

MBS CURL Plugin Documentation

Christian Schmitz

March 10, 2024

0.1 Introduction

This is the PDF version of the documentation for the Xojo Plug-in from Monkeybread Software Germany.
Plugin part: MBS CURL Plugin

0.2 Content

- 1 List of all topics 3
- 2 List of all classes 51
- 3 List of all global methods 53
- 4 All items in this plugin 55
- 6 List of Questions in the FAQ 729
- 7 The FAQ 739

Chapter 1

List of Topics

• 4 CURL	55
– 4.1.1 class CURLEmailMBS	55
* 4.1.3 AddAttachment(data as MemoryBlock, name as string, type as string = "", InlineID as string = "", ContentTypeMethod as String = "")	56
* 4.1.4 AddAttachment(data as string, name as string, type as string = "", InlineID as string = "", ContentTypeMethod as String = "")	57
* 4.1.5 AddAttachment(file as FolderItem, name as string = "", type as string = "", InlineID as string = "", ContentTypeMethod as String = "")	58
* 4.1.6 AddBcc(email as string, name as string)	58
* 4.1.7 Addcc(email as string, name as string)	59
* 4.1.8 AddHeader(header as string)	59
* 4.1.9 AddReplyTo(email as string, name as string)	60
* 4.1.10 AddTo(email as string, name as string)	60
* 4.1.11 Bccs as String()	61
* 4.1.12 ccs as String()	61
* 4.1.13 clearAttachments	61
* 4.1.14 ClearHeaders	62
* 4.1.15 clearRecipients	62
* 4.1.16 constructor(Encoding as string = "UTF-8")	62
* 4.1.17 EmailSource as string	62
* 4.1.18 Headers as String()	62
* 4.1.19 ReplyTOs as String()	63
* 4.1.20 SetFrom(email as string, name as string)	63
* 4.1.21 SetServer(server as string, UseSSL as boolean = false)	63
* 4.1.22 TOs as String()	64
* 4.1.24 Attachmentcount as Integer	65
* 4.1.25 BoundaryName as String	65

* 4.1.26 EncodingName as String	65
* 4.1.27 FromEmail as String	65
* 4.1.28 HeaderList as String	65
* 4.1.29 HTMLText as String	66
* 4.1.30 InReplyTo as String	66
* 4.1.31 MessageID as String	66
* 4.1.32 PlainText as String	66
* 4.1.33 RecipientsBCC as String	67
* 4.1.34 RecipientsCC as String	67
* 4.1.35 RecipientsReplyTo as String	67
* 4.1.36 RecipientsTO as String	67
* 4.1.37 RichText as String	67
* 4.1.38 Server as String	68
* 4.1.39 SMTPPassword as String	68
* 4.1.40 SMTPServer as String	68
* 4.1.41 SMTPUsername as String	69
* 4.1.42 Subject as String	69
* 4.1.43 UseSSL as Boolean	69
– 4.2.1 class CURLFileInfoMBS	71
* 4.2.3 Date as Date	71
* 4.2.4 DateTime as DateTime	71
* 4.2.5 FileName as String	71
* 4.2.6 FileType as Integer	72
* 4.2.7 Flags as Integer	72
* 4.2.8 GID as Integer	72
* 4.2.9 GroupString as String	72
* 4.2.10 HardLinks as Integer	72
* 4.2.11 HasFileName as Boolean	72
* 4.2.12 HasFileType as Boolean	73
* 4.2.13 HasGID as Boolean	73
* 4.2.14 HasHardLinks as Boolean	73
* 4.2.15 HasPermissions as Boolean	73
* 4.2.16 HasSize as Boolean	73
* 4.2.17 HasTime as Boolean	74
* 4.2.18 HasUID as Boolean	74
* 4.2.19 IsDirectory as Boolean	74
* 4.2.20 IsFile as Boolean	74
* 4.2.21 Permissions as Integer	74
* 4.2.22 PermissionString as String	74
* 4.2.23 Size as Int64	75
* 4.2.24 Target as String	75

	5
* 4.2.25 Time as Int64	75
* 4.2.26 TimeString as String	75
* 4.2.27 UID as Integer	75
* 4.2.28 UserString as String	76
– 4.3.1 class CURLListMBS	77
* 4.3.3 Item(index as Integer) as string	77
* 4.3.4 List as String()	77
* 4.3.5 Operator_Convert as String()	77
* 4.3.7 Count as Integer	77
– 4.4.1 class CURLMBS	78
* 4.4.3 AddMimePart as CURLMimePartMBS	79
* 4.4.4 AWSPresignURL(AWSAccessKeyId as String, AWSSecretAccessKey as String, Region as String, Service as String, Path as String, Domain as String, Verb as String = "GET", Expires as Integer = 86400, QueryParameters() as String = nil, Headers() as String = nil) as String	80
* 4.4.5 ClearData	80
* 4.4.6 CloseMTDebugOutputFile	80
* 4.4.7 CloseMTHeaderOutputFile	81
* 4.4.8 CloseMTInputFile	81
* 4.4.9 CloseMTOutputFile	81
* 4.4.10 CreateMTDebugOutputFile(file as folderitem) as boolean	81
* 4.4.11 CreateMTDebugOutputFile(Path as String) as boolean	82
* 4.4.12 CreateMTHeaderOutputFile(file as folderitem) as boolean	82
* 4.4.13 CreateMTHeaderOutputFile(Path as String) as boolean	82
* 4.4.14 CreateMTOutputFile(file as folderitem) as boolean	82
* 4.4.15 CreateMTOutputFile(Path as String) as boolean	83
* 4.4.16 FileInfos as CURLFileInfoMBS()	83
* 4.4.17 FinishMime	83
* 4.4.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string)	84
* 4.4.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string)	85
* 4.4.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer)	86
* 4.4.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer)	86
* 4.4.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string)	87
* 4.4.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string)	88

* 4.4.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer)	88
* 4.4.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string)	91
* 4.4.26 FormAddField(fieldName as String, fieldValue as String, ContentType as String = "")	92
* 4.4.27 FormAddFile(fieldName as String, fileName as String, fileContent as string, ContentType as String = "")	92
* 4.4.28 FormClear	93
* 4.4.29 FormData as String	93
* 4.4.30 FormFinish	93
* 4.4.31 GetInfoActiveSocket as integer	95
* 4.4.32 GetInfoAppConnectTime as Double	95
* 4.4.33 GetInfoCAInfo as string	96
* 4.4.34 GetInfoCAPath as string	96
* 4.4.35 GetInfoCertInfo as CURLListMBS()	96
* 4.4.36 GetInfoConditionUnmet as Integer	96
* 4.4.37 GetInfoConnectTime as Double	97
* 4.4.38 GetInfoContentLengthDownload as Double	97
* 4.4.39 GetInfoContentLengthUpload as Double	97
* 4.4.40 GetInfoContentType as string	97
* 4.4.41 GetInfoCookieList as CURLListMBS	97
* 4.4.42 GetInfoEffectiveMethod as string	98
* 4.4.43 GetInfoEffectiveURL as string	98
* 4.4.44 GetInfoFileTime as Integer	98
* 4.4.45 GetInfoFTPEntryPath as string	99
* 4.4.46 GetInfoHeaderSize as Integer	99
* 4.4.47 GetInfoHTTPAuthAvail as Integer	99
* 4.4.48 GetInfoHTTPConnectCode as Integer	99
* 4.4.49 GetInfoHTTPVersion as integer	99
* 4.4.50 GetInfoLastSocket as Integer	100
* 4.4.51 GetInfoLocalIP as string	100
* 4.4.52 GetInfoLocalPort as Integer	100
* 4.4.53 GetInfoNameLookupTime as Double	101
* 4.4.54 GetInfoNumConnects as Integer	101
* 4.4.55 GetInfoOSErrno as Integer	101
* 4.4.56 GetInfoPreTransferTime as Double	101
* 4.4.57 GetInfoPrimaryIP as string	102
* 4.4.58 GetInfoPrimaryPort as Integer	102
* 4.4.59 GetInfoProtocol as integer	102
* 4.4.60 GetInfoProxyAuthAvail as Integer	103

* 4.4.61 GetInfoProxyError as integer	103
* 4.4.62 GetInfoProxySSLVerifyResult as integer	103
* 4.4.63 GetInfoRedirectCount as Integer	103
* 4.4.64 GetInfoRedirectTime as Double	103
* 4.4.65 GetInfoRedirectURL as string	103
* 4.4.66 GetInfoReferer as string	104
* 4.4.67 GetInfoRequestSize as Integer	104
* 4.4.68 GetInfoResponseCode as Integer	104
* 4.4.69 GetInfoRetryAfter as integer	104
* 4.4.70 GetInfoRTSPClientCSEQ as Integer	105
* 4.4.71 GetInfoRTSPCSEQRecv as Integer	105
* 4.4.72 GetInfoRTSPServerCSEQ as Integer	105
* 4.4.73 GetInfoRTSPSessionID as string	105
* 4.4.74 GetInfoScheme as string	105
* 4.4.75 GetInfoSizeDownload as Double	105
* 4.4.76 GetInfoSizeUpload as Double	106
* 4.4.77 GetInfoSpeedDownload as Double	106
* 4.4.78 GetInfoSpeedUpload as Double	106
* 4.4.79 GetInfoSSLEngines as CURLListMBS	106
* 4.4.80 GetInfoSSLVerifyResult as Integer	106
* 4.4.81 GetInfoStartTransferTime as Double	107
* 4.4.82 GetInfoTotalTime as Double	107
* 4.4.83 LoadAPI	107
* 4.4.84 LoadErrorString as string	107
* 4.4.85 LoadLibrary(file as folderitem) as boolean	107
* 4.4.86 LoadLibrary(path as string) as boolean	108
* 4.4.87 OpenMTInputFile(file as folderitem, Offset as Integer = 0) as boolean	108
* 4.4.88 OpenMTInputFile(Path as String, Offset as Integer = 0) as boolean	109
* 4.4.89 Perform as Integer	110
* 4.4.90 PerformMT as Integer	111
* 4.4.91 ProcessRelativeURL(BaseURL as String, RelativeURL as String) as String	112
* 4.4.92 ReceiveData(byref data as Memoryblock, BytesToRead as Int64) as Int64	113
* 4.4.93 Reset	114
* 4.4.94 SendData(data as Memoryblock) as Integer	114
* 4.4.95 SendData(data as string) as Integer	114
* 4.4.96 SetInputData(data as MemoryBlock)	115
* 4.4.97 SetInputData(data as string)	115
* 4.4.98 SetOptionConnectTo(list() as string)	116
* 4.4.99 SetOptionEmptyPassword	116
* 4.4.100 SetOptionHTTP200Aliases(list() as string)	116
* 4.4.101 SetOptionHTTPHeader(list() as string)	117
* 4.4.102 SetOptionMailRecipients(list() as string)	117

* 4.4.103 SetOptionPostQuote(list() as string)	119
* 4.4.104 SetOptionPreQuote(list() as string)	119
* 4.4.105 SetOptionProxyHeader(list() as string)	119
* 4.4.106 SetOptionQuote(list() as string)	119
* 4.4.107 SetOptionResolve(list() as string)	120
* 4.4.108 SetOptionTelnetOptions(list() as string)	120
* 4.4.109 SetPathCAInfo(path as folderitem)	120
* 4.4.110 SetPathCAPath(path as folderitem)	121
* 4.4.111 SetPathCRLFile(path as folderitem)	121
* 4.4.112 SetPathIssuerCert(path as folderitem)	122
* 4.4.113 SetPathNetRCFile(path as folderitem)	122
* 4.4.114 SetPathProxyIssuerCert(path as folderitem)	122
* 4.4.115 SetupEmail(email as Variant) as boolean	123
* 4.4.116 UpKeep	124
* 4.4.117 WebSocketMeta as CURLWebSocketFrameMBS	124
* 4.4.118 WebSocketReceive(BufferSize as Integer = 65536) as CURLWebSocketFrameMBS	124
* 4.4.119 WebSocketSend(Data as MemoryBlock, FrameSize as Integer = 0, SendFlags as Integer = 0) as Integer	125
* 4.4.121 APILoaded as Boolean	125
* 4.4.122 Cancel as Boolean	125
* 4.4.123 CollectDebugData as Boolean	126
* 4.4.124 CollectDebugMessages as Boolean	126
* 4.4.125 CollectHeaderData as Boolean	126
* 4.4.126 CollectHeaders as Boolean	127
* 4.4.127 CollectOutputData as Boolean	127
* 4.4.128 DebugData as String	127
* 4.4.129 DebugMessages as String	127
* 4.4.130 DebugWithData as Boolean	128
* 4.4.131 Handle as Integer	128
* 4.4.132 HeaderData as String	128
* 4.4.133 Headers as String	128
* 4.4.134 InputData as String	129
* 4.4.135 Lasterror as Integer	129
* 4.4.136 LastErrorMessage as String	129
* 4.4.137 LasterrorText as String	130
* 4.4.138 LibraryUsed as String	131
* 4.4.139 LibVersion as string	131
* 4.4.140 OptionAbstractUnixSocket as String	131
* 4.4.141 OptionAcceptEncoding as String	131
* 4.4.142 OptionAcceptTimeoutMS as Integer	132
* 4.4.143 OptionAddressScope as Integer	132
* 4.4.144 OptionAppend as Boolean	132

* 4.4.145 OptionAutoReferer as Boolean	133
* 4.4.146 OptionAWSSigV4 as String	133
* 4.4.147 OptionBufferSize as Integer	134
* 4.4.148 OptionCACacheTimeout as Integer	134
* 4.4.149 OptionCAInfo as String	135
* 4.4.150 OptionCAInfoBlob as String	135
* 4.4.151 OptionCAPath as String	136
* 4.4.152 OptionCertInfo as boolean	136
* 4.4.153 OptionConnectionTimeout as Integer	137
* 4.4.154 OptionConnectionTimeOutMS as Integer	137
* 4.4.155 OptionConnectOnly as Integer	138
* 4.4.156 OptionCookie as String	138
* 4.4.157 OptionCookieFile as String	138
* 4.4.158 OptionCookieJar as String	139
* 4.4.159 OptionCookieList as String	139
* 4.4.160 OptionCookieSession as Boolean	140
* 4.4.161 OptionCRLF as Boolean	140
* 4.4.162 OptionCRLFile as String	140
* 4.4.163 OptionCustomRequest as String	141
* 4.4.164 OptionDefaultProtocol as String	142
* 4.4.165 OptionDirListOnly as Boolean	142
* 4.4.166 OptionDisableUserNameInURL as Boolean	142
* 4.4.167 OptionDNSCacheTimeout as Integer	143
* 4.4.168 OptionDNSInterface as String	143
* 4.4.169 OptionDNSLocalIPv4 as String	143
* 4.4.170 OptionDNSLocalIPv6 as String	143
* 4.4.171 OptionDNSServers as String	144
* 4.4.172 OptionDNSShuffleAddresses as Boolean	144
* 4.4.173 OptionDOHSSLVerifyHost as Integer	144
* 4.4.174 OptionDOHSSLVerifyPeer as Integer	145
* 4.4.175 OptionDOHSSLVerifyStatus as Integer	145
* 4.4.176 OptionDOHURL as String	146
* 4.4.177 OptionEGDSocket as String	146
* 4.4.178 OptionExpect100TimeoutMS as Integer	147
* 4.4.179 OptionFailOnError as Boolean	147
* 4.4.180 OptionFileTime as Boolean	147
* 4.4.181 OptionFollowLocation as Boolean	148
* 4.4.182 OptionForbitReuse as Boolean	149
* 4.4.183 OptionFreshConnect as Boolean	149
* 4.4.184 OptionFTPAccount as String	149
* 4.4.185 OptionFTPAlternativeToUser as String	150
* 4.4.186 OptionFTPAppend as Boolean	150

* 4.4.187 OptionFTPCreateMissingDirs as Integer	150
* 4.4.188 OptionFTPFileMethod as Integer	151
* 4.4.189 OptionFTPListOnly as Boolean	151
* 4.4.190 OptionFTPPort as String	152
* 4.4.191 OptionFTPResponseTimeout as Integer	152
* 4.4.192 OptionFTPSkipPasvIP as Boolean	152
* 4.4.193 OptionFTPSSL as Integer	153
* 4.4.194 OptionFTPSSLAUTH as Integer	153
* 4.4.195 OptionFTPSSLCCC as Integer	154
* 4.4.196 OptionFTPUseEPRT as Boolean	154
* 4.4.197 OptionFTPUseEPSV as Boolean	155
* 4.4.198 OptionFTPUsePret as Boolean	155
* 4.4.199 OptionGet as Boolean	155
* 4.4.200 OptionGSSAPIDelegation as Integer	156
* 4.4.201 OptionHappyEyeballsTimeOutMS as Integer	156
* 4.4.202 OptionHAProxyProtocol as Boolean	156
* 4.4.203 OptionHeader as Boolean	157
* 4.4.204 OptionHeaderOptions as Integer	158
* 4.4.205 OptionHTTPAUTH as Integer	158
* 4.4.206 OptionHTTPContentDecoding as Integer	159
* 4.4.207 OptionHTTPProxyTunnel as Boolean	159
* 4.4.208 OptionHTTPTransferDecoding as Integer	160
* 4.4.209 OptionHTTPVersion as Integer	160
* 4.4.210 OptionIgnoreContentLength as Boolean	161
* 4.4.211 OptionInFileSize as Int64	161
* 4.4.212 OptionInFileSizeLarge as Int64	161
* 4.4.213 OptionInterface as String	162
* 4.4.214 OptionIPResolve as Integer	162
* 4.4.215 OptionIssuerCert as String	163
* 4.4.216 OptionIssuerCertBlob as String	163
* 4.4.217 OptionKeepSendingOnError as Integer	164
* 4.4.218 OptionKeyPassword as String	164
* 4.4.219 OptionKRB4Level as String	164
* 4.4.220 OptionKRBLevel as String	164
* 4.4.221 OptionLocalPort as Integer	165
* 4.4.222 OptionLocalPortRange as Integer	165
* 4.4.223 OptionLoginOptions as String	165
* 4.4.224 OptionLowSpeedLimit as Integer	166
* 4.4.225 OptionLowSpeedTime as Integer	166
* 4.4.226 OptionMailAuth as String	166
* 4.4.227 OptionMailFrom as String	167
* 4.4.228 OptionMaxAgeConn as Integer	167

* 4.4.229 OptionMaxConnects as Integer	167
* 4.4.230 OptionMaxFileSize as Int64	168
* 4.4.231 OptionMaxFileSizeLarge as Int64	168
* 4.4.232 OptionMaxLifeTimeConnection as Integer	168
* 4.4.233 OptionMaxRecvSpeed as Int64	169
* 4.4.234 OptionMaxRecvSpeedLarge as Int64	169
* 4.4.235 OptionMaxRedirs as Integer	169
* 4.4.236 OptionMaxSendSpeed as Int64	170
* 4.4.237 OptionMaxSendSpeedLarge as Int64	170
* 4.4.238 OptionMimeOptions as Integer	170
* 4.4.239 OptionNetRC as Integer	171
* 4.4.240 OptionNetRCFile as String	172
* 4.4.241 OptionNewDirectoryPerms as Integer	173
* 4.4.242 OptionNewFilePerms as Integer	173
* 4.4.243 OptionNoBody as Boolean	173
* 4.4.244 OptionNoProxy as String	174
* 4.4.245 OptionNoSignal as Integer	174
* 4.4.246 OptionPassword as String	174
* 4.4.247 OptionPathAsIs as Boolean	175
* 4.4.248 OptionPinnedPublicKey as String	175
* 4.4.249 OptionPipeWait as Boolean	175
* 4.4.250 OptionPort as Integer	175
* 4.4.251 OptionPost as Boolean	176
* 4.4.252 OptionPostFields as String	176
* 4.4.253 OptionPostFieldSize as Int64	177
* 4.4.254 OptionPostFieldSizeLarge as Int64	178
* 4.4.255 OptionPostRedirect as Integer	178
* 4.4.256 OptionPreProxy as String	178
* 4.4.257 OptionProtocols as Integer	178
* 4.4.258 OptionProtocolsString as String	179
* 4.4.259 OptionProxy as String	179
* 4.4.260 OptionProxyAuth as Integer	180
* 4.4.261 OptionProxyCAInfo as String	181
* 4.4.262 OptionProxyCAInfoBlob as String	181
* 4.4.263 OptionProxyCAPath as String	182
* 4.4.264 OptionProxyCRLFile as String	182
* 4.4.265 OptionProxyIssuerCert as String	182
* 4.4.266 OptionProxyIssuerCertBlob as String	183
* 4.4.267 OptionProxyKeyPassword as String	183
* 4.4.268 OptionProxyPassword as String	183
* 4.4.269 OptionProxyPinnedPublicKey as String	184
* 4.4.270 OptionProxyPort as Integer	184

* 4.4.271 OptionProxyServiceName as String	184
* 4.4.272 OptionProxySSLCert as String	184
* 4.4.273 OptionProxySSLCertBlob as String	185
* 4.4.274 OptionProxySSLCertType as String	185
* 4.4.275 OptionProxySSLCipherList as String	185
* 4.4.276 OptionProxySSLKey as String	185
* 4.4.277 OptionProxySSLKeyBlob as String	185
* 4.4.278 OptionProxySSLKeyType as String	186
* 4.4.279 OptionProxySSLOptions as Integer	186
* 4.4.280 OptionProxySSLVerifyHost as Integer	186
* 4.4.281 OptionProxySSLVerifyPeer as Integer	187
* 4.4.282 OptionProxySSLVersion as Integer	187
* 4.4.283 OptionProxyTLS13Ciphers as String	188
* 4.4.284 OptionProxyTLSAuthPassword as String	189
* 4.4.285 OptionProxyTLSAuthType as String	189
* 4.4.286 OptionProxyTLSAuthUsername as String	189
* 4.4.287 OptionProxyTransferMode as Integer	189
* 4.4.288 OptionProxyType as Integer	190
* 4.4.289 OptionProxyUsername as String	190
* 4.4.290 OptionPut as Boolean	190
* 4.4.291 OptionQuickExit as Integer	191
* 4.4.292 OptionRandomFile as String	191
* 4.4.293 OptionRange as String	191
* 4.4.294 OptionRedirProtocols as Integer	192
* 4.4.295 OptionReditProtocolsString as String	192
* 4.4.296 OptionReferer as String	193
* 4.4.297 OptionRequestTarget as String	193
* 4.4.298 OptionResumeFrom as Int64	194
* 4.4.299 OptionResumeFromLarge as Int64	194
* 4.4.300 OptionRTSPClientCSEQ as Integer	194
* 4.4.301 OptionRTSPRequest as Integer	194
* 4.4.302 OptionRTSPServerCSEQ as Integer	195
* 4.4.303 OptionRTSPSessionID as String	195
* 4.4.304 OptionRTSPStreamURI as String	196
* 4.4.305 OptionRTSPTransport as String	196
* 4.4.306 OptionSASLAuthZID as String	196
* 4.4.307 OptionSASLIR as Integer	196
* 4.4.308 OptionServerResponseTimeout as Integer	197
* 4.4.309 OptionServiceName as String	197
* 4.4.310 OptionSocks5Auth as Integer	197
* 4.4.311 OptionSocks5GSSAPINEC as Boolean	197
* 4.4.312 OptionSocks5GSSAPIService as String	198

* 4.4.313 OptionSSHAuthTypes as Integer	198
* 4.4.314 OptionSSHCompression as Boolean	198
* 4.4.315 OptionSSHHostPublicKeyMD5 as String	198
* 4.4.316 OptionSSHHostPublicKeySHA256 as String	199
* 4.4.317 OptionSSHKnownhosts as String	199
* 4.4.318 OptionSSHPrivateKeyfile as String	199
* 4.4.319 OptionSSHPublicKeyfile as String	200
* 4.4.320 OptionSSLCert as String	200
* 4.4.321 OptionSSLCertBlob as String	201
* 4.4.322 OptionSSLCertPassword as String	201
* 4.4.323 OptionSSLCertType as String	201
* 4.4.324 OptionSSLCipherList as String	202
* 4.4.325 OptionSSEnableALPN as Integer	202
* 4.4.326 OptionSSEnableNPN as Integer	202
* 4.4.327 OptionSSEngine as String	203
* 4.4.328 OptionSSEngineDefault as Integer	203
* 4.4.329 OptionSSLFalseStart as Integer	203
* 4.4.330 OptionSSLKey as String	203
* 4.4.331 OptionSSLKeyBlob as String	204
* 4.4.332 OptionSSLKeyPassword as String	204
* 4.4.333 OptionSSLKeyType as String	204
* 4.4.334 OptionSSLOptions as Integer	205
* 4.4.335 OptionSSLSessionIDCache as Boolean	205
* 4.4.336 OptionSSLVerifyHost as Integer	205
* 4.4.337 OptionSSLVerifyPeer as Integer	206
* 4.4.338 OptionSSLVerifyStatus as Integer	208
* 4.4.339 OptionSSLVersion as Integer	208
* 4.4.340 OptionStreamDepends as CURLMBS	209
* 4.4.341 OptionStreamDependsE as CURLMBS	209
* 4.4.342 OptionStreamWeight as Integer	209
* 4.4.343 OptionSuppressConnectHeaders as Boolean	210
* 4.4.344 OptionTCPFastOpen as Integer	210
* 4.4.345 OptionTCPKeepAlive as Boolean	210
* 4.4.346 OptionTCPKeepIdle as Integer	210
* 4.4.347 OptionTCPKeepInterval as Integer	210
* 4.4.348 OptionTCPNoDelay as Boolean	211
* 4.4.349 OptionTFTPBlockSize as Integer	211
* 4.4.350 OptionTFTPNoOptions as Integer	212
* 4.4.351 OptionTimeCondition as Integer	212
* 4.4.352 OptionTimeOut as Integer	212
* 4.4.353 OptionTimeOutMS as Integer	213
* 4.4.354 OptionTimeValue as Integer	213

* 4.4.355 OptionTLS13Ciphers as String	213
* 4.4.356 OptionTLSAuthPassword as String	214
* 4.4.357 OptionTLSAuthType as String	214
* 4.4.358 OptionTLSAuthUsername as String	214
* 4.4.359 OptionTransferEncoding as Boolean	214
* 4.4.360 OptionTransferText as Boolean	215
* 4.4.361 OptionUnixSocketPath as String	215
* 4.4.362 OptionUnrestrictedAuth as Boolean	215
* 4.4.363 OptionUpkeepIntervalMS as Integer	216
* 4.4.364 OptionUpload as Boolean	216
* 4.4.365 OptionUploadBufferSize as Integer	217
* 4.4.366 OptionURL as String	217
* 4.4.367 OptionUserAgent as String	218
* 4.4.368 OptionUsername as String	219
* 4.4.369 OptionUseSSL as Integer	219
* 4.4.370 OptionVerbose as Boolean	220
* 4.4.371 OptionWildcardMatch as Boolean	220
* 4.4.372 OptionXOAuth2Bearer as String	221
* 4.4.373 OutputData as String	221
* 4.4.374 Paused as Boolean	222
* 4.4.375 ProgressDownloadCurrent as Int64	222
* 4.4.376 ProgressDownloadTotal as Int64	223
* 4.4.377 ProgressPercent as Double	223
* 4.4.378 ProgressUploadCurrent as Int64	223
* 4.4.379 ProgressUploadTotal as Int64	223
* 4.4.380 Tag as Variant	223
* 4.4.381 Version as CURLVersionMBS	223
* 4.4.382 WebSocketOptions as Integer	224
* 4.4.383 YieldTime as Boolean	224
* 4.4.385 ChunkBegin(FileInfo as CURLFileInfoMBS, Remains as Integer) as Integer	225
* 4.4.386 ChunkEnd(FileInfo as CURLFileInfoMBS, Remains as Integer) as Integer	225
* 4.4.387 DebugMessage(infotype as Integer, data as string, dataSize as Integer)	225
* 4.4.388 FileNameMatch(Pattern as String, Name as String) as Integer	226
* 4.4.389 Finished(Result as Integer)	226
* 4.4.390 Header(data as string, dataSize as Integer) as Integer	226
* 4.4.391 Progress(dltotal as Int64, dlnow as Int64, ultotal as Int64, ulnow as Int64, percent as Double) as boolean	226
* 4.4.392 Read(count as Integer) as string	227
* 4.4.393 RestartRead() as boolean	227
* 4.4.394 Seek(pos as Int64, whence as Integer) as Integer	228
* 4.4.395 SSHKey(KnownKey as string, KnownKeyLength as Integer, KnownKeyType as Integer, FoundKey as string, FoundKeyLength as Integer, FoundKeyType as Integer, MatchStatus as Integer) as Integer	228

	15
* 4.4.396 Write(data as string, dataSize as Integer) as Integer	228
– 4.5.1 class CURLMimePartMBS	239
* 4.5.3 Constructor	239
* 4.5.4 Headers as String()	239
* 4.5.5 SetHeaders(headers() as String)	239
* 4.5.7 DataMemory as Memoryblock	239
* 4.5.8 DataString as String	240
* 4.5.9 Encoding as String	240
* 4.5.10 File as FolderItem	240
* 4.5.11 FileName as String	240
* 4.5.12 FilePath as String	241
* 4.5.13 Lasterror as Integer	241
* 4.5.14 MimeType as String	241
* 4.5.15 Name as String	241
* 4.5.16 Parent as Variant	241
– 4.7.1 class CURLMultiMBS	244
* 4.7.3 AddCURL(curl as CURLMBS, handler as CURLTransferFinishedMBS = nil) as boolean	244
* 4.7.4 CURLs as CURLMBS()	244
* 4.7.5 ErrorString(ErrorCode as Integer) as String	244
* 4.7.6 Perform	244
* 4.7.7 RemoveAll	245
* 4.7.8 RemoveCURL(CURL as CURLMBS) as boolean	245
* 4.7.9 SharedInstance as CURLMultiMBS	245
* 4.7.11 AutoPerform as Boolean	245
* 4.7.12 ChunkLengthPenaltySize as Int64	246
* 4.7.13 ContentLengthPenaltySize as Int64	246
* 4.7.14 Handle as Integer	246
* 4.7.15 Lasterror as Integer	246
* 4.7.16 MaxConcurrentStreams as Integer	246
* 4.7.17 MaxConnects as Integer	247
* 4.7.18 MaxHostConnections as Integer	247
* 4.7.19 MaxPipelineLength as Integer	247
* 4.7.20 MaxTotalConnections as Integer	247
* 4.7.21 Pipelining as Integer	247
* 4.7.22 RunningTransfers as Integer	247
* 4.7.23 Tag as Variant	248
* 4.7.25 TransferFinished(CURL as CURLMBS, result as Integer, RemainingFinishedTransfers as Integer)	248
* 4.7.26 TransfersFinished	248
* 4.7.29 CURLTransferFinishedMBS(curl as CURLMBS, ErrorCode as Integer)	249

* 4.7.30 CURLTransferFinishedMBS(curl as CURLMBS, ErrorCode as Integer)	249
– 4.8.1 class CURLNFileInfoMBS	250
* 4.8.3 Date as Date	250
* 4.8.4 DateTime as DateTime	250
* 4.8.5 FileName as String	250
* 4.8.6 FileType as Integer	251
* 4.8.7 Flags as Integer	251
* 4.8.8 GID as Integer	251
* 4.8.9 GroupString as String	251
* 4.8.10 HardLinks as Integer	251
* 4.8.11 HasFileName as Boolean	251
* 4.8.12 HasFileType as Boolean	252
* 4.8.13 HasGID as Boolean	252
* 4.8.14 HasHardLinks as Boolean	252
* 4.8.15 HasPermissions as Boolean	252
* 4.8.16 HasSize as Boolean	252
* 4.8.17 HasTime as Boolean	253
* 4.8.18 HasUID as Boolean	253
* 4.8.19 IsDirectory as Boolean	253
* 4.8.20 IsFile as Boolean	253
* 4.8.21 Permissions as Integer	253
* 4.8.22 PermissionString as String	253
* 4.8.23 Size as Int64	254
* 4.8.24 Target as String	254
* 4.8.25 Time as Int64	254
* 4.8.26 TimeString as String	254
* 4.8.27 UID as Integer	254
* 4.8.28 UserString as String	255
– 4.9.1 class CURLNListMBS	256
* 4.9.3 Item(index as Integer) as string	256
* 4.9.4 List as String()	256
* 4.9.5 Operator_Convert as String()	256
* 4.9.7 Count as Integer	256
– 4.10.1 class CURLNMBS	257
* 4.10.3 AddMimePart as CURLNMimePartMBS	258
* 4.10.4 AWSPresignURL(AWSAccessKeyId as String, AWSSecretAccessKey as String, Region as String, Service as String, Path as String, Domain as String, Verb as String = "GET", Expires as Integer = 86400, QueryParameters() as String = nil, Headers() as String = nil) as String	259
* 4.10.5 ClearData	259
* 4.10.6 CloseMTDebugOutputFile	259

* 4.10.7 CloseMTHaderOutputFile	260
* 4.10.8 CloseMTInputFile	260
* 4.10.9 CloseMTOutputFile	260
* 4.10.10 CreateMTDebugOutputFile(file as folderitem) as boolean	260
* 4.10.11 CreateMTDebugOutputFile(Path as String) as boolean	261
* 4.10.12 CreateMTHaderOutputFile(file as folderitem) as boolean	261
* 4.10.13 CreateMTHaderOutputFile(Path as String) as boolean	261
* 4.10.14 CreateMTOutputFile(file as folderitem) as boolean	261
* 4.10.15 CreateMTOutputFile(Path as String) as boolean	262
* 4.10.16 FileInfos as CURLNFileInfoMBS()	262
* 4.10.17 FinishMime	262
* 4.10.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string)	263
* 4.10.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string)	264
* 4.10.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer)	265
* 4.10.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer)	265
* 4.10.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string)	266
* 4.10.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string)	267
* 4.10.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer)	267
* 4.10.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string)	270
* 4.10.26 FormAddField(fieldName as String, fieldValue as String, ContentType as String = "")	271
* 4.10.27 FormAddFile(fieldName as String, fileName as String, fileContent as string, ContentType as String = "")	271
* 4.10.28 FormClear	272
* 4.10.29 FormData as String	272
* 4.10.30 FormFinish	272
* 4.10.31 GetInfoActiveSocket as integer	274
* 4.10.32 GetInfoAppConnectTime as Double	275
* 4.10.33 GetInfoCAInfo as string	275
* 4.10.34 GetInfoCAPath as string	275
* 4.10.35 GetInfoCertInfo as CURLNListMBS()	275
* 4.10.36 GetInfoConditionUnmet as Integer	276

* 4.10.37	GetInfoConnectTime as Double	276
* 4.10.38	GetInfoContentLengthDownload as Double	276
* 4.10.39	GetInfoContentLengthUpload as Double	276
* 4.10.40	GetInfoContentType as string	276
* 4.10.41	GetInfoCookieList as CURLNListMBS	277
* 4.10.42	GetInfoEffectiveMethod as string	277
* 4.10.43	GetInfoEffectiveURL as string	277
* 4.10.44	GetInfoFileTime as Integer	277
* 4.10.45	GetInfoFTPEntryPath as string	278
* 4.10.46	GetInfoHeaderSize as Integer	278
* 4.10.47	GetInfoHTTPAuthAvail as Integer	278
* 4.10.48	GetInfoHTTPConnectCode as Integer	279
* 4.10.49	GetInfoHTTPVersion as integer	279
* 4.10.50	GetInfoLastSocket as Integer	279
* 4.10.51	GetInfoLocalIP as string	279
* 4.10.52	GetInfoLocalPort as Integer	280
* 4.10.53	GetInfoNameLookupTime as Double	280
* 4.10.54	GetInfoNumConnects as Integer	280
* 4.10.55	GetInfoOSErrno as Integer	280
* 4.10.56	GetInfoPreTransferTime as Double	281
* 4.10.57	GetInfoPrimaryIP as string	281
* 4.10.58	GetInfoPrimaryPort as Integer	281
* 4.10.59	GetInfoProtocol as integer	282
* 4.10.60	GetInfoProxyAuthAvail as Integer	282
* 4.10.61	GetInfoProxyError as integer	282
* 4.10.62	GetInfoProxySSLVerifyResult as integer	282
* 4.10.63	GetInfoRedirectCount as Integer	282
* 4.10.64	GetInfoRedirectTime as Double	283
* 4.10.65	GetInfoRedirectURL as string	283
* 4.10.66	GetInfoReferer as string	283
* 4.10.67	GetInfoRequestSize as Integer	283
* 4.10.68	GetInfoResponseCode as Integer	283
* 4.10.69	GetInfoRetryAfter as integer	284
* 4.10.70	GetInfoRTSPClientCSEQ as Integer	284
* 4.10.71	GetInfoRTSPCSEQRecv as Integer	284
* 4.10.72	GetInfoRTSPServerCSEQ as Integer	284
* 4.10.73	GetInfoRTSPSessionID as string	284
* 4.10.74	GetInfoScheme as string	285
* 4.10.75	GetInfoSizeDownload as Double	285
* 4.10.76	GetInfoSizeUpload as Double	285
* 4.10.77	GetInfoSpeedDownload as Double	285
* 4.10.78	GetInfoSpeedUpload as Double	285

* 4.10.79 GetInfoSSLEngines as CURLNListMBS	285
* 4.10.80 GetInfoSSLVerifyResult as Integer	286
* 4.10.81 GetInfoStartTransferTime as Double	286
* 4.10.82 GetInfoTotalTime as Double	286
* 4.10.83 LoadAPI	286
* 4.10.84 LoadErrorString as string	287
* 4.10.85 LoadLibrary(file as folderitem) as boolean	287
* 4.10.86 LoadLibrary(path as string) as boolean	287
* 4.10.87 OpenMTInputFile(file as folderitem, Offset as Integer = 0) as boolean	287
* 4.10.88 OpenMTInputFile(Path as String, Offset as Integer = 0) as boolean	288
* 4.10.89 Perform as Integer	289
* 4.10.90 PerformMT as Integer	290
* 4.10.91 ProcessRelativeURL(BaseURL as String, RelativeURL as String) as String	292
* 4.10.92 ReceiveData(byref data as Memoryblock, BytesToRead as Int64) as Int64	292
* 4.10.93 Reset	293
* 4.10.94 SendData(data as Memoryblock) as Integer	293
* 4.10.95 SendData(data as string) as Integer	294
* 4.10.96 SetInputData(data as MemoryBlock)	294
* 4.10.97 SetInputData(data as string)	295
* 4.10.98 SetOptionConnectTo(list() as string)	295
* 4.10.99 SetOptionEmptyPassword	296
* 4.10.100 SetOptionHTTP200Aliases(list() as string)	296
* 4.10.101 SetOptionHTTPHeader(list() as string)	296
* 4.10.102 SetOptionMailRecipients(list() as string)	297
* 4.10.103 SetOptionPostQuote(list() as string)	299
* 4.10.104 SetOptionPreQuote(list() as string)	299
* 4.10.105 SetOptionProxyHeader(list() as string)	299
* 4.10.106 SetOptionQuote(list() as string)	299
* 4.10.107 SetOptionResolve(list() as string)	300
* 4.10.108 SetOptionTelnetOptions(list() as string)	300
* 4.10.109 SetPathCAInfo(path as folderitem)	300
* 4.10.110 SetPathCAPath(path as folderitem)	301
* 4.10.111 SetPathCRLFile(path as folderitem)	301
* 4.10.112 SetPathIssuerCert(path as folderitem)	302
* 4.10.113 SetPathNetRCFile(path as folderitem)	302
* 4.10.114 SetPathProxyIssuerCert(path as folderitem)	302
* 4.10.115 SetupEmail(email as Variant) as boolean	303
* 4.10.116 UpKeep	304
* 4.10.117 WebSocketMeta as CURLNWebSocketFrameMBS	304
* 4.10.118 WebSocketReceive(BufferSize as Integer = 65536) as CURLNWebSocketFrameMBS	304

* 4.10.119 WebSocketSend(Data as MemoryBlock, FrameSize as Integer = 0, SendFlags as Integer = 0) as Integer	305
* 4.10.121 APILoaded as Boolean	305
* 4.10.122 Cancel as Boolean	305
* 4.10.123 CollectDebugData as Boolean	306
* 4.10.124 CollectDebugMessages as Boolean	306
* 4.10.125 CollectHeaderData as Boolean	306
* 4.10.126 CollectHeaders as Boolean	307
* 4.10.127 CollectOutputData as Boolean	307
* 4.10.128 DebugData as String	307
* 4.10.129 DebugMessages as String	307
* 4.10.130 DebugWithData as Boolean	308
* 4.10.131 Handle as Integer	308
* 4.10.132 HeaderData as String	308
* 4.10.133 Headers as String	308
* 4.10.134 InputData as String	309
* 4.10.135 Lasterror as Integer	309
* 4.10.136 LastErrorMessage as String	309
* 4.10.137 LasterrorText as String	310
* 4.10.138 LibraryUsed as String	311
* 4.10.139 LibVersion as string	311
* 4.10.140 OptionAbstractUnixSocket as String	311
* 4.10.141 OptionAcceptEncoding as String	311
* 4.10.142 OptionAcceptTimeoutMS as Integer	312
* 4.10.143 OptionAddressScope as Integer	312
* 4.10.144 OptionAppend as Boolean	312
* 4.10.145 OptionAutoReferer as Boolean	313
* 4.10.146 OptionAWSSigV4 as String	313
* 4.10.147 OptionBufferSize as Integer	314
* 4.10.148 OptionCACacheTimeout as Integer	314
* 4.10.149 OptionCAInfo as String	315
* 4.10.150 OptionCAInfoBlob as String	315
* 4.10.151 OptionCAPath as String	316
* 4.10.152 OptionCertInfo as boolean	316
* 4.10.153 OptionConnectionTimeout as Integer	317
* 4.10.154 OptionConnectionTimeOutMS as Integer	317
* 4.10.155 OptionConnectOnly as Integer	318
* 4.10.156 OptionCookie as String	318
* 4.10.157 OptionCookieFile as String	318
* 4.10.158 OptionCookieJar as String	319
* 4.10.159 OptionCookieList as String	319
* 4.10.160 OptionCookieSession as Boolean	320

* 4.10.161 OptionCRLF as Boolean	320
* 4.10.162 OptionCRLFFile as String	320
* 4.10.163 OptionCustomRequest as String	321
* 4.10.164 OptionDefaultProtocol as String	322
* 4.10.165 OptionDirListOnly as Boolean	322
* 4.10.166 OptionDisableUserNameInURL as Boolean	322
* 4.10.167 OptionDNSCacheTimeout as Integer	323
* 4.10.168 OptionDNSInterface as String	323
* 4.10.169 OptionDNSLocalIPv4 as String	323
* 4.10.170 OptionDNSLocalIPv6 as String	323
* 4.10.171 OptionDNSServers as String	324
* 4.10.172 OptionDNSShuffleAddresses as Boolean	324
* 4.10.173 OptionDOHSSLVerifyHost as Integer	324
* 4.10.174 OptionDOHSSLVerifyPeer as Integer	325
* 4.10.175 OptionDOHSSLVerifyStatus as Integer	325
* 4.10.176 OptionDOHURL as String	326
* 4.10.177 OptionEGDSocket as String	326
* 4.10.178 OptionExpect100TimeoutMS as Integer	327
* 4.10.179 OptionFailOnError as Boolean	327
* 4.10.180 OptionFileTime as Boolean	327
* 4.10.181 OptionFollowLocation as Boolean	328
* 4.10.182 OptionForbitReuse as Boolean	329
* 4.10.183 OptionFreshConnect as Boolean	329
* 4.10.184 OptionFTPAccount as String	329
* 4.10.185 OptionFTPAlternativeToUser as String	330
* 4.10.186 OptionFTPAppend as Boolean	330
* 4.10.187 OptionFTPCreateMissingDirs as Integer	330
* 4.10.188 OptionFTPFileMethod as Integer	331
* 4.10.189 OptionFTPListOnly as Boolean	331
* 4.10.190 OptionFTPPort as String	332
* 4.10.191 OptionFTPResponseTimeout as Integer	332
* 4.10.192 OptionFTPSkipPasvIP as Boolean	332
* 4.10.193 OptionFTPSSL as Integer	333
* 4.10.194 OptionFTPSSLAuth as Integer	333
* 4.10.195 OptionFTPSSLCCC as Integer	334
* 4.10.196 OptionFTPUseEPRT as Boolean	334
* 4.10.197 OptionFTPUseEPSV as Boolean	335
* 4.10.198 OptionFTPUsePret as Boolean	335
* 4.10.199 OptionGet as Boolean	335
* 4.10.200 OptionGSSAPIDelegation as Integer	336
* 4.10.201 OptionHappyEyeballsTimeOutMS as Integer	336
* 4.10.202 OptionHAProxyProtocol as Boolean	336

* 4.10.203 OptionHeader as Boolean	337
* 4.10.204 OptionHeaderOptions as Integer	338
* 4.10.205 OptionHTTPAuth as Integer	338
* 4.10.206 OptionHTTPContentDecoding as Integer	339
* 4.10.207 OptionHTTPProxyTunnel as Boolean	339
* 4.10.208 OptionHTTPTransferDecoding as Integer	340
* 4.10.209 OptionHTTPVersion as Integer	340
* 4.10.210 OptionIgnoreContentLength as Boolean	341
* 4.10.211 OptionInFileSize as Int64	341
* 4.10.212 OptionInFileSizeLarge as Int64	341
* 4.10.213 OptionInterface as String	342
* 4.10.214 OptionIPResolve as Integer	342
* 4.10.215 OptionIssuerCert as String	343
* 4.10.216 OptionIssuerCertBlob as String	343
* 4.10.217 OptionKeepSendingOnError as Integer	344
* 4.10.218 OptionKeyPassword as String	344
* 4.10.219 OptionKRB4Level as String	344
* 4.10.220 OptionKRBLevel as String	344
* 4.10.221 OptionLocalPort as Integer	345
* 4.10.222 OptionLocalPortRange as Integer	345
* 4.10.223 OptionLoginOptions as String	345
* 4.10.224 OptionLowSpeedLimit as Integer	346
* 4.10.225 OptionLowSpeedTime as Integer	346
* 4.10.226 OptionMailAuth as String	346
* 4.10.227 OptionMailFrom as String	347
* 4.10.228 OptionMaxAgeConn as Integer	347
* 4.10.229 OptionMaxConnects as Integer	347
* 4.10.230 OptionMaxFileSize as Int64	348
* 4.10.231 OptionMaxFileSizeLarge as Int64	348
* 4.10.232 OptionMaxLifeTimeConnection as Integer	348
* 4.10.233 OptionMaxRecvSpeed as Int64	349
* 4.10.234 OptionMaxRecvSpeedLarge as Int64	349
* 4.10.235 OptionMaxRedirs as Integer	349
* 4.10.236 OptionMaxSendSpeed as Int64	350
* 4.10.237 OptionMaxSendSpeedLarge as Int64	350
* 4.10.238 OptionMimeOptions as Integer	350
* 4.10.239 OptionNetRC as Integer	351
* 4.10.240 OptionNetRCFile as String	352
* 4.10.241 OptionNewDirectoryPerms as Integer	353
* 4.10.242 OptionNewFilePerms as Integer	353
* 4.10.243 OptionNoBody as Boolean	353
* 4.10.244 OptionNoProxy as String	354

* 4.10.245 OptionNoSignal as Integer	354
* 4.10.246 OptionPassword as String	354
* 4.10.247 OptionPathAsIs as Boolean	355
* 4.10.248 OptionPinnedPublicKey as String	355
* 4.10.249 OptionPipeWait as Boolean	355
* 4.10.250 OptionPort as Integer	355
* 4.10.251 OptionPost as Boolean	356
* 4.10.252 OptionPostFields as String	356
* 4.10.253 OptionPostFieldSize as Int64	357
* 4.10.254 OptionPostFieldSizeLarge as Int64	358
* 4.10.255 OptionPostRedir as Integer	358
* 4.10.256 OptionPreProxy as String	358
* 4.10.257 OptionProtocols as Integer	358
* 4.10.258 OptionProtocolsString as String	359
* 4.10.259 OptionProxy as String	359
* 4.10.260 OptionProxyAuth as Integer	360
* 4.10.261 OptionProxyCAInfo as String	361
* 4.10.262 OptionProxyCAInfoBlob as String	361
* 4.10.263 OptionProxyCAPath as String	362
* 4.10.264 OptionProxyCRLFile as String	362
* 4.10.265 OptionProxyIssuerCert as String	362
* 4.10.266 OptionProxyIssuerCertBlob as String	363
* 4.10.267 OptionProxyKeyPassword as String	363
* 4.10.268 OptionProxyPassword as String	363
* 4.10.269 OptionProxyPinnedPublicKey as String	364
* 4.10.270 OptionProxyPort as Integer	364
* 4.10.271 OptionProxyServiceName as String	364
* 4.10.272 OptionProxySSLCert as String	364
* 4.10.273 OptionProxySSLCertBlob as String	365
* 4.10.274 OptionProxySSLCertType as String	365
* 4.10.275 OptionProxySSLCipherList as String	365
* 4.10.276 OptionProxySSLKey as String	365
* 4.10.277 OptionProxySSLKeyBlob as String	365
* 4.10.278 OptionProxySSLKeyType as String	366
* 4.10.279 OptionProxySSLOptions as Integer	366
* 4.10.280 OptionProxySSLVerifyHost as Integer	366
* 4.10.281 OptionProxySSLVerifyPeer as Integer	367
* 4.10.282 OptionProxySSLVersion as Integer	367
* 4.10.283 OptionProxyTLS13Ciphers as String	368
* 4.10.284 OptionProxyTLSAuthPassword as String	369
* 4.10.285 OptionProxyTLSAuthType as String	369
* 4.10.286 OptionProxyTLSAuthUsername as String	369

* 4.10.287 OptionProxyTransferMode as Integer	369
* 4.10.288 OptionProxyType as Integer	370
* 4.10.289 OptionProxyUsername as String	370
* 4.10.290 OptionPut as Boolean	370
* 4.10.291 OptionQuickExit as Integer	371
* 4.10.292 OptionRandomFile as String	371
* 4.10.293 OptionRange as String	371
* 4.10.294 OptionRedirProtocols as Integer	372
* 4.10.295 OptionReditProtocolsString as String	372
* 4.10.296 OptionReferer as String	373
* 4.10.297 OptionRequestTarget as String	373
* 4.10.298 OptionResumeFrom as Int64	374
* 4.10.299 OptionResumeFromLarge as Int64	374
* 4.10.300 OptionRTSPClientCSEQ as Integer	374
* 4.10.301 OptionRTSPRequest as Integer	374
* 4.10.302 OptionRTSPServerCSEQ as Integer	375
* 4.10.303 OptionRTSPSessionID as String	375
* 4.10.304 OptionRTSPStreamURI as String	376
* 4.10.305 OptionRTSPTransport as String	376
* 4.10.306 OptionSASLAuthZID as String	376
* 4.10.307 OptionSASLIR as Integer	376
* 4.10.308 OptionServerResponseTimeout as Integer	377
* 4.10.309 OptionServiceName as String	377
* 4.10.310 OptionSocks5Auth as Integer	377
* 4.10.311 OptionSocks5GSSAPINEC as Boolean	377
* 4.10.312 OptionSocks5GSSAPIService as String	378
* 4.10.313 OptionSSHAAuthTypes as Integer	378
* 4.10.314 OptionSSHCompression as Boolean	378
* 4.10.315 OptionSSHHostPublicKeyMD5 as String	378
* 4.10.316 OptionSSHHostPublicKeySHA256 as String	379
* 4.10.317 OptionSSHKnownhosts as String	379
* 4.10.318 OptionSSHPrivateKeyfile as String	379
* 4.10.319 OptionSSHPublicKeyfile as String	380
* 4.10.320 OptionSSLCert as String	380
* 4.10.321 OptionSSLCertBlob as String	381
* 4.10.322 OptionSSLCertPassword as String	381
* 4.10.323 OptionSSLCertType as String	381
* 4.10.324 OptionSSLCipherList as String	382
* 4.10.325 OptionSSEnableALPN as Integer	382
* 4.10.326 OptionSSEnableNPN as Integer	382
* 4.10.327 OptionSSEngine as String	383
* 4.10.328 OptionSSEngineDefault as Integer	383

* 4.10.329 OptionSSLFalseStart as Integer	383
* 4.10.330 OptionSSLKey as String	383
* 4.10.331 OptionSSLKeyBlob as String	384
* 4.10.332 OptionSSLKeyPassword as String	384
* 4.10.333 OptionSSLKeyType as String	384
* 4.10.334 OptionSSLOptions as Integer	385
* 4.10.335 OptionSSLSessionIDCache as Boolean	385
* 4.10.336 OptionSSLVerifyHost as Integer	385
* 4.10.337 OptionSSLVerifyPeer as Integer	386
* 4.10.338 OptionSSLVerifyStatus as Integer	388
* 4.10.339 OptionSSLVersion as Integer	388
* 4.10.340 OptionStreamDepends as CURLNMBS	389
* 4.10.341 OptionStreamDependsE as CURLNMBS	389
* 4.10.342 OptionStreamWeight as Integer	389
* 4.10.343 OptionSuppressConnectHeaders as Boolean	390
* 4.10.344 OptionTCPFastOpen as Integer	390
* 4.10.345 OptionTCPKeepAlive as Boolean	390
* 4.10.346 OptionTCPKeepIdle as Integer	390
* 4.10.347 OptionTCPKeepInterval as Integer	390
* 4.10.348 OptionTCPNoDelay as Boolean	391
* 4.10.349 OptionTFTPBlockSize as Integer	391
* 4.10.350 OptionTFTPNoOptions as Integer	392
* 4.10.351 OptionTimeCondition as Integer	392
* 4.10.352 OptionTimeOut as Integer	392
* 4.10.353 OptionTimeOutMS as Integer	393
* 4.10.354 OptionTimeValue as Integer	393
* 4.10.355 OptionTLS13Ciphers as String	393
* 4.10.356 OptionTLSAuthPassword as String	394
* 4.10.357 OptionTLSAuthType as String	394
* 4.10.358 OptionTLSAuthUsername as String	394
* 4.10.359 OptionTransferEncoding as Boolean	394
* 4.10.360 OptionTransferText as Boolean	395
* 4.10.361 OptionUnixSocketPath as String	395
* 4.10.362 OptionUnrestrictedAuth as Boolean	395
* 4.10.363 OptionUpkeepIntervalMS as Integer	396
* 4.10.364 OptionUpload as Boolean	396
* 4.10.365 OptionUploadBufferSize as Integer	397
* 4.10.366 OptionURL as String	397
* 4.10.367 OptionUserAgent as String	398
* 4.10.368 OptionUsername as String	399
* 4.10.369 OptionUseSSL as Integer	399
* 4.10.370 OptionVerbose as Boolean	400

* 4.10.371 OptionWildCardMatch as Boolean	400
* 4.10.372 OptionXOAuth2Bearer as String	401
* 4.10.373 OutputData as String	401
* 4.10.374 Paused as Boolean	402
* 4.10.375 ProgressDownloadCurrent as Int64	402
* 4.10.376 ProgressDownloadTotal as Int64	403
* 4.10.377 ProgressPercent as Double	403
* 4.10.378 ProgressUploadCurrent as Int64	403
* 4.10.379 ProgressUploadTotal as Int64	403
* 4.10.380 Tag as Variant	403
* 4.10.381 Version as CURLNVersionMBS	403
* 4.10.382 WebSocketOptions as Integer	404
* 4.10.383 YieldTime as Boolean	404
* 4.10.385 ChunkBegin(FileInfo as CURLNFileInfoMBS, Remains as Integer) as Integer	405
* 4.10.386 ChunkEnd(FileInfo as CURLNFileInfoMBS, Remains as Integer) as Integer	405
* 4.10.387 DebugMessage(infotype as Integer, data as string, dataSize as Integer)	405
* 4.10.388 FileNameMatch(Pattern as String, Name as String) as Integer	406
* 4.10.389 Finished(Result as Integer)	406
* 4.10.390 Header(data as string, dataSize as Integer) as Integer	406
* 4.10.391 Progress(dltotal as Int64, dlnow as Int64, ultotal as Int64, ulnow as Int64, percent as Double) as boolean	406
* 4.10.392 Read(count as Integer) as string	407
* 4.10.393 RestartRead() as boolean	407
* 4.10.394 Seek(pos as Int64, whence as Integer) as Integer	408
* 4.10.395 SSHKey(KnownKey as string, KnownKeyLength as Integer, KnownKeyType as Integer, FoundKey as string, FoundKeyLength as Integer, FoundKeyType as Integer, MatchStatus as Integer) as Integer	408
* 4.10.396 Write(data as string, dataSize as Integer) as Integer	408
– 4.11.1 class CURLNMimePartMBS	419
* 4.11.3 Constructor	419
* 4.11.4 Headers as String()	419
* 4.11.5 SetHeaders(headers() as String)	419
* 4.11.7 DataMemory as Memoryblock	419
* 4.11.8 DataString as String	420
* 4.11.9 Encoding as String	420
* 4.11.10 File as FolderItem	420
* 4.11.11 FileName as String	420
* 4.11.12 FilePath as String	421
* 4.11.13 Lasterror as Integer	421
* 4.11.14 MimeType as String	421
* 4.11.15 Name as String	421
* 4.11.16 Parent as Variant	421

	27
– 4.13.1 class CURLNMultiMBS	424
* 4.13.3 AddCURL(curl as CURLNMBS, handler as CURLNTransferFinishedMBS = nil) as boolean	424
* 4.13.4 CURLs as CURLNMBS()	424
* 4.13.5 ErrorString(ErrorCode as Integer) as String	424
* 4.13.6 Perform	424
* 4.13.7 RemoveAll	425
* 4.13.8 RemoveCURL(CURL as CURLNMBS) as boolean	425
* 4.13.9 SharedInstance as CURLNMultiMBS	425
* 4.13.11 AutoPerform as Boolean	425
* 4.13.12 ChunkLengthPenaltySize as Int64	426
* 4.13.13 ContentLengthPenaltySize as Int64	426
* 4.13.14 Handle as Integer	426
* 4.13.15 Lasterror as Integer	426
* 4.13.16 MaxConcurrentStreams as Integer	426
* 4.13.17 MaxConnects as Integer	427
* 4.13.18 MaxHostConnections as Integer	427
* 4.13.19 MaxPipelineLength as Integer	427
* 4.13.20 MaxTotalConnections as Integer	427
* 4.13.21 Pipelining as Integer	427
* 4.13.22 RunningTransfers as Integer	427
* 4.13.23 Tag as Variant	428
* 4.13.25 TransferFinished(CURL as CURLNMBS, result as Integer, RemainingFinishedTransfers as Integer)	428
* 4.13.26 TransfersFinished	428
* 4.13.29 CURLNTransferFinishedMBS(curl as CURLNMBS, ErrorCode as Integer)	429
* 4.13.30 CURLNTransferFinishedMBS(curl as CURLNMBS, ErrorCode as Integer)	429
– 4.16.1 class CURLNSSLBackendMBS	433
* 4.16.3 Constructor	433
* 4.16.4 List as CURLNSSLBackendMBS()	433
* 4.16.5 SetSSLBackend(id as Integer) as Integer	433
* 4.16.6 SetSSLBackend(name as string) as Integer	434
* 4.16.8 ID as Integer	435
* 4.16.9 Name as String	435
– 4.17.1 class CURLNURLMBS	436
* 4.17.3 Clone as CURLNURLMBS	436
* 4.17.4 Constructor	436
* 4.17.6 Flags as Integer	436
* 4.17.7 Fragment as String	437
* 4.17.8 Handle as Integer	437
* 4.17.9 Host as String	437

* 4.17.10 Lasterror as Integer	437
* 4.17.11 Options as String	438
* 4.17.12 Password as String	438
* 4.17.13 Path as String	438
* 4.17.14 Port as String	438
* 4.17.15 Query as String	438
* 4.17.16 Scheme as String	439
* 4.17.17 URL as String	439
* 4.17.18 User as String	439
* 4.17.19 ZoneID as String	440
– 4.18.1 class CURLNVersionMBS	442
* 4.18.3 Constructor	442
* 4.18.4 FeatureNames as String()	442
* 4.18.5 Protocol(index as Integer) as string	442
* 4.18.6 Protocols as String()	443
* 4.18.8 brotliVersion as String	443
* 4.18.9 brotliVersionNumber as Integer	443
* 4.18.10 CAInfo as String	443
* 4.18.11 CAPath as String	444
* 4.18.12 Features as Integer	444
* 4.18.13 gsalVersion as String	444
* 4.18.14 Host as String	444
* 4.18.15 hyperVersion as String	444
* 4.18.16 iconvVersionNumber as Integer	445
* 4.18.17 libidnVersion as String	445
* 4.18.18 libsshVersion as String	445
* 4.18.19 LibZVersion as String	445
* 4.18.20 nghttp2Version as String	445
* 4.18.21 nghttp2VersionNumber as Integer	446
* 4.18.22 ProtocolCount as Integer	446
* 4.18.23 quicVersion as String	446
* 4.18.24 SSLVersion as String	446
* 4.18.25 SupportsASYNCHDNS as Boolean	446
* 4.18.26 SupportsBrotli as Boolean	447
* 4.18.27 SupportsConv as Boolean	447
* 4.18.28 SupportsGSSAPI as Boolean	447
* 4.18.29 SupportsGSSNEGOTIATE as Boolean	447
* 4.18.30 SupportsHTTP2 as Boolean	447
* 4.18.31 SupportsHTTP3 as Boolean	448
* 4.18.32 SupportsHTTPSPProxy as Boolean	448
* 4.18.33 SupportsIDN as Boolean	448

* 4.18.34 SupportsIPV6 as Boolean	448
* 4.18.35 SupportsKERBEROS4 as Boolean	449
* 4.18.36 SupportsKerberos5 as Boolean	449
* 4.18.37 SupportsLARGEFILE as Boolean	449
* 4.18.38 SupportsLIBZ as Boolean	449
* 4.18.39 SupportsMultiSSL as Boolean	449
* 4.18.40 SupportsNTLM as Boolean	449
* 4.18.41 SupportsNTLMWB as Boolean	450
* 4.18.42 SupportsPSL as Boolean	450
* 4.18.43 SupportsSPNEGO as Boolean	450
* 4.18.44 SupportsSSL as Boolean	450
* 4.18.45 SupportsSSPI as Boolean	451
* 4.18.46 SupportsTLSAUTHSRP as Boolean	451
* 4.18.47 SupportsUnicode as Boolean	451
* 4.18.48 SupportsUnixSockets as Boolean	451
* 4.18.49 SupportsZSTD as Boolean	451
* 4.18.50 Version as String	452
* 4.18.51 VersionNumber as Integer	452
* 4.18.52 zstdVersion as String	452
* 4.18.53 zstdVersionNumber as Integer	452
– 4.19.1 class CURLNWebSocketFrameMBS	453
* 4.19.3 BytesLeft as Int64	453
* 4.19.4 BytesReceived as Int64	453
* 4.19.5 Data as MemoryBlock	453
* 4.19.6 FlagBinary as Boolean	454
* 4.19.7 FlagClose as Boolean	454
* 4.19.8 FlagContinue as Boolean	454
* 4.19.9 FlagOffset as Boolean	454
* 4.19.10 FlagPing as Boolean	454
* 4.19.11 FlagPong as Boolean	455
* 4.19.12 Flags as Integer	455
* 4.19.13 FlagText as Boolean	455
* 4.19.14 Offset as Int64	455
* 4.19.15 Text as String	455
– 4.20.1 class CURLSFileInfoMBS	457
* 4.20.3 Date as Date	457
* 4.20.4 DateTime as DateTime	458
* 4.20.5 FileName as String	458
* 4.20.6 FileType as Integer	458
* 4.20.7 Flags as Integer	458
* 4.20.8 GID as Integer	458

* 4.20.9 GroupString as String	459
* 4.20.10 HardLinks as Integer	459
* 4.20.11 HasFileName as Boolean	459
* 4.20.12 HasFileType as Boolean	459
* 4.20.13 HasGID as Boolean	459
* 4.20.14 HasHardLinks as Boolean	459
* 4.20.15 HasPermissions as Boolean	460
* 4.20.16 HasSize as Boolean	460
* 4.20.17 HasTime as Boolean	460
* 4.20.18 HasUID as Boolean	460
* 4.20.19 IsDirectory as Boolean	460
* 4.20.20 IsFile as Boolean	461
* 4.20.21 Permissions as Integer	461
* 4.20.22 PermissionString as String	461
* 4.20.23 Size as Int64	461
* 4.20.24 Target as String	461
* 4.20.25 Time as Int64	461
* 4.20.26 TimeString as String	462
* 4.20.27 UID as Integer	462
* 4.20.28 UserString as String	462
– 4.21.1 class CURLSListMBS	464
* 4.21.3 Item(index as Integer) as string	464
* 4.21.4 List as String()	464
* 4.21.5 Operator_Convert as String()	464
* 4.21.7 Count as Integer	464
– 4.22.1 class CURLSMBS	465
* 4.22.3 AddMimePart as CURLSMimePartMBS	467
* 4.22.4 AWSPresignURL(AWSAccessKeyId as String, AWSSecretAccessKey as String, Region as String, Service as String, Path as String, Domain as String, Verb as String = "GET", Expires as Integer = 86400, QueryParameters() as String = nil, Headers() as String = nil) as String	467
* 4.22.5 CipherNames as String()	468
* 4.22.6 ClearData	468
* 4.22.7 CloseMTDebugOutputFile	468
* 4.22.8 CloseMTHHeaderOutputFile	468
* 4.22.9 CloseMTInputFile	468
* 4.22.10 CloseMTOutputFile	469
* 4.22.11 CreateMTDebugOutputFile(file as folderitem) as boolean	469
* 4.22.12 CreateMTDebugOutputFile(Path as String) as boolean	469
* 4.22.13 CreateMTHHeaderOutputFile(file as folderitem) as boolean	469
* 4.22.14 CreateMTHHeaderOutputFile(Path as String) as boolean	470

* 4.22.15 CreateMTOutputFile(file as folderitem) as boolean	470
* 4.22.16 CreateMTOutputFile(Path as String) as boolean	470
* 4.22.17 DigestNames as String()	471
* 4.22.18 FileInfos as CURLSFileInfoMBS()	471
* 4.22.19 FinishMime	471
* 4.22.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string)	472
* 4.22.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string)	473
* 4.22.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer)	474
* 4.22.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer)	474
* 4.22.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string)	475
* 4.22.25 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string)	476
* 4.22.26 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer)	476
* 4.22.27 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string)	479
* 4.22.28 FormAddField(fieldName as String, fieldValue as String, ContentType as String = "")	480
* 4.22.29 FormAddFile(fieldName as String, fileName as String, fileContent as string, ContentType as String = "")	480
* 4.22.30 FormClear	481
* 4.22.31 FormData as String	481
* 4.22.32 FormFinish	481
* 4.22.33 GetInfoActiveSocket as integer	483
* 4.22.34 GetInfoAppConnectTime as Double	483
* 4.22.35 GetInfoCAInfo as string	484
* 4.22.36 GetInfoCAPath as string	484
* 4.22.37 GetInfoCertInfo as CURLSListMBS()	484
* 4.22.38 GetInfoConditionUnmet as Integer	485
* 4.22.39 GetInfoConnectTime as Double	485
* 4.22.40 GetInfoContentLengthDownload as Double	485
* 4.22.41 GetInfoContentLengthUpload as Double	485
* 4.22.42 GetInfoContentType as string	485
* 4.22.43 GetInfoCookieList as CURLSListMBS	486
* 4.22.44 GetInfoEffectiveMethod as string	486

* 4.22.45	GetInfoEffectiveURL as string	486
* 4.22.46	GetInfoFileTime as Integer	486
* 4.22.47	GetInfoFTPEntryPath as string	487
* 4.22.48	GetInfoHeaderSize as Integer	487
* 4.22.49	GetInfoHTTPAuthAvail as Integer	487
* 4.22.50	GetInfoHTTPConnectCode as Integer	487
* 4.22.51	GetInfoHTTPVersion as integer	488
* 4.22.52	GetInfoLastSocket as Integer	488
* 4.22.53	GetInfoLocalIP as string	488
* 4.22.54	GetInfoLocalPort as Integer	488
* 4.22.55	GetInfoNameLookupTime as Double	489
* 4.22.56	GetInfoNumConnects as Integer	489
* 4.22.57	GetInfoOS_errno as Integer	489
* 4.22.58	GetInfoPreTransferTime as Double	489
* 4.22.59	GetInfoPrimaryIP as string	490
* 4.22.60	GetInfoPrimaryPort as Integer	490
* 4.22.61	GetInfoProtocol as integer	490
* 4.22.62	GetInfoProxyAuthAvail as Integer	491
* 4.22.63	GetInfoProxyError as integer	491
* 4.22.64	GetInfoProxySSLVerifyResult as integer	491
* 4.22.65	GetInfoRedirectCount as Integer	491
* 4.22.66	GetInfoRedirectTime as Double	491
* 4.22.67	GetInfoRedirectURL as string	492
* 4.22.68	GetInfoReferer as string	492
* 4.22.69	GetInfoRequestSize as Integer	492
* 4.22.70	GetInfoResponseCode as Integer	492
* 4.22.71	GetInfoRetryAfter as integer	492
* 4.22.72	GetInfoRTSPClientCSEQ as Integer	493
* 4.22.73	GetInfoRTSPCSEQRecv as Integer	493
* 4.22.74	GetInfoRTSPServerCSEQ as Integer	493
* 4.22.75	GetInfoRTSPSessionID as string	493
* 4.22.76	GetInfoScheme as string	493
* 4.22.77	GetInfoSizeDownload as Double	494
* 4.22.78	GetInfoSizeUpload as Double	494
* 4.22.79	GetInfoSpeedDownload as Double	494
* 4.22.80	GetInfoSpeedUpload as Double	494
* 4.22.81	GetInfoSSLEngines as CURLSListMBS	494
* 4.22.82	GetInfoSSLVerifyResult as Integer	495
* 4.22.83	GetInfoStartTransferTime as Double	495
* 4.22.84	GetInfoTotalTime as Double	495
* 4.22.85	LoadAPI	495
* 4.22.86	LoadErrorString as string	495

* 4.22.87 LoadLibrary(file as folderitem) as boolean	496
* 4.22.88 LoadLibrary(path as string) as boolean	496
* 4.22.89 OpenMTInputFile(file as folderitem, Offset as Integer = 0) as boolean	496
* 4.22.90 OpenMTInputFile(Path as String, Offset as Integer = 0) as boolean	497
* 4.22.91 Perform as Integer	498
* 4.22.92 PerformMT as Integer	499
* 4.22.93 ProcessRelativeURL(BaseURL as String, RelativeURL as String) as String	500
* 4.22.94 ReceiveData(byref data as Memoryblock, BytesToRead as Int64) as Int64	501
* 4.22.95 Reset	502
* 4.22.96 SendData(data as Memoryblock) as Integer	502
* 4.22.97 SendData(data as string) as Integer	502
* 4.22.98 SetInputData(data as MemoryBlock)	503
* 4.22.99 SetInputData(data as string)	503
* 4.22.100 SetOptionConnectTo(list() as string)	504
* 4.22.101 SetOptionEmptyPassword	504
* 4.22.102 SetOptionHTTP200Aliases(list() as string)	505
* 4.22.103 SetOptionHTTPHeader(list() as string)	507
* 4.22.104 SetOptionMailRecipients(list() as string)	507
* 4.22.105 SetOptionPostQuote(list() as string)	507
* 4.22.106 SetOptionPreQuote(list() as string)	508
* 4.22.107 SetOptionProxyHeader(list() as string)	508
* 4.22.108 SetOptionQuote(list() as string)	508
* 4.22.109 SetOptionResolve(list() as string)	509
* 4.22.110 SetOptionTelnetOptions(list() as string)	509
* 4.22.111 SetPathCAInfo(path as folderitem)	509
* 4.22.112 SetPathCAPath(path as folderitem)	510
* 4.22.113 SetPathCRLFile(path as folderitem)	510
* 4.22.114 SetPathIssuerCert(path as folderitem)	511
* 4.22.115 SetPathNetRCFile(path as folderitem)	511
* 4.22.116 SetPathProxyIssuerCert(path as folderitem)	511
* 4.22.117 SetupAWS(AWSAccessKeyId as String, AWSSecretAccessKey as String, Region as String, Service as String, Path as String, Domain as String, Verb as String, HashedPayload as String = "", Headers() as String = nil, queryParameters() as string = nil, NoSSL as boolean = false) as boolean	512
* 4.22.118 SetupEmail(email as Variant) as boolean	512
* 4.22.119 SetupOAuth(ConsumerKey as String, ConsumerSecret as String, AccessToken as String, AccessTokenSecret as String, HTTPVerb as String, URL as String, Parameters() as String = nil, Headers() as String = nil, Datas() as String = nil, Nonce as String = "", Timestamp as String = "", HMAC as String = "", Verifier as String = "", Realm as String = "") as boolean	513
* 4.22.120 UpKeep	514
* 4.22.121 UseSystemCertificates as Integer	514
* 4.22.122 WebSocketMeta as CURLSWebSocketFrameMBS	514

* 4.22.123 WebSocketReceive(BufferSize as Integer = 65536) as CURLSWebSocketFrameMBS 514	514
* 4.22.124 WebSocketSend(Data as MemoryBlock, FrameSize as Integer = 0, SendFlags as Integer = 0) as Integer	515
* 4.22.126 APILoaded as Boolean	516
* 4.22.127 Cancel as Boolean	516
* 4.22.128 CollectDebugData as Boolean	516
* 4.22.129 CollectDebugMessages as Boolean	516
* 4.22.130 CollectHeaderData as Boolean	517
* 4.22.131 CollectHeaders as Boolean	517
* 4.22.132 CollectOutputData as Boolean	517
* 4.22.133 DebugData as String	517
* 4.22.134 DebugMessages as String	518
* 4.22.135 DebugWithData as Boolean	518
* 4.22.136 Handle as Integer	518
* 4.22.137 HeaderData as String	518
* 4.22.138 Headers as String	519
* 4.22.139 InputData as String	519
* 4.22.140 Lasterror as Integer	519
* 4.22.141 LastErrorMessage as String	520
* 4.22.142 LasterrorText as String	520
* 4.22.143 LibraryUsed as String	521
* 4.22.144 LibVersion as string	521
* 4.22.145 OptionAbstractUnixSocket as String	521
* 4.22.146 OptionAcceptEncoding as String	522
* 4.22.147 OptionAcceptTimeoutMS as Integer	522
* 4.22.148 OptionAddressScope as Integer	522
* 4.22.149 OptionAppend as Boolean	523
* 4.22.150 OptionAutoReferer as Boolean	523
* 4.22.151 OptionAWSSigV4 as String	523
* 4.22.152 OptionBufferSize as Integer	524
* 4.22.153 OptionCACacheTimeout as Integer	525
* 4.22.154 OptionCAInfo as String	525
* 4.22.155 OptionCAInfoBlob as String	526
* 4.22.156 OptionCAPath as String	526
* 4.22.157 OptionCertInfo as boolean	527
* 4.22.158 OptionConnectionTimeout as Integer	527
* 4.22.159 OptionConnectionTimeOutMS as Integer	528
* 4.22.160 OptionConnectOnly as Integer	528
* 4.22.161 OptionCookie as String	528
* 4.22.162 OptionCookieFile as String	529
* 4.22.163 OptionCookieJar as String	529

* 4.22.164 OptionCookieList as String	530
* 4.22.165 OptionCookieSession as Boolean	530
* 4.22.166 OptionCRLF as Boolean	530
* 4.22.167 OptionCRLFFile as String	531
* 4.22.168 OptionCustomRequest as String	531
* 4.22.169 OptionDefaultProtocol as String	532
* 4.22.170 OptionDirListOnly as Boolean	532
* 4.22.171 OptionDisableUserNameInURL as Boolean	533
* 4.22.172 OptionDNSCacheTimeout as Integer	533
* 4.22.173 OptionDNSInterface as String	533
* 4.22.174 OptionDNSLocalIPv4 as String	533
* 4.22.175 OptionDNSLocalIPv6 as String	534
* 4.22.176 OptionDNSServers as String	534
* 4.22.177 OptionDNSShuffleAddresses as Boolean	534
* 4.22.178 OptionDOHSSLVerifyHost as Integer	534
* 4.22.179 OptionDOHSSLVerifyPeer as Integer	535
* 4.22.180 OptionDOHSSLVerifyStatus as Integer	536
* 4.22.181 OptionDOHURL as String	536
* 4.22.182 OptionEGDSocket as String	537
* 4.22.183 OptionExpect100TimeoutMS as Integer	537
* 4.22.184 OptionFailOnError as Boolean	537
* 4.22.185 OptionFileTime as Boolean	538
* 4.22.186 OptionFollowLocation as Boolean	538
* 4.22.187 OptionForbitReuse as Boolean	539
* 4.22.188 OptionFreshConnect as Boolean	539
* 4.22.189 OptionFTPAccount as String	540
* 4.22.190 OptionFTPAlternativeToUser as String	540
* 4.22.191 OptionFTPAppend as Boolean	540
* 4.22.192 OptionFTPCreateMissingDirs as Integer	540
* 4.22.193 OptionFTPFileMethod as Integer	541
* 4.22.194 OptionFTPListOnly as Boolean	541
* 4.22.195 OptionFTPPort as String	542
* 4.22.196 OptionFTPResponseTimeout as Integer	542
* 4.22.197 OptionFTPSkipPasvIP as Boolean	543
* 4.22.198 OptionFTPSSL as Integer	543
* 4.22.199 OptionFTPSSLAuth as Integer	544
* 4.22.200 OptionFTPSSLCCC as Integer	544
* 4.22.201 OptionFTPUseEPRT as Boolean	545
* 4.22.202 OptionFTPUseEPSV as Boolean	545
* 4.22.203 OptionFTPUsePret as Boolean	545
* 4.22.204 OptionGet as Boolean	547
* 4.22.205 OptionGSSAPIDelegation as Integer	547

* 4.22.206 OptionHappyEyeballsTimeOutMS as Integer	547
* 4.22.207 OptionHAProxyProtocol as Boolean	547
* 4.22.208 OptionHeader as Boolean	548
* 4.22.209 OptionHeaderOptions as Integer	548
* 4.22.210 OptionHTTPAuth as Integer	548
* 4.22.211 OptionHTTPContentDecoding as Integer	549
* 4.22.212 OptionHTTPProxyTunnel as Boolean	550
* 4.22.213 OptionHTTPTransferDecoding as Integer	550
* 4.22.214 OptionHTTPVersion as Integer	550
* 4.22.215 OptionIgnoreContentLength as Boolean	551
* 4.22.216 OptionInFileSize as Int64	551
* 4.22.217 OptionInFileSizeLarge as Int64	552
* 4.22.218 OptionInterface as String	552
* 4.22.219 OptionIPResolve as Integer	552
* 4.22.220 OptionIssuerCert as String	553
* 4.22.221 OptionIssuerCertBlob as String	554
* 4.22.222 OptionKeepSendingOnError as Integer	554
* 4.22.223 OptionKeyPassword as String	554
* 4.22.224 OptionKRB4Level as String	555
* 4.22.225 OptionKRBLLevel as String	555
* 4.22.226 OptionLocalPort as Integer	555
* 4.22.227 OptionLocalPortRange as Integer	555
* 4.22.228 OptionLoginOptions as String	556
* 4.22.229 OptionLowSpeedLimit as Integer	556
* 4.22.230 OptionLowSpeedTime as Integer	556
* 4.22.231 OptionMailAuth as String	557
* 4.22.232 OptionMailFrom as String	557
* 4.22.233 OptionMaxAgeConn as Integer	557
* 4.22.234 OptionMaxConnects as Integer	557
* 4.22.235 OptionMaxFileSize as Int64	558
* 4.22.236 OptionMaxFileSizeLarge as Int64	558
* 4.22.237 OptionMaxLifeTimeConnection as Integer	559
* 4.22.238 OptionMaxRecvSpeed as Int64	559
* 4.22.239 OptionMaxRecvSpeedLarge as Int64	559
* 4.22.240 OptionMaxRedirs as Integer	560
* 4.22.241 OptionMaxSendSpeed as Int64	560
* 4.22.242 OptionMaxSendSpeedLarge as Int64	560
* 4.22.243 OptionMimeOptions as Integer	561
* 4.22.244 OptionNetRC as Integer	562
* 4.22.245 OptionNetRCFile as String	563
* 4.22.246 OptionNewDirectoryPerms as Integer	563
* 4.22.247 OptionNewFilePerms as Integer	563

* 4.22.248 OptionNoBody as Boolean	564
* 4.22.249 OptionNoProxy as String	564
* 4.22.250 OptionNoSignal as Integer	564
* 4.22.251 OptionPassword as String	565
* 4.22.252 OptionPathAsIs as Boolean	565
* 4.22.253 OptionPinnedPublicKey as String	565
* 4.22.254 OptionPipeWait as Boolean	566
* 4.22.255 OptionPort as Integer	566
* 4.22.256 OptionPost as Boolean	566
* 4.22.257 OptionPostFields as String	567
* 4.22.258 OptionPostFieldSize as Int64	568
* 4.22.259 OptionPostFieldSizeLarge as Int64	568
* 4.22.260 OptionPostRedir as Integer	568
* 4.22.261 OptionPreProxy as String	569
* 4.22.262 OptionProtocols as Integer	569
* 4.22.263 OptionProtocolsString as String	569
* 4.22.264 OptionProxy as String	570
* 4.22.265 OptionProxyAuth as Integer	571
* 4.22.266 OptionProxyCAInfo as String	571
* 4.22.267 OptionProxyCAInfoBlob as String	572
* 4.22.268 OptionProxyCAPath as String	572
* 4.22.269 OptionProxyCRLFile as String	572
* 4.22.270 OptionProxyIssuerCert as String	573
* 4.22.271 OptionProxyIssuerCertBlob as String	573
* 4.22.272 OptionProxyKeyPassword as String	574
* 4.22.273 OptionProxyPassword as String	574
* 4.22.274 OptionProxyPinnedPublicKey as String	574
* 4.22.275 OptionProxyPort as Integer	574
* 4.22.276 OptionProxyServiceName as String	575
* 4.22.277 OptionProxySSLCert as String	575
* 4.22.278 OptionProxySSLCertBlob as String	575
* 4.22.279 OptionProxySSLCertType as String	575
* 4.22.280 OptionProxySSLCipherList as String	576
* 4.22.281 OptionProxySSLKey as String	576
* 4.22.282 OptionProxySSLKeyBlob as String	576
* 4.22.283 OptionProxySSLKeyType as String	576
* 4.22.284 OptionProxySSLOptions as Integer	576
* 4.22.285 OptionProxySSLVerifyHost as Integer	577
* 4.22.286 OptionProxySSLVerifyPeer as Integer	577
* 4.22.287 OptionProxySSLVersion as Integer	578
* 4.22.288 OptionProxyTLS13Ciphers as String	579
* 4.22.289 OptionProxyTLSEAuthPassword as String	579

* 4.22.290 OptionProxyTLSAuthType as String	580
* 4.22.291 OptionProxyTLSAuthUsername as String	580
* 4.22.292 OptionProxyTransferMode as Integer	580
* 4.22.293 OptionProxyType as Integer	580
* 4.22.294 OptionProxyUsername as String	581
* 4.22.295 OptionPut as Boolean	581
* 4.22.296 OptionQuickExit as Integer	581
* 4.22.297 OptionRandomFile as String	581
* 4.22.298 OptionRange as String	582
* 4.22.299 OptionRedirProtocols as Integer	582
* 4.22.300 OptionReditProtocolsString as String	583
* 4.22.301 OptionReferer as String	584
* 4.22.302 OptionRequestTarget as String	584
* 4.22.303 OptionResumeFrom as Int64	584
* 4.22.304 OptionResumeFromLarge as Int64	585
* 4.22.305 OptionRTSPClientCSEQ as Integer	585
* 4.22.306 OptionRTSPRequest as Integer	585
* 4.22.307 OptionRTSPServerCSEQ as Integer	585
* 4.22.308 OptionRTSPSessionID as String	585
* 4.22.309 OptionRTSPStreamURI as String	586
* 4.22.310 OptionRTSPTransport as String	586
* 4.22.311 OptionSASLAuthZID as String	586
* 4.22.312 OptionSASLIR as Integer	586
* 4.22.313 OptionServerResponseTimeout as Integer	587
* 4.22.314 OptionServiceName as String	587
* 4.22.315 OptionSocks5Auth as Integer	587
* 4.22.316 OptionSocks5GSSAPINEC as Boolean	587
* 4.22.317 OptionSocks5GSSAPIService as String	588
* 4.22.318 OptionSSHAAuthTypes as Integer	588
* 4.22.319 OptionSSHCompression as Boolean	588
* 4.22.320 OptionSSHHostPublicKeyMD5 as String	588
* 4.22.321 OptionSSHHostPublicKeySHA256 as String	589
* 4.22.322 OptionSSHKnownhosts as String	589
* 4.22.323 OptionSSHPrivateKeyfile as String	589
* 4.22.324 OptionSSHPublicKeyfile as String	590
* 4.22.325 OptionSSLCert as String	590
* 4.22.326 OptionSSLCertBlob as String	591
* 4.22.327 OptionSSLCertPassword as String	591
* 4.22.328 OptionSSLCertType as String	591
* 4.22.329 OptionSSLCipherList as String	592
* 4.22.330 OptionSSLEnableALPN as Integer	592
* 4.22.331 OptionSSLEnableNPN as Integer	592

* 4.22.332 OptionSSLEngine as String	593
* 4.22.333 OptionSSLEngineDefault as Integer	593
* 4.22.334 OptionSSLFalseStart as Integer	593
* 4.22.335 OptionSSLKey as String	593
* 4.22.336 OptionSSLKeyBlob as String	594
* 4.22.337 OptionSSLKeyPassword as String	594
* 4.22.338 OptionSSLKeyType as String	594
* 4.22.339 OptionSSLOptions as Integer	595
* 4.22.340 OptionSSLSessionIDCache as Boolean	595
* 4.22.341 OptionSSLVerifyHost as Integer	595
* 4.22.342 OptionSSLVerifyPeer as Integer	596
* 4.22.343 OptionSSLVerifyStatus as Integer	598
* 4.22.344 OptionSSLVersion as Integer	598
* 4.22.345 OptionStreamDepends as CURLSMBS	599
* 4.22.346 OptionStreamDependsE as CURLSMBS	599
* 4.22.347 OptionStreamWeight as Integer	599
* 4.22.348 OptionSuppressConnectHeaders as Boolean	600
* 4.22.349 OptionTCPFastOpen as Integer	600
* 4.22.350 OptionTCPKeepAlive as Boolean	600
* 4.22.351 OptionTCPKeepIdle as Integer	600
* 4.22.352 OptionTCPKeepInterval as Integer	600
* 4.22.353 OptionTCPNoDelay as Boolean	601
* 4.22.354 OptionTFTPBlockSize as Integer	601
* 4.22.355 OptionTFTPNoOptions as Integer	602
* 4.22.356 OptionTimeCondition as Integer	602
* 4.22.357 OptionTimeOut as Integer	602
* 4.22.358 OptionTimeOutMS as Integer	603
* 4.22.359 OptionTimeValue as Integer	603
* 4.22.360 OptionTLS13Ciphers as String	603
* 4.22.361 OptionTLSAuthPassword as String	604
* 4.22.362 OptionTLSAuthType as String	604
* 4.22.363 OptionTLSAuthUsername as String	604
* 4.22.364 OptionTransferEncoding as Boolean	604
* 4.22.365 OptionTransferText as Boolean	605
* 4.22.366 OptionUnixSocketPath as String	605
* 4.22.367 OptionUnrestrictedAuth as Boolean	605
* 4.22.368 OptionUpkeepIntervalMS as Integer	606
* 4.22.369 OptionUpload as Boolean	606
* 4.22.370 OptionUploadBufferSize as Integer	607
* 4.22.371 OptionURL as String	607
* 4.22.372 OptionUserAgent as String	608
* 4.22.373 OptionUsername as String	609

* 4.22.374 OptionUseSSL as Integer	609
* 4.22.375 OptionVerbose as Boolean	610
* 4.22.376 OptionWildcardMatch as Boolean	610
* 4.22.377 OptionXOAuth2Bearer as String	611
* 4.22.378 OutputData as String	611
* 4.22.379 Paused as Boolean	612
* 4.22.380 ProgressDownloadCurrent as Int64	612
* 4.22.381 ProgressDownloadTotal as Int64	613
* 4.22.382 ProgressPercent as Double	613
* 4.22.383 ProgressUploadCurrent as Int64	613
* 4.22.384 ProgressUploadTotal as Int64	613
* 4.22.385 Tag as Variant	613
* 4.22.386 Version as CURLSVersionMBS	613
* 4.22.387 WebSocketOptions as Integer	614
* 4.22.388 YieldTime as Boolean	614
* 4.22.390 ChunkBegin(FileInfo as CURLSFileInfoMBS, Remains as Integer) as Integer	615
* 4.22.391 ChunkEnd(FileInfo as CURLSFileInfoMBS, Remains as Integer) as Integer	615
* 4.22.392 DebugMessage(infotype as Integer, data as string, dataSize as Integer)	615
* 4.22.393 FileNameMatch(Pattern as String, Name as String) as Integer	616
* 4.22.394 Finished(Result as Integer)	616
* 4.22.395 Header(data as string, dataSize as Integer) as Integer	616
* 4.22.396 Progress(dltotal as Int64, dlnow as Int64, ultotal as Int64, ulnow as Int64, percent as Double) as boolean	616
* 4.22.397 Read(count as Integer) as string	617
* 4.22.398 RestartRead() as boolean	617
* 4.22.399 Seek(pos as Int64, whence as Integer) as Integer	618
* 4.22.400 SSHKey(KnownKey as string, KnownKeyLength as Integer, KnownKeyType as Integer, FoundKey as string, FoundKeyLength as Integer, FoundKeyType as Integer, MatchStatus as Integer) as Integer	618
* 4.22.401 Write(data as string, dataSize as Integer) as Integer	618
– 4.23.1 class CURLSMimePartMBS	629
* 4.23.3 Constructor	629
* 4.23.4 Headers as String()	629
* 4.23.5 SetHeaders(headers() as String)	629
* 4.23.7 DataMemory as Memoryblock	630
* 4.23.8 DataString as String	630
* 4.23.9 Encoding as String	630
* 4.23.10 File as FolderItem	631
* 4.23.11 FileName as String	631
* 4.23.12 FilePath as String	631
* 4.23.13 Lasterror as Integer	631
* 4.23.14 MimeType as String	631

	41
* 4.23.15 Name as String	632
* 4.23.16 Parent as Variant	632
– 4.25.1 class CURLSMultiMBS	634
* 4.25.3 AddCURL(curl as CURLSMBS, handler as CURLSTransferFinishedMBS = nil) as boolean	634
* 4.25.4 CURLs as CURLSMBS()	635
* 4.25.5 ErrorString(ErrorCode as Integer) as String	635
* 4.25.6 Perform	635
* 4.25.7 RemoveAll	635
* 4.25.8 RemoveCURL(CURL as CURLSMBS) as boolean	635
* 4.25.9 SharedInstance as CURLSMultiMBS	636
* 4.25.11 AutoPerform as Boolean	636
* 4.25.12 ChunkLengthPenaltySize as Int64	636
* 4.25.13 ContentLengthPenaltySize as Int64	636
* 4.25.14 Handle as Integer	636
* 4.25.15 Lasterror as Integer	637
* 4.25.16 MaxConcurrentStreams as Integer	637
* 4.25.17 MaxConnects as Integer	637
* 4.25.18 MaxHostConnections as Integer	637
* 4.25.19 MaxPipelineLength as Integer	637
* 4.25.20 MaxTotalConnections as Integer	638
* 4.25.21 Pipelining as Integer	638
* 4.25.22 RunningTransfers as Integer	638
* 4.25.23 Tag as Variant	638
* 4.25.25 TransferFinished(CURL as CURLSMBS, result as Integer, RemainingFinishedTransfers as Integer)	638
* 4.25.26 TransfersFinished	639
* 4.25.29 CURLSTransferFinishedMBS(curl as CURLSMBS, ErrorCode as Integer)	640
– 4.27.1 class CURLSSLBackendMBS	642
* 4.27.3 Constructor	642
* 4.27.4 List as CURLSSLBackendMBS()	642
* 4.27.5 SetSSLBackend(id as Integer) as Integer	642
* 4.27.6 SetSSLBackend(name as string) as Integer	643
* 4.27.8 ID as Integer	644
* 4.27.9 Name as String	644
– 4.28.1 class CURLSSSLBackendMBS	645
* 4.28.3 Constructor	645
* 4.28.4 List as CURLSSSLBackendMBS()	645
* 4.28.5 SetSSLBackend(id as Integer) as Integer	646
* 4.28.6 SetSSLBackend(name as string) as Integer	646
* 4.28.8 ID as Integer	647

* 4.28.9 Name as String	647
– 4.29.1 class CURLSURLMBS	649
* 4.29.3 Clone as CURLSURLMBS	649
* 4.29.4 Constructor	650
* 4.29.6 Flags as Integer	650
* 4.29.7 Fragment as String	650
* 4.29.8 Handle as Integer	650
* 4.29.9 Host as String	651
* 4.29.10 Lasterror as Integer	651
* 4.29.11 Options as String	651
* 4.29.12 Password as String	651
* 4.29.13 Path as String	651
* 4.29.14 Port as String	652
* 4.29.15 Query as String	652
* 4.29.16 Scheme as String	652
* 4.29.17 URL as String	652
* 4.29.18 User as String	653
* 4.29.19 ZoneID as String	653
– 4.30.1 class CURLSVersionMBS	655
* 4.30.3 Constructor	655
* 4.30.4 FeatureNames as String()	655
* 4.30.5 Protocol(index as Integer) as string	656
* 4.30.6 Protocols as String()	656
* 4.30.8 brotliVersion as String	656
* 4.30.9 brotliVersionNumber as Integer	657
* 4.30.10 CAInfo as String	657
* 4.30.11 CAPath as String	657
* 4.30.12 Features as Integer	657
* 4.30.13 gsslVersion as String	657
* 4.30.14 Host as String	658
* 4.30.15 hyperVersion as String	658
* 4.30.16 iconvVersionNumber as Integer	658
* 4.30.17 libidnVersion as String	658
* 4.30.18 libsshVersion as String	658
* 4.30.19 LibZVersion as String	659
* 4.30.20 nghttp2Version as String	659
* 4.30.21 nghttp2VersionNumber as Integer	659
* 4.30.22 ProtocolCount as Integer	659
* 4.30.23 quicVersion as String	659
* 4.30.24 SSLVersion as String	660
* 4.30.25 SupportsASYNCHDNS as Boolean	660

* 4.30.26 SupportsBrotli as Boolean	660
* 4.30.27 SupportsConv as Boolean	660
* 4.30.28 SupportsGSSAPI as Boolean	660
* 4.30.29 SupportsGSSNEGOTIATE as Boolean	661
* 4.30.30 SupportsHTTP2 as Boolean	661
* 4.30.31 SupportsHTTP3 as Boolean	661
* 4.30.32 SupportsHTTPSProxy as Boolean	661
* 4.30.33 SupportsIDN as Boolean	662
* 4.30.34 SupportsIPV6 as Boolean	662
* 4.30.35 SupportsKERBEROS4 as Boolean	662
* 4.30.36 SupportsKerberos5 as Boolean	662
* 4.30.37 SupportsLARGEFILE as Boolean	662
* 4.30.38 SupportsLIBZ as Boolean	662
* 4.30.39 SupportsMultiSSL as Boolean	663
* 4.30.40 SupportsNTLM as Boolean	663
* 4.30.41 SupportsNTLMWB as Boolean	663
* 4.30.42 SupportsPSL as Boolean	663
* 4.30.43 SupportsSPNEGO as Boolean	664
* 4.30.44 SupportsSSL as Boolean	664
* 4.30.45 SupportsSSPI as Boolean	664
* 4.30.46 SupportsTLSAUTHSRP as Boolean	664
* 4.30.47 SupportsUnicode as Boolean	664
* 4.30.48 SupportsUnixSockets as Boolean	665
* 4.30.49 SupportsZSTD as Boolean	665
* 4.30.50 Version as String	665
* 4.30.51 VersionNumber as Integer	665
* 4.30.52 zstdVersion as String	665
* 4.30.53 zstdVersionNumber as Integer	666
– 4.31.1 class CURLSWebSocketFrameMBS	667
* 4.31.3 BytesLeft as Int64	667
* 4.31.4 BytesReceived as Int64	667
* 4.31.5 Data as MemoryBlock	667
* 4.31.6 FlagBinary as Boolean	668
* 4.31.7 FlagClose as Boolean	668
* 4.31.8 FlagContinue as Boolean	668
* 4.31.9 FlagOffset as Boolean	668
* 4.31.10 FlagPing as Boolean	668
* 4.31.11 FlagPong as Boolean	669
* 4.31.12 Flags as Integer	669
* 4.31.13 FlagText as Boolean	669
* 4.31.14 Offset as Int64	669

* 4.31.15 Text as String	669
– 4.32.1 class CURLURLMBS	671
* 4.32.3 Clone as CURLURLMBS	671
* 4.32.4 Constructor	671
* 4.32.6 Flags as Integer	671
* 4.32.7 Fragment as String	672
* 4.32.8 Handle as Integer	672
* 4.32.9 Host as String	672
* 4.32.10 Lasterror as Integer	672
* 4.32.11 Options as String	673
* 4.32.12 Password as String	673
* 4.32.13 Path as String	673
* 4.32.14 Port as String	673
* 4.32.15 Query as String	673
* 4.32.16 Scheme as String	674
* 4.32.17 URL as String	674
* 4.32.18 User as String	674
* 4.32.19 ZoneID as String	675
– 4.33.1 class CURLVersionMBS	677
* 4.33.3 Constructor	677
* 4.33.4 FeatureNames as String()	677
* 4.33.5 Protocol(index as Integer) as string	677
* 4.33.6 Protocols as String()	678
* 4.33.8 brotliVersion as String	678
* 4.33.9 brotliVersionNumber as Integer	678
* 4.33.10 CAInfo as String	678
* 4.33.11 CAPath as String	679
* 4.33.12 Features as Integer	679
* 4.33.13 gsslVersion as String	679
* 4.33.14 Host as String	679
* 4.33.15 hyperVersion as String	679
* 4.33.16 iconvVersionNumber as Integer	680
* 4.33.17 libidnVersion as String	680
* 4.33.18 libsshVersion as String	680
* 4.33.19 LibZVersion as String	680
* 4.33.20 nghttp2Version as String	680
* 4.33.21 nghttp2VersionNumber as Integer	681
* 4.33.22 ProtocolCount as Integer	681
* 4.33.23 quicVersion as String	681
* 4.33.24 SSLVersion as String	681
* 4.33.25 SupportsASYNCHDNS as Boolean	681

* 4.33.26 SupportsBrotli as Boolean	682
* 4.33.27 SupportsConv as Boolean	682
* 4.33.28 SupportsGSSAPI as Boolean	682
* 4.33.29 SupportsGSSNEGOTIATE as Boolean	682
* 4.33.30 SupportsHTTP2 as Boolean	682
* 4.33.31 SupportsHTTP3 as Boolean	683
* 4.33.32 SupportsHTTPSProxy as Boolean	683
* 4.33.33 SupportsIDN as Boolean	683
* 4.33.34 SupportsIPV6 as Boolean	683
* 4.33.35 SupportsKERBEROS4 as Boolean	684
* 4.33.36 SupportsKerberos5 as Boolean	684
* 4.33.37 SupportsLARGEFILE as Boolean	684
* 4.33.38 SupportsLIBZ as Boolean	684
* 4.33.39 SupportsMultiSSL as Boolean	684
* 4.33.40 SupportsNTLM as Boolean	684
* 4.33.41 SupportsNTLMWB as Boolean	685
* 4.33.42 SupportsPSL as Boolean	685
* 4.33.43 SupportsSPNEGO as Boolean	685
* 4.33.44 SupportsSSL as Boolean	685
* 4.33.45 SupportsSSPI as Boolean	686
* 4.33.46 SupportsTLSAUTHSRP as Boolean	686
* 4.33.47 SupportsUnicode as Boolean	686
* 4.33.48 SupportsUnixSockets as Boolean	686
* 4.33.49 SupportsZSTD as Boolean	686
* 4.33.50 Version as String	687
* 4.33.51 VersionNumber as Integer	687
* 4.33.52 zstdVersion as String	687
* 4.33.53 zstdVersionNumber as Integer	687
– 4.34.1 class CURLWebSocketFrameMBS	688
* 4.34.3 BytesLeft as Int64	688
* 4.34.4 BytesReceived as Int64	688
* 4.34.5 Data as MemoryBlock	688
* 4.34.6 FlagBinary as Boolean	689
* 4.34.7 FlagClose as Boolean	689
* 4.34.8 FlagContinue as Boolean	689
* 4.34.9 FlagOffset as Boolean	689
* 4.34.10 FlagPing as Boolean	689
* 4.34.11 FlagPong as Boolean	690
* 4.34.12 Flags as Integer	690
* 4.34.13 FlagText as Boolean	690
* 4.34.14 Offset as Int64	690
* 4.34.15 Text as String	690

• 5 EmailParser	695
– 5.1.1 class MimeAddressListMBS	695
* 5.1.3 Addresses as MimeAddressMBS()	695
* 5.1.4 Addresses(index as Integer) as MimeAddressMBS	695
* 5.1.5 Constructor(TextToParse as String)	696
* 5.1.7 AddressesVariant as Variant	696
* 5.1.8 Count as Integer	696
* 5.1.9 StringValue as String	696
– 5.2.1 class MimeAddressMBS	697
* 5.2.3 Constructor(TextToParse as String)	697
* 5.2.5 Group as MimeGroupMBS	697
* 5.2.6 isGroup as Boolean	697
* 5.2.7 Mailbox as MimeMailboxMBS	698
* 5.2.8 StringValue as String	698
– 5.3.1 class MimeAttachmentMBS	699
* 5.3.3 Constructor	699
* 5.3.5 Body as MimeBodyMBS	699
* 5.3.6 ContentDescription as String	699
* 5.3.7 ContentDisposition as String	700
* 5.3.8 contentId as String	700
* 5.3.9 ContentTransferEncoding as String	700
* 5.3.10 ContentType as String	700
* 5.3.11 Data as String	700
* 5.3.12 Filename as String	701
* 5.3.13 Header as MimeHeaderMBS	701
* 5.3.14 MimeType as String	701
* 5.3.15 MimeVersion as String	701
– 5.4.1 class MimeBodyMBS	702
* 5.4.3 Constructor	702
* 5.4.4 Parts as MimeEntityMBS()	702
* 5.4.5 Parts(index as Integer) as MimeEntityMBS	702
* 5.4.7 epilogue as String	703
* 5.4.8 PartsVariant as Variant	703
* 5.4.9 preamble as String	703
* 5.4.10 StringValue as String	703
– 5.5.1 class MimeEmailMBS	704
* 5.5.3 Attachments as MimeAttachmentMBS()	704
* 5.5.4 Attachments(index as Integer) as MimeAttachmentMBS	705
* 5.5.5 Constructor(Content as MemoryBlock)	705
* 5.5.6 Constructor(Content as string)	705

	47
* 5.5.7 Constructor(File as FolderItem)	706
* 5.5.8 DecodeInline(Text as String) as String	706
* 5.5.9 HTMLToPlainText(HTMLText as String) as String	707
* 5.5.10 Inlines as MimeAttachmentMBS()	707
* 5.5.11 Inlines(index as Integer) as MimeAttachmentMBS	707
* 5.5.13 AttachmentsVariant as Variant	708
* 5.5.14 Date as Date	708
* 5.5.15 HTMLText as String	708
* 5.5.16 InlinesVariant as Variant	708
* 5.5.17 PlainText as String	709
* 5.5.18 RaiseUnknownFormatExceptions as Boolean	709
* 5.5.19 ReceivedDate as Date	709
* 5.5.20 Source as String	710
* 5.5.21 Subject as String	710
– 5.6.1 class MimeEntityMBS	711
* 5.6.3 Constructor	711
* 5.6.5 Body as MimeBodyMBS	711
* 5.6.6 BodyDecoded as String	711
* 5.6.7 Header as MimeHeaderMBS	711
– 5.7.1 class MimeFieldMBS	713
* 5.7.3 Constructor(TextToParse as String)	713
* 5.7.5 Name as String	713
* 5.7.6 Value as String	713
– 5.8.1 class MimeGroupMBS	714
* 5.8.3 Constructor(TextToParse as String)	714
* 5.8.4 Mailboxes as MimeMailboxMBS()	714
* 5.8.5 Mailboxes(index as Integer) as MimeMailboxMBS	714
* 5.8.7 Count as Integer	715
* 5.8.8 MailboxesVariant as Variant	715
* 5.8.9 Name as String	715
* 5.8.10 NameDecoded as String	716
* 5.8.11 StringValue as String	716
– 5.9.1 class MimeHeaderMBS	717
* 5.9.3 Constructor	717
* 5.9.4 FieldByName(name as string) as MimeFieldMBS	717
* 5.9.5 Fields as MimeFieldMBS()	717
* 5.9.6 Fields(index as Integer) as MimeFieldMBS	718
* 5.9.7 hasField(name as string) as boolean	718
* 5.9.9 bcc as MimeAddressListMBS	718
* 5.9.10 cc as MimeAddressListMBS	719
* 5.9.11 ContentDescription as String	719

* 5.9.12	ContentDisposition as String	720
* 5.9.13	contentId as String	720
* 5.9.14	ContentTransferEncoding as String	720
* 5.9.15	ContentTransferEncodingMechanism as String	720
* 5.9.16	ContentType as String	721
* 5.9.17	from as MimeMailboxListMBS	721
* 5.9.18	messageid as String	721
* 5.9.19	MimeVersion as String	722
* 5.9.20	replyto as MimeAddressListMBS	722
* 5.9.21	sender as MimeMailboxMBS	723
* 5.9.22	subject as String	723
* 5.9.23	subjectDecoded as String	723
* 5.9.24	too as MimeAddressListMBS	724
– 5.10.1	class MimeMailboxListMBS	725
* 5.10.3	Constructor(TextToParse as String)	725
* 5.10.4	Mailboxes as MimeMailboxMBS()	725
* 5.10.5	Mailboxes(index as Integer) as MimeMailboxMBS	725
* 5.10.7	Count as Integer	726
* 5.10.8	MailboxesVariant as Variant	726
* 5.10.9	StringValue as String	726
– 5.11.1	class MimeMailboxMBS	727
* 5.11.3	Constructor(TextToParse as String)	727
* 5.11.5	Domain as String	727
* 5.11.6	Email as String	727
* 5.11.7	Label as String	728
* 5.11.8	LabelDecoded as String	728
* 5.11.9	Mailbox as String	728
* 5.11.10	Sourceroute as String	728
* 5.11.11	StringValue as String	728

	49
• 4 CURL	55
– ?? Globals	??
* 4.35.1 FileExtensionToMimeTypeMBS(FileExtension as String) as string	692
* 4.35.2 MimeTypeToFileExtensionMBS(MimeType as String) as string	692

Chapter 2

List of all classes

• CURLEmailMBS	55
• CURLFileInfoMBS	71
• CURLListMBS	77
• CURLMBS	78
• CURLMimePartMBS	239
• CURLMissingFunctionExceptionMBS	243
• CURLMultiMBS	244
• CURLNFileInfoMBS	250
• CURLNListMBS	256
• CURLNMBS	257
• CURLNMimePartMBS	419
• CURLNMissingFunctionExceptionMBS	423
• CURLNMultiMBS	424
• CURLNNotInitializedExceptionMBS	431
• CURLNNotInitializedExceptionMBS	432
• CURLNSSLBackendMBS	433
• CURLNURLMBS	436
• CURLNVersionMBS	442
• CURLNWebSocketFrameMBS	453

• CURLSFileInfoMBS	457
• CURLSListMBS	464
• CURLSMBS	465
• CURLSMimePartMBS	629
• CURLSMissingFunctionExceptionMBS	633
• CURLSMultiMBS	634
• CURLSNotInitializedExceptionMBS	641
• CURLSSLBackendMBS	642
• CURLSSSLBackendMBS	645
• CURLSURLMBS	649
• CURLSVersionMBS	655
• CURLSWebSocketFrameMBS	667
• CURLURLMBS	671
• CURLVersionMBS	677
• CURLWebSocketFrameMBS	688
• MimeAddressListMBS	695
• MimeAddressMBS	697
• MimeAttachmentMBS	699
• MimeBodyMBS	702
• MimeEmailMBS	704
• MimeEntityMBS	711
• MimeFieldMBS	713
• MimeGroupMBS	714
• MimeHeaderMBS	717
• MimeMailboxListMBS	725
• MimeMailboxMBS	727

Chapter 3

List of all global methods

- 4.35.1 FileExtensionToMimeTypeMBS(FileExtension as String) as string 692
- 4.35.2 MimeTypeToFileExtensionMBS(MimeType as String) as string 692

Chapter 4

CURL

4.1 class CURLEmailMBS

4.1.1 class CURLEmailMBS

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Our plugin class to help building and sending emails.

Example:

```
dim e as new CURLEmailMBS

e.SetFrom "test@test.test", "christian Müller"
e.Subject = "Hello World ,òÔè"
e.SMTPPassword = "xxx"
e.SMTPUsername = "xxx"
e.SetServer "smtp.test.test", true
e.AddTo "test@test.test", "Test Müller"
e.PlainText = "Hello World," + EndOfLine + "Smilies: ,òÔè üòò üòÑ"

dim c as new CURLSMBS

if c.SetupEmail(e) then

dim er as Integer = c.Perform
if er = 0 then
MsgBox "Email sent"
end if
end if
```

Notes: Please make sure you set from, to, subject, plaintext to have a minimum email always. If your email misses required fields, the email server may silently discard it.

Blog Entries

- [MBS Xojo Plugins, version 24.1pr5](#)
- [News from the MBS Xojo Plugins Version 24.0](#)
- [MonkeyBread Software Releases the MBS Xojo Plugins in version 24.0](#)
- [Sending email via gmail](#)
- [Upload email to Sent folder via IMAP](#)
- [SMTP Server Settings](#)
- [SMTP Server Settings](#)
- [Differences between CURLMBS and CURLSMBS classes](#)
- [MBS Releases the MBS Xojo / Real Studio plug-ins in version 16.1](#)
- [\[ANN \] MonkeyBread Software Releases the MBS Xojo / Real Studio plug-ins in version 14.4](#)

Xojo Developer Magazine

- [22.2, page 9: News](#)
- [20.1, page 63: Send Your Emails, How to use the MBS Xojo plugins to send emails by Stefanie Juchmes](#)

4.1.2 Methods

4.1.3 `AddAttachment(data as MemoryBlock, name as string, type as string = "", InlineID as string = "", ContentTypeMethod as String = "")`

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds an attachment to the email.

Notes: name: The name for the attachment.

type: Optional, the mime type to use. e.g. "application/pdf" for PDF files. If missing, we use "application/octet-stream".

data: The data to include.

For best results use attachment sizes below 50 MB.

The plugin will encode your data as Base64. If you want to attach a picture, you can use `PictureToPNGStringMBS` (mime type "image/png") or `PictureToJPEGStringMBS` (mime type "image/jpeg") to encode a picture.

Version 15.0 of MBS Plugin can encode file name for preserving non ASCII characters. Still for compatibility it is recommended to use simply ASCII names.

If InlineID is set, we include the attachment for inlining. Please pass content ID (cID).

Empty text or no parameter gives regular attachment.

You can use AddAttachment several times to add several attachments.

The optional ContentTypeMethod parameter allows to specify the method value for the content-type header. Currently only for sending calendar invitations.

See also:

- 4.1.4 AddAttachment(data as string, name as string, type as string = "", InlineID as string = "", ContentTypeMethod as String = "") 57
- 4.1.5 AddAttachment(file as FolderItem, name as string = "", type as string = "", InlineID as string = "", ContentTypeMethod as String = "") 58

4.1.4 AddAttachment(data as string, name as string, type as string = "", InlineID as string = "", ContentTypeMethod as String = "")

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds an attachment to the email.

Notes: name: The name for the attachment.

type: Optional, the mime type to use. e.g. "application/pdf" for PDF files. If missing, we use "application/octet-stream".

data: The data to include.

For best results use attachment sizes below 50 MB.

The plugin will encode your data as Base64. If you want to attach a picture, you can use PictureToPNGStringMBS (mime type "image/png") or PictureToJPEGStringMBS (mime type "image/jpeg") to encode a picture.

Version 15.0 of MBS Plugin can encode file name for preserving non ASCII characters. Still for compatibility it is recommended to use simply ASCII names.

If InlineID is set, we include the attachment for inlining. Please pass content ID (cID).

Empty text or no parameter gives regular attachment.

You can use AddAttachment several times to add several attachments.

The optional ContentTypeMethod parameter allows to specify the method value for the content-type header. Currently only for sending calendar invitations.

See also:

- 4.1.3 AddAttachment(data as MemoryBlock, name as string, type as string = "", InlineID as string = "", ContentTypeMethod as String = "") 56
- 4.1.5 AddAttachment(file as FolderItem, name as string = "", type as string = "", InlineID as string = "", ContentTypeMethod as String = "") 58

4.1.5 AddAttachment(file as FolderItem, name as string = "", type as string = "", InlineID as string = "", ContentTypeMethod as String = "")

Plugin Version: 16.1, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds an attachment to the email.

Notes: name: The name for the attachment. If empty, version 16.2 uses file name from folderitem.

type: Optional, the mime type to use. e.g. "application/pdf" for PDF files. If missing, we use "application/octet-stream".

file: The file to use. This file is read and content used for attachment.

For best results use attachment sizes below 50 MB.

The plugin will encode your data as Base64. If you want to attach a picture, you can use PictureToPNGStringMBS (mime type "image/png") or PictureToJPEGStringMBS (mime type "image/jpeg") to encode a picture.

Version 15.0 of MBS Plugin can encode file name for preserving non ASCII characters. Still for compatibility it is recommended to use simply ASCII names.

If InlineID is set, we include the attachment for inlining. Please pass content ID (cID).

Empty text or no parameter gives regular attachment.

You can use AddAttachment several times to add several attachments.

The optional ContentTypeMethod parameter allows to specify the method value for the content-type header. Currently only for sending calendar invitations.

See also:

- 4.1.3 AddAttachment(data as MemoryBlock, name as string, type as string = "", InlineID as string = "", ContentTypeMethod as String = "") 56
- 4.1.4 AddAttachment(data as string, name as string, type as string = "", InlineID as string = "", ContentTypeMethod as String = "") 57

4.1.6 AddBcc(email as string, name as string)

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds a blind copy recipient.

Example:

4.1. CLASS CURLEMAILMBS

```
dim e as new CURLEmailMBS
```

```
e.AddBcc "test@monkeybreadsoftware.test", "Test Müller"
```

```
dim Bccs() as string = e.Bccs
MsgBox Bccs(0)
```

Notes: Please pass email and optionally name of recipient.
If this name contains special characters, it will be automatically encoded with UTF-8.

4.1.7 Addcc(email as string, name as string)

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds a copy recipient.

Example:

```
dim e as new CURLEmailMBS
```

```
e.Addcc "test@monkeybreadsoftware.test", "Test Müller"
```

```
dim ccs() as string = e.ccs
MsgBox ccs(0)
```

Notes: Please pass email and optionally name of recipient.
If this name contains special characters, it will be automatically encoded with UTF-8.

4.1.8 AddHeader(header as string)

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds a header entry.

Example:

```
dim e as new CURLEmailMBS
```

```
e.AddHeader "X-company: My company, Inc."
```

```
dim Headers() as string = e.Headers
MsgBox Headers(0)
```

Notes: This header is passed as is and not preprocessed.

You can use this function to pass custom headers for "X-Universally-Unique-Identifier:", "Date:", "X-Mailer:", "Message-Id:" and "Mime-Version:".

If you pass header without text following ":", the header is not included.

4.1.9 AddReplyTo(email as string, name as string)

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds a recipient for a reply.

Example:

```
dim e as new CURLEmailMBS
```

```
e.AddReplyTo "test@monkeybreadsoftware.test", "Test Müller"
```

```
dim ReplyTos() as string = e.ReplyTOs
```

```
MsgBox ReplyTos(0)
```

Notes: Please pass email and optionally name of recipient.

If this name contains special characters, it will be automatically encoded with UTF-8.

4.1.10 AddTo(email as string, name as string)

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds a recipient.

Example:

```
dim e as new CURLEmailMBS
```

```
e.AddTo "test@monkeybreadsoftware.test", "Test Müller"
```

```
dim TOs() as string = e.TOs
```

```
MsgBox TOs(0)
```

Notes: Please pass email and optionally name of recipient.

If this name contains special characters, it will be automatically encoded with UTF-8.

4.1. CLASS CURLEMAILMBS

4.1.11 Bccs as String()

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of Bcc recipients.

Example:

```
dim e as new CURLEmailMBS

e.AddBcc "test@monkeybreadsoftware.test", "Test Müller"
```

```
dim Bccs() as string = e.Bccs
MsgBox Bccs(0)
```

Notes: Entries may be encoded if necessary.

4.1.12 ccs as String()

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of cc recipients.

Example:

```
dim e as new CURLEmailMBS

e.Addcc "test@monkeybreadsoftware.test", "Test Müller"
```

```
dim ccs() as string = e.ccs
MsgBox ccs(0)
```

Notes: Entries may be encoded if necessary.

4.1.13 clearAttachments

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Clears all attachments from this email.

Notes: Useful in case you want to send same email with different attachments to another recipient.

4.1.14 ClearHeaders

Plugin Version: 16.1, Platforms: macOS, Linux, Windows, Targets: All.

Function: Clears all headers from this email.

Notes: Useful in case you want to send same email with different headers to another recipient.

4.1.15 clearRecipients

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: clears all recipients.

Notes: Removes all TO, cc, Bcc and ReplyTO entries.

Useful in case you want to send same email to another recipient.

4.1.16 constructor(Encoding as string = "UTF-8")

Plugin Version: 14.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: The constructor.

Notes: Normally, ignore parameter and use UTF-8.

But alternative you can pass: UTF-8, ASCII, MacRoman, Latin1 or Windows.

4.1.17 EmailSource as string

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries the source code for the email.

Notes: This is more for debugging, than for real use.

You can write this into a EML file.

4.1.18 Headers as String()

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of extra header entries.

Example:

```
dim e as new CURLEmailMBS
```

```
e.AddHeader "X-company: My company, Inc."
```

```
dim Headers() as string = e.Headers  
MsgBox Headers(0)
```

4.1.19 ReplyTOs as String()

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of ReplyTo recipients.

Example:

```
dim e as new CURLEmailMBS  
  
e.AddReplyTo "test@monkeybreadsoftware.test", "Test Müller"  
  
dim ReplyTos() as string = e.ReplyTOs  
MsgBox ReplyTos(0)
```

Notes: Entries may be encoded if necessary.

4.1.20 SetFrom(email as string, name as string)

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the email from address.

Example:

```
dim e as new CURLEmailMBS  
  
e.SetFrom "test@test.test", "christian Müller"
```

Notes: Please pass email and name of the recipient. If this name contains special characters, it will be automatically encoded with UTF-8.

4.1.21 SetServer(server as string, UseSSL as boolean = false)

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the server to use.

Example:

```
dim e as new CURLEmailMBS
```

```
e.SMTPPassword = "rGc3_mdyjR%k"
e.SMTPUsername = "sammler@monkeybreadsoftware.de"
e.SetServer "smtprelaypool.ispgateway.de", true
```

Notes: Sets which SMTP server to use.

There are a few combinations possible.

First you can use SetServer with SSL and pass true for UseURL parameter.

Or you pass false for no SSL. Still you can use CURL's OptionFTPSSL set to 3 to allow TLS for an upgrade of the unencrypted connection to SSL later.

Some servers don't support unencrypted, SSL or TLS, so only one may work.

And ports can be difficult, too. You can use CURL OptionPort to set a port explicit or include it in the server with double colon on the end. common ports are 25, 587 or 465.

Port 465 usually Requires UseSSL=true, but other ports need UseSSL=false.
Sets UseSSL property.

4.1.22 TOs as String()

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of TO recipients.

Example:

```
dim e as new CURLEmailMBS
```

```
e.AddTo "test@monkeybreadsoftware.test", "Test Müller"
```

```
dim TOs() as string = e.TOs
MsgBox TOs(0)
```

Notes: Entries may be encoded if necessary.

4.1.23 Properties

4.1.24 Attachmentcount as Integer

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Returns number of attachments.

Notes: (Read only property)

4.1.25 BoundaryName as String

Plugin Version: 17.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Optional name to use in boundaries for MIME parts.

Notes: by default MBS Plugin.
(Read and Write property)

4.1.26 EncodingName as String

Plugin Version: 24.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The encoding used.

Notes: The property is there for you to inspect in debugger.
Set only via Constructor.
(Read only property)

4.1.27 FromEmail as String

Plugin Version: 24.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The from address with name.

Notes: The property is there for you to inspect in debugger.
(Read only property)

4.1.28 HeaderList as String

Plugin Version: 24.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The list of header entries.

Notes: The property is there for you to inspect in debugger.

(Read only property)

4.1.29 HTMLText as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The HTML text of the email.

Notes: This text is encoded as quoted printable UTF-8 text.

(Read and Write property)

4.1.30 InReplyTo as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The in reply to message ID.

Notes: Here you can define the message ID of the email you reply to.

(Read and Write property)

4.1.31 MessageID as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets a custom message ID.

Notes: The plugin normally creates one by default when setting from address.

(Read and Write property)

4.1.32 PlainText as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The plain text of the email.

Example:

```
dim e as new CURLEmailMBS
e.PlainText = "Hello World," + EndOfLine + "Smilies: ,òÔè ùòò ùòÑ"
```

Notes: This text is encoded as quoted printable UTF-8 text.

(Read and Write property)

4.1. CLASS CURLEMAILMBS

4.1.33 RecipientsBCC as String

Plugin Version: 24.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of Bcc recipients.

Notes: The property is there for you to inspect in debugger.
(Read only property)

4.1.34 RecipientsCC as String

Plugin Version: 24.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of CC recipients.

Notes: The property is there for you to inspect in debugger.
(Read only property)

4.1.35 RecipientsReplyTo as String

Plugin Version: 24.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of reply to entries.

Notes: The property is there for you to inspect in debugger.
(Read only property)

4.1.36 RecipientsTO as String

Plugin Version: 24.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of TO recipients.

Notes: The property is there for you to inspect in debugger.
(Read only property)

4.1.37 RichText as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The enriched text of the email.

Notes: This text is encoded as quoted printable UTF-8 text.

This is not to be confused with RTF file format. Enriched text is described here:

http://en.wikipedia.org/wiki/Enriched_text

Please note that most email clients do not support this nowadays.

(Read and Write property)

4.1.38 Server as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The effective server URL used.

Notes: Only for debugging.

(Read only property)

4.1.39 SMTPPassword as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The password for SMTP server authentication.

Example:

`dim e as new CURLEmailMBS`

```
e.SMTPPassword = "rGc3_mdjR%k"  
e.SMTPUsername = "sammler@monkeybreadsoftware.de"  
e.SetServer "smtprelaypool.ispgateway.de", true
```

Notes: (Read and Write property)

4.1.40 SMTPServer as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The domain name of the SMTP Server to use.

Example:

`dim e as new CURLEmailMBS`

```
e.SMTPPassword = "rGc3_mdjR%k"  
e.SMTPUsername = "sammler@monkeybreadsoftware.de"  
e.SMTPServer = "smtprelaypool.ispgateway.de"  
e.UseSSL = true
```

Notes: (Read and Write property)

4.1. CLASS CURLEMAILMBS

4.1.41 SMTPUsername as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The username for SMTP server authentication.

Example:

```
dim e as new CURLEmailMBS
```

```
e.SMTPPassword = "rGc3_mdyjR%k"
e.SMTPUsername = "sammler@monkeybreadsoftware.de"
e.SetServer "smtprelaypool.ispgateway.de", true
```

Notes: (Read and Write property)

4.1.42 Subject as String

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The subject line.

Example:

```
dim e as new CURLEmailMBS
```

```
e.Subject = "Hello World ,òÔè"
```

Notes: If subject lines contains special characters, it is automatically encoded as UTF-8.
(Read and Write property)

4.1.43 UseSSL as Boolean

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to use SSL or not.

Example:

```
dim e as new CURLEmailMBS
```

```
e.SMTPPassword = "rGc3_mdyjR%k"
e.SMTPUsername = "sammler@monkeybreadsoftware.de"
e.SMTPServer = "smtprelaypool.ispgateway.de"
e.UseSSL = true
```

Notes: When using SSL right, please also check `cAInfo`, `cAPath`, `OptionSSLVerifyHost` and `OptionSSLVerifyPeer` properties on the `CURLSMBS` class.

Pass false for TLS and later configure CURL for TLS.

Port 465 usually Requires `UseSSL=true`, but other ports need `UseSSL=false`.

(Read and Write property)

4.2 class CURLFileInfoMBS

4.2.1 class CURLFileInfoMBS

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for file information.

Notes: Content of this structure depends on information which is known and is achievable (e.g. by FTP LIST parsing).

4.2.2 Properties

4.2.3 Date as Date

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The timestamp as a date object.

Notes: As of plugin version 15.2 the CURL library does not parse the timestamp.

So for some timestamp formats we have code in our plugin to do the parsing from the TimeString property. But this is limited. No seconds and the year is a guess. Files newer in the year than today are from last year and other files from current year. The server doesn't provide year details.

(Read only property)

4.2.4 DateTime as DateTime

Plugin Version: 20.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The timestamp as a date object.

Notes: As of plugin version 20.5 the CURL library does not parse the timestamp.

So for some timestamp formats we have code in our plugin to do the parsing from the TimeString property. But this is limited. No seconds and the year is a guess. Files newer in the year than today are from last year and other files from current year. The server doesn't provide year details.

(Read only property)

4.2.5 FileName as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The file name.

Notes: (Read only property)

4.2.6 FileType as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The file type.

Notes: (Read only property)

4.2.7 Flags as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The flags.

Notes: Flags define which fields are set.

Also you can just use the Has properties for same information.

(Read only property)

4.2.8 GID as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The group ID.

Notes: (Read only property)

4.2.9 GroupString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The group string.

Notes: (Read only property)

4.2.10 HardLinks as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The hard link count.

Notes: (Read only property)

4.2.11 HasFileName as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if filename property is valid.

Notes: (Read only property)

4.2.12 HasFileType as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if filetype property is valid.

Notes: (Read only property)

4.2.13 HasGID as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if GID property is valid.

Notes: (Read only property)

4.2.14 HasHardLinks as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if hardlinks property is valid.

Notes: (Read only property)

4.2.15 HasPermissions as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if permissions property is valid.

Notes: (Read only property)

4.2.16 HasSize as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if size property is valid.

Notes: (Read only property)

4.2.17 HasTime as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if time and date properties have values.

Notes: (Read only property)

4.2.18 HasUID as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if UID field has a value.

Notes: (Read only property)

4.2.19 IsDirectory as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if entry is a directory.

Notes: Same as FileType = FileTypeDirectory.

(Read only property)

4.2.20 IsFile as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if entry is a regular file.

Notes: Same as FileType = FileTypeFile.

(Read only property)

4.2.21 Permissions as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The permission value.

Notes: (Read only property)

4.2.22 PermissionString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The permission string.

Notes: (Read only property)

4.2.23 Size as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The file size.

Notes: (Read only property)

4.2.24 Target as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The target for a symlink.

Notes: (Read only property)

4.2.25 Time as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time value.

Notes: (Read only property)

4.2.26 TimeString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time string parsed.

Notes: (Read only property)

4.2.27 UID as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The user ID.

Notes: (Read only property)

4.2.28 UserString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The user ID as text.

Notes: (Read only property)

4.2.29 Constants

File Types

Constant	Value	Description
FileTypeDeviceBlock	3	Block Device
FileTypeDeviceChar	4	Character Device
FileTypeDirectory	1	Directory
FileTypeDoor	7	Door, is possible only on Sun Solaris now.
FileTypeFile	0	Regular file
FileTypeNamedPipe	5	Named Pipe
FileTypeSocket	6	Socket
FileTypeSymlink	2	Symbolic links
FileTypeUnknown	8	Unknown file type. Should never occur.

Flag Constants

Constant	Value	Description
FlagKnownFileName	1	Filename Known
FlagKnownFileType	2	File Type Known
FlagKnownGID	32	GID Known
FlagKnownHardLinks	128	Hardlink Count Known
FlagKnownPermissions	8	Permissions Known
FlagKnownSize	64	Size Known
FlagKnownTime	4	Time Known
FlagKnownUID	16	UID Known

4.3 class CURLListMBS

4.3.1 class CURLListMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A class to hold a list of strings from the CURL library.

Notes: Data is copied for this list, so you can just keep it around.

4.3.2 Methods

4.3.3 Item(index as Integer) as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns the item with the given index.

Notes: Index is zero based.

4.3.4 List as String()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Converts list to a string array.

4.3.5 Operator_Convert as String()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Converts list to a string array.

4.3.6 Properties

4.3.7 Count as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Number of items in this list.

Notes: (Read only property)

4.4 class CURLMBS

4.4.1 class CURLMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A class to wrap libCURL.

Example:

```
Dim d As New CURLMBS
```

```
// download here
d.OptionURL = URL
```

```
// if you use SSL, maybe put in a certificate or disable verification?
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0
```

```
// run download
dim e as integer = d.Perform
```

```
// check result
Dim data As String = d.OutputData
Dim DebugMessage As String = d.DebugMessages // check in debugger on error
```

```
ResultText.text="Result: "+str(e) // 0 = Okay, others are error codes, so check debug messages
```

Notes: We have three variants:

CURLS* classes include a static CURL library with SSL and SSH.

CURLN* classes include a static CURL library with native SSL on Mac and Windows.

CURL* classes without S need you to supply your own CURL library.

All variants can load a custom CURL library or use the one from the system on Mac and Linux.

If no library is loaded or included, the plugin will try to load the system one in constructor.

from the website libCURL website:

<https://curl.haxx.se/libcurl/>

libCURL is a free and easy-to-use client-side URL transfer library, supporting FTP, FTPS, HTTP, HTTPS, SCP, SFTP, TFTP, TELNET, DICT, FILE and LDAP. libCURL supports SSL certificates, HTTP POST, HTTP PUT, FTP uploading, HTTP form based upload, proxies, cookies, user+password authentication (Basic, Digest, NTLM, Negotiate, Kerberos4), file transfer resume, http proxy tunneling and more!

libCURL is highly portable, it builds and works identically on numerous platforms, including Solaris, NetBSD, FreeBSD, OpenBSD, Darwin, HPUX, IRIX, AIX, Tru64, Linux, UnixWare, HURD, Windows, Amiga, OS/2, BeOs, Mac OS X, Ultrix, QNX, OpenVMS, RISC OS, Novell NetWare, DOS and more...

libCURL is free, thread-safe, IPv6 compatible, feature rich, well supported, fast, thoroughly documented and is already used by many known, big and successful companies and numerous applications.

On Linux you may need to install libraries like ldap: `apt-get install libldap-2.4.2:i386`

Blog Entries

- [News from the MBS Xojo Plugins in Version 23.0](#)
- [News from the MBS Xojo Plugins Version 21.3](#)
- [News from the MBS Xojo Plugins Version 21.1](#)
- [News from the MBS Xojo Plugins Version 20.5](#)
- [News from the MBS Xojo Plugins Version 20.4](#)
- [Adding CURLN* classes to MBS Xojo Plugins](#)
- [Differences between CURLMBS and CURLSMBS classes](#)
- [MBS REALbasic Plugins Version 10.4 release notes](#)
- [APIs change, but don't worry](#)
- [MBS REALbasic plug-in 9.6](#)

Xojo Developer Magazine

- [5.3, page 50: Poetry in Motion, Movin', movin', movin', get those icons movin'... by Toby Rush](#)

4.4.2 Methods

4.4.3 AddMimeType as CURLMimeTypeMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Adds a new blank mime part.

Notes: Returns mime object, so you can set properties.

4.4.4 AWSPresignURL(AWSAccessKeyId as String, AWSSecretAccessKey as String, Region as String, Service as String, Path as String, Domain as String, Verb as String = "GET", Expires as Integer = 86400, QueryParameters() as String = nil, Headers() as String = nil) as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query predigend URL for Amazon Webservices.

Example:

```
Dim URL As String = CURLMBS.AWSPresignURL( _
    "AKIAIOSFODNN7EXAMPLE", _
    "wJalrXUtnFEMI/K7MDENG/bPxrFiCYEXAMPLEKEY", _
    "us-east-1", _
    "s3", _
    "/test.txt", _
    "examplebucket.s3.amazonaws.com", _
    "GET", _
    86400 )
```

Break // see URL in debugger

Notes: This implements AWS4-HMAC-SHA256 pre-signature for credentials.

Works also for other compatible S3 services beside Amazon's like the one from Wasabi or Dell ECS.

Parameter	Description	Example
AWSAccessKeyId	Your access key for AWS.	"AKIAIOSFODNN7EXAMPLE"
AWSSecretAccessKey	Your secret key.	"wJalrXUtnFEMI/K7MDENG/bPxrFiCYEXAMPLEKEY"
Region	The region to use.	"us-east-1"
Service	The service to use.	"s3"
Path	The path for the URL. Should always start with "/".	"/test.txt"
Domain	The path for the URL. Should always start with "/".	"examplebucket.s3.amazonaws.com"
Verb	The HTTP method to use. Can be POST, PUT, GET or DELETE. Defaults to GET.	"GET"
Expires	Expiration duration. Provides the time period, in seconds, for which the generated presigned URL is valid. For example, 86400 (24 hours). This value is an integer. The minimum value you can set is 1, and the maximum is 604800 (seven days). A presigned URL can be valid for a maximum of seven days because the signing key you use to sign your request is valid for up to seven days. Default is 86400 for one day.	86400
QueryParameters	List of query parameters to include.	
Headers	Extra HTTP headers to include. When you can specify various headers to include in signature and request.	

Returns the pre-signed URL. May raise an exception in case of error.

4.4.5 ClearData

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Clears data properties.

Notes: Resets OutputData, DebugMessages and Headers.

4.4.6 CloseMTDebugOutputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Closes the debug output file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.4.7 CloseMTHeaderOutputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Closes the header output file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.4.8 CloseMTInputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Closes the input file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.4.9 CloseMTOutputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Closes the output file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.4.10 CreateMTDebugOutputFile(file as folderitem) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where debug data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

With 15.2 version of plugin, this also works with Perform.

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.4.11 CreateMTDebugOutputFile(Path as String) as boolean

4.4.11 CreateMTDebugOutputFile(Path as String) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where debug data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.4.10 CreateMTDebugOutputFile(file as folderitem) as boolean 81

4.4.12 CreateMTHaderOutputFile(file as folderitem) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where header data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

With 15.2 version of plugin, this also works with Perform.

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.4.13 CreateMTHaderOutputFile(Path as String) as boolean 82

4.4.13 CreateMTHaderOutputFile(Path as String) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where header data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.4.12 CreateMTHaderOutputFile(file as folderitem) as boolean 82

4.4.14 CreateMTOutputFile(file as folderitem) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where output data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).
With 15.2 version of plugin, this also works with Perform.

Must be called before Perform, so we can stream data to the file.
The file is closed automatically when Perform methods finish their work.

You can set CollectOutputData to false in order to disable dat being collected.
See also:

- 4.4.15 CreateMTOutputFile(Path as String) as boolean

83

4.4.15 CreateMTOutputFile(Path as String) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where output data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

Must be called before Perform, so we can stream data to the file.
The file is closed automatically when Perform methods finish their work.

You can set CollectOutputData to false in order to disable dat being collected.
See also:

- 4.4.14 CreateMTOutputFile(file as folderitem) as boolean

82

4.4.16 FileInfos as CURLFileInfoMBS()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries array with file information.

Notes: If you use OptionWildcard, you find after the transfer all CURLFileInfoMBS objects for all the files/folders found.

For MBS Plugin 19.0 or newer you can alternatively run a custom request "MLSD" and than get file infos, too.

4.4.17 FinishMime

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Finishes mime data.

Example:

```
dim c as new CURLMBS

// add mime
dim p as CURLMimePartMBS = c.AddMimePart

p.name = "Text"
p.FileName = "test.txt"
p.MimeType = "text/plain"
p.DataString = "Hello World"

c.FinishMime
// now you can send...
```

Notes: Please call AddMimePart for each part you like to add and than finally FinishMime before calling perform.

4.4.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Example:

```
dim c as new CURLMBS
dim file1 as string = "my-face.jpg"
dim file2 as string = "your-face.jpg"
dim formOptions(-1) as Integer
dim formValues(-1) as string

const CURLFORM_COPYNAME = 1
const CURLFORM_ARRAY = 8
const CURLFORM_FILE = 10

'/* Add two file section using CURLFORM_ARRAY */
formOptions.Append CURLFORM_FILE
formValues.append file1
formOptions.Append CURLFORM_FILE
formValues.append file2

'/* no option needed for the end marker */
c.FormAdd CURLFORM_COPYNAME, "pictures", CURLFORM_ARRAY, formOptions, formValues
```

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.4.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 85
- 4.4.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 86
- 4.4.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 86
- 4.4.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 87
- 4.4.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 88
- 4.4.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 88
- 4.4.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 91

4.4.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.4.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 84
- 4.4.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 86
- 4.4.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 86
- 4.4.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 87

- 4.4.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 88
- 4.4.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 88
- 4.4.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 91

4.4.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.4.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 84
- 4.4.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 85
- 4.4.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 86
- 4.4.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 87
- 4.4.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 88
- 4.4.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 88
- 4.4.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 91

4.4.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.4.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 84
- 4.4.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 85
- 4.4.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 86
- 4.4.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 87
- 4.4.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 88
- 4.4.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 88
- 4.4.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 91

4.4.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.4.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 84
- 4.4.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 85
- 4.4.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 86
- 4.4.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 86
- 4.4.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 88
- 4.4.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 88

- 4.4.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 91

4.4.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.4.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 84
- 4.4.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 85
- 4.4.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 86
- 4.4.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 86
- 4.4.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 87
- 4.4.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 88
- 4.4.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 91

4.4.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Several FormAdd methods are there. Send a request to support if you need another parameter combination.

Lasterror is set.

FormAdd() is used to append sections when building a multipart/formdata HTTP POST (sometimes referred to as rfc1867-style posts). Append one section at a time until you've added all the sections you want included and then you call FormFinish.

Using POST with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with CURLOPT_HTTPHEADER as usual.

First, there are some basics you need to understand about multipart/formdata posts. Each part consists of at least a NAME and a CONTENTS part. If the part is made for file upload, there are also a stored CONTENT-TYPE and a FILENAME. Below, we'll discuss what options you use to set these properties in the parts you want to add to your post.

The options listed first are for making normal parts. The options from CURLFORM_FILE through CURLFORM_BUFFERLENGTH are for file upload parts.

CURLFORM_COPYNAME:

followed by a string which provides the name of this part. libCURL copies the string so your application doesn't need to keep it around after this function call. If the name isn't null terminated, or if you'd like it to contain zero bytes, you must set its length with CURLFORM_NAMELENGTH.

CURLFORM_PTRNAME:

followed by a string which provides the name of this part. libCURL will use the string and refer to the data in your application, so you must make sure it remains until CURL no longer needs it. If the name isn't null terminated, or if you'd like it to contain zero bytes, you must set its length with CURLFORM_NAMELENGTH.

CURLFORM_COPYCONTENTS:

followed by a string to the contents of this part, the actual data to send away. libCURL copies the provided data, so your application doesn't need to keep it around after this function call. If the data isn't null terminated, or if you'd like it to contain zero bytes, you must set the length of the name with CURLFORM_CONTENTSLENGTH.

CURLFORM_PTRCONTENTS:

followed by a string to the contents of this part, the actual data to send away. libCURL will use the string and refer to the data in your application, so you must make sure it remains until CURL no longer needs it. If the data isn't null terminated, or if you'd like it to contain zero bytes, you must set its length with CURLFORM_CONTENTSLENGTH.

CURLFORM_CONTENTSLENGTH:

followed by a long giving the length of the contents.

CURLFORM_FILECONTENT:

followed by a filename, causes that file to be read and its contents used as data in this part. This part does not automatically become a file upload part simply because its data was read from a file.

CURLFORM_FILE:

followed by a filename, makes this part a file upload part. It sets the filename field to the basename of the provided filename, it reads the contents of the file and passes them as data and sets the content-type if the given file match one of the internally known file extensions. For CURLFORM_FILE the user may send one or more files in one part by providing multiple CURLFORM_FILE arguments each followed by the filename (and each CURLFORM_FILE is allowed to have a CURLFORM_CONTENTTYPE).

CURLFORM_CONTENTTYPE:

is used in combination with CURLFORM_FILE. Followed a string which provides the content-type for this part, possibly instead of an internally chosen one.

CURLFORM_FILENAME:

is used in combination with CURLFORM_FILE. Followed a string, it tells libCURL to use the given string as the filename in the file upload part instead of the actual file name.

CURLFORM_BUFFER:

is used for custom file upload parts without use of CURLFORM_FILE. It tells libCURL that the file contents are already present in a buffer. The parameter is a string which provides the filename field in the content header.

CURLFORM_BUFFERPTR:

is used in combination with CURLFORM_BUFFER. The parameter is the string to be uploaded. You must also use CURLFORM_BUFFERLENGTH to set the number of bytes in the buffer. Keep the buffer variable alive till the upload is finished.

CURLFORM_BUFFERLENGTH:

is used in combination with CURLFORM_BUFFER. The parameter is a long which gives the length of the buffer.

CURLFORM_ARRAY:

Another possibility to send options to CURL_formadd() is the CURLFORM_ARRAY option, that passes an Integer Array and a String Array defining its value. Each element in the form is constructed using the option from the integer array and the value from the string array. All available options can be used in an array, except the CURLFORM_ARRAY option itself!

CURLFORM_CONTENTHEADER:

specifies extra headers for the form POST section. This takes a CURL_slist prepared in the usual way using CURL_slist_append and appends the list of headers to those libCURL automatically generates. The list must exist while the POST occurs, if you free it before the post completes you may experience problems.

PS: CURLFORM_FILE does not work in all CURL versions on all platforms due to a bug with integer numbers.

See also:

- 4.4.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 84
- 4.4.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 85
- 4.4.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 86
- 4.4.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 86
- 4.4.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 87
- 4.4.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 88
- 4.4.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 91

4.4.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string)

Plugin Version: 17.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.4.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 84
- 4.4.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 85
- 4.4.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 86
- 4.4.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 86
- 4.4.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 87

- 4.4.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 88
- 4.4.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 88

4.4.26 FormAddField(fieldName as String, fieldValue as String, ContentType as String = "")

Plugin Version: 18.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Example:

```
dim d as new CURLMBS
d.FormAddField("company", "Test, Inc.")
```

Notes: For fieldName and ContentType, we use UTF8 always. For fieldValue, we pass through whatever is in the string, so please make sure encoding is working.

ContentType is optional.

Please call FormFinish method later!

4.4.27 FormAddFile(fieldName as String, fileName as String, fileContent as string, ContentType as String = "")

Plugin Version: 18.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Example:

```
// read content of some file
dim file as folderitem = specialFolder.desktop.Child("test.txt")
dim b as BinaryStream = binarystream.Open(file)
dim FileContent as String = b.read(b.length)

// init some curl object
dim d as new CURLMBS

// add the file as part of a form
d.FormAddFile("FileAttachment", "test.txt", FileContent, "text/plain")

// later
d.FormFinish
```

Notes: For fieldName, fileName and ContentType, we use UTF8 always. For fieldValue, we pass through whatever is in the string, so please make sure encoding is working.

Filename is ignored, if empty.
ContentType is optional.

Please call FormFinish method later!

4.4.28 FormClear

Plugin Version: 19.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Clears current form data.

Notes: You usually don't need to call this as Perform clears form data when transfer is done.

4.4.29 FormData as String

Plugin Version: 17.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries current form data.

Notes: This is more for debugging as it builds form data as if we would send it.

4.4.30 FormFinish

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Finishes constructing a form.

Example:

```
dim c as new CURLMBS
dim namebuffer as string = "name buffer"
dim namelength as Integer = lenb(namebuffer)
dim buffer as string = "test buffer"
dim htmlbuffer as string = "<HTML>test buffer</HTML>"
dim htmlbufferlength as Integer = lenb(htmlbuffer)
dim file1 as string = "my-face.jpg"
dim file2 as string = "your-face.jpg"
dim formOptions(-1) as Integer
dim formValues(-1) as string
dim recordbuffer as string = "record buffer"
```

```

dim recordlength as Integer = lenb(recordbuffer)

const CURLFORM_NOHING = 0
const CURLFORM_COPYNAME = 1
const CURLFORM_PTRNAME = 2
const CURLFORM_NAMELENGTH = 3
const CURLFORM_COPYCONTENTS = 4
const CURLFORM_PTRCONTENTS = 5
const CURLFORM_CONTENTSLENGTH = 6
const CURLFORM_FILECONTENT = 7
const CURLFORM_ARRAY = 8
const CURLFORM_FILE = 10
const CURLFORM_BUFFER = 11
const CURLFORM_BUFFERPTR = 12
const CURLFORM_BUFFERLENGTH = 13
const CURLFORM_CONTENTTYPE = 14
const CURLFORM_CONTENTHEADER = 15
const CURLFORM_FILENAME = 16

'/* Add simple name/content section */
c.FormAdd CURLFORM_COPYNAME, "name", CURLFORM_COPYCONTENTS, "content"
,
'/* Add simple name/content/contenttype section */
c.FormAdd CURLFORM_COPYNAME, "htmlcode", CURLFORM_COPYCONTENTS, "<HTML></HTML>",CURL-
FORM_CONTENTTYPE,"text/html"

'/* Add name/ptrcontent section */
c.FormAdd CURLFORM_COPYNAME, "name_for_ptrcontent", CURLFORM_PTRCONTENTS, buffer

'/* Add ptrname/ptrcontent section */
c.FormAdd CURLFORM_PTRNAME, namebuffer, CURLFORM_PTRCONTENTS, buffer, CURLFORM_NAME-
LENGTH, namelength

'/* Add name/ptrcontent/contenttype section */
c.FormAdd CURLFORM_COPYNAME, "html_code_with_hole", CURLFORM_PTRCONTENTS, html-
buffer, CURLFORM_CONTENTSLENGTH, htmlbufferlength, CURLFORM_CONTENTTYPE, "text/html"

'/* Add simple file section */
c.FormAdd CURLFORM_COPYNAME, "picture", CURLFORM_FILE, "my-face.jpg"

'/* Add file/contenttype section */
c.FormAdd CURLFORM_COPYNAME, "picture",CURLFORM_FILE, "my-face.jpg",CURLFORM_CONTENTTYPE,
"image/jpeg"

```

```

'/* Add two file section */
c.FormAdd CURLFORM_COPYNAME, "pictures",CURLFORM_FILE, "my-face.jpg",CURLFORM_FILE,
"your-face.jpg"

'/* Add two file section using CURLFORM_ARRAY */
formOptions.Append CURLFORM_FILE
formValues.append file1
formOptions.Append CURLFORM_FILE
formValues.append file2

'/* Add a buffer to upload */
c.FormAdd CURLFORM_COPYNAME, "name", CURLFORM_BUFFER, "data", CURLFORM_BUFFERPTR,
recordbuffer, CURLFORM_BUFFERLENGTH, recordlength

'/* no option needed for the end marker */
c.FormAdd CURLFORM_COPYNAME, "pictures", CURLFORM_ARRAY, formOptions, formValues

'/* Add the content of a file as a normal post text value */
c.FormAdd CURLFORM_COPYNAME, "filecontent", CURLFORM_FILECONTENT, ".bashrc"
'/* Set the form info */

c.FormFinish

```

Notes: Lasterror is set.

The form is assigned to the HTTPPost property.

4.4.31 GetInfoActiveSocket as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Receive the active socket used by this curl session.

Notes: If the socket is no longer valid, -1 is returned. When you finish working with the socket, the Destructor closes the socket and cleanup other resources associated with the handle. This is typically used in combination with OptionConnectOnly.

This option was added as a replacement for GetInfoLastSocket since that one isn't working on all platforms.

4.4.32 GetInfoAppConnectTime as Double

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time stamp when app connected.

4.4.33 GetInfoCAInfo as string

Plugin Version: 22.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries default CAInfo value.

4.4.34 GetInfoCAPath as string

Plugin Version: 22.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries default CAPath value.

4.4.35 GetInfoCertInfo as CURLListMBS()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries information on the certificate chain.

Example:

```
dim c as new CURLMBS

// do some transfer
c.OptionURL = "https://www.mbsplugins.de/"
c.OptionCertInfo = true
dim e as Integer = c.perform

// query certificate info
dim lists() as CURLListMBS = c.GetInfoCertInfo

for each l as CURLListMBS in lists
  MsgBox Join(l, EndOfLine)
next

MsgBox c.DebugMessages
```

Notes: Please set OptionCertInfo first.

4.4.36 GetInfoConditionUnmet as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Return if the time condition prevented the document to get transferred.

4.4.37 GetInfoConnectTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time, in seconds, it took from the start until the connect to the remote host (or proxy) was completed.

Notes: The Lasterror property is set. 0 for success.

4.4.38 GetInfoContentLengthDownload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The content-length of the download.

Notes: The Lasterror property is set. 0 for success.

This is the value read from the Content-Length: field.

4.4.39 GetInfoContentLengthUpload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The specified size of the upload.

Notes: The Lasterror property is set. 0 for success.

4.4.40 GetInfoContentType as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The content-type of the downloaded object.

Notes: The Lasterror property is set. 0 for success.

This is the value read from the Content-Type: field. If you get "", it means that the server didn't send a valid Content-Type header or that the protocol used doesn't support this.

4.4.41 GetInfoCookieList as CURLListMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A linked-list of all cookies CURL knows (expired ones, too).

Notes: The Lasterror property is set. 0 for success.

If there are no cookies (cookies for the handle have not been enabled or simply none have been received) the result is nil.

4.4.42 GetInfoEffectiveMethod as string

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get the last used effective HTTP method.

Notes: In cases when you've asked libcurl to follow redirects, the method may very well not be the same method the first request would use.

4.4.43 GetInfoEffectiveURL as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last used effective URL.

Notes: The Lasterror property is set. 0 for success.

4.4.44 GetInfoFileTime as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: the remote time of the retrieved document (in number of seconds since 1 jan 1970 in the GMT/UTC time zone).

Example:

```
// init CURL with options
dim d as new CURLMBS
d.OptionFileTime = true
d.OptionURL = "http://www.monkeybreadsoftware.de/images/mbs.jpg"

// run query
dim e as Integer = d.Perform

// calculate date object
dim da as new date(1970,1,1,0,0,0)
da.TotalSeconds = da.TotalSeconds + d.GetInfoFileTime

// show date
ResultText.text=str(d.GetInfoFileTime)+" "+da.ShortDate+" "+da.ShortTime
```

Notes: The Lasterror property is set. 0 for success.

If you get -1, it can be because of many reasons (unknown, the server hides it or the server doesn't support the command that tells document time etc) and the time of the document is unknown. Note that you must tell the server to collect this information before the transfer is made, by using the OptionFileTime option or you will unconditionally get a -1 back. (Added in 7.5)

4.4.45 GetInfoFTPEntryPath as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns a string holding the path of the entry path.

Notes: That is the initial path libCURL ended up in when logging on to the remote FTP server.
Empty string if unknown.

4.4.46 GetInfoHeaderSize as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total size of all the headers received.

Notes: The Lasterror property is set. 0 for success.

4.4.47 GetInfoHTTPAuthAvail as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A bitmask indicating the authentication method(s) available.

Notes: The Lasterror property is set. 0 for success.

The meaning of the bits is explained in the HTTPAuth option.

4.4.48 GetInfoHTTPConnectCode as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last received proxy response code to a CONNECT request.

Notes: The Lasterror property is set. 0 for success.

none

4.4.49 GetInfoHTTPVersion as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get the http version used in the connection.

Notes: The returned value will be kHTTP_VERSION_1_0, kHTTP_VERSION_1_1, or kHTTP_VERSION_2_0, or 0 if the version can't be determined.

4.4.50 GetInfoLastSocket as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use GetInfoActiveSocket instead. **Function:** Receive the last socket used by this CURL session.

Notes: If the socket is no longer valid, -1 is returned. When you finish working with the socket, the destructor will free the handle as usual and let libCURL close the socket and cleanup other resources associated with the handle. This is typically used in combination with OptionConnectOnly. (Added in 7.15.2)

NOTE: this API is not really working on win64, since the SOCKET type on win64 is 64 bit large while its 'long' is only 32 bits.

4.4.51 GetInfoLocalIP as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries local IP.

Example:

```
dim c as new CURLMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check local IP
MsgBox c.GetInfoLocalIP
```

4.4.52 GetInfoLocalPort as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Return the local port of the most recent (primary) connection.

Example:

```
dim c as new CURLMBS
```

```
// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check local IP and port
MsgBox c.GetInfoLocalIP+";" +str(c.GetInfoLocalPort)
```

4.4.53 GetInfoNameLookupTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time, in seconds, it took from the start until the name resolving was completed.

Notes: The Lasterror property is set. 0 for success.

4.4.54 GetInfoNumConnects as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: How many new connections libCURL had to create to achieve the previous transfer.

Notes: The Lasterror property is set. 0 for success.

(only the successful connects are counted)

Combined with RedirectCount you are able to know how many times libCURL successfully reused existing connection(s) or not. See the Connection Options to see how libCURL tries to make persistent connections to save time.

4.4.55 GetInfoOSErrno as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The errno variable from a connect failure.

Notes: The Lasterror property is set. 0 for success.

4.4.56 GetInfoPreTransferTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time, in seconds, it took from the start until the file transfer is just about to begin.

Notes: The Lasterror property is set. 0 for success.

This includes all pre-transfer commands and negotiations that are specific to the particular protocol(s) involved.

4.4.57 GetInfoPrimaryIP as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Return the ip address of the most recent (primary) connection.

Example:

```
dim c as new CURLMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check primary IP and port
MsgBox c.GetInfoPrimaryIP+"."+str(c.GetInfoPrimaryport)
```

4.4.58 GetInfoPrimaryPort as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Return the (remote) port of the most recent (primary) connection.

Example:

```
dim c as new CURLMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check primary IP and port
MsgBox c.GetInfoPrimaryIP+"."+str(c.GetInfoPrimaryport)
```

4.4.59 GetInfoProtocol as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** Get the protocol used in the connection.

Notes: See kProtocol* constants.

4.4.60 GetInfoProxyAuthAvail as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A bitmask indicating the authentication method(s) available for your proxy authentication.

Notes: The Lasterror property is set. 0 for success.

4.4.61 GetInfoProxyError as integer

Plugin Version: 20.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries proxy error code.

4.4.62 GetInfoProxySSLVerifyResult as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get the result of the proxy certificate verification.

Notes: receive the result of the certificate verification that was requested (using the OptionProxySSLVerifyPeer option. This is only used for HTTPS proxies.

4.4.63 GetInfoRedirectCount as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total number of redirections that were actually followed.

Notes: The Lasterror property is set. 0 for success.

4.4.64 GetInfoRedirectTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: the total time, in seconds, it took for all redirection steps include name lookup, connect, pre-transfer and transfer before final transaction was started.

Notes: The Lasterror property is set. 0 for success.

RedirectTime contains the complete execution time for multiple redirections. (Added in 7.9.7)

4.4.65 GetInfoRedirectURL as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The redirection URL.

4.4.66 GetInfoReferer as string

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries referrer text.

4.4.67 GetInfoRequestSize as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total size of the issued requests.

Notes: The Lasterror property is set. 0 for success.

This is so far only for HTTP requests. Note that this may be more than one request if FOLLOWLOCATION is true.

4.4.68 GetInfoResponseCode as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last received HTTP or FTP code.

Notes: The Lasterror property is set. 0 for success.

This will be zero if no server response code has been received. Note that a proxy's CONNECT response should be read with GetInfoHTTPConnectCode and not this.

With HTTP transfer, a successful transfer reports 200 here. If the page is not found, you get 404. Or any other HTTP Response code.

4.4.69 GetInfoRetryAfter as integer

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns the Retry-After retry delay.

Notes: Receive the number of seconds the HTTP server suggests the client should wait until the next request is issued.

The information from the "Retry-After:" header.

While the HTTP header might contain a fixed date string, the RetryAfter will always return number of seconds to wait - or zero if there was no header or the header couldn't be parsed.

4.4.70 GetInfoRTSPClientCSEQ as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query RTSP Client sequence counter.

4.4.71 GetInfoRTSPCSEQRecv as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query RTSP sequence counter received.

4.4.72 GetInfoRTSPServerCSEQ as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query RTSP Server sequence counter.

4.4.73 GetInfoRTSPSessionID as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query RTSP session ID.

4.4.74 GetInfoScheme as string

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get the URL scheme (sometimes called protocol) used in the connection

4.4.75 GetInfoSizeDownload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total amount of bytes that were downloaded.

Notes: The Lasterror property is set. 0 for success.

The amount is only for the latest transfer and will be reset again for each new transfer.

4.4.76 GetInfoSizeUpload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total amount of bytes that were uploaded.

Notes: The Lasterror property is set. 0 for success.

4.4.77 GetInfoSpeedDownload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The average download speed that CURL measured for the complete download.

Notes: The Lasterror property is set. 0 for success.

4.4.78 GetInfoSpeedUpload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The average upload speed that CURL measured for the complete upload.

Notes: The Lasterror property is set. 0 for success.

4.4.79 GetInfoSSLEngines as CURLListMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Receive a linked-list of OpenSSL crypto-engines supported.

Notes: The Lasterror property is set. 0 for success.

Note that engines are normally implemented in separate dynamic libraries. Hence not all the returned engines may be available at run-time.

4.4.80 GetInfoSSLVerifyResult as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: the result of the certification verification that was requested (using the SSLVerifyPeer option).

Notes: The Lasterror property is set. 0 for success.

4.4.81 GetInfoStartTransferTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: the time, in seconds, it took from the start until the first byte is just about to be transferred.

Notes: The Lasterror property is set. 0 for success.

This includes the pretransfer time and also the time the server needs to calculate the result.

4.4.82 GetInfoTotalTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total time in seconds for the previous transfer, including name resolving, TCP connect etc.

Notes: The Lasterror property is set. 0 for success.

4.4.83 LoadAPI

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Loads the default CURL library.

Notes: This method is called by the constructor. So you don't need this except you want to test explicit with APILoaded whether the loading worked before you use the CURLMBS class.

Loads the "libCURL.dll" Windows library (with SSL support this one max require OpenSSL).

Loads on Mac OS X and Linux the libCURL file in /usr/lib.

4.4.84 LoadErrorString as string

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error string from the LoadLibrary function.

4.4.85 LoadLibrary(file as folderitem) as boolean

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Loads the CURL library from the given path.

Notes: You only need to use this function if you have your own CURL Library.

Loads a Windows DLL, a Linux shared library or a Mac OS X shared library from the given path.

Returns true on success.

See also:

- 4.4.86 LoadLibrary(path as string) as boolean

108

4.4.86 LoadLibrary(path as string) as boolean

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Loads the CURL library from the given path.

Notes: You only need to use this function if you have your own CURL Library.

Loads a Windows DLL, a Linux shared library or a Mac OS X shared library from the given path.

Returns true on success.

See also:

- 4.4.85 LoadLibrary(file as folderitem) as boolean

107

4.4.87 OpenMTInputFile(file as folderitem, Offset as Integer = 0) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Opens input file for reading data while PerformMT runs.

Example:

```
Dim c As New CURLMBS
Dim file As FolderItem = SpecialFolder.Desktop.Child("test.rtf")

If c.OpenMTInputFile(file) Then
    // okay
Else
    MsgBox "Failed to open file to upload."
Return
End If

// do a SFTP upload
c.OptionURL = "sftp://monkeybreadsoftware.de/folder/test.rtf"
c.OptionUpload = True
c.OptionUsername = "test"
c.OptionPassword = "test"
c.CollectOutputData = false
```

`Dim e As Integer = c.Perform`

`Dim ErrorMessage As String = c.LastErrorMessage`

`Dim ErrorLog As String = c.DebugMessages`

`Dim ResultData As String = c.OutputData`

Break

Notes: The read event is not called with PerformMT.

Offset is helpful for HTTP PUT requests with range, so you can start with an offset.

With 15.2 version of plugin, this also works with Perform.

Must be called before Perform or PerformMT, so we can stream data from the file.

The file is closed automatically when Perform methods finish their work.

The function returns false in case of an error, e.g. if file is already open by another application, the folderitem/path is invalid, the offset is negative or we can't determinate the file size.

It may be wise to have a fallback in your code to use a binarystream in that case (if that one can read the file) and then read all the data in a string and put into the InputData property.

See also:

- 4.4.88 OpenMTInputFile(Path as String, Offset as Integer = 0) as boolean

109

4.4.88 OpenMTInputFile(Path as String, Offset as Integer = 0) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Opens input file for reading data while PerformMT runs.

Notes: The read event is not called with PerformMT.

Offset is helpful for HTTP PUT requests with range, so you can start with an offset.

Must be called before Perform or PerformMT, so we can stream data from the file.

The file is closed automatically when Perform methods finish their work.

The function returns false in case of an error, e.g. if file is already open by another application, the folderitem/path is invalid, the offset is negative or we can't determinate the file size.

It may be wise to have a fallback in your code to use a binarystream in that case (if that one can read the file) and then read all the data in a string and put into the InputData property.

See also:

- 4.4.87 OpenMTInputFile(file as folderitem, Offset as Integer = 0) as boolean

108

4.4.89 Perform as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Perform a file transfer

Example:

// if you get a curl call like this

```
'curl -X PATCH "https://api.airtable.com/v0/ { baseId } / { tableIdOrName } / { recordId } " \
-H "Authorization: Bearer YOUR_TOKEN" \
-H "Content-Type: application/json" \
-data '{
"fields": {
"Address": "1 Ferry Building",
"Name": "Ferry Building",
"Visited": True
}
}'
```

// you translate it to this:

Dim c As New CURLMBS

Dim Payload As String = _

```
" { "+_
""fields"": { "+_
""Address"": ""1 Ferry Building"", "+_
""Name"": ""Ferry Building"", "+_
""Visited"": True"+_
" } "+_
" } "
```

c.OptionCustomRequest = "PATCH"

c.OptionURL = "https://api.airtable.com/v0/ { baseId } / { tableIdOrName } / { recordId } "

c.SetOptionHTTPHeader Array("Content-Type: application/json", "Authorization: Bearer YOUR_TOKEN")

c.OptionPostFields = Payload

Dim Error As Integer = c.Perform

Dim ResponseCode As Integer = c.GetInfoResponseCode

Dim DebugLog As String = c.DebugMessages

Dim Output As String = c.OutputData

Break

Notes: This function is called after all the options are set, and will perform the transfer as described in the options.

You can do any amount of calls to Perform. If you intend to transfer more than one file, you are even encouraged to do so. libCURL will then attempt to re-use the same connection for the following transfers, thus making the operations faster, less CPU intense and using less network resources. Just note that you will have to use the option properties between the invokes to set options for the following Perform.

Typical error codes are 6 for a wrong domain name in the URL, 67 for wrong name/password combination, 60 for missing SSL settings, 1 for an unsupported protocol.

Possible values for the return value:

The error value -1 is used from the plugin to report that something is missing like OpenSSL dlls on Windows.

With SFTP, you can get logged error "Upload failed: Operation failed (4/-31)" when upload uses path to folder instead of file in URL.

4.4.90 PerformMT as Integer

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Perform a file transfer with preemptive multithreading.

Example:

```
Dim c As New CURLMBS
Dim file As FolderItem = SpecialFolder.Desktop.Child("test.rtf")

If c.OpenMTInputFile(file) Then
    // okay
Else
    MsgBox "Failed to open file to upload."
Return
End If

// do a SFTP upload
c.OptionURL = "sftp://monkeybreadsoftware.de/folder/test.rtf"
c.OptionUpload = True
c.OptionUsername = "test"
c.OptionPassword = "test"

Dim e As Integer = c.PerformMT

Dim ErrorMessage As String = c.LastErrorMessage
Dim ErrorLog As String = c.DebugMessages
Dim ResultData As String = c.OutputData
```

Break

Notes: Same as Perform, but with additional multithreading.

As the actual transfer runs on a preemptive thread, the events Debug, Write, Header and Progress are called asynchronously and run a few milliseconds later. You can return true in Progress event to stop transfer, but you will get more events before the transfer is stopped.

You can call CreateMTDebugOutputFile, CreateMTHeaderOutputFile and CreateMTOutputFile before PerformMT to have output data be written into files. Call OpenMTInputFile to let the plugin read input data (form post or upload) from an input file.

Do not call other CURL functions on this CURLMBS instance while PerformMT is running!

Typical error codes are 6 for a wrong domain name in the URL, 67 for wrong name/password combination, 60 for missing SSL settings, 1 for an unsupported protocol.

To avoid trouble with app hanging on quit of application, be sure to set cancel property to true in window close event to cancel any pending transfer.

The work is performed on a preemptive thread, so this function does not block the application and can yield time to other Xojo threads. Must be called in a Xojo thread to enjoy benefits. If called in main thread will block, but keep other background threads running.

4.4.91 ProcessRelativeURL(BaseURL as String, RelativeURL as String) as String

Plugin Version: 23.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Processes an URL to come from relative URL to a new absolute URL.

Example:

```
Dim baseURL As String = "https://monkeybreadsoftware.net/themes.shtml"
Dim RelativeURL As String = "topic-curl.shtml"
```

```
Dim URL As String = CURLMBS.ProcessRelativeURL(baseURL, RelativeURL)
Break
```

Notes: Raises an UnsupportedOperationException in case of failure.

4.4.92 ReceiveData(byref data as Memoryblock, BytesToRead as Int64) as Int64

Plugin Version: 17.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Receives raw data on a connection.

Notes: This function receives raw data from the established connection. You may use it together with SendData to implement custom protocols using libcurl. This functionality can be particularly useful if you use proxies and/or SSL encryption: libcurl will take care of proxy negotiation and connection set-up.

The data memoryblock is a reference to your variable that will get the received data. BytesToRead is the maximum amount of data you can get in that buffer. The function returns the number of received bytes.

To establish the connection, set OptionConnectOnly = true before calling Perform. Note that ReceiveData does not work on connections that were created without this option.

The call will return kError_AGAIN if there is no data to read - the socket is used in non-blocking mode internally. When kError_AGAIN is returned, wait for data to arrive.

Wait on the socket only if ReceiveData returns kError_AGAIN. The reason for this is libcurl or the SSL library may internally cache some data, therefore you should call ReceiveData until all data is read which would include any cached data.

Furthermore if you wait on the socket and it tells you there is data to read, ReceiveData may return CURLE_AGAIN if the only data that was read was for internal SSL processing, and no other data is available.

On success, sets lasterror to kError_OK (0), stores the received data into memory block, and returns the number of bytes it actually read.

On failure, returns zero and lasterror is set to the appropriate error code.

The function may return kError_AGAIN. In this case, use your operating system facilities to wait until data can be read, and retry.

Reading exactly 0 bytes indicates a closed connection.

If there's no socket available to use from the previous transfer, this function returns kError_UNSUPPORTED_PROTOCOL.

4.4.93 Reset

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Re-initializes all options previously set on a specified CURL handle to the default values.

Notes: It does not change the following information kept in the handle: live connections, the Session ID cache, the DNS cache, the cookies and shares.

4.4.94 SendData(data as Memoryblock) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sends raw data over a connection.

Notes: This function sends arbitrary data over the established connection. You may use it together with ReceiveData to implement custom protocols using libcurl. This functionality can be particularly useful if you use proxies and/or SSL encryption: libcurl will take care of proxy negotiation and connection set-up.

Provide the data to send via parameter. We return the number of bytes sent.

To establish the connection, set OptionConnectOnly = true option before calling Perform methods. Note that SendData will not work on connections that were created without this option.

The call will return kError_AGAIN if it's not possible to send data right now - the socket is used in non-blocking mode internally. When kError_AGAIN is returned, please wait.

Furthermore if you wait on the socket and it tells you it's writable, SendData may return kError_AGAIN if the only data that was sent was for internal SSL processing, and no other data could be sent.

See also:

- 4.4.95 SendData(data as string) as Integer

114

4.4.95 SendData(data as string) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sends raw data over a connection.

Notes: This function sends arbitrary data over the established connection. You may use it together with ReceiveData to implement custom protocols using libcurl. This functionality can be particularly useful if you use proxies and/or SSL encryption: libcurl will take care of proxy negotiation and connection set-up.

Provide the data to send via parameter. We return the number of bytes sent.

To establish the connection, set `OptionConnectOnly = true` option before calling `Perform` methods. Note that `SendData` will not work on connections that were created without this option.

The call will return `kError_AGAIN` if it's not possible to send data right now - the socket is used in non-blocking mode internally. When `kError_AGAIN` is returned, please wait.

Furthermore if you wait on the socket and it tells you it's writable, `SendData` may return `kError_AGAIN` if the only data that was sent was for internal SSL processing, and no other data could be sent.

See also:

- 4.4.94 `SendData(data as Memoryblock) as Integer` 114

4.4.96 `SetInputData(data as MemoryBlock)`

Plugin Version: 14.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the input data.

Notes: If you set input data, you do not need to use `Read`, `RestartRead` or `Seek` events.

The plugin will use the provided data for the upload.

Setting input data size, will also set the input file size (`OptionInFileSizeLarge` and `OptionInFileSize`).

Alternatively you can provide data in `Read` event or use `OpenMTInputFile` method to open a file on disk to upload.

See also:

- 4.4.97 `SetInputData(data as string)` 115

4.4.97 `SetInputData(data as string)`

Plugin Version: 14.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the input data.

Example:

```
Dim c As New CURLMBS
```

```
c.SetInputData "Hello World"
```

```
// do a HTTP Upload with PUT
```

```
c.OptionUpload = True
```

```
c.OptionURL = "https://monkeybreadsoftware.de/filemaker/examples/echo.php"
```

```
// or do a FTP upload
```

```
'c.OptionURL = "ftp://monkeybreadsoftware.de/folder/file.txt"
```

```
Dim e As Integer = c.Perform
```

```
Dim ErrorMessage As String = c.LastErrorMessage
```

```
Dim ErrorLog As String = c.DebugMessages
```

```
Dim ResultData As String = c.OutputData
```

```
Break
```

Notes: If you set input data, you do not need to use Read, RestartRead or Seek events. The plugin will use the provided data for the upload. Setting input data size, will also set the input file size (OptionInFileSizeLarge and OptionInFileSize).

Alternatively you can provide data in Read event or use OpenMTInputFile method to open a file on disk to upload.

See also:

- 4.4.96 SetInputData(data as MemoryBlock) 115

4.4.98 SetOptionConnectTo(list() as string)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set list of host:port:connect-to-host:connect-to-port, overrides the URL's host:port (only for the network layer)

4.4.99 SetOptionEmptyPassword

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets an empty password.

Notes: Normally you have no password unless you set it.

But if you set a password with empty string, the plugin sets CURL to use no password.

This method is to use an empty password.

4.4.100 SetOptionHTTP200Aliases(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A linked list of aliases to be treated as valid HTTP 200 responses.

Notes: Some servers respond with a custom header response line. For example, IceCast servers respond with "ICY 200 OK". By including this string in your list of aliases, the response will be treated as a valid HTTP header line such as "HTTP/1.0 200 OK".

The alias itself is not parsed for any version strings. So if your alias is "MYHTTP/9.9", LibCURL will not treat the server as responding with HTTP version 9.9. Instead LibCURL will use the value set by option HTTPVersion.

The Lasterror property is set. 0 for success.

4.4.101 SetOptionHTTPHeader(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A linked list of HTTP headers to pass to the server in your HTTP request.

Example:

```
dim c as new CURLMBS
c.SetOptionHTTPHeader array("Expect:", "Content-Type: text/xml", "SOAPAction: ""login""")
```

Notes: If you add a header that is otherwise generated and used by libCURL internally, your added one will be used instead. If you add a header with no contents as in 'Accept:' (no data on the right side of the colon), the internally used header will get disabled. Thus, using this option you can add new headers, replace internal headers and remove internal headers. To add a header with no contents, make the contents be two quotes: "". The headers included in the linked list must not be CRLF-terminated, because CURL adds CRLF after each header item. Failure to comply with this will result in strange bugs because the server will most likely ignore part of the headers you specified.

The first line in a request (containing the method, usually a GET or POST) is not a header and cannot be replaced using this option. Only the lines following the request-line are headers. Adding this method line in this list of headers will only cause your request to send an invalid header.

Pass an empty array to this to reset back to no custom headers.

The Lasterror property is set. 0 for success.

4.4.102 SetOptionMailRecipients(list() as string)

Plugin Version: 11.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the array of email recipient addresses.

const kError_FunctionMissing	= -1	
const kError_OK	= 0	
const kError_UNSUPPORTED_PROTOCOL	= 1	
const kError_FAILED_INIT	= 2	
const kError_URL_MALFORMAT	= 3	
const kError_URL_MALFORMAT_USER	= 4	(NOT USED)
const kError_COULDNT_RESOLVE_PROXY	= 5	
const kError_COULDNT_RESOLVE_HOST	= 6	
const kError_COULDNT_CONNECT	= 7	
const kError_FTP_WEIRD_SERVER_REPLY	= 8	
const kError_FTP_ACCESS_DENIED	= 9	a service was denied by the FTP server due to lack of access when login fails this is not returned.
const kError_FTP_USER_PASSWORD_INCORRECT	= 10	
const kError_FTP_WEIRD_PASS_REPLY	= 11	
const kError_FTP_WEIRD_USER_REPLY	= 12	
const kError_FTP_WEIRD_PASV_REPLY	= 13	
const kError_FTP_WEIRD_227_FORMAT	= 14	
const kError_FTP_CANT_GET_HOST	= 15	
const kError_FTP_CANT_RECONNECT	= 16	
const kError_FTP_COULDNT_SET_BINARY	= 17	
const kError_PARTIAL_FILE	= 18	
const kError_FTP_COULDNT_RETR_FILE	= 19	
const kError_FTP_WRITE_ERROR	= 20	
const kError_FTP_QUOTE_ERROR	= 21	
const kError_HTTP_RETURNED_ERROR	= 22	
const kError_WRITE_ERROR	= 23	
const kError_MALFORMAT_USER	= 24	NOT USED
const kError_FTP_COULDNT_STOR_FILE	= 25	failed FTP upload
const kError_READ_ERROR	= 26	could open/read from file
const kError_OUT_OF_MEMORY	= 27	
const kError_OPERATION_TIMEOUTED	= 28	the timeout time was reached
const kError_FTP_COULDNT_SET_ASCII	= 29	TYPE A failed
const kError_FTP_PORT_FAILED	= 30	FTP PORT operation failed
const kError_FTP_COULDNT_USE_REST	= 31	the REST command failed
const kError_FTP_COULDNT_GET_SIZE	= 32	the SIZE command failed
const kError_HTTP_RANGE_ERROR	= 33	RANGE "command" didn't work
const kError_HTTP_POST_ERROR	= 34	
const kError_SSL_CONNECT_ERROR	= 35	wrong when connecting with SSL
const kError_BAD_DOWNLOAD_RESUME	= 36	couldn't resume download
const kError_FILE_COULDNT_READ_FILE	= 37	
const kError_LDAP_CANNOT_BIND	= 38	
const kError_LDAP_SEARCH_FAILED	= 39	
const kError_LIBRARY_NOT_FOUND	= 40	
const kError_FUNCTION_NOT_FOUND	= 41	
const kError_ABORTED_BY_CALLBACK	= 42	
const kError_BAD_FUNCTION_ARGUMENT	= 43	
const kError_BAD_CALLING_ORDER	= 44	NOT USED
const kError_INTERFACE_FAILED	= 45	CURLOPT_INTERFACE failed
const kError_BAD_PASSWORD_ENTERED	= 46	NOT USED
const kError_TOO_MANY_REDIRECTS	= 47	catch endless re-direct loops
const kError_UNKNOWN_TELNET_OPTION	= 48	User specified an unknown option
const kError_TELNET_OPTION_SYNTAX	= 49	Malformed telnet option
const kError_OBSOLETE	= 50	NOT USED
const kError_SSL_PEER_CERTIFICATE	= 51	peer's certificate wasn't ok
const kError_GOT_NOHING	= 52	when this is a specific error
const kError_SSL_ENGINE_NOTFOUND	= 53	SSL crypto engine not found
const kError_SSL_ENGINE_SETFAILED	= 54	can not set SSL crypto engine as default
const kError_SEND_ERROR	= 55	failed sending network data
const kError_RECV_ERROR	= 56	failure in receiving network data
const kError_SHARE_IN_USE	= 57	share is in use
const kError_SSL_CERTPROBLEM	= 58	problem with the local certificate
const kError_SSL_CIPHER	= 59	couldn't use specified cipher
const kError_SSL_CACERT	= 60	problem with the CA cert (path?)
const kError_BAD_CONTENT_ENCODING	= 61	Unrecognized transfer encoding
const kError_LDAP_INVALID_URL	= 62	Invalid LDAP URL
const kError_FILESIZE_EXCEEDED	= 63	Maximum file size exceeded
const kError_FTP_SSL_FAILED	= 64	Requested FTP SSL level failed
const kError_SEND_FAIL_REWIND	= 65	Sending the data requires a rewind that failed
const kError_SSL_ENGINE_INITFAILED	= 66	failed to initialise ENGINE
const kError_LOGIN_DENIED	= 67	user, password or similar was not accepted and we failed to login

4.4.103 SetOptionPostQuote(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an array to a list of FTP commands to pass to the server after your ftp transfer request.

Example:

```
dim d as CURLMBS // your CURL object
```

```
dim ws() As String
ws.Append "RNFR Temp.txt"
ws.append "RNTO MyFile.txt"
d.SetOptionPostQuote(ws)
```

Notes: Disable this operation again by using an empty array for this option.

The Lasterror property is set. 0 for success.

If you want to do a ftp operation instead of download/upload/directory listing, please use SetOptionQuote.

4.4.104 SetOptionPreQuote(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an array to a list of FTP commands to pass to the server after the transfer type is set.

Notes: Disable this operation again by using an empty array for this option. Before version 7.15.6, if you also set Nobody to true, this option didn't work.

The Lasterror property is set. 0 for success.

4.4.105 SetOptionProxyHeader(list() as string)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set list of headers used for proxy requests only.

4.4.106 SetOptionQuote(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an array or a list of FTP commands to pass to the server prior to your ftp request.

Example:

```
dim curl as new CURLMBS
curl.SetOptionQuote array("DELETE filename.txt")
```

Notes: This will be done before any other FTP commands are issued (even before the CWD command).

Disable this operation again by using an empty array for this option.

The Lasterror property is set. 0 for success.

4.4.107 SetOptionResolve(list() as string)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Send linked-list of name:port:address sets.

4.4.108 SetOptionTelnetOptions(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Provide an array of variables to pass to the telnet negotiations.

Notes: The variables should be in the format <option=value>. libCURL supports the options 'TTYTYPE', 'XDISPLOC' and 'NEW_ENV'. See the TELNET standard for details.

The Lasterror property is set. 0 for success.

4.4.109 SetPathCAInfo(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A path holding one or more certificates to verify the peer with.

Example:

```
dim cacert as FolderItem // your cacert.pem file
dim CURL as new CURLMBS
CURL.OptionSSLVerifyHost = 2 // verify server
CURL.OptionSSLVerifyPeer = 1 // proofs certificate is authentic
CURL.SetPathCAInfo cacert
```

Notes: This makes sense only when used in combination with the OptionSSLVerifyPeer option. If OptionSSLVerifyPeer is false, OptionCAINFO need not even indicate an accessible file.

Note that option is by default set to the system path where libCURL's cacert bundle is assumed to be stored, as established at build time.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

4.4.110 SetPathCAPath(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A path to the directory holding multiple CA certificates to verify the peer with.

Example:

```
dim c as new CURLMBS
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
c.SetPathCAPath cacert
```

Notes: The certificate directory must be prepared using the openssl c_rehash utility. This makes sense only when used in combination with the CURLOPT_SSL_VERIFYPEER option. If OptionSSLVerifyPeer is zero, OptionCAPath need not even indicate an accessible path. The OptionCAPath function apparently does not work in Windows due to some limitation in openssl. This option is OpenSSL-specific and does nothing if libCURL is built to use GnuTLS.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

4.4.111 SetPathCRLFile(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the path with the concatenation of CRL (in PEM format) to use in the certificate validation that occurs during the SSL exchange.

Notes: When CURL is built to use NSS or GnuTLS, there is no way to influence the use of CRL passed to help in the verification process. When libCURL is built with OpenSSL support, X509_V_FLAG_CRL_CHECK and X509_V_FLAG_CRL_CHECK_ALL are both set, requiring CRL check against all the elements of the certificate chain if a CRL file is passed.

This option makes sense only when used in combination with the `OptionSSLVerifyPeer` option.

A specific error code (`CURLE_SSL_CRL_BADFILE`) is defined with the option. It is returned when the SSL exchange fails because the CRL file cannot be loaded. Note that a failure in certificate verification due to a revocation information found in the CRL does not trigger this specific error. (Added in 7.19.0)

4.4.112 `SetPathIssuerCert(path as folderitem)`

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the path to a CA certificate in PEM format.

Notes: If the option is set, an additional check against the peer certificate is performed to verify the issuer is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the `OptionSSLVerifyPeer` option. Otherwise, the result of the check is not considered as failure.

A specific error code (`CURLE_SSL_ISSUER_ERROR`) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (`OptionSSLVerifyPeer` has to be set too for the check to fail). (Added in 7.19.0)

4.4.113 `SetPathNetRCFile(path as folderitem)`

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the path to the file you want libCURL to use as `.netrc` file.

Notes: If this option is omitted, and `OptionNETRC` is set, libCURL will attempt to find the a `.netrc` file in the current user's home directory. (Added in 7.10.9)

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

4.4.114 `SetPathProxyIssuerCert(path as folderitem)`

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the proxy issuer SSL certificate filename.

Notes: Pass a string naming a file holding a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer of the the HTTPS proxy is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI

where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the `OptionProxySSLVerifyPeer` option. Otherwise, the result of the check is not considered as failure.

A specific error code (`CURLE_SSL_ISSUER_ERROR`) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (`OptionProxySSLVerifyPeer` has to be set too for the check to fail).

4.4.115 SetupEmail(email as Variant) as boolean

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Setups existing CURL session for an email transfer.

Example:

```
dim e as new CURLEmailMBS

e.SetFrom "test@test.test", "Christian Müller"
e.Subject = "Hello World ,ðÒè"
e.SMTPPassword = "xxx"
e.SMTPUsername = "xxx"
e.SetServer "smtp.test.test", true
e.AddTo "test@test.test", "Test Müller"
e.PlainText = "Hello World," + EndOfLine + "Smilies: ,ðÒè üòò üòÑ"

dim c as new CURLMBS

if c.SetupEmail(e) then

dim er as Integer = c.Perform
if er = 0 then
MsgBox "Email sent"
end if
end if
```

Notes: You can set your own settings like proxy after this function call.

If you like you can reuse the email and CURL objects after you sent an email, change values and send another email.

Returns true on success or false on failure.

4.4.116 UpKeep

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Perform any connection upkeep checks.

Notes: Perform any connection upkeep checks.

Some protocols have "connection upkeep" mechanisms. These mechanisms usually send some traffic on existing connections in order to keep them alive; this can prevent connections from being closed due to overzealous firewalls, for example.

Currently the only protocol with a connection upkeep mechanism is HTTP/2: when the connection upkeep interval is exceeded and Upkeep is called, an HTTP/2 PING frame is sent on the connection.

This function must be explicitly called in order to perform the upkeep work. The connection upkeep interval is set with OptionUpkeepIntervalMS.

4.4.117 WebSocketMeta as CURLWebSocketFrameMBS

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries last frame metadata.

Notes: Only useful if called in Write event.

4.4.118 WebSocketReceive(BufferSize as Integer = 65536) as CURLWebSocketFrameMBS

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Receive WebSocket data.

Example:

```
dim curl as CURLMBS // your curl handle

dim m as CURLWebSocketFrameMBS = curl.WebSocketReceive

if m <> nil then
  TextAreaLog.AddText "Received: "+m.Text
end if
```

Notes: Retrieves as much as possible of a received WebSocket data fragment into the buffer, but not more than BufferSize bytes. The bytesReceived property in CURLWebSocketFrameMBS is set to the number of bytes actually stored.

If there is more fragment data to deliver than what fits in the provided buffer, CURL returns a full buffer and the application needs to call this function again to continue draining the buffer.

The returned `CURLWebSocketFrameMBS` contains the data and the metadata about the received data.

`Lasterror` property is set.

4.4.119 `WebSocketSend(Data as MemoryBlock, FrameSize as Integer = 0, SendFlags as Integer = 0) as Integer`

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Send the specific message fragment over an established WebSocket connection.

Notes: The buffer holds the data to send.

Returns the number of payload bytes actually sent.

To send a (huge) fragment using multiple calls with partial content per invoke, set the `kFlagOffset` bit and the `FrameSize` argument as the total expected size for the first part, then set the `kFlagOffset` with a zero `FrameSize` for the following parts.

If not sending a partial fragment or if this is raw mode, `FrameSize` should be set to zero.

If `kWebSocketRaw` is enabled in `WebSocketOptions`, the `flags` argument should be set to 0.

`Lasterror` property is set.

4.4.120 Properties

4.4.121 `APILoaded as Boolean`

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether the CURL library was loaded.

Notes: The `CURLMBS` constructor loads the library if it was not loaded before.

(Read only property)

4.4.122 `Cancel as Boolean`

Plugin Version: 13.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Tells CURL instance to cancel transfer as soon as possible.

Notes: Especially when using `PerformMT`, you may see your app hang if user tries to quit application.

To prevent the hang, please set `Cancel = true` in window close event. So when app quits and windows get destroyed, the `PerformMT` will see the `Cancel` being true and returns soon.

(Read and Write property)

4.4.123 `CollectDebugData` as Boolean

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `CollectDebugMessages` instead. **Function:** Whether to collect debug message data.

Notes: If you set this property to true, you can grab the data from the transfer in the `DebugMessages` Property instead of collecting the pieces yourself in the `DebugMessage` event. Of course this is optional and you can still process data in `DebugMessage` event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.

(Read and Write property)

4.4.124 `CollectDebugMessages` as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to collect debug message data.

Notes: If you set this property to true, you can grab the data from the transfer in the `DebugMessages` Property instead of collecting the pieces yourself in the `DebugMessage` event. Of course this is optional and you can still process data in `DebugMessage` event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.

(Read and Write property)

4.4.125 `CollectHeaderData` as Boolean

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `CollectHeaders` instead.

Function: Whether to collect headers.

Notes: If you set this property to true, you can grab the data from the transfer in the `Headers` Property instead of collecting the pieces yourself in the header event. Of course this is optional and you can still process data in header event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.

Renamed to `CollectHeaders` in v23.0.

(Read and Write property)

4.4.126 CollectHeaders as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to collect headers.

Notes: If you set this property to true, you can grab the data from the transfer in the Headers Property instead of collecting the pieces yourself in the header event. Of course this is optional and you can still process data in header event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.
(Read and Write property)

4.4.127 CollectOutputData as Boolean

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to collect output data.

Notes: If you set this property to true, you can grab the data from the transfer in the OutputData Property instead of collecting the pieces yourself in the write event. Of course this is optional and you can still process data in write event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.
(Read and Write property)

4.4.128 DebugData as String

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use DebugMessages instead.

Function: The debug data from CURL.

Notes: If CollectDebugData property is true, the plugin puts the data received in debugMessage event also into this property, so you can grab it after the transfer.

Newer code should use DebugMessages property instead.
(Read only property)

4.4.129 DebugMessages as String

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The debug messages from CURL.

Notes: If CollectDebugMessage property is true, the plugin puts the data received in debugMessage event also into this property, so you can grab it after the transfer.

(Read only property)

4.4.130 DebugWithData as Boolean

Plugin Version: 18.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to include data in debug messages.

Example:

```
dim c as new CURLMBS
c.DebugWithData = true
c.OptionVerbose = true
c.CollectDebugMessages = true
```

Notes: (Read and Write property)

4.4.131 Handle as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The internal handle of the CURL object.

Notes: (Read and Write property)

4.4.132 HeaderData as String

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The headers from CURL.

Notes: If CollectHeaders property is true, the plugin puts the data received in header event also into this property, so you can grab it after the transfer.

Renamed to Headers in v23.0.
(Read only property)

4.4.133 Headers as String

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use Headers instead. **Function:** The headers from CURL.

Notes: If CollectHeaders property is true, the plugin puts the data received in header event also into this property, so you can grab it after the transfer.

(Read only property)

4.4.134 InputData as String

Plugin Version: 14.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The input data.

Notes: If you set input data, you do not need to use Read, RestartRead or Seek events.

The plugin will use the provided data for the upload.

Setting input data size, will also set the input file size (OptionInFileSizeLarge and OptionInFileSize).

Alternatively you can provide data in Read event or use OpenMTInputFile method to open a file on disk to upload.

(Read and Write property)

4.4.135 Lasterror as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The lasterror from the library.

Example:

```
Dim d As New CURLMBS
```

```
d.OptionSSLVersion = 123
```

```
Dim LastError As Integer = d.LastError
```

```
// gives 43
```

```
Dim LastErrorText As String = d.LastErrorText
```

```
// A libcurl function was given a bad argument
```

```
Break
```

Notes: Set in the constructor while doing initialization as well as by various curl calls.

Check the kError* constants.

(Read and Write property)

4.4.136 LastErrorMessage as String

Plugin Version: 11.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error message.

Example:

```
Dim d As New CURLMBS
```

```
d.OptionURL = "http://192.168.2.53"  
d.OptionConnectionTimeout = 5
```

```
Dim ErrorCode As Integer = d.Perform
```

```
Dim LastErrorMessage As String = d.LastErrorMessage  
Dim LastErrorText As String = d.LastErrorText
```

```
Break
```

Notes: The error message from the transfer.

e.g. Perform may report a timeout with code 28.
Then LastErrorText is "Timeout was reached" looked up for 28.

But LastErrorMessage would be something like "Failed to connect to x.x.x.x port 80 after 5000 ms: Timeout was reached".
(Read only property)

4.4.137 LasterrorText as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The text for the lasterror code.

Example:

```
Dim d As New CURLMBS
```

```
d.OptionURL = "http://192.168.2.53"  
d.OptionConnectionTimeout = 5
```

```
Dim ErrorCode As Integer = d.Perform
```

```
Dim LastErrorMessage As String = d.LastErrorMessage  
Dim LastErrorText As String = d.LastErrorText
```

```
Break
```

Notes: Static string matched to the error code, so you have an idea what's wrong.

e.g. Perform may report a timeout with code 28.
Then LastErrorText is "Timeout was reached" looked up for 28.

But LastErrorMessage would be something like "Failed to connect to x.x.x.x port 80 after 5000 ms: Timeout was reached".

(Read and Write property)

4.4.138 LibraryUsed as String

Plugin Version: 17.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Which library is in use.

Notes: This is for debugging only to see which library is in use.

(Read only property)

4.4.139 LibVersion as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns a human readable string with the version number of libCURL and some of its important components (like OpenSSL version).

Notes: (Read only property)

4.4.140 OptionAbstractUnixSocket as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Path to an abstract Unix domain socket.

Notes: (Read and Write property)

See also [ABSTRACT_UNIX_SOCKET](#) option in CURL manual.

4.4.141 OptionAcceptEncoding as String

Plugin Version: 13.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the contents of the Accept-Encoding: header sent in a HTTP request, and enables decoding of a response when a Content-Encoding: header is received.

Example:

```
dim c as new CURLMBS
c.OptionAcceptEncoding = "deflate"
```

Notes: Three encodings are supported: identity, which does nothing, deflate which requests the server to

compress its response using the zlib algorithm, and gzip which requests the gzip algorithm. If a zero-length string is set, then an Accept-Encoding: header containing all supported encodings is sent.

This is a request, not an order; the server may or may not do it. This option must be set (to any non-NULL value) or else any unsolicited encoding done by the server is ignored. See the special file README.encoding for details (included with CURL source code).

(Read and Write property)

See also [ACCEPT_ENCODING](#) option in CURL manual.

4.4.142 OptionAcceptTimeoutMS as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Time-out accept operations (currently for FTP only) after this amount of milliseconds.

Notes: (Read and Write property)

See also [ACCEPTTIMEOUT_MS](#) option in CURL manual.

4.4.143 OptionAddressScope as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an integer specifying the scope_id value to use when connecting to IPv6 link-local or site-local addresses.

Notes: (Added in CURL 7.19.0)

(Read and Write property)

See also [ADDRESS_SCOPE](#) option in CURL manual.

4.4.144 OptionAppend as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to append to the remote file instead of overwrite it.

Notes: This is only useful when uploading to an ftp site.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [APPEND](#) option in CURL manual.

4.4.145 OptionAutoReferer as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: When enabled, libCURL will automatically set the Referer: field in requests where it follows a Location: redirect.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [AUTOREFERER](#) option in CURL manual.

4.4.146 OptionAWSSigV4 as String

Plugin Version: 21.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Provides AWS V4 signature authentication on HTTP(S) header.

Notes: Pass a text that is the collection of specific arguments are used for creating outgoing authentication headers. The format of the param option is:

```
provider1 [ :provider2 [ :region [ :service ] ] ]
```

provider1, provider2:

The providers arguments are used for generating some authentication parameters such as "Algorithm", "date", "request type" and "signed headers".

region:

The argument is a geographic area of a resources collection. It is extracted from the host name specified in the URL if omitted.

service:

The argument is a function provided by a cloud. It is extracted from the host name specified in the URL if omitted.

Note: This call set CURLOPT_HTTPAUTH to CURLAUTH_AWS_SIGV4. Calling CURLOPT_HTTPAUTH with CURLAUTH_AWS_SIGV4 is the same as calling this with "aws:amz" in parameter.

Example with "Test:Try", when curl will do the algorithm, it will generate "TEST-HMAC-SHA256" for "Algorithm", "x-try-date" and "X-Try-Date" for "date", "test4_request" for "request type", "SignedHeaders=content-type;host;x-try-date" for "signed headers"

If you use just "test", instead of "test:try", test will be use for every strings generated

By default, the value of this parameter is empty. Calling CURLOPT_HTTPAUTH with CURLAUTH_AWS_SIGV4

is the same as calling this with "aws:amz" in parameter.

(Read and Write property)

See also [AWS_SIGV4](#) option in CURL manual.

4.4.147 OptionBufferSize as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Your preferred size (in bytes) for the receive buffer in libCURL.

Notes: The main point of this would be that the write event gets called more often and with smaller chunks.

This is just treated as a request, not an order. You cannot be guaranteed to actually get the given size.

(Added in 7.10)

This size is by default set as big as possible (OptionMaxWriteSize), so it only make sense to use this option if you want it smaller.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

For slow upload/downloads, it may be better to set buffer size to 1 MB with OptionUploadBufferSize or OptionBufferSize properties to make transfers faster.

(Read and Write property)

See also [BUFFERSIZE](#) option in CURL manual.

4.4.148 OptionCACacheTimeout as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the life-time for cached certificate stores.

Notes: Pass a number, this sets the timeout in seconds. This tells libcurl the maximum time any cached certificate store it has in memory may be kept and reused for new connections. Once the timeout has expired, a subsequent fetch requiring a certificate store will have to build a new one.

Building a certificate store from a CAINFO file (see OptionCAInfo) is a slow operation so curl may cache the generated certificate store internally to speed up future connections.

Set to zero to completely disable caching, or set to -1 to retain the cached store remain forever. By default, libcurl caches this info for 24 hours.

(Read and Write property)

See also [CA_CACHE_TIMEOUT](#) option in CURL manual.

4.4.149 OptionCAInfo as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string naming a file holding one or more certificates to verify the peer with.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLMBS
// your CURL object
```

```
// disable
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
d.OptionCAInfo = cacert.NativePath
d.OptionSSLVerifyHost = 2
d.OptionSSLVerifyPeer = 1
```

Notes: This makes sense only when used in combination with the OptionSSLVerifyPeer option. If OptionSSLVerifyPeer is false, OptionCAINFO need not even indicate an accessible file.

Note that option is by default set to the system path where libCURL's cacert bundle is assumed to be stored, as established at build time.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **CAINFO** option in CURL manual.

4.4.150 OptionCAInfoBlob as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The CAInfo as blob value.

Notes: Certificate Authority (CA) bundle in PEM format passed PEM encoded content holding one or

more certificates to verify the HTTPS server with.
 (Read and Write property)
 See also [CAINFO_BLOB](#) option in CURL manual.

4.4.151 OptionCAPath as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string naming a directory holding multiple CA certificates to verify the peer with.

Example:

```
dim c as new CURLMBS
c.OptionCAPath = "/data/MyCertificates"
```

Notes: The certificate directory must be prepared using the openssl c_rehash utility. This makes sense only when used in combination with the CURLOPT_SSL_VERIFYPEER option. If OptionSSLVerifyPeer is zero, OptionCAPath need not even indicate an accessible path. The OptionCAPath function apparently does not work in Windows due to some limitation in openssl. This option is OpenSSL-specific and does nothing if libCURL is built to use GnuTLS.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [CAPATH](#) option in CURL manual.

4.4.152 OptionCertInfo as boolean

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to true to enable libCURL's certificate chain info gatherer.

Notes: With this enabled, libCURL (if built with OpenSSL) will extract lots of information and data about the certificates in the certificate chain used in the SSL connection. This data is then possible to extract after a transfer using GetInfoCertInfo. (Added in 7.19.1)

(Read and Write property)

See also [CERTINFO](#) option in CURL manual.

4.4.153 OptionConnectionTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum time in seconds that you allow the connection to the server to take.

Example:

```
dim d as new CURLMBS

d.OptionConnectionTimeOutMS = 5000
d.OptionConnectOnly = 1

// try this URL
d.OptionURL = URL

// try connection
dim e as integer = d.Perform

// check result
dim s as string = d.OutputData
TextArea1.text = FixText(S)

if e = 0 then
  MsgBox "Connected"
else
  MsgBox "Failed to connect"
end if
```

Notes: This only limits the connection phase, once it has connected, this option is of no more use. Set to zero to disable connection timeout (it will then only timeout on the system's internal timeouts). See also the OptionTimeout option.

(Read and Write property)

See also **CONNECTTIMEOUT** option in CURL manual.

4.4.154 OptionConnectionTimeOutMS as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum time in milli seconds that you allow the connection to the server to take.

Notes: This only limits the connection phase, once it has connected, this option is of no more use. Set to zero to disable connection timeout (it will then only timeout on the system's internal timeouts). See also the OptionTimeout option.

(Read and Write property)

4.4.155 OptionConnectOnly as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A true tells the library to perform any required proxy authentication and connection setup, but no data transfer.

Notes: This option is useful with the CURLMBS.GetInfoLastSocket function. The library can set up the connection and then the application can obtain the most recently used socket for special data transfers. (Added in 7.15.2)

Type changed to integer in v23.0 to enable passing 2 for WebSockets.

(Read and Write property)

See also [CONNECT_ONLY](#) option in CURL manual.

4.4.156 OptionCookie as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: It will be used to set a cookie in the http request.

Notes: The format of the string should be NAME=CONTENTS, where NAME is the cookie name and CONTENTS is what the cookie should contain.

If you need to set multiple cookies, you need to set them all using a single option and thus you need to concatenate them all in one single string. Set multiple cookies in one string like this: "name1=content1; name2=content2;" etc.

Using this option multiple times will only make the latest string override the previously ones.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [COOKIE](#) option in CURL manual.

4.4.157 OptionCookieFile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The cookie file content.

Notes: It should contain the name of your file holding cookie data to read. The cookie data may be in Netscape / Mozilla cookie data format or just regular HTTP-style headers dumped to a file.

Given an empty or non-existing file or by passing the empty string (""), this option will enable cookies for

this CURL handle, making it understand and parse received cookies and then use matching cookies in future request.

If you use this option multiple times, you just add more files to read. Subsequent files will add more cookies.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **COOKIEFILE** option in CURL manual.

4.4.158 OptionCookieJar as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: File path where to write the cookies to.

Notes: This will make libCURL write all internally known cookies to the specified file, when the object is destroyed. If no cookies are known, no file will be created. Specify "-" to instead have the cookies written to stdout. Using this option also enables cookies for this session, so if you for example follow a location it will make matching cookies get sent accordingly.

If the cookie jar file can't be created or written to, libCURL will not and cannot report an error for this. Using OptionVerbose or DebugFunction event will get a warning to display, but that is the only visible feedback you get about this possibly lethal situation.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **COOKIEJAR** option in CURL manual.

4.4.159 OptionCookieList as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The cookie string.

Notes: Cookie can be either in Netscape / Mozilla format or just regular HTTP-style header (Set-Cookie:

...) format. If CURL cookie engine was not enabled it will enable its cookie engine. Passing a magic string "ALL" will erase all cookies known by CURL. (Added in 7.14.1) Passing the special string "SESS" will only erase all session cookies known by CURL. (Added in 7.15.4)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **COOKIELIST** option in CURL manual.

4.4.160 OptionCookieSession as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to true to mark this as a new cookie "session".

Notes: It will force libCURL to ignore all cookies it is about to load that are "session cookies" from the previous session. By default, libCURL always stores and loads all cookies, independent if they are session cookies are not. Session cookies are cookies without expiry date and they are meant to be alive and existing for this "session" only.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **COOKIESESSION** option in CURL manual.

4.4.161 OptionCRLF as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Convert Unix newlines to CRLF newlines on transfers.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **CRLF** option in CURL manual.

4.4.162 OptionCRLFFile as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string naming a file with the concatenation of CRL (in PEM format) to use in the certificate validation that occurs during the SSL exchange.

Notes: When CURL is built to use NSS or GnuTLS, there is no way to influence the use of CRL passed to help in the verification process. When libCURL is built with OpenSSL support, X509_V_FLAG_CRL_CHECK

and `X509_V_FLAG_CRL_CHECK_ALL` are both set, requiring CRL check against all the elements of the certificate chain if a CRL file is passed.

This option makes sense only when used in combination with the `OptionSSLVerifyPeer` option.

A specific error code (`CURLE_SSL_CRL_BADFILE`) is defined with the option. It is returned when the SSL exchange fails because the CRL file cannot be loaded. Note that a failure in certificate verification due to a revocation information found in the CRL does not trigger this specific error. (Added in 7.19.0) (Read and Write property)

See also `CRLFILE` option in CURL manual.

4.4.163 OptionCustomRequest as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: It will be user instead of GET or HEAD when doing an HTTP request, or instead of LIST or NLST when doing an ftp directory listing.

Example:

```
dim c as CURLMBS // your CURL instance

c.URL = "ftp://..."
c.customRequest = "MLSD" // ftp advanced directory listing
```

Notes: This is useful for doing DELETE or other more or less obscure HTTP requests. Don't do this at will, make sure your server supports the command first.

Restore to the internal default by setting this to "".

Many people have wrongly used this option to replace the entire request with their own, including multiple headers and POST contents. While that might work in many cases, it will cause libCURL to send invalid requests and it could possibly confuse the remote server badly. Use `CURLOPT_POST` and `OptionPostFields` to set POST data. Use `OptionHTTPHeader` to replace or extend the set of headers sent by libCURL. Use `OptionHTTPVersion` to change HTTP version.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

For WebDAV, you can set this to "MKCOL" to create a folder at the given URL.

(Read and Write property)

See also `CUSTOMREQUEST` option in CURL manual.

4.4.164 OptionDefaultProtocol as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the protocol used when curl is given a URL without a protocol.

Notes: (Read and Write property)

See also [DEFAULT_PROTOCOL](#) option in CURL manual.

4.4.165 OptionDirListOnly as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: For FTP and SFTP based URLs a parameter set to true tells the library to list the names of files in a directory, rather than performing a full directory listing that would normally include file sizes, dates etc.

Notes: For POP3 a parameter of true tells the library to list the email message or messages on the POP3 server. This can be used to change the default behaviour of libCURL, when combined with a URL that contains a message ID, to perform a "scan listing" which can then be used to determine the size of an email.

Note: For FTP this causes a NLST command to be sent to the FTP server. Beware that some FTP servers list only files in their response to NLST; they might not include subdirectories and symbolic links.

Setting this option to true also implies a directory listing even if the URL doesn't end with a slash, which otherwise is necessary.

Do NOT use this option if you also use OptionWildcardMatch as it will effectively break that feature then. (Read and Write property)

See also [DIRLISTONLY](#) option in CURL manual.

4.4.166 OptionDisableUserNameInURL as Boolean

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Disallow specifying username/login in URL.

Notes: The value true tells the library to not allow URLs that include an username.

(Read and Write property)

4.4.167 OptionDNSCacheTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The timeout in seconds.

Notes: Name resolves will be kept in memory for this number of seconds. Set to zero (0) to completely disable caching, or set to -1 to make the cached entries remain forever. By default, libCURL caches this info for 60 seconds.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [DNS_CACHE_TIMEOUT](#) option in CURL manual.

4.4.168 OptionDNSInterface as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the name of the network interface that the DNS resolver should bind to.

Notes: This must be an interface name (not an address). Set this option to "" to use the default setting (don't bind to a specific interface).

(Read and Write property)

See also [DNS_INTERFACE](#) option in CURL manual.

4.4.169 OptionDNSLocalIPv4 as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the local IPv4 address that the resolver should bind to.

Notes: The argument should be of string and contain a single numerical IPv4 address as a string. Set this option to "" to use the default setting (don't bind to a specific IP address).

(Read and Write property)

See also [DNS_LOCAL_IP4](#) option in CURL manual.

4.4.170 OptionDNSLocalIPv6 as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the local IPv6 address that the resolver should bind to.

Notes: The argument should be of type string and contain a single IPv6 address as a string. Set this option to "" to use the default setting (don't bind to a specific IP address).

(Read and Write property)

See also [DNS_LOCAL_IP6](#) option in CURL manual.

4.4.171 OptionDNSServers as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the name servers to use for DNS resolution.

Notes: (Read and Write property)

See also [DNS_SERVERS](#) option in CURL manual.

4.4.172 OptionDNSShuffleAddresses as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to shuffle DNS addresses.

Notes: When a name is resolved and more than one IP address is returned, shuffle the order of all returned addresses so that they will be used in a random order. This is similar to the ordering behavior of `gethostbyname` which is no longer used on most platforms.

Addresses will not be reshuffled if a name resolution is completed using the DNS cache. `DNSCacheTimeout` property can be used together with this option to reduce DNS cache timeout or disable caching entirely if frequent reshuffling is needed.

Since the addresses returned will be reordered randomly, their order will not be in accordance with RFC 3484 or any other deterministic order that may be generated by the system's name resolution implementation. This may have performance impacts and may cause IPv4 to be used before IPv6 or vice versa.

Default is false.

(Read and Write property)

See also [DNS_SHUFFLE_ADDRESSES](#) option in CURL manual.

4.4.173 OptionDOHSSLVerifyHost as Integer

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to verify the host name in the DOH (DNS-over-HTTPS) SSL certificate.

Notes: Pass a 2 as asking curl to verify the DOH (DNS-over-HTTPS) server's certificate name fields against the host name.

This option is the DOH equivalent of `OptionSSLVerifyPeer` and only affects requests to the DOH server.

When `OptionDOHSSLVerifyHost` is 2, the SSL certificate provided by the DOH server must indicate that the server name is the same as the server name to which you meant to connect to, or the connection fails.

Curl considers the DOH server the intended one when the Common Name field or a Subject Alternate Name field in the certificate matches the host name in the DOH URL to which you told Curl to connect.

When the verify value is set to 1 it is treated the same as 2. However for consistency with the other Verify-Host options we suggest use 2 and not 1.

When the verify value is set to 0, the connection succeeds regardless of the names used in the certificate. Use that ability with caution!

(Read and Write property)

See also [DOH_SSL_VERIFYHOST](#) option in CURL manual.

4.4.174 OptionDOHSSLVerifyPeer as Integer

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to verify the DOH SSL certificate.

Notes: Pass 1 to enable or 0 to disable.

This option tells curl to verify the authenticity of the DOH (DNS-over-HTTPS) server's certificate. A value of 1 means curl verifies; 0 (zero) means it doesn't.

This option is the DOH equivalent of `CURL.SetOptionSSLVerifyPeer` and only affects requests to the DOH server.

When negotiating a TLS or SSL connection, the server sends a certificate indicating its identity. Curl verifies whether the certificate is authentic, i.e. that you can trust that the server is who the certificate says it is. This trust is based on a chain of digital signatures, rooted in certification authority (CA) certificates you supply. curl uses a default bundle of CA certificates (the path for that is determined at build time) and you can specify alternate certificates with the `CURL.SetOptionCAInfo` option or the `CURL.SetOptionCAPath` option.

When `CURL.SetOptionDOHSSLVerifyPeer` is enabled, and the verification fails to prove that the certificate is authentic, the connection fails. When the option is zero, the peer certificate verification succeeds regardless.

Authenticating the certificate is not enough to be sure about the server. You typically also want to ensure that the server is the server you mean to be talking to. Use `CURL.SetOptionDOHSSLVerifyHost` for that. The check that the host name in the certificate is valid for the host name you're connecting to is done independently of the `CURL.SetOptionDOHSSLVerifyPeer` option.

WARNING: disabling verification of the certificate allows bad guys to man-in-the-middle the communication without you knowing it. Disabling verification makes the communication insecure. Just having encryption on a transfer is not enough as you cannot be sure that you are communicating with the correct end-point. (Read and Write property)

See also [DOH_SSL_VERIFYPEER](#) option in CURL manual.

4.4.175 OptionDOHSSLVerifyStatus as Integer

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to verify the DOH SSL certificate's status.

Notes: Pass 2 to ask curl to verify the DOH (DNS-over-HTTPS) server's certificate name fields against the host name.

This option is the DOH equivalent of `OptionSSLVerifyHost` and only affects requests to the DOH server. When `OptionDOHSSLVerifyHost` is 2, the SSL certificate provided by the DOH server must indicate that the server name is the same as the server name to which you meant to connect to, or the connection fails. Curl considers the DOH server the intended one when the Common Name field or a Subject Alternate Name field in the certificate matches the host name in the DOH URL to which you told Curl to connect. When the verify value is set to 1L it is treated the same as 2L. However for consistency with the other `VerifyHost` options we suggest use 2 and not 1. When the verify value is set to 0L, the connection succeeds regardless of the names used in the certificate. Use that ability with caution!

See also `OptionDOHSSLVerifyPeer` to verify the digital signature of the DOH server certificate. If libcurl is built against NSS and `OptionDOHSSLVerifyPeer` is zero, `OptionDOHSSLVerifyHost` is also set to zero and cannot be overridden.

(Read and Write property)

See also `DOH_SSL_VERIFYSTATUS` option in CURL manual.

4.4.176 `OptionDOHURL` as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Provides the DNS-over-HTTPS URL.

Notes: Pass in a string to a URL for the DOH server to use for name resolving. The parameter should be URL-encoded in the following format: "https://host:port/path". It MUST specify a HTTPS URL.

libcurl doesn't validate the syntax or use this variable until the transfer is issued. Even if you set a crazy value here, `OptionDOHURL` will still return `CURLE_OK`.

curl sends POST requests to the given DNS-over-HTTPS URL.

To find the DOH server itself, which might be specified using a name, libcurl will use the default name lookup function. You can bootstrap that by providing the address for the DOH server with `OptionResolve`.

Disable DOH use again by setting this option to "".

(Read and Write property)

See also `DOH_URL` option in CURL manual.

4.4.177 `OptionEGDSocket` as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** The path name to the Entropy Gathering Daemon socket.

Notes: It will be used to seed the random engine for SSL.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.4.178 OptionExpect100TimeoutMS as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets Expect 100 timeout.

Notes: Time to wait in milliseconds for a response to a HTTP request containing an Expect: 100-continue header before sending the data anyway.

(Read and Write property)

See also [EXPECT_100_TIMEOUT_MS](#) option in CURL manual.

4.4.179 OptionFailOnError as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to fail silently if the HTTP code returned is equal to or larger than 400. The default action would be to return the page normally, ignoring that code.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

This method is not fail-safe and there are occasions where non-succesful response codes will slip through, especially when authentication is involved (response codes 401 and 407).

You might get some amounts of headers transferred before this situation is detected, like for when a "100-continue" is received as a response to a POST/PUT and a 401 or 407 is received immediately afterwards.

(Read and Write property)

See also [FAILONERROR](#) option in CURL manual.

4.4.180 OptionFileTime as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether filetype should be queried.

Example:

```
// init CURL with options
dim d as new CURLMBS
```

```

d.OptionFileTime = true
d.OptionURL = "http://www.monkeybreadsoftware.de/images/mbs.jpg"

// run query
dim e as Integer = d.Perform

// calculate date object
dim da as new date(1970,1,1,0,0,0)
da.TotalSeconds = da.TotalSeconds + d.GetInfoFileTime

// show date
ResultText.text=str(d.GetInfoFileTime)+" "+da.ShortDate+" "+da.ShortTime

```

Notes: If it is true, libCURL will attempt to get the modification date of the remote document in this operation. This requires that the remote server sends the time or replies to a time querying command.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **FILETIME** option in CURL manual.

4.4.181 OptionFollowLocation as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A boolean parameter tells the library to follow any Location: header that the server sends as part of an HTTP header.

Example:

```

dim c as new CURLMBS

c.OptionFollowLocation = true
c.OptionMaxRedirs = 3

```

Notes: This means that the library will re-send the same request on the new location and follow new Location: headers all the way until no more such headers are returned. OptionMaxRedirs can be used to limit the number of redirects libCURL will follow.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **FOLLOWLOCATION** option in CURL manual.

4.4.182 OptionForbitReuse as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to true to make the next transfer explicitly close the connection when done.

Notes: Normally, libCURL keep all connections alive when done with one transfer in case there comes a succeeding one that can re-use them. This option should be used with caution and only if you understand what it does. Set to false to have libCURL keep the connection open for possibly later re-use (default behavior).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.4.183 OptionFreshConnect as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to true to make the next transfer use a new (fresh) connection by force.

Example:

```
dim c as new CURLMBS
```

```
c.OptionFreshConnect=True
```

Notes: If the connection cache is full before this connection, one of the existing connections will be closed as according to the selected or default policy. This option should be used with caution and only if you understand what it does. Set this to 0 to have libCURL attempt re-using an existing connection (default behavior).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

See also **FRESH_CONNECT** option in CURL manual.

4.4.184 OptionFTPAccount as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The FTP account name to use.

Notes: When an FTP server asks for "account data" after user name and password has been provided, this

data is sent off using the ACCT command.

(Read and Write property)

See also [FTP_ACCOUNT](#) option in CURL manual.

4.4.185 OptionFTPAlternativeToUser as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The alternative username.

Notes: Pass a string as parameter, pointing to a string which will be used to authenticate if the usual FTP "USER user" and "PASS password" negotiation fails. This is currently only known to be required when connecting to Tumbleweed's Secure Transport FTPS server using client certificates for authentication.

(Added in 7.15.5)

(Read and Write property)

See also [FTP_ALTERNATIVE_TO_USER](#) option in CURL manual.

4.4.186 OptionFTPAppend as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionAppend instead.

Function: True tells the library to append to the remote file instead of overwrite it.

Notes: This is only useful when uploading to an ftp site.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.4.187 OptionFTPCreateMissingDirs as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the value is 1, CURL will attempt to create any remote directory that it fails to CWD into.

Notes: CWD is the command that changes working directory. (Added in 7.10.7)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Newer CURL Library versions allow a value of 2 to do a CWD after the directory was created, so this property changed from boolean to integer.

(Read and Write property)

See also [FTP_CREATE_MISSING_DIRS](#) option in CURL manual.

4.4.188 OptionFTPFileMethod as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an integer that should have one of the following values.

Notes: This option controls what method libCURL should use to reach a file on a FTP(S) server. The argument should be one of the following alternatives:

URLFTPMETHOD_MULTICWD = 1

libCURL does a single CWD operation for each path part in the given URL. For deep hierarchies this means very many commands. This is how RFC1738 says it should be done. This is the default but the slowest behavior.

CURLFTPMETHOD_NOCWD = 2

libCURL does no CWD at all. libCURL will do SIZE, RETR, STOR etc and give a full path to the server for all these commands. This is the fastest behavior.

CURLFTPMETHOD_SINGLECWD = 3

libCURL does one CWD with the full target directory and then operates on the file "normally" (like in the multicwd case). This is somewhat more standards compliant than 'nocwd' but without the full penalty of 'multicwd'.

(Read and Write property)

See also [FTP_FILEMETHOD](#) option in CURL manual.

4.4.189 OptionFTPListOnly as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionDirListOnly instead. **Function:** True tells the library to just list the names of an ftp directory, instead of doing a full directory listing that would include file sizes, dates etc.

Notes: This causes an FTP NLST command to be sent. Beware that some FTP servers list only files in their response to NLST; they might not include subdirectories and symbolic links.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.4.190 OptionFTPPort as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The port to use for ftp.

Notes: It will be used to get the IP address to use for the ftp PORT instruction. The PORT instruction tells the remote server to connect to our specified IP address. The string may be a plain IP address, a host name, an network interface name (under Unix) or just a '-' letter to let the library use your systems default IP address. Default FTP operations are passive, and thus won't use PORT.

You disable PORT again and go back to using the passive version by setting this option to "".

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **FTPPORT** option in CURL manual.

4.4.191 OptionFTPResponseTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionServerResponseTimeout instead. **Function:** Causes CURL to set a timeout period (in seconds) on the amount of time that the server is allowed to take in order to generate a response message for a command before the session is considered hung.

Notes: With v22.4 or newer, please use newer property name OptionServerResponseTimeout.

While CURL is waiting for a response, this value overrides OptionTimeout. It is recommended that if used in conjunction with OptionTimeout, you set OptionFTPResponseTimeout to a value smaller than OptionTimeout. (Added in 7.10.8)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.4.192 OptionFTPSkipPasvIP as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If set to a non-zero value, it instructs libCURL to not use the IP address the server suggests in its 227-response to libCURL's PASV command when libCURL connects the data connection.

Notes: Instead libCURL will re-use the same IP address it already uses for the control connection. But it

will use the port number from the 227-response. (Added in 7.14.2)

This option has no effect if PORT, EPRT or EPSV is used instead of PASV.

(Read and Write property)

See also [FTP_SKIP_PASV_IP](#) option in CURL manual.

4.4.193 OptionFTPSSL as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionUseSSL instead.

Function: Request using SSL / TLS for the transfer.

Example:

```
dim c as CURLMBS
```

```
c.OptionUseSSL = c.kFTPSSL_ALL
```

```
c.OptionSSLVersion = c.kSSLVersionTLSv12
```

Notes: Set to an integer using one of the values from below, to make libCURL use your desired level of SSL for the transfer.

These are all protocols that start out plain text and get "upgraded" to SSL using the STARTTLS command. This is for enabling SSL/TLS when you use FTP, SMTP, POP3, IMAP etc.

CURLUSESSL_NONE	0	Don't attempt to use SSL.
CURLUSESSL_TRY	1	Try using SSL, proceed as normal otherwise.
CURLUSESSL_CONTROL	2	Require SSL for the control connection or fail with CURLE_USE_SSL_FAILED.
CURLUSESSL_ALL	3	Require SSL for all communication or fail with CURLE_USE_SSL_FAILED.

(Read and Write property)

4.4.194 OptionFTPSSLAAuth as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: What kind of SSL authentication to use for FTP.

Notes: Pass an integer using one of the values from below, to alter how libCURL issues "AUTH TLS" or "AUTH SSL" when FTP over SSL is activated (see CURLOPT_FTP_SSL). (Added in 7.12.2)

```
kFTPAUTH_DEFAULT = 0
```

Allow libCURL to decide

```
kFTPAUTH_SSL = 1
```

Try "AUTH SSL" first, and only if that fails try "AUTH TLS"

```
kFTPAUTH_TLS = 2
```

Try "AUTH TLS" first, and only if that fails try "AUTH SSL"

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [FTPSSLAUTH](#) option in CURL manual.

4.4.195 OptionFTPSSLCCC as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If enabled, this option makes libCURL use CCC (Clear Command Channel).

Notes: It shuts down the SSL/TLS layer after authenticating. The rest of the control channel communication will be unencrypted. This allows NAT routers to follow the FTP transaction. Pass a long using one of the values below. (Added in 7.16.1)

CURLFTPSSL_CCC_NONE	0	Don't attempt to use CCC.
CURLFTPSSL_CCC_PASSIVE	1	Do not initiate the shutdown, but wait for the server to do it. Do not send a reply.
CURLFTPSSL_CCC_ACTIVE	2	Initiate the shutdown and wait for a reply.

(Read and Write property)

See also [FTP_SSL_CCC](#) option in CURL manual.

4.4.196 OptionFTPUseEPRT as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the value is true, it tells CURL to use the EPRT (and LPRT) command when doing active FTP downloads (which is enabled by `CURLOPT_FTPPORT`).

Notes: Using EPRT means that it will first attempt to use EPRT and then LPRT before using PORT, but if you pass FALSE (zero) to this option, it will not try using EPRT or LPRT, only plain PORT. (Added in

7.10.5)

If the server is an IPv6 host, this option will have no effect as of 7.12.3.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [FTP_USE_EPRT](#) option in CURL manual.

4.4.197 OptionFTPUseEPSV as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the value is true, it tells CURL to use the EPSV command when doing passive FTP downloads (which it always does by default).

Notes: Using EPSV means that it will first attempt to use EPSV before using PASV, but if you pass FALSE (zero) to this option, it will not try using EPSV, only plain PASV.

If the server is an IPv6 host, this option will have no effect as of 7.12.3.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [FTP_USE_EPSV](#) option in CURL manual.

4.4.198 OptionFTPusePret as Boolean

Plugin Version: 11.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the value is true, it tells CURL to send a PRET command before PASV (and EPSV). Certain FTP servers, mainly drftpd, require this non-standard command for directory listings as well as up and downloads in PASV mode.

Notes: Has no effect when using the active FTP transfers mode. (Added in 7.20.0)

(Read and Write property)

See also [FTP_USE_PRET](#) option in CURL manual.

4.4.199 OptionGet as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the true, this forces the HTTP request to get back to GET.

Notes: usable if a POST, HEAD, PUT or a custom request have been used previously using the same CURL handle.

When setting `OptionGet` to a true value, it will automatically set `OptionNoBody` to true (since 7.14.1).

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.4.200 `OptionGSSAPIDelegation` as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Allow GSSAPI credential delegation.

Notes: (Read and Write property)

See also [GSSAPI_DELEGATION](#) option in CURL manual.

4.4.201 `OptionHappyEyeballsTimeOutMS` as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The happy eyeballs timeout.

Notes: Head start in milliseconds to give happy eyeballs.

(Read and Write property)

See also [HAPPY_EYEBALLS_TIMEOUT_MS](#) option in CURL manual.

4.4.202 `OptionHAProxyProtocol` as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to send an HAProxy PROXY protocol header.

Notes: Set to true to tell the library to send an HAProxy PROXY protocol header at beginning of the connection. The default action is not to send this header.

This option is primarily useful when sending test requests to a service that expects this header.

Most applications do not need this option.

Default false, do not send HAProxy PROXY protocol header.

(Read and Write property)

See also [HAPROXYPROTOCOL](#) option in CURL manual.

4.4.203 OptionHeader as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to include the header in the body output.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

This is only relevant for protocols that actually have headers preceding the data (like HTTP).

(Read and Write property)

See also [HEADER](#) option in CURL manual.

4.4.204 OptionHeaderOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass in a bitmask of "header options".

Notes: (Read and Write property)

See also **HEADEROPT** option in CURL manual.

4.4.205 OptionHTTPAuth as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Which http authentication to use.

Notes: Pass an integer as parameter, which is set to a bitmask, to tell libCURL what authentication method(s) you want it to use. The available bits are listed below. If more than one bit is set, libCURL will first query the site to see what authentication methods it supports and then pick the best one you allow it to use. For some methods, this will induce an extra network round-trip. Set the actual name and password with the UserPassword option. (Added in 7.10.6)

kAuthBASIC = 1

HTTP Basic authentication. This is the default choice, and the only method that is in wide-spread use and supported virtually everywhere. This is sending the user name and password over the network in plain text, easily captured by others.

kAuthDIGEST = 2

HTTP Digest authentication. Digest authentication is defined in RFC2617 and is a more secure way to do authentication over public networks than the regular old-fashioned Basic method.

kAuthGSSNEGOTIATE = 4

HTTP GSS-Negotiate authentication. The GSS-Negotiate (also known as plain "Negotiate") method was designed by Microsoft and is used in their web applications. It is primarily meant as a support for Kerberos5 authentication but may be also used along with another authentication methods. For more information see IETF draft draft-brezak-spnego-http-04.txt.

You need to build libCURL with a suitable GSS-API library for this to work.

kAuthNTLM = 8

HTTP NTLM authentication. A proprietary protocol invented and used by Microsoft. It uses a challenge-response and hash concept similar to Digest, to prevent the password from being eavesdropped.

You need to build libCURL with OpenSSL support for this option to work, or build libCURL on Windows.

```
kAuthANY = &hFFFFFFFF
```

This is a convenience macro that sets all bits and thus makes libCURL pick any it finds suitable. libCURL will automatically select the one it finds most secure.

```
kAuthANYSAFE = &hFFFFFFFE
```

This is a convenience macro that sets all bits except Basic and thus makes libCURL pick any it finds suitable. libCURL will automatically select the one it finds most secure.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [HTTPAUTH](#) option in CURL manual.

4.4.206 OptionHTTPContentDecoding as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass a long to tell libCURL how to act on content decoding.

Notes: If set to zero, content decoding will be disabled. If set to 1 it is enabled. Note however that libCURL has no default content decoding but requires you to use OptionEncoding for that. (added in 7.16.2)

(Read and Write property)

See also [HTTP_CONTENT_DECODING](#) option in CURL manual.

4.4.207 OptionHTTPProxyTunnel as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the parameter to true to get the library to tunnel all operations through a given HTTP proxy.

Notes: There is a big difference between using a proxy and to tunnel through it. If you don't know what this means, you probably don't want this tunneling option.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [HTTPPROXYTUNNEL](#) option in CURL manual.

4.4.208 OptionHTTPTransferDecoding as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an integer to tell libCURL how to act on transfer decoding.

Notes: If set to zero, transfer decoding will be disabled, if set to 1 it is enabled (default). libCURL does chunked transfer decoding by default unless this option is set to zero. (added in 7.16.2)

(Read and Write property)

See also [HTTP_TRANSFER_DECODING](#) option in CURL manual.

4.4.209 OptionHTTPVersion as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to one of the values described below.

Notes: They force libCURL to use the specific HTTP versions. This is not sensible to do unless you have a good reason.

`kHTTP_VERSION_NONE = 0`

We don't care about what version the library uses. libCURL will use whatever it thinks fit.

`kHTTP_VERSION_1_0 = 1`

Enforce HTTP 1.0 requests.

`kHTTP_VERSION_1_1 = 2`

Enforce HTTP 1.1 requests.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [HTTP_VERSION](#) option in CURL manual.

4.4.210 OptionIgnoreContentLength as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to ignore the Content-Length header.

Notes: This is useful for Apache 1.x (and similar servers) which will report incorrect content length for files over 2 gigabytes. If this option is used, CURL will not be able to accurately report progress, and will simply stop the download when the server ends the connection. (added in 7.14.1)

(Read and Write property)

See also [IGNORE_CONTENT_LENGTH](#) option in CURL manual.

4.4.211 OptionInFileSize as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: When uploading a file to a remote site, this option should be used to tell libCURL what the expected size of the infile is.

Notes: Note that this option does not limit how much data libCURL will actually send, as that is controlled entirely by what the read event returns.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [INFILESIZE](#) option in CURL manual.

4.4.212 OptionInFileSizeLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionInFileSize instead.

Function: When uploading a file to a remote site, this option should be used to tell libCURL what the expected size of the infile is.

Notes: This value should be passed as a CURL_off_t. (Added in 7.11.0)

Note that this option does not limit how much data libCURL will actually send, as that is controlled entirely by what the read event returns.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.4.213 OptionInterface as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This set the interface name to use as outgoing network interface.

Notes: The name can be an interface name, an IP address or a host name.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **INTERFACE** option in CURL manual.

4.4.214 OptionIPResolve as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Allows an application to select what kind of IP addresses to use when resolving host names.

Example:

```
dim c as new CURLMBS
c.OptionIPResolve = c.kIPRESOLVE_V4
```

Notes: This is only interesting when using host names that resolve addresses using more than one version of IP. The allowed values are:

```
kIPRESOLVE_WHATEVER = 0
```

Default, resolves addresses to all IP versions that your system allows.

```
kIPRESOLVE_V4 = 1
```

Resolve to ipv4 addresses.

```
kIPRESOLVE_V6 = 2
```

Resolve to ipv6 addresses.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **IPRESOLVE** option in CURL manual.

4.4.215 OptionIssuerCert as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string naming a file holding a CA certificate in PEM format.

Notes: If the option is set, an additional check against the peer certificate is performed to verify the issuer is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the OptionSSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionSSLVerifyPeer has to be set too for the check to fail). (Added in 7.19.0)

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **ISSUERCERT** option in CURL manual.

4.4.216 OptionIssuerCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set issuer SSL certificate from memory blob.

Notes: Pass data, which contains binary data of a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option should be used in combination with the OptionSSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionSSLVerifyPeer has to be set too for the check to fail).

This option is an alternative to OptionIssuerCert which instead expects a file name as input.

(Read and Write property)

See also [ISSUERCERT_BLOB](#) option in CURL manual.

4.4.217 OptionKeepSendingOnError as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to keep sending on error.

Notes: Continue to send data if the server responds early with an HTTP status code ≥ 300

(Read and Write property)

See also [KEEP_SENDING_ON_ERROR](#) option in CURL manual.

4.4.218 OptionKeyPassword as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set passphrase to private key.

Notes: It will be used as the password required to use the OptionSSLKey or OptionSSHPrivateKeyfile private key. You never needed a pass phrase to load a certificate but you need one to load your private key.

(Read and Write property)

See also [KEYPASSWORD](#) option in CURL manual.

4.4.219 OptionKRB4Level as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionKRBLevel instead.

Function: Set the krb4 security level, this also enables krb4 awareness.

Notes: This is a string, 'clear', 'safe', 'confidential' or 'private'. If the string is set but doesn't match one of these, 'private' will be used. Set the string to "" to disable kerberos4. The kerberos support only works for FTP.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.4.220 OptionKRBLevel as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: FTP kerberos security level.

Notes: Set the kerberos security level for FTP; this also enables kerberos awareness. This is a string that should match one of the following: 'clear', 'safe', 'confidential' or 'private'. If the string is set but doesn't match one of these, 'private' will be used. Set the string to NULL to disable kerberos support for FTP.

(Read and Write property)

See also [KRBLEVEL](#) option in CURL manual.

4.4.221 OptionLocalPort as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This sets the local port number of the socket used for connection.

Notes: This can be used in combination with OptionInterface and you are recommended to use OptionLocalPortRange as well when this is set. Note that port numbers are only valid 1 - 65535. (Added in 7.15.2)

(Read and Write property)

See also [LOCALPORT](#) option in CURL manual.

4.4.222 OptionLocalPortRange as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This is the number of attempts libCURL should do to find a working local port number.

Notes: It starts with the given OptionLocalPort and adds one to the number for each retry. Setting this value to 1 or below will make libCURL do only one try for exact port number. Note that port numbers by nature is a scarce resource that will be busy at times so setting this value to something too low might cause unnecessary connection setup failures. (Added in 7.15.2)

(Read and Write property)

See also [LOCALPORTRANGE](#) option in CURL manual.

4.4.223 OptionLoginOptions as String

Plugin Version: 15.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Login options string to use for the transfer.

Notes: For more information about the login options please see RFC 2384, RFC5092 and IETF draft draft-earhart-url-smtp-00.txt

CURLOPT_LOGIN_OPTIONS can be used to set protocol specific login options, such as the preferred authentication mechanism via "AUTH=NTLM" or "AUTH=*", and should be used in conjunction with the OptionUserName option.

Only IMAP, POP3 and SMTP support login options.

(Read and Write property)

See also [LOGIN_OPTIONS](#) option in CURL manual.

4.4.224 OptionLowSpeedLimit as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This property contains the transfer speed in bytes per second that the transfer should be below during OptionLowSpeedTime seconds for the library to consider it too slow and abort.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [LOW_SPEED_LIMIT](#) option in CURL manual.

4.4.225 OptionLowSpeedTime as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This property contains the time in seconds that the transfer should be below the OptionLowSpeedLimit for the library to consider it too slow and abort.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [LOW_SPEED_TIME](#) option in CURL manual.

4.4.226 OptionMailAuth as String

Plugin Version: 12.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This string will be used to specify the authentication address (identity) of a submitted message that is being relayed to another server.

Notes: This optional parameter allows co-operating agents in a trusted environment to communicate the authentication of individual messages and should only be used by the application program, using libCURL, if the application is itself a mail server acting in such an environment. If the application is operating as such and the AUTH address is not known or is invalid, then an empty string should be used for this parameter.

Unlike OptionMailFrom and SetOptionMailRecipients, the address should not be specified within a pair of angled brackets (<>). However, if an empty string is used then a pair of brackets will be sent by libCURL as required by RFC 2554.

(Read and Write property)

See also [MAIL_AUTH](#) option in CURL manual.

4.4.227 OptionMailFrom as String

Plugin Version: 11.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string that will be used to specify the sender address in a mail when sending an SMTP mail with libCURL.

Notes: (Read and Write property)

See also [MAIL_FROM](#) option in CURL manual.

4.4.228 OptionMaxAgeConn as Integer

Plugin Version: 19.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum age the connection should have in seconds.

Notes: Older connections are not reused, but discarded.

(Read and Write property)

See also [MAXAGE_CONN](#) option in CURL manual.

4.4.229 OptionMaxConnects as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The set number will be the persistent connection cache size.

Notes: The set amount will be the maximum amount of simultaneously open connections that libCURL may cache. Default is 5, and there isn't much point in changing this value unless you are perfectly aware of how this work and changes libCURL's behaviour. This concerns connection using any of the protocols that support persistent connections.

When reaching the maximum limit, CURL closes the oldest one in the cache to prevent the number of open connections to increase.

If you already have performed transfers with this CURL handle, setting a smaller MAXCONNECTS than before may cause open connections to get closed unnecessarily.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [MAXCONNECTS](#) option in CURL manual.

4.4.230 OptionMaxFileSize as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This allows you to specify the maximum size (in bytes) of a file to download.

Notes: If the file requested is larger than this value, the transfer will not start and `kError_FILESIZE_EXCEEDED` will be returned.

The file size is not always known prior to download, and for such files this option has no effect even if the file transfer ends up being larger than this given limit. This concerns both FTP and HTTP transfers.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also `MAXFILESIZE` option in CURL manual.

4.4.231 OptionMaxFileSizeLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionMaxFileSize` instead. **Function:** This allows you to specify the maximum size (in bytes) of a file to download.

Notes: If the file requested is larger than this value, the transfer will not start and `kError_FILESIZE_EXCEEDED` will be returned. (Added in 7.11.0)

The file size is not always known prior to download, and for such files this option has no effect even if the file transfer ends up being larger than this given limit. This concerns both FTP and HTTP transfers.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.4.232 OptionMaxLifeTimeConnection as Integer

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets maximum lifetime (since creation) allowed for reusing a connection.

Notes: Pass a number as parameter containing `maxlifetime` - the maximum time in seconds, since the creation of the connection, that you allow an existing connection to have to be considered for reuse for this request.

libcurl features a connection cache that holds previously used connections. When a new request is to be done,

it will consider any connection that matches for reuse. The `MaxLifeTimeConnection` limit prevents libcurl from trying too old connections for reuse. This can be used for client-side load balancing. If a connection is found in the cache that is older than this set `maxlifetime`, it will instead be closed once any in-progress transfers complete.

If set to 0, this behavior is disabled: all connections are eligible for reuse.
(Read and Write property)

4.4.233 OptionMaxRecvSpeed as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Defines the maximum download speed.

Notes: If a download exceeds this speed (counted in bytes per second) on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

(Read and Write property)

See also [MAX_RECV_SPEED](#) option in CURL manual.

4.4.234 OptionMaxRecvSpeedLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionMaxRecvSpeed` instead. **Function:** Defines the maximum download speed.

Notes: If a download exceeds this speed (counted in bytes per second) on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

(Read and Write property)

4.4.235 OptionMaxRedirs as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The set number will be the redirection limit.

Example:

```
dim c as new CURLMBS
```

```
c.OptionFollowLocation = true
```

```
c.OptionMaxRedirs = 3
```

Notes: If that many redirections have been followed, the next redirect will cause an error (`kError_TOO_MANY_REDIRECTS`). This option only makes sense if the `CURLOPT_FOLLOWLOCATION` is used at the same time. Added in 7.15.1: Setting the limit to 0 will make libCURL refuse any redirect. Set it to -1 for an infinite number of redirects (which is the default)

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [MAXREDIRS](#) option in CURL manual.

4.4.236 OptionMaxSendSpeed as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Defines the maximum upload speed.

Notes: If an upload exceeds this speed on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

Value is in bytes per second.

Useful if you have a limited pipe and you'd like your transfer not to use your entire bandwidth.

Slowing down the transfer speed is also useful for lowering CPU consumption during transfers.

(Read and Write property)

See also [MAX_SEND_SPEED](#) option in CURL manual.

4.4.237 OptionMaxSendSpeedLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionMaxSendSpeed` instead. **Function:** Defines the maximum upload speed.

Notes: If an upload exceeds this speed on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

Value is in bytes per second.

Useful if you have a limited pipe and you'd like your transfer not to use your entire bandwidth.

Slowing down the transfer speed is also useful for lowering CPU consumption during transfers.

(Read and Write property)

4.4.238 OptionMimeOptions as Integer

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set MIME option flags.

Notes: Pass a number that holds a bitmask of CURLMIMEOPT constants. Each bit is a Boolean flag used while encoding a MIME tree or multipart form data.

Available bits are:

CURLMIMEOPT_FORMESCAPE = 1

Tells libcurl to escape multipart form field and file names using the backslash-escaping algorithm rather than percent-encoding (HTTP only).

Backslash-escaping consists in preceding backslashes and double quotes with a backslash. Percent encoding maps all occurrences of double quote, carriage return and line feed to %22, %0D and %0A respectively.

Before version 7.81.0, percent-encoding was never applied.

HTTP browsers used to do backslash-escaping in the past but have over time transitioned to use percent-encoding. This option allows to address server-side applications that have not yet have been converted.

As an example, consider field or file name `strange\name"kind`. When the containing multipart form is sent, this is normally transmitted as `strange\name%22kind`. When this option is set, it is sent as `strange\\name\"kind`. (Read and Write property)

See also [MIME_OPTIONS](#) option in CURL manual.

4.4.239 OptionNetRC as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Controls usage of netrc file.

Notes: This parameter controls the preference of libCURL between using user names and passwords from your `textasciitilde /.netrc` file, relative to user names and passwords in the URL supplied with `OptionURL`.

libCURL uses a user name (and supplied or prompted password) supplied with `OptionUsername` and `OptionPassword` in preference to any of the options controlled by this parameter.

An integer, set to one of the values described below.

kNETRC_OPTIONAL = 1

The use of your textasciitilde /.netrc file is optional, and information in the URL is to be preferred. The file will be scanned with the host and user name (to find the password only) or with the host only, to find the first user name and password after that machine, which ever information is not specified in the URL.

Undefined values of the option will have this effect.

```
kNETRC_IGNORED = 0
```

The library will ignore the file and use only the information in the URL.

This is the default.

```
kNETRC_REQUIRED = 2
```

This value tells the library that use of the file is required, to ignore the information in the URL, and to search the file with the host only.

Only machine name, user name and password are taken into account (init macros and similar things aren't supported).

libCURL does not verify that the file has the correct properties set (as the standard Unix ftp client does). It should only be readable by user.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [NETRC](#) option in CURL manual.

4.4.240 OptionNetRCFile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string containing the full path name to the file you want libCURL to use as .netrc file.

Notes: If this option is omitted, and OptionNETRC is set, libCURL will attempt to find the a .netrc file in the current user's home directory. (Added in 7.10.9)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [NETRC_FILE](#) option in CURL manual.

4.4.241 OptionNewDirectoryPerms as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An integer, containing the value of the permissions that will be assigned to newly created directories on the remote server.

Notes: The default value is 0755, but any valid value can be used. The only protocols that can use this are sftp://, scp://, and file://. (Added in 7.16.4)

Value must be octal, so use `&o` prefix for number.

(Read and Write property)

See also [NEW_DIRECTORY_PERMS](#) option in CURL manual.

4.4.242 OptionNewFilePerms as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An integer, containing the value of the permissions that will be assigned to newly created files on the remote server.

Notes: The default value is `&o0644`, but any valid value can be used. The only protocols that can use this are sftp://, scp://, and file://. (Added in 7.16.4)

Be aware that you normally specify this in octal values. So use the `&o` prefix in Xojo.

(Read and Write property)

See also [NEW_FILE_PERMS](#) option in CURL manual.

4.4.243 OptionNoBody as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to not include the body-part in the output.

Notes: This is only relevant for protocols that have separate header and body parts. On HTTP(S) servers, this will make libCURL do a HEAD request.

To change request to GET, you should use OptionGet. Change request to POST with OptionPost etc.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **NOBODY** option in CURL manual.

4.4.244 OptionNoProxy as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string with a comma-separated list of hosts which do not use a proxy, if one is specified.

Notes: The only wildcard is a single * character, which matches all hosts, and effectively disables the proxy. Each name in this list is matched as either a domain which contains the hostname, or the hostname itself. For example, local.com would match local.com, local.com:80, and www.local.com, but not www.notlocal.com. (Added in 7.19.4)

(Read and Write property)

See also **NOPROXY** option in CURL manual.

4.4.245 OptionNoSignal as Integer

Plugin Version: 13.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to not use signals.

Notes: If it is true, libCURL will not use any functions that install signal handlers or any functions that cause signals to be sent to the process. This option is mainly here to allow multi-threaded unix applications to still set/use all timeout options etc, without risking getting signals. (Added in 7.10)

If this option is set and libCURL has been built with the standard name resolver, timeouts will not occur while the name resolve takes place. Consider building libCURL with c-ares support to enable asynchronous DNS lookups, which enables nice timeouts for name resolves without signals.

Setting OptionNoSignal to true makes libCURL NOT ask the system to ignore SIGPIPE signals, which otherwise are sent by the system when trying to send data to a socket which is closed in the other end. libCURL makes an effort to never cause such SIGPIPEs to trigger, but some operating systems have no way to avoid them and even on those that have there are some corner cases when they may still happen, contrary to our desire. In addition, using CURLAUTH_NTLM_WB authentication could cause a SIGCHLD signal to be raised.

(Read and Write property)

See also **NOSIGNAL** option in CURL manual.

4.4.246 OptionPassword as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The password to use for the transfer.

Notes: The OptionPassword option should be used in conjunction with the OptionUsername option.

(Read and Write property)

See also **PASSWORD** option in CURL manual.

4.4.247 OptionPathAsIs as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass path as it is and do not resolve dots.

Notes: Do not squash dot-dot sequences.

(Read and Write property)

See also **PATH_AS_IS** option in CURL manual.

4.4.248 OptionPinnedPublicKey as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The public key in DER form used to validate the peer public key.

Notes: Native path to key file.

This option is used only if SSLVerifyPeer is true.

(Read and Write property)

See also **PINNEDPUBLICKEY** option in CURL manual.

4.4.249 OptionPipeWait as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Wait/don't wait for pipe/mutex to clarify.

Notes: (Read and Write property)

See also **PIPEWAIT** option in CURL manual.

4.4.250 OptionPort as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The remote port number to connect to, instead of the one specified in the URL or the default port for the used protocol.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **PORT** option in CURL manual.

4.4.251 OptionPost as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A boolean parameter tells the library to do a regular HTTP post.

Notes: This will also make the library use the a "Content-Type: application/x-www-form-urlencoded" header. (This is by far the most commonly used POST method).

Use the OptionPostFields option to specify what data to post.

Optionally, you can provide data to POST using the Read event but then you must make sure to not set OptionPostFields to anything but "". When providing data with an event, you must transmit it using chunked transfer-encoding.

You can override the default POST Content-Type: header by setting your own with OptionHTTPHeader.

Using POST with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with OptionHTTPHeader as usual.

If you use POST to a HTTP 1.1 server, you can send data without knowing the size before starting the POST if you use chunked encoding. You enable this by adding a header like "Transfer-Encoding: chunked" with OptionHTTPHeader. With HTTP 1.0 or without chunked transfer, you must specify the size in the request.

When setting CURLOPT_POST to a non-zero value, it will automatically set OptionNoBody to 0 (since 7.14.1).

If you issue a POST request and then want to make a HEAD or GET using the same re-used handle, you must explicitly set the new request type using OptionNoBody or OptionGet or similar.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **POST** option in CURL manual.

4.4.252 OptionPostFields as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string which should be the full data to post in an HTTP POST operation.

Example:

```

dim xml as string // XML or JSON to send as payload
dim c as new CURLMBS

c.OptionFollowLocation = true
c.OptionMaxRedirs = 3
c.OptionPostFields = xml
c.OptionUserAgent = "Test App"
c.OptionPost = true

// for SOAP use right content type
c.SetOptionHTTPHeader array("Content-Type: application/soap+xml; charset=utf-8")

```

Notes: You must make sure that the data is formatted the way you want the server to receive it. libCURL will not convert or encode it for you. Most web servers will assume this data to be url-encoded. Take note.

This POST is a normal application/x-www-form-urlencoded kind (and libCURL will set that Content-Type by default when this option is used), which is the most commonly used one by HTML forms. See also the OptionPost. Using OptionPostFields implies OptionPost.

Using POST with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with CURLOPT_HTTPHEADER as usual.

To make multipart/formdata posts (aka rfc1867-posts), check out the OptionPost option.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **COPYPOSTFIELDS** option in CURL manual.

4.4.253 OptionPostFieldSize as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The size of the post data.

Notes: Optional you can set the size of your post data.

If you specify a postfield string, this size will be set automatically.

If you specify a size and no postfield string, the Read event will request data.

(Read and Write property)

See also **POSTFIELDSIZE** option in CURL manual.

4.4.254 OptionPostFieldSizeLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionPostFieldSize instead. **Function:** The size of the post data. (64 bit version)

Notes: Optional you can set the size of your post data.

If you specify a postfield string, this size will be set automatically.

If you specify a size and no postfield string, the Read event will request data.
(Read and Write property)

4.4.255 OptionPostRedir as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A bitmask to control how libCURL acts on redirects after POSTs that get a 301 or 302 response back.

Notes: A parameter with bit 0 set (value `CURL_REDIR_POST_301=1`) tells the library to respect RFC 2616/10.3.2 and not convert POST requests into GET requests when following a 301 redirection. Setting bit 1 (value `CURL_REDIR_POST_302=2`) makes libCURL maintain the request method after a 302 redirect. `CURL_REDIR_POST_ALL` is a convenience define that sets both bits.

The non-RFC behaviour is ubiquitous in web browsers, so the library does the conversion by default to maintain consistency. However, a server may require a POST to remain a POST after such a redirection. This option is meaningful only when setting OptionFollowLocation. (Added in 7.17.1) (This option was known as `CURLOPT_POST301` up to 7.19.0 as it only supported the 301 way before then)

(Read and Write property)

See also [POSTREDIR](#) option in CURL manual.

4.4.256 OptionPreProxy as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Name of pre proxy to use.

Notes: (Read and Write property)

See also [PRE_PROXY](#) option in CURL manual.

4.4.257 OptionProtocols as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionProtocolsString instead. **Function:** A bitmask of kProtocol* constants.

Notes: If used, this bitmask limits what protocols libCURL may use in the transfer. This allows you to have a libCURL built to support a wide range of protocols but still limit specific transfers to only be allowed to use a subset of them. By default libCURL will accept all protocols it supports. See also OptionRedirProtocols.

(Added in 7.19.4)

(Read and Write property)

4.4.258 OptionProtocolsString as String

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The protocols allowed-

Example:

```
dim c as new CURLMBS
c.OptionProtocolsString = "http,tftp,sftp"
```

Notes: Pass a string that holds a comma-separated list of case insensitive protocol names (URL schemes) to allow in the transfer. This option allows applications to use libcurl built to support a wide range of protocols but still limit specific transfers to only be allowed to use a subset of them. By default, libcurl accepts all protocols it was built with support for. See also OptionReditProtocolsString.

If trying to set a non-existing protocol or if no matching protocol at all is set, it returns error.

These are the available protocols:

DICT, FILE, FTP, FTPS, GOPHER, GOPHERS, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTMPE, RTMPS, RTMPT, RTMPTE, RTMPTS, RTSP, SCP, SFTP, SMB, SMBS, SMTP, SMTPS, TELNET, TFTP

You can set "ALL" as a short-cut to enable all protocols. Note that by setting all, you may enable protocols that were not supported the day you write this but are introduced in a future libcurl version.

CURLVersionMBS class can be used to get a list of all supported protocols in the current libcurl. GetInfo-Protocol function is the recommended way to figure out the protocol used in a previous transfer.

(Read and Write property)

4.4.259 OptionProxy as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set HTTP proxy to use.

Example:

```
dim c as CURLMBS // your CURL object
dim psAddress as string // your proxy address
dim psPort as Integer // your proxy port

c.OptionProxy=psAddress
c.OptionProxyPort=psPort
c.OptionProxyType=c.kPROXY_HTTP
```

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

The parameter should be a string holding the host name or dotted IP address. To specify port number in this string, append : [port] to the end of the host name. The proxy string may be prefixed with [protocol] :// since any such prefix will be ignored. The proxy's port number may optionally be specified with the separate option ProxyHost.

When you tell the library to use an HTTP proxy, libCURL will transparently convert operations to HTTP even if you specify an FTP URL etc. This may have an impact on what other features of the library you can use, such as CURLOPT_QUOTE and similar FTP specifics that don't work unless you tunnel through the HTTP proxy. Such tunneling is activated with HTTPProxyTunnel.

libCURL respects the environment variables http_proxy, ftp_proxy, all_proxy etc, if any of those is set. The Proxy option does however override any possibly set environment variables.

Starting with 7.14.1, the proxy host string given in environment variables can be specified the exact same way as the proxy can be set with Proxy, include protocol prefix (http://) and embedded user + password.

You can use WinHTTPClientMBS class on Windows or CFProxyMBS on Mac to discover system proxy settings.

(Read and Write property)

See also **PROXY** option in CURL manual.

4.4.260 OptionProxyAuth as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Which proxy authentication to use.

Notes: Pass an integer as parameter, which is set to a bitmask, to tell libCURL what authentication method(s) you want it to use for your proxy authentication. If more than one bit is set, libCURL will first

query the site to see what authentication methods it supports and then pick the best one you allow it to use. For some methods, this will induce an extra network round-trip. Set the actual name and password with the ProxyUserPassword option. The bitmask can be constructed by or'ing together the bits listed above for the HTTPAuth option. As of this writing, only Basic, Digest and NTLM work. (Added in 7.10.7)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **PROXYAUTH** option in CURL manual.

4.4.261 OptionProxyCAInfo as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The CApath or CAfile used to validate the proxy certificate.

Example:

// if you use SSL, maybe put in a certificate or disable verification?

```
dim d as CURLMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionProxySSLVerifyHost = 0
```

```
d.OptionProxySSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionProxyCAInfo = cacert.NativePath
```

```
d.OptionProxySSLVerifyHost = 2
```

```
d.OptionProxySSLVerifyPeer = 1
```

Notes: Pass native file path.

This option is used only if CURLMBS.OptionProxySSLVerifyPeer is true

(Read and Write property)

See also **PROXY_CAINFO** option in CURL manual.

4.4.262 OptionProxyCAInfoBlob as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The CAInfo for proxy as blob value.

Notes: This option is for connecting to an HTTPS proxy, not an HTTPS server. Certificate Authority (CA) bundle in PEM format passed PEM encoded content holding one or more certificates to verify the HTTPS server with.

(Read and Write property)

See also [PROXY_CAINFO_BLOB](#) option in CURL manual.

4.4.263 OptionProxyCAPath as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The CApath directory used to validate the proxy certificate.

Notes: Pass native file path.

This option is used only if `CURLMBS.OptionProxySSLVerifyPeer` is true

(Read and Write property)

See also [PROXY_CAPATH](#) option in CURL manual.

4.4.264 OptionProxyCRLFile as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: CRL file for proxy.

Notes: Pass native file path.

(Read and Write property)

See also [PROXY_CRLFILE](#) option in CURL manual.

4.4.265 OptionProxyIssuerCert as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the proxy issuer SSL certificate filename.

Notes: Pass a string naming a file holding a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer of the the HTTPS proxy is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the `OptionProxySSLVerifyPeer` option. Otherwise, the result of the check is not considered as failure.

A specific error code (`CURLE_SSL_ISSUER_ERROR`) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (`OptionProxySSLVerifyPeer` has to be set too for the check to fail).

(Read and Write property)

See also **PROXY_ISSUERCERT** option in CURL manual.

4.4.266 OptionProxyIssuerCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set proxy issuer SSL certificate from memory blob.

Notes: Pass data, which contains binary data of a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer of the the HTTPS proxy is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option should be used in combination with the OptionProxySSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (`CURLE_SSL_ISSUER_ERROR`) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionProxySSLVerifyPeer has to be set too for the check to fail).

This option is an alternative to OptionProxyIssuerCert which instead expects a file name as input.
(Read and Write property)

See also **PROXY_ISSUERCERT_BLOB** option in CURL manual.

4.4.267 OptionProxyKeyPassword as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Password for the SSL private key for proxy.

Notes: (Read and Write property)

See also **PROXY_KEYPASSWD** option in CURL manual.

4.4.268 OptionProxyPassword as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string which should be pointing to the password to use for the transfer while connecting to Proxy.

Notes: The OptionProxyPassword option should be used in conjunction with the OptionProxyUsername option. (Added in 7.19.1)

(Read and Write property)

See also [PROXYPASSWORD](#) option in CURL manual.

4.4.269 OptionProxyPinnedPublicKey as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The public key in DER form used to validate the proxy public key.

Notes: This option is used only if `CURLMBS.OptionProxySSLVerifyPeer` is true.

Please path native file path to key file.

(Read and Write property)

See also [PROXY_PINNEDPUBLICKEY](#) option in CURL manual.

4.4.270 OptionProxyPort as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The proxy port to connect to unless it is specified in the proxy string `OptionProxy`.

Notes: The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

You can use `OptionProxy` with port, e.g. "12.34.56.78:8080" or pass port here and proxy without port.

For some users it seems like the option with `OptionProxy` including port works better.

(Read and Write property)

See also [PROXYPORT](#) option in CURL manual.

4.4.271 OptionProxyServiceName as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Proxy Service Name.

Notes: (Read and Write property)

See also [PROXY_SERVICE_NAME](#) option in CURL manual.

4.4.272 OptionProxySSLCert as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Name of the file keeping your private SSL-certificate for proxy.

Notes: (Read and Write property)

See also [PROXY_SSLCERT](#) option in CURL manual.

4.4.273 OptionProxySSLCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets private key for proxy cert from memory blob.

Notes: Pass data, which contains the private key for connecting to the HTTPS proxy. Compatible with OpenSSL. The format (like "PEM") must be specified with `CURL.SetOptionProxySSLKeyType`. (Read and Write property)

See also `PROXY_SSLCERT_BLOB` option in CURL manual.

4.4.274 OptionProxySSLCertType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Type of the file keeping your SSL-certificate for proxy.

Notes: Value can be "DER", "PEM" or "ENG".

(Read and Write property)

See also `PROXY_SSLCERTTYPE` option in CURL manual.

4.4.275 OptionProxySSLCipherList as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Specify which SSL ciphers to use for proxy.

Notes: (Read and Write property)

See also `PROXY_SSL_CIPHER_LIST` option in CURL manual.

4.4.276 OptionProxySSLKey as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Name of the file keeping your private SSL-key for proxy.

Notes: Pass native file path.

(Read and Write property)

See also `PROXY_SSLKEY` option in CURL manual.

4.4.277 OptionProxySSLKeyBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set private key for proxy cert from memory blob.

Notes: Pass data, which contains a private key for connecting to the HTTPS proxy. Compatible with

OpenSSL. The format (like "PEM") must be specified with `OptionProxySSLKeyType`.

This option is an alternative to `OptionProxySSLKey` which instead expects a file name as input.
(Read and Write property)

See also `PROXY_SSLKEY_BLOB` option in CURL manual.

4.4.278 `OptionProxySSLKeyType` as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets type of the file keeping your private SSL-key for proxy.

Notes: Value is DER, PEM or ENG.

(Read and Write property)

See also `PROXY_SSLKEYTYPE` option in CURL manual.

4.4.279 `OptionProxySSLOptions` as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable specific SSL features with a bitmask for proxy.

Notes: (Read and Write property)

See also `PROXY_SSL_OPTIONS` option in CURL manual.

4.4.280 `OptionProxySSLVerifyHost` as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable SSL Host verification.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionProxySSLVerifyHost = 0
```

```
d.OptionProxySSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionProxyCAInfo = cacert.NativePath
```

```
d.OptionProxySSLVerifyHost = 2
d.OptionProxySSLVerifyPeer = 1
```

Notes: Set if we should verify the Common name from the proxy certificate in ssl handshake, set 1 to check existence, 2 to ensure that it matches the provided hostname.

(Read and Write property)

See also [PROXY_SSL_VERIFYHOST](#) option in CURL manual.

4.4.281 OptionProxySSLVerifyPeer as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set if we should verify the proxy in ssl handshake.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLMBS
// your CURL object
```

```
// disable
```

```
d.OptionProxySSLVerifyHost = 0
d.OptionProxySSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
d.OptionProxyCAInfo = cacert.NativePath
d.OptionProxySSLVerifyHost = 2
d.OptionProxySSLVerifyPeer = 1
```

Notes: set 1 to verify.

(Read and Write property)

See also [PROXY_SSL_VERIFYPEER](#) option in CURL manual.

4.4.282 OptionProxySSLVersion as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: What version to specifically try to use for proxy.

Notes: The SSL and TLS versions have typically developed from the most insecure version to be more and more secure in this order through history: SSL v2, SSLv3, TLS v1.0, TLS v1.1, TLS v1.2 and the most

recent TLS v1.3.

Use one of the available defines for this purpose. The available options are:

Default	0	The default acceptable version range. The minimum acceptable version is by default TLS v1.0 since 7.39.0 (unless the TLS library has a stricter rule).
TLSv1	1	TLS v1.0 or later
SSLv2	2	SSL v2 (but not SSLv3)
SSLv3	3	SSL v3 (but not SSLv2)
TLSv1.0	4	TLS v1.0 or later (Added in 7.34.0)
TLSv1.1	5	TLS v1.1 or later (Added in 7.34.0)
TLSv1.2	6	TLS v1.2 or later (Added in 7.34.0)
TLSv1.3	7	TLS v1.3 or later (Added in 7.52.0)

See also `kSSLVersion*` constants.

The maximum TLS version can be set by using one of the `CURL_SSLVERSION_MAX_` macros below. It is also possible to OR one of the `CURL_SSLVERSION_` macros with one of the `CURL_SSLVERSION_MAX_` macros.

Default	<code>&h10000</code>	The flag defines the maximum supported TLS version by libcurl, or the default value from the SSL library is used. libcurl will use a sensible default maximum, which was TLS v1.2 up to before 7.61.0 and is TLS v1.3 since then - assuming the TLS library support it. (Added in 7.54.0)
Max TLSv1.0	<code>&h40000</code>	The flag defines maximum supported TLS version as TLS v1.0. (Added in 7.54.0)
Max TLSv1.1	<code>&h50000</code>	The flag defines maximum supported TLS version as TLS v1.1. (Added in 7.54.0)
Max TLSv1.2	<code>&h60000</code>	The flag defines maximum supported TLS version as TLS v1.2. (Added in 7.54.0)
Max TLSv1.3	<code>&h70000</code>	The flag defines maximum supported TLS version as TLS v1.3. (Added in 7.54.0)

Please note that MBS Plugin does not yet support TLS v1.3 now, but may in future.
(Read and Write property)

See also [PROXY_SSLVERSION](#) option in CURL manual.

4.4.283 OptionProxyTLS13Ciphers as String

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Specify which TLS 1.3 ciphers suites to use for proxy.

Notes: The list of cipher suites to use for the TLS 1.3 connection to a proxy. The list must be syntactically correct, it consists of one or more cipher suite strings separated by colons.

You'll find more details about cipher lists on this URL:

<https://curl.haxx.se/docs/ssl-ciphers.html>

The application does not have to keep the string around after setting this option.

(Read and Write property)

See also **PROXY_TLS13_CIPHERS** option in CURL manual.

4.4.284 OptionProxyTLSEAuthPassword as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Password for authenticated TLS for proxy.

Notes: (Read and Write property)

See also **PROXY_TLSAUTH_PASSWORD** option in CURL manual.

4.4.285 OptionProxyTLSEAuthType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set authentication type for authenticated TLS for proxy

Notes: (Read and Write property)

See also **PROXY_TLSAUTH_TYPE** option in CURL manual.

4.4.286 OptionProxyTLSEAuthUsername as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set a username for authenticated TLS for proxy.

Notes: (Read and Write property)

See also **PROXY_TLSAUTH_USERNAME** option in CURL manual.

4.4.287 OptionProxyTransferMode as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If this integer value is set to 1 (one), it tells libCURL to set the transfer mode (binary or ASCII) for FTP transfers done via an HTTP proxy, by appending ;type=a or ;type=i to the URL.

Notes: Without this setting, or it being set to 0 (zero, the default), OptionTransferText has no effect when doing FTP via a proxy. Beware that not all proxies support this feature. (Added in 7.18.0)
(Read and Write property)

See also **PROXY_TRANSFER_MODE** option in CURL manual.

4.4.288 OptionProxyType as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This option is to set type of the proxy.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Available options for this are kPROXY_HTTP, kPROXY_SOCKS4 (added in 7.15.2) kPROXY_SOCKS5.
The HTTP type is default.

(Read and Write property)

See also **PROXYTYPE** option in CURL manual.

4.4.289 OptionProxyUsername as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string, which should be pointing to the user name to use for the transfer while connecting to Proxy.

Notes: In order to specify the password to be used in conjunction with the user name use the OptionProxyPassword option.

(Read and Write property)

See also **PROXYUSERNAME** option in CURL manual.

4.4.290 OptionPut as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionUpload instead.

Function: A non-zero parameter tells the library to use HTTP PUT to transfer data.

Notes: The data should be set with OptionInFileSize.

This option is deprecated and starting with version 7.12.1 you should instead use OptionUpload.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.4.291 OptionQuickExit as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to allow to exit quickly.

Notes: Pass a number as a parameter, 1 meaning that when recovering from a timeout, libcurl should skip lengthy cleanups that are intended to avoid all kinds of leaks (threads etc.), as the caller program is about to call exit() anyway. This allows for a swift termination after a DNS timeout for example, by canceling and/or forgetting about a resolver thread, at the expense of a possible (though short-lived) leak of associated resources.

(Read and Write property)

See also [QUICK_EXIT](#) option in CURL manual.

4.4.292 OptionRandomFile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** A file name for the random file.

Notes: The file will be used to read from to seed the random engine for SSL. The more random the specified file is, the more secure the SSL connection will become.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

4.4.293 OptionRange as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string which should contain the specified range you want.

Notes: It should be in the format "X-Y", where X or Y may be left out. HTTP transfers also support several intervals, separated with commas as in "X-Y,N-M". Using this kind of multiple intervals will cause the HTTP server to send the response document in pieces (using standard MIME separation techniques).

Pass a NULL to this option to disable the use of ranges.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **RANGE** option in CURL manual.

4.4.294 OptionRedirProtocols as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionRedirProtocolsString instead. **Function:** An integer that holds a bitmask of kProtocol* constants.

Notes: If used, this bitmask limits what protocols libCURL may use in a transfer that it follows to in a redirect when OptionFollowLocation is enabled. This allows you to limit specific transfers to only be allowed to use a subset of protocols in redirections. By default libCURL will allow all protocols except for FILE and SCP. This is a difference compared to pre-7.19.4 versions which unconditionally would follow to all protocols supported. (Added in 7.19.4)

(Read and Write property)

4.4.295 OptionReditProtocolsString as String

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The protocols allowed to redirect to.

Example:

```
dim c as new CURLMBS
c.OptionReditProtocolsString = "http,https"
```

Notes: Pass string that holds a comma-separated list of case insensitive protocol names (URL schemes). That list limits what protocols libcurl may use in a transfer that it follows to in a redirect when OptionFollowLocation is enabled. This option allows applications to limit specific transfers to only be allowed to use a subset of protocols in redirections.

Protocols denied by OptionProtocolsString are not overridden by this option.

By default libcurl will allow HTTP, HTTPS, FTP and FTPS on redirects (since 7.65.2). Older versions of libcurl allowed all protocols on redirect except several disabled for security reasons: Since 7.19.4 FILE and SCP are disabled, and since 7.40.0 SMB and SMBS are also disabled.

These are the available protocols:

DICT, FILE, FTP, FTPS, GOPHER, GOPHERS, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTMPE, RTMPS, RTMPT, RTMPTE, RTMPTS, RTSP, SCP, SFTP, SMB, SMBS, SMTP, SMTPS, TELNET, TFTP

You can set "ALL" as a short-cut to enable all protocols. Note that by setting all, you may enable protocols that were not supported the day you write this but are introduced in a future libcurl version.

If trying to set a non-existing protocol or if no matching protocol at all is set, it returns error.

Default

HTTP, HTTPS, FTP and FTPS (Added in 7.65.2).

Older versions defaulted to all protocols except FILE, SCP and since 7.40.0 SMB and SMBS. (Read and Write property)

4.4.296 OptionReferer as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The referer to pass to the server.

Notes: It will be used to set the Referer: header in the http request sent to the remote server. This can be used to fool servers or scripts. You can also set any custom header with OptionHTTPHeader.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [REFERER](#) option in CURL manual.

4.4.297 OptionRequestTarget as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The request target, instead of extracted from the URL.

Notes: (Read and Write property)

See also [REQUEST_TARGET](#) option in CURL manual.

4.4.298 OptionResumeFrom as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: It contains the offset in number of bytes that you want the transfer to start from.

Notes: Set this option to 0 to make the transfer start from the beginning (effectively disabling resume). For FTP, set this option to -1 to make the transfer start from the end of the target file (useful to continue an interrupted upload).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [RESUME_FROM](#) option in CURL manual.

4.4.299 OptionResumeFromLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionResumeFrom instead. **Function:** It contains the offset in number of bytes that you want the transfer to start from.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.4.300 OptionRTSPClientCSEQ as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Manually initialize the client RTSP CSeq for this handle.

Notes: (Read and Write property)

See also [RTSP_CLIENT_CSEQ](#) option in CURL manual.

4.4.301 OptionRTSPRequest as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: RTSP request method (OPTIONS, SETUP, PLAY, etc...).

Notes: (Read and Write property)

See also [RTSP_REQUEST](#) option in CURL manual.

4.4.302 OptionRTSPServerCSEQ as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Manually initialize the server RTSP CSeq for this handle.

Notes: (Read and Write property)

See also [RTSP_SERVER_CSEQ](#) option in CURL manual.

4.4.303 OptionRTSPSessionID as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The RTSP session identifier.

Notes: (Read and Write property)

See also [RTSP_SESSION_ID](#) option in CURL manual.

4.4.304 OptionRTSPStreamURI as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The RTSP stream URI.

Notes: (Read and Write property)

See also [RTSP_STREAM_URI](#) option in CURL manual.

4.4.305 OptionRTSPTransport as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The Transport: header to use in RTSP requests.

Notes: (Read and Write property)

See also [RTSP_TRANSPORT](#) option in CURL manual.

4.4.306 OptionSASLAUTHZID as String

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The authorisation identity (identity to act as).

Notes: Sets the authorisation identity (identity to act as).

Pass a text as parameter, which should be pointing to the authorisation identity (authzid) for the transfer. Only applicable to the PLAIN SASL authentication mechanism where it is optional.

When not specified only the authentication identity (authcid) as specified by the username will be sent to the server, along with the password. The server will derive a authzid from the authcid when not provided, which it will then uses internally.

When the authzid is specified, the use of which is server dependent, it can be used to access another user's inbox, that the user has been granted access to, or a shared mailbox for example.

(Read and Write property)

See also [SASL_AUTHZID](#) option in CURL manual.

4.4.307 OptionSASLIR as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable SASL initial response.

Notes: (Read and Write property)

See also [SASL_IR](#) option in CURL manual.

4.4.308 OptionServerResponseTimeout as Integer

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Causes libcurl to set a timeout period (in seconds) on the amount of time that the server is allowed to take in order to send a response message for a command before the session is considered dead.

Notes: While libcurl is waiting for a response, this value overrides OptionTimeout. It is recommended that if used in conjunction with OptionTimeout, you set OptionServerResponseTimeout to a value smaller than OptionTimeout.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SERVER_RESPONSE_TIMEOUT](#) option in CURL manual.

4.4.309 OptionServiceName as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Service Name.

Notes: (Read and Write property)

See also [SERVICE_NAME](#) option in CURL manual.

4.4.310 OptionSocks5Auth as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bitmask of allowed auth methods for connections to SOCKS5 proxies.

Notes: (Read and Write property)

See also [SOCKS5_AUTH](#) option in CURL manual.

4.4.311 OptionSocks5GSSAPINEC as Boolean

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to protect SOCKS5 connection is protected.

Notes: Set to true to enable or false to disable. As part of the gssapi negotiation a protection mode is negotiated. The rfc1961 says in section 4.3/4.4 it should be protected, but the NEC reference implementation does not. If enabled, this option allows the unprotected exchange of the protection mode negotiation. (Added in 7.19.4).

(Read and Write property)

See also [SOCKS5_GSSAPI_NEC](#) option in CURL manual.

4.4.312 OptionSocks5GSSAPIService as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** A string holding the name of the service.

Notes: The default service name for a SOCKS5 server is rcmd/server-fqdn. This option allows you to change it. (Added in 7.19.4)

(Read and Write property)

4.4.313 OptionSSHAuthTypes as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Define the SSH authorization types.

Example:

```
dim c as CURLMBS // your instance

// only do password
c.OptionSSHAuthTypes = c.kSSHAuthKeyboard or c.kSSHAuthPassword
```

Notes: Pass a long set to a bitmask consisting of one or more of CURLSSH_AUTH_PUBLICKEY, CURLSSH_AUTH_PASSWORD, CURLSSH_AUTH_HOST, CURLSSH_AUTH_KEYBOARD. Set CURLSSH_AUTH_ to let libCURL pick one. (Added in 7.16.1)

See kSSHAuth* constants.

(Read and Write property)

See also [SSH_AUTH_TYPES](#) option in CURL manual.

4.4.314 OptionSSHCompression as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable SSH compression.

Notes: (Read and Write property)

See also [SSH_COMPRESSION](#) option in CURL manual.

4.4.315 OptionSSHHostPublicKeyMD5 as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string containing 32 hexadecimal digits with the 128 bit MD5 checksum of the remote host's public key.

Notes: libCURL will reject the connection to the host unless the md5sums match. This option is only for SCP and SFTP transfers. (Added in 7.17.1)

(Read and Write property)

See also [SSH_HOST_PUBLIC_KEY_MD5](#) option in CURL manual.

4.4.316 OptionSSHHostPublicKeySHA256 as String

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: SHA256 hash of SSH server public key.

Notes: Pass a string containing a Base64-encoded SHA256 hash of the remote host's public key. The transfer will fail if the given hash does not match the hash the remote host provides.

(Read and Write property)

See also [SSH_HOST_PUBLIC_KEY_SHA256](#) option in CURL manual.

4.4.317 OptionSSHKnownhosts as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string holding the file name of the known_host file to use.

Notes: The known_hosts file should use the OpenSSH file format as supported by libssh2. If this file is specified, libCURL will only accept connections with hosts that are known and present in that file, with a matching public key. (Added in 7.19.6)

(Read and Write property)

See also [SSH_KNOWNHOSTS](#) option in CURL manual.

4.4.318 OptionSSHPrivateKeyfile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass a path pointing to a file name for your private key.

Example:

`Dim c As New CURLMBS`

```
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa"
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa.pub"
c.OptionUsername = "test"
```

Notes: If not used, libCURL defaults to using

textasciitilde /.ssh/id_dsa. If the file is password-protected, set the password with OptionSSLKeyPassword. (Added in 7.16.1)

For a SFTP transfer (= file transfer over SSH), you would tell the plugin your public and private keys, so the plugin can login.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you. (Read and Write property)

See also [SSH_PRIVATE_KEYFILE](#) option in CURL manual.

4.4.319 OptionSSHPrivateKeyfile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass a path pointing to a file name for your public key.

Example:

Dim c As New CURLMBS

```
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa"
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa.pub"
c.OptionUsername = "test"
```

Notes: If not used, libCURL defaults to using textasciitilde /.ssh/id_dsa.pub. (Added in 7.16.1)

For a SFTP transfer (= file transfer over SSH), you would tell the plugin your public and private keys, so the plugin can login.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you. (Read and Write property)

See also [SSH_PUBLIC_KEYFILE](#) option in CURL manual.

4.4.320 OptionSSLCert as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The string should be the file name of your certificate.

Notes: The default format is "PEM" and can be changed with OptionSSLCERTTYPE.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [SSLCERT](#) option in CURL manual.

4.4.321 OptionSSLCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set SSL client certificate from memory blob.

Notes: Pass data, which contains a client certificate. The format must be "P12" on Secure Transport or Schannel. The format must be "P12" or "PEM" on OpenSSL. The string "P12" or "PEM" must be specified with OptionSSLCertType.

This option is an alternative to OptionSSLCert which instead expects a file name as input.

(Read and Write property)

See also [SSLCERT_BLOB](#) option in CURL manual.

4.4.322 OptionSSLCertPassword as String

Plugin Version: 11.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionKeyPassword instead. **Function:** The certificate password.

Notes: (Read and Write property)

4.4.323 OptionSSLCertType as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The string should be the format of your certificate.

Notes: Supported formats are "PEM" and "DER". (Added in 7.9.3)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSLCERTTYPE](#) option in CURL manual.

4.4.324 OptionSSLCipherList as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string holding the list of ciphers to use for the SSL connection.

Example:

```
// allow lower secure ciphers
curl.OptionSSLCipherList = "DEFAULT@SECLEVEL=0"
```

Notes: The list must be syntactically correct, it consists of one or more cipher strings separated by colons. Commas or spaces are also acceptable separators but colons are normally used, !, - and + can be used as operators. Valid examples of cipher lists include 'RC4-SHA', 'SHA1+DES', 'TLSv1' and 'DEFAULT'. The default list is normally set when you compile OpenSSL.

You'll find more details about cipher lists on this URL:

<http://www.openssl.org/docs/apps/ciphers.html>

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSL_CIPHER_LIST](#) option in CURL manual.

4.4.325 OptionSSLEnableALPN as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable TLS ALPN extension (http2 over ssl might fail without).

Notes: (Read and Write property)

See also [SSL_ENABLE_ALPN](#) option in CURL manual.

4.4.326 OptionSSLEnableNPN as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** Enable/disable TLS NPN extension (http2 over ssl might fail without)

Notes: (Read and Write property)

4.4.327 OptionSSLEngine as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** It will be used as the identifier for the crypto engine you want to use for your private key.

Notes: If the crypto device cannot be loaded, kError_SSL_ENGINE_NOTFOUND is returned.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSLENGINE](#) option in CURL manual.

4.4.328 OptionSSLEngineDefault as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** Sets the actual crypto engine as the default for (asymmetric) crypto operations.

Notes: If the crypto device cannot be set, kError_SSL_ENGINE_SETFAILED is returned.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSLENGINE_DEFAULT](#) option in CURL manual.

4.4.329 OptionSSLFalseStart as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set if we should enable TLS false start.

Notes: (Read and Write property)

See also [SSL_FALSESTART](#) option in CURL manual.

4.4.330 OptionSSLKey as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The string should be the file name of your private key.

Notes: The default format is "PEM" and can be changed with OptionSSLKEYTYPE.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [SSLKEY](#) option in CURL manual.

4.4.331 OptionSSLKeyBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set private key for client cert from memory blob.

Notes: Pass data, which contains a private key. Compatible with OpenSSL. The format (like "PEM") must be specified with OptionSSLKeyType.

This option is an alternative to OptionSSLKey which instead expects a file name as input.

(Read and Write property)

See also [SSLKEY_BLOB](#) option in CURL manual.

4.4.332 OptionSSLKeyPassword as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionKeyPassword instead. **Function:** The password required to use the OptionSSLKEY private key.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.4.333 OptionSSLKeyType as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The string should be the format of your private key.

Notes: Supported formats are "PEM", "DER" and "ENG".

The format "ENG" enables you to load the private key from a crypto engine. In this case OptionSSLKEY is used as an identifier passed to the engine. You have to set the crypto engine with OptionSSLENGINE. "DER" format key file currently does not work because of a bug in OpenSSL.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

See also [SSLKEYTYPE](#) option in CURL manual.

4.4.334 OptionSSLOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable specific SSL features with a bitmask.

Notes: (Read and Write property)

See also [SSL_OPTIONS](#) option in CURL manual.

4.4.335 OptionSSLSessionIDCache as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to use the SSL session ID cache.

Notes: Pass false to disable libCURL's use of SSL session-ID caching. Set this to true to enable it. By default all transfers are done using the cache. Note that while nothing ever should get hurt by attempting to reuse SSL session-IDs, there seem to be broken SSL implementations in the wild that may require you to disable this in order for you to succeed. (Added in 7.16.0)

(Read and Write property)

See also [SSL_SESSIONID_CACHE](#) option in CURL manual.

4.4.336 OptionSSLVerifyHost as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This option determines whether libCURL verifies that the server cert is for the server it is known as.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0

// or better provide root certificates:

Dim cacert As FolderItem = GetFolderItem("cacert.pem")
d.OptionCAInfo = cacert.NativePath
d.OptionSSLVerifyHost = 2
d.OptionSSLVerifyPeer = 1
```

Notes: When negotiating an SSL connection, the server sends a certificate indicating its identity.

When `OptionSSLVerifyHost` is 2, that certificate must indicate that the server is the server to which you meant to connect, or the connection fails.

CURL considers the server the intended one when the Common Name field or a Subject Alternate Name field in the certificate matches the host name in the URL to which you told CURL to connect.

When the value is 1, the certificate must contain a Common Name field, but it doesn't matter what name it says. (This is not ordinarily a useful setting).

When the value is 0, the connection succeeds regardless of the names in the certificate.

The default, since 7.10, is 2.

The checking this option controls is of the identity that the server claims. The server could be lying. To control lying, see `OptionSSLVerifyPeer`.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

When you don't set the options for certificate path or load system certificates, the MBS Plugin will disable the verify step to let the transfer run.

(Read and Write property)

See also [SSL_VERIFYHOST](#) option in CURL manual.

4.4.337 OptionSSLVerifyPeer as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Configure whether this CURL instance will verify the SSL peer certificate.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLMBS
// your CURL object
```

```
// disable
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
d.OptionCAInfo = cacert.NativePath
d.OptionSSLVerifyHost = 2
d.OptionSSLVerifyPeer = 1
```

Notes: This option determines whether CURL verifies the authenticity of the peer's certificate. A value of 1 means CURL verifies; zero means it doesn't. The default is nonzero, but before 7.10, it was zero.

When negotiating an SSL connection, the server sends a certificate indicating its identity. CURL verifies whether the certificate is authentic, i.e. that you can trust that the server is who the certificate says it is. This trust is based on a chain of digital signatures, rooted in certification authority (CA) certificates you supply. As of 7.10, CURL installs a default bundle of CA certificates and you can specify alternate certificates with the OptionCAINFO option or the OptionCAPATH option.

When OptionSSLVerifyPeer is nonzero, and the verification fails to prove that the certificate is authentic, the connection fails. When the option is zero, the connection succeeds regardless.

Authenticating the certificate is not by itself very useful. You typically want to ensure that the server, as authentically identified by its certificate, is the server you mean to be talking to. Use OptionSSLVerifyHost to control that.

When you don't set the options for certificate path or load system certificates, the MBS Plugin will disable the verify step to let the transfer run.

(Read and Write property)

See also [SSL_VERIFYPEER](#) option in CURL manual.

4.4.338 OptionSSLVerifyStatus as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set if we should verify the certificate status.

Notes: (Read and Write property)

See also [SSL_VERIFYSTATUS](#) option in CURL manual.

4.4.339 OptionSSLVersion as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: What version of SSL/TLS to attempt to use.

Example:

```
dim c as CURLMBS
c.OptionUseSSL = c.kFTPSSL_ALL
c.OptionSSLVersion = c.kSSLVersionTLSv12
```

Notes: The SSL and TLS versions have typically developed from the most insecure version to be more and more secure in this order through history: SSL v2, SSLv3, TLS v1.0, TLS v1.1, TLS v1.2 and the most recent TLS v1.3.

Use one of the available defines for this purpose. The available options are:

Default	0	The default acceptable version range. The minimum acceptable version is by default TLS v1.0 since 7.39.0 (unless the TLS library has a stricter rule).
TLSv1	1	TLS v1.0 or later
SSLv2	2	SSL v2 (but not SSLv3)
SSLv3	3	SSL v3 (but not SSLv2)
TLSv1.0	4	TLS v1.0 or later (Added in 7.34.0)
TLSv1.1	5	TLS v1.1 or later (Added in 7.34.0)
TLSv1.2	6	TLS v1.2 or later (Added in 7.34.0)
TLSv1.3	7	TLS v1.3 or later (Added in 7.52.0)

See also `kSSLVersion*` constants.

The maximum TLS version can be set by using one of the `CURL_SSLVERSION_MAX_` macros below. It is also possible to OR one of the `CURL_SSLVERSION_` macros with one of the `CURL_SSLVERSION_MAX_` macros.

Default	&h10000	The flag defines the maximum supported TLS version by libcurl, or the default value from the SSL library is used. libcurl will use a sensible default maximum, which was TLS v1.2 up to before 7.61.0 and is TLS v1.3 since then - assuming the TLS library support it. (Added in 7.54.0)
Max TLSv1.0	&h40000	The flag defines maximum supported TLS version as TLS v1.0. (Added in 7.54.0)
Max TLSv1.1	&h50000	The flag defines maximum supported TLS version as TLS v1.1. (Added in 7.54.0)
Max TLSv1.2	&h60000	The flag defines maximum supported TLS version as TLS v1.2. (Added in 7.54.0)
Max TLSv1.3	&h70000	The flag defines maximum supported TLS version as TLS v1.3. (Added in 7.54.0)

Please note that MBS Plugin does not yet support TLS v1.3 now, but may in future.

(Read and Write property)

See also [SSLVERSION](#) option in CURL manual.

4.4.340 OptionStreamDepends as CURLMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set stream dependency on another CURL handle.

Notes: (Read and Write property)

See also [STREAM_DEPENDS](#) option in CURL manual.

4.4.341 OptionStreamDependsE as CURLMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set E-exclusive stream dependency on another CURL handle.

Notes: (Read and Write property)

See also [STREAM_DEPENDS_E](#) option in CURL manual.

4.4.342 OptionStreamWeight as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set stream weight, 1 - 256.

Notes: Default is 16.

(Read and Write property)

See also [STREAM_WEIGHT](#) option in CURL manual.

4.4.343 OptionSuppressConnectHeaders as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Suppress proxy CONNECT response headers from events.

Notes: (Read and Write property)

See also [SUPPRESS_CONNECT_HEADERS](#) option in CURL manual.

4.4.344 OptionTCPFastOpen as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set TCP Fast Open.

Notes: (Read and Write property)

See also [TCP_FASTOPEN](#) option in CURL manual.

4.4.345 OptionTCPKeepAlive as Boolean

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If set to true, TCP keepalive probes will be sent.

Notes: The delay and frequency of these probes can be controlled by the OptionTCPKeepIdle and OptionTCPKeepInterval options, provided the operating system supports them. Set to false (default behavior) to disable keepalive probes (Added in 7.25.0).

(Read and Write property)

See also [TCP_KEEPALIVE](#) option in CURL manual.

4.4.346 OptionTCPKeepIdle as Integer

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the delay, in seconds, that the operating system will wait while the connection is idle before sending keepalive probes.

Notes: Not all operating systems support this option. (Added in 7.25.0)

(Read and Write property)

See also [TCP_KEEPIDLE](#) option in CURL manual.

4.4.347 OptionTCPKeepInterval as Integer

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the interval, in seconds, that the operating system will wait between sending keepalive probes.

Notes: Not all operating systems support this option. (Added in 7.25.0)

(Read and Write property)

See also [TCP_KEEPINTVL](#) option in CURL manual.

4.4.348 OptionTCPNoDelay as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An integer specifying whether the TCP_NODELAY option should be set or cleared (true = set, false = clear).

Notes: The option is cleared by default. This will have no effect after the connection has been established.

Setting this option will disable TCP's Nagle algorithm. The purpose of this algorithm is to try to minimize the number of small packets on the network (where "small packets" means TCP segments less than the Maximum Segment Size (MSS) for the network).

Maximizing the amount of data sent per TCP segment is good because it amortizes the overhead of the send. However, in some cases (most notably telnet or rlogin) small segments may need to be sent without delay. This is less efficient than sending larger amounts of data at a time, and can contribute to congestion on the network if overdone.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TCP_NODELAY](#) option in CURL manual.

4.4.349 OptionTFTPBlockSize as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Specify block size to use for TFTP data transmission.

Notes: Valid range as per RFC 2348 is 8-65464 bytes. The default of 512 bytes will be used if this option is not specified. The specified block size will only be used pending support by the remote server. If the server does not return an option acknowledgement or returns an option acknowledgement with no blksize, the default of 512 bytes will be used. (added in 7.19.4)

(Read and Write property)

See also [TFTP_BLKSIZE](#) option in CURL manual.

4.4.350 OptionTFTPNoOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether not send any tftp option requests to the server.

Notes: (Read and Write property)

See also **TFTP_NO_OPTIONS** option in CURL manual.

4.4.351 OptionTimeCondition as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The Time condition option.

Notes: This defines how the OptionTimeValue time value is treated. You can set this parameter to `kTimeConditionIfModifiedSince` (1) or `kTimeConditionIfUnmodifiedSince` (2). This feature applies to HTTP and FTP.

The last modification time of a file is not always known and in such instances this feature will have no effect even if the given time condition would have not been met.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **TIMECONDITION** option in CURL manual.

4.4.352 OptionTimeOut as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum time in seconds that you allow the libCURL transfer operation to take.

Notes: Normally, name lookups can take a considerable time and limiting operations to less than a few minutes risk aborting perfectly normal operations. This option will cause CURL to use the SIGALRM to enable time-outing system calls.

In unix-like systems, this might cause signals to be used unless `CURLOPT_NOSIGNAL` is set.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **TIMEOUT** option in CURL manual.

4.4.353 OptionTimeoutMS as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass a long as parameter containing the maximum time in milli seconds that you allow the libCURL transfer operation to take.

Notes: Normally, name lookups can take a considerable time and limiting operations to less than a few minutes risk aborting perfectly normal operations. This option will cause CURL to use the SIGALRM to enable time-outing system calls.

(Read and Write property)

See also [TIMEOUT_MS](#) option in CURL manual.

4.4.354 OptionTimeValue as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This should be the time in seconds since 1 jan 1970, and the time will be used in a condition as specified with OptionTimeCondition.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TIMEVALUE](#) option in CURL manual.

4.4.355 OptionTLS13Ciphers as String

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Specify which TLS 1.3 ciphers suites to use.

Notes: string holding the list of cipher suites to use for the TLS 1.3 connection. The list must be syntactically correct, it consists of one or more cipher suite strings separated by colons.

You'll find more details about cipher lists on this URL:

<https://curl.haxx.se/docs/ssl-ciphers.html>

The application does not have to keep the string around after setting this option.

(Read and Write property)

See also [TLS13_CIPHERS](#) option in CURL manual.

4.4.356 OptionTLSAuthPassword as String

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the TSL authentication password.

Notes: Please also set OptionTLSAuthType.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TLSAUTH_PASSWORD](#) option in CURL manual.

4.4.357 OptionTLSAuthType as String

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the TLS authentication type.

Notes: You can set this to "SRP" to use Secure Remote Password authentication.

Please also set username and password.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TLSAUTH_TYPE](#) option in CURL manual.

4.4.358 OptionTLSAuthUsername as String

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the TSL authentication user name.

Notes: Please also set OptionTLSAuthType.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TLSAUTH_USERNAME](#) option in CURL manual.

4.4.359 OptionTransferEncoding as Boolean

Plugin Version: 13.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Adds a request for compressed Transfer Encoding in the outgoing HTTP request.

Notes: If the server supports this and so desires, it can respond with the HTTP response sent using a compressed Transfer-Encoding that will be automatically uncompressed by libCURL on reception.

Transfer-Encoding differs slightly from the Content-Encoding you ask for with OptionAcceptEncoding in that a Transfer-Encoding is strictly meant to be for the transfer and thus MUST be decoded before the data arrives in the client. Traditionally, Transfer-Encoding has been much less used and supported by both HTTP clients and HTTP servers.

(Read and Write property)

See also [TRANSFER_ENCODING](#) option in CURL manual.

4.4.360 OptionTransferText as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to use ASCII mode for ftp transfers, instead of the default binary transfer.

Notes: For win32 systems it does not set the stdout to binary mode. This option can be usable when transferring text data between systems with different views on certain characters, such as newlines or similar.

libCURL does not do a complete ASCII conversion when doing ASCII transfers over FTP. This is a known limitation/ flaw that nobody has rectified. libCURL simply sets the mode to ascii and performs a standard transfer.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TRANSFERTEXT](#) option in CURL manual.

4.4.361 OptionUnixSocketPath as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Path to Unix domain socket.

Notes: (Read and Write property)

See also [UNIX_SOCKET_PATH](#) option in CURL manual.

4.4.362 OptionUnrestrictedAuth as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A boolean parameter tells the library it can continue to send authentication (user+password) when following locations, even when hostname changed.

Notes: This option is meaningful only when setting FollowOption.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [UNRESTRICTED_AUTH](#) option in CURL manual.

4.4.363 OptionUpkeepIntervalMS as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Connection upkeep interval.

Notes: Some protocols have "connection upkeep" mechanisms. These mechanisms usually send some traffic on existing connections in order to keep them alive; this can prevent connections from being closed due to overzealous firewalls, for example.

The user needs to explicitly call Upkeep in order to perform the upkeep work.

Currently the only protocol with a connection upkeep mechanism is HTTP/2: when the connection upkeep interval is exceeded and Upkeep is called, an HTTP/2 PING frame is sent on the connection.

(Read and Write property)

See also [UPKEEP_INTERVAL_MS](#) option in CURL manual.

4.4.364 OptionUpload as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to prepare for an upload.

Notes: The OptionInFileSize or OptionInFileSizeLarge options are also interesting for uploads. If the protocol is HTTP, uploading means using the PUT request unless you tell libCURL otherwise.

Using PUT with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with OptionHTTPHeader as usual.

If you use PUT to a HTTP 1.1 server, you can upload data without knowing the size before starting the transfer if you use chunked encoding. You enable this by adding a header like "Transfer-Encoding: chunked" with OptionHTTPHeader. With HTTP 1.0 or without chunked transfer, you must specify the size.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [UPLOAD](#) option in CURL manual.

4.4.365 OptionUploadBufferSize as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set preferred upload buffer size.

Notes: Pass a long specifying your preferred size (in bytes) for the upload buffer in libcurl. It makes libcurl uses a larger buffer that gets passed to the next layer in the stack to get sent off. In some setups and for some protocols, there's a huge performance benefit of having a larger upload buffer.

This is just treated as a request, not an order. You cannot be guaranteed to actually get the given size.

The upload buffer size is by default 64 kilobytes. The maximum buffer size allowed to be set is 2 megabytes. The minimum buffer size allowed to be set is 16 kilobytes.

Since curl 7.61.1 the upload buffer is allocated on-demand - so if the handle isn't used for upload, this buffer will not be allocated at all.

For slow upload/downloads, it may be better to set buffer size to 1 MB with OptionUploadBufferSize or OptionBufferSize properties to make transfers faster.

(Read and Write property)

See also [UPLOAD_BUFFER_SIZE](#) option in CURL manual.

4.4.366 OptionURL as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The actual URL to deal with.

Example:

```
Dim c As New CURLMBS
```

```
// this example sends a xml request to a server
c.OptionURL = "http://www.someserver.com/service"
```

```
// some XML for a SOAP request
Dim request As String = "<?xml version=""1.0""?><methodCall><methodName>application.getValue</methodName><params><param><value>info</value></param></params></methodCall>"
```

```
c.OptionPostFields = request
```

```
Dim header(-1) As String
header.Append "Content-Type: text/xml"
c.SetOptionHTTPHeader header
```

```
// this should be c.kError_OK if okay.
Dim result As Integer = c.Perform

Dim output As String = c.OutputData
Dim debugLog As String = c.DebugMessages
Dim HTTPStatus As Integer = c.GetInfoResponseCode

Break
```

Notes: If you need to pass username or password, please consider using the `OptionUsername` and `OptionPassword` properties. If your username or password contains characters like `@` or `:`, you must use those properties.

The `Lasterror` property is set. 0 for success.
You can set this value and later you can read it, but you cannot read the default value.

The parameter should be a `char *` to a zero terminated string. The string must remain present until CURL no longer needs it, as it doesn't copy the string.

If the given URL lacks the protocol part ("`http://`" or "`ftp://`" etc), it will attempt to guess which protocol to use based on the given host name. If the given protocol of the set URL is not supported, libCURL will return on error (`kError_UNSUPPORTED_PROTOCOL`) when you call `Perform`. Use `VersionInfo` for detailed info on which protocols that are supported.

The string given to `CURLOPT_URL` must be url-encoded and following the RFC 2396:
`http://CURL.haxx.se/rfc/rfc2396.txt`

`CURLOPT_URL` is the only option that must be set before `Perform` is called.
For file uploads or downloads, please include the file name in the URL.

Please do never include username and passwords in URLs, as those get often written to log files and would reveal your credentials!
Instead use `OptionUsername` and `OptionPassword`.

If you miss the protocol in the URL, you may get an error about HTTP/0.9 being used and not allowed.
(`Read` and `Write` property)
See also [URL](#) option in CURL manual.

4.4.367 OptionUserAgent as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The user agent string to pass to the server.

Example:

```
Dim c As New CURLMBS
```

```
// setup request and any options you need
c.OptionURL = URL
c.OptionUserAgent = "MyDownloader 1.0"
```

Notes: It will be used to set the User-Agent: header in the http request sent to the remote server. This can be used to fool servers or scripts. You can also set any custom header with OptionHTTPHeader.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **USERAGENT** option in CURL manual.

4.4.368 OptionUsername as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The user name to be used in protocol authentication

Notes: In order to specify the password to be used in conjunction with the user name use the OptionPassword option

(Read and Write property)

See also **USERNAME** option in CURL manual.

4.4.369 OptionUseSSL as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Request using SSL / TLS for the transfer.

Example:

```
dim c as CURLMBS
c.OptionUseSSL = c.kFTPSSL_ALL
c.OptionSSLVersion = c.kSSLVersionTLSv12
```

Notes: Set to an integer using one of the values from below, to make libCURL use your desired level of SSL for the transfer.

These are all protocols that start out plain text and get "upgraded" to SSL using the STARTTLS command.

This is for enabling SSL/TLS when you use FTP, SMTP, POP3, IMAP etc.

CURLUSESSL_NONE	0	Don't attempt to use SSL.
CURLUSESSL_TRY	1	Try using SSL, proceed as normal otherwise.
CURLUSESSL_CONTROL	2	Require SSL for the control connection or fail with CURLE_USE_SSL_FAILED.
CURLUSESSL_ALL	3	Require SSL for all communication or fail with CURLE_USE_SSL_FAILED.

(Read and Write property)

See also [USE_SSL](#) option in CURL manual.

4.4.370 OptionVerbose as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether debug messages are sent to the DebugMessage event.

Notes: Default is false.

You need to subclass the CURLMBS class to add code in the DebugMessage event.

Or you set CollectDebugMessages = true and later query DebugMessages property.

Or you use CreateMTDebugOutputFile to stream them to a file.

(Read and Write property)

See also [VERBOSE](#) option in CURL manual.

4.4.371 OptionWildcardMatch as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable wildcard matching.

Notes: Set onoff to true if you want to transfer multiple files according to a file name pattern. The pattern can be specified as part of the OptionURL option, using an fnmatch-like pattern (Shell Pattern Matching) in the last part of URL (file name).

By default, libCURL uses its internal wildcard matching implementation. You can provide your own matching function by the CURLMBS.FileNameMatch event.

A brief introduction of its syntax follows:

- - ASTERISK

ftp://example.com/some/path/*.txt (for all txt's from the root directory)

- ? - QUESTION MARK

Question mark matches any (exactly one) character.

```
ftp://example.com/some/path/photo?.jpeg
```

[- BRACKET EXPRESSION

The left bracket opens a bracket expression. The question mark and asterisk have no special meaning in a bracket expression. Each bracket expression ends by the right bracket and matches exactly one character. Some examples follow:

[a-zA-Z0-9] or [f-gF-G] - character interval

[abc] - character enumeration

[^abc] or [!abc] - negation

[[:name:]] class expression. Supported classes are alnum,lower, space, alpha, digit, print, upper, blank, graph, xdigit.

[] [-!^] - special case - matches only ' ', ' ', ' [', '! ' or '^ '. These characters have no special purpose.

[\[\] \\] - escape syntax. Matches ' [', '] ' or ' \-¥ '.

Using the rules above, a file name pattern can be constructed:

```
ftp://example.com/some/path/ [ a-z [ :upper: ] \\ ] .jpeg
```

This feature is only supported for FTP download. Not for SFTP or HTTP.

(Read and Write property)

See also [WILDCARDMATCH](#) option in CURL manual.

4.4.372 OptionXOAuth2Bearer as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The XOAUTH2 bearer token.

Notes: (Read and Write property)

See also [XOAUTH2_BEARER](#) option in CURL manual.

4.4.373 OutputData as String

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The output data from CURL.

Example:

```
Dim d As New CURLMBS
```

```
// download here
d.OptionURL = URL
```

```
// if you use SSL, maybe put in a certificate or disable verification?
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0
```

```
// run download
dim e as integer = d.Perform
```

```
// check result
Dim data As String = d.OutputData
Dim DebugMessage As String = d.DebugMessages // check in debugger on error
```

```
ResultText.text="Result: "+str(e) // 0 = Okay, others are error codes, so check debug messages
```

Notes: If CollectOutputData property is true, the plugin puts the data received in write event also into this property, so you can grab it after the transfer. Use ClearData method to clear when reusing CURL object.

Limited to 2 GB. Please stream to file for bigger data with CreateMTOutputFile function.
(Read only property)

4.4.374 Paused as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether transfer is paused.

Notes: You can set it to true while transfer runs to pause it.
(Read and Write property)

4.4.375 ProgressDownloadCurrent as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bytes downloaded so far.

Notes: (Read only property)

4.4.376 ProgressDownloadTotal as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bytes to download in total.

Notes: (Read only property)

4.4.377 ProgressPercent as Double

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Current download/upload progress in percent.

Notes: Range from 0 to 100.

(Read only property)

4.4.378 ProgressUploadCurrent as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bytes uploaded so far.

Notes: (Read only property)

4.4.379 ProgressUploadTotal as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bytes to upload in total.

Notes: (Read only property)

4.4.380 Tag as Variant

Plugin Version: 23.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The tag value.

Notes: You can store whatever reference value you need.

(Read and Write property)

4.4.381 Version as CURLVersionMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns a version object to a filled with information about various run-time features in libCURL.

Notes: (Read only property)

4.4.382 WebSocketOptions as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: WebSocket behavior options.

Notes: Pass a bitmask to tell libcurl about specific WebSocket behaviors.

To detach a WebSocket connection and use the `WebSocketSend` and `WebSocketReceive` functions after the HTTP upgrade procedure, set the `OptionConnectOnly` option to 2.

Available bits in the bitmask:

`kWebSocketRaw`:

Deliver "raw" WebSocket traffic to the Write event.

In raw mode, libcurl does not handle pings or any other frame for the application.

(Read and Write property)

4.4.383 YieldTime as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether plugin should yield time.

Example:

```
dim curl as new CURLMBS
```

```
curl.YieldTime = true
```

Notes: If set the plugin will yield time to Xojo back so threads and timers work while you download.

Seems like in RB 2009 this property only has effect if you run CURL in a thread.

(Read and Write property)

4.4.384 Events**4.4.385 ChunkBegin(FileInfo as CURLFileInfoMBS, Remains as Integer) as Integer**

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: The event called on begin of a new chunk.

Notes: If splitting of data transfer is enabled, this event is called before download of an individual chunk started. Note that parameter "remains" works only for FTP wildcard downloading (for now), otherwise is not used.

4.4.386 ChunkEnd(FileInfo as CURLFileInfoMBS, Remains as Integer) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: Download of a chunk ended.

Notes: If splitting of data transfer is enabled this event is called after download of an individual chunk finished.

This event is called for skipped or downloaded files.

4.4.387 DebugMessage(infotype as Integer, data as string, dataSize as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: A debug event to get data of ongoing process.

Notes: You may need to set OptionVerbose to true.

infotype constants:

kInfo_TEXT	0	The data is informational text.
kInfo_HEADER_IN	1	The data is header (or header-like) data received from the peer.
kInfo_HEADER_OUT	2	The data is header (or header-like) data sent to the peer.
kInfo_DATA_IN	3	The data is protocol data received from the peer.
kInfo_DATA_OUT	4	The data is protocol data sent to the peer.
kInfo_SSL_DATA_IN	5	The data is protocol data received from the peer.
kInfo_SSL_DATA_OUT	6	The data is protocol data sent to the peer.

If you set CollectDebugMessages, the plugin will collect the messages and provide them via the DebugMessages property. You can still use this event to write your own log instead of in addition.

4.4.388 `FileNameMatch(Pattern as String, Name as String)` as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: Match a file against a pattern.

Notes: If you don't implement this event, you get the default implementation from CURL. Return `kFileNameMatchNoMatch`, `kFileNameMatchIsMatch` or `kFileNameMatchFailed`.

4.4.389 `Finished(Result as Integer)`

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: The event called when transfer has finished.

Notes: For `Perform` and `PerformMT` it is called before `Perform` function returns, so in `PerformMT` this is called on the thread.

For use with `CURLMultiMBS`, it is called after `TransferFinished` event and before `TransfersFinished` event. If you want to modify GUI and use `PeformMT`, you may need to start a timer to do so.

4.4.390 `Header(data as string, dataSize as Integer)` as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: New Header data was received.

Notes: You can get error 23 if you don't return `lenb(data)` in this event.

Or just leave it empty so RB will not include it in your application the plugin will return `lenb(data)` itself.

If you set `CollectHeaderData` to true, the plugin will collect the messages and provide them via the `Header-Data` property. You can still use this event to write your own log instead of in addition.

4.4.391 `Progress(dltotal as Int64, dlnow as Int64, ultotal as Int64, ulnow as Int64, percent as Double)` as boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: An event to report progress of ongoing transfers.

Notes: This function gets called by libCURL with a frequent interval during operation (roughly once per second) no matter if data is being transferred or not. Unknown/unused argument values passed to the event will be set to zero (like if you only download data, the upload size will remain 0).

Returning a true from this event will cause libCURL to abort the transfer and return `kError_ABORTED_BY_CALLBACK`.

You can run CURL from a thread to download several things at the same time or keep the GUI more responsive. For better GUI, you can even call a method like `app.DoEvents` to get the GUI updated more often.

When sending email, `ultotal` may be zero. In that case use `OptionInFileSize` to know size of email to upload.

4.4.392 Read(count as Integer) as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: This event gets called by libCURL as soon as it needs to read data in order to send it to the peer.

Notes: Return the number of bytes requested. Never return a string with `lenb(string)>count`. You can return 0 to inform about end of file.

If you stop the current transfer by returning 0 "pre-maturely" (i.e before the server expected it, like when you've told you will upload N bytes and you upload less than N bytes), you may experience that the server "hangs" waiting for the rest of the data that won't come.

The read event may return `CURL_READFUNC_ABORT (&h10000000)` to stop the current operation immediately, resulting in a `kError_ABORTED_BY_CALLBACK` error code from the transfer (Added in 7.12.1)

This event is not called when using `PerformMT`.

If you provide Input data via `SetInputData` or `OpenMTInputFile` method, this event is not called and data is taken from the data you provided.

4.4.393 RestartRead() as boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: An event to inform you that reading on the file needs to start at the beginning again.

Notes: Return true on success.

If you use a `binarystream` for reading you will have to set position to 0 in this event.

This event is not called when using `PerformMT`.

4.4.394 Seek(pos as Int64, whence as Integer) as Integer

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: .

Function: Called when CURL needs to perform a seek.

Notes: Normally only needed if you resume a download (Seek forward) or upload is reset (seek back).

Whence is kSeekOriginCurrent, kSeekOriginEnd or kSeekOriginSet.

Please return one of this constants: kSeekReturnCantSeek, kSeekReturnFail or kSeekReturnOk.

4.4.395 SSHKey(KnownKey as string, KnownKeyLength as Integer, KnownKeyType as Integer, FoundKey as string, FoundKeyLength as Integer, FoundKeyType as Integer, MatchStatus as Integer) as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: .

Function: The event for known hosts event for SFTP and SCP.

Notes: KnownKey: The known key as string encoded with base64 if KnownKeyLength is zero, otherwise the "raw" data.

KnownKeyLength: The length of the key. Zero for base64 encoded key.

KnownKeyType: The type of the key. (0 = Unknown, 1 = RSA1, 2 = RSA, 3 = DSS)

FoundKey: The found key as string encoded with base64 if FoundKeyLength is zero, otherwise the "raw" data.

FoundKeyLength: The length of the key. Zero for base64 encoded key.

FoundKeyType: The type of the key. (0 = Unknown, 1 = RSA1, 2 = RSA, 3 = DSS)

MatchStatus: The status CURL found. (0 = OK, 1 = Mismatch, 2 = Missing)

Return one of the following values:

CURLKHSTAT_FINE_ADD_TO_FILE	0	Fine and add to file
CURLKHSTAT_FINE	1	Fine
CURLKHSTAT_REJECT	2	reject the connection, return an error
CURLKHSTAT_DEFER	3	do not accept it, but we can't answer right now so this causes a CURLE_DEFER error but otherwise the connection will be left intact etc

4.4.396 Write(data as string, dataSize as Integer) as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: This event gets called by libCURL as soon as there is data received that needs to be saved.

Notes: Return the number of bytes actually taken care of. If that amount differs from the amount passed to your function, it'll signal an error to the library and it will abort the transfer and return kError_WRITE_ERROR.

This function may be called with zero bytes data if the transferred file is empty.

The event function will be passed as much data as possible in all invokes, but you cannot possibly make any assumptions. It may be one byte, it may be thousands. The maximum amount of data that can be passed to the write event is defined in the CURL.h header file: `CURL_MAX_WRITE_SIZE` (16384).

If you set `CollectOutputData` to true, the plugin will automatically collect the data and provide it to you after the transfer with the `OutputData` property. This collecting feature will only work right, if there is enough free memory. You can of course still process data yourself in this event instead of in addition.

4.4.397 Constants

Constants

Constant	Value	Description
<code>kUpkeepIntervalDefault</code>	50000	The default connection upkeep interval in milliseconds.
<code>kWebSocketRaw</code>	1	One of the options for web sockets. RAW mode for <code>WebSocketOptions</code> .

Authorization

Constant	Value	Description
kAUTH_ANY	&hFFFFFFEF	all types set
kAUTH_ANYSAFE	&hFFFFFFEE	
kAUTH_AWS_SIGV4	128	AWS Signature v4
kAUTH_BASIC	1	Basic (default)
kAUTH_Bearer	64	HTTP Bearer token authentication
kAUTH_DIGEST	2	Digest
kAUTH_DIGEST_IE	16	HTTP Digest authentication with an IE flavor. Digest authentication is defined in RFC 2617 and is a more secure way to do authentication over public networks than the regular old-fashioned Basic method. The IE flavor is simply what libCURL will use a special "quirk" that IE is known to have used before version 7 and that some servers require the client to use.
kAUTH_GSSNEGOTIATE	4	GSS-Negotiate Please check SupportsGSSNEGOTIATE property in CURLVersionMBS to determine whether this is supported/implemented by your copy of the CURL library.
kAUTH_NEGOTIATE	4	HTTP Negotiate (SPNEGO) authentication. Negotiate authentication is defined in RFC 4559 and is the most secure way to perform authentication over HTTP. You need to build libCURL with a suitable GSS-API library or SSPI on Windows for this to work.
kAUTH_NONE	0	
kAUTH_NTLM	8	
kAUTH_NTLM_WB	32	NTLM delegating to winbind helper. Authentication is performed by a separate binary application that is executed when needed. The name of the application is specified at compile time but is typically /usr/bin/ntlm_auth Note that libCURL will fork when necessary to run the winbind application and kill it when complete, calling waitpid() to await its exit when done. On POSIX operating systems, killing the process will cause a SIGCHLD signal to be raised (regardless of whether OptionNoSignal is set), which must be handled intelligently by the application. In particular, the application must not unconditionally call wait() in its SIGCHLD signal handler to avoid being subject to a race condition. This behavior is subject to change in future versions of libCURL.
kAUTH_Only	&h80000000	This is a meta symbol. OR this value together with a single specific authentication type to force libCURL to probe for un-restricted authentication and if not, only that specific authentication algorithm is acceptable.

ChunkBegin result values

Constant	Value	Description
kChunkBeginFailed	1	Failed, so we exit downloads.
kChunkBeginOK	0	OK, download this file.
kChunkBeginSkip	2	Skip the file.

ChunkEnd result values

Constant	Value	Description
kChunkEndFailed	1	Failed, so we exit downloads.
kChunkEndOK	0	Download success.

Error Constants

Constant	Value	Description
kError_ABORTED_BY_CALLBACK	42	
kError_AGAIN	81	socket is not ready for send/recv, wait till it's ready and try again (added in 7.18.2)
kError_Auth_Error	94	An authentication function returned an error.
kError_BAD_CONTENT_ENCODING	61	Unrecognized transfer encoding
kError_BAD_DOWNLOAD_RESUME	36	couldn't resume download
kError_BAD_FUNCTION_ARGUMENT	43	
kError_CHUNK_FAILED	88	Chunk event reported error.
kError_CONV_REQD	76	Not used with plugin.
kError_COULDNT_CONNECT	7	Could not connect. Proxy set? Firewall open?
kError_COULDNT_RESOLVE_HOST	6	
kError_COULDNT_RESOLVE_PROXY	5	
kError_FAILED_INIT	2	
kError_FILESIZE_EXCEEDED	63	Maximum file size exceeded
kError_FILE_COULDNT_READ_FILE	37	
kError_FTP_ACCEPT_FAILED	10	While waiting for the server to connect back when an active FTP session is used, an error code was sent over the control connection or similar
kError_FTP_ACCEPT_TIMEOUT	12	During an active FTP session while waiting for the server to connect back, OptionAcceptTimeoutMS (or the internal default) timeout expired
kError_FTP_BAD_FILE_LIST	87	Unable to parse FTP file list.
kError_FTP_CANT_GET_HOST	15	
kError_FTP_COULDNT_RETR_FILE	19	
kError_FTP_COULDNT_SET_TYPE	17	
kError_FTP_COULDNT_USE_REST	31	the REST command failed
kError_FTP_PORT_FAILED	30	FTP PORT operation failed
kError_FTP_PRET_FAILED	84	a PRET command failed
kError_FTP_WEIRD_227_FORMAT	14	
kError_FTP_WEIRD_PASS_REPLY	11	
kError_FTP_WEIRD_PASV_REPLY	13	
kError_FTP_WEIRD_SERVER_REPLY	8	
kError_FUNCTION_NOT_FOUND	41	
kError_GOT_NOTHING	52	when this is a specific error
kError_HTTP2	16	A problem was detected in the HTTP2 framing layer. This is some error and can be one out of several problems, see the error buffer for details
kError_HTTP2_STREAM	92	stream error in HTTP/2 framing layer
kError_HTTP3	95	HTTP3 layer failed.
kError_HTTP_POST_ERROR	34	
kError_HTTP_RETURNED_ERROR	22	
kError_INTERFACE_FAILED	45	
kError_LDAP_CANNOT_BIND	38	
kError_LDAP_INVALID_URL	62	Invalid LDAP URL
kError_LDAP_SEARCH_FAILED	39	
kError_LOGIN_DENIED	67	user, password or similar was not accepted and we failed to login
kError_NOT_BUILT_IN	4	A requested feature, protocol or option was not found built-in in libCURL due to a build-time decision. This means that a feature or option was not enabled or explicitly disabled when libCURL was built and in order to use that to function you have to get a rebuilt libCURL.
kError_NO_CONNECTION_AVAILABLE	89	For internal use only, will never be returned by libCURL. No connection available, the session will be queued. (added in 7.18.2)
kError_OK	0	
kError_OPERATION_TIMEDOUT	28	
kError_OUT_OF_MEMORY	27	
kError_PARTIAL_FILE	18	
kError_PEER_FAILED_VERIFICATION	60	
kError_Proxy	96	Proxy handshake error.
kError_Quic_Connect_Error	96	Quic had a connect error.
kError_QUOTE_ERROR	21	
kError_RANGE_ERROR	33	

FileNameMatch Event Result Values

Constant	Value	Description
kFileNameMatchFailed	2	Failed.
kFileNameMatchIsMatch	0	Is Match.
kFileNameMatchNoMatch	1	No match.

Form Constants

Constant	Value	Description
kFormArray	8	
kFormBuffer	11	
kFormBufferLength	13	
kFormBufferPtr	12	
kFormContentHeader	15	
kFormContentsLength	6	
kFormContentType	14	
kFormCopyContents	4	
kFormCopyName	1	
kFormEnd	17	
kFormFile	10	
kFormFileContent	7	
kFormFilename	16	
kFormNameLength	3	
kFormPtrContents	5	
kFormPtrName	2	

FTP Authorization

Constant	Value	Description
kFTPAUTH_DEFAULT	0	Allow libCURL to decide
kFTPAUTH_SSL	1	Try "AUTH SSL" first, and only if that fails try "AUTH TLS"
kFTPAUTH_TLS	2	Try "AUTH TLS" first, and only if that fails try "AUTH SSL"

FTP CWD method

Constant	Value	Description
kFTPMethodDefault	0	let libcurl pick
kFTPMethodMultiCWD	1	single CWD operation for each path part
kFTPMethodNoCWD	2	no CWD at all
kFTPMethodSingleCWD	3	one CWD to full dir, then work on file

FTP SSL Option

Constant	Value	Description
kFTPSSL_ALL	3	Require SSL for all communication or fail with kError_FTP_SSL_FAILED.
kFTPSSL_CONTROL	2	Require SSL for the control connection or fail with kError_FTP_SSL_FAILED.
kFTPSSL_NONE	0	Don't attempt to use SSL.
kFTPSSL_TRY	1	Try using SSL, proceed as normal otherwise.

GSS API delegation modes

Constant	Value	Description
kGSSAPIDelegationFlag	2	delegate always
kGSSAPIDelegationNone	0	no delegation (default)
kGSSAPIDelegationPolicyFlag	1	if permitted by policy

HTTP Versions

Constant	Value	Description
kHTTP_VERSION_1_0	1	Enforce HTTP 1.0 requests.
kHTTP_VERSION_1_1	2	Enforce HTTP 1.1 requests.
kHTTP_VERSION_2TLS	4	use version 2 for HTTPS, version 1.1 for HTTP
kHTTP_VERSION_2_0	3	please use HTTP 2 in the request
kHTTP_VERSION_2_PRIOR_KNOWLEDGE	5	please use HTTP 2 without HTTP/1.1 Upgrade
kHTTP_VERSION_3	30	please use HTTP 3 in the request
kHTTP_VERSION_3Only	31	Use HTTP/3 without fallback. For HTTPS only. For HTTP, it return error.
kHTTP_VERSION_NONE	0	We don't care about what version the library uses. libCURL will use what it thinks fit.

Debug Message Info Types

Constant	Value	Description
kINFO_DATA_IN	3	The data is protocol data received from the peer.
kINFO_DATA_OUT	4	The data is protocol data sent to the peer.
kINFO_HEADER_IN	1	The data is header (or header-like) data received from the peer.
kINFO_HEADER_OUT	2	The data is header (or header-like) data sent to the peer.
kINFO_SSL_DATA_IN	5	The data is protocol data received from the peer.
kINFO_SSL_DATA_OUT	6	The data is protocol data sent to the peer.
kINFO_TEXT	0	The data is informational text.

IP Resolve Modes

Constant	Value	Description
kIPRESOLVE_V4	1	
kIPRESOLVE_V6	2	
kIPRESOLVE_WHATEVER	0	

NetRC Modes

Constant	Value	Description
kNETRC_IGNORED	0	The .netrc will never be read. This is the default.
kNETRC_OPTIONAL	1	A user:password in the URL will be preferred to one in the .netrc.
kNETRC_REQUIRED	2	A user:password in the URL will be ignored. Unless one is set programmatically, the .netrc will be queried.

Protocols

Constant	Value	Description
kProtocolAll	-1	Enable all protocols.
kProtocolDICT	&h200	DICT
kProtocolFILE	&h400	File
kProtocolFTP	4	FTP
kProtocolFTPS	8	FTPS
kProtocolGopher	&h2000000	Gopher
kProtocolGophers	&h20000000	
kProtocolHTTP	1	HTTP
kProtocolHTTPS	2	HTTPS
kProtocolIMAP	&h1000	IMAP
kProtocolIMAPS	&h2000	IMAPS
kProtocolLDAP	&h80	LDAP
kProtocolLDAPS	&h100	LDAPS
kProtocolMQTT	&h10000000	MQTT
kProtocolPOP3	&h4000	POP3
kProtocolPOP3S	&h8000	POP3S
kProtocolRTMP	&h80000	RTMP
kProtocolRTMPE	&h200000	RTMPE
kProtocolRTMPS	&h800000	RTMPS
kProtocolRTMPT	&h100000	RTMPT
kProtocolRTMPTE	&h400000	RTMPTE
kProtocolRTMPTS	&h1000000	RTMPTS
kProtocolRTSP	&h40000	RTSP
kProtocolSCP	&h10	SCP
kProtocolSFTP	&h20	SFTP
kProtocolSMB	&h4000000	SMB
kProtocolSMBS	&h8000000	SMBS
kProtocolSMTP	&h10000	SMTP
kProtocolSMTPS	&h20000	SMTPS
kProtocolTelnet	&h40	Telnet
kProtocolTFTP	&h800	TFTP

Proxy Types

Constant	Value	Description
kPROXY_HTTP	0	
kPROXY_HTTP10	1	Force to use CONNECT HTTP/1.0.
kPROXY_HTTP11	0	Connect using HTTP/1.1.
kPROXY SOCKS4	4	
kPROXY SOCKS4A	6	Using SOCKS 4A.
kPROXY SOCKS5	5	
kPROXY SOCKS5_Hostname	7	Use the SOCKS5 protocol but pass along the host name rather than the IP address. added in 7.18.0

Seek Origin Constants

Constant	Value	Description
kSeekOriginCurrent	1	Seek relative to current file position.
kSeekOriginEnd	2	Seek relative to end of file.
kSeekOriginSet	0	Seek relative to start of file.

Seek Event Result Values

Constant	Value	Description
kSeekReturnCantSeek	3	Return this value if you can't seek as you are not using a file, but for example a stream.
kSeekReturnFail	2	Returns this value if your seek operation failed.
kSeekReturnOk	1	Returns this value if your seek operation succeeded.

SSH Authentication

Constant	Value	Description
kSSHAAuthAgent	16	agent (ssh-agent, pageant...)
kSSHAAuthAny	-1	Any allowed
kSSHAAuthDefault	-1	Default: Any
kSSHAAuthGSSAPI	32	gssapi (kerberos, ...)
kSSHAAuthHost	4	host key files
kSSHAAuthKeyboard	8	keyboard interactive
kSSHAAuthNone	0	none allowed, silly but complete
kSSHAAuthPassword	2	password
kSSHAAuthPublicKey	1	public/private key files

SSL Option Flags

Constant	Value	Description
kSSLOptionAllowBeast	1	tells libcurl to allow the BEAST SSL vulnerability in the name of improving interoperability with older servers. Some SSL libraries have introduced work-arounds for this flaw but those work-arounds sometimes make the SSL communication fail. To regain functionality with those broken servers, a user can this way allow the vulnerability back.
kSSLOptionAutoClientCert	32	Tells libcurl to automatically locate and use a client certificate for authentication. (Schannel)
kSSLOptionNativeCA	16	tells libcurl to use standard certificate store of operating system. Currently implemented under MS-Windows.
kSSLOptionNoPartialChain	4	tells libcurl to <i>*NOT*</i> accept a partial certificate chain if possible. The OpenSSL backend has this ability.
kSSLOptionNoRevoke	2	tells libcurl to disable certificate revocation checks for those SSL backends where such behavior is present.
kSSLOptionRevokeBestEffort	8	tells libcurl to ignore certificate revocation offline checks and ignore missing revocation list for those SSL backends where such behavior is present.

SSL Versions

Constant	Value	Description
kSSLVersionDefault	0	The default acceptable version range. The minimum acceptable version is by default TLS v1.0 since 7.39.0 (unless the TLS library has a stricter rule).
kSSLVersionSSLv2	2	SSL v2 (but not SSLv3)
kSSLVersionSSLv3	3	SSL v3 (but not SSLv2)
kSSLVersionTLSv1	1	TLS v1.0 or later
kSSLVersionTLSv10	4	TLS v1.0 or later (Added in 7.34.0)
kSSLVersionTLSv11	5	TLS v1.1 or later (Added in 7.34.0)
kSSLVersionTLSv12	6	TLS v1.2 or later (Added in 7.34.0)
kSSLVersionTLSv13	7	TLS v1.3 or later (Added in 7.52.0)

Time Conditions

Constant	Value	Description
kTimeConditionIfModifiedSince	1	
kTimeConditionIfUnModifiedSince	2	
kTimeConditionNone	0	No condition.

SSL Option

Constant	Value	Description
kUseSSLall	3	Require SSL for all communication or fail with kError_FTP_SSL_FAILED.
kUseSSLcontrol	2	Require SSL for the control connection or fail with kError_FTP_SSL_FAILED.
kUseSSLnone	0	Don't attempt to use SSL.
kUseSSLtry	1	Try using SSL, proceed as normal otherwise.

4.5 class CURLMimePartMBS

4.5.1 class CURLMimePartMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for mime parts.

Notes: You can provide data via file path, folderitem, data in memoryblock or string.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

4.5.2 Methods

4.5.3 Constructor

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The private constructor.

4.5.4 Headers as String()

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries header.

4.5.5 SetHeaders(headers() as String)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets header.

4.5.6 Properties

4.5.7 DataMemory as Memoryblock

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part data source from memory data.

Notes: (Read and Write property)

4.5.8 DataString as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part data source from memory data.

Example:

```
dim c as new CURLMBS

// add mime
dim p as CURLMimePartMBS = c.AddMimePart

p.name = "Text"
p.FileName = "test.txt"
p.MimeType = "text/plain"
p.DataString = "Hello World"

c.FinishMime
// now you can send...
```

Notes: (Read and Write property)

4.5.9 Encoding as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime data transfer encoder.

Notes: If set to binary, 8bit, 7bit, base64 or quoted-printable, the matching encoding is applied.
(Read and Write property)

4.5.10 File as FolderItem

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The file to stream.

Notes: When you set property, the plugin will open file and may raise IOException on failure.
(Read and Write property)

4.5.11 FileName as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part remote file name.

Notes: If mime type is not set, we pick extension from file name.

This includes gif, jpg, jpeg, png, svg, txt, htm, html, pdf and xml file extensions.

(Read and Write property)

4.5.12 FilePath as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part data source from named file.

Notes: (Read and Write property)

4.5.13 Lasterror as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error code.

Notes: (Read and Write property)

4.5.14 MimeType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part type.

Notes: (Read and Write property)

4.5.15 Name as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime/form part name.

Notes: (Read and Write property)

4.5.16 Parent as Variant

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The parent object.

Notes: (Read only property)

4.5.17 Constants

Encodings

Constant	Value	Description
kEncoding7bit	"7bit"	7bit
kEncoding8bit	"8bit"	8bit
kEncodingBase64	"base64"	Base64
kEncodingBinary	"binary"	Binary mode
kEncodingNone	""	No mode, so data is passed through and header has no encoding defined
kEncodingQuotedPrintable	"quoted-printable"	Quoted printable

Mime Types

Constant	Value	Description
kMimeTypeGIF	"image/gif"	GIF
kMimeTypeHTML	"text/html"	HTML
kMimeTypeJPEG	"image/jpeg"	JPEG
kMimeTypePDF	"application/pdf"	PDF
kMimeTypePNG	"image/png"	PNG
kMimeTypeSVG	"image/svg+xml"	SVG
kMimeTypeText	"text/plain"	Text
kMimeTypeXML	"application/xml"	XML

4.6 class CURLMissingFunctionExceptionMBS

4.6.1 class CURLMissingFunctionExceptionMBS

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An exception raised if a CURL library function is not loaded.

Notes: If you call load library before you use the CURLMBS Constructor, you should never see this.
Subclass of the RuntimeException class.

4.7 class CURLMultiMBS

4.7.1 class CURLMultiMBS

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for multiple CURL transfers running in parallel.

Blog Entries

- [News from the MBS Xojo Plugins Version 23.2](#)

4.7.2 Methods

4.7.3 AddCURL(curl as CURLMBS, handler as CURLTransferFinishedMBS = nil) as boolean

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a standard CURL handle to the multi stack.

Notes: Lasterror is set.

We added handler parameter for v23.2 to make it easier to run things asynchronously.

4.7.4 CURLs as CURLMBS()

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries list of current CURL instances.

4.7.5 ErrorString(ErrorCode as Integer) as String

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries text message for a given error code.

4.7.6 Perform

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Checks for things to see.

Notes: When the app thinks there's data available for CURL it calls this function to read/write whatever

there is right now. This returns as soon as the reads and writes are done. This function does not require that there actually is data available for reading or that data can be written, it can be called just in case.

Lasterror is set. This only provides errors etc regarding the whole multi stack. There might still have occurred problems on individual transfers even when this returns OK.

Sets RunningTransfers property.

4.7.7 RemoveAll

Plugin Version: 23.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Removes all curl handles.

Notes: Same as looping over CURLs() array and calling RemoveCURL for each.

This effectively cancels all requests.

4.7.8 RemoveCURL(CURL as CURLMBS) as boolean

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Removes a CURL handle from the multi stack again.

Notes: Lasterror is set.

Plugin calls this automatically when TransferFinished event was called.

4.7.9 SharedInstance as CURLMultiMBS

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The shared instance.

Notes: Either you create a new CURLMultiMBS object, which then takes this place.

Or you don't and the plugin creates an object for you to easily schedule transfers asynchronously.

4.7.10 Properties

4.7.11 AutoPerform as Boolean

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to run a timer and run Perform automatically for you.

Notes: Set to true to run Perform automatically. For this the plugin manages a timer to call perform

regularly.

We set this to true for the default shared instance, so it runs without you doing anything.

(Read and Write property)

4.7.12 ChunkLengthPenaltySize as Int64

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A connection with a chunk length longer than this will not be considered for pipelining.

Notes: (Read and Write property)

4.7.13 ContentLengthPenaltySize as Int64

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A connection with a content-length longer than this will not be considered for pipelining.

Notes: (Read and Write property)

4.7.14 Handle as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The internal object reference.

Notes: (Read only property)

4.7.15 Lasterror as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error code.

Notes: (Read and Write property)

4.7.16 MaxConcurrentStreams as Integer

Plugin Version: 20.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum number of concurrent connections to a server.

Notes: Maximum number of concurrent streams to support on a connection.

(Read and Write property)

4.7.17 MaxConnects as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Maximum number of entries in the connection cache.

Notes: (Read and Write property)

4.7.18 MaxHostConnections as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Maximum number of (pipelining) connections to one host.

Notes: (Read and Write property)

4.7.19 MaxPipelineLength as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Maximum number of requests in a pipeline.

Notes: (Read and Write property)

4.7.20 MaxTotalConnections as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Maximum number of open connections in total.

Notes: (Read and Write property)

4.7.21 Pipelining as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to 1 to enable pipelining for this multi handle.

Notes: Only for HTTP protocol.

Used to be a boolean property for 15.0 to 18.1, but changed to integer for 18.2.

(Read and Write property)

4.7.22 RunningTransfers as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Number of running transfers.

Notes: Set by Perform method.

(Read only property)

4.7.23 Tag as Variant

Plugin Version: 23.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The tag value.

Notes: You can store whatever reference value you need.

(Read and Write property)

4.7.24 Events

4.7.25 TransferFinished(CURL as CURLMBS, result as Integer, RemainingFinishedTransfers as Integer)

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: .

Function: One transfer finished.

Notes: Query CURL object for details.

Result is the result of the transfer as returned by Perform method of CURL object.

RemainingFinishedTransfers is how many transfers are also finished and will be called right after this event.

This event fires always when the queue is empty.

You may want to turn off the timer calling Perform method when this event fires.

Later you can start timer again if you call Add method.

4.7.26 TransfersFinished

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: .

Function: All pending transfers finished.

4.7.27 Constants

Error Codes

Constant	Value	Description
kErrorAddedAlready	7	An easy handle already added to a multi handle was attempted to get added - again.
kErrorBadEadyHandle	2	An easy handle was not good/valid.
kErrorBadFunctionArgument	10	A function was called with a bad parameter.
kErrorBadHandle	1	The passed-in handle is not a valid CURLM handle.
kErrorBadSocket	5	The passed in socket argument did not match.
kErrorCallPerform	-1	Please call Perform soon to do some tasks.
kErrorInternalError	4	This is a libCURL bug.
kErrorOK	0	Everything OK.
kErrorOutOfMemory	3	Running low on memory.
kErrorRecursiveAPICall	8	An api function was called from inside an event.
kErrorUnknownOption	6	Tried to set unsupported option.
kErrorWakeupFailure	9	Wakeup is unavailable or failed.

Pipelining options

Constant	Value	Description
kPipeHTTP1	1	Pipe with HTTP/1.1.
kPipeMultiPlex	2	Pipe with multiplex.
kPipeNothing	0	No piping.

4.7.28 Delegates

4.7.29 `CURLTransferFinishedMBS(curl as CURLMBS, ErrorCode as Integer)`

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The delegate used to indicate a transfer finished.

Notes: ErrorCode is zero for a successful.

See kError* constants in CURLSMBS class.

See also:

- 4.7.30 `CURLTransferFinishedMBS(curl as CURLMBS, ErrorCode as Integer)` 249

4.7.30 `CURLTransferFinishedMBS(curl as CURLMBS, ErrorCode as Integer)`

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The delegate used to indicate a transfer finished.

Notes: ErrorCode is zero for a successful.

See kError* constants in CURLMBS class.

See also:

- 4.7.29 `CURLTransferFinishedMBS(curl as CURLMBS, ErrorCode as Integer)` 249

4.8 class CURLNFileInfoMBS

4.8.1 class CURLNFileInfoMBS

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for file information.

Notes: Content of this structure depends on information which is known and is achievable (e.g. by FTP LIST parsing).

4.8.2 Properties

4.8.3 Date as Date

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The timestamp as a date object.

Notes: As of plugin version 15.2 the CURL library does not parse the timestamp.

So for some timestamp formats we have code in our plugin to do the parsing from the TimeString property. But this is limited. No seconds and the year is a guess. Files newer in the year than today are from last year and other files from current year. The server doesn't provide year details.

(Read only property)

4.8.4 DateTime as DateTime

Plugin Version: 20.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The timestamp as a date object.

Notes: As of plugin version 20.5 the CURL library does not parse the timestamp.

So for some timestamp formats we have code in our plugin to do the parsing from the TimeString property. But this is limited. No seconds and the year is a guess. Files newer in the year than today are from last year and other files from current year. The server doesn't provide year details.

(Read only property)

4.8.5 FileName as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The file name.

Notes: (Read only property)

4.8.6 FileType as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The file type.

Notes: (Read only property)

4.8.7 Flags as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The flags.

Notes: Flags define which fields are set.

Also you can just use the Has properties for same information.

(Read only property)

4.8.8 GID as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The group ID.

Notes: (Read only property)

4.8.9 GroupString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The group string.

Notes: (Read only property)

4.8.10 HardLinks as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The hard link count.

Notes: (Read only property)

4.8.11 HasFileName as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if filename property is valid.

Notes: (Read only property)

4.8.12 HasFileType as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if filetype property is valid.

Notes: (Read only property)

4.8.13 HasGID as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if GID property is valid.

Notes: (Read only property)

4.8.14 HasHardLinks as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if hardlinks property is valid.

Notes: (Read only property)

4.8.15 HasPermissions as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if permissions property is valid.

Notes: (Read only property)

4.8.16 HasSize as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if size property is valid.

Notes: (Read only property)

4.8.17 HasTime as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if time and date properties have values.

Notes: (Read only property)

4.8.18 HasUID as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if UID field has a value.

Notes: (Read only property)

4.8.19 IsDirectory as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if entry is a directory.

Notes: Same as FileType = FileTypeDirectory.
(Read only property)

4.8.20 IsFile as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True if entry is a regular file.

Notes: Same as FileType = FileTypeFile.
(Read only property)

4.8.21 Permissions as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The permission value.

Notes: (Read only property)

4.8.22 PermissionString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The permission string.

Notes: (Read only property)

4.8.23 Size as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The file size.

Notes: (Read only property)

4.8.24 Target as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The target for a symlink.

Notes: (Read only property)

4.8.25 Time as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time value.

Notes: (Read only property)

4.8.26 TimeString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time string parsed.

Notes: (Read only property)

4.8.27 UID as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The user ID.

Notes: (Read only property)

4.8.28 UserString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The user ID as text.

Notes: (Read only property)

4.8.29 Constants

File Types

Constant	Value	Description
FileTypeDeviceBlock	3	Block Device
FileTypeDeviceChar	4	Character Device
FileTypeDirectory	1	Directory
FileTypeDoor	7	Door, is possible only on Sun Solaris now.
FileTypeFile	0	Regular file
FileTypeNamedPipe	5	Named Pipe
FileTypeSocket	6	Socket
FileTypeSymlink	2	Symbolic links
FileTypeUnknown	8	Unknown file type. Should never occur.

Flag Constants

Constant	Value	Description
FlagKnownFileName	1	Filename Known
FlagKnownFileType	2	File Type Known
FlagKnownGID	32	GID Known
FlagKnownHardLinks	128	Hardlink Count Known
FlagKnownPermissions	8	Permissions Known
FlagKnownSize	64	Size Known
FlagKnownTime	4	Time Known
FlagKnownUID	16	UID Known

4.9 class CURLNListMBS

4.9.1 class CURLNListMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A class to hold a list of strings from the CURL library.

Notes: Data is copied for this list, so you can just keep it around.

4.9.2 Methods

4.9.3 Item(index as Integer) as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns the item with the given index.

Notes: Index is zero based.

4.9.4 List as String()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Converts list to a string array.

4.9.5 Operator_Convert as String()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Converts list to a string array.

4.9.6 Properties

4.9.7 Count as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Number of items in this list.

Notes: (Read only property)

4.10 class CURLNMBS

4.10.1 class CURLNMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A class to wrap libCURL.

Example:

```
Dim d As New CURLNMBS
```

```
// download here
d.OptionURL = URL
```

```
// if you use SSL, maybe put in a certificate or disable verification?
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0
```

```
// run download
dim e as integer = d.Perform
```

```
// check result
Dim data As String = d.OutputData
Dim DebugMessage As String = d.DebugMessages // check in debugger on error
```

```
ResultText.text="Result: "+str(e) // 0 = Okay, others are error codes, so check debug messages
```

Notes: We have three variants:

CURLS* classes include a static CURL library with SSL and SSH.

CURLN* classes include a static CURL library with native SSL on Mac and Windows.

CURL* classes without S need you to supply your own CURL library.

All variants can load a custom CURL library or use the one from the system on Mac and Linux.

If no library is loaded or included, the plugin will try to load the system one in constructor.

from the website libCURL website:

<https://curl.haxx.se/libcurl/>

libCURL is a free and easy-to-use client-side URL transfer library, supporting FTP, FTPS, HTTP, HTTPS, SCP, SFTP, TFTP, TELNET, DICT, FILE and LDAP. libCURL supports SSL certificates, HTTP POST, HTTP PUT, FTP uploading, HTTP form based upload, proxies, cookies, user+password authentication (Basic, Digest, NTLM, Negotiate, Kerberos4), file transfer resume, http proxy tunneling and more!

libCURL is highly portable, it builds and works identically on numerous platforms, including Solaris, NetBSD, FreeBSD, OpenBSD, Darwin, HPUX, IRIX, AIX, Tru64, Linux, UnixWare, HURD, Windows, Amiga, OS/2, BeOs, Mac OS X, Ultrix, QNX, OpenVMS, RISC OS, Novell NetWare, DOS and more...

libCURL is free, thread-safe, IPv6 compatible, feature rich, well supported, fast, thoroughly documented and is already used by many known, big and successful companies and numerous applications.

On Linux you may need to install libraries like ldap: `apt-get install libldap-2.4.2:i386`

Blog Entries

- [News from the MBS Xojo Plugins Version 23.4](#)
- [News from the MBS Xojo Plugins in Version 23.0](#)
- [News from the MBS Xojo Plugins Version 22.4](#)
- [News from the MBS Xojo Plugins Version 22.3](#)
- [News from the MBS Xojo Plugins Version 21.3](#)
- [News from the MBS Xojo Plugins Version 21.1](#)
- [News from the MBS Xojo Plugins Version 20.3](#)
- [URLs without UserName and Password please](#)
- [CURL conference](#)
- [Adding CURLN* classes to MBS Xojo Plugins](#)

Videos

- [Presentation from London conference about MBS Plugins.](#)

4.10.2 Methods

4.10.3 AddMimePart as CURLNMimePartMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Adds a new blank mime part.

Notes: Returns mime object, so you can set properties.

4.10.4 AWSPresignURL(AWSAccessKeyId as String, AWSSecretAccessKey as String, Region as String, Service as String, Path as String, Domain as String, Verb as String = "GET", Expires as Integer = 86400, QueryParameters() as String = nil, Headers() as String = nil) as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query predigend URL for Amazon Webservices.

Example:

```
Dim URL As String = CURLNMBS.AWSPresignURL( _
  "AKIAIOSFODNN7EXAMPLE", _
  "wJalrXUtnFEMI/K7MDENG/bPxDfCYEXAMPLEKEY", _
  "us-east-1", _
  "s3", _
  "/test.txt", _
  "examplebucket.s3.amazonaws.com", _
  "GET", _
  86400 )
```

Break // see URL in debugger

Notes: This implements AWS4-HMAC-SHA256 pre-signature for credentials.

Works also for other compatible S3 services beside Amazon's like the one from Wasabi or Dell ECS.

Parameter	Description	Example
AWSAccessKeyId	Your access key for AWS.	"AKIAIOSFODNN7EXAMPLE"
AWSSecretAccessKey	Your secret key.	"wJalrXUtnFEMI/K7MDENG/bPxDfCYEXAMPLEKEY"
Region	The region to use.	"us-east-1"
Service	The service to use.	"s3"
Path	The path for the URL. Should always start with "/".	"/test.txt"
Domain	The path for the URL. Should always start with "/".	"examplebucket.s3.amazonaws.com"
Verb	The HTTP method to use. Can be POST, PUT, GET or DELETE. Defaults to GET.	"GET"
Expires	Expiration duration. Provides the time period, in seconds, for which the generated presigned URL is valid. For example, 86400 (24 hours). This value is an integer. The minimum value you can set is 1, and the maximum is 604800 (seven days). A presigned URL can be valid for a maximum of seven days because the signing key you use to sign the URL is valid for up to seven days. Default is 86400 for one day.	86400
QueryParameters	List of query parameters to include. When you can specify various headers to include in signature and request.	"key=value"
Headers	Extra HTTP headers to include. When you can specify various headers to include in signature and request.	"key=value"

Returns the pre-signed URL. May raise an exception in case of error.

4.10.5 ClearData

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Clears data properties.

Notes: Resets OutputData, DebugMessages and Headers.

4.10.6 CloseMTDebugOutputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Closes the debug output file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.10.7 CloseMTHaderOutputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Closes the header output file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.10.8 CloseMTInputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Closes the input file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.10.9 CloseMTOutputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Closes the output file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.10.10 CreateMTDebugOutputFile(file as folderitem) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where debug data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

With 15.2 version of plugin, this also works with Perform.

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.10.11 CreateMTDebugOutputFile(Path as String) as boolean

4.10.11 CreateMTDebugOutputFile(Path as String) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where debug data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.10.10 CreateMTDebugOutputFile(file as folderitem) as boolean

260

4.10.12 CreateMTHeaderOutputFile(file as folderitem) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where header data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

With 15.2 version of plugin, this also works with Perform.

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.10.13 CreateMTHeaderOutputFile(Path as String) as boolean

261

4.10.13 CreateMTHeaderOutputFile(Path as String) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where header data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.10.12 CreateMTHeaderOutputFile(file as folderitem) as boolean

261

4.10.14 CreateMTOutputFile(file as folderitem) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where output data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).
With 15.2 version of plugin, this also works with Perform.

Must be called before Perform, so we can stream data to the file.
The file is closed automatically when Perform methods finish their work.

You can set CollectOutputData to false in order to disable dat being collected.
See also:

- 4.10.15 CreateMTOutputFile(Path as String) as boolean 262

4.10.15 CreateMTOutputFile(Path as String) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a file where output data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

Must be called before Perform, so we can stream data to the file.
The file is closed automatically when Perform methods finish their work.

You can set CollectOutputData to false in order to disable dat being collected.
See also:

- 4.10.14 CreateMTOutputFile(file as folderitem) as boolean 261

4.10.16 FileInfos as CURLNFileInfoMBS()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries array with file information.

Notes: If you use OptionWildcard, you find after the transfer all CURLNFileInfoMBS objects for all the files/folders found.

For MBS Plugin 19.0 or newer you can alternatively run a custom request "MLSD" and than get file infos, too.

4.10.17 FinishMime

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Finishes mime data.

Example:

```
dim c as new CURLNMBS

// add mime
dim p as CURLNMimePartMBS = c.AddMimePart

p.name = "Text"
p.FileName = "test.txt"
p.MimeType = "text/plain"
p.DataString = "Hello World"

c.FinishMime
// now you can send...
```

Notes: Please call AddMimePart for each part you like to add and than finally FinishMime before calling perform.

4.10.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Example:

```
dim c as new CURLNMBS
dim file1 as string = "my-face.jpg"
dim file2 as string = "your-face.jpg"
dim formOptions(-1) as Integer
dim formValues(-1) as string

const CURLFORM_COPYNAME = 1
const CURLFORM_ARRAY = 8
const CURLFORM_FILE = 10

'/* Add two file section using CURLFORM_ARRAY */
formOptions.Append CURLFORM_FILE
formValues.append file1
formOptions.Append CURLFORM_FILE
formValues.append file2

'/* no option needed for the end marker */
c.FormAdd CURLFORM_COPYNAME, "pictures", CURLFORM_ARRAY, formOptions, formValues
```

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.10.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 264
- 4.10.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 265
- 4.10.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 265
- 4.10.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 266
- 4.10.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 267
- 4.10.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 267
- 4.10.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 270

4.10.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.10.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 263
- 4.10.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 265
- 4.10.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 265
- 4.10.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 266

4.10. CLASS CURLNMBS 265

- 4.10.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 267
- 4.10.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 267
- 4.10.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 270

4.10.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.10.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 263
- 4.10.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 264
- 4.10.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 265
- 4.10.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 266
- 4.10.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 267
- 4.10.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 267
- 4.10.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 270

4.10.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.10.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 263
- 4.10.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 264
- 4.10.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 265
- 4.10.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 266
- 4.10.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 267
- 4.10.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 267
- 4.10.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 270

4.10.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.10.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 263
- 4.10.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 264
- 4.10.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 265
- 4.10.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 265

4.10. CLASS CURLNMBS 267

- 4.10.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 267
- 4.10.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 267
- 4.10.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 270

4.10.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.10.18 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 263
- 4.10.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 264
- 4.10.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 265
- 4.10.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 265
- 4.10.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 266
- 4.10.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 267
- 4.10.25 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 270

4.10.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Several FormAdd methods are there. Send a request to support if you need another parameter combination.

Lasterror is set.

FormAdd() is used to append sections when building a multipart/formdata HTTP POST (sometimes referred to as rfc1867-style posts). Append one section at a time until you've added all the sections you want included and then you call FormFinish.

Using POST with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with `CURLOPT_HTTPHEADER` as usual.

First, there are some basics you need to understand about multipart/formdata posts. Each part consists of at least a NAME and a CONTENTS part. If the part is made for file upload, there are also a stored CONTENT-TYPE and a FILENAME. Below, we'll discuss what options you use to set these properties in the parts you want to add to your post.

The options listed first are for making normal parts. The options from `CURLFORM_FILE` through `CURLFORM_BUFFERLENGTH` are for file upload parts.

`CURLFORM_COPYNAME:`

followed by a string which provides the name of this part. libCURL copies the string so your application doesn't need to keep it around after this function call. If the name isn't null terminated, or if you'd like it to contain zero bytes, you must set its length with `CURLFORM_NAMELENGTH`.

`CURLFORM_PTRNAME:`

followed by a string which provides the name of this part. libCURL will use the string and refer to the data in your application, so you must make sure it remains until CURL no longer needs it. If the name isn't null terminated, or if you'd like it to contain zero bytes, you must set its length with `CURLFORM_NAMELENGTH`.

`CURLFORM_COPYCONTENTS:`

followed by a string to the contents of this part, the actual data to send away. libCURL copies the provided data, so your application doesn't need to keep it around after this function call. If the data isn't null terminated, or if you'd like it to contain zero bytes, you must set the length of the name with `CURLFORM_CONTENTSLENGTH`.

`CURLFORM_PTRCONTENTS:`

followed by a string to the contents of this part, the actual data to send away. libCURL will use the string and refer to the data in your application, so you must make sure it remains until CURL no longer needs it. If the data isn't null terminated, or if you'd like it to contain zero bytes, you must set its length with

CURLFORM_CONTENTSLENGTH.

CURLFORM_CONTENTSLENGTH:
followed by a long giving the length of the contents.

CURLFORM_FILECONTENT:
followed by a filename, causes that file to be read and its contents used as data in this part. This part does not automatically become a file upload part simply because its data was read from a file.

CURLFORM_FILE:
followed by a filename, makes this part a file upload part. It sets the filename field to the basename of the provided filename, it reads the contents of the file and passes them as data and sets the content-type if the given file match one of the internally known file extensions. For CURLFORM_FILE the user may send one or more files in one part by providing multiple CURLFORM_FILE arguments each followed by the filename (and each CURLFORM_FILE is allowed to have a CURLFORM_CONTENTTYPE).

CURLFORM_CONTENTTYPE:
is used in combination with CURLFORM_FILE. Followed a string which provides the content-type for this part, possibly instead of an internally chosen one.

CURLFORM_FILENAME:
is used in combination with CURLFORM_FILE. Followed a string, it tells libCURL to use the given string as the filename in the file upload part instead of the actual file name.

CURLFORM_BUFFER:
is used for custom file upload parts without use of CURLFORM_FILE. It tells libCURL that the file contents are already present in a buffer. The parameter is a string which provides the filename field in the content header.

CURLFORM_BUFFERPTR:
is used in combination with CURLFORM_BUFFER. The parameter is the string to be uploaded. You must also use CURLFORM_BUFFERLENGTH to set the number of bytes in the buffer. Keep the buffer variable alive till the upload is finished.

CURLFORM_BUFFERLENGTH:
is used in combination with CURLFORM_BUFFER. The parameter is a long which gives the length of the buffer.

CURLFORM_ARRAY:
Another possibility to send options to CURL_formadd() is the CURLFORM_ARRAY option, that passes an Integer Array and a String Array defining its value. Each element in the form is constructed using the option from the integer array and the value from the string array. All available options can be used in an

array, except the `CURLFORM_ARRAY` option itself!

`CURLFORM_CONTENTHEADER`:

specifies extra headers for the form POST section. This takes a `CURL_slist` prepared in the usual way using `CURL_slist_append` and appends the list of headers to those libCURL automatically generates. The list must exist while the POST occurs, if you free it before the post completes you may experience problems.

PS: `CURLFORM_FILE` does not work in all CURL versions on all platforms due to a bug with integer numbers.

See also:

- 4.10.18 `FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string)` 263
- 4.10.19 `FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string)` 264
- 4.10.20 `FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer)` 265
- 4.10.21 `FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer)` 265
- 4.10.22 `FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string)` 266
- 4.10.23 `FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string)` 267
- 4.10.25 `FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string)` 270

4.10.25 `FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string)`

Plugin Version: 17.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: `Lasterror` is set.

See other `FormAdd` methods for details.

See also:

- 4.10.18 `FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string)` 263

- 4.10.19 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string)
264
- 4.10.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string,
FormOption3 as Integer, Number3 as Integer) 265
- 4.10.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string,
FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 265
- 4.10.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string,
FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 266
- 4.10.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string,
FormOption3 as Integer, Text3 as string) 267
- 4.10.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string,
FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 267

4.10.26 FormAddField(fieldName as String, fieldValue as String, ContentType as String = "")

Plugin Version: 18.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Example:

```
dim d as new CURLNMBS
d.FormAddField("company", "Test, Inc.")
```

Notes: For fieldName and ContentType, we use UTF8 always. For fieldValue, we pass through whatever is in the string, so please make sure encoding is working.

ContentType is optional.

Please call FormFinish method later!

4.10.27 FormAddFile(fieldName as String, fileName as String, fileContent as string, ContentType as String = "")

Plugin Version: 18.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a section to a multipart/formdata HTTP POST.

Example:

```
// read content of some file
dim file as folderitem = specialFolder.desktop.Child("test.txt")
dim b as BinaryStream = binarystream.Open(file)
```

```
dim FileContent as String = b.read(b.length)

// init some curl object
dim d as new CURLNMBS

// add the file as part of a form
d.FormAddFile("FileAttachment", "test.txt", FileContent, "text/plain")

// later
d.FormFinish
```

Notes: For fieldName, fileName and ContentType, we use UTF8 always. For fieldValue, we pass through whatever is in the string, so please make sure encoding is working.

Filename is ignored, if empty.
ContentType is optional.

Please call FormFinish method later!

4.10.28 FormClear

Plugin Version: 19.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Clears current form data.

Notes: You usually don't need to call this as Perform clears form data when transfer is done.

4.10.29 FormData as String

Plugin Version: 17.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries current form data.

Notes: This is more for debugging as it builds form data as if we would send it.

4.10.30 FormFinish

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Finishes constructing a form.

Example:

```

dim c as new CURLNMBS
dim namebuffer as string = "name buffer"
dim namelength as Integer = lenb(namebuffer)
dim buffer as string = "test buffer"
dim htmlbuffer as string = "<HTML>test buffer</HTML>"
dim htmlbufferlength as Integer = lenb(htmlbuffer)
dim file1 as string = "my-face.jpg"
dim file2 as string = "your-face.jpg"
dim formOptions(-1) as Integer
dim formValues(-1) as string
dim recordbuffer as string = "record buffer"
dim recordlength as Integer = lenb(recordbuffer)

const CURLFORM_NOHING = 0
const CURLFORM_COPYNAME = 1
const CURLFORM_PTRNAME = 2
const CURLFORM_NAMELENGTH = 3
const CURLFORM_COPYCONTENTS = 4
const CURLFORM_PTRCONTENTS = 5
const CURLFORM_CONTENTSLENGTH = 6
const CURLFORM_FILECONTENT = 7
const CURLFORM_ARRAY = 8
const CURLFORM_FILE = 10
const CURLFORM_BUFFER = 11
const CURLFORM_BUFFERPTR = 12
const CURLFORM_BUFFERLENGTH = 13
const CURLFORM_CONTENTTYPE = 14
const CURLFORM_CONTENTHEADER = 15
const CURLFORM_FILENAME = 16

'/* Add simple name/content section */
c.FormAdd CURLFORM_COPYNAME, "name", CURLFORM_COPYCONTENTS, "content"
,
'/* Add simple name/content/contenttype section */
c.FormAdd CURLFORM_COPYNAME, "htmlcode", CURLFORM_COPYCONTENTS, "<HTML></HTML>",CURL-
FORM_CONTENTTYPE,"text/html"

'/* Add name/ptrcontent section */
c.FormAdd CURLFORM_COPYNAME, "name_for_ptrcontent", CURLFORM_PTRCONTENTS, buffer

'/* Add ptrname/ptrcontent section */
c.FormAdd CURLFORM_PTRNAME, namebuffer, CURLFORM_PTRCONTENTS, buffer, CURLFORM_NAME-
LENGTH, namelength

```

```

'/* Add name/ptrcontent/contenttype section */
c.FormAdd CURLFORM_COPYNAME, "html_code_with_hole", CURLFORM_PTRCONTENTS, html-
buffer, CURLFORM_CONTENTSLENGTH, htmlbufferlength, CURLFORM_CONTENTTYPE, "text/html"

'/* Add simple file section */
c.FormAdd CURLFORM_COPYNAME, "picture", CURLFORM_FILE, "my-face.jpg"

'/* Add file/contenttype section */
c.FormAdd CURLFORM_COPYNAME, "picture",CURLFORM_FILE, "my-face.jpg",CURLFORM_CONTENTTYPE,
"image/jpeg"

'/* Add two file section */
c.FormAdd CURLFORM_COPYNAME, "pictures",CURLFORM_FILE, "my-face.jpg",CURLFORM_FILE,
"your-face.jpg"

'/* Add two file section using CURLFORM_ARRAY */
formOptions.Append CURLFORM_FILE
formValues.append file1
formOptions.Append CURLFORM_FILE
formValues.append file2

'/* Add a buffer to upload */
c.FormAdd CURLFORM_COPYNAME, "name", CURLFORM_BUFFER, "data", CURLFORM_BUFFERPTR,
recordbuffer, CURLFORM_BUFFERLENGTH, recordlength

'/* no option needed for the end marker */
c.FormAdd CURLFORM_COPYNAME, "pictures", CURLFORM_ARRAY, formOptions, formValues

'/* Add the content of a file as a normal post text value */
c.FormAdd CURLFORM_COPYNAME, "filecontent", CURLFORM_FILECONTENT, ".bashrc"
'/* Set the form info */

c.FormFinish

```

Notes: Lasterror is set.

The form is assigned to the HTTPPost property.

4.10.31 GetInfoActiveSocket as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Receive the active socket used by this curl session.

Notes: If the socket is no longer valid, -1 is returned. When you finish working with the socket, the Destructor closes the socket and cleanup other resources associated with the handle. This is typically used in combination with OptionConnectOnly.

This option was added as a replacement for GetInfoLastSocket since that one isn't working on all platforms.

4.10.32 GetInfoAppConnectTime as Double

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time stamp when app connected.

4.10.33 GetInfoCAInfo as string

Plugin Version: 22.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries default CAInfo value.

4.10.34 GetInfoCAPath as string

Plugin Version: 22.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries default CAPath value.

4.10.35 GetInfoCertInfo as CURLNListMBS()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries information on the certificate chain.

Example:

```
dim c as new CURLNMBS

// do some transfer
c.OptionURL = "https://www.mbsplugins.de/"
c.OptionCertInfo = true
dim e as Integer = c.perform

// query certificate info
dim lists() as CURLNListMBS = c.GetInfoCertInfo

for each l as CURLNListMBS in lists
MsgBox Join(l, EndOfLine)
next
```

MsgBox c.DebugMessages

Notes: Please set OptionCertInfo first.

4.10.36 GetInfoConditionUnmet as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Return if the time condition prevented the document to get transferred.

4.10.37 GetInfoConnectTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time, in seconds, it took from the start until the connect to the remote host (or proxy) was completed.

Notes: The Lasterror property is set. 0 for success.

4.10.38 GetInfoContentLengthDownload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The content-length of the download.

Notes: The Lasterror property is set. 0 for success.

This is the value read from the Content-Length: field.

4.10.39 GetInfoContentLengthUpload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The specified size of the upload.

Notes: The Lasterror property is set. 0 for success.

4.10.40 GetInfoContentType as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The content-type of the downloaded object.

Notes: The Lasterror property is set. 0 for success.

This is the value read from the Content-Type: field. If you get "", it means that the server didn't send a valid Content-Type header or that the protocol used doesn't support this.

4.10.41 GetInfoCookieList as CURLNListMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A linked-list of all cookies CURL knows (expired ones, too).

Notes: The Lasterror property is set. 0 for success.

If there are no cookies (cookies for the handle have not been enabled or simply none have been received) the result is nil.

4.10.42 GetInfoEffectiveMethod as string

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get the last used effective HTTP method.

Notes: In cases when you've asked libcurl to follow redirects, the method may very well not be the same method the first request would use.

4.10.43 GetInfoEffectiveURL as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last used effective URL.

Notes: The Lasterror property is set. 0 for success.

4.10.44 GetInfoFileTime as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: the remote time of the retrieved document (in number of seconds since 1 jan 1970 in the GMT/UTC time zone).

Example:

```
// init CURL with options
dim d as new CURLNMBS
d.OptionFileTime = true
d.OptionURL = "http://www.monkeybreadsoftware.de/images/mbs.jpg"
```

```
// run query
dim e as Integer = d.Perform

// calculate date object
dim da as new date(1970,1,1,0,0,0)
da.TotalSeconds = da.TotalSeconds + d.GetInfoFileTime

// show date
ResultText.text=str(d.GetInfoFileTime)+" "+da.ShortDate+" "+da.ShortTime
```

Notes: The Lasterror property is set. 0 for success.

If you get -1, it can be because of many reasons (unknown, the server hides it or the server doesn't support the command that tells document time etc) and the time of the document is unknown. Note that you must tell the server to collect this information before the transfer is made, by using the OptionFileTime option or you will unconditionally get a -1 back. (Added in 7.5)

4.10.45 GetInfoFTPEntryPath as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns a string holding the path of the entry path.

Notes: That is the initial path libCURL ended up in when logging on to the remote FTP server. Empty string if unknown.

4.10.46 GetInfoHeaderSize as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total size of all the headers received.

Notes: The Lasterror property is set. 0 for success.

4.10.47 GetInfoHTTPAvail as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A bitmask indicating the authentication method(s) available.

Notes: The Lasterror property is set. 0 for success.

The meaning of the bits is explained in the HTTPAuth option.

4.10.48 GetInfoHTTPConnectCode as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last received proxy response code to a CONNECT request.

Notes: The Lasterror property is set. 0 for success.

none

4.10.49 GetInfoHTTPVersion as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get the http version used in the connection.

Notes: The returned value will be kHTTP_VERSION_1_0, kHTTP_VERSION_1_1, or kHTTP_VERSION_2_0, or 0 if the version can't be determined.

4.10.50 GetInfoLastSocket as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use GetInfoActiveSocket instead. **Function:** Receive the last socket used by this CURL session.

Notes: If the socket is no longer valid, -1 is returned. When you finish working with the socket, the destructor will free the handle as usual and let libCURL close the socket and cleanup other resources associated with the handle. This is typically used in combination with OptionConnectOnly. (Added in 7.15.2)

NOTE: this API is not really working on win64, since the SOCKET type on win64 is 64 bit large while its 'long' is only 32 bits.

4.10.51 GetInfoLocalIP as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries local IP.

Example:

```

dim c as new CURLNMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check local IP

```

MsgBox c.GetInfoLocalIP

4.10.52 GetInfoLocalPort as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Return the local port of the most recent (primary) connection.

Example:

```
dim c as new CURLNMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check local IP and port
MsgBox c.GetInfoLocalIP+":"+str(c.GetInfoLocalPort)
```

4.10.53 GetInfoNameLookupTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time, in seconds, it took from the start until the name resolving was completed.

Notes: The Lasterror property is set. 0 for success.

4.10.54 GetInfoNumConnects as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: How many new connections libCURL had to create to achieve the previous transfer.

Notes: The Lasterror property is set. 0 for success.

(only the successful connects are counted)

Combined with RedirectCount you are able to know how many times libCURL successfully reused existing connection(s) or not. See the Connection Options to see how libCURL tries to make persistent connections to save time.

4.10.55 GetInfoOS_errno as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The errno variable from a connect failure.

Notes: The Lasterror property is set. 0 for success.

4.10.56 GetInfoPreTransferTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The time, in seconds, it took from the start until the file transfer is just about to begin.

Notes: The Lasterror property is set. 0 for success.

This includes all pre-transfer commands and negotiations that are specific to the particular protocol(s) involved.

4.10.57 GetInfoPrimaryIP as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Return the ip address of the most recent (primary) connection.

Example:

```
dim c as new CURLNMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check primary IP and port
MsgBox c.GetInfoPrimaryIP+":"+str(c.GetInfoPrimaryport)
```

4.10.58 GetInfoPrimaryPort as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Return the (remote) port of the most recent (primary) connection.

Example:

```
dim c as new CURLNMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check primary IP and port
MsgBox c.GetInfoPrimaryIP+":"+str(c.GetInfoPrimaryport)
```

4.10.59 GetInfoProtocol as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** Get the protocol used in the connection.

Notes: See kProtocol* constants.

4.10.60 GetInfoProxyAuthAvail as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A bitmask indicating the authentication method(s) available for your proxy authentication.

Notes: The Lasterror property is set. 0 for success.

4.10.61 GetInfoProxyError as integer

Plugin Version: 20.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries proxy error code.

4.10.62 GetInfoProxySSLVerifyResult as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get the result of the proxy certificate verification.

Notes: receive the result of the certificate verification that was requested (using the OptionProxySSLVerifyPeer option. This is only used for HTTPS proxies.

4.10.63 GetInfoRedirectCount as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total number of redirections that were actually followed.

Notes: The Lasterror property is set. 0 for success.

4.10.64 GetInfoRedirectTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: the total time, in seconds, it took for all redirection steps include name lookup, connect, pre-transfer and transfer before final transaction was started.

Notes: The Lasterror property is set. 0 for success.

RedirectTime contains the complete execution time for multiple redirections. (Added in 7.9.7)

4.10.65 GetInfoRedirectURL as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The redirection URL.

4.10.66 GetInfoReferer as string

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries referrer text.

4.10.67 GetInfoRequestSize as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total size of the issued requests.

Notes: The Lasterror property is set. 0 for success.

This is so far only for HTTP requests. Note that this may be more than one request if FOLLOWLOCATION is true.

4.10.68 GetInfoResponseCode as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last received HTTP or FTP code.

Notes: The Lasterror property is set. 0 for success.

This will be zero if no server response code has been received. Note that a proxy's CONNECT response should be read with GetInfoHTTPConnectCode and not this.

With HTTP transfer, a successful transfer reports 200 here. If the page is not found, you get 404. Or any other HTTP Response code.

4.10.69 GetInfoRetryAfter as integer

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns the Retry-After retry delay.

Notes: Receive the number of seconds the HTTP server suggests the client should wait until the next request is issued.

The information from the "Retry-After:" header.

While the HTTP header might contain a fixed date string, the RetryAfter will always return number of seconds to wait - or zero if there was no header or the header couldn't be parsed.

4.10.70 GetInfoRTSPClientCSEQ as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query RTSP Client sequence counter.

4.10.71 GetInfoRTSPCSEQRecv as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query RTSP sequence counter received.

4.10.72 GetInfoRTSPServerCSEQ as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query RTSP Server sequence counter.

4.10.73 GetInfoRTSPSessionID as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Query RTSP session ID.

4.10.74 GetInfoScheme as string

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get the URL scheme (sometimes called protocol) used in the connection

4.10.75 GetInfoSizeDownload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total amount of bytes that were downloaded.

Notes: The Lasterror property is set. 0 for success.

The amount is only for the latest transfer and will be reset again for each new transfer.

4.10.76 GetInfoSizeUpload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total amount of bytes that were uploaded.

Notes: The Lasterror property is set. 0 for success.

4.10.77 GetInfoSpeedDownload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The average download speed that CURL measured for the complete download.

Notes: The Lasterror property is set. 0 for success.

4.10.78 GetInfoSpeedUpload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The average upload speed that CURL measured for the complete upload.

Notes: The Lasterror property is set. 0 for success.

4.10.79 GetInfoSSLEngines as CURLNListMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Receive a linked-list of OpenSSL crypto-engines supported.

Notes: The Lasterror property is set. 0 for success.

Note that engines are normally implemented in separate dynamic libraries. Hence not all the returned engines may be available at run-time.

4.10.80 GetInfoSSLVerifyResult as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: the result of the certification verification that was requested (using the SSLVerifyPeer option).

Notes: The Lasterror property is set. 0 for success.

4.10.81 GetInfoStartTransferTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: the time, in seconds, it took from the start until the first byte is just about to be transferred.

Notes: The Lasterror property is set. 0 for success.

This includes the pretransfer time and also the time the server needs to calculate the result.

4.10.82 GetInfoTotalTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The total time in seconds for the previous transfer, including name resolving, TCP connect etc.

Notes: The Lasterror property is set. 0 for success.

4.10.83 LoadAPI

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Loads the default CURL library.

Notes: This method is called by the constructor. So you don't need this except you want to test explicit with APILoaded whether the loading worked before you use the CURLNMBS class.

Loads the "libCURL.dll" Windows library (with SSL support this one max require OpenSSL).

Loads on Mac OS X and Linux the libCURL file in /usr/lib.

4.10.84 LoadErrorString as string

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error string from the LoadLibrary function.

4.10.85 LoadLibrary(file as folderitem) as boolean

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Loads the CURL library from the given path.

Notes: You only need to use this function if you have your own CURL Library.

Loads a Windows DLL, a Linux shared library or a Mac OS X shared library from the given path.

Returns true on success.

See also:

- 4.10.86 LoadLibrary(path as string) as boolean

287

4.10.86 LoadLibrary(path as string) as boolean

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Loads the CURL library from the given path.

Notes: You only need to use this function if you have your own CURL Library.

Loads a Windows DLL, a Linux shared library or a Mac OS X shared library from the given path.

Returns true on success.

See also:

- 4.10.85 LoadLibrary(file as folderitem) as boolean

287

4.10.87 OpenMTInputFile(file as folderitem, Offset as Integer = 0) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Opens input file for reading data while PerformMT runs.

Example:

`Dim c As New CURLNMBS`

`Dim file As FolderItem = SpecialFolder.Desktop.Child("test.rtf")`

```

If c.OpenMTInputFile(file) Then
// okay
Else
MessageBox "Failed to open file to upload."
Return
End If

// do a SFTP upload
c.OptionURL = "sftp://monkeybreadsoftware.de/folder/test.rtf"
c.OptionUpload = True
c.OptionUsername = "test"
c.OptionPassword = "test"
c.CollectOutputData = false

Dim e As Integer = c.Perform

Dim ErrorMessage As String = c.LastErrorMessage
Dim ErrorLog As String = c.DebugMessages
Dim ResultData As String = c.OutputData

Break

```

Notes: The read event is not called with PerformMT.

Offset is helpful for HTTP PUT requests with range, so you can start with an offset.

With 15.2 version of plugin, this also works with Perform.

Must be called before Perform or PerformMT, so we can stream data from the file.

The file is closed automatically when Perform methods finish their work.

The function returns false in case of an error, e.g. if file is already open by another application, the folder/item/path is invalid, the offset is negative or we can't determinate the file size.

It may be wise to have a fallback in your code to use a binarystream in that case (if that one can read the file) and then read all the data in a string and put into the InputData property.

See also:

- 4.10.88 OpenMTInputFile(Path as String, Offset as Integer = 0) as boolean

288

4.10.88 OpenMTInputFile(Path as String, Offset as Integer = 0) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Opens input file for reading data while PerformMT runs.

Notes: The read event is not called with PerformMT.

Offset is helpful for HTTP PUT requests with range, so you can start with an offset.

Must be called before Perform or PerformMT, so we can stream data from the file. The file is closed automatically when Perform methods finish their work.

The function returns false in case of an error, e.g. if file is already open by another application, the folderitem/path is invalid, the offset is negative or we can't determinate the file size. It may be wise to have a fallback in your code to use a binarystream in that case (if that one can read the file) and then read all the data in a string and put into the InputData property. See also:

- 4.10.87 OpenMTInputFile(file as folderitem, Offset as Integer = 0) as boolean

287

4.10.89 Perform as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Perform a file transfer

Example:

// if you get a curl call like this

```
'curl -X PATCH "https://api.airtable.com/v0/ { baseId } / { tableIdOrName } / { recordId } " \
-H "Authorization: Bearer YOUR_TOKEN" \
-H "Content-Type: application/json" \
-data ' {
  "fields": {
    "Address": "1 Ferry Building",
    "Name": "Ferry Building",
    "Visited": True
  }
}'
```

// you translate it to this:

```
Dim c As New CURLNMBS
```

```
Dim Payload As String = _
" { "+_
  ""fields"": { "+_
  ""Address"": ""1 Ferry Building"" "+_
  ""Name"": ""Ferry Building"" "+_
  ""Visited"": True"+_
" } "+_
" }
```

```
c.OptionCustomRequest = "PATCH"
```

```

c.OptionURL = "https://api.airtable.com/v0/ { baseId } / { tableIdOrName } / { recordId } "
c.SetOptionHTTPHeader Array("Content-Type: application/json", "Authorization: Bearer YOUR_TO-
KEN")
c.OptionPostFields = Payload

Dim Error As Integer = c.Perform
Dim ResponseCode As Integer = c.GetInfoResponseCode
Dim DebugLog As String = c.DebugMessages
Dim Output As String = c.OutputData

```

```
Break
```

Notes: This function is called after all the options are set, and will perform the transfer as described in the options.

You can do any amount of calls to Perform. If you intend to transfer more than one file, you are even encouraged to do so. libCURL will then attempt to re-use the same connection for the following transfers, thus making the operations faster, less CPU intense and using less network resources. Just note that you will have to use the option properties between the invokes to set options for the following Perform.

Typical error codes are 6 for a wrong domain name in the URL, 67 for wrong name/password combination, 60 for missing SSL settings, 1 for an unsupported protocol.

Possible values for the return value:

The error value -1 is used from the plugin to report that something is missing like OpenSSL dlls on Windows.

With SFTP, you can get logged error "Upload failed: Operation failed (4/-31)" when upload uses path to folder instead of file in URL.

4.10.90 PerformMT as Integer

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Perform a file transfer with preemptive multithreading.

Example:

```

Dim c As New CURLNMBS
Dim file As FolderItem = SpecialFolder.Desktop.Child("test.rtf")

If c.OpenMTInputFile(file) Then
// okay
Else

```

```
MessageBox "Failed to open file to upload."  
Return  
End If  
  
// do a SFTP upload  
c.OptionURL = "sftp://monkeybreadsoftware.de/folder/test.rtf"  
c.OptionUpload = True  
c.OptionUsername = "test"  
c.OptionPassword = "test"  
  
Dim e As Integer = c.PerformMT  
  
Dim ErrorMessage As String = c.LastErrorMessage  
Dim ErrorLog As String = c.DebugMessages  
Dim ResultData As String = c.OutputData  
  
Break
```

Notes: Same as Perform, but with additional multithreading.

As the actual transfer runs on a preemptive thread, the events Debug, Write, Header and Progress are called asynchronously and run a few milliseconds later. You can return true in Progress event to stop transfer, but you will get more events before the transfer is stopped.

You can call CreateMTDebugOutputFile, CreateMTHeaderOutputFile and CreateMTOutputFile before PerformMT to have output data be written into files. Call OpenMTInputFile to let the plugin read input data (form post or upload) from an input file.

Do not call other CURL functions on this CURLNMBS instance while PerformMT is running!

Typical error codes are 6 for a wrong domain name in the URL, 67 for wrong name/password combination, 60 for missing SSL settings, 1 for an unsupported protocol.

To avoid trouble with app hanging on quit of application, be sure to set cancel property to true in window close event to cancel any pending transfer.

The work is performed on a preemptive thread, so this function does not block the application and can yield time to other Xojo threads. Must be called in a Xojo thread to enjoy benefits. If called in main thread will block, but keep other background threads running.

4.10.91 ProcessRelativeURL(BaseURL as String, RelativeURL as String) as String

Plugin Version: 23.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Processes an URL to come from relative URL to a new absolute URL.

Example:

```
Dim baseURL As String = "https://monkeybreadsoftware.net/themes.shtml"
Dim RelativeURL As String = "topic-curl.shtml"
```

```
Dim URL As String = CURLNMBS.ProcessRelativeURL(baseURL, RelativeURL)
```

Break

Notes: Raises an UnsupportedOperationException in case of failure.

4.10.92 ReceiveData(byref data as Memoryblock, BytesToRead as Int64) as Int64

Plugin Version: 17.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Receives raw data on a connection.

Notes: This function receives raw data from the established connection. You may use it together with SendData to implement custom protocols using libcurl. This functionality can be particularly useful if you use proxies and/or SSL encryption: libcurl will take care of proxy negotiation and connection set-up.

The data memoryblock is a reference to your variable that will get the received data. BytesToRead is the maximum amount of data you can get in that buffer. The function returns the number of received bytes.

To establish the connection, set OptionConnectOnly = true before calling Perform. Note that ReceiveData does not work on connections that were created without this option.

The call will return kError_AGAIN if there is no data to read - the socket is used in non-blocking mode internally. When kError_AGAIN is returned, wait for data to arrive.

Wait on the socket only if ReceiveData returns kError_AGAIN. The reason for this is libcurl or the SSL library may internally cache some data, therefore you should call ReceiveData until all data is read which would include any cached data.

Furthermore if you wait on the socket and it tells you there is data to read, ReceiveData may return CURLE_AGAIN if the only data that was read was for internal SSL processing, and no other data is available.

On success, sets `lasterror` to `kError_OK` (0), stores the received data into memory block, and returns the number of bytes it actually read.

On failure, returns zero and `lasterror` is set to the appropriate error code.

The function may return `kError_AGAIN`. In this case, use your operating system facilities to wait until data can be read, and retry.

Reading exactly 0 bytes indicates a closed connection.

If there's no socket available to use from the previous transfer, this function returns `kError_UNSUPPORTED_PROTOCOL`.

4.10.93 Reset

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Re-initializes all options previously set on a specified CURL handle to the default values.

Notes: It does not change the following information kept in the handle: live connections, the Session ID cache, the DNS cache, the cookies and shares.

4.10.94 SendData(data as Memoryblock) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sends raw data over a connection.

Notes: This function sends arbitrary data over the established connection. You may use it together with `ReceiveData` to implement custom protocols using `libcurl`. This functionality can be particularly useful if you use proxies and/or SSL encryption: `libcurl` will take care of proxy negotiation and connection set-up.

Provide the data to send via parameter. We return the number of bytes sent.

To establish the connection, set `OptionConnectOnly = true` option before calling `Perform` methods. Note that `SendData` will not work on connections that were created without this option.

The call will return `kError_AGAIN` if it's not possible to send data right now - the socket is used in non-blocking mode internally. When `kError_AGAIN` is returned, please wait.

Furthermore if you wait on the socket and it tells you it's writable, `SendData` may return `kError_AGAIN` if the only data that was sent was for internal SSL processing, and no other data could be sent.

See also:

- 4.10.95 SendData(data as string) as Integer 294

4.10.95 SendData(data as string) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sends raw data over a connection.

Notes: This function sends arbitrary data over the established connection. You may use it together with ReceiveData to implement custom protocols using libcurl. This functionality can be particularly useful if you use proxies and/or SSL encryption: libcurl will take care of proxy negotiation and connection set-up.

Provide the data to send via parameter. We return the number of bytes sent.

To establish the connection, set OptionConnectOnly = true option before calling Perform methods. Note that SendData will not work on connections that were created without this option.

The call will return kError_AGAIN if it's not possible to send data right now - the socket is used in non-blocking mode internally. When kError_AGAIN is returned, please wait.

Furthermore if you wait on the socket and it tells you it's writable, SendData may return kError_AGAIN if the only data that was sent was for internal SSL processing, and no other data could be sent.

See also:

- 4.10.94 SendData(data as Memoryblock) as Integer 293

4.10.96 SetInputData(data as MemoryBlock)

Plugin Version: 14.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the input data.

Notes: If you set input data, you do not need to use Read, RestartRead or Seek events.

The plugin will use the provided data for the upload.

Setting input data size, will also set the input file size (OptionInFileSizeLarge and OptionInFileSize).

Alternatively you can provide data in Read event or use OpenMTInputFile method to open a file on disk to upload.

See also:

- 4.10.97 SetInputData(data as string) 295

4.10.97 SetInputData(data as string)

Plugin Version: 14.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the input data.

Example:

```
Dim c As New CURLNMBS
```

```
c.SetInputData "Hello World"
```

```
// do a HTTP Upload with PUT
```

```
c.OptionUpload = True
```

```
c.OptionURL = "https://monkeybreadsoftware.de/filemaker/examples/echo.php"
```

```
// or do a FTP upload
```

```
'c.OptionURL = "ftp://monkeybreadsoftware.de/folder/file.txt"
```

```
Dim e As Integer = c.Perform
```

```
Dim ErrorMessage As String = c.LastErrorMessage
```

```
Dim ErrorLog As String = c.DebugMessages
```

```
Dim ResultData As String = c.OutputData
```

```
Break
```

Notes: If you set input data, you do not need to use Read, RestartRead or Seek events.

The plugin will use the provided data for the upload.

Setting input data size, will also set the input file size (OptionInFileSizeLarge and OptionInFileSize).

Alternatively you can provide data in Read event or use OpenMTInputFile method to open a file on disk to upload.

See also:

- 4.10.96 SetInputData(data as MemoryBlock)

4.10.98 SetOptionConnectTo(list() as string)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set list of host:port:connect-to-host:connect-to-port, overrides the URL's host:port (only for the network layer)

4.10.99 SetOptionEmptyPassword

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets an empty password.

Notes: Normally you have no password unless you set it.

But if you set a password with empty string, the plugin sets CURL to use no password.

This method is to use an empty password.

4.10.100 SetOptionHTTP200Aliases(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A linked list of aliases to be treated as valid HTTP 200 responses.

Notes: Some servers respond with a custom header response line. For example, IceCast servers respond with "ICY 200 OK". By including this string in your list of aliases, the response will be treated as a valid HTTP header line such as "HTTP/1.0 200 OK".

The alias itself is not parsed for any version strings. So if your alias is "MYHTTP/9.9", LibCURL will not treat the server as responding with HTTP version 9.9. Instead LibCURL will use the value set by option HTTPVersion.

The Lasterror property is set. 0 for success.

4.10.101 SetOptionHTTPHeader(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A linked list of HTTP headers to pass to the server in your HTTP request.

Example:

```
dim c as new CURLNMBS
c.SetOptionHTTPHeader array("Expect:", "Content-Type: text/xml", "SOAPAction: ""login""")
```

Notes: If you add a header that is otherwise generated and used by libCURL internally, your added one will be used instead. If you add a header with no contents as in 'Accept:' (no data on the right side of the colon), the internally used header will get disabled. Thus, using this option you can add new headers, replace internal headers and remove internal headers. To add a header with no contents, make the contents be two quotes: "". The headers included in the linked list must not be CRLF-terminated, because CURL adds CRLF after each header item. Failure to comply with this will result in strange bugs because the server will most likely ignore part of the headers you specified.

The first line in a request (containing the method, usually a GET or POST) is not a header and cannot be replaced using this option. Only the lines following the request-line are headers. Adding this method line in this list of headers will only cause your request to send an invalid header.

Pass an empty array to this to reset back to no custom headers.

The Lasterror property is set. 0 for success.

4.10.102 SetOptionMailRecipients(list() as string)

Plugin Version: 11.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the array of email recipient addresses.

const kError_FunctionMissing	= -1	
const kError_OK	= 0	
const kError_UNSUPPORTED_PROTOCOL	= 1	
const kError_FAILED_INIT	= 2	
const kError_URL_MALFORMAT	= 3	
const kError_URL_MALFORMAT_USER	= 4	(NOT USED)
const kError_COULDNT_RESOLVE_PROXY	= 5	
const kError_COULDNT_RESOLVE_HOST	= 6	
const kError_COULDNT_CONNECT	= 7	
const kError_FTP_WEIRD_SERVER_REPLY	= 8	
const kError_FTP_ACCESS_DENIED	= 9	a service was denied by the FTP server due to lack of access when login fails this is not returned.
const kError_FTP_USER_PASSWORD_INCORRECT	= 10	
const kError_FTP_WEIRD_PASS_REPLY	= 11	
const kError_FTP_WEIRD_USER_REPLY	= 12	
const kError_FTP_WEIRD_PASV_REPLY	= 13	
const kError_FTP_WEIRD_227_FORMAT	= 14	
const kError_FTP_CANT_GET_HOST	= 15	
const kError_FTP_CANT_RECONNECT	= 16	
const kError_FTP_COULDNT_SET_BINARY	= 17	
const kError_PARTIAL_FILE	= 18	
const kError_FTP_COULDNT_RETR_FILE	= 19	
const kError_FTP_WRITE_ERROR	= 20	
const kError_FTP_QUOTE_ERROR	= 21	
const kError_HTTP_RETURNED_ERROR	= 22	
const kError_WRITE_ERROR	= 23	
const kError_MALFORMAT_USER	= 24	NOT USED
const kError_FTP_COULDNT_STOR_FILE	= 25	failed FTP upload
const kError_READ_ERROR	= 26	could open/read from file
const kError_OUT_OF_MEMORY	= 27	
const kError_OPERATION_TIMEOUTED	= 28	the timeout time was reached
const kError_FTP_COULDNT_SET_ASCII	= 29	TYPE A failed
const kError_FTP_PORT_FAILED	= 30	FTP PORT operation failed
const kError_FTP_COULDNT_USE_REST	= 31	the REST command failed
const kError_FTP_COULDNT_GET_SIZE	= 32	the SIZE command failed
const kError_HTTP_RANGE_ERROR	= 33	RANGE "command" didn't work
const kError_HTTP_POST_ERROR	= 34	
const kError_SSL_CONNECT_ERROR	= 35	wrong when connecting with SSL
const kError_BAD_DOWNLOAD_RESUME	= 36	couldn't resume download
const kError_FILE_COULDNT_READ_FILE	= 37	
const kError_LDAP_CANNOT_BIND	= 38	
const kError_LDAP_SEARCH_FAILED	= 39	
const kError_LIBRARY_NOT_FOUND	= 40	
const kError_FUNCTION_NOT_FOUND	= 41	
const kError_ABORTED_BY_CALLBACK	= 42	
const kError_BAD_FUNCTION_ARGUMENT	= 43	
const kError_BAD_CALLING_ORDER	= 44	NOT USED
const kError_INTERFACE_FAILED	= 45	CURLLOPT_INTERFACE failed
const kError_BAD_PASSWORD_ENTERED	= 46	NOT USED
const kError_TOO_MANY_REDIRECTS	= 47	catch endless re-direct loops
const kError_UNKNOWN_TELNET_OPTION	= 48	User specified an unknown option
const kError_TELNET_OPTION_SYNTAX	= 49	Malformed telnet option
const kError_OBSOLETE	= 50	NOT USED
const kError_SSL_PEER_CERTIFICATE	= 51	peer's certificate wasn't ok
const kError_GOT_NOHING	= 52	when this is a specific error
const kError_SSL_ENGINE_NOTFOUND	= 53	SSL crypto engine not found
const kError_SSL_ENGINE_SETFAILED	= 54	can not set SSL crypto engine as default
const kError_SEND_ERROR	= 55	failed sending network data
const kError_RECV_ERROR	= 56	failure in receiving network data
const kError_SHARE_IN_USE	= 57	share is in use
const kError_SSL_CERTPROBLEM	= 58	problem with the local certificate
const kError_SSL_CIPHER	= 59	couldn't use specified cipher
const kError_SSL_CACERT	= 60	problem with the CA cert (path?)
const kError_BAD_CONTENT_ENCODING	= 61	Unrecognized transfer encoding
const kError_LDAP_INVALID_URL	= 62	Invalid LDAP URL
const kError_FILESIZE_EXCEEDED	= 63	Maximum file size exceeded
const kError_FTP_SSL_FAILED	= 64	Requested FTP SSL level failed
const kError_SEND_FAIL_REWIND	= 65	Sending the data requires a rewind that failed
const kError_SSL_ENGINE_INITFAILED	= 66	failed to initialise ENGINE
const kError_LOGIN_DENIED	= 67	user, password or similar was not accepted and we failed to login

4.10.103 SetOptionPostQuote(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an array to a list of FTP commands to pass to the server after your ftp transfer request.

Example:

```
dim d as CURLNMBS // your CURL object
```

```
dim ws() As String  
ws.Append "RNFR Temp.txt"  
ws.append "RNTD MyFile.txt"  
d.SetOptionPostQuote(ws)
```

Notes: Disable this operation again by using an empty array for this option.

The Lasterror property is set. 0 for success.

If you want to do a ftp operation instead of download/upload/directory listing, please use SetOptionQuote.

4.10.104 SetOptionPreQuote(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an array to a list of FTP commands to pass to the server after the transfer type is set.

Notes: Disable this operation again by using an empty array for this option. Before version 7.15.6, if you also set Nobody to true, this option didn't work.

The Lasterror property is set. 0 for success.

4.10.105 SetOptionProxyHeader(list() as string)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set list of headers used for proxy requests only.

4.10.106 SetOptionQuote(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an array or a list of FTP commands to pass to the server prior to your ftp request.

Example:

```
dim curl as new CURLNMBS
curl.SetOptionQuote array("DELETE filename.txt")
```

Notes: This will be done before any other FTP commands are issued (even before the CWD command).

Disable this operation again by using an empty array for this option.

The Lasterror property is set. 0 for success.

4.10.107 SetOptionResolve(list() as string)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Send linked-list of name:port:address sets.

4.10.108 SetOptionTelnetOptions(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Provide an array of variables to pass to the telnet negotiations.

Notes: The variables should be in the format <option=value>. libCURL supports the options 'TTYTYPE', 'XDISPLOC' and 'NEW_ENV'. See the TELNET standard for details.

The Lasterror property is set. 0 for success.

4.10.109 SetPathCAInfo(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A path holding one or more certificates to verify the peer with.

Example:

```
dim cacert as FolderItem // your cacert.pem file
dim CURL as new CURLMBS
CURL.OptionSSLVerifyHost = 2 // verify server
CURL.OptionSSLVerifyPeer = 1 // proofs certificate is authentic
CURL.SetPathCAInfo cacert
```

Notes: This makes sense only when used in combination with the OptionSSLVerifyPeer option. If OptionSSLVerifyPeer is false, OptionCAINFO need not even indicate an accessible file.

Note that option is by default set to the system path where libCURL's cacert bundle is assumed to be stored, as established at build time.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

4.10.110 SetPathCAPath(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A path to the directory holding multiple CA certificates to verify the peer with.

Example:

```
dim c as new CURLNMBS
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
c.SetPathCAPath cacert
```

Notes: The certificate directory must be prepared using the openssl c_rehash utility. This makes sense only when used in combination with the CURLOPT_SSL_VERIFYPEER option. If OptionSSLVerifyPeer is zero, OptionCAPath need not even indicate an accessible path. The OptionCAPath function apparently does not work in Windows due to some limitation in openssl. This option is OpenSSL-specific and does nothing if libCURL is built to use GnuTLS.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

4.10.111 SetPathCRLFile(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the path with the concatenation of CRL (in PEM format) to use in the certificate validation that occurs during the SSL exchange.

Notes: When CURL is built to use NSS or GnuTLS, there is no way to influence the use of CRL passed to help in the verification process. When libCURL is built with OpenSSL support, X509_V_FLAG_CRL_CHECK and X509_V_FLAG_CRL_CHECK_ALL are both set, requiring CRL check against all the elements of the certificate chain if a CRL file is passed.

This option makes sense only when used in combination with the `OptionSSLVerifyPeer` option.

A specific error code (`CURLE_SSL_CRL_BADFILE`) is defined with the option. It is returned when the SSL exchange fails because the CRL file cannot be loaded. Note that a failure in certificate verification due to a revocation information found in the CRL does not trigger this specific error. (Added in 7.19.0)

4.10.112 `SetPathIssuerCert(path as folderitem)`

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the path to a CA certificate in PEM format.

Notes: If the option is set, an additional check against the peer certificate is performed to verify the issuer is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the `OptionSSLVerifyPeer` option. Otherwise, the result of the check is not considered as failure.

A specific error code (`CURLE_SSL_ISSUER_ERROR`) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (`OptionSSLVerifyPeer` has to be set too for the check to fail). (Added in 7.19.0)

4.10.113 `SetPathNetRCFile(path as folderitem)`

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the path to the file you want libCURL to use as `.netrc` file.

Notes: If this option is omitted, and `OptionNETRC` is set, libCURL will attempt to find the a `.netrc` file in the current user's home directory. (Added in 7.10.9)

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

4.10.114 `SetPathProxyIssuerCert(path as folderitem)`

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the proxy issuer SSL certificate filename.

Notes: Pass a string naming a file holding a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer of the the HTTPS proxy is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI

where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the `OptionProxySSLVerifyPeer` option. Otherwise, the result of the check is not considered as failure.

A specific error code (`CURLE_SSL_ISSUER_ERROR`) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (`OptionProxySSLVerifyPeer` has to be set too for the check to fail).

4.10.115 SetupEmail(email as Variant) as boolean

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Setups existing CURL session for an email transfer.

Example:

```
dim e as new CURLEmailMBS

e.SetFrom "test@test.test", "Christian Müller"
e.Subject = "Hello World ,ðÒè"
e.SMTPPassword = "xxx"
e.SMTPUsername = "xxx"
e.SetServer "smtp.test.test", true
e.AddTo "test@test.test", "Test Müller"
e.PlainText = "Hello World," + EndOfLine + "Smilies: ,ðÒè üòò üòÑ"

dim c as new CURLNMBS

if c.SetupEmail(e) then

dim er as Integer = c.Perform
if er = 0 then
MsgBox "Email sent"
end if
end if
```

Notes: You can set your own settings like proxy after this function call.

If you like you can reuse the email and CURL objects after you sent an email, change values and send another email.

Returns true on success or false on failure.

4.10.116 UpKeep

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Perform any connection upkeep checks.

Notes: Perform any connection upkeep checks.

Some protocols have "connection upkeep" mechanisms. These mechanisms usually send some traffic on existing connections in order to keep them alive; this can prevent connections from being closed due to overzealous firewalls, for example.

Currently the only protocol with a connection upkeep mechanism is HTTP/2: when the connection upkeep interval is exceeded and Upkeep is called, an HTTP/2 PING frame is sent on the connection.

This function must be explicitly called in order to perform the upkeep work. The connection upkeep interval is set with OptionUpkeepIntervalMS.

4.10.117 WebSocketMeta as CURLNWebSocketFrameMBS

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries last frame metadata.

Notes: Only useful if called in Write event.

4.10.118 WebSocketReceive(BufferSize as Integer = 65536) as CURLNWebSocketFrameMBS

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Receive WebSocket data.

Example:

```
dim curl as CURLNMBS // your curl handle
```

```
dim m as CURLNWebSocketFrameMBS = curl.WebSocketReceive
```

```
if m <> nil then
```

```
  TextAreaLog.AddText "Received: "+m.Text
```

```
end if
```

Notes: Retrieves as much as possible of a received WebSocket data fragment into the buffer, but not more than BufferSize bytes. The bytesReceived property in CURLNWebSocketFrameMBS is set to the number of bytes actually stored.

If there is more fragment data to deliver than what fits in the provided buffer, CURL returns a full buffer and the application needs to call this function again to continue draining the buffer.

The returned CURLNWebSocketFrameMBS contains the data and the metadata about the received data.

Lasterror property is set.

4.10.119 WebSocketSend(Data as MemoryBlock, FrameSize as Integer = 0, SendFlags as Integer = 0) as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Send the specific message fragment over an established WebSocket connection.

Notes: The buffer holds the data to send.

Returns the number of payload bytes actually sent.

To send a (huge) fragment using multiple calls with partial content per invoke, set the kFlagOffset bit and the FrameSize argument as the total expected size for the first part, then set the kFlagOffset with a zero FrameSize for the following parts.

If not sending a partial fragment or if this is raw mode, FrameSize should be set to zero.

If kWebSocketRaw is enabled in WebSocketOptions, the flags argument should be set to 0.

Lasterror property is set.

4.10.120 Properties

4.10.121 APILoaded as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether the CURL library was loaded.

Notes: The CURLNMBS constructor loads the library if it was not loaded before.

(Read only property)

4.10.122 Cancel as Boolean

Plugin Version: 13.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Tells CURL instance to cancel transfer as soon as possible.

Notes: Especially when using PerformMT, you may see your app hang if user tries to quit application.

To prevent the hang, please set `Cancel = true` in window close event. So when app quits and windows get destroyed, the `PerformMT` will see the `Cancel` being true and returns soon.

(Read and Write property)

4.10.123 `CollectDebugData` as Boolean

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `CollectDebugMessages` instead. **Function:** Whether to collect debug message data.

Notes: If you set this property to true, you can grab the data from the transfer in the `DebugMessages` Property instead of collecting the pieces yourself in the `DebugMessage` event. Of course this is optional and you can still process data in `DebugMessage` event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.

(Read and Write property)

4.10.124 `CollectDebugMessages` as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to collect debug message data.

Notes: If you set this property to true, you can grab the data from the transfer in the `DebugMessages` Property instead of collecting the pieces yourself in the `DebugMessage` event. Of course this is optional and you can still process data in `DebugMessage` event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.

(Read and Write property)

4.10.125 `CollectHeaderData` as Boolean

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `CollectHeaders` instead.

Function: Whether to collect headers.

Notes: If you set this property to true, you can grab the data from the transfer in the `Headers` Property instead of collecting the pieces yourself in the header event. Of course this is optional and you can still process data in header event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.

Renamed to `CollectHeaders` in v23.0.

(Read and Write property)

4.10.126 CollectHeaders as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to collect headers.

Notes: If you set this property to true, you can grab the data from the transfer in the Headers Property instead of collecting the pieces yourself in the header event. Of course this is optional and you can still process data in header event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.
(Read and Write property)

4.10.127 CollectOutputData as Boolean

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to collect output data.

Notes: If you set this property to true, you can grab the data from the transfer in the OutputData Property instead of collecting the pieces yourself in the write event. Of course this is optional and you can still process data in write event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.
(Read and Write property)

4.10.128 DebugData as String

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use DebugMessages instead.

Function: The debug data from CURL.

Notes: If CollectDebugData property is true, the plugin puts the data received in debugMessage event also into this property, so you can grab it after the transfer.

Newer code should use DebugMessages property instead.
(Read only property)

4.10.129 DebugMessages as String

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The debug messages from CURL.

Notes: If CollectDebugMessage property is true, the plugin puts the data received in debugMessage event also into this property, so you can grab it after the transfer.

(Read only property)

4.10.130 DebugWithData as Boolean

Plugin Version: 18.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to include data in debug messages.

Example:

```
dim c as new CURLNMBS
c.DebugWithData = true
c.OptionVerbose = true
c.CollectDebugMessages = true
```

Notes: (Read and Write property)

4.10.131 Handle as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The internal handle of the CURL object.

Notes: (Read and Write property)

4.10.132 HeaderData as String

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The headers from CURL.

Notes: If CollectHeaders property is true, the plugin puts the data received in header event also into this property, so you can grab it after the transfer.

Renamed to Headers in v23.0.
(Read only property)

4.10.133 Headers as String

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use Headers instead. **Function:** The headers from CURL.

Notes: If CollectHeaders property is true, the plugin puts the data received in header event also into this property, so you can grab it after the transfer.

(Read only property)

4.10.134 InputData as String

Plugin Version: 14.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The input data.

Notes: If you set input data, you do not need to use Read, RestartRead or Seek events.

The plugin will use the provided data for the upload.

Setting input data size, will also set the input file size (OptionInFileSizeLarge and OptionInFileSize).

Alternatively you can provide data in Read event or use OpenMTInputFile method to open a file on disk to upload.

(Read and Write property)

4.10.135 Lasterror as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The lasterror from the library.

Example:

```
Dim d As New CURLNMBS
```

```
d.OptionSSLVersion = 123
```

```
Dim LastError As Integer = d.LastError
```

```
// gives 43
```

```
Dim LastErrorText As String = d.LastErrorText
```

```
// A libcurl function was given a bad argument
```

```
Break
```

Notes: Set in the constructor while doing initialization as well as by various curl calls.

Check the kError* constants.

(Read and Write property)

4.10.136 LastErrorMessage as String

Plugin Version: 11.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error message.

Example:

```
Dim d As New CURLNMBS
```

```
d.OptionURL = "http://192.168.2.53"  
d.OptionConnectionTimeout = 5
```

```
Dim ErrorCode As Integer = d.Perform
```

```
Dim LastErrorMessage As String = d.LastErrorMessage  
Dim LastErrorText As String = d.LastErrorText
```

```
Break
```

Notes: The error message from the transfer.

e.g. Perform may report a timeout with code 28.
Then LastErrorText is "Timeout was reached" looked up for 28.

But LastErrorMessage would be something like "Failed to connect to x.x.x.x port 80 after 5000 ms: Timeout was reached".
(Read only property)

4.10.137 LasterrorText as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The text for the lasterror code.

Example:

```
Dim d As New CURLNMBS
```

```
d.OptionURL = "http://192.168.2.53"  
d.OptionConnectionTimeout = 5
```

```
Dim ErrorCode As Integer = d.Perform
```

```
Dim LastErrorMessage As String = d.LastErrorMessage  
Dim LastErrorText As String = d.LastErrorText
```

```
Break
```

Notes: Static string matched to the error code, so you have an idea what's wrong.

e.g. Perform may report a timeout with code 28.
Then LastErrorText is "Timeout was reached" looked up for 28.

But LastErrorMessage would be something like "Failed to connect to x.x.x.x port 80 after 5000 ms: Timeout was reached".

(Read and Write property)

4.10.138 LibraryUsed as String

Plugin Version: 17.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Which library is in use.

Notes: This is for debugging only to see which library is in use.

(Read only property)

4.10.139 LibVersion as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns a human readable string with the version number of libCURL and some of its important components (like OpenSSL version).

Notes: (Read only property)

4.10.140 OptionAbstractUnixSocket as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Path to an abstract Unix domain socket.

Notes: (Read and Write property)

See also [ABSTRACT_UNIX_SOCKET](#) option in CURL manual.

4.10.141 OptionAcceptEncoding as String

Plugin Version: 13.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the contents of the Accept-Encoding: header sent in a HTTP request, and enables decoding of a response when a Content-Encoding: header is received.

Example:

```
dim c as new CURLNMBS
c.OptionAcceptEncoding = "deflate"
```

Notes: Three encodings are supported: identity, which does nothing, deflate which requests the server to

compress its response using the zlib algorithm, and gzip which requests the gzip algorithm. If a zero-length string is set, then an Accept-Encoding: header containing all supported encodings is sent.

This is a request, not an order; the server may or may not do it. This option must be set (to any non-NULL value) or else any unsolicited encoding done by the server is ignored. See the special file README.encoding for details (included with CURL source code).

(Read and Write property)

See also [ACCEPT_ENCODING](#) option in CURL manual.

4.10.142 OptionAcceptTimeoutMS as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Time-out accept operations (currently for FTP only) after this amount of milliseconds.

Notes: (Read and Write property)

See also [ACCEPTTIMEOUT_MS](#) option in CURL manual.

4.10.143 OptionAddressScope as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an integer specifying the scope_id value to use when connecting to IPv6 link-local or site-local addresses.

Notes: (Added in CURL 7.19.0)

(Read and Write property)

See also [ADDRESS_SCOPE](#) option in CURL manual.

4.10.144 OptionAppend as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to append to the remote file instead of overwrite it.

Notes: This is only useful when uploading to an ftp site.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [APPEND](#) option in CURL manual.

4.10.145 OptionAutoReferer as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: When enabled, libCURL will automatically set the Referer: field in requests where it follows a Location: redirect.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [AUTOREFERER](#) option in CURL manual.

4.10.146 OptionAWSSigV4 as String

Plugin Version: 21.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Provides AWS V4 signature authentication on HTTP(S) header.

Notes: Pass a text that is the collection of specific arguments are used for creating outgoing authentication headers. The format of the param option is:

```
provider1 [ :provider2 [ :region [ :service ] ] ]
```

provider1, provider2:

The providers arguments are used for generating some authentication parameters such as "Algorithm", "date", "request type" and "signed headers".

region:

The argument is a geographic area of a resources collection. It is extracted from the host name specified in the URL if omitted.

service:

The argument is a function provided by a cloud. It is extracted from the host name specified in the URL if omitted.

Note: This call set CURLOPT_HTTPAUTH to CURLAUTH_AWS_SIGV4. Calling CURLOPT_HTTPAUTH with CURLAUTH_AWS_SIGV4 is the same as calling this with "aws:amz" in parameter.

Example with "Test:Try", when curl will do the algorithm, it will generate "TEST-HMAC-SHA256" for "Algorithm", "x-try-date" and "X-Try-Date" for "date", "test4_request" for "request type", "SignedHeaders=content-type;host;x-try-date" for "signed headers"

If you use just "test", instead of "test:try", test will be use for every strings generated

By default, the value of this parameter is empty. Calling CURLOPT_HTTPAUTH with CURLAUTH_AWS_SIGV4

is the same as calling this with "aws:amz" in parameter.

(Read and Write property)

See also [AWS_SIGV4](#) option in CURL manual.

4.10.147 OptionBufferSize as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Your preferred size (in bytes) for the receive buffer in libCURL.

Notes: The main point of this would be that the write event gets called more often and with smaller chunks.

This is just treated as a request, not an order. You cannot be guaranteed to actually get the given size.

(Added in 7.10)

This size is by default set as big as possible (OptionMaxWriteSize), so it only make sense to use this option if you want it smaller.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

For slow upload/downloads, it may be better to set buffer size to 1 MB with OptionUploadBufferSize or OptionBufferSize properties to make transfers faster.

(Read and Write property)

See also [BUFFERSIZE](#) option in CURL manual.

4.10.148 OptionCACacheTimeout as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the life-time for cached certificate stores.

Notes: Pass a number, this sets the timeout in seconds. This tells libcurl the maximum time any cached certificate store it has in memory may be kept and reused for new connections. Once the timeout has expired, a subsequent fetch requiring a certificate store will have to build a new one.

Building a certificate store from a CAINFO file (see OptionCAInfo) is a slow operation so curl may cache the generated certificate store internally to speed up future connections.

Set to zero to completely disable caching, or set to -1 to retain the cached store remain forever. By default, libcurl caches this info for 24 hours.

(Read and Write property)

See also [CA_CACHE_TIMEOUT](#) option in CURL manual.

4.10.149 OptionCAInfo as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string naming a file holding one or more certificates to verify the peer with.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLNMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionSSLVerifyHost = 0
```

```
d.OptionSSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionCAInfo = cacert.NativePath
```

```
d.OptionSSLVerifyHost = 2
```

```
d.OptionSSLVerifyPeer = 1
```

Notes: This makes sense only when used in combination with the OptionSSLVerifyPeer option. If OptionSSLVerifyPeer is false, OptionCAINFO need not even indicate an accessible file.

Note that option is by default set to the system path where libCURL's cacert bundle is assumed to be stored, as established at build time.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **CAINFO** option in CURL manual.

4.10.150 OptionCAInfoBlob as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The CAInfo as blob value.

Notes: Certificate Authority (CA) bundle in PEM format passed PEM encoded content holding one or

more certificates to verify the HTTPS server with.
 (Read and Write property)
 See also [CAINFO_BLOB](#) option in CURL manual.

4.10.151 OptionCAPath as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string naming a directory holding multiple CA certificates to verify the peer with.

Example:

```
dim c as new CURLNMBS
c.OptionCAPath = "/data/MyCertificates"
```

Notes: The certificate directory must be prepared using the openssl c_rehash utility. This makes sense only when used in combination with the CURLOPT_SSL_VERIFYPEER option. If OptionSSLVerifyPeer is zero, OptionCAPath need not even indicate an accessible path. The OptionCAPath function apparently does not work in Windows due to some limitation in openssl. This option is OpenSSL-specific and does nothing if libCURL is built to use GnuTLS.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [CAPATH](#) option in CURL manual.

4.10.152 OptionCertInfo as boolean

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to true to enable libCURL's certificate chain info gatherer.

Notes: With this enabled, libCURL (if built with OpenSSL) will extract lots of information and data about the certificates in the certificate chain used in the SSL connection. This data is then possible to extract after a transfer using GetInfoCertInfo. (Added in 7.19.1)

(Read and Write property)

See also [CERTINFO](#) option in CURL manual.

4.10.153 OptionConnectionTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum time in seconds that you allow the connection to the server to take.

Example:

```
dim d as new CURLNMBS

d.OptionConnectionTimeOutMS = 5000
d.OptionConnectOnly = 1

// try this URL
d.OptionURL = URL

// try connection
dim e as integer = d.Perform

// check result
dim s as string = d.OutputData
TextArea1.text = FixText(S)

if e = 0 then
  MsgBox "Connected"
else
  MsgBox "Failed to connect"
end if
```

Notes: This only limits the connection phase, once it has connected, this option is of no more use. Set to zero to disable connection timeout (it will then only timeout on the system's internal timeouts). See also the OptionTimeout option.

(Read and Write property)

See also **CONNECTTIMEOUT** option in CURL manual.

4.10.154 OptionConnectionTimeOutMS as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum time in milli seconds that you allow the connection to the server to take.

Notes: This only limits the connection phase, once it has connected, this option is of no more use. Set to zero to disable connection timeout (it will then only timeout on the system's internal timeouts). See also the OptionTimeout option.

(Read and Write property)

4.10.155 OptionConnectOnly as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A true tells the library to perform any required proxy authentication and connection setup, but no data transfer.

Notes: This option is useful with the `CURLNMBS.GetInfoLastSocket` function. The library can set up the connection and then the application can obtain the most recently used socket for special data transfers. (Added in 7.15.2)

Type changed to integer in v23.0 to enable passing 2 for WebSockets.

(Read and Write property)

See also `CONNECT_ONLY` option in CURL manual.

4.10.156 OptionCookie as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: It will be used to set a cookie in the http request.

Notes: The format of the string should be `NAME=CONTENTS`, where `NAME` is the cookie name and `CONTENTS` is what the cookie should contain.

If you need to set multiple cookies, you need to set them all using a single option and thus you need to concatenate them all in one single string. Set multiple cookies in one string like this: `"name1=content1; name2=content2;"` etc.

Using this option multiple times will only make the latest string override the previously ones.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also `COOKIE` option in CURL manual.

4.10.157 OptionCookieFile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The cookie file content.

Notes: It should contain the name of your file holding cookie data to read. The cookie data may be in Netscape / Mozilla cookie data format or just regular HTTP-style headers dumped to a file.

Given an empty or non-existing file or by passing the empty string (`""`), this option will enable cookies for

this CURL handle, making it understand and parse received cookies and then use matching cookies in future request.

If you use this option multiple times, you just add more files to read. Subsequent files will add more cookies.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [COOKIEFILE](#) option in CURL manual.

4.10.158 OptionCookieJar as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: File path where to write the cookies to.

Notes: This will make libCURL write all internally known cookies to the specified file, when the object is destroyed. If no cookies are known, no file will be created. Specify "-" to instead have the cookies written to stdout. Using this option also enables cookies for this session, so if you for example follow a location it will make matching cookies get sent accordingly.

If the cookie jar file can't be created or written to, libCURL will not and cannot report an error for this. Using OptionVerbose or DebugFunction event will get a warning to display, but that is the only visible feedback you get about this possibly lethal situation.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [COOKIEJAR](#) option in CURL manual.

4.10.159 OptionCookieList as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The cookie string.

Notes: Cookie can be either in Netscape / Mozilla format or just regular HTTP-style header (Set-Cookie:

...) format. If CURL cookie engine was not enabled it will enable its cookie engine. Passing a magic string "ALL" will erase all cookies known by CURL. (Added in 7.14.1) Passing the special string "SESS" will only erase all session cookies known by CURL. (Added in 7.15.4)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **COOKIELIST** option in CURL manual.

4.10.160 OptionCookieSession as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to true to mark this as a new cookie "session".

Notes: It will force libCURL to ignore all cookies it is about to load that are "session cookies" from the previous session. By default, libCURL always stores and loads all cookies, independent if they are session cookies are not. Session cookies are cookies without expiry date and they are meant to be alive and existing for this "session" only.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **COOKIESESSION** option in CURL manual.

4.10.161 OptionCRLF as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Convert Unix newlines to CRLF newlines on transfers.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **CRLF** option in CURL manual.

4.10.162 OptionCRLFile as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string naming a file with the concatenation of CRL (in PEM format) to use in the certificate validation that occurs during the SSL exchange.

Notes: When CURL is built to use NSS or GnuTLS, there is no way to influence the use of CRL passed to help in the verification process. When libCURL is built with OpenSSL support, X509_V_FLAG_CRL_CHECK

and `X509_V_FLAG_CRL_CHECK_ALL` are both set, requiring CRL check against all the elements of the certificate chain if a CRL file is passed.

This option makes sense only when used in combination with the `OptionSSLVerifyPeer` option.

A specific error code (`CURLE_SSL_CRL_BADFILE`) is defined with the option. It is returned when the SSL exchange fails because the CRL file cannot be loaded. Note that a failure in certificate verification due to a revocation information found in the CRL does not trigger this specific error. (Added in 7.19.0)
(Read and Write property)

See also `CRLFILE` option in CURL manual.

4.10.163 OptionCustomRequest as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: It will be user instead of GET or HEAD when doing an HTTP request, or instead of LIST or NLST when doing an ftp directory listing.

Example:

```
dim c as CURLNMBS // your CURL instance

c.URL = "ftp://..."
c.customRequest = "MLSD" // ftp advanced directory listing
```

Notes: This is useful for doing DELETE or other more or less obscure HTTP requests. Don't do this at will, make sure your server supports the command first.

Restore to the internal default by setting this to "".

Many people have wrongly used this option to replace the entire request with their own, including multiple headers and POST contents. While that might work in many cases, it will cause libCURL to send invalid requests and it could possibly confuse the remote server badly. Use `CURLOPT_POST` and `OptionPostFields` to set POST data. Use `OptionHTTPHeader` to replace or extend the set of headers sent by libCURL. Use `OptionHTTPVersion` to change HTTP version.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

For WebDAV, you can set this to "MKCOL" to create a folder at the given URL.

(Read and Write property)

See also `CUSTOMREQUEST` option in CURL manual.

4.10.164 OptionDefaultProtocol as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the protocol used when curl is given a URL without a protocol.

Notes: (Read and Write property)

See also [DEFAULT_PROTOCOL](#) option in CURL manual.

4.10.165 OptionDirListOnly as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: For FTP and SFTP based URLs a parameter set to true tells the library to list the names of files in a directory, rather than performing a full directory listing that would normally include file sizes, dates etc.

Notes: For POP3 a parameter of true tells the library to list the email message or messages on the POP3 server. This can be used to change the default behaviour of libCURL, when combined with a URL that contains a message ID, to perform a "scan listing" which can then be used to determine the size of an email.

Note: For FTP this causes a NLST command to be sent to the FTP server. Beware that some FTP servers list only files in their response to NLST; they might not include subdirectories and symbolic links.

Setting this option to true also implies a directory listing even if the URL doesn't end with a slash, which otherwise is necessary.

Do NOT use this option if you also use OptionWildcardMatch as it will effectively break that feature then. (Read and Write property)

See also [DIRLISTONLY](#) option in CURL manual.

4.10.166 OptionDisableUserNameInURL as Boolean

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Disallow specifying username/login in URL.

Notes: The value true tells the library to not allow URLs that include an username.

(Read and Write property)

4.10.167 OptionDNSCacheTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The timeout in seconds.

Notes: Name resolves will be kept in memory for this number of seconds. Set to zero (0) to completely disable caching, or set to -1 to make the cached entries remain forever. By default, libCURL caches this info for 60 seconds.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [DNS_CACHE_TIMEOUT](#) option in CURL manual.

4.10.168 OptionDNSInterface as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the name of the network interface that the DNS resolver should bind to.

Notes: This must be an interface name (not an address). Set this option to "" to use the default setting (don't bind to a specific interface).

(Read and Write property)

See also [DNS_INTERFACE](#) option in CURL manual.

4.10.169 OptionDNSLocalIPv4 as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the local IPv4 address that the resolver should bind to.

Notes: The argument should be of string and contain a single numerical IPv4 address as a string. Set this option to "" to use the default setting (don't bind to a specific IP address).

(Read and Write property)

See also [DNS_LOCAL_IP4](#) option in CURL manual.

4.10.170 OptionDNSLocalIPv6 as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the local IPv6 address that the resolver should bind to.

Notes: The argument should be of type string and contain a single IPv6 address as a string. Set this option to "" to use the default setting (don't bind to a specific IP address).

(Read and Write property)

See also [DNS_LOCAL_IP6](#) option in CURL manual.

4.10.171 OptionDNSServers as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the name servers to use for DNS resolution.

Notes: (Read and Write property)

See also [DNS_SERVERS](#) option in CURL manual.

4.10.172 OptionDNSShuffleAddresses as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to shuffle DNS addresses.

Notes: When a name is resolved and more than one IP address is returned, shuffle the order of all returned addresses so that they will be used in a random order. This is similar to the ordering behavior of `gethostbyname` which is no longer used on most platforms.

Addresses will not be reshuffled if a name resolution is completed using the DNS cache. `DNSCacheTimeout` property can be used together with this option to reduce DNS cache timeout or disable caching entirely if frequent reshuffling is needed.

Since the addresses returned will be reordered randomly, their order will not be in accordance with RFC 3484 or any other deterministic order that may be generated by the system's name resolution implementation. This may have performance impacts and may cause IPv4 to be used before IPv6 or vice versa.

Default is false.

(Read and Write property)

See also [DNS_SHUFFLE_ADDRESSES](#) option in CURL manual.

4.10.173 OptionDOHSSLVerifyHost as Integer

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to verify the host name in the DOH (DNS-over-HTTPS) SSL certificate.

Notes: Pass a 2 as asking curl to verify the DOH (DNS-over-HTTPS) server's certificate name fields against the host name.

This option is the DOH equivalent of `OptionSSLVerifyPeer` and only affects requests to the DOH server.

When `OptionDOHSSLVerifyHost` is 2, the SSL certificate provided by the DOH server must indicate that the server name is the same as the server name to which you meant to connect to, or the connection fails.

Curl considers the DOH server the intended one when the Common Name field or a Subject Alternate Name field in the certificate matches the host name in the DOH URL to which you told Curl to connect.

When the verify value is set to 1 it is treated the same as 2. However for consistency with the other Verify-Host options we suggest use 2 and not 1.

When the verify value is set to 0, the connection succeeds regardless of the names used in the certificate. Use that ability with caution!

(Read and Write property)

See also [DOH_SSL_VERIFYHOST](#) option in CURL manual.

4.10.174 OptionDOHSSLVerifyPeer as Integer

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to verify the DOH SSL certificate.

Notes: Pass 1 to enable or 0 to disable.

This option tells curl to verify the authenticity of the DOH (DNS-over-HTTPS) server's certificate. A value of 1 means curl verifies; 0 (zero) means it doesn't.

This option is the DOH equivalent of `CURL.SetOptionSSLVerifyPeer` and only affects requests to the DOH server.

When negotiating a TLS or SSL connection, the server sends a certificate indicating its identity. Curl verifies whether the certificate is authentic, i.e. that you can trust that the server is who the certificate says it is. This trust is based on a chain of digital signatures, rooted in certification authority (CA) certificates you supply. curl uses a default bundle of CA certificates (the path for that is determined at build time) and you can specify alternate certificates with the `CURL.SetOptionCAInfo` option or the `CURL.SetOptionCAPath` option.

When `CURL.SetOptionDOHSSLVerifyPeer` is enabled, and the verification fails to prove that the certificate is authentic, the connection fails. When the option is zero, the peer certificate verification succeeds regardless.

Authenticating the certificate is not enough to be sure about the server. You typically also want to ensure that the server is the server you mean to be talking to. Use `CURL.SetOptionDOHSSLVerifyHost` for that. The check that the host name in the certificate is valid for the host name you're connecting to is done independently of the `CURL.SetOptionDOHSSLVerifyPeer` option.

WARNING: disabling verification of the certificate allows bad guys to man-in-the-middle the communication without you knowing it. Disabling verification makes the communication insecure. Just having encryption on a transfer is not enough as you cannot be sure that you are communicating with the correct end-point. (Read and Write property)

See also [DOH_SSL_VERIFYPEER](#) option in CURL manual.

4.10.175 OptionDOHSSLVerifyStatus as Integer

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to verify the DOH SSL certificate's status.

Notes: Pass 2 to ask curl to verify the DOH (DNS-over-HTTPS) server's certificate name fields against the host name.

This option is the DOH equivalent of `OptionSSLVerifyHost` and only affects requests to the DOH server. When `OptionDOHSSLVerifyHost` is 2, the SSL certificate provided by the DOH server must indicate that the server name is the same as the server name to which you meant to connect to, or the connection fails. Curl considers the DOH server the intended one when the Common Name field or a Subject Alternate Name field in the certificate matches the host name in the DOH URL to which you told Curl to connect. When the verify value is set to 1L it is treated the same as 2L. However for consistency with the other `VerifyHost` options we suggest use 2 and not 1. When the verify value is set to 0L, the connection succeeds regardless of the names used in the certificate. Use that ability with caution!

See also `OptionDOHSSLVerifyPeer` to verify the digital signature of the DOH server certificate. If libcurl is built against NSS and `OptionDOHSSLVerifyPeer` is zero, `OptionDOHSSLVerifyHost` is also set to zero and cannot be overridden.

(Read and Write property)

See also `DOH_SSL_VERIFYSTATUS` option in CURL manual.

4.10.176 `OptionDOHURL` as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Provides the DNS-over-HTTPS URL.

Notes: Pass in a string to a URL for the DOH server to use for name resolving. The parameter should be URL-encoded in the following format: "https://host:port/path". It MUST specify a HTTPS URL.

libcurl doesn't validate the syntax or use this variable until the transfer is issued. Even if you set a crazy value here, `OptionDOHURL` will still return `CURLE_OK`.

curl sends POST requests to the given DNS-over-HTTPS URL.

To find the DOH server itself, which might be specified using a name, libcurl will use the default name lookup function. You can bootstrap that by providing the address for the DOH server with `OptionResolve`.

Disable DOH use again by setting this option to "".

(Read and Write property)

See also `DOH_URL` option in CURL manual.

4.10.177 `OptionEGDSocket` as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** The path name to the Entropy Gathering Daemon socket.

Notes: It will be used to seed the random engine for SSL.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.10.178 OptionExpect100TimeoutMS as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets Expect 100 timeout.

Notes: Time to wait in milliseconds for a response to a HTTP request containing an Expect: 100-continue header before sending the data anyway.

(Read and Write property)

See also [EXPECT_100_TIMEOUT_MS](#) option in CURL manual.

4.10.179 OptionFailOnError as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to fail silently if the HTTP code returned is equal to or larger than 400. The default action would be to return the page normally, ignoring that code.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

This method is not fail-safe and there are occasions where non-succesful response codes will slip through, especially when authentication is involved (response codes 401 and 407).

You might get some amounts of headers transferred before this situation is detected, like for when a "100-continue" is received as a response to a POST/PUT and a 401 or 407 is received immediately afterwards.

(Read and Write property)

See also [FAILONERROR](#) option in CURL manual.

4.10.180 OptionFileTime as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether filetime should be queried.

Example:

```
// init CURL with options
dim d as new CURLNMBS
```

```

d.OptionFileTime = true
d.OptionURL = "http://www.monkeybreadsoftware.de/images/mbs.jpg"

// run query
dim e as Integer = d.Perform

// calculate date object
dim da as new date(1970,1,1,0,0,0)
da.TotalSeconds = da.TotalSeconds + d.GetInfoFileTime

// show date
ResultText.text=str(d.GetInfoFileTime)+" "+da.ShortDate+" "+da.ShortTime

```

Notes: If it is true, libCURL will attempt to get the modification date of the remote document in this operation. This requires that the remote server sends the time or replies to a time querying command.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **FILETIME** option in CURL manual.

4.10.181 OptionFollowLocation as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A boolean parameter tells the library to follow any Location: header that the server sends as part of an HTTP header.

Example:

```

dim c as new CURLNMBS

c.OptionFollowLocation = true
c.OptionMaxRedirs = 3

```

Notes: This means that the library will re-send the same request on the new location and follow new Location: headers all the way until no more such headers are returned. OptionMaxRedirs can be used to limit the number of redirects libCURL will follow.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **FOLLOWLOCATION** option in CURL manual.

4.10.182 OptionForbidReuse as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to true to make the next transfer explicitly close the connection when done.

Notes: Normally, libCURL keep all connections alive when done with one transfer in case there comes a succeeding one that can re-use them. This option should be used with caution and only if you understand what it does. Set to false to have libCURL keep the connection open for possibly later re-use (default behavior).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.10.183 OptionFreshConnect as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to true to make the next transfer use a new (fresh) connection by force.

Example:

```
dim c as new CURLNMBS
```

```
c.OptionFreshConnect=True
```

Notes: If the connection cache is full before this connection, one of the existing connections will be closed as according to the selected or default policy. This option should be used with caution and only if you understand what it does. Set this to 0 to have libCURL attempt re-using an existing connection (default behavior).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

See also **FRESH_CONNECT** option in CURL manual.

4.10.184 OptionFTPAccount as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The FTP account name to use.

Notes: When an FTP server asks for "account data" after user name and password has been provided, this

data is sent off using the ACCT command.

(Read and Write property)

See also [FTP_ACCOUNT](#) option in CURL manual.

4.10.185 OptionFTPAlternativeToUser as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The alternative username.

Notes: Pass a string as parameter, pointing to a string which will be used to authenticate if the usual FTP "USER user" and "PASS password" negotiation fails. This is currently only known to be required when connecting to Tumbleweed's Secure Transport FTPS server using client certificates for authentication.

(Added in 7.15.5)

(Read and Write property)

See also [FTP_ALTERNATIVE_TO_USER](#) option in CURL manual.

4.10.186 OptionFTPAppend as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionAppend instead.

Function: True tells the library to append to the remote file instead of overwrite it.

Notes: This is only useful when uploading to an ftp site.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.10.187 OptionFTPCreateMissingDirs as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the value is 1, CURL will attempt to create any remote directory that it fails to CWD into.

Notes: CWD is the command that changes working directory. (Added in 7.10.7)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Newer CURL Library versions allow a value of 2 to do a CWD after the directory was created, so this property changed from boolean to integer.

(Read and Write property)

See also [FTP_CREATE_MISSING_DIRS](#) option in CURL manual.

4.10.188 OptionFTPFileMethod as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an integer that should have one of the following values.

Notes: This option controls what method libCURL should use to reach a file on a FTP(S) server. The argument should be one of the following alternatives:

URLFTPMETHOD_MULTICWD = 1

libCURL does a single CWD operation for each path part in the given URL. For deep hierarchies this means very many commands. This is how RFC1738 says it should be done. This is the default but the slowest behavior.

CURLFTPMETHOD_NOCWD = 2

libCURL does no CWD at all. libCURL will do SIZE, RETR, STOR etc and give a full path to the server for all these commands. This is the fastest behavior.

CURLFTPMETHOD_SINGLECWD = 3

libCURL does one CWD with the full target directory and then operates on the file "normally" (like in the multicwd case). This is somewhat more standards compliant than 'nocwd' but without the full penalty of 'multicwd'.

(Read and Write property)

See also [FTP_FILEMETHOD](#) option in CURL manual.

4.10.189 OptionFTPListOnly as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionDirListOnly instead. **Function:** True tells the library to just list the names of an ftp directory, instead of doing a full directory listing that would include file sizes, dates etc.

Notes: This causes an FTP NLST command to be sent. Beware that some FTP servers list only files in their response to NLST; they might not include subdirectories and symbolic links.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.10.190 OptionFTPPort as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The port to use for ftp.

Notes: It will be used to get the IP address to use for the ftp PORT instruction. The PORT instruction tells the remote server to connect to our specified IP address. The string may be a plain IP address, a host name, an network interface name (under Unix) or just a '-' letter to let the library use your systems default IP address. Default FTP operations are passive, and thus won't use PORT.

You disable PORT again and go back to using the passive version by setting this option to "".

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **FTPPORT** option in CURL manual.

4.10.191 OptionFTPResponseTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionServerResponseTimeout instead. **Function:** Causes CURL to set a timeout period (in seconds) on the amount of time that the server is allowed to take in order to generate a response message for a command before the session is considered hung.

Notes: With v22.4 or newer, please use newer property name OptionServerResponseTimeout.

While CURL is waiting for a response, this value overrides OptionTimeout. It is recommended that if used in conjunction with OptionTimeout, you set OptionFTPResponseTimeout to a value smaller than OptionTimeout. (Added in 7.10.8)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.10.192 OptionFTPSkipPasvIP as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If set to a non-zero value, it instructs libCURL to not use the IP address the server suggests in its 227-response to libCURL's PASV command when libCURL connects the data connection.

Notes: Instead libCURL will re-use the same IP address it already uses for the control connection. But it

will use the port number from the 227-response. (Added in 7.14.2)

This option has no effect if PORT, EPRT or EPSV is used instead of PASV.

(Read and Write property)

See also `FTP_SKIP_PASV_IP` option in CURL manual.

4.10.193 OptionFTPSSL as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionUseSSL` instead.

Function: Request using SSL / TLS for the transfer.

Example:

```
dim c as CURLNMBS
```

```
c.OptionUseSSL = c.kFTPSSL_ALL
```

```
c.OptionSSLVersion = c.kSSLVersionTLSv12
```

Notes: Set to an integer using one of the values from below, to make libCURL use your desired level of SSL for the transfer.

These are all protocols that start out plain text and get "upgraded" to SSL using the STARTTLS command. This is for enabling SSL/TLS when you use FTP, SMTP, POP3, IMAP etc.

CURLUSESSL_NONE	0	Don't attempt to use SSL.
CURLUSESSL_TRY	1	Try using SSL, proceed as normal otherwise.
CURLUSESSL_CONTROL	2	Require SSL for the control connection or fail with CURLE_USE_SSL_FAILED.
CURLUSESSL_ALL	3	Require SSL for all communication or fail with CURLE_USE_SSL_FAILED.

(Read and Write property)

4.10.194 OptionFTPSSLAUTH as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: What kind of SSL authentication to use for FTP.

Notes: Pass an integer using one of the values from below, to alter how libCURL issues "AUTH TLS" or "AUTH SSL" when FTP over SSL is activated (see `CURLOPT_FTP_SSL`). (Added in 7.12.2)

```
kFTPAUTH_DEFAULT = 0
```

Allow libCURL to decide

```
kFTPAUTH_SSL = 1
```

Try "AUTH SSL" first, and only if that fails try "AUTH TLS"

```
kFTPAUTH_TLS = 2
```

Try "AUTH TLS" first, and only if that fails try "AUTH SSL"

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [FTPSSLAUTH](#) option in CURL manual.

4.10.195 OptionFTPSSLCCC as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If enabled, this option makes libCURL use CCC (Clear Command Channel).

Notes: It shuts down the SSL/TLS layer after authenticating. The rest of the control channel communication will be unencrypted. This allows NAT routers to follow the FTP transaction. Pass a long using one of the values below. (Added in 7.16.1)

CURLFTPSSL_CCC_NONE	0	Don't attempt to use CCC.
CURLFTPSSL_CCC_PASSIVE	1	Do not initiate the shutdown, but wait for the server to do it. Do not send a reply.
CURLFTPSSL_CCC_ACTIVE	2	Initiate the shutdown and wait for a reply.

(Read and Write property)

See also [FTP_SSL_CCC](#) option in CURL manual.

4.10.196 OptionFTPUseEPRT as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the value is true, it tells CURL to use the EPRT (and LPRT) command when doing active FTP downloads (which is enabled by `CURLOPT_FTPPORT`).

Notes: Using EPRT means that it will first attempt to use EPRT and then LPRT before using PORT, but if you pass FALSE (zero) to this option, it will not try using EPRT or LPRT, only plain PORT. (Added in

7.10.5)

If the server is an IPv6 host, this option will have no effect as of 7.12.3.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [FTP_USE_EPRT](#) option in CURL manual.

4.10.197 OptionFTPUseEPSV as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the value is true, it tells CURL to use the EPSV command when doing passive FTP downloads (which it always does by default).

Notes: Using EPSV means that it will first attempt to use EPSV before using PASV, but if you pass FALSE (zero) to this option, it will not try using EPSV, only plain PASV.

If the server is an IPv6 host, this option will have no effect as of 7.12.3.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [FTP_USE_EPSV](#) option in CURL manual.

4.10.198 OptionFTPusePret as Boolean

Plugin Version: 11.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the value is true, it tells CURL to send a PRET command before PASV (and EPSV). Certain FTP servers, mainly drftpd, require this non-standard command for directory listings as well as up and downloads in PASV mode.

Notes: Has no effect when using the active FTP transfers mode. (Added in 7.20.0)

(Read and Write property)

See also [FTP_USE_PRET](#) option in CURL manual.

4.10.199 OptionGet as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If the true, this forces the HTTP request to get back to GET.

Notes: usable if a POST, HEAD, PUT or a custom request have been used previously using the same CURL handle.

When setting `OptionGet` to a true value, it will automatically set `OptionNoBody` to true (since 7.14.1).

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.10.200 `OptionGSSAPIDelegation` as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Allow GSSAPI credential delegation.

Notes: (Read and Write property)

See also `GSSAPI_DELEGATION` option in CURL manual.

4.10.201 `OptionHappyEyeballsTimeOutMS` as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The happy eyeballs timeout.

Notes: Head start in milliseconds to give happy eyeballs.

(Read and Write property)

See also `HAPPY_EYEBALLS_TIMEOUT_MS` option in CURL manual.

4.10.202 `OptionHAProxyProtocol` as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to send an HAProxy PROXY protocol header.

Notes: Set to true to tell the library to send an HAProxy PROXY protocol header at beginning of the connection. The default action is not to send this header.

This option is primarily useful when sending test requests to a service that expects this header.

Most applications do not need this option.

Default false, do not send HAProxy PROXY protocol header.

(Read and Write property)

See also `HAPROXYPROTOCOL` option in CURL manual.

4.10.203 OptionHeader as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to include the header in the body output.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

This is only relevant for protocols that actually have headers preceding the data (like HTTP).

(Read and Write property)

See also [HEADER](#) option in CURL manual.

4.10.204 OptionHeaderOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass in a bitmask of "header options".

Notes: (Read and Write property)

See also **HEADEROPT** option in CURL manual.

4.10.205 OptionHTTPAuth as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Which http authentication to use.

Notes: Pass an integer as parameter, which is set to a bitmask, to tell libCURL what authentication method(s) you want it to use. The available bits are listed below. If more than one bit is set, libCURL will first query the site to see what authentication methods it supports and then pick the best one you allow it to use. For some methods, this will induce an extra network round-trip. Set the actual name and password with the UserPassword option. (Added in 7.10.6)

kAuthBASIC = 1

HTTP Basic authentication. This is the default choice, and the only method that is in wide-spread use and supported virtually everywhere. This is sending the user name and password over the network in plain text, easily captured by others.

kAuthDIGEST = 2

HTTP Digest authentication. Digest authentication is defined in RFC2617 and is a more secure way to do authentication over public networks than the regular old-fashioned Basic method.

kAuthGSSNEGOTIATE = 4

HTTP GSS-Negotiate authentication. The GSS-Negotiate (also known as plain "Negotiate") method was designed by Microsoft and is used in their web applications. It is primarily meant as a support for Kerberos5 authentication but may be also used along with another authentication methods. For more information see IETF draft draft-brezak-spnego-http-04.txt.

You need to build libCURL with a suitable GSS-API library for this to work.

kAuthNTLM = 8

HTTP NTLM authentication. A proprietary protocol invented and used by Microsoft. It uses a challenge-response and hash concept similar to Digest, to prevent the password from being eavesdropped.

You need to build libCURL with OpenSSL support for this option to work, or build libCURL on Windows.

```
kAuthANY = &hFFFFFFFF
```

This is a convenience macro that sets all bits and thus makes libCURL pick any it finds suitable. libCURL will automatically select the one it finds most secure.

```
kAuthANYSAFE = &hFFFFFFFE
```

This is a convenience macro that sets all bits except Basic and thus makes libCURL pick any it finds suitable. libCURL will automatically select the one it finds most secure.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [HTTPAUTH](#) option in CURL manual.

4.10.206 OptionHTTPContentDecoding as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass a long to tell libCURL how to act on content decoding.

Notes: If set to zero, content decoding will be disabled. If set to 1 it is enabled. Note however that libCURL has no default content decoding but requires you to use OptionEncoding for that. (added in 7.16.2)

(Read and Write property)

See also [HTTP_CONTENT_DECODING](#) option in CURL manual.

4.10.207 OptionHTTPProxyTunnel as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set the parameter to true to get the library to tunnel all operations through a given HTTP proxy.

Notes: There is a big difference between using a proxy and to tunnel through it. If you don't know what this means, you probably don't want this tunneling option.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [HTTPPROXYTUNNEL](#) option in CURL manual.

4.10.208 OptionHTTPTransferDecoding as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass an integer to tell libCURL how to act on transfer decoding.

Notes: If set to zero, transfer decoding will be disabled, if set to 1 it is enabled (default). libCURL does chunked transfer decoding by default unless this option is set to zero. (added in 7.16.2)

(Read and Write property)

See also [HTTP_TRANSFER_DECODING](#) option in CURL manual.

4.10.209 OptionHTTPVersion as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to one of the values described below.

Notes: They force libCURL to use the specific HTTP versions. This is not sensible to do unless you have a good reason.

`kHTTP_VERSION_NONE = 0`

We don't care about what version the library uses. libCURL will use whatever it thinks fit.

`kHTTP_VERSION_1_0 = 1`

Enforce HTTP 1.0 requests.

`kHTTP_VERSION_1_1 = 2`

Enforce HTTP 1.1 requests.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [HTTP_VERSION](#) option in CURL manual.

4.10.210 OptionIgnoreContentLength as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to ignore the Content-Length header.

Notes: This is useful for Apache 1.x (and similar servers) which will report incorrect content length for files over 2 gigabytes. If this option is used, CURL will not be able to accurately report progress, and will simply stop the download when the server ends the connection. (added in 7.14.1)

(Read and Write property)

See also [IGNORE_CONTENT_LENGTH](#) option in CURL manual.

4.10.211 OptionInFileSize as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: When uploading a file to a remote site, this option should be used to tell libCURL what the expected size of the infile is.

Notes: Note that this option does not limit how much data libCURL will actually send, as that is controlled entirely by what the read event returns.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [INFILESIZE](#) option in CURL manual.

4.10.212 OptionInFileSizeLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionInFileSize instead.

Function: When uploading a file to a remote site, this option should be used to tell libCURL what the expected size of the infile is.

Notes: This value should be passed as a CURL_off_t. (Added in 7.11.0)

Note that this option does not limit how much data libCURL will actually send, as that is controlled entirely by what the read event returns.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.10.213 OptionInterface as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This set the interface name to use as outgoing network interface.

Notes: The name can be an interface name, an IP address or a host name.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **INTERFACE** option in CURL manual.

4.10.214 OptionIPResolve as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Allows an application to select what kind of IP addresses to use when resolving host names.

Example:

```
dim c as new CURLNMBS
c.OptionIPResolve = c.kIPRESOLVE_V4
```

Notes: This is only interesting when using host names that resolve addresses using more than one version of IP. The allowed values are:

```
kIPRESOLVE_WHATEVER = 0
```

Default, resolves addresses to all IP versions that your system allows.

```
kIPRESOLVE_V4 = 1
```

Resolve to ipv4 addresses.

```
kIPRESOLVE_V6 = 2
```

Resolve to ipv6 addresses.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **IPRESOLVE** option in CURL manual.

4.10.215 OptionIssuerCert as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string naming a file holding a CA certificate in PEM format.

Notes: If the option is set, an additional check against the peer certificate is performed to verify the issuer is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the OptionSSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionSSLVerifyPeer has to be set too for the check to fail). (Added in 7.19.0)

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **ISSUERCERT** option in CURL manual.

4.10.216 OptionIssuerCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set issuer SSL certificate from memory blob.

Notes: Pass data, which contains binary data of a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option should be used in combination with the OptionSSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionSSLVerifyPeer has to be set too for the check to fail).

This option is an alternative to OptionIssuerCert which instead expects a file name as input.

(Read and Write property)

See also [ISSUERCERT_BLOB](#) option in CURL manual.

4.10.217 OptionKeepSendingOnError as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to keep sending on error.

Notes: Continue to send data if the server responds early with an HTTP status code ≥ 300

(Read and Write property)

See also [KEEP_SENDING_ON_ERROR](#) option in CURL manual.

4.10.218 OptionKeyPassword as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set passphrase to private key.

Notes: It will be used as the password required to use the OptionSSLKey or OptionSSHPrivateKeyfile private key. You never needed a pass phrase to load a certificate but you need one to load your private key.

(Read and Write property)

See also [KEYPASSWORD](#) option in CURL manual.

4.10.219 OptionKRB4Level as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionKRBLevel instead.

Function: Set the krb4 security level, this also enables krb4 awareness.

Notes: This is a string, 'clear', 'safe', 'confidential' or 'private'. If the string is set but doesn't match one of these, 'private' will be used. Set the string to "" to disable kerberos4. The kerberos support only works for FTP.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.10.220 OptionKRBLevel as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: FTP kerberos security level.

Notes: Set the kerberos security level for FTP; this also enables kerberos awareness. This is a string that should match one of the following: 'clear', 'safe', 'confidential' or 'private'. If the string is set but doesn't match one of these, 'private' will be used. Set the string to NULL to disable kerberos support for FTP.

(Read and Write property)

See also [KRBLEVEL](#) option in CURL manual.

4.10.221 OptionLocalPort as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This sets the local port number of the socket used for connection.

Notes: This can be used in combination with OptionInterface and you are recommended to use OptionLocalPortRange as well when this is set. Note that port numbers are only valid 1 - 65535. (Added in 7.15.2)

(Read and Write property)

See also [LOCALPORT](#) option in CURL manual.

4.10.222 OptionLocalPortRange as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This is the number of attempts libCURL should do to find a working local port number.

Notes: It starts with the given OptionLocalPort and adds one to the number for each retry. Setting this value to 1 or below will make libCURL do only one try for exact port number. Note that port numbers by nature is a scarce resource that will be busy at times so setting this value to something too low might cause unnecessary connection setup failures. (Added in 7.15.2)

(Read and Write property)

See also [LOCALPORTRANGE](#) option in CURL manual.

4.10.223 OptionLoginOptions as String

Plugin Version: 15.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Login options string to use for the transfer.

Notes: For more information about the login options please see RFC 2384, RFC5092 and IETF draft draft-earhart-url-smtp-00.txt

CURLOPT_LOGIN_OPTIONS can be used to set protocol specific login options, such as the preferred authentication mechanism via "AUTH=NTLM" or "AUTH=*", and should be used in conjunction with the OptionUserName option.

Only IMAP, POP3 and SMTP support login options.

(Read and Write property)

See also [LOGIN_OPTIONS](#) option in CURL manual.

4.10.224 OptionLowSpeedLimit as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This property contains the transfer speed in bytes per second that the transfer should be below during OptionLowSpeedTime seconds for the library to consider it too slow and abort.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [LOW_SPEED_LIMIT](#) option in CURL manual.

4.10.225 OptionLowSpeedTime as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This property contains the time in seconds that the transfer should be below the OptionLowSpeedLimit for the library to consider it too slow and abort.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [LOW_SPEED_TIME](#) option in CURL manual.

4.10.226 OptionMailAuth as String

Plugin Version: 12.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This string will be used to specify the authentication address (identity) of a submitted message that is being relayed to another server.

Notes: This optional parameter allows co-operating agents in a trusted environment to communicate the authentication of individual messages and should only be used by the application program, using libCURL, if the application is itself a mail server acting in such an environment. If the application is operating as such and the AUTH address is not known or is invalid, then an empty string should be used for this parameter.

Unlike OptionMailFrom and SetOptionMailRecipients, the address should not be specified within a pair of angled brackets (<>). However, if an empty string is used then a pair of brackets will be sent by libCURL as required by RFC 2554.

(Read and Write property)

See also [MAIL_AUTH](#) option in CURL manual.

4.10.227 OptionMailFrom as String

Plugin Version: 11.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string that will be used to specify the sender address in a mail when sending an SMTP mail with libCURL.

Notes: (Read and Write property)

See also [MAIL_FROM](#) option in CURL manual.

4.10.228 OptionMaxAgeConn as Integer

Plugin Version: 19.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum age the connection should have in seconds.

Notes: Older connections are not reused, but discarded.

(Read and Write property)

See also [MAXAGE_CONN](#) option in CURL manual.

4.10.229 OptionMaxConnects as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The set number will be the persistent connection cache size.

Notes: The set amount will be the maximum amount of simultaneously open connections that libCURL may cache. Default is 5, and there isn't much point in changing this value unless you are perfectly aware of how this work and changes libCURL's behaviour. This concerns connection using any of the protocols that support persistent connections.

When reaching the maximum limit, CURL closes the oldest one in the cache to prevent the number of open connections to increase.

If you already have performed transfers with this CURL handle, setting a smaller MAXCONNECTS than before may cause open connections to get closed unnecessarily.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [MAXCONNECTS](#) option in CURL manual.

4.10.230 OptionMaxFileSize as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This allows you to specify the maximum size (in bytes) of a file to download.

Notes: If the file requested is larger than this value, the transfer will not start and `kError_FILESIZE_EXCEEDED` will be returned.

The file size is not always known prior to download, and for such files this option has no effect even if the file transfer ends up being larger than this given limit. This concerns both FTP and HTTP transfers.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also `MAXFILESIZE` option in CURL manual.

4.10.231 OptionMaxFileSizeLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionMaxFileSize` instead. **Function:** This allows you to specify the maximum size (in bytes) of a file to download.

Notes: If the file requested is larger than this value, the transfer will not start and `kError_FILESIZE_EXCEEDED` will be returned. (Added in 7.11.0)

The file size is not always known prior to download, and for such files this option has no effect even if the file transfer ends up being larger than this given limit. This concerns both FTP and HTTP transfers.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.10.232 OptionMaxLifeTimeConnection as Integer

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets maximum lifetime (since creation) allowed for reusing a connection.

Notes: Pass a number as parameter containing `maxlifetime` - the maximum time in seconds, since the creation of the connection, that you allow an existing connection to have to be considered for reuse for this request.

libcurl features a connection cache that holds previously used connections. When a new request is to be done,

it will consider any connection that matches for reuse. The `MaxLifeTimeConnection` limit prevents libcurl from trying too old connections for reuse. This can be used for client-side load balancing. If a connection is found in the cache that is older than this set `maxlifetime`, it will instead be closed once any in-progress transfers complete.

If set to 0, this behavior is disabled: all connections are eligible for reuse.
(Read and Write property)

4.10.233 OptionMaxRecvSpeed as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Defines the maximum download speed.

Notes: If a download exceeds this speed (counted in bytes per second) on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

(Read and Write property)

See also [MAX_RECV_SPEED](#) option in CURL manual.

4.10.234 OptionMaxRecvSpeedLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionMaxRecvSpeed` instead. **Function:** Defines the maximum download speed.

Notes: If a download exceeds this speed (counted in bytes per second) on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

(Read and Write property)

4.10.235 OptionMaxRedirs as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The set number will be the redirection limit.

Example:

```
dim c as new CURLNMBS
```

```
c.OptionFollowLocation = true
```

```
c.OptionMaxRedirs = 3
```

Notes: If that many redirections have been followed, the next redirect will cause an error (`kError_TOO_MANY_REDIRECTS`). This option only makes sense if the `CURLOPT_FOLLOWLOCATION` is used at the same time. Added in 7.15.1: Setting the limit to 0 will make libCURL refuse any redirect. Set it to -1 for an infinite number of redirects (which is the default)

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [MAXREDIRS](#) option in CURL manual.

4.10.236 OptionMaxSendSpeed as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Defines the maximum upload speed.

Notes: If an upload exceeds this speed on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

Value is in bytes per second.

Useful if you have a limited pipe and you'd like your transfer not to use your entire bandwidth.

Slowing down the transfer speed is also useful for lowering CPU consumption during transfers.

(Read and Write property)

See also [MAX_SEND_SPEED](#) option in CURL manual.

4.10.237 OptionMaxSendSpeedLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionMaxSendSpeed` instead. **Function:** Defines the maximum upload speed.

Notes: If an upload exceeds this speed on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

Value is in bytes per second.

Useful if you have a limited pipe and you'd like your transfer not to use your entire bandwidth.

Slowing down the transfer speed is also useful for lowering CPU consumption during transfers.

(Read and Write property)

4.10.238 OptionMimeOptions as Integer

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set MIME option flags.

Notes: Pass a number that holds a bitmask of CURLMIMEOPT constants. Each bit is a Boolean flag used while encoding a MIME tree or multipart form data.

Available bits are:

CURLMIMEOPT_FORMESCAPE = 1

Tells libcurl to escape multipart form field and file names using the backslash-escaping algorithm rather than percent-encoding (HTTP only).

Backslash-escaping consists in preceding backslashes and double quotes with a backslash. Percent encoding maps all occurrences of double quote, carriage return and line feed to %22, %0D and %0A respectively.

Before version 7.81.0, percent-encoding was never applied.

HTTP browsers used to do backslash-escaping in the past but have over time transitioned to use percent-encoding. This option allows to address server-side applications that have not yet have been converted.

As an example, consider field or file name `strange\name"kind`. When the containing multipart form is sent, this is normally transmitted as `strange\name%22kind`. When this option is set, it is sent as `strange\\name\"kind`. (Read and Write property)

See also [MIME_OPTIONS](#) option in CURL manual.

4.10.239 OptionNetRC as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Controls usage of netrc file.

Notes: This parameter controls the preference of libCURL between using user names and passwords from your `textasciitilde /.netrc` file, relative to user names and passwords in the URL supplied with `OptionURL`.

libCURL uses a user name (and supplied or prompted password) supplied with `OptionUsername` and `OptionPassword` in preference to any of the options controlled by this parameter.

An integer, set to one of the values described below.

kNETRC_OPTIONAL = 1

The use of your `textasciitilde /.netrc` file is optional, and information in the URL is to be preferred. The file will be scanned with the host and user name (to find the password only) or with the host only, to find the first user name and password after that machine, whichever information is not specified in the URL.

Undefined values of the option will have this effect.

```
kNETRC_IGNORED = 0
```

The library will ignore the file and use only the information in the URL.

This is the default.

```
kNETRC_REQUIRED = 2
```

This value tells the library that use of the file is required, to ignore the information in the URL, and to search the file with the host only.

Only machine name, user name and password are taken into account (init macros and similar things aren't supported).

libCURL does not verify that the file has the correct properties set (as the standard Unix ftp client does). It should only be readable by user.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [NETRC](#) option in CURL manual.

4.10.240 OptionNetRCFile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string containing the full path name to the file you want libCURL to use as `.netrc` file.

Notes: If this option is omitted, and `OptionNETRC` is set, libCURL will attempt to find the a `.netrc` file in the current user's home directory. (Added in 7.10.9)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [NETRC_FILE](#) option in CURL manual.

4.10.241 OptionNewDirectoryPerms as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An integer, containing the value of the permissions that will be assigned to newly created directories on the remote server.

Notes: The default value is 0755, but any valid value can be used. The only protocols that can use this are sftp://, scp://, and file://. (Added in 7.16.4)

Value must be octal, so use `&o` prefix for number.

(Read and Write property)

See also [NEW_DIRECTORY_PERMS](#) option in CURL manual.

4.10.242 OptionNewFilePerms as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An integer, containing the value of the permissions that will be assigned to newly created files on the remote server.

Notes: The default value is `&o0644`, but any valid value can be used. The only protocols that can use this are sftp://, scp://, and file://. (Added in 7.16.4)

Be aware that you normally specify this in octal values. So use the `&o` prefix in Xojo.

(Read and Write property)

See also [NEW_FILE_PERMS](#) option in CURL manual.

4.10.243 OptionNoBody as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to not include the body-part in the output.

Notes: This is only relevant for protocols that have separate header and body parts. On HTTP(S) servers, this will make libCURL do a HEAD request.

To change request to GET, you should use OptionGet. Change request to POST with OptionPost etc.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **NOBODY** option in CURL manual.

4.10.244 OptionNoProxy as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string with a comma-separated list of hosts which do not use a proxy, if one is specified.

Notes: The only wildcard is a single * character, which matches all hosts, and effectively disables the proxy. Each name in this list is matched as either a domain which contains the hostname, or the hostname itself. For example, local.com would match local.com, local.com:80, and www.local.com, but not www.notlocal.com. (Added in 7.19.4)

(Read and Write property)

See also **NOPROXY** option in CURL manual.

4.10.245 OptionNoSignal as Integer

Plugin Version: 13.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to not use signals.

Notes: If it is true, libCURL will not use any functions that install signal handlers or any functions that cause signals to be sent to the process. This option is mainly here to allow multi-threaded unix applications to still set/use all timeout options etc, without risking getting signals. (Added in 7.10)

If this option is set and libCURL has been built with the standard name resolver, timeouts will not occur while the name resolve takes place. Consider building libCURL with c-ares support to enable asynchronous DNS lookups, which enables nice timeouts for name resolves without signals.

Setting OptionNoSignal to true makes libCURL NOT ask the system to ignore SIGPIPE signals, which otherwise are sent by the system when trying to send data to a socket which is closed in the other end. libCURL makes an effort to never cause such SIGPIPEs to trigger, but some operating systems have no way to avoid them and even on those that have there are some corner cases when they may still happen, contrary to our desire. In addition, using CURLAUTH_NTLM_WB authentication could cause a SIGCHLD signal to be raised.

(Read and Write property)

See also **NOSIGNAL** option in CURL manual.

4.10.246 OptionPassword as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The password to use for the transfer.

Notes: The OptionPassword option should be used in conjunction with the OptionUsername option.

(Read and Write property)

See also **PASSWORD** option in CURL manual.

4.10.247 OptionPathAsIs as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass path as it is and do not resolve dots.

Notes: Do not squash dot-dot sequences.

(Read and Write property)

See also **PATH_AS_IS** option in CURL manual.

4.10.248 OptionPinnedPublicKey as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The public key in DER form used to validate the peer public key.

Notes: Native path to key file.

This option is used only if SSLVerifyPeer is true.

(Read and Write property)

See also **PINNEDPUBLICKEY** option in CURL manual.

4.10.249 OptionPipeWait as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Wait/don't wait for pipe/mutex to clarify.

Notes: (Read and Write property)

See also **PIPEWAIT** option in CURL manual.

4.10.250 OptionPort as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The remote port number to connect to, instead of the one specified in the URL or the default port for the used protocol.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **PORT** option in CURL manual.

4.10.251 OptionPost as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A boolean parameter tells the library to do a regular HTTP post.

Notes: This will also make the library use the a "Content-Type: application/x-www-form-urlencoded" header. (This is by far the most commonly used POST method).

Use the OptionPostFields option to specify what data to post.

Optionally, you can provide data to POST using the Read event but then you must make sure to not set OptionPostFields to anything but "". When providing data with an event, you must transmit it using chunked transfer-encoding.

You can override the default POST Content-Type: header by setting your own with OptionHTTPHeader.

Using POST with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with OptionHTTPHeader as usual.

If you use POST to a HTTP 1.1 server, you can send data without knowing the size before starting the POST if you use chunked encoding. You enable this by adding a header like "Transfer-Encoding: chunked" with OptionHTTPHeader. With HTTP 1.0 or without chunked transfer, you must specify the size in the request.

When setting CURLOPT_POST to a non-zero value, it will automatically set OptionNoBody to 0 (since 7.14.1).

If you issue a POST request and then want to make a HEAD or GET using the same re-used handle, you must explicitly set the new request type using OptionNoBody or OptionGet or similar.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **POST** option in CURL manual.

4.10.252 OptionPostFields as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string which should be the full data to post in an HTTP POST operation.

Example:

```

dim xml as string // XML or JSON to send as payload
dim c as new CURLNMBS

c.OptionFollowLocation = true
c.OptionMaxRedirs = 3
c.OptionPostFields = xml
c.OptionUserAgent = "Test App"
c.OptionPost = true

// for SOAP use right content type
c.SetOptionHTTPHeader array("Content-Type: application/soap+xml; charset=utf-8")

```

Notes: You must make sure that the data is formatted the way you want the server to receive it. libCURL will not convert or encode it for you. Most web servers will assume this data to be url-encoded. Take note.

This POST is a normal application/x-www-form-urlencoded kind (and libCURL will set that Content-Type by default when this option is used), which is the most commonly used one by HTML forms. See also the OptionPost. Using OptionPostFields implies OptionPost.

Using POST with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with CURLOPT_HTTPHEADER as usual.

To make multipart/formdata posts (aka rfc1867-posts), check out the OptionPost option.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **COPYPOSTFIELDS** option in CURL manual.

4.10.253 OptionPostFieldSize as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The size of the post data.

Notes: Optional you can set the size of your post data.

If you specify a postfield string, this size will be set automatically.

If you specify a size and no postfield string, the Read event will request data.

(Read and Write property)

See also **POSTFIELDSIZE** option in CURL manual.

4.10.254 OptionPostFieldSizeLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionPostFieldSize instead. **Function:** The size of the post data. (64 bit version)

Notes: Optional you can set the size of your post data.

If you specify a postfield string, this size will be set automatically.

If you specify a size and no postfield string, the Read event will request data.
(Read and Write property)

4.10.255 OptionPostRedir as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A bitmask to control how libCURL acts on redirects after POSTs that get a 301 or 302 response back.

Notes: A parameter with bit 0 set (value `CURL_REDIR_POST_301=1`) tells the library to respect RFC 2616/10.3.2 and not convert POST requests into GET requests when following a 301 redirection. Setting bit 1 (value `CURL_REDIR_POST_302=2`) makes libCURL maintain the request method after a 302 redirect. `CURL_REDIR_POST_ALL` is a convenience define that sets both bits.

The non-RFC behaviour is ubiquitous in web browsers, so the library does the conversion by default to maintain consistency. However, a server may require a POST to remain a POST after such a redirection. This option is meaningful only when setting OptionFollowLocation. (Added in 7.17.1) (This option was known as `CURLOPT_POST301` up to 7.19.0 as it only supported the 301 way before then)

(Read and Write property)

See also [POSTREDIR](#) option in CURL manual.

4.10.256 OptionPreProxy as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Name of pre proxy to use.

Notes: (Read and Write property)

See also [PRE_PROXY](#) option in CURL manual.

4.10.257 OptionProtocols as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionProtocolsString instead. **Function:** A bitmask of kProtocol* constants.

Notes: If used, this bitmask limits what protocols libCURL may use in the transfer. This allows you to have a libCURL built to support a wide range of protocols but still limit specific transfers to only be allowed to use a subset of them. By default libCURL will accept all protocols it supports. See also OptionRedirProtocols.

(Added in 7.19.4)

(Read and Write property)

4.10.258 OptionProtocolsString as String

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The protocols allowed-

Example:

```
dim c as new CURLNMBS
c.OptionProtocolsString = "http,tftp,sftp"
```

Notes: Pass a string that holds a comma-separated list of case insensitive protocol names (URL schemes) to allow in the transfer. This option allows applications to use libcurl built to support a wide range of protocols but still limit specific transfers to only be allowed to use a subset of them. By default, libcurl accepts all protocols it was built with support for. See also OptionReditProtocolsString.

If trying to set a non-existing protocol or if no matching protocol at all is set, it returns error.

These are the available protocols:

DICT, FILE, FTP, FTPS, GOPHER, GOPHERS, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTMPE, RTMPS, RTMPT, RTMPTE, RTMPTS, RTSP, SCP, SFTP, SMB, SMBS, SMTP, SMTPS, TELNET, TFTP

You can set "ALL" as a short-cut to enable all protocols. Note that by setting all, you may enable protocols that were not supported the day you write this but are introduced in a future libcurl version.

CURLVersionMBS class can be used to get a list of all supported protocols in the current libcurl. GetInfo-Protocol function is the recommended way to figure out the protocol used in a previous transfer.

(Read and Write property)

4.10.259 OptionProxy as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set HTTP proxy to use.

Example:

```
dim c as CURLNMBS // your CURL object
dim psAddress as string // your proxy address
dim psPort as Integer // your proxy port
```

```
c.OptionProxy=psAddress
c.OptionProxyPort=psPort
c.OptionProxyType=c.kPROXY_HTTP
```

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

The parameter should be a string holding the host name or dotted IP address. To specify port number in this string, append : [port] to the end of the host name. The proxy string may be prefixed with [protocol] :// since any such prefix will be ignored. The proxy's port number may optionally be specified with the separate option ProxyHost.

When you tell the library to use an HTTP proxy, libCURL will transparently convert operations to HTTP even if you specify an FTP URL etc. This may have an impact on what other features of the library you can use, such as CURLOPT_QUOTE and similar FTP specifics that don't work unless you tunnel through the HTTP proxy. Such tunneling is activated with HTTPProxyTunnel.

libCURL respects the environment variables http_proxy, ftp_proxy, all_proxy etc, if any of those is set. The Proxy option does however override any possibly set environment variables.

Starting with 7.14.1, the proxy host string given in environment variables can be specified the exact same way as the proxy can be set with Proxy, include protocol prefix (http://) and embedded user + password.

You can use WinHTTPClientMBS class on Windows or CFProxyMBS on Mac to discover system proxy settings.

(Read and Write property)

See also **PROXY** option in CURL manual.

4.10.260 OptionProxyAuth as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Which proxy authentication to use.

Notes: Pass an integer as parameter, which is set to a bitmask, to tell libCURL what authentication method(s) you want it to use for your proxy authentication. If more than one bit is set, libCURL will first

query the site to see what authentication methods it supports and then pick the best one you allow it to use. For some methods, this will induce an extra network round-trip. Set the actual name and password with the ProxyUserPassword option. The bitmask can be constructed by or'ing together the bits listed above for the HTTPAuth option. As of this writing, only Basic, Digest and NTLM work. (Added in 7.10.7)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **PROXYAUTH** option in CURL manual.

4.10.261 OptionProxyCAInfo as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The CApath or CAfile used to validate the proxy certificate.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLNMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionProxySSLVerifyHost = 0
```

```
d.OptionProxySSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionProxyCAInfo = cacert.NativePath
```

```
d.OptionProxySSLVerifyHost = 2
```

```
d.OptionProxySSLVerifyPeer = 1
```

Notes: Pass native file path.

This option is used only if CURLNMBS.OptionProxySSLVerifyPeer is true

(Read and Write property)

See also **PROXY_CAINFO** option in CURL manual.

4.10.262 OptionProxyCAInfoBlob as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The CAInfo for proxy as blob value.

Notes: This option is for connecting to an HTTPS proxy, not an HTTPS server. Certificate Authority (CA) bundle in PEM format passed PEM encoded content holding one or more certificates to verify the HTTPS server with.

(Read and Write property)

See also [PROXY_CAINFO_BLOB](#) option in CURL manual.

4.10.263 OptionProxyCAPath as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The CApath directory used to validate the proxy certificate.

Notes: Pass native file path.

This option is used only if `CURLNMBBS.OptionProxySSLVerifyPeer` is true

(Read and Write property)

See also [PROXY_CAPATH](#) option in CURL manual.

4.10.264 OptionProxyCRLFile as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: CRL file for proxy.

Notes: Pass native file path.

(Read and Write property)

See also [PROXY_CRLFILE](#) option in CURL manual.

4.10.265 OptionProxyIssuerCert as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the proxy issuer SSL certificate filename.

Notes: Pass a string naming a file holding a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer of the the HTTPS proxy is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the `OptionProxySSLVerifyPeer` option. Otherwise, the result of the check is not considered as failure.

A specific error code (`CURLE_SSL_ISSUER_ERROR`) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (`OptionProxySSLVerifyPeer` has to be set too for the check to fail).

(Read and Write property)

See also [PROXY_ISSUERCERT](#) option in CURL manual.

4.10.266 OptionProxyIssuerCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set proxy issuer SSL certificate from memory blob.

Notes: Pass data, which contains binary data of a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer of the the HTTPS proxy is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option should be used in combination with the OptionProxySSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (`CURLE_SSL_ISSUER_ERROR`) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionProxySSLVerifyPeer has to be set too for the check to fail).

This option is an alternative to OptionProxyIssuerCert which instead expects a file name as input.
(Read and Write property)

See also [PROXY_ISSUERCERT_BLOB](#) option in CURL manual.

4.10.267 OptionProxyKeyPassword as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Password for the SSL private key for proxy.

Notes: (Read and Write property)

See also [PROXY_KEYPASSWD](#) option in CURL manual.

4.10.268 OptionProxyPassword as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string which should be pointing to the password to use for the transfer while connecting to Proxy.

Notes: The OptionProxyPassword option should be used in conjunction with the OptionProxyUsername option. (Added in 7.19.1)

(Read and Write property)

See also [PROXYPASSWORD](#) option in CURL manual.

4.10.269 OptionProxyPinnedPublicKey as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The public key in DER form used to validate the proxy public key.

Notes: This option is used only if `CURLNMBBS.OptionProxySSLVerifyPeer` is true.

Please path native file path to key file.

(Read and Write property)

See also [PROXY_PINNEDPUBLICKEY](#) option in CURL manual.

4.10.270 OptionProxyPort as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The proxy port to connect to unless it is specified in the proxy string `OptionProxy`.

Notes: The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

You can use `OptionProxy` with port, e.g. "12.34.56.78:8080" or pass port here and proxy without port.

For some users it seems like the option with `OptionProxy` including port works better.

(Read and Write property)

See also [PROXYPORT](#) option in CURL manual.

4.10.271 OptionProxyServiceName as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Proxy Service Name.

Notes: (Read and Write property)

See also [PROXY_SERVICE_NAME](#) option in CURL manual.

4.10.272 OptionProxySSLCert as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Name of the file keeping your private SSL-certificate for proxy.

Notes: (Read and Write property)

See also [PROXY_SSLCERT](#) option in CURL manual.

4.10.273 OptionProxySSLCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets private key for proxy cert from memory blob.

Notes: Pass data, which contains the private key for connecting to the HTTPS proxy. Compatible with OpenSSL. The format (like "PEM") must be specified with `CURL.SetOptionProxySSLKeyType`. (Read and Write property)

See also `PROXY_SSLCERT_BLOB` option in CURL manual.

4.10.274 OptionProxySSLCertType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Type of the file keeping your SSL-certificate for proxy.

Notes: Value can be "DER", "PEM" or "ENG".

(Read and Write property)

See also `PROXY_SSLCERTTYPE` option in CURL manual.

4.10.275 OptionProxySSLCipherList as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Specify which SSL ciphers to use for proxy.

Notes: (Read and Write property)

See also `PROXY_SSL_CIPHER_LIST` option in CURL manual.

4.10.276 OptionProxySSLKey as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Name of the file keeping your private SSL-key for proxy.

Notes: Pass native file path.

(Read and Write property)

See also `PROXY_SSLKEY` option in CURL manual.

4.10.277 OptionProxySSLKeyBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set private key for proxy cert from memory blob.

Notes: Pass data, which contains a private key for connecting to the HTTPS proxy. Compatible with

OpenSSL. The format (like "PEM") must be specified with `OptionProxySSLKeyType`.

This option is an alternative to `OptionProxySSLKey` which instead expects a file name as input.
(Read and Write property)

See also `PROXY_SSLKEY_BLOB` option in CURL manual.

4.10.278 `OptionProxySSLKeyType` as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets type of the file keeping your private SSL-key for proxy.

Notes: Value is DER, PEM or ENG.

(Read and Write property)

See also `PROXY_SSLKEYTYPE` option in CURL manual.

4.10.279 `OptionProxySSLOptions` as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable specific SSL features with a bitmask for proxy.

Notes: (Read and Write property)

See also `PROXY_SSL_OPTIONS` option in CURL manual.

4.10.280 `OptionProxySSLVerifyHost` as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable SSL Host verification.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLNMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionProxySSLVerifyHost = 0
```

```
d.OptionProxySSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionProxyCAInfo = cacert.NativePath
```

```
d.OptionProxySSLVerifyHost = 2
d.OptionProxySSLVerifyPeer = 1
```

Notes: Set if we should verify the Common name from the proxy certificate in ssl handshake, set 1 to check existence, 2 to ensure that it matches the provided hostname.

(Read and Write property)

See also [PROXY_SSL_VERIFYHOST](#) option in CURL manual.

4.10.281 OptionProxySSLVerifyPeer as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set if we should verify the proxy in ssl handshake.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLNMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionProxySSLVerifyHost = 0
```

```
d.OptionProxySSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionProxyCAInfo = cacert.NativePath
```

```
d.OptionProxySSLVerifyHost = 2
```

```
d.OptionProxySSLVerifyPeer = 1
```

Notes: set 1 to verify.

(Read and Write property)

See also [PROXY_SSL_VERIFYPEER](#) option in CURL manual.

4.10.282 OptionProxySSLVersion as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: What version to specifically try to use for proxy.

Notes: The SSL and TLS versions have typically developed from the most insecure version to be more and more secure in this order through history: SSL v2, SSLv3, TLS v1.0, TLS v1.1, TLS v1.2 and the most

recent TLS v1.3.

Use one of the available defines for this purpose. The available options are:

Default	0	The default acceptable version range. The minimum acceptable version is by default TLS v1.0 since 7.39.0 (unless the TLS library has a stricter rule).
TLSv1	1	TLS v1.0 or later
SSLv2	2	SSL v2 (but not SSLv3)
SSLv3	3	SSL v3 (but not SSLv2)
TLSv1.0	4	TLS v1.0 or later (Added in 7.34.0)
TLSv1.1	5	TLS v1.1 or later (Added in 7.34.0)
TLSv1.2	6	TLS v1.2 or later (Added in 7.34.0)
TLSv1.3	7	TLS v1.3 or later (Added in 7.52.0)

See also `kSSLVersion*` constants.

The maximum TLS version can be set by using one of the `CURL_SSLVERSION_MAX_` macros below. It is also possible to OR one of the `CURL_SSLVERSION_` macros with one of the `CURL_SSLVERSION_MAX_` macros.

Default	<code>&h10000</code>	The flag defines the maximum supported TLS version by libcurl, or the default value from the SSL library is used. libcurl will use a sensible default maximum, which was TLS v1.2 up to before 7.61.0 and is TLS v1.3 since then - assuming the TLS library support it. (Added in 7.54.0)
Max TLSv1.0	<code>&h40000</code>	The flag defines maximum supported TLS version as TLS v1.0. (Added in 7.54.0)
Max TLSv1.1	<code>&h50000</code>	The flag defines maximum supported TLS version as TLS v1.1. (Added in 7.54.0)
Max TLSv1.2	<code>&h60000</code>	The flag defines maximum supported TLS version as TLS v1.2. (Added in 7.54.0)
Max TLSv1.3	<code>&h70000</code>	The flag defines maximum supported TLS version as TLS v1.3. (Added in 7.54.0)

Please note that MBS Plugin does not yet support TLS v1.3 now, but may in future. (Read and Write property)

See also [PROXY_SSLVERSION](#) option in CURL manual.

4.10.283 OptionProxyTLS13Ciphers as String

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Specify which TLS 1.3 ciphers suites to use for proxy.

Notes: The list of cipher suites to use for the TLS 1.3 connection to a proxy. The list must be syntactically correct, it consists of one or more cipher suite strings separated by colons.

You'll find more details about cipher lists on this URL:

<https://curl.haxx.se/docs/ssl-ciphers.html>

The application does not have to keep the string around after setting this option.

(Read and Write property)

See also [PROXY_TLS13_CIPHERS](#) option in CURL manual.

4.10.284 OptionProxyTLSAuthPassword as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Password for authenticated TLS for proxy.

Notes: (Read and Write property)

See also [PROXY_TLSAUTH_PASSWORD](#) option in CURL manual.

4.10.285 OptionProxyTLSAuthType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set authentication type for authenticated TLS for proxy

Notes: (Read and Write property)

See also [PROXY_TLSAUTH_TYPE](#) option in CURL manual.

4.10.286 OptionProxyTLSAuthUsername as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set a username for authenticated TLS for proxy.

Notes: (Read and Write property)

See also [PROXY_TLSAUTH_USERNAME](#) option in CURL manual.

4.10.287 OptionProxyTransferMode as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If this integer value is set to 1 (one), it tells libCURL to set the transfer mode (binary or ASCII) for FTP transfers done via an HTTP proxy, by appending ;type=a or ;type=i to the URL.

Notes: Without this setting, or it being set to 0 (zero, the default), OptionTransferText has no effect when doing FTP via a proxy. Beware that not all proxies support this feature. (Added in 7.18.0)
(Read and Write property)

See also **PROXY_TRANSFER_MODE** option in CURL manual.

4.10.288 OptionProxyType as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This option is to set type of the proxy.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Available options for this are kPROXY_HTTP, kPROXY_SOCKS4 (added in 7.15.2) kPROXY_SOCKS5.
The HTTP type is default.

(Read and Write property)

See also **PROXYTYPE** option in CURL manual.

4.10.289 OptionProxyUsername as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string, which should be pointing to the user name to use for the transfer while connecting to Proxy.

Notes: In order to specify the password to be used in conjunction with the user name use the OptionProxyPassword option.

(Read and Write property)

See also **PROXYUSERNAME** option in CURL manual.

4.10.290 OptionPut as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionUpload instead.

Function: A non-zero parameter tells the library to use HTTP PUT to transfer data.

Notes: The data should be set with OptionInFileSize.

This option is deprecated and starting with version 7.12.1 you should instead use OptionUpload.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.10.291 OptionQuickExit as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to allow to exit quickly.

Notes: Pass a number as a parameter, 1 meaning that when recovering from a timeout, libcurl should skip lengthy cleanups that are intended to avoid all kinds of leaks (threads etc.), as the caller program is about to call exit() anyway. This allows for a swift termination after a DNS timeout for example, by canceling and/or forgetting about a resolver thread, at the expense of a possible (though short-lived) leak of associated resources.

(Read and Write property)

See also [QUICK_EXIT](#) option in CURL manual.

4.10.292 OptionRandomFile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** A file name for the random file.

Notes: The file will be used to read from to seed the random engine for SSL. The more random the specified file is, the more secure the SSL connection will become.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

4.10.293 OptionRange as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string which should contain the specified range you want.

Notes: It should be in the format "X-Y", where X or Y may be left out. HTTP transfers also support several intervals, separated with commas as in "X-Y,N-M". Using this kind of multiple intervals will cause the HTTP server to send the response document in pieces (using standard MIME separation techniques).

Pass a NULL to this option to disable the use of ranges.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **RANGE** option in CURL manual.

4.10.294 OptionRedirProtocols as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionRedirProtocolsString instead. **Function:** An integer that holds a bitmask of kProtocol* constants.

Notes: If used, this bitmask limits what protocols libCURL may use in a transfer that it follows to in a redirect when OptionFollowLocation is enabled. This allows you to limit specific transfers to only be allowed to use a subset of protocols in redirections. By default libCURL will allow all protocols except for FILE and SCP. This is a difference compared to pre-7.19.4 versions which unconditionally would follow to all protocols supported. (Added in 7.19.4)

(Read and Write property)

4.10.295 OptionReditProtocolsString as String

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The protocols allowed to redirect to.

Example:

```
dim c as new CURLNMBS
c.OptionReditProtocolsString = "http,https"
```

Notes: Pass string that holds a comma-separated list of case insensitive protocol names (URL schemes). That list limits what protocols libcurl may use in a transfer that it follows to in a redirect when OptionFollowLocation is enabled. This option allows applications to limit specific transfers to only be allowed to use a subset of protocols in redirections.

Protocols denied by OptionProtocolsString are not overridden by this option.

By default libcurl will allow HTTP, HTTPS, FTP and FTPS on redirects (since 7.65.2). Older versions of libcurl allowed all protocols on redirect except several disabled for security reasons: Since 7.19.4 FILE and SCP are disabled, and since 7.40.0 SMB and SMBS are also disabled.

These are the available protocols:

_DICT, FILE, FTP, FTPS, GOPHER, GOPHERS, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTMPE, RTMPS, RTMPT, RTMPTE, RTMPTS, RTSP, SCP, SFTP, SMB, SMBS, SMTP, SMTPS, TELNET, TFTP

You can set "ALL" as a short-cut to enable all protocols. Note that by setting all, you may enable protocols that were not supported the day you write this but are introduced in a future libcurl version.

If trying to set a non-existing protocol or if no matching protocol at all is set, it returns error.

Default

HTTP, HTTPS, FTP and FTPS (Added in 7.65.2).

Older versions defaulted to all protocols except FILE, SCP and since 7.40.0 SMB and SMBS. (Read and Write property)

4.10.296 OptionReferer as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The referer to pass to the server.

Notes: It will be used to set the Referer: header in the http request sent to the remote server. This can be used to fool servers or scripts. You can also set any custom header with OptionHTTPHeader.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [REFERER](#) option in CURL manual.

4.10.297 OptionRequestTarget as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The request target, instead of extracted from the URL.

Notes: (Read and Write property)

See also [REQUEST_TARGET](#) option in CURL manual.

4.10.298 OptionResumeFrom as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: It contains the offset in number of bytes that you want the transfer to start from.

Notes: Set this option to 0 to make the transfer start from the beginning (effectively disabling resume). For FTP, set this option to -1 to make the transfer start from the end of the target file (useful to continue an interrupted upload).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [RESUME_FROM](#) option in CURL manual.

4.10.299 OptionResumeFromLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionResumeFrom instead. **Function:** It contains the offset in number of bytes that you want the transfer to start from.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.10.300 OptionRTSPClientCSEQ as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Manually initialize the client RTSP CSeq for this handle.

Notes: (Read and Write property)

See also [RTSP_CLIENT_CSEQ](#) option in CURL manual.

4.10.301 OptionRTSPRequest as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: RTSP request method (OPTIONS, SETUP, PLAY, etc...).

Notes: (Read and Write property)

See also [RTSP_REQUEST](#) option in CURL manual.

4.10.302 OptionRTSPServerCSEQ as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Manually initialize the server RTSP CSeq for this handle.

Notes: (Read and Write property)

See also [RTSP_SERVER_CSEQ](#) option in CURL manual.

4.10.303 OptionRTSPSessionID as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The RTSP session identifier.

Notes: (Read and Write property)

See also [RTSP_SESSION_ID](#) option in CURL manual.

4.10.304 OptionRTSPStreamURI as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The RTSP stream URI.

Notes: (Read and Write property)

See also [RTSP_STREAM_URI](#) option in CURL manual.

4.10.305 OptionRTSPTransport as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The Transport: header to use in RTSP requests.

Notes: (Read and Write property)

See also [RTSP_TRANSPORT](#) option in CURL manual.

4.10.306 OptionSASLAUTHZID as String

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The authorisation identity (identity to act as).

Notes: Sets the authorisation identity (identity to act as).

Pass a text as parameter, which should be pointing to the authorisation identity (authzid) for the transfer. Only applicable to the PLAIN SASL authentication mechanism where it is optional.

When not specified only the authentication identity (authcid) as specified by the username will be sent to the server, along with the password. The server will derive a authzid from the authcid when not provided, which it will then uses internally.

When the authzid is specified, the use of which is server dependent, it can be used to access another user's inbox, that the user has been granted access to, or a shared mailbox for example.

(Read and Write property)

See also [SASL_AUTHZID](#) option in CURL manual.

4.10.307 OptionSASLIR as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable SASL initial response.

Notes: (Read and Write property)

See also [SASL_IR](#) option in CURL manual.

4.10.308 OptionServerResponseTimeout as Integer

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Causes libcurl to set a timeout period (in seconds) on the amount of time that the server is allowed to take in order to send a response message for a command before the session is considered dead.

Notes: While libcurl is waiting for a response, this value overrides OptionTimeout. It is recommended that if used in conjunction with OptionTimeout, you set OptionServerResponseTimeout to a value smaller than OptionTimeout.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SERVER_RESPONSE_TIMEOUT](#) option in CURL manual.

4.10.309 OptionServiceName as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Service Name.

Notes: (Read and Write property)

See also [SERVICE_NAME](#) option in CURL manual.

4.10.310 OptionSocks5Auth as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bitmask of allowed auth methods for connections to SOCKS5 proxies.

Notes: (Read and Write property)

See also [SOCKS5_AUTH](#) option in CURL manual.

4.10.311 OptionSocks5GSSAPINEC as Boolean

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to protect SOCKS5 connection is protected.

Notes: Set to true to enable or false to disable. As part of the gssapi negotiation a protection mode is negotiated. The rfc1961 says in section 4.3/4.4 it should be protected, but the NEC reference implementation does not. If enabled, this option allows the unprotected exchange of the protection mode negotiation. (Added in 7.19.4).

(Read and Write property)

See also [SOCKS5_GSSAPI_NEC](#) option in CURL manual.

4.10.312 OptionSocks5GSSAPIService as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** A string holding the name of the service.

Notes: The default service name for a SOCKS5 server is rcmd/server-fqdn. This option allows you to change it. (Added in 7.19.4)

(Read and Write property)

4.10.313 OptionSSHAuthTypes as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Define the SSH authorization types.

Example:

```
dim c as CURLNMBS // your instance

// only do password
c.OptionSSHAuthTypes = c.kSSHAuthKeyboard or c.kSSHAuthPassword
```

Notes: Pass a long set to a bitmask consisting of one or more of CURLSSH_AUTH_PUBLICKEY, CURLSSH_AUTH_PASSWORD, CURLSSH_AUTH_HOST, CURLSSH_AUTH_KEYBOARD. Set CURLSSH_AUTH_ to let libCURL pick one. (Added in 7.16.1)

See kSSHAuth* constants.

(Read and Write property)

See also [SSH_AUTH_TYPES](#) option in CURL manual.

4.10.314 OptionSSHCompression as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable SSH compression.

Notes: (Read and Write property)

See also [SSH_COMPRESSION](#) option in CURL manual.

4.10.315 OptionSSHHostPublicKeyMD5 as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string containing 32 hexadecimal digits with the 128 bit MD5 checksum of the remote host's public key.

Notes: libCURL will reject the connection to the host unless the md5sums match. This option is only for SCP and SFTP transfers. (Added in 7.17.1)

(Read and Write property)

See also [SSH_HOST_PUBLIC_KEY_MD5](#) option in CURL manual.

4.10.316 OptionSSHHostPublicKeySHA256 as String

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: SHA256 hash of SSH server public key.

Notes: Pass a string containing a Base64-encoded SHA256 hash of the remote host's public key. The transfer will fail if the given hash does not match the hash the remote host provides.

(Read and Write property)

See also [SSH_HOST_PUBLIC_KEY_SHA256](#) option in CURL manual.

4.10.317 OptionSSHKnownhosts as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string holding the file name of the known_host file to use.

Notes: The known_hosts file should use the OpenSSH file format as supported by libssh2. If this file is specified, libCURL will only accept connections with hosts that are known and present in that file, with a matching public key. (Added in 7.19.6)

(Read and Write property)

See also [SSH_KNOWNHOSTS](#) option in CURL manual.

4.10.318 OptionSSHPrivateKeyfile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass a path pointing to a file name for your private key.

Example:

`Dim c As New CURLNMBS`

```
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa"
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa.pub"
c.OptionUsername = "test"
```

Notes: If not used, libCURL defaults to using

textasciitilde /.ssh/id_dsa. If the file is password-protected, set the password with OptionSSLKeyPassword. (Added in 7.16.1)

For a SFTP transfer (= file transfer over SSH), you would tell the plugin your public and private keys, so the plugin can login.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you. (Read and Write property)

See also [SSH_PRIVATE_KEYFILE](#) option in CURL manual.

4.10.319 OptionSSHPublicKeyfile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass a path pointing to a file name for your public key.

Example:

Dim c As New CURLNMBS

```
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa"
c.OptionSSHPublicKeyfile = "/Users/test/.ssh/id_rsa.pub"
c.OptionUsername = "test"
```

Notes: If not used, libCURL defaults to using textasciitilde /.ssh/id_dsa.pub. (Added in 7.16.1)

For a SFTP transfer (= file transfer over SSH), you would tell the plugin your public and private keys, so the plugin can login.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you. (Read and Write property)

See also [SSH_PUBLIC_KEYFILE](#) option in CURL manual.

4.10.320 OptionSSLCert as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The string should be the file name of your certificate.

Notes: The default format is "PEM" and can be changed with OptionSSLCERTTYPE.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **SSLCERT** option in CURL manual.

4.10.321 OptionSSLCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set SSL client certificate from memory blob.

Notes: Pass data, which contains a client certificate. The format must be "P12" on Secure Transport or Schannel. The format must be "P12" or "PEM" on OpenSSL. The string "P12" or "PEM" must be specified with OptionSSLCertType.

This option is an alternative to OptionSSLCert which instead expects a file name as input.

(Read and Write property)

See also **SSLCERT_BLOB** option in CURL manual.

4.10.322 OptionSSLCertPassword as String

Plugin Version: 11.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionKeyPassword instead. **Function:** The certificate password.

Notes: (Read and Write property)

4.10.323 OptionSSLCertType as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The string should be the format of your certificate.

Notes: Supported formats are "PEM" and "DER". (Added in 7.9.3)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSLCERTTYPE](#) option in CURL manual.

4.10.324 OptionSSLCipherList as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A string holding the list of ciphers to use for the SSL connection.

Example:

```
// allow lower secure ciphers
curl.OptionSSLCipherList = "DEFAULT@SECLEVEL=0"
```

Notes: The list must be syntactically correct, it consists of one or more cipher strings separated by colons. Commas or spaces are also acceptable separators but colons are normally used, !, - and + can be used as operators. Valid examples of cipher lists include 'RC4-SHA', 'SHA1+DES', 'TLSv1' and 'DEFAULT'. The default list is normally set when you compile OpenSSL.

You'll find more details about cipher lists on this URL:

<http://www.openssl.org/docs/apps/ciphers.html>

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSL_CIPHER_LIST](#) option in CURL manual.

4.10.325 OptionSSLEnableALPN as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable TLS ALPN extension (http2 over ssl might fail without).

Notes: (Read and Write property)

See also [SSL_ENABLE_ALPN](#) option in CURL manual.

4.10.326 OptionSSLEnableNPN as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** Enable/disable TLS NPN extension (http2 over ssl might fail without)

Notes: (Read and Write property)

4.10.327 OptionSSLEngine as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** It will be used as the identifier for the crypto engine you want to use for your private key.

Notes: If the crypto device cannot be loaded, `kError_SSL_ENGINE_NOTFOUND` is returned.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSENGINE](#) option in CURL manual.

4.10.328 OptionSSLEngineDefault as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. **Function:** Sets the actual crypto engine as the default for (asymmetric) crypto operations.

Notes: If the crypto device cannot be set, `kError_SSL_ENGINE_SETFAILED` is returned.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSENGINE_DEFAULT](#) option in CURL manual.

4.10.329 OptionSSLFalseStart as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set if we should enable TLS false start.

Notes: (Read and Write property)

See also [SSL_FALSESTART](#) option in CURL manual.

4.10.330 OptionSSLKey as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The string should be the file name of your private key.

Notes: The default format is "PEM" and can be changed with OptionSSLKEYTYPE.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [SSLKEY](#) option in CURL manual.

4.10.331 OptionSSLKeyBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set private key for client cert from memory blob.

Notes: Pass data, which contains a private key. Compatible with OpenSSL. The format (like "PEM") must be specified with OptionSSLKeyType.

This option is an alternative to OptionSSLKey which instead expects a file name as input.

(Read and Write property)

See also [SSLKEY_BLOB](#) option in CURL manual.

4.10.332 OptionSSLKeyPassword as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Deprecated: This item is deprecated and should no longer be used. You can use OptionKeyPassword instead. **Function:** The password required to use the OptionSSLKEY private key.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.10.333 OptionSSLKeyType as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The string should be the format of your private key.

Notes: Supported formats are "PEM", "DER" and "ENG".

The format "ENG" enables you to load the private key from a crypto engine. In this case OptionSSLKEY is used as an identifier passed to the engine. You have to set the crypto engine with OptionSSLENGINE. "DER" format key file currently does not work because of a bug in OpenSSL.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSLKEYTYPE](#) option in CURL manual.

4.10.334 OptionSSLOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable/disable specific SSL features with a bitmask.

Notes: (Read and Write property)

See also [SSL_OPTIONS](#) option in CURL manual.

4.10.335 OptionSSLSessionIDCache as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to use the SSL session ID cache.

Notes: Pass false to disable libCURL's use of SSL session-ID caching. Set this to true to enable it. By default all transfers are done using the cache. Note that while nothing ever should get hurt by attempting to reuse SSL session-IDs, there seem to be broken SSL implementations in the wild that may require you to disable this in order for you to succeed. (Added in 7.16.0)

(Read and Write property)

See also [SSL_SESSIONID_CACHE](#) option in CURL manual.

4.10.336 OptionSSLVerifyHost as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This option determines whether libCURL verifies that the server cert is for the server it is known as.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLNMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0

// or better provide root certificates:

Dim cacert As FolderItem = GetFolderItem("cacert.pem")
d.OptionCAInfo = cacert.NativePath
d.OptionSSLVerifyHost = 2
d.OptionSSLVerifyPeer = 1
```

Notes: When negotiating an SSL connection, the server sends a certificate indicating its identity.

When `OptionSSLVerifyHost` is 2, that certificate must indicate that the server is the server to which you meant to connect, or the connection fails.

CURL considers the server the intended one when the Common Name field or a Subject Alternate Name field in the certificate matches the host name in the URL to which you told CURL to connect.

When the value is 1, the certificate must contain a Common Name field, but it doesn't matter what name it says. (This is not ordinarily a useful setting).

When the value is 0, the connection succeeds regardless of the names in the certificate.

The default, since 7.10, is 2.

The checking this option controls is of the identity that the server claims. The server could be lying. To control lying, see `OptionSSLVerifyPeer`.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

When you don't set the options for certificate path or load system certificates, the MBS Plugin will disable the verify step to let the transfer run.

(Read and Write property)

See also [SSL_VERIFYHOST](#) option in CURL manual.

4.10.337 OptionSSLVerifyPeer as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Configure whether this CURL instance will verify the SSL peer certificate.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLNMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionSSLVerifyHost = 0
```

```
d.OptionSSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionCAInfo = cacert.NativePath
```

```
d.OptionSSLVerifyHost = 2
```

```
d.OptionSSLVerifyPeer = 1
```

Notes: This option determines whether CURL verifies the authenticity of the peer's certificate. A value of 1 means CURL verifies; zero means it doesn't. The default is nonzero, but before 7.10, it was zero.

When negotiating an SSL connection, the server sends a certificate indicating its identity. CURL verifies whether the certificate is authentic, i.e. that you can trust that the server is who the certificate says it is. This trust is based on a chain of digital signatures, rooted in certification authority (CA) certificates you supply. As of 7.10, CURL installs a default bundle of CA certificates and you can specify alternate certificates with the OptionCAINFO option or the OptionCAPATH option.

When OptionSSLVerifyPeer is nonzero, and the verification fails to prove that the certificate is authentic, the connection fails. When the option is zero, the connection succeeds regardless.

Authenticating the certificate is not by itself very useful. You typically want to ensure that the server, as authentically identified by its certificate, is the server you mean to be talking to. Use OptionSSLVerifyHost to control that.

When you don't set the options for certificate path or load system certificates, the MBS Plugin will disable the verify step to let the transfer run.

(Read and Write property)

See also [SSL_VERIFYPEER](#) option in CURL manual.

4.10.338 OptionSSLVerifyStatus as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set if we should verify the certificate status.

Notes: (Read and Write property)

See also [SSL_VERIFYSTATUS](#) option in CURL manual.

4.10.339 OptionSSLVersion as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: What version of SSL/TLS to attempt to use.

Example:

```
dim c as CURLNMBS
c.OptionUseSSL = c.kFTPSSL_ALL
c.OptionSSLVersion = c.kSSLVersionTLSv12
```

Notes: The SSL and TLS versions have typically developed from the most insecure version to be more and more secure in this order through history: SSL v2, SSLv3, TLS v1.0, TLS v1.1, TLS v1.2 and the most recent TLS v1.3.

Use one of the available defines for this purpose. The available options are:

Default	0	The default acceptable version range. The minimum acceptable version is by default TLS v1.0 since 7.39.0 (unless the TLS library has a stricter rule).
TLSv1	1	TLS v1.0 or later
SSLv2	2	SSL v2 (but not SSLv3)
SSLv3	3	SSL v3 (but not SSLv2)
TLSv1.0	4	TLS v1.0 or later (Added in 7.34.0)
TLSv1.1	5	TLS v1.1 or later (Added in 7.34.0)
TLSv1.2	6	TLS v1.2 or later (Added in 7.34.0)
TLSv1.3	7	TLS v1.3 or later (Added in 7.52.0)

See also `kSSLVersion*` constants.

The maximum TLS version can be set by using one of the `CURL_SSLVERSION_MAX_` macros below. It is also possible to OR one of the `CURL_SSLVERSION_` macros with one of the `CURL_SSLVERSION_MAX_` macros.

Default	&h10000	The flag defines the maximum supported TLS version by libcurl, or the default value from the SSL library is used. libcurl will use a sensible default maximum, which was TLS v1.2 up to before 7.61.0 and is TLS v1.3 since then - assuming the TLS library support it. (Added in 7.54.0)
Max TLSv1.0	&h40000	The flag defines maximum supported TLS version as TLS v1.0. (Added in 7.54.0)
Max TLSv1.1	&h50000	The flag defines maximum supported TLS version as TLS v1.1. (Added in 7.54.0)
Max TLSv1.2	&h60000	The flag defines maximum supported TLS version as TLS v1.2. (Added in 7.54.0)
Max TLSv1.3	&h70000	The flag defines maximum supported TLS version as TLS v1.3. (Added in 7.54.0)

Please note that MBS Plugin does not yet support TLS v1.3 now, but may in future.

(Read and Write property)

See also [SSLVERSION](#) option in CURL manual.

4.10.340 OptionStreamDepends as CURLNMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set stream dependency on another CURL handle.

Notes: (Read and Write property)

See also [STREAM_DEPENDS](#) option in CURL manual.

4.10.341 OptionStreamDependsE as CURLNMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set E-exclusive stream dependency on another CURL handle.

Notes: (Read and Write property)

See also [STREAM_DEPENDS_E](#) option in CURL manual.

4.10.342 OptionStreamWeight as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set stream weight, 1 - 256.

Notes: Default is 16.

(Read and Write property)

See also [STREAM_WEIGHT](#) option in CURL manual.

4.10.343 OptionSuppressConnectHeaders as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Suppress proxy CONNECT response headers from events.

Notes: (Read and Write property)

See also [SUPPRESS_CONNECT_HEADERS](#) option in CURL manual.

4.10.344 OptionTCPFastOpen as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set TCP Fast Open.

Notes: (Read and Write property)

See also [TCP_FASTOPEN](#) option in CURL manual.

4.10.345 OptionTCPKeepAlive as Boolean

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: If set to true, TCP keepalive probes will be sent.

Notes: The delay and frequency of these probes can be controlled by the `OptionTCPKeepIdle` and `OptionTCPKeepInterval` options, provided the operating system supports them. Set to false (default behavior) to disable keepalive probes (Added in 7.25.0).

(Read and Write property)

See also [TCP_KEEPALIVE](#) option in CURL manual.

4.10.346 OptionTCPKeepIdle as Integer

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the delay, in seconds, that the operating system will wait while the connection is idle before sending keepalive probes.

Notes: Not all operating systems support this option. (Added in 7.25.0)

(Read and Write property)

See also [TCP_KEEPIDLE](#) option in CURL manual.

4.10.347 OptionTCPKeepInterval as Integer

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the interval, in seconds, that the operating system will wait between sending keepalive probes.

Notes: Not all operating systems support this option. (Added in 7.25.0)

(Read and Write property)

See also [TCP_KEEPINTVL](#) option in CURL manual.

4.10.348 OptionTCPNoDelay as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An integer specifying whether the TCP_NODELAY option should be set or cleared (true = set, false = clear).

Notes: The option is cleared by default. This will have no effect after the connection has been established.

Setting this option will disable TCP's Nagle algorithm. The purpose of this algorithm is to try to minimize the number of small packets on the network (where "small packets" means TCP segments less than the Maximum Segment Size (MSS) for the network).

Maximizing the amount of data sent per TCP segment is good because it amortizes the overhead of the send. However, in some cases (most notably telnet or rlogin) small segments may need to be sent without delay. This is less efficient than sending larger amounts of data at a time, and can contribute to congestion on the network if overdone.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TCP_NODELAY](#) option in CURL manual.

4.10.349 OptionTFTPBlockSize as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Specify block size to use for TFTP data transmission.

Notes: Valid range as per RFC 2348 is 8-65464 bytes. The default of 512 bytes will be used if this option is not specified. The specified block size will only be used pending support by the remote server. If the server does not return an option acknowledgement or returns an option acknowledgement with no blksize, the default of 512 bytes will be used. (added in 7.19.4)

(Read and Write property)

See also [TFTP_BLKSIZE](#) option in CURL manual.

4.10.350 OptionTFTPNoOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether not send any tftp option requests to the server.

Notes: (Read and Write property)

See also **TFTP_NO_OPTIONS** option in CURL manual.

4.10.351 OptionTimeCondition as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The Time condition option.

Notes: This defines how the OptionTimeValue time value is treated. You can set this parameter to kTimeConditionIfModifiedSince (1) or kTimeConditionIfUnmodifiedSince (2). This feature applies to HTTP and FTP.

The last modification time of a file is not always known and in such instances this feature will have no effect even if the given time condition would have not been met.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **TIMECONDITION** option in CURL manual.

4.10.352 OptionTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum time in seconds that you allow the libCURL transfer operation to take.

Notes: Normally, name lookups can take a considerable time and limiting operations to less than a few minutes risk aborting perfectly normal operations. This option will cause CURL to use the SIGALRM to enable time-outing system calls.

In unix-like systems, this might cause signals to be used unless CURLOPT_NOSIGNAL is set.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **TIMEOUT** option in CURL manual.

4.10.353 OptionTimeoutMS as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Pass a long as parameter containing the maximum time in milli seconds that you allow the libCURL transfer operation to take.

Notes: Normally, name lookups can take a considerable time and limiting operations to less than a few minutes risk aborting perfectly normal operations. This option will cause CURL to use the SIGALRM to enable time-outing system calls.

(Read and Write property)

See also [TIMEOUT_MS](#) option in CURL manual.

4.10.354 OptionTimeValue as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: This should be the time in seconds since 1 jan 1970, and the time will be used in a condition as specified with OptionTimeCondition.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TIMEVALUE](#) option in CURL manual.

4.10.355 OptionTLS13Ciphers as String

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Specify which TLS 1.3 ciphers suites to use.

Notes: string holding the list of cipher suites to use for the TLS 1.3 connection. The list must be syntactically correct, it consists of one or more cipher suite strings separated by colons.

You'll find more details about cipher lists on this URL:

<https://curl.haxx.se/docs/ssl-ciphers.html>

The application does not have to keep the string around after setting this option.

(Read and Write property)

See also [TLS13_CIPHERS](#) option in CURL manual.

4.10.356 OptionTLSAuthPassword as String

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the TSL authentication password.

Notes: Please also set OptionTLSAuthType.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TLSAUTH_PASSWORD](#) option in CURL manual.

4.10.357 OptionTLSAuthType as String

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the TLS authentication type.

Notes: You can set this to "SRP" to use Secure Remote Password authentication.

Please also set username and password.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TLSAUTH_TYPE](#) option in CURL manual.

4.10.358 OptionTLSAuthUsername as String

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the TSL authentication user name.

Notes: Please also set OptionTLSAuthType.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TLSAUTH_USERNAME](#) option in CURL manual.

4.10.359 OptionTransferEncoding as Boolean

Plugin Version: 13.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Adds a request for compressed Transfer Encoding in the outgoing HTTP request.

Notes: If the server supports this and so desires, it can respond with the HTTP response sent using a compressed Transfer-Encoding that will be automatically uncompressed by libCURL on reception.

Transfer-Encoding differs slightly from the Content-Encoding you ask for with OptionAcceptEncoding in that a Transfer-Encoding is strictly meant to be for the transfer and thus MUST be decoded before the data arrives in the client. Traditionally, Transfer-Encoding has been much less used and supported by both HTTP clients and HTTP servers.

(Read and Write property)

See also [TRANSFER_ENCODING](#) option in CURL manual.

4.10.360 OptionTransferText as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to use ASCII mode for ftp transfers, instead of the default binary transfer.

Notes: For win32 systems it does not set the stdout to binary mode. This option can be usable when transferring text data between systems with different views on certain characters, such as newlines or similar.

libCURL does not do a complete ASCII conversion when doing ASCII transfers over FTP. This is a known limitation/ flaw that nobody has rectified. libCURL simply sets the mode to ascii and performs a standard transfer.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TRANSFERTEXT](#) option in CURL manual.

4.10.361 OptionUnixSocketPath as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Path to Unix domain socket.

Notes: (Read and Write property)

See also [UNIX_SOCKET_PATH](#) option in CURL manual.

4.10.362 OptionUnrestrictedAuth as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A boolean parameter tells the library it can continue to send authentication (user+password) when following locations, even when hostname changed.

Notes: This option is meaningful only when setting FollowOption.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [UNRESTRICTED_AUTH](#) option in CURL manual.

4.10.363 OptionUpkeepIntervalMS as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Connection upkeep interval.

Notes: Some protocols have "connection upkeep" mechanisms. These mechanisms usually send some traffic on existing connections in order to keep them alive; this can prevent connections from being closed due to overzealous firewalls, for example.

The user needs to explicitly call Upkeep in order to perform the upkeep work.

Currently the only protocol with a connection upkeep mechanism is HTTP/2: when the connection upkeep interval is exceeded and Upkeep is called, an HTTP/2 PING frame is sent on the connection.

(Read and Write property)

See also [UPKEEP_INTERVAL_MS](#) option in CURL manual.

4.10.364 OptionUpload as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: True tells the library to prepare for an upload.

Notes: The OptionInFileSize or OptionInFileSizeLarge options are also interesting for uploads. If the protocol is HTTP, uploading means using the PUT request unless you tell libCURL otherwise.

Using PUT with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with OptionHTTPHeader as usual.

If you use PUT to a HTTP 1.1 server, you can upload data without knowing the size before starting the transfer if you use chunked encoding. You enable this by adding a header like "Transfer-Encoding: chunked" with OptionHTTPHeader. With HTTP 1.0 or without chunked transfer, you must specify the size.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [UPLOAD](#) option in CURL manual.

4.10.365 OptionUploadBufferSize as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set preferred upload buffer size.

Notes: Pass a long specifying your preferred size (in bytes) for the upload buffer in libcurl. It makes libcurl uses a larger buffer that gets passed to the next layer in the stack to get sent off. In some setups and for some protocols, there's a huge performance benefit of having a larger upload buffer.

This is just treated as a request, not an order. You cannot be guaranteed to actually get the given size.

The upload buffer size is by default 64 kilobytes. The maximum buffer size allowed to be set is 2 megabytes. The minimum buffer size allowed to be set is 16 kilobytes.

Since curl 7.61.1 the upload buffer is allocated on-demand - so if the handle isn't used for upload, this buffer will not be allocated at all.

For slow upload/downloads, it may be better to set buffer size to 1 MB with OptionUploadBufferSize or OptionBufferSize properties to make transfers faster.

(Read and Write property)

See also [UPLOAD_BUFFER_SIZE](#) option in CURL manual.

4.10.366 OptionURL as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The actual URL to deal with.

Example:

```
Dim c As New CURLNMBS
```

```
// this example sends a xml request to a server
c.OptionURL = "http://www.someserver.com/service"
```

```
// some XML for a SOAP request
Dim request As String = "<?xml version=""1.0""?><methodCall><methodName>application.getValue</methodName><params><param><value>info</value></param></params></methodCall>"
```

```
c.OptionPostFields = request
```

```
Dim header(-1) As String
header.Append "Content-Type: text/xml"
c.SetOptionHTTPHeader header
```

```
// this should be c.kError_OK if okay.
Dim result As Integer = c.Perform

Dim output As String = c.OutputData
Dim debugLog As String = c.DebugMessages
Dim HTTPStatus As Integer = c.GetInfoResponseCode

Break
```

Notes: If you need to pass username or password, please consider using the `OptionUsername` and `OptionPassword` properties. If your username or password contains characters like `@` or `:`, you must use those properties.

The `Lasterror` property is set. 0 for success.
You can set this value and later you can read it, but you cannot read the default value.

The parameter should be a `char *` to a zero terminated string. The string must remain present until CURL no longer needs it, as it doesn't copy the string.

If the given URL lacks the protocol part ("`http://`" or "`ftp://`" etc), it will attempt to guess which protocol to use based on the given host name. If the given protocol of the set URL is not supported, libCURL will return an error (`kError_UNSUPPORTED_PROTOCOL`) when you call `Perform`. Use `VersionInfo` for detailed info on which protocols that are supported.

The string given to `CURLOPT_URL` must be url-encoded and following the RFC 2396:
`http://CURL.haxx.se/rfc/rfc2396.txt`

`CURLOPT_URL` is the only option that must be set before `Perform` is called.
For file uploads or downloads, please include the file name in the URL.

Please do never include username and passwords in URLs, as those get often written to log files and would reveal your credentials!
Instead use `OptionUsername` and `OptionPassword`.

If you miss the protocol in the URL, you may get an error about HTTP/0.9 being used and not allowed.
(`Read` and `Write` property)
See also **URL** option in CURL manual.

4.10.367 OptionUserAgent as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The user agent string to pass to the server.

Example:

```
Dim c As New CURLNMBS
```

```
// setup request and any options you need
c.OptionURL = URL
c.OptionUserAgent = "MyDownloader 1.0"
```

Notes: It will be used to set the User-Agent: header in the http request sent to the remote server. This can be used to fool servers or scripts. You can also set any custom header with OptionHTTPHeader.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **USERAGENT** option in CURL manual.

4.10.368 OptionUsername as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The user name to be used in protocol authentication

Notes: In order to specify the password to be used in conjunction with the user name use the OptionPassword option

(Read and Write property)

See also **USERNAME** option in CURL manual.

4.10.369 OptionUseSSL as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Request using SSL / TLS for the transfer.

Example:

```
dim c as CURLNMBS
c.OptionUseSSL = c.kFTPSSL_ALL
c.OptionSSLVersion = c.kSSLVersionTLSv12
```

Notes: Set to an integer using one of the values from below, to make libCURL use your desired level of SSL for the transfer.

These are all protocols that start out plain text and get "upgraded" to SSL using the STARTTLS command. This is for enabling SSL/TLS when you use FTP, SMTP, POP3, IMAP etc.

CURLUSESSL_NONE	0	Don't attempt to use SSL.
CURLUSESSL_TRY	1	Try using SSL, proceed as normal otherwise.
CURLUSESSL_CONTROL	2	Require SSL for the control connection or fail with CURLE_USE_SSL_FAILED.
CURLUSESSL_ALL	3	Require SSL for all communication or fail with CURLE_USE_SSL_FAILED.

(Read and Write property)

See also [USE_SSL](#) option in CURL manual.

4.10.370 OptionVerbose as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether debug messages are sent to the DebugMessage event.

Notes: Default is false.

You need to subclass the CURLNMBS class to add code in the DebugMessage event.

Or you set CollectDebugMessages = true and later query DebugMessages property.

Or you use CreateMTDebugOutputFile to stream them to a file.

(Read and Write property)

See also [VERBOSE](#) option in CURL manual.

4.10.371 OptionWildcardMatch as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Enable wildcard matching.

Notes: Set onoff to true if you want to transfer multiple files according to a file name pattern. The pattern can be specified as part of the OptionURL option, using an fnmatch-like pattern (Shell Pattern Matching) in the last part of URL (file name).

By default, libCURL uses its internal wildcard matching implementation. You can provide your own matching function by the CURLNMBS.FileNameMatch event.

A brief introduction of its syntax follows:

- - ASTERISK

ftp://example.com/some/path/*.txt (for all txt's from the root directory)

? - QUESTION MARK

Question mark matches any (exactly one) character.

```
ftp://example.com/some/path/photo?.jpeg
```

[- BRACKET EXPRESSION

The left bracket opens a bracket expression. The question mark and asterisk have no special meaning in a bracket expression. Each bracket expression ends by the right bracket and matches exactly one character. Some examples follow:

[a-zA-Z0-9] or [f-gF-G] - character interval

[abc] - character enumeration

[^abc] or [!abc] - negation

[[:name:]] class expression. Supported classes are alnum,lower, space, alpha, digit, print, upper, blank, graph, xdigit.

[] [-!^] - special case - matches only '-', '!', '^'. These characters have no special purpose.

[\[\] \\] - escape syntax. Matches '[', ']' or '\-¥'.

Using the rules above, a file name pattern can be constructed:

```
ftp://example.com/some/path/ [ a-z [ :upper: ] \\ ] .jpeg
```

This feature is only supported for FTP download. Not for SFTP or HTTP.

(Read and Write property)

See also [WILDCARDMATCH](#) option in CURL manual.

4.10.372 OptionXOAuth2Bearer as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The XOAUTH2 bearer token.

Notes: (Read and Write property)

See also [XOAUTH2_BEARER](#) option in CURL manual.

4.10.373 OutputData as String

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The output data from CURL.

Example:

```
Dim d As New CURLNMBS
```

```
// download here
d.OptionURL = URL
```

```
// if you use SSL, maybe put in a certificate or disable verification?
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0
```

```
// run download
dim e as integer = d.Perform
```

```
// check result
Dim data As String = d.OutputData
Dim DebugMessage As String = d.DebugMessages // check in debugger on error
```

```
ResultText.text="Result: "+str(e) // 0 = Okay, others are error codes, so check debug messsages
```

Notes: If CollectOutputData property is true, the plugin puts the data received in write event also into this property, so you can grab it after the transfer. Use ClearData method to clear when reusing CURL object.

Limited to 2 GB. Please stream to file for bigger data with CreateMTOutputFile function.
(Read only property)

4.10.374 Paused as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether transfer is paused.

Notes: You can set it to true while transfer runs to pause it.
(Read and Write property)

4.10.375 ProgressDownloadCurrent as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bytes downloaded so far.

Notes: (Read only property)

4.10.376 ProgressDownloadTotal as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bytes to download in total.

Notes: (Read only property)

4.10.377 ProgressPercent as Double

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Current download/upload progress in percent.

Notes: Range from 0 to 100.

(Read only property)

4.10.378 ProgressUploadCurrent as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bytes uploaded so far.

Notes: (Read only property)

4.10.379 ProgressUploadTotal as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bytes to upload in total.

Notes: (Read only property)

4.10.380 Tag as Variant

Plugin Version: 23.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The tag value.

Notes: You can store whatever reference value you need.

(Read and Write property)

4.10.381 Version as CURLNVersionMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Returns a version object to a filled with information about various run-time features in libCURL.

Notes: (Read only property)

4.10.382 WebSocketOptions as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: WebSocket behavior options.

Notes: Pass a bitmask to tell libcurl about specific WebSocket behaviors.

To detach a WebSocket connection and use the `WebSocketSend` and `WebSocketReceive` functions after the HTTP upgrade procedure, set the `OptionConnectOnly` option to 2.

Available bits in the bitmask:

`kWebSocketRaw`:

Deliver "raw" WebSocket traffic to the Write event.

In raw mode, libcurl does not handle pings or any other frame for the application.

(Read and Write property)

4.10.383 YieldTime as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether plugin should yield time.

Example:

```
dim curl as new CURLNMBS
```

```
curl.YieldTime = true
```

Notes: If set the plugin will yield time to Xojo back so threads and timers work while you download.

Seems like in RB 2009 this property only has effect if you run CURL in a thread.

(Read and Write property)

4.10.384 Events**4.10.385 ChunkBegin(FileInfo as CURLNFileInfoMBS, Remains as Integer) as Integer**

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: The event called on begin of a new chunk.

Notes: If splitting of data transfer is enabled, this event is called before download of an individual chunk started. Note that parameter "remains" works only for FTP wildcard downloading (for now), otherwise is not used.

4.10.386 ChunkEnd(FileInfo as CURLNFileInfoMBS, Remains as Integer) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: Download of a chunk ended.

Notes: If splitting of data transfer is enabled this event is called after download of an individual chunk finished.

This event is called for skipped or downloaded files.

4.10.387 DebugMessage(infotype as Integer, data as string, dataSize as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: A debug event to get data of ongoing process.

Notes: You may need to set OptionVerbose to true.

infotype constants:

kInfo_TEXT	0	The data is informational text.
kInfo_HEADER_IN	1	The data is header (or header-like) data received from the peer.
kInfo_HEADER_OUT	2	The data is header (or header-like) data sent to the peer.
kInfo_DATA_IN	3	The data is protocol data received from the peer.
kInfo_DATA_OUT	4	The data is protocol data sent to the peer.
kInfo_SSL_DATA_IN	5	The data is protocol data received from the peer.
kInfo_SSL_DATA_OUT	6	The data is protocol data sent to the peer.

If you set CollectDebugMessages, the plugin will collect the messages and provide them via the DebugMessages property. You can still use this event to write your own log instead of in addition.

4.10.388 `FileNameMatch(Pattern as String, Name as String)` as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: Match a file against a pattern.

Notes: If you don't implement this event, you get the default implementation from CURL. Return `kFileNameMatchNoMatch`, `kFileNameMatchIsMatch` or `kFileNameMatchFailed`.

4.10.389 `Finished(Result as Integer)`

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: The event called when transfer has finished.

Notes: For `Perform` and `PerformMT` it is called before `Perform` function returns, so in `PerformMT` this is called on the thread.

For use with `CURLNMultiMBS`, it is called after `TransferFinished` event and before `TransfersFinished` event. If you want to modify GUI and use `PeformMT`, you may need to start a timer to do so.

4.10.390 `Header(data as string, dataSize as Integer)` as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: New Header data was received.

Notes: You can get error 23 if you don't return `lenb(data)` in this event.

Or just leave it empty so RB will not include it in your application the plugin will return `lenb(data)` itself.

If you set `CollectHeaderData` to true, the plugin will collect the messages and provide them via the `HeaderData` property. You can still use this event to write your own log instead of in addition.

4.10.391 `Progress(dltotal as Int64, dlnow as Int64, ultotal as Int64, ulnow as Int64, percent as Double)` as boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: An event to report progress of ongoing transfers.

Notes: This function gets called by libCURL with a frequent interval during operation (roughly once per second) no matter if data is being transferred or not. Unknown/unused argument values passed to the event will be set to zero (like if you only download data, the upload size will remain 0).

Returning a true from this event will cause libCURL to abort the transfer and return `kError_ABORTED_BY_CALLBACK`.

You can run CURL from a thread to download several things at the same time or keep the GUI more responsive. For better GUI, you can even call a method like `app.DoEvents` to get the GUI updated more often.

When sending email, `ultotal` may be zero. In that case use `OptionInFileSize` to know size of email to upload.

4.10.392 Read(count as Integer) as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: This event gets called by libCURL as soon as it needs to read data in order to send it to the peer.

Notes: Return the number of bytes requested. Never return a string with `lenb(string)>count`. You can return 0 to inform about end of file.

If you stop the current transfer by returning 0 "pre-maturely" (i.e before the server expected it, like when you've told you will upload N bytes and you upload less than N bytes), you may experience that the server "hangs" waiting for the rest of the data that won't come.

The read event may return `CURL_READFUNC_ABORT (&h10000000)` to stop the current operation immediately, resulting in a `kError_ABORTED_BY_CALLBACK` error code from the transfer (Added in 7.12.1)

This event is not called when using `PerformMT`.

If you provide Input data via `SetInputData` or `OpenMTInputFile` method, this event is not called and data is taken from the data you provided.

4.10.393 RestartRead() as boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: An event to inform you that reading on the file needs to start at the beginning again.

Notes: Return true on success.

If you use a `binarystream` for reading you will have to set position to 0 in this event.

This event is not called when using `PerformMT`.

4.10.394 Seek(pos as Int64, whence as Integer) as Integer

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: .

Function: Called when CURL needs to perform a seek.

Notes: Normally only needed if you resume a download (Seek forward) or upload is reset (seek back).

Whence is kSeekOriginCurrent, kSeekOriginEnd or kSeekOriginSet.

Please return one of this constants: kSeekReturnCantSeek, kSeekReturnFail or kSeekReturnOk.

4.10.395 SSHKey(KnownKey as string, KnownKeyLength as Integer, KnownKeyType as Integer, FoundKey as string, FoundKeyLength as Integer, FoundKeyType as Integer, MatchStatus as Integer) as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: .

Function: The event for known hosts event for SFTP and SCP.

Notes: KnownKey: The known key as string encoded with base64 if KnownKeyLength is zero, otherwise the "raw" data.

KnownKeyLength: The length of the key. Zero for base64 encoded key.

KnownKeyType: The type of the key. (0 = Unknown, 1 = RSA1, 2 = RSA, 3 = DSS)

FoundKey: The found key as string encoded with base64 if FoundKeyLength is zero, otherwise the "raw" data.

FoundKeyLength: The length of the key. Zero for base64 encoded key.

FoundKeyType: The type of the key. (0 = Unknown, 1 = RSA1, 2 = RSA, 3 = DSS)

MatchStatus: The status CURL found. (0 = OK, 1 = Mismatch, 2 = Missing)

Return one of the following values:

CURLKHSTAT_FINE_ADD_TO_FILE	0	Fine and add to file
CURLKHSTAT_FINE	1	Fine
CURLKHSTAT_REJECT	2	reject the connection, return an error
CURLKHSTAT_DEFER	3	do not accept it, but we can't answer right now so this causes a CURLE_DEFER error but otherwise the connection will be left intact etc

4.10.396 Write(data as string, dataSize as Integer) as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: This event gets called by libCURL as soon as there is data received that needs to be saved.

Notes: Return the number of bytes actually taken care of. If that amount differs from the amount passed to your function, it'll signal an error to the library and it will abort the transfer and return kError_WRITE_ERROR.

This function may be called with zero bytes data if the transferred file is empty.

The event function will be passed as much data as possible in all invokes, but you cannot possibly make any assumptions. It may be one byte, it may be thousands. The maximum amount of data that can be passed to the write event is defined in the CURL.h header file: `CURL_MAX_WRITE_SIZE` (16384).

If you set `CollectOutputData` to true, the plugin will automatically collect the data and provide it to you after the transfer with the `OutputData` property. This collecting feature will only work right, if there is enough free memory. You can of course still process data yourself in this event instead of in addition.

4.10.397 Constants

Constants

Constant	Value	Description
<code>kUpkeepIntervalDefault</code>	50000	The default connection upkeep interval in milliseconds.
<code>kWebSocketRaw</code>	1	One of the options for web sockets. RAW mode for <code>WebSocketOptions</code> .

Authorization

Constant	Value	Description
kAUTH_ANY	&hFFFFFFEF	all types set
kAUTH_ANYSAFE	&hFFFFFFEE	
kAUTH_AWS_SIGV4	128	AWS Signature v4
kAUTH_BASIC	1	Basic (default)
kAUTH_Bearer	64	HTTP Bearer token authentication
kAUTH_DIGEST	2	Digest
kAUTH_DIGEST_IE	16	HTTP Digest authentication with an IE flavor. Digest authentication is defined in RFC 2617 and is a more secure way to do authentication over public networks than the regular old-fashioned Basic method. The IE flavor is simply what libCURL will use a special "quirk" that IE is known to have used before version 7 and that some servers require the client to use.
kAUTH_GSSNEGOTIATE	4	GSS-Negotiate Please check SupportsGSSNEGOTIATE property in CURLNVersionMBS to determine whether this is supported/implemented by your copy of the CURL library.
kAUTH_NEGOTIATE	4	HTTP Negotiate (SPNEGO) authentication. Negotiate authentication is defined in RFC 4559 and is the most secure way to perform authentication over HTTP. You need to build libCURL with a suitable GSS-API library or SSPI on Windows for this to work.
kAUTH_NONE	0	
kAUTH_NTLM	8	
kAUTH_NTLM_WB	32	NTLM delegating to winbind helper. Authentication is performed by a separate binary application that is executed when needed. The name of the application is specified at compile time but is typically /usr/bin/ntlm_auth Note that libCURL will fork when necessary to run the winbind application and kill it when complete, calling waitpid() to await its exit when done. On POSIX operating systems, killing the process will cause a SIGCHLD signal to be raised (regardless of whether OptionNoSignal is set), which must be handled intelligently by the application. In particular, the application must not unconditionally call wait() in its SIGCHLD signal handler to avoid being subject to a race condition. This behavior is subject to change in future versions of libCURL.
kAUTH_Only	&h80000000	This is a meta symbol. OR this value together with a single specific authentication type to force libCURL to probe for un-restricted authentication and if not, only that single authentication algorithm is acceptable.

ChunkBegin result values

Constant	Value	Description
kChunkBeginFailed	1	Failed, so we exit downloads.
kChunkBeginOK	0	OK, download this file.
kChunkBeginSkip	2	Skip the file.

ChunkEnd result values

Constant	Value	Description
kChunkEndFailed	1	Failed, so we exit downloads.
kChunkEndOK	0	Download success.

Error Constants

Constant	Value	Description
kError_ABORTED_BY_CALLBACK	42	
kError_AGAIN	81	socket is not ready for send/recv, wait till it's ready and try again (added in CURL 7.18.2)
kError_Auth_Error	94	An authentication function returned an error.
kError_BAD_CONTENT_ENCODING	61	Unrecognized transfer encoding
kError_BAD_DOWNLOAD_RESUME	36	couldn't resume download
kError_BAD_FUNCTION_ARGUMENT	43	
kError_CHUNK_FAILED	88	Chunk event reported error.
kError_CONV_REQD	76	Not used with plugin.
kError_COULDNT_CONNECT	7	Could not connect. Proxy set? Firewall open?
kError_COULDNT_RESOLVE_HOST	6	
kError_COULDNT_RESOLVE_PROXY	5	
kError_FAILED_INIT	2	
kError_FILESIZE_EXCEEDED	63	Maximum file size exceeded
kError_FILE_COULDNT_READ_FILE	37	
kError_FTP_ACCEPT_FAILED	10	While waiting for the server to connect back when an active FTP session is used, an error code was sent over the control connection or similar
kError_FTP_ACCEPT_TIMEOUT	12	During an active FTP session while waiting for the server to connect back. OptionAcceptTimeoutMS (or the internal default) timeout expired
kError_FTP_BAD_FILE_LIST	87	Unable to parse FTP file list.
kError_FTP_CANT_GET_HOST	15	
kError_FTP_COULDNT_RETR_FILE	19	
kError_FTP_COULDNT_SET_TYPE	17	
kError_FTP_COULDNT_USE_REST	31	the REST command failed
kError_FTP_PORT_FAILED	30	FTP PORT operation failed
kError_FTP_PRET_FAILED	84	a PRET command failed
kError_FTP_WEIRD_227_FORMAT	14	
kError_FTP_WEIRD_PASS_REPLY	11	
kError_FTP_WEIRD_PASV_REPLY	13	
kError_FTP_WEIRD_SERVER_REPLY	8	
kError_FUNCTION_NOT_FOUND	41	
kError_GOT_NOTHING	52	when this is a specific error
kError_HTTP2	16	A problem was detected in the HTTP2 framing layer. This is some error and can be one out of several problems, see the error buffer for details
kError_HTTP2_STREAM	92	stream error in HTTP/2 framing layer
kError_HTTP3	95	HTTP3 layer failed.
kError_HTTP_POST_ERROR	34	
kError_HTTP_RETURNED_ERROR	22	
kError_INTERFACE_FAILED	45	
kError_LDAP_CANNOT_BIND	38	
kError_LDAP_INVALID_URL	62	Invalid LDAP URL
kError_LDAP_SEARCH_FAILED	39	
kError_LOGIN_DENIED	67	user, password or similar was not accepted and we failed to login
kError_NOT_BUILT_IN	4	A requested feature, protocol or option was not found built-in in libCURL due to a build-time decision. This means that a feature or option was not enabled or explicitly disabled when libCURL was built and in order to use that to function you have to get a rebuilt libCURL.
kError_NO_CONNECTION_AVAILABLE	89	For internal use only, will never be returned by libCURL. No connection available, the session will be queued. (added in 7.34.0)
kError_OK	0	
kError_OPERATION_TIMEDOUT	28	
kError_OUT_OF_MEMORY	27	
kError_PARTIAL_FILE	18	
kError_PEER_FAILED_VERIFICATION	60	
kError_Proxy	96	Proxy handshake error.
kError_Quic_Connect_Error	96	Quic had a connect error.
kError_QUOTE_ERROR	21	
kError_RANGE_ERROR	33	

FileNameMatch Event Result Values

Constant	Value	Description
kFileNameMatchFailed	2	Failed.
kFileNameMatchIsMatch	0	Is Match.
kFileNameMatchNoMatch	1	No match.

Form Constants

Constant	Value	Description
kFormArray	8	
kFormBuffer	11	
kFormBufferLength	13	
kFormBufferPtr	12	
kFormContentHeader	15	
kFormContentsLength	6	
kFormContentType	14	
kFormCopyContents	4	
kFormCopyName	1	
kFormEnd	17	
kFormFile	10	
kFormFileContent	7	
kFormFilename	16	
kFormNameLength	3	
kFormPtrContents	5	
kFormPtrName	2	

FTP Authorization

Constant	Value	Description
kFTPAUTH_DEFAULT	0	Allow libCURL to decide
kFTPAUTH_SSL	1	Try "AUTH SSL" first, and only if that fails try "AUTH TLS"
kFTPAUTH_TLS	2	Try "AUTH TLS" first, and only if that fails try "AUTH SSL"

FTP CWD method

Constant	Value	Description
kFTPMethodDefault	0	let libcurl pick
kFTPMethodMultiCWD	1	single CWD operation for each path part
kFTPMethodNoCWD	2	no CWD at all
kFTPMethodSingleCWD	3	one CWD to full dir, then work on file

FTP SSL Option

Constant	Value	Description
kFTPSSL_ALL	3	Require SSL for all communication or fail with kError_FTP_SSL_FAILED.
kFTPSSL_CONTROL	2	Require SSL for the control connection or fail with kError_FTP_SSL_FAILED.
kFTPSSL_NONE	0	Don't attempt to use SSL.
kFTPSSL_TRY	1	Try using SSL, proceed as normal otherwise.

GSS API delegation modes

Constant	Value	Description
kGSSAPIDelegationFlag	2	delegate always
kGSSAPIDelegationNone	0	no delegation (default)
kGSSAPIDelegationPolicyFlag	1	if permitted by policy

HTTP Versions

Constant	Value	Description
kHTTP_VERSION_1_0	1	Enforce HTTP 1.0 requests.
kHTTP_VERSION_1_1	2	Enforce HTTP 1.1 requests.
kHTTP_VERSION_2TLS	4	use version 2 for HTTPS, version 1.1 for HTTP
kHTTP_VERSION_2_0	3	please use HTTP 2 in the request
kHTTP_VERSION_2_PRIOR_KNOWLEDGE	5	please use HTTP 2 without HTTP/1.1 Upgrade
kHTTP_VERSION_3	30	please use HTTP 3 in the request
kHTTP_VERSION_3Only	31	Use HTTP/3 without fallback. For HTTPS only. For HTTP, it return error.
kHTTP_VERSION_NONE	0	We don't care about what version the library uses. libCURL will use what it thinks fit.

Debug Message Info Types

Constant	Value	Description
kINFO_DATA_IN	3	The data is protocol data received from the peer.
kINFO_DATA_OUT	4	The data is protocol data sent to the peer.
kINFO_HEADER_IN	1	The data is header (or header-like) data received from the peer.
kINFO_HEADER_OUT	2	The data is header (or header-like) data sent to the peer.
kINFO_SSL_DATA_IN	5	The data is protocol data received from the peer.
kINFO_SSL_DATA_OUT	6	The data is protocol data sent to the peer.
kINFO_TEXT	0	The data is informational text.

IP Resolve Modes

Constant	Value	Description
kIPRESOLVE_V4	1	
kIPRESOLVE_V6	2	
kIPRESOLVE_WHATEVER	0	

NetRC Modes

Constant	Value	Description
kNETRC_IGNORED	0	The .netrc will never be read. This is the default.
kNETRC_OPTIONAL	1	A user:password in the URL will be preferred to one in the .netrc.
kNETRC_REQUIRED	2	A user:password in the URL will be ignored. Unless one is set programmatically, the .netrc will be queried.

Protocols

Constant	Value	Description
kProtocolAll	-1	Enable all protocols.
kProtocolDICT	&h200	DICT
kProtocolFILE	&h400	File
kProtocolFTP	4	FTP
kProtocolFTPS	8	FTPS
kProtocolGopher	&h2000000	Gopher
kProtocolGophers	&h20000000	
kProtocolHTTP	1	HTTP
kProtocolHTTPS	2	HTTPS
kProtocolIMAP	&h1000	IMAP
kProtocolIMAPS	&h2000	IMAPS
kProtocolLDAP	&h80	LDAP
kProtocolLDAPS	&h100	LDAPS
kProtocolMQTT	&h10000000	MQTT
kProtocolPOP3	&h4000	POP3
kProtocolPOP3S	&h8000	POP3S
kProtocolRTMP	&h80000	RTMP
kProtocolRTMPE	&h200000	RTMPE
kProtocolRTMPS	&h800000	RTMPS
kProtocolRTMPT	&h100000	RTMPT
kProtocolRTMPTE	&h400000	RTMPTE
kProtocolRTMPTS	&h1000000	RTMPTS
kProtocolRTSP	&h40000	RTSP
kProtocolSCP	&h10	SCP
kProtocolSFTP	&h20	SFTP
kProtocolSMB	&h4000000	SMB
kProtocolSMBS	&h8000000	SMBS
kProtocolSMTP	&h10000	SMTP
kProtocolSMTPS	&h20000	SMTPS
kProtocolTelnet	&h40	Telnet
kProtocolTFTP	&h800	TFTP

Proxy Types

Constant	Value	Description
kPROXY_HTTP	0	
kPROXY_HTTP10	1	Force to use CONNECT HTTP/1.0.
kPROXY_HTTP11	0	Connect using HTTP/1.1.
kPROXY SOCKS4	4	
kPROXY SOCKS4A	6	Using SOCKS 4A.
kPROXY SOCKS5	5	
kPROXY SOCKS5_Hostname	7	Use the SOCKS5 protocol but pass along the host name rather than the IP address. added in 7.18.0

Seek Origin Constants

Constant	Value	Description
kSeekOriginCurrent	1	Seek relative to current file position.
kSeekOriginEnd	2	Seek relative to end of file.
kSeekOriginSet	0	Seek relative to start of file.

Seek Event Result Values

Constant	Value	Description
kSeekReturnCantSeek	3	Return this value if you can't seek as you are not using a file, but for example a stream.
kSeekReturnFail	2	Returns this value if your seek operation failed.
kSeekReturnOk	1	Returns this value if your seek operation succeeded.

SSH Authentication

Constant	Value	Description
kSSHAAuthAgent	16	agent (ssh-agent, pageant...)
kSSHAAuthAny	-1	Any allowed
kSSHAAuthDefault	-1	Default: Any
kSSHAAuthGSSAPI	32	gssapi (kerberos, ...)
kSSHAAuthHost	4	host key files
kSSHAAuthKeyboard	8	keyboard interactive
kSSHAAuthNone	0	none allowed, silly but complete
kSSHAAuthPassword	2	password
kSSHAAuthPublicKey	1	public/private key files

SSL Option Flags

Constant	Value	Description
kSSLOptionAllowBeast	1	tells libcurl to allow the BEAST SSL vulnerability in the name of improving interoperability with older servers. Some SSL libraries have introduced work-arounds for this flaw but those work-arounds sometimes make the SSL communication fail. To regain functionality with those broken servers, a user can this way allow the vulnerability back.
kSSLOptionAutoClientCert	32	Tells libcurl to automatically locate and use a client certificate for authentication. (Schannel)
kSSLOptionNativeCA	16	tells libcurl to use standard certificate store of operating system. Currently implemented under MS-Windows.
kSSLOptionNoPartialChain	4	tells libcurl to <i>*NOT*</i> accept a partial certificate chain if possible. The OpenSSL backend has this ability.
kSSLOptionNoRevoke	2	tells libcurl to disable certificate revocation checks for those SSL backends where such behavior is present.
kSSLOptionRevokeBestEffort	8	tells libcurl to ignore certificate revocation offline checks and ignore missing revocation list for those SSL backends where such behavior is present.

SSL Versions

Constant	Value	Description
kSSLVersionDefault	0	The default acceptable version range. The minimum acceptable version is by default TLS v1.0 since 7.39.0 (unless the TLS library has a stricter rule).
kSSLVersionSSLv2	2	SSL v2 (but not SSLv3)
kSSLVersionSSLv3	3	SSL v3 (but not SSLv2)
kSSLVersionTLSv1	1	TLS v1.0 or later
kSSLVersionTLSv10	4	TLS v1.0 or later (Added in 7.34.0)
kSSLVersionTLSv11	5	TLS v1.1 or later (Added in 7.34.0)
kSSLVersionTLSv12	6	TLS v1.2 or later (Added in 7.34.0)
kSSLVersionTLSv13	7	TLS v1.3 or later (Added in 7.52.0)

Time Conditions

Constant	Value	Description
kTimeConditionIfModifiedSince	1	
kTimeConditionIfUnModifiedSince	2	
kTimeConditionNone	0	No condition.

SSL Option

Constant	Value	Description
kUseSSLall	3	Require SSL for all communication or fail with kError_FTP_SSL_FAILED.
kUseSSLcontrol	2	Require SSL for the control connection or fail with kError_FTP_SSL_FAILED.
kUseSSLnone	0	Don't attempt to use SSL.
kUseSSLtry	1	Try using SSL, proceed as normal otherwise.

4.11 class CURLNMimePartMBS

4.11.1 class CURLNMimePartMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for mime parts.

Notes: You can provide data via file path, folderitem, data in memoryblock or string.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

4.11.2 Methods

4.11.3 Constructor

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The private constructor.

4.11.4 Headers as String()

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries header.

4.11.5 SetHeaders(headers() as String)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets header.

4.11.6 Properties

4.11.7 DataMemory as Memoryblock

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part data source from memory data.

Notes: (Read and Write property)

4.11.8 DataString as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part data source from memory data.

Example:

```
dim c as new CURLNMBS

// add mime
dim p as CURLNMimePartMBS = c.AddMimePart

p.name = "Text"
p.FileName = "test.txt"
p.MimeType = "text/plain"
p.DataString = "Hello World"

c.FinishMime
// now you can send...
```

Notes: (Read and Write property)

4.11.9 Encoding as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime data transfer encoder.

Notes: If set to binary, 8bit, 7bit, base64 or quoted-printable, the matching encoding is applied.
(Read and Write property)

4.11.10 File as FolderItem

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The file to stream.

Notes: When you set property, the plugin will open file and may raise IOException on failure.
(Read and Write property)

4.11.11 FileName as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part remote file name.

Notes: If mime type is not set, we pick extension from file name.

This includes gif, jpg, jpeg, png, svg, txt, htm, html, pdf and xml file extensions.

(Read and Write property)

4.11.12 FilePath as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part data source from named file.

Notes: (Read and Write property)

4.11.13 Lasterror as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error code.

Notes: (Read and Write property)

4.11.14 MimeType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime part type.

Notes: (Read and Write property)

4.11.15 Name as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The mime/form part name.

Notes: (Read and Write property)

4.11.16 Parent as Variant

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The parent object.

Notes: (Read only property)

4.11.17 Constants

Encodings

Constant	Value	Description
kEncoding7bit	"7bit"	7bit
kEncoding8bit	"8bit"	8bit
kEncodingBase64	"base64"	Base64
kEncodingBinary	"binary"	Binary mode
kEncodingNone	""	No mode, so data is passed through and header has no encoding defined
kEncodingQuotedPrintable	"quoted-printable"	Quoted printable

Mime Types

Constant	Value	Description
kMimeTypeGIF	"image/gif"	GIF
kMimeTypeHTML	"text/html"	HTML
kMimeTypeJPEG	"image/jpeg"	JPEG
kMimeTypePDF	"application/pdf"	PDF
kMimeTypePNG	"image/png"	PNG
kMimeTypeSVG	"image/svg+xml"	SVG
kMimeTypeText	"text/plain"	Text
kMimeTypeXML	"application/xml"	XML

4.12 class **CURLNMissingFunctionExceptionMBS**

4.12.1 class **CURLNMissingFunctionExceptionMBS**

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An exception raised if a CURL library function is not loaded.

Notes: If you call load library before you use the CURLNMBS Constructor, you should never see this.
Subclass of the RuntimeException class.

4.13 class CURLNMultiMBS

4.13.1 class CURLNMultiMBS

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for multiple CURL transfers running in parallel.

Blog Entries

- [News from the MBS Xojo Plugins Version 23.2](#)

4.13.2 Methods

4.13.3 AddCURL(curl as CURLNMBS, handler as CURLNTransferFinishedMBS = nil) as boolean

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Add a standard CURL handle to the multi stack.

Notes: Lasterror is set.

We added handler parameter for v23.2 to make it easier to run things asynchronously.

4.13.4 CURLs as CURLNMBS()

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries list of current CURL instances.

4.13.5 ErrorString(ErrorCode as Integer) as String

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries text message for a given error code.

4.13.6 Perform

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Checks for things to see.

Notes: When the app thinks there's data available for CURL it calls this function to read/write whatever

there is right now. This returns as soon as the reads and writes are done. This function does not require that there actually is data available for reading or that data can be written, it can be called just in case.

Lasterror is set. This only provides errors etc regarding the whole multi stack. There might still have occurred problems on individual transfers even when this returns OK.

Sets RunningTransfers property.

4.13.7 RemoveAll

Plugin Version: 23.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Removes all curl handles.

Notes: Same as looping over CURLs() array and calling RemoveCURL for each.

This effectively cancels all requests.

4.13.8 RemoveCURL(CURL as CURLNMBS) as boolean

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Removes a CURL handle from the multi stack again.

Notes: Lasterror is set.

Plugin calls this automatically when TransferFinished event was called.

4.13.9 SharedInstance as CURLNMultiMBS

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The shared instance.

Notes: Either you create a new CURLNMultiMBS object, which then takes this place.

Or you don't and the plugin creates an object for you to easily schedule transfers asynchronously.

4.13.10 Properties

4.13.11 AutoPerform as Boolean

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether to run a timer and run Perform automatically for you.

Notes: Set to true to run Perform automatically. For this the plugin manages a timer to call perform

regularly.

We set this to true for the default shared instance, so it runs without you doing anything.
(Read and Write property)

4.13.12 ChunkLengthPenaltySize as Int64

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A connection with a chunk length longer than this will not be considered for pipelining.

Notes: (Read and Write property)

4.13.13 ContentLengthPenaltySize as Int64

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A connection with a content-length longer than this will not be considered for pipelining.

Notes: (Read and Write property)

4.13.14 Handle as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The internal object reference.

Notes: (Read only property)

4.13.15 Lasterror as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error code.

Notes: (Read and Write property)

4.13.16 MaxConcurrentStreams as Integer

Plugin Version: 20.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The maximum number of concurrent connections to a server.

Notes: Maximum number of concurrent streams to support on a connection.
(Read and Write property)

4.13.17 MaxConnects as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Maximum number of entries in the connection cache.

Notes: (Read and Write property)

4.13.18 MaxHostConnections as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Maximum number of (pipelining) connections to one host.

Notes: (Read and Write property)

4.13.19 MaxPipelineLength as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Maximum number of requests in a pipeline.

Notes: (Read and Write property)

4.13.20 MaxTotalConnections as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Maximum number of open connections in total.

Notes: (Read and Write property)

4.13.21 Pipelining as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Set to 1 to enable pipelining for this multi handle.

Notes: Only for HTTP protocol.

Used to be a boolean property for 15.0 to 18.1, but changed to integer for 18.2.

(Read and Write property)

4.13.22 RunningTransfers as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Number of running transfers.

Notes: Set by Perform method.

(Read only property)

4.13.23 Tag as Variant

Plugin Version: 23.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The tag value.

Notes: You can store whatever reference value you need.

(Read and Write property)

4.13.24 Events

4.13.25 TransferFinished(CURL as CURLNMBS, result as Integer, RemainingFinishedTransfers as Integer)

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: .

Function: One transfer finished.

Notes: Query CURL object for details.

Result is the result of the transfer as returned by Perform method of CURL object.

RemainingFinishedTransfers is how many transfers are also finished and will be called right after this event.

This event fires always when the queue is empty.

You may want to turn off the timer calling Perform method when this event fires.

Later you can start timer again if you call Add method.

4.13.26 TransfersFinished

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: .

Function: All pending transfers finished.

4.13.27 Constants

Error Codes

Constant	Value	Description
kErrorAddedAlready	7	An easy handle already added to a multi handle was attempted to get added - again.
kErrorBadEadyHandle	2	An easy handle was not good/valid.
kErrorBadFunctionArgument	10	A function was called with a bad parameter.
kErrorBadHandle	1	The passed-in handle is not a valid CURLM handle.
kErrorBadSocket	5	The passed in socket argument did not match.
kErrorCallPerform	-1	Please call Perform soon to do some tasks.
kErrorInternalError	4	This is a libCURL bug.
kErrorOK	0	Everything OK.
kErrorOutOfMemory	3	Running low on memory.
kErrorRecursiveAPICall	8	An api function was called from inside an event.
kErrorUnknownOption	6	Tried to set unsupported option.
kErrorWakeupFailure	9	Wakeup is unavailable or failed.

Pipelining options

Constant	Value	Description
kPipeHTTP1	1	Pipe with HTTP/1.1.
kPipeMultiPlex	2	Pipe with multiplex.
kPipeNothing	0	No piping.

4.13.28 Delegates

4.13.29 CURLNTransferFinishedMBS(curl as CURLNMBS, ErrorCode as Integer)

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The delegate used to indicate a transfer finished.

Notes: ErrorCode is zero for a successful.

See kError* constants in CURLNMBS class.

See also:

- 4.13.30 CURLNTransferFinishedMBS(curl as CURLNMBS, ErrorCode as Integer)

429

4.13.30 CURLNTransferFinishedMBS(curl as CURLNMBS, ErrorCode as Integer)

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The delegate used to indicate a transfer finished.

Notes: ErrorCode is zero for a successful.

See kError* constants in CURLSMBS class.

See also:

- 4.13.29 CURLNTransferFinishedMBS(curl as CURLNMBS, ErrorCode as Integer) 429

4.14 class **CURLNNotInitializedExceptionMBS**

4.14.1 class **CURLNNotInitializedExceptionMBS**

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An exception raised if CURL library is not initialized.

Notes: If you call load library before you use the CURLMBS Constructor, you should never see this.
Subclass of the RuntimeException class.

4.15 class CURLNotInitializedExceptionMBS

4.15.1 class CURLNotInitializedExceptionMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An exception raised if CURL library is not initialized.

Notes: If you call load library before you use the CURLMBS Constructor, you should never see this.
Subclass of the RuntimeException class.

4.16 class CURLNSSLBackendMBS

4.16.1 class CURLNSSLBackendMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for a SSL backend.

Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

4.16.2 Methods

4.16.3 Constructor

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The private constructor.

4.16.4 List as CURLNSSLBackendMBS()

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Lists the backends.

Example:

```
dim list() as CURLNSSLBackendMBS = CURLNSSLBackendMBS.List
```

```
for each l as CURLNSSLBackendMBS in list
  MsgBox l.name
next
```

Notes: The list may not be available if called too late.

4.16.5 SetSSLBackend(id as Integer) as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the SSL backend.

Notes: When built with multiple SSL backends, SetSSLBackend() allows to choose one. This function can only be called once, and it must be called *before* CURL constructor().

The backend can be identified by the id (e.g. `CURLSSLBACKEND_OPENSSL`). The backend can also be specified via the name parameter (passing `-1` as id). If both id and name are specified, the name will be ignored. If neither id nor name are specified, the function will fail with `CURLSSLSET_UNKNOWN_BACKEND` and set the "avail" pointer to the NULL-terminated list of available backends.

Upon success, the function returns `kErrorOK`.

If the specified SSL backend is not available, the function returns `kErrorUnknownBackend`.

The SSL backend can be set only once. If it has already been set, a subsequent attempt to change it will result in a `kErrorTooLate`.

Returns nil, if there are no backends to choose.

See also:

- 4.16.6 `SetSSLBackend(name as string)` as Integer

434

4.16.6 `SetSSLBackend(name as string)` as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the SSL backend.

Notes: When built with multiple SSL backends, `SetSSLBackend()` allows to choose one. This function can only be called once, and it must be called **before** `CURL` constructor().

The backend can be identified by the id (e.g. `CURLSSLBACKEND_OPENSSL`). The backend can also be specified via the name parameter (passing `-1` as id). If both id and name are specified, the name will be ignored. If neither id nor name are specified, the function will fail with `CURLSSLSET_UNKNOWN_BACKEND` and set the "avail" pointer to the NULL-terminated list of available backends.

Upon success, the function returns `kErrorOK`.

If the specified SSL backend is not available, the function returns `kErrorUnknownBackend`.

The SSL backend can be set only once. If it has already been set, a subsequent attempt to change it will result in a `kErrorTooLate`.

Returns nil, if there are no backends to choose.

See also:

- 4.16.5 `SetSSLBackend(id as Integer)` as Integer

433

4.16.7 Properties

4.16.8 ID as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The ID of this SSL backend.

Notes: (Read only property)

4.16.9 Name as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The name of this SSL backend.

Notes: (Read only property)

4.16.10 Constants

Error codes

Constant	Value	Description
kErrorNoBackends	3	libcurl was built without any SSL support
kErrorOK	0	OK
kErrorTooLate	2	You can't set SSL backend after SSL initialization.
kErrorUnknownBackend	1	Unknown backend name or ID.

SSL Backend IDs

Constant	Value	Description
kSSLBackendDarwinSSL	9	DarwinSSL
kSSLBackendGNUTLS	2	GNUTLS
kSSLBackendGSKIT	5	GSKIT
kSSLBackendMBEDTLS	11	MBEDTLS
kSSLBackendNone	0	
kSSLBackendNSS	3	NSS
kSSLBackendOpenSSL	1	OpenSSL or BoringSSL
kSSLBackendSChannel	8	SChannel
kSSLBackendSecureTransport	9	DarwinSSL
kSSLBackendWolfSSL	7	WolfSSL

4.17 class CURLNURLMBS

4.17.1 class CURLNURLMBS

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for CURL's URL parser.

Example:

```
dim c as new CURLNURLMBS
c.URL = "www.test.de/Hello World test.pdf"
// setting URL will repair the spaces
c.path = c.Path
MsgBox c.URL
```

4.17.2 Methods

4.17.3 Clone as CURLNURLMBS

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Duplicates the object.

4.17.4 Constructor

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a new URL object.

4.17.5 Properties

4.17.6 Flags as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The flags to use.

Notes: Our default is combination of:

- kFlagsNoDefaultPort
- kFlagsNonSupportScheme
- kFlagsURLDecode
- kFlagsURLEncode
- kFlagsGuessScheme
- kFlagsDefaultScheme

(Read and Write property)

4.17.7 Fragment as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set fragment part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.17.8 Handle as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Internal object reference.

Notes: (Read and Write property)

4.17.9 Host as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set host part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.17.10 Lasterror as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error code reported by one of the functions.

Notes: This changes while using debugger because getting or setting properties also sets this property.

(Read and Write property)

4.17.11 Options as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set options part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.17.12 Password as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set password part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.17.13 Path as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set path part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.17.14 Port as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set port part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.17.15 Query as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set query part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.17.16 Scheme as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set scheme part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.17.17 URL as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set full URL.

Example:

[Dim c As New CURLNURLMBS](#)

```
// load absolute URL  
c.URL = "http://domain.com/folder/page1.htm"
```

```
// load relative URL  
c.URL = "page2.htm"
```

```
// get final URL  
MsgBox c.URL
```

Notes: Sets lasterror property.

(Read and Write property)

4.17.18 User as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set user part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.17.19 ZoneID as String

Plugin Version: 19.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The zone ID.

Notes: (Read and Write property)

4.17.20 Constants

Constants

Constant	Value	Description
kFlagsNoAuthority	1024	Allow URLs without authority. Allow empty authority when the scheme is unknown.

Error Constants

Constant	Value	Description
kErrorBadFileURL	19	The file:// URL is invalid.
kErrorBadFragment	20	The fragment part of the URL contained bad or invalid characters.
kErrorBadHostname	21	The hostname contained bad or invalid characters.
kErrorBadIPv6	22	The IPv6 address hostname contained bad or invalid characters.
kErrorBadLogin	23	The login part of the URL contained bad or invalid characters.
kErrorBadPassword	24	The password part of the URL contained bad or invalid characters.
kErrorBadPath	25	The path part of the URL contained bad or invalid characters.
kErrorBadQuery	26	The query part of the URL contained bad or invalid characters.
kErrorBadScheme	27	The scheme part of the URL contained bad or invalid characters.
kErrorBadSlashes	28	The URL contained an invalid number of slashes.
kErrorBadUser	29	The user part of the URL contained bad or invalid characters.
kErrorNoZoneID	18	There is no zoneid set in the URL.

Error Codes

Constant	Value	Description
kErrorBadHandle	1	An argument that should be a CURLU pointer was passed in as a NULL. Should never happen with plugin as you would get exception.
kErrorBadPartpointer	2	A NULL pointer was passed to the 'part' argument of curl_url_get. Should never happen with plugin as you would get exception.
kErrorBadPortNumber	4	The port number was not a decimal number between 0 and 65535.
kErrorLacksIDN	30	IDN missing.
kErrorMalformedInput	3	A malformed input was passed to a URL API function.
kErrorNoFragment	17	There is no fragment part in the URL.
kErrorNoHost	14	There is no host part in the URL.
kErrorNoOptions	13	There is no options part in the URL.
kErrorNoPassword	12	There is no password part in the URL.
kErrorNoPort	15	There is no port part in the URL.
kErrorNoQuery	16	There is no query part in the URL.
kErrorNoScheme	10	There is no scheme part in the URL.
kErrorNoUser	11	There is no user part in the URL.
kErrorOk	0	No error.
kErrorOutOfMemory	7	A memory function failed.
kErrorUnknownPart	9	An unknown part ID was passed to a URL API function.
kErrorUnsupportedScheme	5	This libcurl build doesn't support the given URL scheme.
kErrorUrlDecode	6	
kErrorUserNotAllowed	8	Credentials was passed in the URL when prohibited.

Flags

Constant	Value	Description
kFlagsAllowSpace	2048	Whether to allow space character in URLs.
kFlagsAppendQuery	256	Append a form style part.
kFlagsDefaultPort	1	Return default port number.
kFlagsDefaultScheme	4	Return default scheme if missing.
kFlagsDisallowUser	32	No user+password allowed.
kFlagsGuessScheme	512	Legacy curl-style guessing.
kFlagsNoDefaultPort	2	Act as if no port number was set, if the port number matches the default for the scheme.
kFlagsNonSupportScheme	8	Allow non-supported scheme.
kFlagsPathAsIs	16	Leave dot sequences.
kFlagsPunyCode	4096	get the host name in punycode
kFlagsURLDecode	64	URL decode on get.
kFlagsURLEncode	128	URL encode on set.

4.18 class CURLNVersionMBS

4.18.1 class CURLNVersionMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A class to hold version information from libCURL.

Blog Entries

- [News from the MBS Xojo Plugins in Version 23.0](#)
- [News from the MBS Xojo Plugins Version 21.1](#)

4.18.2 Methods

4.18.3 Constructor

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The constructor.

4.18.4 FeatureNames as String()

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries the feature names.

Example:

```
dim v as new CURLNVersionMBS
dim features() as string = v.FeatureNames
dim Names as string = string.FromArray(features)
MessageBox Names
```

Notes: Values are e.g. alt-svc AsynchDNS HSTS HTTPS-proxy IPv6 Largefile libz NTLM NTLM_WB SSL threadsafe TLS-SRP UnixSockets zstd

4.18.5 Protocol(index as Integer) as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An array containing the names protocols that libCURL supports (using lowercase letters).

Notes: The protocol names are the same as would be used in URLs.

Index is zero based.

4.18.6 Protocols as String()

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An array containing the names protocols that libCURL supports (using lowercase letters).

Example:

```
dim v as new CURLNVersionMBS
dim Protocols() as string = v.Protocols
dim Names as string = string.FromArray(Protocols)
MessageBox Names
```

Notes: The protocol names are the same as would be used in URLs.

4.18.7 Properties

4.18.8 brotliVersion as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Brotli library version string.

Notes: Empty if library is not used in the CURL library you use.

(Read only property)

4.18.9 brotliVersionNumber as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Version of brotli version.

Notes: (Read only property)

4.18.10 CAInfo as String

Plugin Version: 20.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The built-in default CURLOPT_CAINFO.

Notes: Should be empty within plugin.

(Read only property)

4.18.11 CAPath as String

Plugin Version: 20.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The built-in default CURLOPT_CAPATH.

Notes: Should be empty within plugin.
(Read only property)

4.18.12 Features as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bits which define what features libCURL can and can't.

Notes: Use the Supports Boolean properties instead.
Additional feature bits may be found in the libCURL documentation.
(Read only property)

4.18.13 gsaslVersion as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version string of the GNU SASL Library version.

Notes: (Read only property)

4.18.14 Host as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An ascii string showing what host information that this libCURL was built for.

Notes: As discovered by a configure script or set by the build environment.
e.g. "powerpc-apple-darwin8.0"
(Read only property)

4.18.15 hyperVersion as String

Plugin Version: 21.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Human readable string.

Notes: (Read only property)

4.18.16 iconvVersionNumber as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Version number of iconv library.

Notes: (Read only property)

4.18.17 libidnVersion as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Version of LibIDN used.

Notes: Empty if library is not used in the CURL library you use.

(Read only property)

4.18.18 libsshVersion as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Version of LibSSH2 used.

Notes: Empty if library is not used in the CURL library you use.

(Read only property)

4.18.19 LibZVersion as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An ascii string (there is no numerical version).

Notes: If libCURL has no libz support, this is "".

e.g. "1.2.3"

(Read only property)

4.18.20 nghttp2Version as String

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version string for nghttp2 library.

Notes: (Read only property)

4.18.21 nhttp2VersionNumber as Integer

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version number for nhttp2.

Notes: Numeric nhttp2 version: (MAJOR * 65536) + (MINOR * 256) + PATCH
(Read only property)

4.18.22 ProtocolCount as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The number of entries in the Protocol array.

Notes: (Read only property)

4.18.23 quicVersion as String

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version of quic version.

Notes: human readable quic (+ HTTP/3) library version.
(Read only property)

4.18.24 SSLVersion as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An ascii string for the OpenSSL version used.

Notes: If libCURL has no SSL support, this is "".
e.g. " OpenSSL/0.9.7l"
(Read only property)

4.18.25 SupportsASYNCHDNS as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for asynchronous name lookups, which allows more exact timeouts (even on Windows) and less blocking when using the multi interface.

Notes: (added in 7.10.7)
(Read only property)

4.18.26 SupportsBrotli as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Brotli features are present.

Notes: (Read only property)

4.18.27 SupportsConv as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Character conversions supported.

Notes: (Read only property)

4.18.28 SupportsGSSAPI as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Built against a GSS-API library.

Notes: (Read only property)

4.18.29 SupportsGSSNEGOTIATE as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports HTTP GSS-Negotiate

Notes: (added in 7.10.6)

(Read only property)

4.18.30 SupportsHTTP2 as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether currently used CURL library supports HTTP2.

Example:

```
dim c as new CURLNMBS
dim v as CURLNVersionMBS = c.version
```

```
if v.SupportsHTTP2 then
MsgBox "HTTP2 is supported"
else
```

```
MsgBox "HTTP2 is not supported"  
end if
```

Notes: While our CURL Plugin with CURLNMBS plugin may not support this currently, you could use LoadLibrary function to load a CURL library supporting it.
(Read only property)

4.18.31 SupportsHTTP3 as Boolean

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether HTTP3 features are present.

Notes: (Read only property)

4.18.32 SupportsHTTPSProxy as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: HTTPS-proxy support built-in.

Notes: (Read only property)

4.18.33 SupportsIDN as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for IDNA, domain names with international letters.

Notes: (Added in 7.12.0)

(Read only property)

4.18.34 SupportsIPV6 as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports IPv6

Notes: (Read only property)

4.18.35 SupportsKERBEROS4 as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports kerberos4 (when using FTP).

Notes: (Read only property)

4.18.36 SupportsKerberos5 as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Kerberos V5 auth is supported.

Notes: (Read only property)

4.18.37 SupportsLARGEFILE as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for large files.

Notes: (Added in 7.11.1)

(Read only property)

4.18.38 SupportsLIBZ as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports HTTP deflate using libz

Notes: (Added in 7.10)

(Read only property)

4.18.39 SupportsMultiSSL as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Multiple SSL backends available.

Notes: (Read only property)

4.18.40 SupportsNTLM as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports HTTP NTLM

Example:

```
dim c as new CURLNMBS
dim v as CURLNVersionMBS = c.Version
```

```
MsgBox "SupportsNTLM: "+str(v.SupportsNTLM)
```

Notes: (added in 7.10.6)

(Read only property)

4.18.41 SupportsNTLMWB as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: NTLM delegation to winbind helper is supported.

Notes: (Read only property)

4.18.42 SupportsPSL as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Mozilla's Public Suffix List, used for cookie domain verification.

Notes: (Read only property)

4.18.43 SupportsSPNEGO as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for SPNEGO authentication

Notes: (Simple and Protected GSS-API Negotiation Mechanism, defined in RFC 2478.) (added in 7.10.8)

(Read only property)

4.18.44 SupportsSSL as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports SSL (HTTPS/FTPS)

Notes: (Added in 7.10)

(Read only property)

4.18.45 SupportsSSPI as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for SSPI.

Notes: This is only available on Windows and makes libCURL use Windows-provided functions for NTLM authentication. It also allows libCURL to use the current user and the current user's password without the app having to pass them on. (Added in 7.13.2)

(Read only property)

4.18.46 SupportsTLSAUTHSRP as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: TLS-SRP auth is supported.

Notes: (Read only property)

4.18.47 SupportsUnicode as Boolean

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether unicode for Windows is enabled.

Notes: libcurl was built with Unicode support on Windows. This makes non-ASCII characters work in filenames and options passed to libcurl. (Added in 7.72.0)

(Read only property)

4.18.48 SupportsUnixSockets as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Unix domain sockets support.

Notes: (Read only property)

4.18.49 SupportsZSTD as Boolean

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Supports HTTP zstd content encoding using zstd library.

Notes: Added in CURL 7.72.0

(Read only property)

4.18.50 Version as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An ascii string for the libCURL version.

Notes: e.g. "7.13.1"

(Read only property)

4.18.51 VersionNumber as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version of libCURL as number.

Notes: a 24 bit number created like this:

<8 bits major number>| <8 bits minor number>| <8 bits patch number>.

Version 7.9.8 is therefore returned as 0x070908.

(Read only property)

4.18.52 zstdVersion as String

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Human readable string version for zstd library.

Notes: (Read only property)

4.18.53 zstdVersionNumber as Integer

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Numeric Zstd version.

Notes: Major 8 bits, minor 12 bits, Patch 12 bits.

(Read only property)

4.19 class CURLNWebSocketFrameMBS

4.19.1 class CURLNWebSocketFrameMBS

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The class for a WebSocket frame.

Notes: dim curl as CURLNMBS // your curl handle

```
dim m as CURLNWebSocketFrameMBS = curl.WebSocketReceive
```

```
if m <>nil then  
  TextAreaLog.AddText "Received: "+m.Text  
end if
```

Blog Entries

- [News from the MBS Xojo Plugins in Version 23.0](#)

4.19.2 Properties

4.19.3 BytesLeft as Int64

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: Number of pending bytes left of the payload.

Notes: (Read only property)

4.19.4 BytesReceived as Int64

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The number of bytes received.

Notes: (Read only property)

4.19.5 Data as MemoryBlock

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The data read.

Notes: (Read only property)

4.19.6 FlagBinary as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is binary data.

Notes: (Read only property)

4.19.7 FlagClose as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: Close this transfer.

Notes: (Read only property)

4.19.8 FlagContinue as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is not the final fragment of the message, which implies that there will be another fragment coming as part of the same message where this bit is not set.

Notes: (Read only property)

4.19.9 FlagOffset as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is a partial fragment.

Notes: The provided data is only a partial fragment and there will be more in a following call to `WebSocketSend()`. When sending only a piece of the fragment like this, the `fragsize` must be provided with the total expected fragment size in the first call and it needs to be zero in subsequent calls.

(Read only property)

4.19.10 FlagPing as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This as a ping.

Notes: (Read only property)

4.19.11 FlagPong as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is a pong.

Notes: (Read only property)

4.19.12 Flags as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: Flags for this packet.

Notes: See kFlag* constants.

(Read only property)

4.19.13 FlagText as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The buffer contains text data.

Notes: Note that this makes a difference to WebSocket but CURL itself will not make any verification of the content or precautions that you actually send valid UTF-8 content.

(Read only property)

4.19.14 Offset as Int64

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The offset of this data into the frame.

Notes: (Read only property)

4.19.15 Text as String

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The data read as text.

Notes: If this is not a binary transfer, we put the text here.

(Read only property)

4.19.16 Constants

Flags

Constant	Value	Description
kFlagBinary	2	This is binary data.
kFlagClose	8	Close this transfer.
kFlagContinue	4	This is not the final fragment of the message, which implies that there will be another fragment coming as part of the same message where this bit is not set.
kFlagOffset	32	This is a partial fragment. The provided data is only a partial fragment and there will be more in a following call to <code>WebSocketSend()</code> . When sending only a piece of the fragment like this, the <code>fragsize</code> must be provided with the total expected fragment size in the first call and it needs to be zero in subsequent calls.
kFlagPing	16	This as a ping.
kFlagPong	64	This is a pong.
kFlagText	1	The buffer contains text data. Note that this makes a difference to <code>WebSocket</code> but <code>CURL</code> itself will not make any verification of the content or precautions that you actually send valid UTF-8 content.

4.20 class CURLSFileInfoMBS

4.20.1 class CURLSFileInfoMBS

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for file information.

Notes: Content of this structure depends on information which is known and is achievable (e.g. by FTP LIST parsing).

Blog Entries

- [MBS Xojo Plugins, version 20.5pr6](#)
- [MBS Xojo Plugins in version 19.0](#)
- [MBS Xojo Plugins, version 18.6pr5](#)
- [MBS Xojo / Real Studio Plugins, version 16.1pr3](#)
- [MBS Releases the MBS Xojo / Real Studio plug-ins in version 15.2](#)
- [MBS Xojo / Real Studio Plugins, version 15.2pr8](#)
- [MBS Xojo / Real Studio Plugins, version 15.2pr7](#)

Videos

- [Presentation from Xojo Developer Conference 2019 in Miami.](#)

Xojo Developer Magazine

- [17.5, page 38: What's New in the MBS Plugins, With the Plugins growing every year, here are new capabilities you may have missed by Stefanie Juchmes](#)
- [17.2, page 11: News](#)
- [13.5, page 8: News](#)

4.20.2 Properties

4.20.3 Date as Date

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The timestamp as a date object.

Notes: As of plugin version 15.2 the CURL library does not parse the timestamp.

So for some timestamp formats we have code in our plugin to do the parsing from the TimeString property. But this is limited. No seconds and the year is a guess. Files newer in the year than today are from last year and other files from current year. The server doesn't provide year details.

(Read only property)

4.20.4 DateTime as DateTime

Plugin Version: 20.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: The timestamp as a date object.

Notes: As of plugin version 20.5 the CURL library does not parse the timestamp.

So for some timestamp formats we have code in our plugin to do the parsing from the TimeString property. But this is limited. No seconds and the year is a guess. Files newer in the year than today are from last year and other files from current year. The server doesn't provide year details.

(Read only property)

4.20.5 FileName as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The file name.

Notes: (Read only property)

4.20.6 FileType as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The file type.

Notes: (Read only property)

4.20.7 Flags as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The flags.

Notes: Flags define which fields are set.

Also you can just use the Has properties for same information.

(Read only property)

4.20.8 GID as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The group ID.

Notes: (Read only property)

4.20.9 GroupString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The group string.

Notes: (Read only property)

4.20.10 HardLinks as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The hard link count.

Notes: (Read only property)

4.20.11 HasFileName as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if filename property is valid.

Notes: (Read only property)

4.20.12 HasFileType as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if filetype property is valid.

Notes: (Read only property)

4.20.13 HasGID as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if GID property is valid.

Notes: (Read only property)

4.20.14 HasHardLinks as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if hardlinks property is valid.

Notes: (Read only property)

4.20.15 HasPermissions as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if permissions property is valid.

Notes: (Read only property)

4.20.16 HasSize as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if size property is valid.

Notes: (Read only property)

4.20.17 HasTime as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if time and date properties have values.

Notes: (Read only property)

4.20.18 HasUID as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if UID field has a value.

Notes: (Read only property)

4.20.19 IsDirectory as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if entry is a directory.

Notes: Same as FileType = FileTypeDirectory.

(Read only property)

4.20.20 IsFile as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True if entry is a regular file.

Notes: Same as FileType = FileTypeFile.

(Read only property)

4.20.21 Permissions as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The permission value.

Notes: (Read only property)

4.20.22 PermissionString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The permission string.

Notes: (Read only property)

4.20.23 Size as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The file size.

Notes: (Read only property)

4.20.24 Target as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The target for a symlink.

Notes: (Read only property)

4.20.25 Time as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The time value.

Notes: (Read only property)

4.20.26 TimeString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The time string parsed.

Notes: (Read only property)

4.20.27 UID as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The user ID.

Notes: (Read only property)

4.20.28 UserString as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The user ID as text.

Notes: (Read only property)

4.20.29 Constants

File Types

Constant	Value	Description
FileTypeDeviceBlock	3	Block Device
FileTypeDeviceChar	4	Character Device
FileTypeDirectory	1	Directory
FileTypeDoor	7	Door, is possible only on Sun Solaris now.
FileTypeFile	0	Regular file
FileTypeNamedPipe	5	Named Pipe
FileTypeSocket	6	Socket
FileTypeSymlink	2	Symbolic links
FileTypeUnknown	8	Unknown file type. Should never occur.

Flag Constants

Constant	Value	Description
FlagKnownFileName	1	Filename Known
FlagKnownFileType	2	File Type Known
FlagKnownGID	32	GID Known
FlagKnownHardLinks	128	Hardlink Count Known
FlagKnownPermissions	8	Permissions Known
FlagKnownSize	64	Size Known
FlagKnownTime	4	Time Known
FlagKnownUID	16	UID Known

4.21 class CURLSListMBS

4.21.1 class CURLSListMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A class to hold a list of strings from the CURL library.

Notes: Data is copied for this list, so you can just keep it around.

4.21.2 Methods

4.21.3 Item(index as Integer) as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Returns the item with the given index.

Notes: Index is zero based.

4.21.4 List as String()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Converts list to a string array.

4.21.5 Operator_Convert as String()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Converts list to a string array.

4.21.6 Properties

4.21.7 Count as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Number of items in this list.

Notes: (Read only property)

4.22 class CURLSMBS

4.22.1 class CURLSMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A class to wrap libCURL.

Example:

```
Dim d As New CURLSMBS
```

```
// download here
d.OptionURL = URL
```

```
// if you use SSL, maybe put in a certificate or disable verification?
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0
```

```
// run download
dim e as integer = d.Perform
```

```
// check result
Dim data As String = d.OutputData
Dim DebugMessage As String = d.DebugMessages // check in debugger on error
```

```
ResultText.text="Result: "+str(e) // 0 = Okay, others are error codes, so check debug messages
```

Notes: We have three variants:

CURLS* classes include a static CURL library with SSL and SSH.

CURLN* classes include a static CURL library with native SSL on Mac and Windows.

CURL* classes without S need you to supply your own CURL library.

All variants can load a custom CURL library or use the one from the system on Mac and Linux.

If no library is loaded or included, the plugin will try to load the system one in constructor.

from the website libCURL website:

<https://curl.haxx.se/libcurl/>

libCURL is a free and easy-to-use client-side URL transfer library, supporting FTP, FTPS, HTTP, HTTPS, SCP, SFTP, TFTP, TELNET, DICT, FILE and LDAP. libCURL supports SSL certificates, HTTP POST, HTTP PUT, FTP uploading, HTTP form based upload, proxies, cookies, user+password authentication (Basic, Digest, NTLM, Negotiate, Kerberos4), file transfer resume, http proxy tunneling and more!

libCURL is highly portable, it builds and works identically on numerous platforms, including Solaris, NetBSD, FreeBSD, OpenBSD, Darwin, HPUX, IRIX, AIX, Tru64, Linux, UnixWare, HURD, Windows, Amiga, OS/2, BeOs, Mac OS X, Ultrix, QNX, OpenVMS, RISC OS, Novell NetWare, DOS and more...

libCURL is free, thread-safe, IPv6 compatible, feature rich, well supported, fast, thoroughly documented and is already used by many known, big and successful companies and numerous applications.

On Linux you may need to install libraries like ldap: `apt-get install libldap-2.4.2:i386`

Blog Entries

- [News from the MBS Xojo Plugins Version 22.3](#)
- [News from the MBS Xojo Plugins Version 21.1](#)
- [News from the MBS Xojo Plugins Version 20.5](#)
- [News from the MBS Xojo Plugins Version 20.4](#)
- [Multithreaded plugin functions can increase speed of Xojo application](#)
- [Xojo 2018 Release 4 Now Available](#)
- [CURL function for OAuth](#)
- [The Cancel problem with Threads](#)
- [Multithreaded plugin functions can increase speed of Real Studio application](#)
- [MBS Plugins 11.1 Release notes](#)

Videos

- [Presentation from London conference about MBS Plugins.](#)

Xojo Developer Magazine

- [21.6, page 8: News](#)
- [21.5, page 9: News](#)
- [21.3, page 9: News](#)
- [21.2, page 9: News](#)
- [21.1, page 9: News](#)
- [20.6, page 9: News](#)
- [20.1, page 67: Send Your Emails, How to use the MBS Xojo plugins to send emails by Stefanie Juchmes](#)
- [19.6, page 10: News](#)
- [16.5, page 9: News](#)
- [16.2, page 9: News](#)

4.22.2 Methods

4.22.3 AddMimePart as CURLSMimePartMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds a new blank mime part.

Notes: Returns mime object, so you can set properties.

4.22.4 AWSPresignURL(AWSAccessKeyId as String, AWSSecretAccessKey as String, Region as String, Service as String, Path as String, Domain as String, Verb as String = "GET", Expires as Integer = 86400, QueryParameters() as String = nil, Headers() as String = nil) as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Query predigend URL for Amazon Webservices.

Example:

```
Dim URL As String = CURLSMBS.AWSPresignURL( _
  "AKIAIOSFODNN7EXAMPLE", _
  "wJalrXUtnFEMI/K7MDENG/bPxrFiCYEXAMPLEKEY", _
  "us-east-1", _
  "s3", _
  "/test.txt", _
  "examplebucket.s3.amazonaws.com", _
  "GET", _
  86400 )
```

Break // see URL in debugger

Notes: This implements AWS4-HMAC-SHA256 pre-signature for credentials.

Works also for other compatible S3 services beside Amazon's like the one from Wasabi or Dell ECS.

Parameter	Description	Example
AWSAccessKeyId	Your access key for AWS.	"AKIAIOSFODNN7EXAMPLE"
AWSSecretAccessKey	Your secret key.	"wJalrXUtnFEMI/K7MDENG/bPxrFiCYEXAMPLEKEY"
Region	The region to use.	"us-east-1"
Service	The service to use.	"s3"
Path	The path to use. Should always start with "/".	"/test.txt"
Domain	Optional domain to use. Do not add the port field to this string and always use the HTTP domain as the base. Use the POST, PUT, GET or DELETE. Default is GET.	"examplebucket.s3.amazonaws.com"
Verb	Optional domain. Overrides the verb printed in results for which the generated presigned URL is valid. For example, HEAD (20 bytes). This value is as large as the maximum is 86400 (seven days). A presigned URL can be valid for a maximum of seven days because the signing key you use to calculate the signature is valid for up to seven days. Default is HEAD for our site.	"GET"
Expires	Optional domain. Overrides the verb printed in results for which the generated presigned URL is valid. For example, HEAD (20 bytes). This value is as large as the maximum is 86400 (seven days). A presigned URL can be valid for a maximum of seven days because the signing key you use to calculate the signature is valid for up to seven days. Default is HEAD for our site.	"86400"
QueryParameters	Optional domain. Overrides the verb printed in results for which the generated presigned URL is valid. For example, HEAD (20 bytes). This value is as large as the maximum is 86400 (seven days). A presigned URL can be valid for a maximum of seven days because the signing key you use to calculate the signature is valid for up to seven days. Default is HEAD for our site.	"&key=value"
Headers	Optional domain. Overrides the verb printed in results for which the generated presigned URL is valid. For example, HEAD (20 bytes). This value is as large as the maximum is 86400 (seven days). A presigned URL can be valid for a maximum of seven days because the signing key you use to calculate the signature is valid for up to seven days. Default is HEAD for our site.	"header: value"

Returns the pre-signed URL. May raise an exception in case of error.

4.22.5 CipherNames as String()

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of all cipher algorithms.

Example:

```
// see hash and encryption algorithms available
dim CipherNames() as string = CURLSMBS.CipherNames
dim DigestNames() as string = CURLSMBS.DigestNames
Break
```

Notes: The list may not be the same for Mac, Windows and Linux.

4.22.6 ClearData

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Clears data properties.

Notes: Resets OutputData, DebugMessages and Headers.

4.22.7 CloseMTDebugOutputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Closes the debug output file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.22.8 CloseMTHeaderOutputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Closes the header output file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.22.9 CloseMTInputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Closes the input file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.22.10 CloseMTOutputFile

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Closes the output file for PerformMT.

Notes: Call after PerformMT finished.

With 15.2 version of plugin, this also works with Perform.

4.22.11 CreateMTDebugOutputFile(file as folderitem) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Creates a file where debug data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

With 15.2 version of plugin, this also works with Perform.

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.22.12 CreateMTDebugOutputFile(Path as String) as boolean

469

4.22.12 CreateMTDebugOutputFile(Path as String) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Creates a file where debug data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.22.11 CreateMTDebugOutputFile(file as folderitem) as boolean

469

4.22.13 CreateMTHeaderOutputFile(file as folderitem) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Creates a file where header data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).
With 15.2 version of plugin, this also works with Perform.

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.22.14 CreateMTHaderOutputFile(Path as String) as boolean 470

4.22.14 CreateMTHaderOutputFile(Path as String) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Creates a file where header data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

See also:

- 4.22.13 CreateMTHaderOutputFile(file as folderitem) as boolean 469

4.22.15 CreateMTOutputFile(file as folderitem) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Creates a file where output data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

With 15.2 version of plugin, this also works with Perform.

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

You can set CollectOutputData to false in order to disable dat being collected.

See also:

- 4.22.16 CreateMTOutputFile(Path as String) as boolean 470

4.22.16 CreateMTOutputFile(Path as String) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Creates a file where output data is written to.

Notes: Returns true on success and false on failure (e.g. permission error).

Must be called before Perform, so we can stream data to the file.

The file is closed automatically when Perform methods finish their work.

You can set CollectOutputData to false in order to disable data being collected.

See also:

- 4.22.15 CreateMTOutputFile(file as folderitem) as boolean

470

4.22.17 DigestNames as String()

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of all digest algorithms.

Example:

```
// see hash and encryption algorithms available
dim CipherNames() as string = CURLSMBS.CipherNames
dim DigestNames() as string = CURLSMBS.DigestNames
Break
```

Notes: The list may not be the same for Mac, Windows and Linux.

4.22.18 FileInfos as CURLSFileInfoMBS()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries array with file information.

Notes: If you use OptionWildcard, you find after the transfer all CURLSFileInfoMBS objects for all the files/folders found.

For MBS Plugin 19.0 or newer you can alternatively run a custom request "MLSD" and then get file infos, too.

4.22.19 FinishMime

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Finishes mime data.

Example:

```

dim c as new CURLSMBS

// add mime
dim p as CURLSMimePartMBS = c.AddMimePart

p.name = "Text"
p.FileName = "test.txt"
p.MimeType = "text/plain"
p.DataString = "Hello World"

c.FinishMime
// now you can send...

```

Notes: Please call AddMimePart for each part you like to add and than finally FinishMime before calling perform.

4.22.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Example:

```

dim c as new CURLSMBS
dim file1 as string = "my-face.jpg"
dim file2 as string = "your-face.jpg"
dim formOptions(-1) as Integer
dim formValues(-1) as string

const CURLFORM_COPYNAME = 1
const CURLFORM_ARRAY = 8
const CURLFORM_FILE = 10

'/* Add two file section using CURLFORM_ARRAY */
formOptions.Append CURLFORM_FILE
formValues.append file1
formOptions.Append CURLFORM_FILE
formValues.append file2

'/* no option needed for the end marker */
c.FormAdd CURLFORM_COPYNAME, "pictures", CURLFORM_ARRAY, formOptions, formValues

```

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.22.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 473
- 4.22.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 474
- 4.22.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 474
- 4.22.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 475
- 4.22.25 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 476
- 4.22.26 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 476
- 4.22.27 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 479

4.22.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.22.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 472
- 4.22.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 474
- 4.22.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 474
- 4.22.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 475
- 4.22.25 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 476

- 4.22.26 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 476
- 4.22.27 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 479

4.22.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.22.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 472
- 4.22.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 473
- 4.22.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 474
- 4.22.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 475
- 4.22.25 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 476
- 4.22.26 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 476
- 4.22.27 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 479

4.22.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.22. *CLASS CURLSMBS* 475
- 4.22.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 472
 - 4.22.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 473
 - 4.22.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 474
 - 4.22.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 475
 - 4.22.25 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 476
 - 4.22.26 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 476
 - 4.22.27 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 479

4.22.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.22.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 472
- 4.22.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 473
- 4.22.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 474
- 4.22.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 474
- 4.22.25 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 476
- 4.22.26 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 476

- 4.22.27 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 479

4.22.25 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.22.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 472
- 4.22.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 473
- 4.22.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 474
- 4.22.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 474
- 4.22.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 475
- 4.22.26 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 476
- 4.22.27 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 479

4.22.26 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Several FormAdd methods are there. Send a request to support if you need another parameter combination.

Lasterror is set.

FormAdd() is used to append sections when building a multipart/formdata HTTP POST (sometimes referred to as rfc1867-style posts). Append one section at a time until you've added all the sections you want included and then you call FormFinish.

Using POST with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with CURLOPT_HTTPHEADER as usual.

First, there are some basics you need to understand about multipart/formdata posts. Each part consists of at least a NAME and a CONTENTS part. If the part is made for file upload, there are also a stored CONTENT-TYPE and a FILENAME. Below, we'll discuss what options you use to set these properties in the parts you want to add to your post.

The options listed first are for making normal parts. The options from CURLFORM_FILE through CURLFORM_BUFFERLENGTH are for file upload parts.

CURLFORM_COPYNAME:

followed by a string which provides the name of this part. libCURL copies the string so your application doesn't need to keep it around after this function call. If the name isn't null terminated, or if you'd like it to contain zero bytes, you must set its length with CURLFORM_NAMELENGTH.

CURLFORM_PTRNAME:

followed by a string which provides the name of this part. libCURL will use the string and refer to the data in your application, so you must make sure it remains until CURL no longer needs it. If the name isn't null terminated, or if you'd like it to contain zero bytes, you must set its length with CURLFORM_NAMELENGTH.

CURLFORM_COPYCONTENTS:

followed by a string to the contents of this part, the actual data to send away. libCURL copies the provided data, so your application doesn't need to keep it around after this function call. If the data isn't null terminated, or if you'd like it to contain zero bytes, you must set the length of the name with CURLFORM_CONTENTSLENGTH.

CURLFORM_PTRCONTENTS:

followed by a string to the contents of this part, the actual data to send away. libCURL will use the string and refer to the data in your application, so you must make sure it remains until CURL no longer needs it. If the data isn't null terminated, or if you'd like it to contain zero bytes, you must set its length with CURLFORM_CONTENTSLENGTH.

CURLFORM_CONTENTSLENGTH:

followed by a long giving the length of the contents.

CURLFORM_FILECONTENT:

followed by a filename, causes that file to be read and its contents used as data in this part. This part does not automatically become a file upload part simply because its data was read from a file.

CURLFORM_FILE:

followed by a filename, makes this part a file upload part. It sets the filename field to the basename of the provided filename, it reads the contents of the file and passes them as data and sets the content-type if the given file match one of the internally known file extensions. For CURLFORM_FILE the user may send one or more files in one part by providing multiple CURLFORM_FILE arguments each followed by the filename (and each CURLFORM_FILE is allowed to have a CURLFORM_CONTENTTYPE).

CURLFORM_CONTENTTYPE:

is used in combination with CURLFORM_FILE. Followed a string which provides the content-type for this part, possibly instead of an internally chosen one.

CURLFORM_FILENAME:

is used in combination with CURLFORM_FILE. Followed a string, it tells libCURL to use the given string as the filename in the file upload part instead of the actual file name.

CURLFORM_BUFFER:

is used for custom file upload parts without use of CURLFORM_FILE. It tells libCURL that the file contents are already present in a buffer. The parameter is a string which provides the filename field in the content header.

CURLFORM_BUFFERPTR:

is used in combination with CURLFORM_BUFFER. The parameter is the string to be uploaded. You must also use CURLFORM_BUFFERLENGTH to set the number of bytes in the buffer. Keep the buffer variable alive till the upload is finished.

CURLFORM_BUFFERLENGTH:

is used in combination with CURLFORM_BUFFER. The parameter is a long which gives the length of the buffer.

CURLFORM_ARRAY:

Another possibility to send options to CURL_formadd() is the CURLFORM_ARRAY option, that passes an Integer Array and a String Array defining its value. Each element in the form is constructed using the option from the integer array and the value from the string array. All available options can be used in an array, except the CURLFORM_ARRAY option itself!

CURLFORM_CONTENTHEADER:

specifies extra headers for the form POST section. This takes a CURL_slist prepared in the usual way using CURL_slist_append and appends the list of headers to those libCURL automatically generates. The list must exist while the POST occurs, if you free it before the post completes you may experience problems.

PS: CURLFORM_FILE does not work in all CURL versions on all platforms due to a bug with integer numbers.

See also:

- 4.22.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 472
- 4.22.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 473
- 4.22.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 474
- 4.22.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 474
- 4.22.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 475
- 4.22.25 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 476
- 4.22.27 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string) 479

4.22.27 FormAdd(FormOption1 as integer, Text1 as string, FormOption2 as integer, Text2 as string, FormOption3 as integer, Text3 as string, FormOption4 as integer, Number4 as integer, FormOption5 as integer, Text5 as string)

Plugin Version: 17.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Notes: Lasterror is set.

See other FormAdd methods for details.

See also:

- 4.22.20 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, FormOptions() as Integer, Texts() as string) 472
- 4.22.21 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string) 473
- 4.22.22 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer) 474
- 4.22.23 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Number4 as Integer) 474

- 4.22.24 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Number3 as Integer, FormOption4 as Integer, Text4 as string) 475
- 4.22.25 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string) 476
- 4.22.26 FormAdd(FormOption1 as Integer, Text1 as string, FormOption2 as Integer, Text2 as string, FormOption3 as Integer, Text3 as string, FormOption4 as Integer, Number4 as Integer) 476

4.22.28 FormAddField(fieldName as String, fieldValue as String, ContentType as String = "")

Plugin Version: 18.1, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Example:

```
dim d as new CURLSMBS
d.FormAddField("company", "Test, Inc.")
```

Notes: For fieldName and ContentType, we use UTF8 always. For fieldValue, we pass through whatever is in the string, so please make sure encoding is working.
ContentType is optional.

Please call FormFinish method later!

4.22.29 FormAddFile(fieldName as String, fileName as String, fileContent as string, ContentType as String = "")

Plugin Version: 18.1, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a section to a multipart/formdata HTTP POST.

Example:

```
// read content of some file
dim file as folderitem = specialFolder.desktop.Child("test.txt")
dim b as BinaryStream = binarystream.Open(file)
dim FileContent as String = b.read(b.length)

// init some curl object
dim d as new CURLSMBS

// add the file as part of a form
d.FormAddFile("FileAttachment", "test.txt", FileContent, "text/plain")
```

```
// later
d.FormFinish
```

Notes: For fieldName, fileName and ContentType, we use UTF8 always. For fieldValue, we pass through whatever is in the string, so please make sure encoding is working.

Filename is ignored, if empty.
ContentType is optional.

Please call FormFinish method later!

4.22.30 FormClear

Plugin Version: 19.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Clears current form data.

Notes: You usually don't need to call this as Perform clears form data when transfer is done.

4.22.31 FormData as String

Plugin Version: 17.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries current form data.

Notes: This is more for debugging as it builds form data as if we would send it.

4.22.32 FormFinish

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Finishes constructing a form.

Example:

```
dim c as new CURLSMBS
dim namebuffer as string = "name buffer"
dim namelength as Integer = lenb(namebuffer)
dim buffer as string = "test buffer"
dim htmlbuffer as string = "<HTML>test buffer</HTML>"
dim htmlbufferlength as Integer = lenb(htmlbuffer)
dim file1 as string = "my-face.jpg"
dim file2 as string = "your-face.jpg"
dim formOptions(-1) as Integer
```

```

dim formValues(-1) as string
dim recordbuffer as string = "record buffer"
dim recordlength as Integer = lenb(recordbuffer)

const CURLFORM_NOHING = 0
const CURLFORM_COPYNAME = 1
const CURLFORM_PTRNAME = 2
const CURLFORM_NAMELENGTH = 3
const CURLFORM_COPYCONTENTS = 4
const CURLFORM_PTRCONTENTS = 5
const CURLFORM_CONTENTSLENGTH = 6
const CURLFORM_FILECONTENT = 7
const CURLFORM_ARRAY = 8
const CURLFORM_FILE = 10
const CURLFORM_BUFFER = 11
const CURLFORM_BUFFERPTR = 12
const CURLFORM_BUFFERLENGTH = 13
const CURLFORM_CONTENTTYPE = 14
const CURLFORM_CONTENTHEADER = 15
const CURLFORM_FILENAME = 16

'/* Add simple name/content section */
c.FormAdd CURLFORM_COPYNAME, "name", CURLFORM_COPYCONTENTS, "content"
,
'/* Add simple name/content/contenttype section */
c.FormAdd CURLFORM_COPYNAME, "htmlcode", CURLFORM_COPYCONTENTS, "<HTML></HTML>",CURL-
FORM_CONTENTTYPE,"text/html"

'/* Add name/ptrcontent section */
c.FormAdd CURLFORM_COPYNAME, "name_for_ptrcontent", CURLFORM_PTRCONTENTS, buffer

'/* Add ptrname/ptrcontent section */
c.FormAdd CURLFORM_PTRNAME, namebuffer, CURLFORM_PTRCONTENTS, buffer, CURLFORM_NAME-
LENGTH, namelength

'/* Add name/ptrcontent/contenttype section */
c.FormAdd CURLFORM_COPYNAME, "html_code_with_hole", CURLFORM_PTRCONTENTS, html-
buffer, CURLFORM_CONTENTSLENGTH, htmlbufferlength, CURLFORM_CONTENTTYPE, "text/html"

'/* Add simple file section */
c.FormAdd CURLFORM_COPYNAME, "picture", CURLFORM_FILE, "my-face.jpg"

'/* Add file/contenttype section */
c.FormAdd CURLFORM_COPYNAME, "picture",CURLFORM_FILE, "my-face.jpg",CURLFORM_CONTENTTYPE,

```

```

"image/jpeg"

/* Add two file section */
c.FormAdd CURLFORM_COPYNAME, "pictures", CURLFORM_FILE, "my-face.jpg", CURLFORM_FILE,
"your-face.jpg"

/* Add two file section using CURLFORM_ARRAY */
formOptions.Append CURLFORM_FILE
formValues.append file1
formOptions.Append CURLFORM_FILE
formValues.append file2

/* Add a buffer to upload */
c.FormAdd CURLFORM_COPYNAME, "name", CURLFORM_BUFFER, "data", CURLFORM_BUFFERPTR,
recordbuffer, CURLFORM_BUFFERLENGTH, recordlength

/* no option needed for the end marker */
c.FormAdd CURLFORM_COPYNAME, "pictures", CURLFORM_ARRAY, formOptions, formValues

/* Add the content of a file as a normal post text value */
c.FormAdd CURLFORM_COPYNAME, "filecontent", CURLFORM_FILECONTENT, ".bashrc"
/* Set the form info */

c.FormFinish

```

Notes: Lasterror is set.

The form is assigned to the HTTPPost property.

4.22.33 GetInfoActiveSocket as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Receive the active socket used by this curl session.

Notes: If the socket is no longer valid, -1 is returned. When you finish working with the socket, the Destructor closes the socket and cleanup other resources associated with the handle. This is typically used in combination with OptionConnectOnly.

This option was added as a replacement for GetInfoLastSocket since that one isn't working on all platforms.

4.22.34 GetInfoAppConnectTime as Double

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The time stamp when app connected.

4.22.35 GetInfoCAInfo as string

Plugin Version: 22.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries default CAInfo value.

4.22.36 GetInfoCAPath as string

Plugin Version: 22.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries default CAPath value.

4.22.37 GetInfoCertInfo as CURLSListMBS()

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries information on the certificate chain.

Example:

```
dim c as new CURLSMBS

// do some transfer
c.OptionURL = "https://www.mbsplugins.de/"
c.OptionCertInfo = true
dim e as Integer = c.perform

// query certificate info
dim lists() as CURLSListMBS = c.GetInfoCertInfo

for each l as CURLSListMBS in lists
  MsgBox Join(l, EndOfLine)
next

MsgBox c.DebugMessages
```

Notes: Please set OptionCertInfo first.

4.22.38 GetInfoConditionUnmet as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Return if the time condition prevented the document to get transferred.

4.22.39 GetInfoConnectTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The time, in seconds, it took from the start until the connect to the remote host (or proxy) was completed.

Notes: The Lasterror property is set. 0 for success.

4.22.40 GetInfoContentLengthDownload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content-length of the download.

Notes: The Lasterror property is set. 0 for success.

This is the value read from the Content-Length: field.

4.22.41 GetInfoContentLengthUpload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The specified size of the upload.

Notes: The Lasterror property is set. 0 for success.

4.22.42 GetInfoContentType as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content-type of the downloaded object.

Notes: The Lasterror property is set. 0 for success.

This is the value read from the Content-Type: field. If you get "", it means that the server didn't send a valid Content-Type header or that the protocol used doesn't support this.

4.22.43 GetInfoCookieList as CURLSListMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A linked-list of all cookies CURL knows (expired ones, too).

Notes: The Lasterror property is set. 0 for success.

If there are no cookies (cookies for the handle have not been enabled or simply none have been received) the result is nil.

4.22.44 GetInfoEffectiveMethod as string

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get the last used effective HTTP method.

Notes: In cases when you've asked libcurl to follow redirects, the method may very well not be the same method the first request would use.

4.22.45 GetInfoEffectiveURL as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The last used effective URL.

Notes: The Lasterror property is set. 0 for success.

4.22.46 GetInfoFileTime as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: the remote time of the retrieved document (in number of seconds since 1 jan 1970 in the GMT/UTC time zone).

Example:

```
// init CURL with options
dim d as new CURLSMBS
d.OptionFileTime = true
d.OptionURL = "http://www.monkeybreadsoftware.de/images/mbs.jpg"

// run query
dim e as Integer = d.Perform

// calculate date object
dim da as new date(1970,1,1,0,0,0)
da.TotalSeconds = da.TotalSeconds + d.GetInfoFileTime
```

```
// show date  
ResultText.text=str(d.GetInfoFileTime)+" "+da.ShortDate+" "+da.ShortTime
```

Notes: The Lasterror property is set. 0 for success.

If you get -1, it can be because of many reasons (unknown, the server hides it or the server doesn't support the command that tells document time etc) and the time of the document is unknown. Note that you must tell the server to collect this information before the transfer is made, by using the OptionFileTime option or you will unconditionally get a -1 back. (Added in 7.5)

4.22.47 GetInfoFTPEntryPath as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Returns a string holding the path of the entry path.

Notes: That is the initial path libCURL ended up in when logging on to the remote FTP server.
Empty string if unknown.

4.22.48 GetInfoHeaderSize as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The total size of all the headers received.

Notes: The Lasterror property is set. 0 for success.

4.22.49 GetInfoHTTPAuthAvail as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A bitmask indicating the authentication method(s) available.

Notes: The Lasterror property is set. 0 for success.

The meaning of the bits is explained in the HTTPAuth option.

4.22.50 GetInfoHTTPConnectCode as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The last received proxy response code to a CONNECT request.

Notes: The Lasterror property is set. 0 for success.

none

4.22.51 GetInfoHTTPVersion as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get the http version used in the connection.

Notes: The returned value will be kHTTP_VERSION_1_0, kHTTP_VERSION_1_1, or kHTTP_VERSION_2_0, or 0 if the version can't be determined.

4.22.52 GetInfoLastSocket as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use GetInfoActiveSocket instead. **Function:** Receive the last socket used by this CURL session.

Notes: If the socket is no longer valid, -1 is returned. When you finish working with the socket, the destructor will free the handle as usual and let libCURL close the socket and cleanup other resources associated with the handle. This is typically used in combination with OptionConnectOnly. (Added in 7.15.2)

NOTE: this API is not really working on win64, since the SOCKET type on win64 is 64 bit large while its 'long' is only 32 bits.

4.22.53 GetInfoLocalIP as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries local IP.

Example:

```
dim c as new CURLSMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check local IP
MsgBox c.GetInfoLocalIP
```

4.22.54 GetInfoLocalPort as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Return the local port of the most recent (primary) connection.

Example:

```
dim c as new CURLSMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check local IP and port
MsgBox c.GetInfoLocalIP+"."+str(c.GetInfoLocalPort)
```

4.22.55 GetInfoNameLookupTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The time, in seconds, it took from the start until the name resolving was completed.

Notes: The Lasterror property is set. 0 for success.

4.22.56 GetInfoNumConnects as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: How many new connections libCURL had to create to achieve the previous transfer.

Notes: The Lasterror property is set. 0 for success.

(only the successful connects are counted)

Combined with RedirectCount you are able to know how many times libCURL successfully reused existing connection(s) or not. See the Connection Options to see how libCURL tries to make persistent connections to save time.

4.22.57 GetInfoOS_errno as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The errno variable from a connect failure.

Notes: The Lasterror property is set. 0 for success.

4.22.58 GetInfoPreTransferTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The time, in seconds, it took from the start until the file transfer is just about to begin.

Notes: The Lasterror property is set. 0 for success.

This includes all pre-transfer commands and negotiations that are specific to the particular protocol(s) involved.

4.22.59 GetInfoPrimaryIP as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Return the ip address of the most recent (primary) connection.

Example:

```
dim c as new CURLSMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check primary IP and port
MsgBox c.GetInfoPrimaryIP+":"+str(c.GetInfoPrimaryport)
```

4.22.60 GetInfoPrimaryPort as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Return the (remote) port of the most recent (primary) connection.

Example:

```
dim c as new CURLSMBS

// do some transfer
c.OptionURL = "http://www.mbsplugins.de/"
dim e as Integer = c.perform

// now check primary IP and port
MsgBox c.GetInfoPrimaryIP+":"+str(c.GetInfoPrimaryport)
```

4.22.61 GetInfoProtocol as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. **Function:** Get the protocol used in

the connection.

Notes: See kProtocol* constants.

4.22.62 GetInfoProxyAuthAvail as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A bitmask indicating the authentication method(s) available for your proxy authentication.

Notes: The Lasterror property is set. 0 for success.

4.22.63 GetInfoProxyError as integer

Plugin Version: 20.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries proxy error code.

4.22.64 GetInfoProxySSLVerifyResult as integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get the result of the proxy certificate verification.

Notes: receive the result of the certificate verification that was requested (using the OptionProxySSLVerifyPeer option. This is only used for HTTPS proxies.

4.22.65 GetInfoRedirectCount as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The total number of redirections that were actually followed.

Notes: The Lasterror property is set. 0 for success.

4.22.66 GetInfoRedirectTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: the total time, in seconds, it took for all redirection steps include name lookup, connect, pre-transfer and transfer before final transaction was started.

Notes: The Lasterror property is set. 0 for success.

RedirectTime contains the complete execution time for multiple redirections. (Added in 7.9.7)

4.22.67 GetInfoRedirectURL as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The redirection URL.

4.22.68 GetInfoReferer as string

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries referrer text.

4.22.69 GetInfoRequestSize as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The total size of the issued requests.

Notes: The Lasterror property is set. 0 for success.

This is so far only for HTTP requests. Note that this may be more than one request if FOLLOWLOCATION is true.

4.22.70 GetInfoResponseCode as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The last received HTTP or FTP code.

Notes: The Lasterror property is set. 0 for success.

This will be zero if no server response code has been received. Note that a proxy's CONNECT response should be read with GetInfoHTTPConnectCode and not this.

With HTTP transfer, a successful transfer reports 200 here. If the page is not found, you get 404. Or any other HTTP Response code.

4.22.71 GetInfoRetryAfter as integer

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Returns the Retry-After retry delay.

Notes: Receive the number of seconds the HTTP server suggests the client should wait until the next request is issued.

The information from the "Retry-After:" header.

While the HTTP header might contain a fixed date string, the RetryAfter will always return number of seconds to wait - or zero if there was no header or the header couldn't be parsed.

4.22.72 GetInfoRTSPClientCSEQ as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Query RTSP Client sequence counter.

4.22.73 GetInfoRTSPCSEQRecv as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Query RTSP sequence counter received.

4.22.74 GetInfoRTSPServerCSEQ as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Query RTSP Server sequence counter.

4.22.75 GetInfoRTSPSessionID as string

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Query RTSP session ID.

4.22.76 GetInfoScheme as string

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get the URL scheme (sometimes called protocol) used in the connection

4.22.77 GetInfoSizeDownload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The total amount of bytes that were downloaded.

Notes: The Lasterror property is set. 0 for success.

The amount is only for the latest transfer and will be reset again for each new transfer.

4.22.78 GetInfoSizeUpload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The total amount of bytes that were uploaded.

Notes: The Lasterror property is set. 0 for success.

4.22.79 GetInfoSpeedDownload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The average download speed that CURL measured for the complete download.

Notes: The Lasterror property is set. 0 for success.

4.22.80 GetInfoSpeedUpload as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The average upload speed that CURL measured for the complete upload.

Notes: The Lasterror property is set. 0 for success.

4.22.81 GetInfoSSLEngines as CURLSListMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Receive a linked-list of OpenSSL crypto-engines supported.

Notes: The Lasterror property is set. 0 for success.

Note that engines are normally implemented in separate dynamic libraries. Hence not all the returned engines may be available at run-time.

4.22.82 GetInfoSSLVerifyResult as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: the result of the certification verification that was requested (using the SSLVerifyPeer option).

Notes: The Lasterror property is set. 0 for success.

4.22.83 GetInfoStartTransferTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: the time, in seconds, it took from the start until the first byte is just about to be transferred.

Notes: The Lasterror property is set. 0 for success.

This includes the pretransfer time and also the time the server needs to calculate the result.

4.22.84 GetInfoTotalTime as Double

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The total time in seconds for the previous transfer, including name resolving, TCP connect etc.

Notes: The Lasterror property is set. 0 for success.

4.22.85 LoadAPI

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Loads the default CURL library.

Notes: This method is called by the constructor. So you don't need this except you want to test explicit with APILoaded whether the loading worked before you use the CURLSMBS class.

Loads the "libCURL.dll" Windows library (with SSL support this one max require OpenSSL).

Loads on Mac OS X and Linux the libCURL file in /usr/lib.

4.22.86 LoadErrorString as string

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: The last error string from the LoadLibrary function.

4.22.87 LoadLibrary(file as folderitem) as boolean

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Loads the CURL library from the given path.

Notes: You only need to use this function if you have your own CURL Library.

Loads a Windows DLL, a Linux shared library or a Mac OS X shared library from the given path.

Returns true on success.

See also:

- 4.22.88 LoadLibrary(path as string) as boolean 496

4.22.88 LoadLibrary(path as string) as boolean

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Loads the CURL library from the given path.

Notes: You only need to use this function if you have your own CURL Library.

Loads a Windows DLL, a Linux shared library or a Mac OS X shared library from the given path.

Returns true on success.

See also:

- 4.22.87 LoadLibrary(file as folderitem) as boolean 496

4.22.89 OpenMTInputFile(file as folderitem, Offset as Integer = 0) as boolean

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Opens input file for reading data while PerformMT runs.

Example:

```
Dim c As New CURLSMBS
Dim file As FolderItem = SpecialFolder.Desktop.Child("test.rtf")

If c.OpenMTInputFile(file) Then
  // okay
Else
  MsgBox "Failed to open file to upload."
Return
End If
```

```
// do a SFTP upload
c.OptionURL = "sftp://monkeybreadsoftware.de/folder/test.rtf"
c.OptionUpload = True
c.OptionUsername = "test"
c.OptionPassword = "test"
c.CollectOutputData = false

Dim e As Integer = c.Perform

Dim ErrorMessage As String = c.LastErrorMessage
Dim ErrorLog As String = c.DebugMessages
Dim ResultData As String = c.OutputData
```

```
Break
```

Notes: The read event is not called with PerformMT.

Offset is helpful for HTTP PUT requests with range, so you can start with an offset.

With 15.2 version of plugin, this also works with Perform.

Must be called before Perform or PerformMT, so we can stream data from the file.

The file is closed automatically when Perform methods finish their work.

The function returns false in case of an error, e.g. if file is already open by another application, the folder/item/path is invalid, the offset is negative or we can't determinate the file size.

It may be wise to have a fallback in your code to use a binarystream in that case (if that one can read the file) and then read all the data in a string and put into the InputData property.

See also:

- 4.22.90 OpenMTInputFile(Path as String, Offset as Integer = 0) as boolean

497

4.22.90 OpenMTInputFile(Path as String, Offset as Integer = 0) as boolean

Plugin Version: 19.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Opens input file for reading data while PerformMT runs.

Notes: The read event is not called with PerformMT.

Offset is helpful for HTTP PUT requests with range, so you can start with an offset.

Must be called before Perform or PerformMT, so we can stream data from the file.

The file is closed automatically when Perform methods finish their work.

The function returns false in case of an error, e.g. if file is already open by another application, the folder/item/path is invalid, the offset is negative or we can't determinate the file size.

It may be wise to have a fallback in your code to use a binarystream in that case (if that one can read the

file) and then read all the data in a string and put into the InputData property.
See also:

- 4.22.89 OpenMTInputFile(file as folderitem, Offset as Integer = 0) as boolean

496

4.22.91 Perform as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Perform a file transfer

Example:

// if you get a curl call like this

```
'curl -X PATCH "https://api.airtable.com/v0/ { baseId } / { tableIdOrName } / { recordId } " \
-H "Authorization: Bearer YOUR_TOKEN" \
-H "Content-Type: application/json" \
-data ' {
  "fields": {
    "Address": "1 Ferry Building",
    "Name": "Ferry Building",
    "Visited": True
  }
}'
```

// you translate it to this:

```
Dim c As New CURLSMBS
```

```
Dim Payload As String = _
" { "+_
  ""fields"": { "+_
    ""Address"": ""1 Ferry Building"", "+_
    ""Name"": ""Ferry Building"", "+_
    ""Visited"": True"+_
  } "+_
}
```

```
c.OptionCustomRequest = "PATCH"
```

```
c.OptionURL = "https://api.airtable.com/v0/ { baseId } / { tableIdOrName } / { recordId } "
```

```
c.SetOptionHTTPHeader Array("Content-Type: application/json", "Authorization: Bearer YOUR_TO-
KEN")
```

```
c.OptionPostFields = Payload
```

```
Dim Error As Integer = c.Perform
```

```
Dim ResponseCode As Integer = c.GetInfoResponseCode
```

```
Dim DebugLog As String = c.DebugMessages
```

```
Dim Output As String = c.OutputData
```

Break

Notes: This function is called after all the options are set, and will perform the transfer as described in the options.

You can do any amount of calls to Perform. If you intend to transfer more than one file, you are even encouraged to do so. libCURL will then attempt to re-use the same connection for the following transfers, thus making the operations faster, less CPU intense and using less network resources. Just note that you will have to use the option properties between the invokes to set options for the following Perform.

Typical error codes are 6 for a wrong domain name in the URL, 67 for wrong name/password combination, 60 for missing SSL settings, 1 for an unsupported protocol.

Possible values for the return value:

The error value -1 is used from the plugin to report that something is missing like OpenSSL dlls on Windows.

With SFTP, you can get logged error "Upload failed: Operation failed (4/-31)" when upload uses path to folder instead of file in URL.

4.22.92 PerformMT as Integer

Plugin Version: 11.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Perform a file transfer with preemptive multithreading.

Example:

```
Dim c As New CURLSMBS
Dim file As FolderItem = SpecialFolder.Desktop.Child("test.rtf")

If c.OpenMTInputFile(file) Then
    // okay
Else
    MsgBox "Failed to open file to upload."
Return
End If

// do a SFTP upload
c.OptionURL = "sftp://monkeybreadsoftware.de/folder/test.rtf"
c.OptionUpload = True
c.OptionUsername = "test"
c.OptionPassword = "test"
```

```

Dim e As Integer = c.PerformMT

Dim ErrorMessage As String = c.LastErrorMessage
Dim ErrorLog As String = c.DebugMessages
Dim ResultData As String = c.OutputData

```

Break

Notes: Same as Perform, but with additional multithreading.

As the actual transfer runs on a preemptive thread, the events Debug, Write, Header and Progress are called asynchronously and run a few milliseconds later. You can return true in Progress event to stop transfer, but you will get more events before the transfer is stopped.

You can call CreateMTDebugOutputFile, CreateMTHeaderOutputFile and CreateMTOutputFile before PerformMT to have output data be written into files. Call OpenMTInputFile to let the plugin read input data (form post or upload) from an input file.

Do not call other CURL functions on this CURLSMBS instance while PerformMT is running!

Typical error codes are 6 for a wrong domain name in the URL, 67 for wrong name/password combination, 60 for missing SSL settings, 1 for an unsupported protocol.

To avoid trouble with app hanging on quit of application, be sure to set cancel property to true in window close event to cancel any pending transfer.

The work is performed on a preemptive thread, so this function does not block the application and can yield time to other Xojo threads. Must be called in a Xojo thread to enjoy benefits. If called in main thread will block, but keep other background threads running.

4.22.93 ProcessRelativeURL(BaseURL as String, RelativeURL as String) as String

Plugin Version: 23.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Processes an URL to come from relative URL to a new absolute URL.

Example:

```

Dim baseURL As String = "https://monkeybreadsoftware.net/themes.shtml"
Dim RelativeURL As String = "topic-curl.shtml"

```

`Dim URL As String = CURLSMBS.ProcessRelativeURL(baseURL, RelativeURL)`
Break

Notes: Raises an `UnsupportedOperationException` in case of failure.

4.22.94 ReceiveData(byref data as Memoryblock, BytesToRead as Int64) as Int64

Plugin Version: 17.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Receives raw data on a connection.

Notes: This function receives raw data from the established connection. You may use it together with `SendData` to implement custom protocols using libcurl. This functionality can be particularly useful if you use proxies and/or SSL encryption: libcurl will take care of proxy negotiation and connection set-up.

The data memoryblock is a reference to your variable that will get the received data. `BytesToRead` is the maximum amount of data you can get in that buffer. The function returns the number of received bytes.

To establish the connection, set `OptionConnectOnly = true` before calling `Perform`. Note that `ReceiveData` does not work on connections that were created without this option.

The call will return `kError_AGAIN` if there is no data to read - the socket is used in non-blocking mode internally. When `kError_AGAIN` is returned, wait for data to arrive.

Wait on the socket only if `ReceiveData` returns `kError_AGAIN`. The reason for this is libcurl or the SSL library may internally cache some data, therefore you should call `ReceiveData` until all data is read which would include any cached data.

Furthermore if you wait on the socket and it tells you there is data to read, `ReceiveData` may return `CURLE_AGAIN` if the only data that was read was for internal SSL processing, and no other data is available.

On success, sets `lasterror` to `kError_OK (0)`, stores the received data into memory block, and returns the number of bytes it actually read.

On failure, returns zero and `lasterror` is set to the appropriate error code.

The function may return `kError_AGAIN`. In this case, use your operating system facilities to wait until data can be read, and retry.

Reading exactly 0 bytes indicates a closed connection.

If there's no socket available to use from the previous transfer, this function returns `kError_UNSUPPORTED_PROTOCOL`.

4.22.95 Reset

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Re-initializes all options previously set on a specified CURL handle to the default values.

Notes: It does not change the following information kept in the handle: live connections, the Session ID cache, the DNS cache, the cookies and shares.

4.22.96 SendData(data as Memoryblock) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sends raw data over a connection.

Notes: This function sends arbitrary data over the established connection. You may use it together with `ReceiveData` to implement custom protocols using libcurl. This functionality can be particularly useful if you use proxies and/or SSL encryption: libcurl will take care of proxy negotiation and connection set-up.

Provide the data to send via parameter. We return the number of bytes sent.

To establish the connection, set `OptionConnectOnly = true` option before calling `Perform` methods. Note that `SendData` will not work on connections that were created without this option.

The call will return `kError_AGAIN` if it's not possible to send data right now - the socket is used in non-blocking mode internally. When `kError_AGAIN` is returned, please wait.

Furthermore if you wait on the socket and it tells you it's writable, `SendData` may return `kError_AGAIN` if the only data that was sent was for internal SSL processing, and no other data could be sent.

See also:

- 4.22.97 `SendData(data as string) as Integer`

502

4.22.97 SendData(data as string) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sends raw data over a connection.

Notes: This function sends arbitrary data over the established connection. You may use it together with `ReceiveData` to implement custom protocols using `libcurl`. This functionality can be particularly useful if you use proxies and/or SSL encryption: `libcurl` will take care of proxy negotiation and connection set-up.

Provide the data to send via parameter. We return the number of bytes sent.

To establish the connection, set `OptionConnectOnly = true` option before calling `Perform` methods. Note that `SendData` will not work on connections that were created without this option.

The call will return `kError_AGAIN` if it's not possible to send data right now - the socket is used in non-blocking mode internally. When `kError_AGAIN` is returned, please wait.

Furthermore if you wait on the socket and it tells you it's writable, `SendData` may return `kError_AGAIN` if the only data that was sent was for internal SSL processing, and no other data could be sent.

See also:

- 4.22.96 `SendData(data as Memoryblock) as Integer` 502

4.22.98 `SetInputData(data as MemoryBlock)`

Plugin Version: 14.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the input data.

Notes: If you set input data, you do not need to use `Read`, `RestartRead` or `Seek` events.

The plugin will use the provided data for the upload.

Setting input data size, will also set the input file size (`OptionInFileSizeLarge` and `OptionInFileSize`).

Alternatively you can provide data in `Read` event or use `OpenMTInputFile` method to open a file on disk to upload.

See also:

- 4.22.99 `SetInputData(data as string)` 503

4.22.99 `SetInputData(data as string)`

Plugin Version: 14.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the input data.

Example:

```
Dim c As New CURLSMBS
```

```
c.SetInputData "Hello World"
```

```
// do a HTTP Upload with PUT
c.OptionUpload = True
c.OptionURL = "https://monkeybreadsoftware.de/filemaker/examples/echo.php"

// or do a FTP upload
`c.OptionURL = "ftp://monkeybreadsoftware.de/folder/file.txt"

Dim e As Integer = c.Perform

Dim ErrorMessage As String = c.LastErrorMessage
Dim ErrorLog As String = c.DebugMessages
Dim ResultData As String = c.OutputData

Break
```

Notes: If you set input data, you do not need to use Read, RestartRead or Seek events. The plugin will use the provided data for the upload. Setting input data size, will also set the input file size (OptionInFileSizeLarge and OptionInFileSize).

Alternatively you can provide data in Read event or use OpenMTInputFile method to open a file on disk to upload.
See also:

- 4.22.98 SetInputData(data as MemoryBlock)

503

4.22.100 SetOptionConnectTo(list() as string)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set list of host:port:connect-to-host:connect-to-port, overrides the URL's host:port (only for the network layer)

4.22.101 SetOptionEmptyPassword

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets an empty password.

Notes: Normally you have no password unless you set it.

But if you set a password with empty string, the plugin sets CURL to use no password. This method is to use an empty password.

4.22.102 SetOptionHTTP200Aliases(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A linked list of aliases to be treated as valid HTTP 200 responses.

Notes: Some servers respond with a custom header response line. For example, IceCast servers respond with "ICY 200 OK". By including this string in your list of aliases, the response will be treated as a valid HTTP header line such as "HTTP/1.0 200 OK".

The alias itself is not parsed for any version strings. So if your alias is "MYHTTP/9.9", LibCURL will not treat the server as responding with HTTP version 9.9. Instead LibCURL will use the value set by option HTTPVersion.

The Lasterror property is set. 0 for success.

const kError_FunctionMissing	= -1	
const kError_OK	= 0	
const kError_UNSUPPORTED_PROTOCOL	= 1	
const kError_FAILED_INIT	= 2	
const kError_URL_MALFORMAT	= 3	
const kError_URL_MALFORMAT_USER	= 4	(NOT USED)
const kError_COULDNT_RESOLVE_PROXY	= 5	
const kError_COULDNT_RESOLVE_HOST	= 6	
const kError_COULDNT_CONNECT	= 7	
const kError_FTP_WEIRD_SERVER_REPLY	= 8	
const kError_FTP_ACCESS_DENIED	= 9	a service was denied by the FTP server due to lack of access when login fails this is not returned.
const kError_FTP_USER_PASSWORD_INCORRECT	= 10	
const kError_FTP_WEIRD_PASS_REPLY	= 11	
const kError_FTP_WEIRD_USER_REPLY	= 12	
const kError_FTP_WEIRD_PASV_REPLY	= 13	
const kError_FTP_WEIRD_227_FORMAT	= 14	
const kError_FTP_CANT_GET_HOST	= 15	
const kError_FTP_CANT_RECONNECT	= 16	
const kError_FTP_COULDNT_SET_BINARY	= 17	
const kError_PARTIAL_FILE	= 18	
const kError_FTP_COULDNT_RETR_FILE	= 19	
const kError_FTP_WRITE_ERROR	= 20	
const kError_FTP_QUOTE_ERROR	= 21	
const kError_HTTP_RETURNED_ERROR	= 22	
const kError_WRITE_ERROR	= 23	
const kError_MALFORMAT_USER	= 24	NOT USED
const kError_FTP_COULDNT_STOR_FILE	= 25	failed FTP upload
const kError_READ_ERROR	= 26	could open/read from file
const kError_OUT_OF_MEMORY	= 27	
const kError_OPERATION_TIMEOUTED	= 28	the timeout time was reached
const kError_FTP_COULDNT_SET_ASCII	= 29	TYPE A failed
const kError_FTP_PORT_FAILED	= 30	FTP PORT operation failed
const kError_FTP_COULDNT_USE_REST	= 31	the REST command failed
const kError_FTP_COULDNT_GET_SIZE	= 32	the SIZE command failed
const kError_HTTP_RANGE_ERROR	= 33	RANGE "command" didn't work
const kError_HTTP_POST_ERROR	= 34	
const kError_SSL_CONNECT_ERROR	= 35	wrong when connecting with SSL
const kError_BAD_DOWNLOAD_RESUME	= 36	couldn't resume download
const kError_FILE_COULDNT_READ_FILE	= 37	
const kError_LDAP_CANNOT_BIND	= 38	
const kError_LDAP_SEARCH_FAILED	= 39	
const kError_LIBRARY_NOT_FOUND	= 40	
const kError_FUNCTION_NOT_FOUND	= 41	
const kError_ABORTED_BY_CALLBACK	= 42	
const kError_BAD_FUNCTION_ARGUMENT	= 43	
const kError_BAD_CALLING_ORDER	= 44	NOT USED
const kError_INTERFACE_FAILED	= 45	CURLLOPT_INTERFACE failed
const kError_BAD_PASSWORD_ENTERED	= 46	NOT USED
const kError_TOO_MANY_REDIRECTS	= 47	catch endless re-direct loops
const kError_UNKNOWN_TELNET_OPTION	= 48	User specified an unknown option
const kError_TELNET_OPTION_SYNTAX	= 49	Malformed telnet option
const kError_OBSOLETE	= 50	NOT USED
const kError_SSL_PEER_CERTIFICATE	= 51	peer's certificate wasn't ok
const kError_GOT_NOTHING	= 52	when this is a specific error
const kError_SSL_ENGINE_NOTFOUND	= 53	SSL crypto engine not found
const kError_SSL_ENGINE_SETFAILED	= 54	can not set SSL crypto engine as default
const kError_SEND_ERROR	= 55	failed sending network data
const kError_RECV_ERROR	= 56	failure in receiving network data
const kError_SHARE_IN_USE	= 57	share is in use
const kError_SSL_CERTPROBLEM	= 58	problem with the local certificate
const kError_SSL_CIPHER	= 59	couldn't use specified cipher
const kError_SSL_CACERT	= 60	problem with the CA cert (path?)
const kError_BAD_CONTENT_ENCODING	= 61	Unrecognized transfer encoding
const kError_LDAP_INVALID_URL	= 62	Invalid LDAP URL
const kError_FILESIZE_EXCEEDED	= 63	Maximum file size exceeded
const kError_FTP_SSL_FAILED	= 64	Requested FTP SSL level failed
const kError_SEND_FAIL_REWIND	= 65	Sending the data requires a rewind that failed
const kError_SSL_ENGINE_INITFAILED	= 66	failed to initialise ENGINE
const kError_LOGIN_DENIED	= 67	user, password or similar was not accepted and we failed to login

4.22.103 SetOptionHTTPHeader(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A linked list of HTTP headers to pass to the server in your HTTP request.

Example:

```
dim c as new CURLSMBS
c.SetOptionHTTPHeader array("Expect:", "Content-Type: text/xml", "SOAPAction: ""login""")
```

Notes: If you add a header that is otherwise generated and used by libCURL internally, your added one will be used instead. If you add a header with no contents as in 'Accept:' (no data on the right side of the colon), the internally used header will get disabled. Thus, using this option you can add new headers, replace internal headers and remove internal headers. To add a header with no contents, make the contents be two quotes: "". The headers included in the linked list must not be CRLF-terminated, because CURL adds CRLF after each header item. Failure to comply with this will result in strange bugs because the server will most likely ignore part of the headers you specified.

The first line in a request (containing the method, usually a GET or POST) is not a header and cannot be replaced using this option. Only the lines following the request-line are headers. Adding this method line in this list of headers will only cause your request to send an invalid header.

Pass an empty array to this to reset back to no custom headers.

The Lasterror property is set. 0 for success.

4.22.104 SetOptionMailRecipients(list() as string)

Plugin Version: 11.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the array of email recipient addresses.

4.22.105 SetOptionPostQuote(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass an array to a list of FTP commands to pass to the server after your ftp transfer request.

Example:

```
dim d as CURLSMBS // your CURL object
```

```
dim ws() As String
```

```
ws.Append "RNFR Temp.txt"  
ws.append "RNT0 MyFile.txt"  
d.SetOptionPostQuote(ws)
```

Notes: Disable this operation again by using an empty array for this option.

The Lasterror property is set. 0 for success.

If you want to do a ftp operation instead of download/upload/directory listing, please use SetOptionQuote.

4.22.106 SetOptionPreQuote(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass an array to a list of FTP commands to pass to the server after the transfer type is set.

Notes: Disable this operation again by using an empty array for this option. Before version 7.15.6, if you also set Nobody to true, this option didn't work.

The Lasterror property is set. 0 for success.

4.22.107 SetOptionProxyHeader(list() as string)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set list of headers used for proxy requests only.

4.22.108 SetOptionQuote(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass an array or a list of FTP commands to pass to the server prior to your ftp request.

Example:

```
dim curl as new CURLSMBS  
curl.SetOptionQuote array("DELE filename.txt")
```

Notes: This will be done before any other FTP commands are issued (even before the CWD command).

Disable this operation again by using an empty array for this option.

The Lasterror property is set. 0 for success.

4.22.109 SetOptionResolve(list() as string)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Send linked-list of name:port:address sets.

4.22.110 SetOptionTelnetOptions(list() as string)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Provide an array of variables to pass to the telnet negotiations.

Notes: The variables should be in the format <option=value>. libCURL supports the options 'TTYTYPE', 'XDISPLOC' and 'NEW_ENV'. See the TELNET standard for details.

The Lasterror property is set. 0 for success.

4.22.111 SetPathCAInfo(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A path holding one or more certificates to verify the peer with.

Example:

```
dim cacert as FolderItem // your cacert.pem file
dim CURL as new CURLMBS
CURL.OptionSSLVerifyHost = 2 // verify server
CURL.OptionSSLVerifyPeer = 1 // proofs certificate is authentic
CURL.SetPathCAInfo cacert
```

Notes: This makes sense only when used in combination with the OptionSSLVerifyPeer option. If OptionSSLVerifyPeer is false, OptionCAINFO need not even indicate an accessible file.

Note that option is by default set to the system path where libCURL's cacert bundle is assumed to be stored, as established at build time.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

4.22.112 SetPathCAPath(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A path to the directory holding multiple CA certificates to verify the peer with.

Example:

```
dim c as new CURLSMBS
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
c.SetPathCAPath cacert
```

Notes: The certificate directory must be prepared using the openssl c_rehash utility. This makes sense only when used in combination with the CURLOPT_SSL_VERIFYPEER option. If OptionSSLVerifyPeer is zero, OptionCAPath need not even indicate an accessible path. The OptionCAPath function apparently does not work in Windows due to some limitation in openssl. This option is OpenSSL-specific and does nothing if libCURL is built to use GnuTLS.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

4.22.113 SetPathCRLFile(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the path with the concatenation of CRL (in PEM format) to use in the certificate validation that occurs during the SSL exchange.

Notes: When CURL is built to use NSS or GnuTLS, there is no way to influence the use of CRL passed to help in the verification process. When libCURL is built with OpenSSL support, X509_V_FLAG_CRL_CHECK and X509_V_FLAG_CRL_CHECK_ALL are both set, requiring CRL check against all the elements of the certificate chain if a CRL file is passed.

This option makes sense only when used in combination with the OptionSSLVerifyPeer option.

A specific error code (CURLE_SSL_CRL_BADFILE) is defined with the option. It is returned when the SSL exchange fails because the CRL file cannot be loaded. Note that a failure in certificate verification due to a revocation information found in the CRL does not trigger this specific error. (Added in 7.19.0)

4.22.114 SetPathIssuerCert(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the path to a CA certificate in PEM format.

Notes: If the option is set, an additional check against the peer certificate is performed to verify the issuer is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the OptionSSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionSSLVerifyPeer has to be set too for the check to fail). (Added in 7.19.0)

4.22.115 SetPathNetRCFile(path as folderitem)

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the path to the file you want libCURL to use as .netrc file.

Notes: If this option is omitted, and OptionNETRC is set, libCURL will attempt to find the a .netrc file in the current user's home directory. (Added in 7.10.9)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

4.22.116 SetPathProxyIssuerCert(path as folderitem)

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the proxy issuer SSL certificate filename.

Notes: Pass a string naming a file holding a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer of the the HTTPS proxy is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the OptionProxySSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionProx-

ySSLVerifyPeer has to be set too for the check to fail).

4.22.117 SetupAWS(AWSAccessKeyId as String, AWSSecretAccessKey as String, Region as String, Service as String, Path as String, Domain as String, Verb as String, HashedPayload as String = "", Headers() as String = nil, queryParameters() as string = nil, NoSSL as boolean = false) as boolean

Plugin Version: 17.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Setup CURL to transfer to Amazon Webservices.

Notes: This implements AWS4-HMAC-SHA256 signature for credentials, sets authentication, URL, HTTP Headers and other parameters.

For upload or post, please set input parameters first.

AWSAccessKeyId	Your access key for AWS.	
AWSSecretAccessKey	Your secret.	
Region	The region to use.	"eu-central-1"
Service	The service to use.	"s3"
Path	The path for the URL. Should always start with "/".	"/test.jpg"
Domain	Optional the domain to use. By default we just build it from region and service.	"s3.eu-central-1.amazonaws.com" or "s3-ap-southeast-2.amazonaws.com"
Verb	The HTTP Operation to do. Can be POST, PUT, PATCH, GET or DELETE.	"PUT"
HashedPayload	The hashed payload. If empty, we calculate it automatically from input data or postfields. This is a lowercase hex SHA256.	
Headers	Optional extra HTTP headers to include.	"x-amz-acl: public-read"
queryParameters	Optional query parameter list with entries like "key=value", URL encoded.	

Returns true on success or false on failure.

Throws exceptions when parameters are insufficient (UnsupportedOperationException).

Works also for other compatible S3 services beside Amazon's like the one from Wasabi or Dell ECS. Added PATCH as verb in version 23.0.

Please be aware that this function depends on a correct time and date set on the computer. If the time is not set correct, the authentication will fail.

4.22.118 SetupEmail(email as Variant) as boolean

Plugin Version: 14.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Setups existing CURL session for an email transfer.

Example:

```
dim e as new CURLEmailMBS
```

```
e.SetFrom "test@test.test", "Christian Müller"
```

```
e.Subject = "Hello World ,öÛ"
```

```
e.SMTPPassword = "xxx"
```

```
e.SMTPUsername = "xxx"
e.SetServer "smtp.test.test", true
e.AddTo "test@test.test", "Test Müller"
e.PlainText = "Hello World," + EndOfLine + "Smilies: ,òÔè ùòò ùòÑ"
```

```
dim c as new CURLSMBS
```

```
if c.SetupEmail(e) then
```

```
dim er as Integer = c.Perform
```

```
if er = 0 then
```

```
MsgBox "Email sent"
```

```
end if
```

```
end if
```

Notes: You can set your own settings like proxy after this function call.

If you like you can reuse the email and CURL objects after you sent an email, change values and send another email.

Returns true on success or false on failure.

4.22.119 SetupOAuth(ConsumerKey as String, ConsumerSecret as String, AccessToken as String, AccessTokenSecret as String, HTTPVerb as String, URL as String, Parameters() as String = nil, Headers() as String = nil, Datas() as String = nil, Nonce as String = "", Timestamp as String = "", HMAC as String = "", Verifier as String = "", Realm as String = "") as boolean

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets up an OAuth signed transfer.

Notes: The plugin calculates the signature and adds headers for authorization to the CURL handle.

Sets URL with parameters and optionally data values for POST.

Parameter	Description	Example
ConsumerKey	The oauth consumer key.	"xvz1evFS4wEEPTGEFPHBog"
ConsumerSecret	The oauth consumer secret.	"kAcSOqF21Fu85e7zjz7ZN2U4ZRhV3WpwPAoE3Z7kBw"
AccessToken	The oauth access token.	"370773112-GmHxMAGyYbLnEtIKZoRNFsMKPR9EYmZesS9wJAEb"
AccessTokenSecret	The oauth access token secret. Can be empty if not yet known.	"LswwdoUalvS8htyT15jkRh4J50vUPVVHrR2YP5kE"
HTTPVerb	The HTTP verb. e.g. POST, PUT, GET, DELETE. Default if empty is GET.	"POST"
URL	The URL to query without parameters.	"https://api.twitter.com/1.1/statuses/update.json"
Parameters	List of parameters. Can be empty. Please pass list with newline as delimiter. Values should be URL encoded already.	"include_entities=true"
Headers	List of additional header entries to include. Can be empty. We automatically set Authorization header.	"Accept: application/json;Content-Type: application/json"
Datas	Data value list for POST.	"status=Hello%0Aothers=123"
Nonce	The nonce value. If empty, we generate it automatically for you.	"KyjaVB8Y0ZFabsSWbWovY3nYSQ2pTgmZcNn2VS4cg"
Timestamp	The timestamp to use for signature. If empty, we query current timestamp (same as you calling Time.UnixTimeStamp)	1318622958
HMAC	Which HMAC algorithm to use. Can be HMAC-SHA512, HMAC-SHA256 or HMAC-SHA1. Default is HMAC-SHA1 if parameter is missing or empty.	"HMAC-SHA1"
Verifier	The verifier. Usually an ID shown on a website after login to the service and authorization of an app.	"3456789"

Added Realm parameter for version 20.5.

4.22.120 UpKeep

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Perform any connection upkeep checks.

Notes: Perform any connection upkeep checks.

Some protocols have "connection upkeep" mechanisms. These mechanisms usually send some traffic on existing connections in order to keep them alive; this can prevent connections from being closed due to overzealous firewalls, for example.

Currently the only protocol with a connection upkeep mechanism is HTTP/2: when the connection upkeep interval is exceeded and Upkeep is called, an HTTP/2 PING frame is sent on the connection.

This function must be explicitly called in order to perform the upkeep work. The connection upkeep interval is set with OptionUpkeepIntervalMS.

4.22.121 UseSystemCertificates as Integer

Plugin Version: 17.2, Platforms: macOS, Windows, Targets: All.

Function: Read certificate from system and installs them in CURL session,.

Notes: For macOS and Windows we load the available certificates from keychain or Windows Certificate Store and pass them to CURL. This is better than having no certificates at all.

Even better is normally to provide a cacert.pem file with only the expected certificates.

Returns number of certificates loaded.

4.22.122 WebSocketMeta as CURLSWebSocketFrameMBS

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries last frame metadata.

Notes: Only useful if called in Write event.

4.22.123 WebSocketReceive(BufferSize as Integer = 65536) as CURLSWebSocketFrameMBS

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Receive WebSocket data.

Example:

```
dim curl as CURLSMBS // your curl handle
```

```
dim m as CURLSWebSocketFrameMBS = curl.WebSocketReceive
```

```

if m <>nil then
TextAreaLog.AddText "Received: "+m.Text
end if

```

Notes: Retrieves as much as possible of a received WebSocket data fragment into the buffer, but not more than BufferSize bytes. The bytesReceived property in CURLSWebSocketFrameMBS is set to the number of bytes actually stored.

If there is more fragment data to deliver than what fits in the provided buffer, CURL returns a full buffer and the application needs to call this function again to continue draining the buffer.

The returned CURLSWebSocketFrameMBS contains the data and the metadata about the received data.

Lasterror property is set.

4.22.124 WebSocketSend(Data as MemoryBlock, FrameSize as Integer = 0, SendFlags as Integer = 0) as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Send the specific message fragment over an established WebSocket connection.

Notes: The buffer holds the data to send.

Returns the number of payload bytes actually sent.

To send a (huge) fragment using multiple calls with partial content per invoke, set the kFlagOffset bit and the FrameSize argument as the total expected size for the first part, then set the kFlagOffset with a zero FrameSize for the following parts.

If not sending a partial fragment or if this is raw mode, FrameSize should be set to zero.

If kWebSocketRaw is enabled in WebSocketOptions, the flags argument should be set to 0.

Lasterror property is set.

4.22.125 Properties

4.22.126 APILoaded as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether the CURL library was loaded.

Notes: The CURLSMBS constructor loads the library if it was not loaded before.
(Read only property)

4.22.127 Cancel as Boolean

Plugin Version: 13.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Tells CURL instance to cancel transfer as soon as possible.

Notes: Especially when using PerformMT, you may see your app hang if user tries to quit application. To prevent the hang, please set Cancel = true in window close event. So when app quits and windows get destroyed, the PerformMT will see the Cancel being true and returns soon.
(Read and Write property)

4.22.128 CollectDebugData as Boolean

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use CollectDebugMessages instead. **Function:** Whether to collect debug message data.

Notes: If you set this property to true, you can grab the data from the transfer in the DebugMessages Property instead of collecting the pieces yourself in the DebugMessage event. Of course this is optional and you can still process data in DebugMessage event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.
(Read and Write property)

4.22.129 CollectDebugMessages as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to collect debug message data.

Notes: If you set this property to true, you can grab the data from the transfer in the DebugMessages Property instead of collecting the pieces yourself in the DebugMessage event. Of course this is optional and you can still process data in DebugMessage event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.
(Read and Write property)

4.22.130 CollectHeaderData as Boolean

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use CollectHeaders instead.

Function: Whether to collect headers.

Notes: If you set this property to true, you can grab the data from the transfer in the Headers Property instead of collecting the pieces yourself in the header event. Of course this is optional and you can still process data in header event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.

Renamed to CollectHeaders in v23.0.

(Read and Write property)

4.22.131 CollectHeaders as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to collect headers.

Notes: If you set this property to true, you can grab the data from the transfer in the Headers Property instead of collecting the pieces yourself in the header event. Of course this is optional and you can still process data in header event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.

(Read and Write property)

4.22.132 CollectOutputData as Boolean

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to collect output data.

Notes: If you set this property to true, you can grab the data from the transfer in the OutputData Property instead of collecting the pieces yourself in the write event. Of course this is optional and you can still process data in write event.

Due to memory limitation, collecting data will not work right if your app is running low on memory.

(Read and Write property)

4.22.133 DebugData as String

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use DebugMessages instead.

Function: The debug data from CURL.

Notes: If CollectDebugData property is true, the plugin puts the data received in debugMessage event also

into this property, so you can grab it after the transfer.

Newer code should use `DebugMessages` property instead.
(Read only property)

4.22.134 `DebugMessages` as String

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The debug messages from CURL.

Notes: If `CollectDebugMessage` property is true, the plugin puts the data received in `debugMessage` event also into this property, so you can grab it after the transfer.
(Read only property)

4.22.135 `DebugWithData` as Boolean

Plugin Version: 18.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to include data in debug messages.

Example:

```
dim c as new CURLSMBS
c.DebugWithData = true
c.OptionVerbose = true
c.CollectDebugMessages = true
```

Notes: (Read and Write property)

4.22.136 `Handle` as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The internal handle of the CURL object.

Notes: (Read and Write property)

4.22.137 `HeaderData` as String

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The headers from CURL.

Notes: If `CollectHeaders` property is true, the plugin puts the data received in `header` event also into this

property, so you can grab it after the transfer.

Renamed to Headers in v23.0.
(Read only property)

4.22.138 Headers as String

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use Headers instead. **Function:** The headers from CURL.

Notes: If CollectHeaders property is true, the plugin puts the data received in header event also into this property, so you can grab it after the transfer.
(Read only property)

4.22.139 InputData as String

Plugin Version: 14.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The input data.

Notes: If you set input data, you do not need to use Read, RestartRead or Seek events.

The plugin will use the provided data for the upload.

Setting input data size, will also set the input file size (OptionInFileSizeLarge and OptionInFileSize).

Alternatively you can provide data in Read event or use OpenMTInputFile method to open a file on disk to upload.

(Read and Write property)

4.22.140 Lasterror as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The lasterror from the library.

Example:

```
Dim d As New CURLSMBS
```

```
d.OptionSSLVersion = 123
```

```
Dim LastError As Integer = d.LastError
```

```
// gives 43
```

```
Dim LastErrorText As String = d.LastErrorText
```

```
// A libcurl function was given a bad argument
```

```
Break
```

Notes: Set in the constructor while doing initialization as well as by various curl calls. Check the `kError*` constants. (Read and Write property)

4.22.141 LastErrorMessage as String

Plugin Version: 11.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The last error message.

Example:

```
Dim d As New CURLSMBS
```

```
d.OptionURL = "http://192.168.2.53"
```

```
d.OptionConnectionTimeout = 5
```

```
Dim ErrorCode As Integer = d.Perform
```

```
Dim LastErrorMessage As String = d.LastErrorMessage
```

```
Dim LastErrorText As String = d.LastErrorText
```

```
Break
```

Notes: The error message from the transfer.

e.g. Perform may report a timeout with code 28.

Then LastErrorText is "Timeout was reached" looked up for 28.

But LastErrorMessage would be something like "Failed to connect to x.x.x.x port 80 after 5000 ms: Timeout was reached".

(Read only property)

4.22.142 LastErrorText as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The text for the lasterror code.

Example:

```
Dim d As New CURLSMBS
```

```
d.OptionURL = "http://192.168.2.53"
```

```
d.OptionConnectionTimeout = 5
```

```
Dim ErrorCode As Integer = d.Perform
```

```
Dim LastErrorMessage As String = d.LastErrorMessage
```

```
Dim LastErrorText As String = d.LastErrorText
```

```
Break
```

Notes: Static string matched to the error code, so you have an idea what's wrong.

e.g. Perform may report a timeout with code 28.

Then LastErrorText is "Timeout was reached" looked up for 28.

But LastErrorMessage would be something like "Failed to connect to x.x.x.x port 80 after 5000 ms: Timeout was reached".

(Read and Write property)

4.22.143 LibraryUsed as String

Plugin Version: 17.1, Platforms: macOS, Linux, Windows, Targets: All.

Function: Which library is in use.

Notes: This is for debugging only to see which library is in use.

(Read only property)

4.22.144 LibVersion as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Returns a human readable string with the version number of libCURL and some of its important components (like OpenSSL version).

Notes: (Read only property)

4.22.145 OptionAbstractUnixSocket as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Path to an abstract Unix domain socket.

Notes: (Read and Write property)

See also [ABSTRACT_UNIX_SOCKET](#) option in CURL manual.

4.22.146 OptionAcceptEncoding as String

Plugin Version: 13.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the contents of the Accept-Encoding: header sent in a HTTP request, and enables decoding of a response when a Content-Encoding: header is received.

Example:

```
dim c as new CURLSMBS
c.OptionAcceptEncoding = "deflate"
```

Notes: Three encodings are supported: identity, which does nothing, deflate which requests the server to compress its response using the zlib algorithm, and gzip which requests the gzip algorithm. If a zero-length string is set, then an Accept-Encoding: header containing all supported encodings is sent.

This is a request, not an order; the server may or may not do it. This option must be set (to any non-NULL value) or else any unsolicited encoding done by the server is ignored. See the special file README.encoding for details (included with CURL source code).

(Read and Write property)

See also [ACCEPT_ENCODING](#) option in CURL manual.

4.22.147 OptionAcceptTimeoutMS as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Time-out accept operations (currently for FTP only) after this amount of milliseconds.

Notes: (Read and Write property)

See also [ACCEPTTIMEOUT_MS](#) option in CURL manual.

4.22.148 OptionAddressScope as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass an integer specifying the scope_id value to use when connecting to IPv6 link-local or site-local addresses.

Notes: (Added in CURL 7.19.0)

(Read and Write property)

See also [ADDRESS_SCOPE](#) option in CURL manual.

4.22.149 OptionAppend as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: True tells the library to append to the remote file instead of overwrite it.

Notes: This is only useful when uploading to an ftp site.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [APPEND](#) option in CURL manual.

4.22.150 OptionAutoReferer as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: When enabled, libCURL will automatically set the Referer: field in requests where it follows a Location: redirect.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [AUTOREFERER](#) option in CURL manual.

4.22.151 OptionAWSSigV4 as String

Plugin Version: 21.1, Platforms: macOS, Linux, Windows, Targets: All.

Function: Provides AWS V4 signature authentication on HTTP(S) header.

Notes: Pass a text that is the collection of specific arguments are used for creating outgoing authentication headers. The format of the param option is:

```
provider1 [ :provider2 [ :region [ :service ] ] ]
```

provider1, provider2:

The providers arguments are used for generating some authentication parameters such as "Algorithm", "date", "request type" and "signed headers".

region:

The argument is a geographic area of a resources collection. It is extracted from the host name specified in

the URL if omitted.

service:

The argument is a function provided by a cloud. It is extracted from the host name specified in the URL if omitted.

Note: This call set `CURLOPT_HTTPAUTH` to `CURLAUTH_AWS_SIGV4`. Calling `CURLOPT_HTTPAUTH` with `CURLAUTH_AWS_SIGV4` is the same as calling this with "aws:amz" in parameter.

Example with "Test:Try", when curl will do the algorithm, it will generate "TEST-HMAC-SHA256" for "Algorithm", "x-try-date" and "X-Try-Date" for "date", "test4_request" for "request type", "SignedHeaders=content-type;host;x-try-date" for "signed headers"

If you use just "test", instead of "test:try", test will be use for every strings generated

By default, the value of this parameter is empty. Calling `CURLOPT_HTTPAUTH` with `CURLAUTH_AWS_SIGV4` is the same as calling this with "aws:amz" in parameter.

(Read and Write property)

See also [AWS_SIGV4](#) option in CURL manual.

4.22.152 OptionBufferSize as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Your preferred size (in bytes) for the receive buffer in libCURL.

Notes: The main point of this would be that the write event gets called more often and with smaller chunks. This is just treated as a request, not an order. You cannot be guaranteed to actually get the given size. (Added in 7.10)

This size is by default set as big as possible (`OptionMaxWriteSize`), so it only makse sense to use this option if you want it smaller.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

For slow upload/downloads, it may be better to set buffer size to 1 MB with `OptionUploadBufferSize` or `OptionBufferSize` properties to make transfers faster.

(Read and Write property)

See also [BUFFERSIZE](#) option in CURL manual.

4.22.153 OptionCACacheTimeout as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the life-time for cached certificate stores.

Notes: Pass a number, this sets the timeout in seconds. This tells libcurl the maximum time any cached certificate store it has in memory may be kept and reused for new connections. Once the timeout has expired, a subsequent fetch requiring a certificate store will have to build a new one.

Building a certificate store from a CAINFO file (see OptionCAInfo) is a slow operation so curl may cache the generated certificate store internally to speed up future connections.

Set to zero to completely disable caching, or set to -1 to retain the cached store remain forever. By default, libcurl caches this info for 24 hours.

(Read and Write property)

See also [CA_CACHE_TIMEOUT](#) option in CURL manual.

4.22.154 OptionCAInfo as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string naming a file holding one or more certificates to verify the peer with.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLSMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionSSLVerifyHost = 0
```

```
d.OptionSSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionCAInfo = cacert.NativePath
```

```
d.OptionSSLVerifyHost = 2
```

```
d.OptionSSLVerifyPeer = 1
```

Notes: This makes sense only when used in combination with the OptionSSLVerifyPeer option. If OptionSSLVerifyPeer is false, OptionCAINFO need not even indicate an accessible file.

Note that option is by default set to the system path where libCURL's cacert bundle is assumed to be stored, as established at build time.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **CAINFO** option in CURL manual.

4.22.155 OptionCAInfoBlob as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The CAInfo as blob value.

Notes: Certificate Authority (CA) bundle in PEM format passed PEM encoded content holding one or more certificates to verify the HTTPS server with.

(Read and Write property)

See also **CAINFO_BLOB** option in CURL manual.

4.22.156 OptionCAPath as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string naming a directory holding multiple CA certificates to verify the peer with.

Example:

```
dim c as new CURLSMBS
c.OptionCAPath = "/data/MyCertificates"
```

Notes: The certificate directory must be prepared using the openssl c_rehash utility. This makes sense only when used in combination with the CURLOPT_SSL_VERIFYPEER option. If OptionSSLVerifyPeer is zero, OptionCAPath need not even indicate an accessible path. The OptionCAPath function apparently does not work in Windows due to some limitation in openssl. This option is OpenSSL-specific and does nothing if libCURL is built to use GnuTLS.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **CAPATH** option in CURL manual.

4.22.157 OptionCertInfo as boolean

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set to true to enable libCURL's certificate chain info gatherer.

Notes: With this enabled, libCURL (if built with OpenSSL) will extract lots of information and data about the certificates in the certificate chain used in the SSL connection. This data is then possible to extract after a transfer using GetInfoCertInfo. (Added in 7.19.1)

(Read and Write property)

See also **CERTINFO** option in CURL manual.

4.22.158 OptionConnectionTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The maximum time in seconds that you allow the connection to the server to take.

Example:

```
dim d as new CURLSMBS
```

```
d.OptionConnectionTimeOutMS = 5000
```

```
d.OptionConnectOnly = 1
```

```
// try this URL
```

```
d.OptionURL = URL
```

```
// try connection
```

```
dim e as integer = d.Perform
```

```
// check result
```

```
dim s as string = d.OutputData
```

```
TextArea1.text = FixText(S)
```

```
if e = 0 then
```

```
MsgBox "Connected"
```

```
else
```

```
MsgBox "Failed to connect"
```

```
end if
```

Notes: This only limits the connection phase, once it has connected, this option is of no more use. Set to zero to disable connection timeout (it will then only timeout on the system's internal timeouts). See also the OptionTimeout option.

(Read and Write property)

See also **CONNECTTIMEOUT** option in CURL manual.

4.22.159 OptionConnectionTimeOutMS as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The maximum time in milli seconds that you allow the connection to the server to take.

Notes: This only limits the connection phase, once it has connected, this option is of no more use. Set to zero to disable connection timeout (it will then only timeout on the system's internal timeouts). See also the OptionTimeout option.

(Read and Write property)

4.22.160 OptionConnectOnly as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A true tells the library to perform any required proxy authentication and connection setup, but no data transfer.

Notes: This option is useful with the CURLSMBS.GetInfoLastSocket function. The library can set up the connection and then the application can obtain the most recently used socket for special data transfers. (Added in 7.15.2)

Type changed to integer in v23.0 to enable passing 2 for WebSockets.

(Read and Write property)

See also [CONNECT_ONLY](#) option in CURL manual.

4.22.161 OptionCookie as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: It will be used to set a cookie in the http request.

Notes: The format of the string should be NAME=CONTENTS, where NAME is the cookie name and CONTENTS is what the cookie should contain.

If you need to set multiple cookies, you need to set them all using a single option and thus you need to concatenate them all in one single string. Set multiple cookies in one string like this: "name1=content1; name2=content2;" etc.

Using this option multiple times will only make the latest string override the previously ones.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [COOKIE](#) option in CURL manual.

4.22.162 OptionCookieFile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The cookie file content.

Notes: It should contain the name of your file holding cookie data to read. The cookie data may be in Netscape / Mozilla cookie data format or just regular HTTP-style headers dumped to a file.

Given an empty or non-existing file or by passing the empty string (""), this option will enable cookies for this CURL handle, making it understand and parse received cookies and then use matching cookies in future request.

If you use this option multiple times, you just add more files to read. Subsequent files will add more cookies.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **COOKIEFILE** option in CURL manual.

4.22.163 OptionCookieJar as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: File path where to write the cookies to.

Notes: This will make libCURL write all internally known cookies to the specified file, when the object is destroyed. If no cookies are known, no file will be created. Specify "-" to instead have the cookies written to stdout. Using this option also enables cookies for this session, so if you for example follow a location it will make matching cookies get sent accordingly.

If the cookie jar file can't be created or written to, libCURL will not and cannot report an error for this. Using OptionVerbose or DebugFunction event will get a warning to display, but that is the only visible feedback you get about this possibly lethal situation.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [COOKIEJAR](#) option in CURL manual.

4.22.164 OptionCookieList as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The cookie string.

Notes: Cookie can be either in Netscape / Mozilla format or just regular HTTP-style header (Set-Cookie: ...) format. If CURL cookie engine was not enabled it will enable its cookie engine. Passing a magic string "ALL" will erase all cookies known by CURL. (Added in 7.14.1) Passing the special string "SESS" will only erase all session cookies known by CURL. (Added in 7.15.4)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [COOKIELIST](#) option in CURL manual.

4.22.165 OptionCookieSession as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set to true to mark this as a new cookie "session".

Notes: It will force libCURL to ignore all cookies it is about to load that are "session cookies" from the previous session. By default, libCURL always stores and loads all cookies, independent if they are session cookies are not. Session cookies are cookies without expiry date and they are meant to be alive and existing for this "session" only.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [COOKIESESSION](#) option in CURL manual.

4.22.166 OptionCRLF as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Convert Unix newlines to CRLF newlines on transfers.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **CRLF** option in CURL manual.

4.22.167 OptionCRLFile as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string naming a file with the concatenation of CRL (in PEM format) to use in the certificate validation that occurs during the SSL exchange.

Notes: When CURL is built to use NSS or GnuTLS, there is no way to influence the use of CRL passed to help in the verification process. When libCURL is built with OpenSSL support, X509_V_FLAG_CRL_CHECK and X509_V_FLAG_CRL_CHECK_ALL are both set, requiring CRL check against all the elements of the certificate chain if a CRL file is passed.

This option makes sense only when used in combination with the OptionSSLVerifyPeer option.

A specific error code (CURLE_SSL_CRL_BADFILE) is defined with the option. It is returned when the SSL exchange fails because the CRL file cannot be loaded. Note that a failure in certificate verification due to a revocation information found in the CRL does not trigger this specific error. (Added in 7.19.0)

(Read and Write property)

See also **CRLFILE** option in CURL manual.

4.22.168 OptionCustomRequest as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: It will be user instead of GET or HEAD when doing an HTTP request, or instead of LIST or NLST when doing an ftp directory listing.

Example:

```
dim c as CURLSMBS // your CURL instance
```

```
c.URL = "ftp://..."
```

```
c.customRequest = "MLSD" // ftp advanced directory listing
```

Notes: This is useful for doing DELETE or other more or less obscure HTTP requests. Don't do this at will, make sure your server supports the command first.

Restore to the internal default by setting this to "".

Many people have wrongly used this option to replace the entire request with their own, including multiple

headers and POST contents. While that might work in many cases, it will cause libCURL to send invalid requests and it could possibly confuse the remote server badly. Use `CURLOPT_POST` and `OptionPostFields` to set POST data. Use `OptionHTTPHeader` to replace or extend the set of headers sent by libCURL. Use `OptionHTTPVersion` to change HTTP version.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

For WebDAV, you can set this to "MKCOL" to create a folder at the given URL.

(Read and Write property)

See also `CUSTOMREQUEST` option in CURL manual.

4.22.169 `OptionDefaultProtocol` as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set the protocol used when curl is given a URL without a protocol.

Notes: (Read and Write property)

See also `DEFAULT_PROTOCOL` option in CURL manual.

4.22.170 `OptionDirListOnly` as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: For FTP and SFTP based URLs a parameter set to true tells the library to list the names of files in a directory, rather than performing a full directory listing that would normally include file sizes, dates etc.

Notes: For POP3 a parameter of true tells the library to list the email message or messages on the POP3 server. This can be used to change the default behaviour of libCURL, when combined with a URL that contains a message ID, to perform a "scan listing" which can then be used to determine the size of an email.

Note: For FTP this causes a NLST command to be sent to the FTP server. Beware that some FTP servers list only files in their response to NLST; they might not include subdirectories and symbolic links.

Setting this option to true also implies a directory listing even if the URL doesn't end with a slash, which otherwise is necessary.

Do NOT use this option if you also use `OptionWildcardMatch` as it will effectively break that feature then. (Read and Write property)

See also `DIRLISTONLY` option in CURL manual.

4.22.171 OptionDisableUserNameInURL as Boolean

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Disallow specifying username/login in URL.

Notes: The value true tells the library to not allow URLs that include an username.
(Read and Write property)

4.22.172 OptionDNSCacheTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The timeout in seconds.

Notes: Name resolves will be kept in memory for this number of seconds. Set to zero (0) to completely disable caching, or set to -1 to make the cached entries remain forever. By default, libCURL caches this info for 60 seconds.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [DNS_CACHE_TIMEOUT](#) option in CURL manual.

4.22.173 OptionDNSInterface as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set the name of the network interface that the DNS resolver should bind to.

Notes: This must be an interface name (not an address). Set this option to "" to use the default setting (don't bind to a specific interface).

(Read and Write property)

See also [DNS_INTERFACE](#) option in CURL manual.

4.22.174 OptionDNSLocalIPv4 as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set the local IPv4 address that the resolver should bind to.

Notes: The argument should be of string and contain a single numerical IPv4 address as a string. Set this option to "" to use the default setting (don't bind to a specific IP address).

(Read and Write property)

See also [DNS_LOCAL_IP4](#) option in CURL manual.

4.22.175 OptionDNSLocalIPv6 as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set the local IPv6 address that the resolver should bind to.

Notes: The argument should be of type string and contain a single IPv6 address as a string. Set this option to "" to use the default setting (don't bind to a specific IP address).

(Read and Write property)

See also [DNS_LOCAL_IP6](#) option in CURL manual.

4.22.176 OptionDNSServers as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set the name servers to use for DNS resolution.

Notes: (Read and Write property)

See also [DNS_SERVERS](#) option in CURL manual.

4.22.177 OptionDNSShuffleAddresses as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to shuffle DNS addresses.

Notes: When a name is resolved and more than one IP address is returned, shuffle the order of all returned addresses so that they will be used in a random order. This is similar to the ordering behavior of gethostbyname which is no longer used on most platforms.

Addresses will not be reshuffled if a name resolution is completed using the DNS cache. `DNSCacheTimeout` property can be used together with this option to reduce DNS cache timeout or disable caching entirely if frequent reshuffling is needed.

Since the addresses returned will be reordered randomly, their order will not be in accordance with RFC 3484 or any other deterministic order that may be generated by the system's name resolution implementation. This may have performance impacts and may cause IPv4 to be used before IPv6 or vice versa.

Default is false.

(Read and Write property)

See also [DNS_SHUFFLE_ADDRESSES](#) option in CURL manual.

4.22.178 OptionDOHSSLVerifyHost as Integer

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to verify the host name in the DOH (DNS-over-HTTPS) SSL certificate.

Notes: Pass a 2 as asking curl to verify the DOH (DNS-over-HTTPS) server's certificate name fields against the host name.

This option is the DOH equivalent of `OptionSSLVerifyPeer` and only affects requests to the DOH server.

When `OptionDOHSSLVerifyHost` is 2, the SSL certificate provided by the DOH server must indicate that the server name is the same as the server name to which you meant to connect to, or the connection fails.

Curl considers the DOH server the intended one when the Common Name field or a Subject Alternate Name field in the certificate matches the host name in the DOH URL to which you told Curl to connect.

When the verify value is set to 1 it is treated the same as 2. However for consistency with the other `VerifyHost` options we suggest use 2 and not 1.

When the verify value is set to 0, the connection succeeds regardless of the names used in the certificate. Use that ability with caution!

(Read and Write property)

See also `DOH_SSL_VERIFYHOST` option in CURL manual.

4.22.179 OptionDOHSSLVerifyPeer as Integer

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to verify the DOH SSL certificate.

Notes: Pass 1 to enable or 0 to disable.

This option tells curl to verify the authenticity of the DOH (DNS-over-HTTPS) server's certificate. A value of 1 means curl verifies; 0 (zero) means it doesn't.

This option is the DOH equivalent of `CURL.SetOptionSSLVerifyPeer` and only affects requests to the DOH server.

When negotiating a TLS or SSL connection, the server sends a certificate indicating its identity. Curl verifies whether the certificate is authentic, i.e. that you can trust that the server is who the certificate says it is. This trust is based on a chain of digital signatures, rooted in certification authority (CA) certificates you supply. curl uses a default bundle of CA certificates (the path for that is determined at build time) and you can specify alternate certificates with the `CURL.SetOptionCAInfo` option or the `CURL.SetOptionCAPath` option.

When `CURL.SetOptionDOHSSLVerifyPeer` is enabled, and the verification fails to prove that the certificate is authentic, the connection fails. When the option is zero, the peer certificate verification succeeds regardless.

Authenticating the certificate is not enough to be sure about the server. You typically also want to ensure that the server is the server you mean to be talking to. Use `CURL.SetOptionDOHSSLVerifyHost` for that. The check that the host name in the certificate is valid for the host name you're connecting to is done independently of the `CURL.SetOptionDOHSSLVerifyPeer` option.

WARNING: disabling verification of the certificate allows bad guys to man-in-the-middle the communication without you knowing it. Disabling verification makes the communication insecure. Just having encryption on a transfer is not enough as you cannot be sure that you are communicating with the correct end-point.

(Read and Write property)

See also `DOH_SSL_VERIFYPEER` option in CURL manual.

4.22.180 OptionDOHSSLVerifyStatus as Integer

Plugin Version: 21.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to verify the DOH SSL certificate's status.

Notes: Pass 2 to ask curl to verify the DOH (DNS-over-HTTPS) server's certificate name fields against the host name.

This option is the DOH equivalent of OptionSSLVerifyHost and only affects requests to the DOH server.

When OptionDOHSSLVerifyHost is 2, the SSL certificate provided by the DOH server must indicate that the server name is the same as the server name to which you meant to connect to, or the connection fails.

Curl considers the DOH server the intended one when the Common Name field or a Subject Alternate Name field in the certificate matches the host name in the DOH URL to which you told Curl to connect.

When the verify value is set to 1L it is treated the same as 2L. However for consistency with the other VerifyHost options we suggest use 2 and not 1.

When the verify value is set to 0L, the connection succeeds regardless of the names used in the certificate. Use that ability with caution!

See also OptionDOHSSLVerifyPeer to verify the digital signature of the DOH server certificate. If libcurl is built against NSS and OptionDOHSSLVerifyPeer is zero, OptionDOHSSLVerifyHost is also set to zero and cannot be overridden.

(Read and Write property)

See also [DOH_SSL_VERIFYSTATUS](#) option in CURL manual.

4.22.181 OptionDOHURL as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Provides the DNS-over-HTTPS URL.

Notes: Pass in a string to a URL for the DOH server to use for name resolving. The parameter should be URL-encoded in the following format: "https://host:port/path". It MUST specify a HTTPS URL.

libcurl doesn't validate the syntax or use this variable until the transfer is issued. Even if you set a crazy value here, OptionDOHURL will still return CURLE_OK.

curl sends POST requests to the given DNS-over-HTTPS URL.

To find the DOH server itself, which might be specified using a name, libcurl will use the default name lookup function. You can bootstrap that by providing the address for the DOH server with OptionResolve.

Disable DOH use again by setting this option to "".

(Read and Write property)

See also [DOH_URL](#) option in CURL manual.

4.22.182 OptionEGDSocket as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. **Function:** The path name to the Entropy Gathering Daemon socket.

Notes: It will be used to seed the random engine for SSL.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.22.183 OptionExpect100TimeoutMS as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets Expect 100 timeout.

Notes: Time to wait in milliseconds for a response to a HTTP request containing an Expect: 100-continue header before sending the data anyway.

(Read and Write property)

See also [EXPECT_100_TIMEOUT_MS](#) option in CURL manual.

4.22.184 OptionFailOnError as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: True tells the library to fail silently if the HTTP code returned is equal to or larger than 400. The default action would be to return the page normally, ignoring that code.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

This method is not fail-safe and there are occasions where non-successful response codes will slip through, especially when authentication is involved (response codes 401 and 407).

You might get some amounts of headers transferred before this situation is detected, like for when a "100-continue" is received as a response to a POST/PUT and a 401 or 407 is received immediately afterwards.

(Read and Write property)

See also [FAILONERROR](#) option in CURL manual.

4.22.185 OptionFileTime as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether filetime should be queried.

Example:

```
// init CURL with options
dim d as new CURLSMBS
d.OptionFileTime = true
d.OptionURL = "http://www.monkeybreadsoftware.de/images/mbs.jpg"

// run query
dim e as Integer = d.Perform

// calculate date object
dim da as new date(1970,1,1,0,0,0)
da.TotalSeconds = da.TotalSeconds + d.GetInfoFileTime

// show date
ResultText.text=str(d.GetInfoFileTime)+" "+da.ShortDate+" "+da.ShortTime
```

Notes: If it is true, libCURL will attempt to get the modification date of the remote document in this operation. This requires that the remote server sends the time or replies to a time querying command.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **FILETIME** option in CURL manual.

4.22.186 OptionFollowLocation as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A boolean parameter tells the library to follow any Location: header that the server sends as part of an HTTP header.

Example:

```
dim c as new CURLSMBS

c.OptionFollowLocation = true
c.OptionMaxRedirs = 3
```

Notes: This means that the library will re-send the same request on the new location and follow new Location: headers all the way until no more such headers are returned. OptionMaxRedirs can be used to limit the number of redirects libCURL will follow.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

See also **FOLLOWLOCATION** option in CURL manual.

4.22.187 OptionForbitReuse as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set to true to make the next transfer explicitly close the connection when done.

Notes: Normally, libCURL keep all connections alive when done with one transfer in case there comes a succeeding one that can re-use them. This option should be used with caution and only if you understand what it does. Set to false to have libCURL keep the connection open for possibly later re-use (default behavior).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.22.188 OptionFreshConnect as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set to true to make the next transfer use a new (fresh) connection by force.

Example:

```
dim c as new CURLSMBS
```

```
c.OptionFreshConnect=True
```

Notes: If the connection cache is full before this connection, one of the existing connections will be closed as according to the selected or default policy. This option should be used with caution and only if you understand what it does. Set this to 0 to have libCURL attempt re-using an existing connection (default behavior).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

See also **FRESH_CONNECT** option in CURL manual.

4.22.189 OptionFTPAccount as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The FTP account name to use.

Notes: When an FTP server asks for "account data" after user name and password has been provided, this data is sent off using the ACCT command.

(Read and Write property)

See also **FTP_ACCOUNT** option in CURL manual.

4.22.190 OptionFTPAlternativeToUser as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The alternative username.

Notes: Pass a string as parameter, pointing to a string which will be used to authenticate if the usual FTP "USER user" and "PASS password" negotiation fails. This is currently only known to be required when connecting to Tumbleweed's Secure Transport FTPS server using client certificates for authentication.

(Added in 7.15.5)

(Read and Write property)

See also **FTP_ALTERNATIVE_TO_USER** option in CURL manual.

4.22.191 OptionFTPAppend as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionAppend instead.

Function: True tells the library to append to the remote file instead of overwrite it.

Notes: This is only useful when uploading to an ftp site.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.22.192 OptionFTPCreateMissingDirs as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: If the value is 1, CURL will attempt to create any remote directory that it fails to CWD into.

Notes: CWD is the command that changes working directory. (Added in 7.10.7)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Newer CURL Library versions allow a value of 2 to do a CWD after the directory was created, so this property changed from boolean to integer.

(Read and Write property)

See also [FTP_CREATE_MISSING_DIRS](#) option in CURL manual.

4.22.193 OptionFTPFileMethod as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass an integer that should have one of the following values.

Notes: This option controls what method libCURL should use to reach a file on a FTP(S) server. The argument should be one of the following alternatives:

URLFTPMETHOD_MULTICWD = 1

libCURL does a single CWD operation for each path part in the given URL. For deep hierarchies this means very many commands. This is how RFC1738 says it should be done. This is the default but the slowest behavior.

CURLFTPMETHOD_NOCWD = 2

libCURL does no CWD at all. libCURL will do SIZE, RETR, STOR etc and give a full path to the server for all these commands. This is the fastest behavior.

CURLFTPMETHOD_SINGLECWD = 3

libCURL does one CWD with the full target directory and then operates on the file "normally" (like in the multicwd case). This is somewhat more standards compliant than 'nocwd' but without the full penalty of 'multicwd'.

(Read and Write property)

See also [FTP_FILEMETHOD](#) option in CURL manual.

4.22.194 OptionFTPListOnly as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionDirListOnly` instead. **Function:** True tells the library to just list the names of an ftp directory, instead of doing a full directory listing that would include file sizes, dates etc.

Notes: This causes an FTP NLST command to be sent. Beware that some FTP servers list only files in their response to NLST; they might not include subdirectories and symbolic links.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.22.195 OptionFTPPort as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The port to use for ftp.

Notes: It will be used to get the IP address to use for the ftp PORT instruction. The PORT instruction tells the remote server to connect to our specified IP address. The string may be a plain IP address, a host name, an network interface name (under Unix) or just a '-' letter to let the library use your systems default IP address. Default FTP operations are passive, and thus won't use PORT.

You disable PORT again and go back to using the passive version by setting this option to "".

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

See also **FTPPORT** option in CURL manual.

4.22.196 OptionFTPResponseTimeout as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionServerResponseTimeout` instead. **Function:** Causes CURL to set a timeout period (in seconds) on the amount of time that the server is allowed to take in order to generate a response message for a command before the session is considered hung.

Notes: With v22.4 or newer, please use newer property name `OptionServerResponseTimeout`.

While CURL is waiting for a response, this value overrides `OptionTimeout`. It is recommended that if used in conjunction with `OptionTimeout`, you set `OptionFTPResponseTimeout` to a value smaller than `OptionTimeout`. (Added in 7.10.8)

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.22.197 OptionFTPSkipPasvIP as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: If set to a non-zero value, it instructs libCURL to not use the IP address the server suggests in its 227-response to libCURL's PASV command when libCURL connects the data connection.

Notes: Instead libCURL will re-use the same IP address it already uses for the control connection. But it will use the port number from the 227-response. (Added in 7.14.2)

This option has no effect if PORT, EPRT or EPSV is used instead of PASV.

(Read and Write property)

See also [FTP_SKIP_PASV_IP](#) option in CURL manual.

4.22.198 OptionFTPSSL as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionUseSSL instead.

Function: Request using SSL / TLS for the transfer.

Example:

```
dim c as CURLSMBS
```

```
c.OptionUseSSL = c.kFTPSSL_ALL
```

```
c.OptionSSLVersion = c.kSSLVersionTLSv12
```

Notes: Set to an integer using one of the values from below, to make libCURL use your desired level of SSL for the transfer.

These are all protocols that start out plain text and get "upgraded" to SSL using the STARTTLS command. This is for enabling SSL/TLS when you use FTP, SMTP, POP3, IMAP etc.

CURLUSESSL_NONE	0	Don't attempt to use SSL.
CURLUSESSL_TRY	1	Try using SSL, proceed as normal otherwise.
CURLUSESSL_CONTROL	2	Require SSL for the control connection or fail with CURLE_USE_SSL_FAILED.
CURLUSESSL_ALL	3	Require SSL for all communication or fail with CURLE_USE_SSL_FAILED.

(Read and Write property)

4.22.199 OptionFTPSSLAUTH as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: What kind of SSL authentication to use for FTP.

Notes: Pass an integer using one of the values from below, to alter how libCURL issues "AUTH TLS" or "AUTH SSL" when FTP over SSL is activated (see CURLOPT_FTP_SSL). (Added in 7.12.2)

kFTPAUTH_DEFAULT = 0

Allow libCURL to decide

kFTPAUTH_SSL = 1

Try "AUTH SSL" first, and only if that fails try "AUTH TLS"

kFTPAUTH_TLS = 2

Try "AUTH TLS" first, and only if that fails try "AUTH SSL"

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [FTPSSLAUTH](#) option in CURL manual.

4.22.200 OptionFTPSSLCCC as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: If enabled, this option makes libCURL use CCC (Clear Command Channel).

Notes: It shuts down the SSL/TLS layer after authenticating. The rest of the control channel communication will be unencrypted. This allows NAT routers to follow the FTP transaction. Pass a long using one of the values below. (Added in 7.16.1)

CURLFTPSSL_CCC_NONE	0	Don't attempt to use CCC.
CURLFTPSSL_CCC_PASSIVE	1	Do not initiate the shutdown, but wait for the server to do it. Do not send a reply.
CURLFTPSSL_CCC_ACTIVE	2	Initiate the shutdown and wait for a reply.

(Read and Write property)

See also [FTP_SSL_CCC](#) option in CURL manual.

4.22.201 OptionFTPUseEPRT as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: If the value is true, it tells CURL to use the EPRT (and LPRT) command when doing active FTP downloads (which is enabled by CURLOPT_FTPPORT).

Notes: Using EPRT means that it will first attempt to use EPRT and then LPRT before using PORT, but if you pass FALSE (zero) to this option, it will not try using EPRT or LPRT, only plain PORT. (Added in 7.10.5)

If the server is an IPv6 host, this option will have no effect as of 7.12.3.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [FTP_USE_EPRT](#) option in CURL manual.

4.22.202 OptionFTPUseEPSV as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: If the value is true, it tells CURL to use the EPSV command when doing passive FTP downloads (which it always does by default).

Notes: Using EPSV means that it will first attempt to use EPSV before using PASV, but if you pass FALSE (zero) to this option, it will not try using EPSV, only plain PASV.

If the server is an IPv6 host, this option will have no effect as of 7.12.3.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [FTP_USE_EPSV](#) option in CURL manual.

4.22.203 OptionFTPusePret as Boolean

Plugin Version: 11.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: If the value is true, it tells CURL to send a PRET command before PASV (and EPSV). Certain FTP servers, mainly drftpd, require this non-standard command for directory listings as well as up and downloads in PASV mode.

Notes: Has no effect when using the active FTP transfers mode. (Added in 7.20.0)
(Read and Write property)
See also `FTP_USE_PRET` option in CURL manual.

4.22.204 OptionGet as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: If the true, this forces the HTTP request to get back to GET.

Notes: usable if a POST, HEAD, PUT or a custom request have been used previously using the same CURL handle.

When setting OptionGet to a true value, it will automatically set OptionNoBody to true (since 7.14.1).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.22.205 OptionGSSAPIDelegation as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Allow GSSAPI credential delegation.

Notes: (Read and Write property)

See also [GSSAPI_DELEGATION](#) option in CURL manual.

4.22.206 OptionHappyEyeballsTimeOutMS as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The happy eyeballs timeout.

Notes: Head start in milliseconds to give happy eyeballs.

(Read and Write property)

See also [HAPPY_EYEBALLS_TIMEOUT_MS](#) option in CURL manual.

4.22.207 OptionHAProxyProtocol as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to send an HAProxy PROXY protocol header.

Notes: Set to true to tell the library to send an HAProxy PROXY protocol header at beginning of the connection. The default action is not to send this header.

This option is primarily useful when sending test requests to a service that expects this header.

Most applications do not need this option.

Default false, do not send HAProxy PROXY protocol header.

(Read and Write property)

See also [HAPROXYPROTOCOL](#) option in CURL manual.

4.22.208 OptionHeader as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: True tells the library to include the header in the body output.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

This is only relevant for protocols that actually have headers preceding the data (like HTTP).
(Read and Write property)

See also [HEADER](#) option in CURL manual.

4.22.209 OptionHeaderOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass in a bitmask of "header options".

Notes: (Read and Write property)

See also [HEADEROPT](#) option in CURL manual.

4.22.210 OptionHTTPAuth as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Which http authentication to use.

Notes: Pass an integer as parameter, which is set to a bitmask, to tell libCURL what authentication method(s) you want it to use. The available bits are listed below. If more than one bit is set, libCURL will first query the site to see what authentication methods it supports and then pick the best one you allow it to use. For some methods, this will induce an extra network round-trip. Set the actual name and password with the UserPassword option. (Added in 7.10.6)

kAuthBASIC = 1

HTTP Basic authentication. This is the default choice, and the only method that is in wide-spread use and supported virtually everywhere. This is sending the user name and password over the network in plain text, easily captured by others.

kAuthDIGEST = 2

HTTP Digest authentication. Digest authentication is defined in RFC2617 and is a more secure way to do authentication over public networks than the regular old-fashioned Basic method.

```
kAuthGSSNEGOTIATE = 4
```

HTTP GSS-Negotiate authentication. The GSS-Negotiate (also known as plain "Negotiate") method was designed by Microsoft and is used in their web applications. It is primarily meant as a support for Kerberos5 authentication but may be also used along with another authentication methods. For more information see IETF draft draft-brezak-spnego-http-04.txt.

You need to build libCURL with a suitable GSS-API library for this to work.

```
kAuthNTLM = 8
```

HTTP NTLM authentication. A proprietary protocol invented and used by Microsoft. It uses a challenge-response and hash concept similar to Digest, to prevent the password from being eavesdropped.

You need to build libCURL with OpenSSL support for this option to work, or build libCURL on Windows.

```
kAuthANY = &hFFFFFFFF
```

This is a convenience macro that sets all bits and thus makes libCURL pick any it finds suitable. libCURL will automatically select the one it finds most secure.

```
kAuthANYSAFE = &hFFFFFFFE
```

This is a convenience macro that sets all bits except Basic and thus makes libCURL pick any it finds suitable. libCURL will automatically select the one it finds most secure.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [HTTPAUTH](#) option in CURL manual.

4.22.211 OptionHTTPContentDecoding as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass a long to tell libCURL how to act on content decoding.

Notes: If set to zero, content decoding will be disabled. If set to 1 it is enabled. Note however that libCURL

has no default content decoding but requires you to use `OptionEncoding` for that. (added in 7.16.2)

(Read and Write property)

See also [HTTP_CONTENT_DECODING](#) option in CURL manual.

4.22.212 OptionHTTPProxyTunnel as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set the parameter to true to get the library to tunnel all operations through a given HTTP proxy.

Notes: There is a big difference between using a proxy and to tunnel through it. If you don't know what this means, you probably don't want this tunneling option.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [HTTPPROXYTUNNEL](#) option in CURL manual.

4.22.213 OptionHTTPTransferDecoding as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass an integer to tell libCURL how to act on transfer decoding.

Notes: If set to zero, transfer decoding will be disabled, if set to 1 it is enabled (default). libCURL does chunked transfer decoding by default unless this option is set to zero. (added in 7.16.2)

(Read and Write property)

See also [HTTP_TRANSFER_DECODING](#) option in CURL manual.

4.22.214 OptionHTTPVersion as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set to one of the values described below.

Notes: They force libCURL to use the specific HTTP versions. This is not sensible to do unless you have a good reason.

`kHTTP_VERSION_NONE = 0`

We don't care about what version the library uses. libCURL will use whatever it thinks fit.

kHTTP_VERSION_1_0 = 1

Enforce HTTP 1.0 requests.

kHTTP_VERSION_1_1 = 2

Enforce HTTP 1.1 requests.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [HTTP_VERSION](#) option in CURL manual.

4.22.215 OptionIgnoreContentLength as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to ignore the Content-Length header.

Notes: This is useful for Apache 1.x (and similar servers) which will report incorrect content length for files over 2 gigabytes. If this option is used, CURL will not be able to accurately report progress, and will simply stop the download when the server ends the connection. (added in 7.14.1)

(Read and Write property)

See also [IGNORE_CONTENT_LENGTH](#) option in CURL manual.

4.22.216 OptionInFileSize as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: When uploading a file to a remote site, this option should be used to tell libCURL what the expected size of the infile is.

Notes: Note that this option does not limit how much data libCURL will actually send, as that is controlled entirely by what the read event returns.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [INFILESIZE](#) option in CURL manual.

4.22.217 OptionInFileSizeLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionInFileSize instead.

Function: When uploading a file to a remote site, this option should be used to tell libCURL what the expected size of the infile is.

Notes: This value should be passed as a CURL_off_t. (Added in 7.11.0)

Note that this option does not limit how much data libCURL will actually send, as that is controlled entirely by what the read event returns.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.22.218 OptionInterface as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: This set the interface name to use as outgoing network interface.

Notes: The name can be an interface name, an IP address or a host name.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **INTERFACE** option in CURL manual.

4.22.219 OptionIPResolve as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Allows an application to select what kind of IP addresses to use when resolving host names.

Example:

```
dim c as new CURLSMBS
c.OptionIPResolve = c.kIPRESOLVE_V4
```

Notes: This is only interesting when using host names that resolve addresses using more than one version of IP. The allowed values are:

```
kIPRESOLVE_WHATEVER = 0
```

Default, resolves addresses to all IP versions that your system allows.

```
kIPRESOLVE_V4 = 1
```

Resolve to ipv4 addresses.

```
kIPRESOLVE_V6 = 2
```

Resolve to ipv6 addresses.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **IPRESOLVE** option in CURL manual.

4.22.220 OptionIssuerCert as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string naming a file holding a CA certificate in PEM format.

Notes: If the option is set, an additional check against the peer certificate is performed to verify the issuer is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the OptionSSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionSSLVerifyPeer has to be set too for the check to fail). (Added in 7.19.0)

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **ISSUERCERT** option in CURL manual.

4.22.221 OptionIssuerCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set issuer SSL certificate from memory blob.

Notes: Pass data, which contains binary data of a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option should be used in combination with the OptionSSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionSSLVerifyPeer has to be set too for the check to fail).

This option is an alternative to OptionIssuerCert which instead expects a file name as input.
(Read and Write property)

See also [ISSUERCERT_BLOB](#) option in CURL manual.

4.22.222 OptionKeepSendingOnError as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to keep sending on error.

Notes: Continue to send data if the server responds early with an HTTP status code ≥ 300
(Read and Write property)

See also [KEEP_SENDING_ON_ERROR](#) option in CURL manual.

4.22.223 OptionKeyPassword as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set passphrase to private key.

Notes: It will be used as the password required to use the OptionSSLKey or OptionSSHPrivateKeyfile private key. You never needed a pass phrase to load a certificate but you need one to load your private key.
(Read and Write property)

See also [KEYPASSWORD](#) option in CURL manual.

4.22.224 OptionKRB4Level as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionKRBLevel instead.

Function: Set the krb4 security level, this also enables krb4 awareness.

Notes: This is a string, 'clear', 'safe', 'confidential' or 'private'. If the string is set but doesn't match one of these, 'private' will be used. Set the string to "" to disable kerberos4. The kerberos support only works for FTP.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.22.225 OptionKRBLevel as String

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: FTP kerberos security level.

Notes: Set the kerberos security level for FTP; this also enables kerberos awareness. This is a string that should match one of the following: 'clear', 'safe', 'confidential' or 'private'. If the string is set but doesn't match one of these, 'private' will be used. Set the string to NULL to disable kerberos support for FTP.

(Read and Write property)

See also [KRBLEVEL](#) option in CURL manual.

4.22.226 OptionLocalPort as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: This sets the local port number of the socket used for connection.

Notes: This can be used in combination with OptionInterface and you are recommended to use OptionLocalPortRange as well when this is set. Note that port numbers are only valid 1 - 65535. (Added in 7.15.2)

(Read and Write property)

See also [LOCALPORT](#) option in CURL manual.

4.22.227 OptionLocalPortRange as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: This is the number of attempts libCURL should do to find a working local port number.

Notes: It starts with the given OptionLocalPort and adds one to the number for each retry. Setting this value to 1 or below will make libCURL do only one try for exact port number. Note that port numbers by nature is a scarce resource that will be busy at times so setting this value to something too low might cause

unnecessary connection setup failures. (Added in 7.15.2)
(Read and Write property)
See also [LOCALPORTRANGE](#) option in CURL manual.

4.22.228 OptionLoginOptions as String

Plugin Version: 15.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Login options string to use for the transfer.

Notes: For more information about the login options please see RFC 2384, RFC5092 and IETF draft draft-earhart-url-smtp-00.txt

CURLOPT_LOGIN_OPTIONS can be used to set protocol specific login options, such as the preferred authentication mechanism via "AUTH=NTLM" or "AUTH=*", and should be used in conjunction with the OptionUserName option.

Only IMAP, POP3 and SMTP support login options.

(Read and Write property)

See also [LOGIN_OPTIONS](#) option in CURL manual.

4.22.229 OptionLowSpeedLimit as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: This property contains the transfer speed in bytes per second that the transfer should be below during OptionLowSpeedTime seconds for the library to consider it too slow and abort.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [LOW_SPEED_LIMIT](#) option in CURL manual.

4.22.230 OptionLowSpeedTime as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: This property contains the time in seconds that the transfer should be below the OptionLowSpeedLimit for the library to consider it too slow and abort.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [LOW_SPEED_TIME](#) option in CURL manual.

4.22.231 OptionMailAuth as String

Plugin Version: 12.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: This string will be used to specify the authentication address (identity) of a submitted message that is being relayed to another server.

Notes: This optional parameter allows co-operating agents in a trusted environment to communicate the authentication of individual messages and should only be used by the application program, using libCURL, if the application is itself a mail server acting in such an environment. If the application is operating as such and the AUTH address is not known or is invalid, then an empty string should be used for this parameter.

Unlike OptionMailFrom and SetOptionMailRecipients, the address should not be specified within a pair of angled brackets (<>). However, if an empty string is used then a pair of brackets will be sent by libCURL as required by RFC 2554.

(Read and Write property)

See also [MAIL_AUTH](#) option in CURL manual.

4.22.232 OptionMailFrom as String

Plugin Version: 11.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string that will be used to specify the sender address in a mail when sending an SMTP mail with libCURL.

Notes: (Read and Write property)

See also [MAIL_FROM](#) option in CURL manual.

4.22.233 OptionMaxAgeConn as Integer

Plugin Version: 19.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The maximum age the connection should have in seconds.

Notes: Older connections are not reused, but discarded.

(Read and Write property)

See also [MAXAGE_CONN](#) option in CURL manual.

4.22.234 OptionMaxConnects as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The set number will be the persistent connection cache size.

Notes: The set amount will be the maximum amount of simultaneously open connections that libCURL may cache. Default is 5, and there isn't much point in changing this value unless you are perfectly aware of how this work and changes libCURL's behaviour. This concerns connection using any of the protocols that

support persistent connections.

When reaching the maximum limit, CURL closes the oldest one in the cache to prevent the number of open connections to increase.

If you already have performed transfers with this CURL handle, setting a smaller MAXCONNECTS than before may cause open connections to get closed unnecessarily.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **MAXCONNECTS** option in CURL manual.

4.22.235 OptionMaxFileSize as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: This allows you to specify the maximum size (in bytes) of a file to download.

Notes: If the file requested is larger than this value, the transfer will not start and `kError_FILESIZE_EXCEEDED` will be returned.

The file size is not always known prior to download, and for such files this option has no effect even if the file transfer ends up being larger than this given limit. This concerns both FTP and HTTP transfers.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **MAXFILESIZE** option in CURL manual.

4.22.236 OptionMaxFileSizeLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionMaxFileSize` instead. **Function:** This allows you to specify the maximum size (in bytes) of a file to download.

Notes: If the file requested is larger than this value, the transfer will not start and `kError_FILESIZE_EXCEEDED` will be returned. (Added in 7.11.0)

The file size is not always known prior to download, and for such files this option has no effect even if the file transfer ends up being larger than this given limit. This concerns both FTP and HTTP transfers.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.22.237 OptionMaxLifeTimeConnection as Integer

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets maximum lifetime (since creation) allowed for reusing a connection.

Notes: Pass a number as parameter containing maxlifetime - the maximum time in seconds, since the creation of the connection, that you allow an existing connection to have to be considered for reuse for this request.

libcurl features a connection cache that holds previously used connections. When a new request is to be done, it will consider any connection that matches for reuse. The MaxLifeTimeConnection limit prevents libcurl from trying too old connections for reuse. This can be used for client-side load balancing. If a connection is found in the cache that is older than this set maxlifetime, it will instead be closed once any in-progress transfers complete.

If set to 0, this behavior is disabled: all connections are eligible for reuse.
(Read and Write property)

4.22.238 OptionMaxRecvSpeed as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Defines the maximum download speed.

Notes: If a download exceeds this speed (counted in bytes per second) on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

(Read and Write property)

See also [MAX_RECV_SPEED](#) option in CURL manual.

4.22.239 OptionMaxRecvSpeedLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionMaxRecvSpeed instead. **Function:** Defines the maximum download speed.

Notes: If a download exceeds this speed (counted in bytes per second) on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

(Read and Write property)

4.22.240 OptionMaxRedirs as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The set number will be the redirection limit.

Example:

```
dim c as new CURLSMBS
```

```
c.OptionFollowLocation = true
```

```
c.OptionMaxRedirs = 3
```

Notes: If that many redirections have been followed, the next redirect will cause an error (kError_TOO_MANY_REDIRECTS). This option only makes sense if the CURLOPT_FOLLOWLOCATION is used at the same time. Added in 7.15.1: Setting the limit to 0 will make libCURL refuse any redirect. Set it to -1 for an infinite number of redirects (which is the default)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [MAXREDIRS](#) option in CURL manual.

4.22.241 OptionMaxSendSpeed as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Defines the maximum upload speed.

Notes: If an upload exceeds this speed on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

Value is in bytes per second.

Useful if you have a limited pipe and you'd like your transfer not to use your entire bandwidth.

Slowing down the transfer speed is also useful for lowering CPU consumption during transfers.

(Read and Write property)

See also [MAX_SEND_SPEED](#) option in CURL manual.

4.22.242 OptionMaxSendSpeedLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionMaxSendSpeed` instead. **Function:** Defines the maximum upload speed.

Notes: If an upload exceeds this speed on cumulative average during the transfer, the transfer will pause to keep the average rate less than or equal to the parameter value. Defaults to unlimited speed. (Added in 7.15.5)

Value is in bytes per second.

Useful if you have a limited pipe and you'd like your transfer not to use your entire bandwidth.

Slowing down the transfer speed is also useful for lowering CPU consumption during transfers.

(Read and Write property)

4.22.243 OptionMimeOptions as Integer

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set MIME option flags.

Notes: Pass a number that holds a bitmask of `CURLMIMEOPT` constants. Each bit is a Boolean flag used while encoding a MIME tree or multipart form data.

Available bits are:

`CURLMIMEOPT_FORMESCAPE = 1`

Tells libcurl to escape multipart form field and file names using the backslash-escaping algorithm rather than percent-encoding (HTTP only).

Backslash-escaping consists in preceding backslashes and double quotes with a backslash. Percent encoding maps all occurrences of double quote, carriage return and line feed to `%22`, `%0D` and `%0A` respectively.

Before version 7.81.0, percent-encoding was never applied.

HTTP browsers used to do backslash-escaping in the past but have over time transitioned to use percent-encoding. This option allows to address server-side applications that have not yet have been converted.

As an example, consider field or file name `strange\name"kind`. When the containing multipart form is sent, this is normally transmitted as `strange\name%22kind`. When this option is set, it is sent as `strange\\name\"kind`. (Read and Write property)

See also [MIME_OPTIONS](#) option in CURL manual.

4.22.244 OptionNetRC as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Controls usage of netrc file.

Notes: This parameter controls the preference of libCURL between using user names and passwords from your textasciitilde /.netrc file, relative to user names and passwords in the URL supplied with OptionURL.

libCURL uses a user name (and supplied or prompted password) supplied with OptionUsername and OptionPassword in preference to any of the options controlled by this parameter.

An integer, set to one of the values described below.

kNETRC_OPTIONAL = 1

The use of your textasciitilde /.netrc file is optional, and information in the URL is to be preferred. The file will be scanned with the host and user name (to find the password only) or with the host only, to find the first user name and password after that machine, which ever information is not specified in the URL.

Undefined values of the option will have this effect.

kNETRC_IGNORED = 0

The library will ignore the file and use only the information in the URL.

This is the default.

kNETRC_REQUIRED = 2

This value tells the library that use of the file is required, to ignore the information in the URL, and to search the file with the host only.

Only machine name, user name and password are taken into account (init macros and similar things aren't supported).

libCURL does not verify that the file has the correct properties set (as the standard Unix ftp client does). It should only be readable by user.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **NETRC** option in CURL manual.

4.22.245 OptionNetRCFile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string containing the full path name to the file you want libCURL to use as .netrc file.

Notes: If this option is omitted, and OptionNETRC is set, libCURL will attempt to find the a .netrc file in the current user's home directory. (Added in 7.10.9)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also **NETRC_FILE** option in CURL manual.

4.22.246 OptionNewDirectoryPerms as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: An integer, containing the value of the permissions that will be assigned to newly created directories on the remote server.

Notes: The default value is 0755, but any valid value can be used. The only protocols that can use this are sftp://, scp://, and file://. (Added in 7.16.4)

Value must be octal, so use &o prefix for number.

(Read and Write property)

See also **NEW_DIRECTORY_PERMS** option in CURL manual.

4.22.247 OptionNewFilePerms as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: An integer, containing the value of the permissions that will be assigned to newly created files on the remote server.

Notes: The default value is &o0644, but any valid value can be used. The only protocols that can use this are sftp://, scp://, and file://. (Added in 7.16.4)

Be aware that you normally specify this in octal values. So use the &o prefix in Xojo.

(Read and Write property)

See also [NEW_FILE_PERMS](#) option in CURL manual.

4.22.248 OptionNoBody as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: True tells the library to not include the body-part in the output.

Notes: This is only relevant for protocols that have separate header and body parts. On HTTP(S) servers, this will make libCURL do a HEAD request.

To change request to GET, you should use OptionGet. Change request to POST with OptionPost etc.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [NOBODY](#) option in CURL manual.

4.22.249 OptionNoProxy as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string with a comma- separated list of hosts which do not use a proxy, if one is specified.

Notes: The only wildcard is a single * character, which matches all hosts, and effectively disables the proxy. Each name in this list is matched as either a domain which contains the hostname, or the hostname itself. For example, local.com would match local.com, local.com:80, and www.local.com, but not www.notlocal.com.

(Added in 7.19.4)

(Read and Write property)

See also [NOPROXY](#) option in CURL manual.

4.22.250 OptionNoSignal as Integer

Plugin Version: 13.1, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to not use signals.

Notes: If it is true, libCURL will not use any functions that install signal handlers or any functions that cause signals to be sent to the process. This option is mainly here to allow multi-threaded unix applications to still set/use all timeout options etc, without risking getting signals. (Added in 7.10)

If this option is set and libCURL has been built with the standard name resolver, timeouts will not occur while the name resolve takes place. Consider building libCURL with c-ares support to enable asynchronous

DNS lookups, which enables nice timeouts for name resolves without signals.

Setting `OptionNoSignal` to true makes libCURL NOT ask the system to ignore SIGPIPE signals, which otherwise are sent by the system when trying to send data to a socket which is closed in the other end. libCURL makes an effort to never cause such SIGPIPEs to trigger, but some operating systems have no way to avoid them and even on those that have there are some corner cases when they may still happen, contrary to our desire. In addition, using `CURLAUTH_NTLM_WB` authentication could cause a SIGCHLD signal to be raised.

(Read and Write property)

See also `NOSIGNAL` option in CURL manual.

4.22.251 OptionPassword as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The password to use for the transfer.

Notes: The `OptionPassword` option should be used in conjunction with the `OptionUsername` option.

(Read and Write property)

See also `PASSWORD` option in CURL manual.

4.22.252 OptionPathAsIs as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass path as it is and do not resolve dots.

Notes: Do not squash dot-dot sequences.

(Read and Write property)

See also `PATH_AS_IS` option in CURL manual.

4.22.253 OptionPinnedPublicKey as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The public key in DER form used to validate the peer public key.

Notes: Native path to key file.

This option is used only if `SSLVerifyPeer` is true.

(Read and Write property)

See also `PINNEDPUBLICKEY` option in CURL manual.

4.22.254 OptionPipeWait as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Wait/don't wait for pipe/mutex to clarify.

Notes: (Read and Write property)

See also **PIPEWAIT** option in CURL manual.

4.22.255 OptionPort as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The remote port number to connect to, instead of the one specified in the URL or the default port for the used protocol.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **PORT** option in CURL manual.

4.22.256 OptionPost as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A boolean parameter tells the library to do a regular HTTP post.

Notes: This will also make the library use the a "Content-Type: application/x-www-form-urlencoded" header. (This is by far the most commonly used POST method).

Use the OptionPostFields option to specify what data to post.

Optionally, you can provide data to POST using the Read event but then you must make sure to not set OptionPostFields to anything but "". When providing data with an event, you must transmit it using chunked transfer-encoding.

You can override the default POST Content-Type: header by setting your own with OptionHTTPHeader.

Using POST with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with OptionHTTPHeader as usual.

If you use POST to a HTTP 1.1 server, you can send data without knowing the size before starting the POST if you use chunked encoding. You enable this by adding a header like "Transfer-Encoding: chunked" with OptionHTTPHeader. With HTTP 1.0 or without chunked transfer, you must specify the size in the request.

When setting `CURLOPT_POST` to a non-zero value, it will automatically set `OptionNoBody` to 0 (since 7.14.1).

If you issue a POST request and then want to make a HEAD or GET using the same re-used handle, you must explicitly set the new request type using `OptionNoBody` or `OptionGet` or similar.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **POST** option in CURL manual.

4.22.257 OptionPostFields as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string which should be the full data to post in an HTTP POST operation.

Example:

```
dim xml as string // XML or JSON to send as payload
dim c as new CURLSMBS

c.OptionFollowLocation = true
c.OptionMaxRedirs = 3
c.OptionPostFields = xml
c.OptionUserAgent = "Test App"
c.OptionPost = true

// for SOAP use right content type
c.SetOptionHTTPHeader array("Content-Type: application/soap+xml; charset=utf-8")
```

Notes: You must make sure that the data is formatted the way you want the server to receive it. libCURL will not convert or encode it for you. Most web servers will assume this data to be url-encoded. Take note.

This POST is a normal `application/x-www-form-urlencoded` kind (and libCURL will set that `Content-Type` by default when this option is used), which is the most commonly used one by HTML forms. See also the `OptionPost`. Using `OptionPostFields` implies `OptionPost`.

Using POST with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with `CURLOPT_HTTPHEADER` as usual.

To make multipart/formdata posts (aka rfc1867-posts), check out the OptionPost option.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **COPYPOSTFIELDS** option in CURL manual.

4.22.258 OptionPostFieldSize as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The size of the post data.

Notes: Optional you can set the size of your post data.

If you specify a postfield string, this size will be set automatically.

If you specify a size and no postfield string, the Read event will request data.

(Read and Write property)

See also **POSTFIELDSIZE** option in CURL manual.

4.22.259 OptionPostFieldSizeLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionPostFieldSize instead. **Function:** The size of the post data. (64 bit version)

Notes: Optional you can set the size of your post data.

If you specify a postfield string, this size will be set automatically.

If you specify a size and no postfield string, the Read event will request data.

(Read and Write property)

4.22.260 OptionPostRedir as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A bitmask to control how libCURL acts on redirects after POSTs that get a 301 or 302 response back.

Notes: A parameter with bit 0 set (value `CURL_REDIR_POST_301=1`) tells the library to respect RFC 2616/10.3.2 and not convert POST requests into GET requests when following a 301 redirection. Setting bit 1 (value `CURL_REDIR_POST_302=2`) makes libCURL maintain the request method after a 302 redirect.

CURL_REDIR_POST_ALL is a convenience define that sets both bits.

The non-RFC behaviour is ubiquitous in web browsers, so the library does the conversion by default to maintain consistency. However, a server may require a POST to remain a POST after such a redirection. This option is meaningful only when setting OptionFollowLocation. (Added in 7.17.1) (This option was known as CURLOPT_POST301 up to 7.19.0 as it only supported the 301 way before then)
(Read and Write property)

See also **POSTREDIR** option in CURL manual.

4.22.261 OptionPreProxy as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Name of pre proxy to use.

Notes: (Read and Write property)

See also **PRE_PROXY** option in CURL manual.

4.22.262 OptionProtocols as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionProtocolsString instead. **Function:** A bitmask of kProtocol* constants.

Notes: If used, this bitmask limits what protocols libCURL may use in the transfer. This allows you to have a libCURL built to support a wide range of protocols but still limit specific transfers to only be allowed to use a subset of them. By default libCURL will accept all protocols it supports. See also OptionRedirProtocols. (Added in 7.19.4)

(Read and Write property)

4.22.263 OptionProtocolsString as String

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: The protocols allowed-

Example:

```
dim c as new CURLSMBS
c.OptionProtocolsString = "http,tftp,sftp"
```

Notes: Pass a string that holds a comma-separated list of case insensitive protocol names (URL schemes) to allow in the transfer. This option allows applications to use libcurl built to support a wide range of protocols but still limit specific transfers to only be allowed to use a subset of them. By default, libcurl accepts all

protocols it was built with support for. See also `OptionReditProtocolsString`.

If trying to set a non-existing protocol or if no matching protocol at all is set, it returns error.

These are the available protocols:

DICT, FILE, FTP, FTPS, GOPHER, GOPHERS, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTMPE, RTMPS, RTMPT, RTMPTE, RTMPTS, RTSP, SCP, SFTP, SMB, SMBS, SMTP, SMTPS, TELNET, TFTP

You can set "ALL" as a short-cut to enable all protocols. Note that by setting all, you may enable protocols that were not supported the day you write this but are introduced in a future libcurl version.

`CURLVersionMBS` class can be used to get a list of all supported protocols in the current libcurl. `GetInfo-Protocol` function is the recommended way to figure out the protocol used in a previous transfer. (Read and Write property)

4.22.264 OptionProxy as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set HTTP proxy to use.

Example:

```

dim c as CURLSMBS // your CURL object
dim psAddress as string // your proxy address
dim psPort as Integer // your proxy port
  
```

```

c.OptionProxy=psAddress
c.OptionProxyPort=psPort
c.OptionProxyType=c.kPROXY_HTTP
  
```

Notes: The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

The parameter should be a string holding the host name or dotted IP address. To specify port number in this string, append : [port] to the end of the host name. The proxy string may be prefixed with [protocol] :// since any such prefix will be ignored. The proxy's port number may optionally be specified with the separate option `ProxyHost`.

When you tell the library to use an HTTP proxy, libCURL will transparently convert operations to HTTP

even if you specify an FTP URL etc. This may have an impact on what other features of the library you can use, such as `CURLOPT_QUOTE` and similar FTP specifics that don't work unless you tunnel through the HTTP proxy. Such tunneling is activated with `HTTPProxyTunnel`.

libCURL respects the environment variables `http_proxy`, `ftp_proxy`, `all_proxy` etc, if any of those is set. The `Proxy` option does however override any possibly set environment variables.

Starting with 7.14.1, the proxy host string given in environment variables can be specified the exact same way as the proxy can be set with `Proxy`, include protocol prefix (`http://`) and embedded user + password.

You can use `WinHTTPClientMBS` class on Windows or `CFProxyMBS` on Mac to discover system proxy settings.

(Read and Write property)

See also **PROXY** option in CURL manual.

4.22.265 OptionProxyAuth as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Which proxy authentication to use.

Notes: Pass an integer as parameter, which is set to a bitmask, to tell libCURL what authentication method(s) you want it to use for your proxy authentication. If more than one bit is set, libCURL will first query the site to see what authentication methods it supports and then pick the best one you allow it to use. For some methods, this will induce an extra network round-trip. Set the actual name and password with the `ProxyUserPassword` option. The bitmask can be constructed by or'ing together the bits listed above for the `HTTPAuth` option. As of this writing, only Basic, Digest and NTLM work. (Added in 7.10.7)

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **PROXYAUTH** option in CURL manual.

4.22.266 OptionProxyCAInfo as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The CApath or CAfile used to validate the proxy certificate.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLSMBS
```

```
// your CURL object
```

```
// disable
d.OptionProxySSLVerifyHost = 0
d.OptionProxySSLVerifyPeer = 0

// or better provide root certificates:

Dim cacert As FolderItem = GetFolderItem("cacert.pem")
d.OptionProxyCAInfo = cacert.NativePath
d.OptionProxySSLVerifyHost = 2
d.OptionProxySSLVerifyPeer = 1
```

Notes: Pass native file path.

This option is used only if `CURLSMBS.OptionProxySSLVerifyPeer` is true

(Read and Write property)

See also [PROXY_CAINFO](#) option in CURL manual.

4.22.267 OptionProxyCAInfoBlob as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The CAInfo for proxy as blob value.

Notes: This option is for connecting to an HTTPS proxy, not an HTTPS server.

Certificate Authority (CA) bundle in PEM format passed PEM encoded content holding one or more certificates to verify the HTTPS server with.

(Read and Write property)

See also [PROXY_CAINFO_BLOB](#) option in CURL manual.

4.22.268 OptionProxyCAPath as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The CAPath directory used to validate the proxy certificate.

Notes: Pass native file path.

This option is used only if `CURLSMBS.OptionProxySSLVerifyPeer` is true

(Read and Write property)

See also [PROXY_CAPATH](#) option in CURL manual.

4.22.269 OptionProxyCRLFile as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: CRL file for proxy.

Notes: Pass native file path.

(Read and Write property)

See also [PROXY_CRLFILE](#) option in CURL manual.

4.22.270 OptionProxyIssuerCert as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the proxy issuer SSL certificate filename.

Notes: Pass a string naming a file holding a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer of the the HTTPS proxy is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option makes sense only when used in combination with the OptionProxySSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionProxySSLVerifyPeer has to be set too for the check to fail).

(Read and Write property)

See also [PROXY_ISSUERCERT](#) option in CURL manual.

4.22.271 OptionProxyIssuerCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set proxy issuer SSL certificate from memory blob.

Notes: Pass data, which contains binary data of a CA certificate in PEM format. If the option is set, an additional check against the peer certificate is performed to verify the issuer of the the HTTPS proxy is indeed the one associated with the certificate provided by the option. This additional check is useful in multi-level PKI where one needs to enforce that the peer certificate is from a specific branch of the tree.

This option should be used in combination with the OptionProxySSLVerifyPeer option. Otherwise, the result of the check is not considered as failure.

A specific error code (CURLE_SSL_ISSUER_ERROR) is defined with the option, which is returned if the setup of the SSL/TLS session has failed due to a mismatch with the issuer of peer certificate (OptionProxySSLVerifyPeer has to be set too for the check to fail).

This option is an alternative to OptionProxyIssuerCert which instead expects a file name as input.

(Read and Write property)

See also `PROXY_ISSUERCERT_BLOB` option in CURL manual.

4.22.272 OptionProxyKeyPassword as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Password for the SSL private key for proxy.

Notes: (Read and Write property)

See also `PROXY_KEYPASSWD` option in CURL manual.

4.22.273 OptionProxyPassword as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string which should be pointing to the password to use for the transfer while connecting to Proxy.

Notes: The OptionProxyPassword option should be used in conjunction with the OptionProxyUsername option. (Added in 7.19.1)

(Read and Write property)

See also `PROXYPASSWORD` option in CURL manual.

4.22.274 OptionProxyPinnedPublicKey as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The public key in DER form used to validate the proxy public key.

Notes: This option is used only if `CURLSMBS.OptionProxySSLVerifyPeer` is true.

Please path native file path to key file.

(Read and Write property)

See also `PROXY_PINNEDPUBLICKEY` option in CURL manual.

4.22.275 OptionProxyPort as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The proxy port to connect to unless it is specified in the proxy string OptionProxy.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

You can use OptionProxy with port, e.g. "12.34.56.78:8080" or pass port here and proxy without port. For some users it seems like the option with OptionProxy including port works better.

(Read and Write property)

See also **PROXYPORT** option in CURL manual.

4.22.276 OptionProxyServiceName as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Proxy Service Name.

Notes: (Read and Write property)

See also **PROXY_SERVICE_NAME** option in CURL manual.

4.22.277 OptionProxySSLCert as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Name of the file keeping your private SSL-certificate for proxy.

Notes: (Read and Write property)

See also **PROXY_SSLCERT** option in CURL manual.

4.22.278 OptionProxySSLCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets private key for proxy cert from memory blob.

Notes: Pass data, which contains the private key for connecting to the HTTPS proxy. Compatible with OpenSSL. The format (like "PEM") must be specified with `CURL.SetOptionProxySSLKeyType`.

(Read and Write property)

See also **PROXY_SSLCERT_BLOB** option in CURL manual.

4.22.279 OptionProxySSLCertType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Type of the file keeping your SSL-certificate for proxy.

Notes: Value can be "DER", "PEM" or "ENG".

(Read and Write property)

See also **PROXY_SSLCERTTYPE** option in CURL manual.

4.22.280 OptionProxySSLCipherList as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Specify which SSL ciphers to use for proxy.

Notes: (Read and Write property)

See also [PROXY_SSL_CIPHER_LIST](#) option in CURL manual.

4.22.281 OptionProxySSLKey as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Name of the file keeping your private SSL-key for proxy.

Notes: Pass native file path.

(Read and Write property)

See also [PROXY_SSLKEY](#) option in CURL manual.

4.22.282 OptionProxySSLKeyBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set private key for proxy cert from memory blob.

Notes: Pass data, which contains a private key for connecting to the HTTPS proxy. Compatible with OpenSSL. The format (like "PEM") must be specified with OptionProxySSLKeyType.

This option is an alternative to OptionProxySSLKey which instead expects a file name as input.

(Read and Write property)

See also [PROXY_SSLKEY_BLOB](#) option in CURL manual.

4.22.283 OptionProxySSLKeyType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets type of the file keeping your private SSL-key for proxy.

Notes: Value is DER, PEM or ENG.

(Read and Write property)

See also [PROXY_SSLKEYTYPE](#) option in CURL manual.

4.22.284 OptionProxySSLOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Enable/disable specific SSL features with a bitmask for proxy.

Notes: (Read and Write property)

See also [PROXY_SSL_OPTIONS](#) option in CURL manual.

4.22.285 OptionProxySSLVerifyHost as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Enable SSL Host verification.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLSMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionProxySSLVerifyHost = 0
```

```
d.OptionProxySSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionProxyCAInfo = cacert.NativePath
```

```
d.OptionProxySSLVerifyHost = 2
```

```
d.OptionProxySSLVerifyPeer = 1
```

Notes: Set if we should verify the Common name from the proxy certificate in ssl handshake, set 1 to check existence, 2 to ensure that it matches the provided hostname.

(Read and Write property)

See also [PROXY_SSL_VERIFYHOST](#) option in CURL manual.

4.22.286 OptionProxySSLVerifyPeer as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set if we should verify the proxy in ssl handshake.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLSMBS
```

```
// your CURL object
```

```
// disable
d.OptionProxySSLVerifyHost = 0
d.OptionProxySSLVerifyPeer = 0

// or better provide root certificates:

Dim cacert As FolderItem = GetFolderItem("cacert.pem")
d.OptionProxyCAInfo = cacert.NativePath
d.OptionProxySSLVerifyHost = 2
d.OptionProxySSLVerifyPeer = 1
```

Notes: set 1 to verify.
 (Read and Write property)
 See also **PROXY_SSL_VERIFYPEER** option in CURL manual.

4.22.287 OptionProxySSLVersion as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: What version to specifically try to use for proxy.

Notes: The SSL and TLS versions have typically developed from the most insecure version to be more and more secure in this order through history: SSL v2, SSLv3, TLS v1.0, TLS v1.1, TLS v1.2 and the most recent TLS v1.3.

Use one of the available defines for this purpose. The available options are:

Default	0	The default acceptable version range. The minimum acceptable version is by default TLS v1.0 since 7.39.0 (unless the TLS library has a stricter rule).
TLSv1	1	TLS v1.0 or later
SSLv2	2	SSL v2 (but not SSLv3)
SSLv3	3	SSL v3 (but not SSLv2)
TLSv1.0	4	TLS v1.0 or later (Added in 7.34.0)
TLSv1.1	5	TLS v1.1 or later (Added in 7.34.0)
TLSv1.2	6	TLS v1.2 or later (Added in 7.34.0)
TLSv1.3	7	TLS v1.3 or later (Added in 7.52.0)

See also `kSSLVersion*` constants.

The maximum TLS version can be set by using one of the `CURL_SSLVERSION_MAX_` macros below. It is also possible to OR one of the `CURL_SSLVERSION_` macros with one of the `CURL_SSLVERSION_MAX_` macros.

Default	&h10000	The flag defines the maximum supported TLS version by libcurl, or the default value from the SSL library is used. libcurl will use a sensible default maximum, which was TLS v1.2 up to before 7.61.0 and is TLS v1.3 since then - assuming the TLS library support it. (Added in 7.54.0)
Max TLSv1.0	&h40000	The flag defines maximum supported TLS version as TLS v1.0. (Added in 7.54.0)
Max TLSv1.1	&h50000	The flag defines maximum supported TLS version as TLS v1.1. (Added in 7.54.0)
Max TLSv1.2	&h60000	The flag defines maximum supported TLS version as TLS v1.2. (Added in 7.54.0)
Max TLSv1.3	&h70000	The flag defines maximum supported TLS version as TLS v1.3. (Added in 7.54.0)

Please note that MBS Plugin does not yet support TLS v1.3 now, but may in future.

(Read and Write property)

See also [PROXY_SSLVERSION](#) option in CURL manual.

4.22.288 OptionProxyTLS13Ciphers as String

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Specify which TLS 1.3 ciphers suites to use for proxy.

Notes: The list of cipher suites to use for the TLS 1.3 connection to a proxy. The list must be syntactically correct, it consists of one or more cipher suite strings separated by colons.

You'll find more details about cipher lists on this URL:

<https://curl.haxx.se/docs/ssl-ciphers.html>

The application does not have to keep the string around after setting this option.

(Read and Write property)

See also [PROXY_TLS13_CIPHERS](#) option in CURL manual.

4.22.289 OptionProxyTLSAuthPassword as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Password for authenticated TLS for proxy.

Notes: (Read and Write property)

See also [PROXY_TLSAUTH_PASSWORD](#) option in CURL manual.

4.22.290 OptionProxyTLSSAuthType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set authentication type for authenticated TLS for proxy

Notes: (Read and Write property)

See also [PROXY_TLSAUTH_TYPE](#) option in CURL manual.

4.22.291 OptionProxyTLSSAuthUsername as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set a username for authenticated TLS for proxy.

Notes: (Read and Write property)

See also [PROXY_TLSAUTH_USERNAME](#) option in CURL manual.

4.22.292 OptionProxyTransferMode as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: If this integer value is set to 1 (one), it tells libCURL to set the transfer mode (binary or ASCII) for FTP transfers done via an HTTP proxy, by appending ;type=a or ;type=i to the URL.

Notes: Without this setting, or it being set to 0 (zero, the default), OptionTransferText has no effect when doing FTP via a proxy. Beware that not all proxies support this feature. (Added in 7.18.0)

(Read and Write property)

See also [PROXY_TRANSFER_MODE](#) option in CURL manual.

4.22.293 OptionProxyType as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: This option is to set type of the proxy.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Available options for this are kPROXY_HTTP, kPROXY SOCKS4 (added in 7.15.2) kPROXY SOCKS5. The HTTP type is default.

(Read and Write property)

See also [PROXYTYPE](#) option in CURL manual.

4.22.294 OptionProxyUsername as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string, which should be pointing to the user name to use for the transfer while connecting to Proxy.

Notes: In order to specify the password to be used in conjunction with the user name use the OptionProxyPassword option.

(Read and Write property)

See also [PROXYUSERNAME](#) option in CURL manual.

4.22.295 OptionPut as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionUpload instead.

Function: A non-zero parameter tells the library to use HTTP PUT to transfer data.

Notes: The data should be set with OptionInFileSize.

This option is deprecated and starting with version 7.12.1 you should instead use OptionUpload.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.22.296 OptionQuickExit as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to allow to exit quickly.

Notes: Pass a number as a parameter, 1 meaning that when recovering from a timeout, libcurl should skip lengthy cleanups that are intended to avoid all kinds of leaks (threads etc.), as the caller program is about to call exit() anyway. This allows for a swift termination after a DNS timeout for example, by canceling and/or forgetting about a resolver thread, at the expense of a possible (though short-lived) leak of associated resources.

(Read and Write property)

See also [QUICK_EXIT](#) option in CURL manual.

4.22.297 OptionRandomFile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. **Function:** A file name for the random file.

Notes: The file will be used to read from to seed the random engine for SSL. The more random the specified file is, the more secure the SSL connection will become.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

4.22.298 OptionRange as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string which should contain the specified range you want.

Notes: It should be in the format "X-Y", where X or Y may be left out. HTTP transfers also support several intervals, separated with commas as in "X-Y,N-M". Using this kind of multiple intervals will cause the HTTP server to send the response document in pieces (using standard MIME separation techniques). Pass a NULL to this option to disable the use of ranges.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **RANGE** option in CURL manual.

4.22.299 OptionRedirProtocols as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionRedirProtocolsString instead. **Function:** An integer that holds a bitmask of kProtocol* constants.

Notes: If used, this bitmask limits what protocols libCURL may use in a transfer that it follows to in a redirect when OptionFollowLocation is enabled. This allows you to limit specific transfers to only be allowed to use a subset of protocols in redirections. By default libCURL will allow all protocols except for FILE and SCP. This is a difference compared to pre-7.19.4 versions which unconditionally would follow to all protocols supported. (Added in 7.19.4)

(Read and Write property)

4.22.300 OptionReditProtocolsString as String

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: The protocols allowed to redirect to.

Example:

```
dim c as new CURLSMBS
c.OptionReditProtocolsString = "http,https"
```

Notes: Pass string that holds a comma-separated list of case insensitive protocol names (URL schemes). That list limits what protocols libcurl may use in a transfer that it follows to in a redirect when OptionFollowLocation is enabled. This option allows applications to limit specific transfers to only be allowed to use a subset of protocols in redirections.

Protocols denied by OptionProtocolsString are not overridden by this option.

By default libcurl will allow HTTP, HTTPS, FTP and FTPS on redirects (since 7.65.2). Older versions of libcurl allowed all protocols on redirect except several disabled for security reasons: Since 7.19.4 FILE and SCP are disabled, and since 7.40.0 SMB and SMBS are also disabled.

These are the available protocols:

DICT, FILE, FTP, FTPS, GOPHER, GOPHERS, HTTP, HTTPS, IMAP, IMAPS, LDAP, LDAPS, POP3, POP3S, RTMP, RTMPE, RTMPS, RTMPTE, RTMPPTS, RTSP, SCP, SFTP, SMB, SMBS, SMTP, SMTPS, TELNET, TFTP

You can set "ALL" as a short-cut to enable all protocols. Note that by setting all, you may enable protocols that were not supported the day you write this but are introduced in a future libcurl version.

If trying to set a non-existing protocol or if no matching protocol at all is set, it returns error.

Default

HTTP, HTTPS, FTP and FTPS (Added in 7.65.2).

Older versions defaulted to all protocols except FILE, SCP and since 7.40.0 SMB and SMBS. (Read and Write property)

4.22.301 OptionReferer as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The referer to pass to the server.

Notes: It will be used to set the Referer: header in the http request sent to the remote server. This can be used to fool servers or scripts. You can also set any custom header with OptionHTTPHeader.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [REFERER](#) option in CURL manual.

4.22.302 OptionRequestTarget as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The request target, instead of extracted from the URL.

Notes: (Read and Write property)

See also [REQUEST_TARGET](#) option in CURL manual.

4.22.303 OptionResumeFrom as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: It contains the offset in number of bytes that you want the transfer to start from.

Notes: Set this option to 0 to make the transfer start from the beginning (effectively disabling resume). For FTP, set this option to -1 to make the transfer start from the end of the target file (useful to continue an interrupted upload).

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [RESUME_FROM](#) option in CURL manual.

4.22.304 OptionResumeFromLarge as Int64

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use `OptionResumeFrom` instead. **Function:** It contains the offset in number of bytes that you want the transfer to start from.

Notes: The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

4.22.305 OptionRTSPClientCSEQ as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Manually initialize the client RTSP CSeq for this handle.

Notes: (Read and Write property)

See also [RTSP_CLIENT_CSEQ](#) option in CURL manual.

4.22.306 OptionRTSPRequest as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: RTSP request method (OPTIONS, SETUP, PLAY, etc...).

Notes: (Read and Write property)

See also [RTSP_REQUEST](#) option in CURL manual.

4.22.307 OptionRTSPServerCSEQ as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Manually initialize the server RTSP CSeq for this handle.

Notes: (Read and Write property)

See also [RTSP_SERVER_CSEQ](#) option in CURL manual.

4.22.308 OptionRTSPSessionID as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The RTSP session identifier.

Notes: (Read and Write property)

See also [RTSP_SESSION_ID](#) option in CURL manual.

4.22.309 OptionRTSPStreamURI as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The RTSP stream URI.

Notes: (Read and Write property)

See also [RTSP_STREAM_URI](#) option in CURL manual.

4.22.310 OptionRTSPTransport as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The Transport: header to use in RTSP requests.

Notes: (Read and Write property)

See also [RTSP_TRANSPORT](#) option in CURL manual.

4.22.311 OptionSASLAUTHZID as String

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: The authorisation identity (identity to act as).

Notes: Sets the authorisation identity (identity to act as).

Pass a text as parameter, which should be pointing to the authorisation identity (authzid) for the transfer. Only applicable to the PLAIN SASL authentication mechanism where it is optional.

When not specified only the authentication identity (authcid) as specified by the username will be sent to the server, along with the password. The server will derive a authzid from the authcid when not provided, which it will then uses internally.

When the authzid is specified, the use of which is server dependent, it can be used to access another user's inbox, that the user has been granted access to, or a shared mailbox for example.

(Read and Write property)

See also [SASL_AUTHZID](#) option in CURL manual.

4.22.312 OptionSASLIR as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Enable/disable SASL initial response.

Notes: (Read and Write property)

See also [SASL_IR](#) option in CURL manual.

4.22.313 OptionServerResponseTimeout as Integer

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Causes libcurl to set a timeout period (in seconds) on the amount of time that the server is allowed to take in order to send a response message for a command before the session is considered dead.

Notes: While libcurl is waiting for a response, this value overrides OptionTimeout. It is recommended that if used in conjunction with OptionTimeout, you set OptionServerResponseTimeout to a value smaller than OptionTimeout.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SERVER_RESPONSE_TIMEOUT](#) option in CURL manual.

4.22.314 OptionServiceName as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Service Name.

Notes: (Read and Write property)

See also [SERVICE_NAME](#) option in CURL manual.

4.22.315 OptionSocks5Auth as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Bitmask of allowed auth methods for connections to SOCKS5 proxies.

Notes: (Read and Write property)

See also [SOCKS5_AUTH](#) option in CURL manual.

4.22.316 OptionSocks5GSSAPI NEC as Boolean

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to protect SOCKS5 connection is protected.

Notes: Set to true to enable or false to disable. As part of the gssapi negotiation a protection mode is negotiated. The rfc1961 says in section 4.3/4.4 it should be protected, but the NEC reference implementation does not. If enabled, this option allows the unprotected exchange of the protection mode negotiation. (Added in 7.19.4).

(Read and Write property)

See also [SOCKS5_GSSAPI_NEC](#) option in CURL manual.

4.22.317 OptionSocks5GSSAPIService as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. **Function:** A string holding the name of the service.

Notes: The default service name for a SOCKS5 server is rcmd/server-fqdn. This option allows you to change it. (Added in 7.19.4)

(Read and Write property)

4.22.318 OptionSSHAuthTypes as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Define the SSH authorization types.

Example:

```
dim c as CURLSMBS // your instance

// only do password
c.OptionSSHAuthTypes = c.kSSHAuthKeyboard or c.kSSHAuthPassword
```

Notes: Pass a long set to a bitmask consisting of one or more of CURLSSH_AUTH_PUBLICKEY, CURLSSH_AUTH_PASSWORD, CURLSSH_AUTH_HOST, CURLSSH_AUTH_KEYBOARD. Set CURLSSH_AUTH_ to let libCURL pick one. (Added in 7.16.1)

See kSSHAuth* constants.

(Read and Write property)

See also [SSH_AUTH_TYPES](#) option in CURL manual.

4.22.319 OptionSSHCompression as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Enable/disable SSH compression.

Notes: (Read and Write property)

See also [SSH_COMPRESSION](#) option in CURL manual.

4.22.320 OptionSSHHostPublicKeyMD5 as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string containing 32 hexadecimal digits with the 128 bit MD5 checksum of the remote host's public key.

Notes: libCURL will reject the connection to the host unless the md5sums match. This option is only for SCP and SFTP transfers. (Added in 7.17.1)

(Read and Write property)

See also [SSH_HOST_PUBLIC_KEY_MD5](#) option in CURL manual.

4.22.321 OptionSSHHostPublicKeySHA256 as String

Plugin Version: 22.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: SHA256 hash of SSH server public key.

Notes: Pass a string containing a Base64-encoded SHA256 hash of the remote host's public key. The transfer will fail if the given hash does not match the hash the remote host provides.

(Read and Write property)

See also [SSH_HOST_PUBLIC_KEY_SHA256](#) option in CURL manual.

4.22.322 OptionSSHKnownhosts as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string holding the file name of the known_host file to use.

Notes: The known_hosts file should use the OpenSSH file format as supported by libssh2. If this file is specified, libCURL will only accept connections with hosts that are known and present in that file, with a matching public key. (Added in 7.19.6)

(Read and Write property)

See also [SSH_KNOWNHOSTS](#) option in CURL manual.

4.22.323 OptionSSHPrivateKeyfile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass a path pointing to a file name for your private key.

Example:

`Dim c As New CURLSMBS`

```
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa"
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa.pub"
c.OptionUsername = "test"
```

Notes: If not used, libCURL defaults to using

textasciitilde /.ssh/id_dsa. If the file is password-protected, set the password with OptionSSLKeyPassword. (Added in 7.16.1)

For a SFTP transfer (= file transfer over SSH), you would tell the plugin your public and private keys, so the plugin can login.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you. (Read and Write property)

See also [SSH_PRIVATE_KEYFILE](#) option in CURL manual.

4.22.324 OptionSSHPublicKeyfile as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass a path pointing to a file name for your public key.

Example:

Dim c As New CURLSMBS

```
c.OptionSSHPrivateKeyfile = "/Users/test/.ssh/id_rsa"
c.OptionSSHPublicKeyfile = "/Users/test/.ssh/id_rsa.pub"
c.OptionUsername = "test"
```

Notes: If not used, libCURL defaults to using textasciitilde /.ssh/id_dsa.pub. (Added in 7.16.1)

For a SFTP transfer (= file transfer over SSH), you would tell the plugin your public and private keys, so the plugin can login.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you. (Read and Write property)

See also [SSH_PUBLIC_KEYFILE](#) option in CURL manual.

4.22.325 OptionSSLCert as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The string should be the file name of your certificate.

Notes: The default format is "PEM" and can be changed with OptionSSLCERTTYPE.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [SSLCERT](#) option in CURL manual.

4.22.326 OptionSSLCertBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set SSL client certificate from memory blob.

Notes: Pass data, which contains a client certificate. The format must be "P12" on Secure Transport or Schannel. The format must be "P12" or "PEM" on OpenSSL. The string "P12" or "PEM" must be specified with OptionSSLCertType.

This option is an alternative to OptionSSLCert which instead expects a file name as input.

(Read and Write property)

See also [SSLCERT_BLOB](#) option in CURL manual.

4.22.327 OptionSSLCertPassword as String

Plugin Version: 11.3, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionKeyPassword instead. **Function:** The certificate password.

Notes: (Read and Write property)

4.22.328 OptionSSLCertType as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The string should be the format of your certificate.

Notes: Supported formats are "PEM" and "DER". (Added in 7.9.3)

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSLCERTTYPE](#) option in CURL manual.

4.22.329 OptionSSLCipherList as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A string holding the list of ciphers to use for the SSL connection.

Example:

```
// allow lower secure ciphers
curl.OptionSSLCipherList = "DEFAULT@SECLEVEL=0"
```

Notes: The list must be syntactically correct, it consists of one or more cipher strings separated by colons. Commas or spaces are also acceptable separators but colons are normally used, !, - and + can be used as operators. Valid examples of cipher lists include 'RC4-SHA', 'SHA1+DES', 'TLSv1' and 'DEFAULT'. The default list is normally set when you compile OpenSSL.

You'll find more details about cipher lists on this URL:

<http://www.openssl.org/docs/apps/ciphers.html>

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSL_CIPHER_LIST](#) option in CURL manual.

4.22.330 OptionSSLEnableALPN as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Enable/disable TLS ALPN extension (http2 over ssl might fail without).

Notes: (Read and Write property)

See also [SSL_ENABLE_ALPN](#) option in CURL manual.

4.22.331 OptionSSLEnableNPN as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. **Function:** Enable/disable TLS NPN extension (http2 over ssl might fail without)

Notes: (Read and Write property)

4.22.332 OptionSSLEngine as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. **Function:** It will be used as the identifier for the crypto engine you want to use for your private key.

Notes: If the crypto device cannot be loaded, `kError_SSL_ENGINE_NOTFOUND` is returned.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSENGINE](#) option in CURL manual.

4.22.333 OptionSSLEngineDefault as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. **Function:** Sets the actual crypto engine as the default for (asymmetric) crypto operations.

Notes: If the crypto device cannot be set, `kError_SSL_ENGINE_SETFAILED` is returned.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [SSENGINE_DEFAULT](#) option in CURL manual.

4.22.334 OptionSSLFalseStart as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set if we should enable TLS false start.

Notes: (Read and Write property)

See also [SSL_FALSESTART](#) option in CURL manual.

4.22.335 OptionSSLKey as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The string should be the file name of your private key.

Notes: The default format is "PEM" and can be changed with OptionSSLKEYTYPE.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

Starting with version 18.0 the plugin will always use UTF-8 encoding for file path on Linux and macOS. For macOS we also do the unicode character normalization for file names for you.

(Read and Write property)

See also [SSLKEY](#) option in CURL manual.

4.22.336 OptionSSLKeyBlob as String

Plugin Version: 20.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set private key for client cert from memory blob.

Notes: Pass data, which contains a private key. Compatible with OpenSSL. The format (like "PEM") must be specified with OptionSSLKeyType.

This option is an alternative to OptionSSLKey which instead expects a file name as input.

(Read and Write property)

See also [SSLKEY_BLOB](#) option in CURL manual.

4.22.337 OptionSSLKeyPassword as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Deprecated: This item is deprecated and should no longer be used. You can use OptionKeyPassword instead. **Function:** The password required to use the OptionSSLKEY private key.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

4.22.338 OptionSSLKeyType as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The string should be the format of your private key.

Notes: Supported formats are "PEM", "DER" and "ENG".

The format "ENG" enables you to load the private key from a crypto engine. In this case OptionSSLKEY is used as an identifier passed to the engine. You have to set the crypto engine with OptionSSENGINE. "DER" format key file currently does not work because of a bug in OpenSSL.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.
(Read and Write property)

See also [SSLKEYTYPE](#) option in CURL manual.

4.22.339 OptionSSLOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Enable/disable specific SSL features with a bitmask.

Notes: (Read and Write property)

See also [SSL_OPTIONS](#) option in CURL manual.

4.22.340 OptionSSLSessionIDCache as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to use the SSL session ID cache.

Notes: Pass false to disable libCURL's use of SSL session-ID caching. Set this to true to enable it. By default all transfers are done using the cache. Note that while nothing ever should get hurt by attempting to reuse SSL session-IDs, there seem to be broken SSL implementations in the wild that may require you to disable this in order for you to succeed. (Added in 7.16.0)

(Read and Write property)

See also [SSL_SESSIONID_CACHE](#) option in CURL manual.

4.22.341 OptionSSLVerifyHost as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: This option determines whether libCURL verifies that the server cert is for the server it is known as.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLSMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0

// or better provide root certificates:

Dim cacert As FolderItem = GetFolderItem("cacert.pem")
d.OptionCAInfo = cacert.NativePath
d.OptionSSLVerifyHost = 2
d.OptionSSLVerifyPeer = 1
```

Notes: When negotiating an SSL connection, the server sends a certificate indicating its identity.

When `OptionSSLVerifyHost` is 2, that certificate must indicate that the server is the server to which you meant to connect, or the connection fails.

CURL considers the server the intended one when the Common Name field or a Subject Alternate Name field in the certificate matches the host name in the URL to which you told CURL to connect.

When the value is 1, the certificate must contain a Common Name field, but it doesn't matter what name it says. (This is not ordinarily a useful setting).

When the value is 0, the connection succeeds regardless of the names in the certificate.

The default, since 7.10, is 2.

The checking this option controls is of the identity that the server claims. The server could be lying. To control lying, see `OptionSSLVerifyPeer`.

The `Lasterror` property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

When you don't set the options for certificate path or load system certificates, the MBS Plugin will disable the verify step to let the transfer run.

(Read and Write property)

See also [SSL_VERIFYHOST](#) option in CURL manual.

4.22.342 OptionSSLVerifyPeer as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Configure whether this CURL instance will verify the SSL peer certificate.

Example:

```
// if you use SSL, maybe put in a certificate or disable verification?
```

```
dim d as CURLSMBS
```

```
// your CURL object
```

```
// disable
```

```
d.OptionSSLVerifyHost = 0
```

```
d.OptionSSLVerifyPeer = 0
```

```
// or better provide root certificates:
```

```
Dim cacert As FolderItem = GetFolderItem("cacert.pem")
```

```
d.OptionCAInfo = cacert.NativePath
```

```
d.OptionSSLVerifyHost = 2
```

```
d.OptionSSLVerifyPeer = 1
```

Notes: This option determines whether CURL verifies the authenticity of the peer's certificate. A value of 1 means CURL verifies; zero means it doesn't. The default is nonzero, but before 7.10, it was zero.

When negotiating an SSL connection, the server sends a certificate indicating its identity. CURL verifies whether the certificate is authentic, i.e. that you can trust that the server is who the certificate says it is. This trust is based on a chain of digital signatures, rooted in certification authority (CA) certificates you supply. As of 7.10, CURL installs a default bundle of CA certificates and you can specify alternate certificates with the OptionCAINFO option or the OptionCAPATH option.

When OptionSSLVerifyPeer is nonzero, and the verification fails to prove that the certificate is authentic, the connection fails. When the option is zero, the connection succeeds regardless.

Authenticating the certificate is not by itself very useful. You typically want to ensure that the server, as authentically identified by its certificate, is the server you mean to be talking to. Use OptionSSLVerifyHost to control that.

When you don't set the options for certificate path or load system certificates, the MBS Plugin will disable the verify step to let the transfer run.

(Read and Write property)

See also [SSL_VERIFYPEER](#) option in CURL manual.

4.22.343 OptionSSLVerifyStatus as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set if we should verify the certificate status.

Notes: (Read and Write property)

See also [SSL_VERIFYSTATUS](#) option in CURL manual.

4.22.344 OptionSSLVersion as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: What version of SSL/TLS to attempt to use.

Example:

```
dim c as CURLSMBS
c.OptionUseSSL = c.kFTPSSL_ALL
c.OptionSSLVersion = c.kSSLVersionTLSv12
```

Notes: The SSL and TLS versions have typically developed from the most insecure version to be more and more secure in this order through history: SSL v2, SSLv3, TLS v1.0, TLS v1.1, TLS v1.2 and the most recent TLS v1.3.

Use one of the available defines for this purpose. The available options are:

Default	0	The default acceptable version range. The minimum acceptable version is by default TLS v1.0 since 7.39.0 (unless the TLS library has a stricter rule).
TLSv1	1	TLS v1.0 or later
SSLv2	2	SSL v2 (but not SSLv3)
SSLv3	3	SSL v3 (but not SSLv2)
TLSv1.0	4	TLS v1.0 or later (Added in 7.34.0)
TLSv1.1	5	TLS v1.1 or later (Added in 7.34.0)
TLSv1.2	6	TLS v1.2 or later (Added in 7.34.0)
TLSv1.3	7	TLS v1.3 or later (Added in 7.52.0)

See also `kSSLVersion*` constants.

The maximum TLS version can be set by using one of the `CURL_SSLVERSION_MAX_` macros below. It is also possible to OR one of the `CURL_SSLVERSION_` macros with one of the `CURL_SSLVERSION_MAX_` macros.

Default	&h10000	The flag defines the maximum supported TLS version by libcurl, or the default value from the SSL library is used. libcurl will use a sensible default maximum, which was TLS v1.2 up to before 7.61.0 and is TLS v1.3 since then - assuming the TLS library support it. (Added in 7.54.0)
Max TLSv1.0	&h40000	The flag defines maximum supported TLS version as TLS v1.0. (Added in 7.54.0)
Max TLSv1.1	&h50000	The flag defines maximum supported TLS version as TLS v1.1. (Added in 7.54.0)
Max TLSv1.2	&h60000	The flag defines maximum supported TLS version as TLS v1.2. (Added in 7.54.0)
Max TLSv1.3	&h70000	The flag defines maximum supported TLS version as TLS v1.3. (Added in 7.54.0)

Please note that MBS Plugin does not yet support TLS v1.3 now, but may in future.

(Read and Write property)

See also [SSLVERSION](#) option in CURL manual.

4.22.345 OptionStreamDepends as CURLSMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set stream dependency on another CURL handle.

Notes: (Read and Write property)

See also [STREAM_DEPENDS](#) option in CURL manual.

4.22.346 OptionStreamDependsE as CURLSMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set E-exclusive stream dependency on another CURL handle.

Notes: (Read and Write property)

See also [STREAM_DEPENDS_E](#) option in CURL manual.

4.22.347 OptionStreamWeight as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set stream weight, 1 - 256.

Notes: Default is 16.

(Read and Write property)

See also [STREAM_WEIGHT](#) option in CURL manual.

4.22.348 OptionSuppressConnectHeaders as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Suppress proxy CONNECT response headers from events.

Notes: (Read and Write property)

See also [SUPPRESS_CONNECT_HEADERS](#) option in CURL manual.

4.22.349 OptionTCPFastOpen as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set TCP Fast Open.

Notes: (Read and Write property)

See also [TCP_FASTOPEN](#) option in CURL manual.

4.22.350 OptionTCPKeepAlive as Boolean

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: If set to true, TCP keepalive probes will be sent.

Notes: The delay and frequency of these probes can be controlled by the `OptionTCPKeepIdle` and `OptionTCPKeepInterval` options, provided the operating system supports them. Set to false (default behavior) to disable keepalive probes (Added in 7.25.0).

(Read and Write property)

See also [TCP_KEEPALIVE](#) option in CURL manual.

4.22.351 OptionTCPKeepIdle as Integer

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the delay, in seconds, that the operating system will wait while the connection is idle before sending keepalive probes.

Notes: Not all operating systems support this option. (Added in 7.25.0)

(Read and Write property)

See also [TCP_KEEPIDLE](#) option in CURL manual.

4.22.352 OptionTCPKeepInterval as Integer

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the interval, in seconds, that the operating system will wait between sending keepalive probes.

Notes: Not all operating systems support this option. (Added in 7.25.0)

(Read and Write property)

See also [TCP_KEEPINTVL](#) option in CURL manual.

4.22.353 OptionTCPNoDelay as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: An integer specifying whether the TCP_NODELAY option should be set or cleared (true = set, false = clear).

Notes: The option is cleared by default. This will have no effect after the connection has been established.

Setting this option will disable TCP's Nagle algorithm. The purpose of this algorithm is to try to minimize the number of small packets on the network (where "small packets" means TCP segments less than the Maximum Segment Size (MSS) for the network).

Maximizing the amount of data sent per TCP segment is good because it amortizes the overhead of the send. However, in some cases (most notably telnet or rlogin) small segments may need to be sent without delay. This is less efficient than sending larger amounts of data at a time, and can contribute to congestion on the network if overdone.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TCP_NODELAY](#) option in CURL manual.

4.22.354 OptionTFTPBlockSize as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Specify block size to use for TFTP data transmission.

Notes: Valid range as per RFC 2348 is 8-65464 bytes. The default of 512 bytes will be used if this option is not specified. The specified block size will only be used pending support by the remote server. If the server does not return an option acknowledgement or returns an option acknowledgement with no blksize, the default of 512 bytes will be used. (added in 7.19.4)

(Read and Write property)

See also [TFTP_BLKSIZE](#) option in CURL manual.

4.22.355 OptionTFTPNoOptions as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether not send any tftp option requests to the server.

Notes: (Read and Write property)

See also **TFTP_NO_OPTIONS** option in CURL manual.

4.22.356 OptionTimeCondition as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The Time condition option.

Notes: This defines how the OptionTimeValue time value is treated. You can set this parameter to kTimeConditionIfModifiedSince (1) or kTimeConditionIfUnmodifiedSince (2). This feature applies to HTTP and FTP.

The last modification time of a file is not always known and in such instances this feature will have no effect even if the given time condition would have not been met.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **TIMECONDITION** option in CURL manual.

4.22.357 OptionTimeOut as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The maximum time in seconds that you allow the libCURL transfer operation to take.

Notes: Normally, name lookups can take a considerable time and limiting operations to less than a few minutes risk aborting perfectly normal operations. This option will cause CURL to use the SIGALRM to enable time-outing system calls.

In unix-like systems, this might cause signals to be used unless CURLOPT_NOSIGNAL is set.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **TIMEOUT** option in CURL manual.

4.22.358 OptionTimeoutMS as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Pass a long as parameter containing the maximum time in milli seconds that you allow the libCURL transfer operation to take.

Notes: Normally, name lookups can take a considerable time and limiting operations to less than a few minutes risk aborting perfectly normal operations. This option will cause CURL to use the SIGALRM to enable time-outing system calls.

(Read and Write property)

See also [TIMEOUT_MS](#) option in CURL manual.

4.22.359 OptionTimeValue as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: This should be the time in seconds since 1 jan 1970, and the time will be used in a condition as specified with OptionTimeCondition.

Notes: The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TIMEVALUE](#) option in CURL manual.

4.22.360 OptionTLS13Ciphers as String

Plugin Version: 18.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Specify which TLS 1.3 ciphers suites to use.

Notes: string holding the list of cipher suites to use for the TLS 1.3 connection. The list must be syntactically correct, it consists of one or more cipher suite strings separated by colons.

You'll find more details about cipher lists on this URL:

<https://curl.haxx.se/docs/ssl-ciphers.html>

The application does not have to keep the string around after setting this option.

(Read and Write property)

See also [TLS13_CIPHERS](#) option in CURL manual.

4.22.361 OptionTLSAuthPassword as String

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the TSL authentication password.

Notes: Please also set OptionTLSAuthType.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TLSAUTH_PASSWORD](#) option in CURL manual.

4.22.362 OptionTLSAuthType as String

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the TLS authentication type.

Notes: You can set this to "SRP" to use Secure Remote Password authentication.

Please also set username and password.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TLSAUTH_TYPE](#) option in CURL manual.

4.22.363 OptionTLSAuthUsername as String

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the TSL authentication user name.

Notes: Please also set OptionTLSAuthType.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TLSAUTH_USERNAME](#) option in CURL manual.

4.22.364 OptionTransferEncoding as Boolean

Plugin Version: 13.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Adds a request for compressed Transfer Encoding in the outgoing HTTP request.

Notes: If the server supports this and so desires, it can respond with the HTTP response sent using a compressed Transfer-Encoding that will be automatically uncompressed by libCURL on reception.

Transfer-Encoding differs slightly from the Content-Encoding you ask for with OptionAcceptEncoding in that a Transfer-Encoding is strictly meant to be for the transfer and thus MUST be decoded before the data arrives in the client. Traditionally, Transfer-Encoding has been much less used and supported by both HTTP clients and HTTP servers.

(Read and Write property)

See also [TRANSFER_ENCODING](#) option in CURL manual.

4.22.365 OptionTransferText as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: True tells the library to use ASCII mode for ftp transfers, instead of the default binary transfer.

Notes: For win32 systems it does not set the stdout to binary mode. This option can be usable when transferring text data between systems with different views on certain characters, such as newlines or similar.

libCURL does not do a complete ASCII conversion when doing ASCII transfers over FTP. This is a known limitation/ flaw that nobody has rectified. libCURL simply sets the mode to ascii and performs a standard transfer.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [TRANSFERTEXT](#) option in CURL manual.

4.22.366 OptionUnixSocketPath as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Path to Unix domain socket.

Notes: (Read and Write property)

See also [UNIX_SOCKET_PATH](#) option in CURL manual.

4.22.367 OptionUnrestrictedAuth as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A boolean parameter tells the library it can continue to send authentication (user+password) when following locations, even when hostname changed.

Notes: This option is meaningful only when setting FollowOption.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [UNRESTRICTED_AUTH](#) option in CURL manual.

4.22.368 OptionUpkeepIntervalMS as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Connection upkeep interval.

Notes: Some protocols have "connection upkeep" mechanisms. These mechanisms usually send some traffic on existing connections in order to keep them alive; this can prevent connections from being closed due to overzealous firewalls, for example.

The user needs to explicitly call Upkeep in order to perform the upkeep work.

Currently the only protocol with a connection upkeep mechanism is HTTP/2: when the connection upkeep interval is exceeded and Upkeep is called, an HTTP/2 PING frame is sent on the connection.

(Read and Write property)

See also [UPKEEP_INTERVAL_MS](#) option in CURL manual.

4.22.369 OptionUpload as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: True tells the library to prepare for an upload.

Notes: The OptionInFileSize or OptionInFileSizeLarge options are also interesting for uploads. If the protocol is HTTP, uploading means using the PUT request unless you tell libCURL otherwise.

Using PUT with HTTP 1.1 implies the use of a "Expect: 100-continue" header. You can disable this header with OptionHTTPHeader as usual.

If you use PUT to a HTTP 1.1 server, you can upload data without knowing the size before starting the transfer if you use chunked encoding. You enable this by adding a header like "Transfer-Encoding: chunked" with OptionHTTPHeader. With HTTP 1.0 or without chunked transfer, you must specify the size.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also [UPLOAD](#) option in CURL manual.

4.22.370 OptionUploadBufferSize as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set preferred upload buffer size.

Notes: Pass a long specifying your preferred size (in bytes) for the upload buffer in libcurl. It makes libcurl uses a larger buffer that gets passed to the next layer in the stack to get sent off. In some setups and for some protocols, there's a huge performance benefit of having a larger upload buffer.

This is just treated as a request, not an order. You cannot be guaranteed to actually get the given size.

The upload buffer size is by default 64 kilobytes. The maximum buffer size allowed to be set is 2 megabytes. The minimum buffer size allowed to be set is 16 kilobytes.

Since curl 7.61.1 the upload buffer is allocated on-demand - so if the handle isn't used for upload, this buffer will not be allocated at all.

For slow upload/downloads, it may be better to set buffer size to 1 MB with OptionUploadBufferSize or OptionBufferSize properties to make transfers faster.

(Read and Write property)

See also [UPLOAD_BUFFER_SIZE](#) option in CURL manual.

4.22.371 OptionURL as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The actual URL to deal with.

Example:

```
Dim c As New CURLSMBS
```

```
// this example sends a xml request to a server
c.OptionURL = "http://www.someserver.com/service"
```

```
// some XML for a SOAP request
Dim request As String = "<?xml version=""1.0""?><methodCall><methodName>application.getValue</methodName><params><param><value>info</value></param></params></methodCall>"
```

```
c.OptionPostFields = request
```

```
Dim header(-1) As String
header.Append "Content-Type: text/xml"
c.SetOptionHTTPHeader header
```

```
// this should be c.kError_OK if okay.
Dim result As Integer = c.Perform

Dim output As String = c.OutputData
Dim debugLog As String = c.DebugMessages
Dim HTTPStatus As Integer = c.GetInfoResponseCode

Break
```

Notes: If you need to pass username or password, please consider using the `OptionUsername` and `OptionPassword` properties. If your username or password contains characters like `@` or `:`, you must use those properties.

The `Lasterror` property is set. 0 for success.
You can set this value and later you can read it, but you cannot read the default value.

The parameter should be a `char *` to a zero terminated string. The string must remain present until CURL no longer needs it, as it doesn't copy the string.

If the given URL lacks the protocol part ("`http://`" or "`ftp://`" etc), it will attempt to guess which protocol to use based on the given host name. If the given protocol of the set URL is not supported, libCURL will return an error (`kError_UNSUPPORTED_PROTOCOL`) when you call `Perform`. Use `VersionInfo` for detailed info on which protocols that are supported.

The string given to `CURLOPT_URL` must be url-encoded and following the RFC 2396:
`http://CURL.haxx.se/rfc/rfc2396.txt`

`CURLOPT_URL` is the only option that must be set before `Perform` is called.
For file uploads or downloads, please include the file name in the URL.

Please do never include username and passwords in URLs, as those get often written to log files and would reveal your credentials!
Instead use `OptionUsername` and `OptionPassword`.

If you miss the protocol in the URL, you may get an error about HTTP/0.9 being used and not allowed.
(`Read` and `Write` property)
See also **URL** option in CURL manual.

4.22.372 OptionUserAgent as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The user agent string to pass to the server.

Example:

```
Dim c As New CURLSMBS
```

```
// setup request and any options you need
c.OptionURL = URL
c.OptionUserAgent = "MyDownloader 1.0"
```

Notes: It will be used to set the User-Agent: header in the http request sent to the remote server. This can be used to fool servers or scripts. You can also set any custom header with OptionHTTPHeader.

The Lasterror property is set. 0 for success.

You can set this value and later you can read it, but you cannot read the default value.

(Read and Write property)

See also **USERAGENT** option in CURL manual.

4.22.373 OptionUsername as String

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The user name to be used in protocol authentication

Notes: In order to specify the password to be used in conjunction with the user name use the OptionPassword option

(Read and Write property)

See also **USERNAME** option in CURL manual.

4.22.374 OptionUseSSL as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Request using SSL / TLS for the transfer.

Example:

```
dim c as CURLSMBS
c.OptionUseSSL = c.kFTPSSL_ALL
c.OptionSSLVersion = c.kSSLVersionTLSv12
```

Notes: Set to an integer using one of the values from below, to make libCURL use your desired level of SSL for the transfer.

These are all protocols that start out plain text and get "upgraded" to SSL using the STARTTLS command.

This is for enabling SSL/TLS when you use FTP, SMTP, POP3, IMAP etc.

CURLUSESSL_NONE	0	Don't attempt to use SSL.
CURLUSESSL_TRY	1	Try using SSL, proceed as normal otherwise.
CURLUSESSL_CONTROL	2	Require SSL for the control connection or fail with CURLE_USE_SSL_FAILED.
CURLUSESSL_ALL	3	Require SSL for all communication or fail with CURLE_USE_SSL_FAILED.

(Read and Write property)

See also [USE_SSL](#) option in CURL manual.

4.22.375 OptionVerbose as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether debug messages are sent to the DebugMessage event.

Notes: Default is false.

You need to subclass the CURLSMBS class to add code in the DebugMessage event.

Or you set CollectDebugMessages = true and later query DebugMessages property.

Or you use CreateMTDebugOutputFile to stream them to a file.

(Read and Write property)

See also [VERBOSE](#) option in CURL manual.

4.22.376 OptionWildcardMatch as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Enable wildcard matching.

Notes: Set onoff to true if you want to transfer multiple files according to a file name pattern. The pattern can be specified as part of the OptionURL option, using an fnmatch-like pattern (Shell Pattern Matching) in the last part of URL (file name).

By default, libCURL uses its internal wildcard matching implementation. You can provide your own matching function by the CURLSMBS.FileNameMatch event.

A brief introduction of its syntax follows:

- - ASTERISK

ftp://example.com/some/path/*.txt (for all txt's from the root directory)

? - QUESTION MARK

Question mark matches any (exactly one) character.

```
ftp://example.com/some/path/photo?.jpeg
```

[- BRACKET EXPRESSION

The left bracket opens a bracket expression. The question mark and asterisk have no special meaning in a bracket expression. Each bracket expression ends by the right bracket and matches exactly one character. Some examples follow:

[a-zA-Z0-9] or [f-gF-G] - character interval

[abc] - character enumeration

[^abc] or [!abc] - negation

[[:name:]] class expression. Supported classes are alnum,lower, space, alpha, digit, print, upper, blank, graph, xdigit.

[] [-!^] - special case - matches only '-', '!', '^', ']' or '^-'. These characters have no special purpose.

[\[\] \\] - escape syntax. Matches '[', ']' or '\-¥'.

Using the rules above, a file name pattern can be constructed:

```
ftp://example.com/some/path/ [ a-z [ :upper: ] \\ ] .jpeg
```

This feature is only supported for FTP download. Not for SFTP or HTTP.
(Read and Write property)

See also [WILDCARDMATCH](#) option in CURL manual.

4.22.377 OptionXOAuth2Bearer as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The XOAUTH2 bearer token.

Notes: (Read and Write property)

See also [XOAUTH2_BEARER](#) option in CURL manual.

4.22.378 OutputData as String

Plugin Version: 12.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The output data from CURL.

Example:

```
Dim d As New CURLSMBS
```

```
// download here
d.OptionURL = URL
```

```
// if you use SSL, maybe put in a certificate or disable verification?
d.OptionSSLVerifyHost = 0
d.OptionSSLVerifyPeer = 0
```

```
// run download
dim e as integer = d.Perform
```

```
// check result
Dim data As String = d.OutputData
Dim DebugMessage As String = d.DebugMessages // check in debugger on error
```

```
ResultText.text="Result: "+str(e) // 0 = Okay, others are error codes, so check debug messsages
```

Notes: If CollectOutputData property is true, the plugin puts the data received in write event also into this property, so you can grab it after the transfer. Use ClearData method to clear when reusing CURL object.

Limited to 2 GB. Please stream to file for bigger data with CreateMTOutputFile function.
(Read only property)

4.22.379 Paused as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether transfer is paused.

Notes: You can set it to true while transfer runs to pause it.
(Read and Write property)

4.22.380 ProgressDownloadCurrent as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Bytes downloaded so far.

Notes: (Read only property)

4.22.381 ProgressDownloadTotal as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Bytes to download in total.

Notes: (Read only property)

4.22.382 ProgressPercent as Double

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Current download/upload progress in percent.

Notes: Range from 0 to 100.

(Read only property)

4.22.383 ProgressUploadCurrent as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Bytes uploaded so far.

Notes: (Read only property)

4.22.384 ProgressUploadTotal as Int64

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Bytes to upload in total.

Notes: (Read only property)

4.22.385 Tag as Variant

Plugin Version: 23.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The tag value.

Notes: You can store whatever reference value you need.

(Read and Write property)

4.22.386 Version as CURLSVersionMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Returns a version object to a filled with information about various run-time features in libCURL.

Notes: (Read only property)

4.22.387 WebSocketOptions as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: WebSocket behavior options.

Notes: Pass a bitmask to tell libcurl about specific WebSocket behaviors.

To detach a WebSocket connection and use the `WebSocketSend` and `WebSocketReceive` functions after the HTTP upgrade procedure, set the `OptionConnectOnly` option to 2.

Available bits in the bitmask:

`kWebSocketRaw`:

Deliver "raw" WebSocket traffic to the Write event.

In raw mode, libcurl does not handle pings or any other frame for the application.

(Read and Write property)

4.22.388 YieldTime as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether plugin should yield time.

Example:

```
dim curl as new CURLSMBS
```

```
curl.YieldTime = true
```

Notes: If set the plugin will yield time to Xojo back so threads and timers work while you download.

Seems like in RB 2009 this property only has effect if you run CURL in a thread.

(Read and Write property)

4.22.389 Events**4.22.390 ChunkBegin(FileInfo as CURLSFileInfoMBS, Remains as Integer) as Integer**

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: The event called on begin of a new chunk.

Notes: If splitting of data transfer is enabled, this event is called before download of an individual chunk started. Note that parameter "remains" works only for FTP wildcard downloading (for now), otherwise is not used.

4.22.391 ChunkEnd(FileInfo as CURLSFileInfoMBS, Remains as Integer) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: Download of a chunk ended.

Notes: If splitting of data transfer is enabled this event is called after download of an individual chunk finished.

This event is called for skipped or downloaded files.

4.22.392 DebugMessage(infotype as Integer, data as string, dataSize as Integer)

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: A debug event to get data of ongoing process.

Notes: You may need to set OptionVerbose to true.

infotype constants:

kInfo_TEXT	0	The data is informational text.
kInfo_HEADER_IN	1	The data is header (or header-like) data received from the peer.
kInfo_HEADER_OUT	2	The data is header (or header-like) data sent to the peer.
kInfo_DATA_IN	3	The data is protocol data received from the peer.
kInfo_DATA_OUT	4	The data is protocol data sent to the peer.
kInfo_SSL_DATA_IN	5	The data is protocol data received from the peer.
kInfo_SSL_DATA_OUT	6	The data is protocol data sent to the peer.

If you set CollectDebugMessages, the plugin will collect the messages and provide them via the DebugMessages property. You can still use this event to write your own log instead of in addition.

4.22.393 FileNameMatch(Pattern as String, Name as String) as Integer

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: Match a file against a pattern.

Notes: If you don't implement this event, you get the default implementation from CURL. Return `kFileNameMatchNoMatch`, `kFileNameMatchIsMatch` or `kFileNameMatchFailed`.

4.22.394 Finished(Result as Integer)

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: .

Function: The event called when transfer has finished.

Notes: For `Perform` and `PerformMT` it is called before `Perform` function returns, so in `PerformMT` this is called on the thread.

For use with `CURLSMultiMBS`, it is called after `TransferFinished` event and before `TransfersFinished` event. If you want to modify GUI and use `PeformMT`, you may need to start a timer to do so.

4.22.395 Header(data as string, dataSize as Integer) as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: New Header data was received.

Notes: You can get error 23 if you don't return `lenb(data)` in this event.

Or just leave it empty so RB will not include it in your application the plugin will return `lenb(data)` itself.

If you set `CollectHeaderData` to true, the plugin will collect the messages and provide them via the `HeaderData` property. You can still use this event to write your own log instead of in addition.

4.22.396 Progress(dltotal as Int64, dlnow as Int64, ultotal as Int64, ulnow as Int64, percent as Double) as boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: An event to report progress of ongoing transfers.

Notes: This function gets called by libCURL with a frequent interval during operation (roughly once per second) no matter if data is being transferred or not. Unknown/unused argument values passed to the event will be set to zero (like if you only download data, the upload size will remain 0).

Returning a true from this event will cause libCURL to abort the transfer and return `kError_ABORTED_BY_CALLBACK`.

You can run CURL from a thread to download several things at the same time or keep the GUI more responsive. For better GUI, you can even call a method like `app.DoEvents` to get the GUI updated more often.

When sending email, `ultotal` may be zero. In that case use `OptionInFileSize` to know size of email to upload.

4.22.397 Read(count as Integer) as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: This event gets called by libCURL as soon as it needs to read data in order to send it to the peer.

Notes: Return the number of bytes requested. Never return a string with `lenb(string)>count`. You can return 0 to inform about end of file.

If you stop the current transfer by returning 0 "pre-maturely" (i.e before the server expected it, like when you've told you will upload N bytes and you upload less than N bytes), you may experience that the server "hangs" waiting for the rest of the data that won't come.

The read event may return `CURL_READFUNC_ABORT (&h10000000)` to stop the current operation immediately, resulting in a `kError_ABORTED_BY_CALLBACK` error code from the transfer (Added in 7.12.1)

This event is not called when using `PerformMT`.

If you provide Input data via `SetInputData` or `OpenMTInputFile` method, this event is not called and data is taken from the data you provided.

4.22.398 RestartRead() as boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: An event to inform you that reading on the file needs to start at the beginning again.

Notes: Return true on success.

If you use a `binarystream` for reading you will have to set position to 0 in this event.

This event is not called when using `PerformMT`.

4.22.399 Seek(pos as Int64, whence as Integer) as Integer

Plugin Version: 12.2, Platforms: macOS, Linux, Windows, Targets: .

Function: Called when CURL needs to perform a seek.

Notes: Normally only needed if you resume a download (Seek forward) or upload is reset (seek back).

Whence is kSeekOriginCurrent, kSeekOriginEnd or kSeekOriginSet.

Please return one of this constants: kSeekReturnCantSeek, kSeekReturnFail or kSeekReturnOk.

4.22.400 SSHKey(KnownKey as string, KnownKeyLength as Integer, KnownKeyType as Integer, FoundKey as string, FoundKeyLength as Integer, FoundKeyType as Integer, MatchStatus as Integer) as Integer

Plugin Version: 10.0, Platforms: macOS, Linux, Windows, Targets: .

Function: The event for known hosts event for SFTP and SCP.

Notes: KnownKey: The known key as string encoded with base64 if KnownKeyLength is zero, otherwise the "raw" data.

KnownKeyLength: The length of the key. Zero for base64 encoded key.

KnownKeyType: The type of the key. (0 = Unknown, 1 = RSA1, 2 = RSA, 3 = DSS)

FoundKey: The found key as string encoded with base64 if FoundKeyLength is zero, otherwise the "raw" data.

FoundKeyLength: The length of the key. Zero for base64 encoded key.

FoundKeyType: The type of the key. (0 = Unknown, 1 = RSA1, 2 = RSA, 3 = DSS)

MatchStatus: The status CURL found. (0 = OK, 1 = Mismatch, 2 = Missing)

Return one of the following values:

CURLKHSTAT_FINE_ADD_TO_FILE	0	Fine and add to file
CURLKHSTAT_FINE	1	Fine
CURLKHSTAT_REJECT	2	reject the connection, return an error
CURLKHSTAT_DEFER	3	do not accept it, but we can't answer right now so this causes a CURLE_DEFER error but otherwise the connection will be left intact etc

4.22.401 Write(data as string, dataSize as Integer) as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: .

Function: This event gets called by libCURL as soon as there is data received that needs to be saved.

Notes: Return the number of bytes actually taken care of. If that amount differs from the amount passed to your function, it'll signal an error to the library and it will abort the transfer and return kError_WRITE_ERROR.

This function may be called with zero bytes data if the transferred file is empty.

The event function will be passed as much data as possible in all invokes, but you cannot possibly make any assumptions. It may be one byte, it may be thousands. The maximum amount of data that can be passed to the write event is defined in the CURL.h header file: `CURL_MAX_WRITE_SIZE` (16384).

If you set `CollectOutputData` to true, the plugin will automatically collect the data and provide it to you after the transfer with the `OutputData` property. This collecting feature will only work right, if there is enough free memory. You can of course still process data yourself in this event instead of in addition.

4.22.402 Constants

Constants

Constant	Value	Description
<code>kUpkeepIntervalDefault</code>	50000	The default connection upkeep interval in milliseconds.
<code>kWebSocketRaw</code>	1	One of the options for web sockets. RAW mode for <code>WebSocketOptions</code> .

Authorization

Constant	Value	Description
kAUTH_ANY	&hFFFFFFEF	all types set
kAUTH_ANYSAFE	&hFFFFFFEE	
kAUTH_AWS_SIGV4	128	AWS Signature v4
kAUTH_BASIC	1	Basic (default)
kAUTH_Bearer	64	HTTP Bearer token authentication
kAUTH_DIGEST	2	Digest
kAUTH_DIGEST_IE	16	HTTP Digest authentication with an IE flavor. Digest authentication is defined in RFC 2617 and is a more secure way to do authentication over public networks than the regular old-fashioned Basic method. The IE flavor is simply a quirk that libCURL will use a special "quirk" that IE is known to have used before version 7 and that some servers require the client to use.
kAUTH_GSSNEGOTIATE	4	GSS-Negotiate Please check SupportsGSSNEGOTIATE property in CURLSVersionMBS to determine whether this is supported/implemented by your copy of the CURL library.
kAUTH_NEGOTIATE	4	HTTP Negotiate (SPNEGO) authentication. Negotiate authentication is defined in RFC 4559 and is the most secure way to perform authentication over HTTP. You need to build libCURL with a suitable GSS-API library or SSPI on Windows for this to work.
kAUTH_NONE	0	
kAUTH_NTLM	8	
kAUTH_NTLM_WB	32	NTLM delegating to winbind helper. Authentication is performed by a separate binary application that is executed when needed. The name of the application is specified at compile time but is typically /usr/bin/ntlm_auth Note that libCURL will fork when necessary to run the winbind application and kill it when complete, calling waitpid() to await its exit when done. On POSIX operating systems, killing the process will cause a SIGCHLD signal to be raised (regardless of whether OptionNoSignal is set), which must be handled intelligently by the application. In particular, the application must not unconditionally call wait() in its SIGCHLD signal handler to avoid being subject to a race condition. This behavior is subject to change in future versions of libCURL.
kAUTH_Only	&h80000000	This is a meta symbol. OR this value together with a single specific authentication type to force libCURL to probe for un-restricted authentication and if not, only that specific authentication algorithm is acceptable.

ChunkBegin result values

Constant	Value	Description
kChunkBeginFailed	1	Failed, so we exit downloads.
kChunkBeginOK	0	OK, download this file.
kChunkBeginSkip	2	Skip the file.

ChunkEnd result values

Constant	Value	Description
kChunkEndFailed	1	Failed, so we exit downloads.
kChunkEndOK	0	Download success.

Error Constants

Constant	Value	Description
kError_ABORTED_BY_CALLBACK	42	
kError_AGAIN	81	socket is not ready for send/recv, wait till it's ready and try again (added in 7.18.2)
kError_Auth_Error	94	An authentication function returned an error.
kError_BAD_CONTENT_ENCODING	61	Unrecognized transfer encoding
kError_BAD_DOWNLOAD_RESUME	36	couldn't resume download
kError_BAD_FUNCTION_ARGUMENT	43	
kError_CHUNK_FAILED	88	Chunk event reported error.
kError_CONV_REQD	76	Not used with plugin.
kError_COULDNT_CONNECT	7	Could not connect. Proxy set? Firewall open?
kError_COULDNT_RESOLVE_HOST	6	
kError_COULDNT_RESOLVE_PROXY	5	
kError_FAILED_INIT	2	
kError_FILESIZE_EXCEEDED	63	Maximum file size exceeded
kError_FILE_COULDNT_READ_FILE	37	
kError_FTP_ACCEPT_FAILED	10	While waiting for the server to connect back when an active FTP session is used, an error code was sent over the control connection or similar
kError_FTP_ACCEPT_TIMEOUT	12	During an active FTP session while waiting for the server to connect back, OptionAcceptTimeoutMS (or the internal default) timeout expired
kError_FTP_BAD_FILE_LIST	87	Unable to parse FTP file list.
kError_FTP_CANT_GET_HOST	15	
kError_FTP_COULDNT_RETR_FILE	19	
kError_FTP_COULDNT_SET_TYPE	17	
kError_FTP_COULDNT_USE_REST	31	the REST command failed
kError_FTP_PORT_FAILED	30	FTP PORT operation failed
kError_FTP_PRET_FAILED	84	a PRET command failed
kError_FTP_WEIRD_227_FORMAT	14	
kError_FTP_WEIRD_PASS_REPLY	11	
kError_FTP_WEIRD_PASV_REPLY	13	
kError_FTP_WEIRD_SERVER_REPLY	8	
kError_FUNCTION_NOT_FOUND	41	
kError_GOT_NOTHING	52	when this is a specific error
kError_HTTP2	16	A problem was detected in the HTTP2 framing layer. This is some error and can be one out of several problems, see the error buffer for details
kError_HTTP2_STREAM	92	stream error in HTTP/2 framing layer
kError_HTTP3	95	HTTP3 layer failed.
kError_HTTP_POST_ERROR	34	
kError_HTTP_RETURNED_ERROR	22	
kError_INTERFACE_FAILED	45	
kError_LDAP_CANNOT_BIND	38	
kError_LDAP_INVALID_URL	62	Invalid LDAP URL
kError_LDAP_SEARCH_FAILED	39	
kError_LOGIN_DENIED	67	user, password or similar was not accepted and we failed to login
kError_NOT_BUILT_IN	4	A requested feature, protocol or option was not found built-in in libCURL due to a build-time decision. This means that a feature or option was not enabled or explicitly disabled when libCURL was built and in order to use that to function you have to get a rebuilt libCURL.
kError_NO_CONNECTION_AVAILABLE	89	For internal use only, will never be returned by libCURL. No connection available, the session will be queued. (added in 7.18.2)
kError_OK	0	
kError_OPERATION_TIMEDOUT	28	
kError_OUT_OF_MEMORY	27	
kError_PARTIAL_FILE	18	
kError_PEER_FAILED_VERIFICATION	60	
kError_Proxy	96	Proxy handshake error.
kError_Quic_Connect_Error	96	Quic had a connect error.
kError_QUOTE_ERROR	21	
kError_RANGE_ERROR	33	

FileNameMatch Event Result Values

Constant	Value	Description
kFileNameMatchFailed	2	Failed.
kFileNameMatchIsMatch	0	Is Match.
kFileNameMatchNoMatch	1	No match.

Form Constants

Constant	Value	Description
kFormArray	8	
kFormBuffer	11	
kFormBufferLength	13	
kFormBufferPtr	12	
kFormContentHeader	15	
kFormContentsLength	6	
kFormContentType	14	
kFormCopyContents	4	
kFormCopyName	1	
kFormEnd	17	
kFormFile	10	
kFormFileContent	7	
kFormFilename	16	
kFormNameLength	3	
kFormPtrContents	5	
kFormPtrName	2	

FTP Authorization

Constant	Value	Description
kFTPAUTH_DEFAULT	0	Allow libCURL to decide
kFTPAUTH_SSL	1	Try "AUTH SSL" first, and only if that fails try "AUTH TLS"
kFTPAUTH_TLS	2	Try "AUTH TLS" first, and only if that fails try "AUTH SSL"

FTP CWD method

Constant	Value	Description
kFTPMethodDefault	0	let libcurl pick
kFTPMethodMultiCWD	1	single CWD operation for each path part
kFTPMethodNoCWD	2	no CWD at all
kFTPMethodSingleCWD	3	one CWD to full dir, then work on file

FTP SSL Option

Constant	Value	Description
kFTPSSL_ALL	3	Require SSL for all communication or fail with kError_FTP_SSL_FAILED.
kFTPSSL_CONTROL	2	Require SSL for the control connection or fail with kError_FTP_SSL_FAILED.
kFTPSSL_NONE	0	Don't attempt to use SSL.
kFTPSSL_TRY	1	Try using SSL, proceed as normal otherwise.

GSS API delegation modes

Constant	Value	Description
kGSSAPIDelegationFlag	2	delegate always
kGSSAPIDelegationNone	0	no delegation (default)
kGSSAPIDelegationPolicyFlag	1	if permitted by policy

HTTP Versions

Constant	Value	Description
kHTTP_VERSION_1_0	1	Enforce HTTP 1.0 requests.
kHTTP_VERSION_1_1	2	Enforce HTTP 1.1 requests.
kHTTP_VERSION_2TLS	4	use version 2 for HTTPS, version 1.1 for HTTP
kHTTP_VERSION_2_0	3	please use HTTP 2 in the request
kHTTP_VERSION_2_PRIOR_KNOWLEDGE	5	please use HTTP 2 without HTTP/1.1 Upgrade
kHTTP_VERSION_3	30	please use HTTP 3 in the request
kHTTP_VERSION_3Only	31	Use HTTP/3 without fallback. For HTTPS only. For HTTP, it return error.
kHTTP_VERSION_NONE	0	We don't care about what version the library uses. libCURL will use what it thinks fit.

Debug Message Info Types

Constant	Value	Description
kINFO_DATA_IN	3	The data is protocol data received from the peer.
kINFO_DATA_OUT	4	The data is protocol data sent to the peer.
kINFO_HEADER_IN	1	The data is header (or header-like) data received from the peer.
kINFO_HEADER_OUT	2	The data is header (or header-like) data sent to the peer.
kINFO_SSL_DATA_IN	5	The data is protocol data received from the peer.
kINFO_SSL_DATA_OUT	6	The data is protocol data sent to the peer.
kINFO_TEXT	0	The data is informational text.

IP Resolve Modes

Constant	Value	Description
kIPRESOLVE_V4	1	
kIPRESOLVE_V6	2	
kIPRESOLVE_WHATEVER	0	

NetRC Modes

Constant	Value	Description
kNETRC_IGNORED	0	The .netrc will never be read. This is the default.
kNETRC_OPTIONAL	1	A user:password in the URL will be preferred to one in the .netrc.
kNETRC_REQUIRED	2	A user:password in the URL will be ignored. Unless one is set programmatically, the .netrc will be queried.

Protocols

Constant	Value	Description
kProtocolAll	-1	Enable all protocols.
kProtocolDICT	&h200	DICT
kProtocolFILE	&h400	File
kProtocolFTP	4	FTP
kProtocolFTPS	8	FTPS
kProtocolGopher	&h2000000	Gopher
kProtocolGophers	&h20000000	
kProtocolHTTP	1	HTTP
kProtocolHTTPS	2	HTTPS
kProtocolIMAP	&h1000	IMAP
kProtocolIMAPS	&h2000	IMAPS
kProtocolLDAP	&h80	LDAP
kProtocolLDAPS	&h100	LDAPS
kProtocolMQTT	&h10000000	MQTT
kProtocolPOP3	&h4000	POP3
kProtocolPOP3S	&h8000	POP3S
kProtocolRTMP	&h80000	RTMP
kProtocolRTMPE	&h200000	RTMPE
kProtocolRTMPS	&h800000	RTMPS
kProtocolRTMPT	&h100000	RTMPT
kProtocolRTMPTE	&h400000	RTMPTE
kProtocolRTMPTS	&h1000000	RTMPTS
kProtocolRTSP	&h40000	RTSP
kProtocolSCP	&h10	SCP
kProtocolSFTP	&h20	SFTP
kProtocolSMB	&h4000000	SMB
kProtocolSMBS	&h8000000	SMBS
kProtocolSMTP	&h10000	SMTP
kProtocolSMTPS	&h20000	SMTPS
kProtocolTelnet	&h40	Telnet
kProtocolTFTP	&h800	TFTP

Proxy Types

Constant	Value	Description
kPROXY_HTTP	0	
kPROXY_HTTP10	1	Force to use CONNECT HTTP/1.0.
kPROXY_HTTP11	0	Connect using HTTP/1.1.
kPROXY SOCKS4	4	
kPROXY SOCKS4A	6	Using SOCKS 4A.
kPROXY SOCKS5	5	
kPROXY SOCKS5_Hostname	7	Use the SOCKS5 protocol but pass along the host name rather than the IP address. added in 7.18.0

Seek Origin Constants

Constant	Value	Description
kSeekOriginCurrent	1	Seek relative to current file position.
kSeekOriginEnd	2	Seek relative to end of file.
kSeekOriginSet	0	Seek relative to start of file.

Seek Event Result Values

Constant	Value	Description
kSeekReturnCantSeek	3	Return this value if you can't seek as you are not using a file, but for example a stream.
kSeekReturnFail	2	Returns this value if your seek operation failed.
kSeekReturnOk	1	Returns this value if your seek operation succeeded.

SSH Authentication

Constant	Value	Description
kSSHAAuthAgent	16	agent (ssh-agent, pageant...)
kSSHAAuthAny	-1	Any allowed
kSSHAAuthDefault	-1	Default: Any
kSSHAAuthGSSAPI	32	gssapi (kerberos, ...)
kSSHAAuthHost	4	host key files
kSSHAAuthKeyboard	8	keyboard interactive
kSSHAAuthNone	0	none allowed, silly but complete
kSSHAAuthPassword	2	password
kSSHAAuthPublicKey	1	public/private key files

SSL Option Flags

Constant	Value	Description
kSSLOptionAllowBeast	1	tells libcurl to allow the BEAST SSL vulnerability in the name of improving interoperability with older servers. Some SSL libraries have introduced work-arounds for this flaw but those work-arounds sometimes make the SSL communication fail. To regain functionality with those broken servers, a user can this way allow the vulnerability back.
kSSLOptionAutoClientCert	32	Tells libcurl to automatically locate and use a client certificate for authentication. (Schannel)
kSSLOptionNativeCA	16	tells libcurl to use standard certificate store of operating system. Currently implemented under MS-Windows.
kSSLOptionNoPartialChain	4	tells libcurl to <i>*NOT*</i> accept a partial certificate chain if possible. The OpenSSL backend has this ability.
kSSLOptionNoRevoke	2	tells libcurl to disable certificate revocation checks for those SSL backends where such behavior is present.
kSSLOptionRevokeBestEffort	8	tells libcurl to ignore certificate revocation offline checks and ignore missing revocation list for those SSL backends where such behavior is present.

SSL Versions

Constant	Value	Description
kSSLVersionDefault	0	The default acceptable version range. The minimum acceptable version is by default TLS v1.0 since 7.39.0 (unless the TLS library has a stricter rule).
kSSLVersionSSLv2	2	SSL v2 (but not SSLv3)
kSSLVersionSSLv3	3	SSL v3 (but not SSLv2)
kSSLVersionTLSv1	1	TLS v1.0 or later
kSSLVersionTLSv10	4	TLS v1.0 or later (Added in 7.34.0)
kSSLVersionTLSv11	5	TLS v1.1 or later (Added in 7.34.0)
kSSLVersionTLSv12	6	TLS v1.2 or later (Added in 7.34.0)
kSSLVersionTLSv13	7	TLS v1.3 or later (Added in 7.52.0)

Time Conditions

Constant	Value	Description
kTimeConditionIfModifiedSince	1	
kTimeConditionIfUnModifiedSince	2	
kTimeConditionNone	0	No condition.

SSL Option

Constant	Value	Description
kUseSSLall	3	Require SSL for all communication or fail with kError_FTP_SSL_FAILED.
kUseSSLcontrol	2	Require SSL for the control connection or fail with kError_FTP_SSL_FAILED.
kUseSSLnone	0	Don't attempt to use SSL.
kUseSSLtry	1	Try using SSL, proceed as normal otherwise.

4.23 class CURLSMimePartMBS

4.23.1 class CURLSMimePartMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for mime parts.

Notes: You can provide data via file path, folderitem, data in memoryblock or string.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

Blog Entries

- [MonkeyBread Software Releases the MBS Xojo Plugins in version 18.2](#)
- [MBS Xojo Plugins, version 18.2pr4](#)

Videos

- [Presentation from Munich conference about MBS Plugins.](#)
- [Presentation from Xojo Developer Conference 2019 in Miami.](#)

4.23.2 Methods

4.23.3 Constructor

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The private constructor.

4.23.4 Headers as String()

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries header.

4.23.5 SetHeaders(headers() as String)

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets header.

4.23.6 Properties

4.23.7 DataMemory as Memoryblock

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime part data source from memory data.

Notes: (Read and Write property)

4.23.8 DataString as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime part data source from memory data.

Example:

```
dim c as new CURLSMBS

// add mime
dim p as CURLSMimePartMBS = c.AddMimePart

p.name = "Text"
p.FileName = "test.txt"
p.MimeType = "text/plain"
p.DataString = "Hello World"

c.FinishMime
// now you can send...
```

Notes: (Read and Write property)

4.23.9 Encoding as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime data transfer encoder.

Notes: If set to binary, 8bit, 7bit, base64 or quoted-printable, the matching encoding is applied.
(Read and Write property)

4.23.10 File as FolderItem

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The file to stream.

Notes: When you set property, the plugin will open file and may raise IOException on failure.
(Read and Write property)

4.23.11 FileName as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime part remote file name.

Notes: If mime type is not set, we pick extension from file name.

This includes gif, jpg, jpeg, png, svg, txt, htm, html, pdf and xml file extensions.

(Read and Write property)

4.23.12 FilePath as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime part data source from named file.

Notes: (Read and Write property)

4.23.13 Lasterror as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The last error code.

Notes: (Read and Write property)

4.23.14 MimeType as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime part type.

Notes: (Read and Write property)

4.23.15 Name as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime/form part name.

Notes: (Read and Write property)

4.23.16 Parent as Variant

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The parent object.

Notes: (Read only property)

4.23.17 Constants

Encodings

Constant	Value	Description
kEncoding7bit	"7bit"	7bit
kEncoding8bit	"8bit"	8bit
kEncodingBase64	"base64"	Base64
kEncodingBinary	"binary"	Binary mode
kEncodingNone	""	No mode, so data is passed through and header has no encoding defined
kEncodingQuotedPrintable	"quoted-printable"	Quoted printable

Mime Types

Constant	Value	Description
kMimeTypeGIF	"image/gif"	GIF
kMimeTypeHTML	"text/html"	HTML
kMimeTypeJPEG	"image/jpeg"	JPEG
kMimeTypePDF	"application/pdf"	PDF
kMimeTypePNG	"image/png"	PNG
kMimeTypeSVG	"image/svg+xml"	SVG
kMimeTypeText	"text/plain"	Text
kMimeTypeXML	"application/xml"	XML

4.24 class CURLSMissingFunctionExceptionMBS

4.24.1 class CURLSMissingFunctionExceptionMBS

Plugin Version: 13.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: An exception raised if a CURL library function is not loaded.

Notes: If you call load library before you use the CURLSMBS Constructor, you should never see this.
Subclass of the RuntimeException class.

4.25 class CURLSMultiMBS

4.25.1 class CURLSMultiMBS

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for multiple CURL transfers running in parallel.

Blog Entries

- [MBS Xojo Plugins, version 23.4pr5](#)
- [MBS Xojo Plugins, version 23.3pr1](#)
- [News from the MBS Xojo Plugins Version 23.2](#)
- [MonkeyBread Software Releases the MBS Xojo Plugins in version 23.2](#)
- [Easier multi transfer for our Xojo CURL Plugin](#)
- [MBS Xojo Plugins, version 23.2pr2](#)
- [MBS Xojo Plugins, version 23.0pr6](#)
- [MBS Xojo Plugins, version 21.1pr1](#)
- [Batch Emailer Application for Xojo as a sample project](#)
- [MonkeyBread Software Releases the MBS Xojo / Real Studio plug-ins in version 15.0](#)

Xojo Developer Magazine

- [21.4, page 10: News](#)

4.25.2 Methods

4.25.3 AddCURL(curl as CURLSMBS, handler as CURLSTransferFinishedMBS = nil) as boolean

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Add a standard CURL handle to the multi stack.

Notes: Lasterror is set.

We added handler parameter for v23.2 to make it easier to run things asynchronously.

4.25.4 CURLs as CURLSMBS()

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries list of current CURL instances.

4.25.5 ErrorString(ErrorCode as Integer) as String

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries text message for a given error code.

4.25.6 Perform

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Checks for things to see.

Notes: When the app thinks there's data available for CURL it calls this function to read/write whatever there is right now. This returns as soon as the reads and writes are done. This function does not require that there actually is data available for reading or that data can be written, it can be called just in case.

Lasterror is set. This only provides errors etc regarding the whole multi stack. There might still have occurred problems on individual transfers even when this returns OK.

Sets RunningTransfers property.

4.25.7 RemoveAll

Plugin Version: 23.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Removes all curl handles.

Notes: Same as looping over CURLs() array and calling RemoveCURL for each. This effectively cancels all requests.

4.25.8 RemoveCURL(CURL as CURLSMBS) as boolean

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Removes a CURL handle from the multi stack again.

Notes: Lasterror is set.

Plugin calls this automatically when TransferFinished event was called.

4.25.9 SharedInstance as CURLSMultiMBS

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The shared instance.

Notes: Either you create a new CURLSMultiMBS object, which then takes this place.

Or you don't and the plugin creates an object for you to easily schedule transfers asynchronously.

4.25.10 Properties

4.25.11 AutoPerform as Boolean

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to run a timer and run Perform automatically for you.

Notes: Set to true to run Perform automatically. For this the plugin manages a timer to call perform regularly.

We set this to true for the default shared instance, so it runs without you doing anything.

(Read and Write property)

4.25.12 ChunkLengthPenaltySize as Int64

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A connection with a chunk length longer than this will not be considered for pipelining.

Notes: (Read and Write property)

4.25.13 ContentLengthPenaltySize as Int64

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: A connection with a content-length longer than this will not be considered for pipelining.

Notes: (Read and Write property)

4.25.14 Handle as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The internal object reference.

Notes: (Read only property)

4.25.15 Lasterror as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The last error code.

Notes: (Read and Write property)

4.25.16 MaxConcurrentStreams as Integer

Plugin Version: 20.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: The maximum number of concurrent connections to a server.

Notes: Maximum number of concurrent streams to support on a connection.
(Read and Write property)

4.25.17 MaxConnects as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Maximum number of entries in the connection cache.

Notes: (Read and Write property)

4.25.18 MaxHostConnections as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Maximum number of (pipelining) connections to one host.

Notes: (Read and Write property)

4.25.19 MaxPipelineLength as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Maximum number of requests in a pipeline.

Notes: (Read and Write property)

4.25.20 MaxTotalConnections as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Maximum number of open connections in total.

Notes: (Read and Write property)

4.25.21 Pipelining as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Set to 1 to enable pipelining for this multi handle.

Notes: Only for HTTP protocol.

Used to be a boolean property for 15.0 to 18.1, but changed to integer for 18.2.

(Read and Write property)

4.25.22 RunningTransfers as Integer

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Number of running transfers.

Notes: Set by Perform method.

(Read only property)

4.25.23 Tag as Variant

Plugin Version: 23.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The tag value.

Notes: You can store whatever reference value you need.

(Read and Write property)

4.25.24 Events

4.25.25 TransferFinished(CURL as CURLSMBS, result as Integer, RemainingFinishedTransfers as Integer)

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: .

Function: One transfer finished.

Notes: Query CURL object for details.

Result is the result of the transfer as returned by Perform method of CURL object.

RemainingFinishedTransfers is how many transfers are also finished and will be called right after this event.

This event fires always when the queue is empty.

You may want to turn off the timer calling Perform method when this event fires.

Later you can start timer again if you call Add method.

4.25.26 TransfersFinished

Plugin Version: 15.0, Platforms: macOS, Linux, Windows, Targets: .

Function: All pending transfers finished.

4.25.27 Constants

Error Codes

Constant	Value	Description
kErrorAddedAlready	7	An easy handle already added to a multi handle was attempted to get added - again.
kErrorBadEadyHandle	2	An easy handle was not good/valid.
kErrorBadFunctionArgument	10	A function was called with a bad parameter.
kErrorBadHandle	1	The passed-in handle is not a valid CURLM handle.
kErrorBadSocket	5	The passed in socket argument did not match.
kErrorCallPerform	-1	Please call Perform soon to do some tasks.
kErrorInternalError	4	This is a libCURL bug.
kErrorOK	0	Everything OK.
kErrorOutOfMemory	3	Running low on memory.
kErrorRecursiveAPICall	8	An api function was called from inside an event.
kErrorUnknownOption	6	Tried to set unsupported option.
kErrorWakeupFailure	9	Wakeup is unavailable or failed.

Pipelining options

Constant	Value	Description
kPipeHTTP1	1	Pipe with HTTP/1.1.
kPipeMultiPlex	2	Pipe with multiplex.
kPipeNothing	0	No piping.

4.25.28 Delegates

4.25.29 CURLSTransferFinishedMBS(curl as CURLSMBS, ErrorCode as Integer)

Plugin Version: 23.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The delegate used to indicate a transfer finished.

Notes: ErrorCode is zero for a successful.

See kError* constants in CURLSMBS class.

Blog Entries

- [Easier multi transfer for our Xojo CURL Plugin](#)

4.26 class CURLSNotInitializedExceptionMBS

4.26.1 class CURLSNotInitializedExceptionMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: An exception raised if CURL library is not initialized.

Notes: If you call load library before you use the CURLMBS Constructor, you should never see this.
Subclass of the RuntimeException class.

4.27 class CURLSSLBackendMBS

4.27.1 class CURLSSLBackendMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for a SSL backend.

Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

4.27.2 Methods

4.27.3 Constructor

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The private constructor.

4.27.4 List as CURLSSLBackendMBS()

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Lists the backends.

Example:

```
dim list() as CURLSSLBackendMBS = CURLSSLBackendMBS.List

for each l as CURLSSLBackendMBS in list
  MsgBox l.name
next
```

Notes: The list may not be available if called too late.

4.27.5 SetSSLBackend(id as Integer) as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the SSL backend.

Notes: When built with multiple SSL backends, SetSSLBackend() allows to choose one. This function can only be called once, and it must be called **before** CURL constructor().

The backend can be identified by the id (e.g. CURLSSLBACKEND_OPENSSL). The backend can also be specified via the name parameter (passing -1 as id). If both id and name are specified, the name will be ignored. If neither id nor name are specified, the function will fail with CURLSSLSET_UNKNOWN_BACKEND and set the "avail" pointer to the NULL-terminated list of available backends.

Upon success, the function returns kErrorOK.

If the specified SSL backend is not available, the function returns kErrorUnknownBackend.

The SSL backend can be set only once. If it has already been set, a subsequent attempt to change it will result in a kErrorTooLate.

Returns nil, if there are no backends to choose.

See also:

- 4.27.6 SetSSLBackend(name as string) as Integer

643

4.27.6 SetSSLBackend(name as string) as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Sets the SSL backend.

Notes: When built with multiple SSL backends, SetSSLBackend() allows to choose one. This function can only be called once, and it must be called **before** CURL constructor().

The backend can be identified by the id (e.g. CURLSSLBACKEND_OPENSSL). The backend can also be specified via the name parameter (passing -1 as id). If both id and name are specified, the name will be ignored. If neither id nor name are specified, the function will fail with CURLSSLSET_UNKNOWN_BACKEND and set the "avail" pointer to the NULL-terminated list of available backends.

Upon success, the function returns kErrorOK.

If the specified SSL backend is not available, the function returns kErrorUnknownBackend.

The SSL backend can be set only once. If it has already been set, a subsequent attempt to change it will result in a kErrorTooLate.

Returns nil, if there are no backends to choose.

See also:

- 4.27.5 SetSSLBackend(id as Integer) as Integer

642

4.27.7 Properties

4.27.8 ID as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The ID of this SSL backend.

Notes: (Read only property)

4.27.9 Name as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The name of this SSL backend.

Notes: (Read only property)

4.27.10 Constants

Error codes

Constant	Value	Description
kErrorNoBackends	3	libcurl was built without any SSL support
kErrorOK	0	OK
kErrorTooLate	2	You can't set SSL backend after SSL initialization.
kErrorUnknownBackend	1	Unknown backend name or ID.

SSL Backend IDs

Constant	Value	Description
kSSLBackendDarwinSSL	9	DarwinSSL
kSSLBackendGNUTLS	2	GNUTLS
kSSLBackendGSKIT	5	GSKIT
kSSLBackendMBEDTLS	11	MBEDTLS
kSSLBackendNone	0	
kSSLBackendNSS	3	NSS
kSSLBackendOpenSSL	1	OpenSSL or BoringSSL
kSSLBackendSChannel	8	SChannel
kSSLBackendSecureTransport	9	DarwinSSL
kSSLBackendWolfSSL	7	WolfSSL

4.28 class CURLSSSLBackendMBS

4.28.1 class CURLSSSLBackendMBS

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for a SSL backend.

Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

Blog Entries

- [MBS Xojo Plugins, version 23.0pr5](#)
- [MonkeyBread Software Releases the MBS Xojo Plugins in version 18.2](#)
- [MBS Xojo Plugins, version 18.2pr3](#)

Videos

- [Presentation from Xojo Developer Conference 2019 in Miami.](#)

Xojo Developer Magazine

- [21.1, page 9: News](#)

4.28.2 Methods

4.28.3 Constructor

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The private constructor.

4.28.4 List as CURLSSSLBackendMBS()

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Lists the backends.

Example:

```
dim list() as CURLSSSLBackendMBS = CURLSSSLBackendMBS.List
```

```
for each l as CURLSSSLBackendMBS in list  
  MsgBox l.name  
next
```

Notes: The list may not be available if called too late.

4.28.5 SetSSLBackend(id as Integer) as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the SSL backend.

Notes: When built with multiple SSL backends, SetSSLBackend() allows to choose one. This function can only be called once, and it must be called **before** CURL constructor().

The backend can be identified by the id (e.g. CURLSSLBACKEND_OPENSSL). The backend can also be specified via the name parameter (passing -1 as id). If both id and name are specified, the name will be ignored. If neither id nor name are specified, the function will fail with CURLSSLSET_UNKNOWN_BACKEND and set the "avail" pointer to the NULL-terminated list of available backends.

Upon success, the function returns kErrorOK.

If the specified SSL backend is not available, the function returns kErrorUnknownBackend.

The SSL backend can be set only once. If it has already been set, a subsequent attempt to change it will result in a kErrorTooLate.

Returns nil, if there are no backends to choose.

See also:

- 4.28.6 SetSSLBackend(name as string) as Integer

646

4.28.6 SetSSLBackend(name as string) as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Sets the SSL backend.

Notes: When built with multiple SSL backends, SetSSLBackend() allows to choose one. This function can only be called once, and it must be called **before** CURL constructor().

The backend can be identified by the id (e.g. CURLSSLBACKEND_OPENSSL). The backend can also be specified via the name parameter (passing -1 as id). If both id and name are specified, the name will be ignored. If neither id nor name are specified, the function will fail with CURLSSLSET_UNKNOWN_BACKEND and set the "avail" pointer to the NULL-terminated list of available backends.

Upon success, the function returns `kErrorOK`.

If the specified SSL backend is not available, the function returns `kErrorUnknownBackend`.

The SSL backend can be set only once. If it has already been set, a subsequent attempt to change it will result in a `kErrorTooLate`.

Returns nil, if there are no backends to choose.

See also:

- 4.28.5 `SetSSLBackend(id as Integer) as Integer`

646

4.28.7 Properties

4.28.8 ID as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The ID of this SSL backend.

Notes: (Read only property)

4.28.9 Name as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The name of this SSL backend.

Notes: (Read only property)

4.28.10 Constants

Error codes

Constant	Value	Description
<code>kErrorNoBackends</code>	3	libcurl was built without any SSL support
<code>kErrorOK</code>	0	OK
<code>kErrorTooLate</code>	2	You can't set SSL backend after SSL initialization.
<code>kErrorUnknownBackend</code>	1	Unknown backend name or ID.

SSL Backend IDs

Constant	Value	Description
kSSLBackendDarwinSSL	9	DarwinSSL
kSSLBackendGNUTLS	2	GNUTLS
kSSLBackendGSKIT	5	GSKIT
kSSLBackendMBEDTLS	11	MBEDTLS
kSSLBackendNone	0	
kSSLBackendNSS	3	NSS
kSSLBackendOpenSSL	1	OpenSSL or BoringSSL
kSSLBackendSChannel	8	SChannel
kSSLBackendSecureTransport	9	DarwinSSL
kSSLBackendWolfSSL	7	WolfSSL

4.29 class CURLSURLMBS

4.29.1 class CURLSURLMBS

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for CURL's URL parser.

Example:

```
dim c as new CURLSURLMBS
c.URL = "www.test.de/Hello World test.pdf"

// setting URL will repair the spaces
c.path = c.Path

MsgBox c.URL
```

Blog Entries

- [MBS Xojo Plugins, version 19.3pr1](#)
- [MBS Xojo Plugins, version 19.2pr1](#)
- [MonkeyBread Software Releases the MBS Xojo Plugins in version 18.5](#)
- [MBS Xojo Plugins, version 18.5pr5](#)

Videos

- [Presentation from Xojo Developer Conference 2019 in Miami.](#)

Xojo Developer Magazine

- [17.5, page 38: What's New in the MBS Plugins, With the Plugins growing every year, here are new capabilities you may have missed by Stefanie Juchmes](#)

4.29.2 Methods

4.29.3 Clone as CURLSURLMBS

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Duplicates the object.

4.29.4 Constructor

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Creates a new URL object.

4.29.5 Properties

4.29.6 Flags as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: The flags to use.

Notes: Our default is combination of:

- kFlagsNoDefaultPort
- kFlagsNonSupportScheme
- kFlagsURLDecode
- kFlagsURLEncode
- kFlagsGuessScheme
- kFlagsDefaultScheme

(Read and Write property)

4.29.7 Fragment as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set fragment part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.29.8 Handle as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Internal object reference.

Notes: (Read and Write property)

4.29.9 Host as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set host part of URL.

Notes: Sets lasterror property.
(Read and Write property)

4.29.10 Lasterror as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: The last error code reported by one of the functions.

Notes: This changes while using debugger because getting or setting properties also sets this property.
(Read and Write property)

4.29.11 Options as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set options part of URL.

Notes: Sets lasterror property.
(Read and Write property)

4.29.12 Password as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set password part of URL.

Notes: Sets lasterror property.
(Read and Write property)

4.29.13 Path as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set path part of URL.

Notes: Sets lasterror property.
(Read and Write property)

4.29.14 Port as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set port part of URL.

Notes: Sets lasterror property.
(Read and Write property)

4.29.15 Query as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set query part of URL.

Notes: Sets lasterror property.
(Read and Write property)

4.29.16 Scheme as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set scheme part of URL.

Notes: Sets lasterror property.
(Read and Write property)

4.29.17 URL as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set full URL.

Example:

```
Dim c As New CURLSURLMBS
```

```
// load absolute URL  
c.URL = "http://domain.com/folder/page1.htm"
```

```
// load relative URL  
c.URL = "page2.htm"
```

```
// get final URL  
MsgBox c.URL
```

Notes: Sets lasterror property.
(Read and Write property)

4.29.18 User as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Get/Set user part of URL.

Notes: Sets lasterror property.
(Read and Write property)

4.29.19 ZoneID as String

Plugin Version: 19.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The zone ID.

Notes: (Read and Write property)

4.29.20 Constants

Constants

Constant	Value	Description
kFlagsNoAuthority	1024	Allow URLs without authority. Allow empty authority when the scheme is unknown.

Error Constants

Constant	Value	Description
kErrorBadFileURL	19	The file:// URL is invalid.
kErrorBadFragment	20	The fragment part of the URL contained bad or invalid characters.
kErrorBadHostname	21	The hostname contained bad or invalid characters.
kErrorBadIPv6	22	The IPv6 address hostname contained bad or invalid characters.
kErrorBadLogin	23	The login part of the URL contained bad or invalid characters.
kErrorBadPassword	24	The password part of the URL contained bad or invalid characters.
kErrorBadPath	25	The path part of the URL contained bad or invalid characters.
kErrorBadQuery	26	The query part of the URL contained bad or invalid characters.
kErrorBadScheme	27	The scheme part of the URL contained bad or invalid characters.
kErrorBadSlashes	28	The URL contained an invalid number of slashes.
kErrorBadUser	29	The user part of the URL contained bad or invalid characters.
kErrorNoZoneID	18	There is no zoneid set in the URL.

Error Codes

Constant	Value	Description
kErrorBadHandle	1	An argument that should be a CURLU pointer was passed in as a NULL. Should never happen with plugin as you would get exception.
kErrorBadPartpointer	2	A NULL pointer was passed to the 'part' argument of curl_url_get. Should never happen with plugin as you would get exception.
kErrorBadPortNumber	4	The port number was not a decimal number between 0 and 65535.
kErrorLacksIDN	30	IDN missing.
kErrorMalformedInput	3	A malformed input was passed to a URL API function.
kErrorNoFragment	17	There is no fragment part in the URL.
kErrorNoHost	14	There is no host part in the URL.
kErrorNoOptions	13	There is no options part in the URL.
kErrorNoPassword	12	There is no password part in the URL.
kErrorNoPort	15	There is no port part in the URL.
kErrorNoQuery	16	There is no query part in the URL.
kErrorNoScheme	10	There is no scheme part in the URL.
kErrorNoUser	11	There is no user part in the URL.
kErrorOk	0	No error.
kErrorOutOfMemory	7	A memory function failed.
kErrorUnknownPart	9	An unknown part ID was passed to a URL API function.
kErrorUnsupportedScheme	5	This libcurl build doesn't support the given URL scheme.
kErrorUrlDecode	6	
kErrorUserNotAllowed	8	Credentials was passed in the URL when prohibited.

Flags

Constant	Value	Description
kFlagsAllowSpace	2048	Whether to allow space character in URLs.
kFlagsAppendQuery	256	Append a form style part.
kFlagsDefaultPort	1	Return default port number.
kFlagsDefaultScheme	4	Return default scheme if missing.
kFlagsDisallowUser	32	No user+password allowed.
kFlagsGuessScheme	512	Legacy curl-style guessing.
kFlagsNoDefaultPort	2	Act as if no port number was set, if the port number matches the default for the scheme.
kFlagsNonSupportScheme	8	Allow non-supported scheme.
kFlagsPathAsIs	16	Leave dot sequences.
kFlagsPunyCode	4096	get the host name in punycode
kFlagsURLDecode	64	URL decode on get.
kFlagsURLEncode	128	URL encode on set.

4.30 class CURLSVersionMBS

4.30.1 class CURLSVersionMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: A class to hold version information from libCURL.

Blog Entries

- [News from the MBS Xojo Plugins in Version 23.0](#)
- [MonkeyBread Software Releases the MBS Xojo Plugins in version 23.0](#)
- [MBS Xojo Plugins, version 23.0pr5](#)
- [News from the MBS Xojo Plugins Version 21.1](#)
- [MBS Xojo Plugins, version 20.4pr5](#)
- [MBS Xojo Plugins, version 20.2pr6](#)
- [MBS Xojo Plugins, version 19.4pr7](#)
- [MBS Xojo Plugins, version 18.2pr3](#)

Xojo Developer Magazine

- [21.3, page 9: News](#)
- [21.2, page 9: News](#)

4.30.2 Methods

4.30.3 Constructor

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The constructor.

4.30.4 FeatureNames as String()

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries the feature names.

Example:

```
dim v as new CURLSVersionMBS
dim features() as string = v.FeatureNames
```

```
dim Names as string = string.FromArray(features)
MessageBox Names
```

Notes: Values are e.g. alt-svc AsynchDNS HSTS HTTPS-proxy IPv6 Largefile libz NTLM NTLM_WB SSL threadsafe TLS-SRP UnixSockets zstd

4.30.5 Protocol(index as Integer) as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: An array containing the names protocols that libCURL supports (using lowercase letters).

Notes: The protocol names are the same as would be used in URLs.

Index is zero based.

4.30.6 Protocols as String()

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: All.

Function: An array containing the names protocols that libCURL supports (using lowercase letters).

Example:

```
dim v as new CURLSVersionMBS
dim Protocols() as string = v.Protocols
dim Names as string = string.FromArray(Protocols)
MessageBox Names
```

Notes: The protocol names are the same as would be used in URLs.

4.30.7 Properties

4.30.8 brotliVersion as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Brotli library version string.

Notes: Empty if library is not used in the CURL library you use.

(Read only property)

4.30.9 brotliVersionNumber as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Version of brotli version.

Notes: (Read only property)

4.30.10 CAInfo as String

Plugin Version: 20.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The built-in default CURLOPT_CAINFO.

Notes: Should be empty within plugin.

(Read only property)

4.30.11 CAPath as String

Plugin Version: 20.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: The built-in default CURLOPT_CAPATH.

Notes: Should be empty within plugin.

(Read only property)

4.30.12 Features as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Bits which define what features libCURL can and can't.

Notes: Use the Supports Boolean properties instead.

Additional feature bits may be found in the libCURL documentation.

(Read only property)

4.30.13 gssapiVersion as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The version string of the GNU SASL Library version.

Notes: (Read only property)

4.30.14 Host as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: An ascii string showing what host information that this libCURL was built for.

Notes: As discovered by a configure script or set by the build environment.

e.g. "powerpc-apple-darwin8.0"

(Read only property)

4.30.15 hyperVersion as String

Plugin Version: 21.1, Platforms: macOS, Linux, Windows, Targets: All.

Function: Human readable string.

Notes: (Read only property)

4.30.16 iconvVersionNumber as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Version number of iconv library.

Notes: (Read only property)

4.30.17 libidnVersion as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Version of LibIDN used.

Notes: Empty if library is not used in the CURL library you use.

(Read only property)

4.30.18 libsshVersion as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Version of LibSSH2 used.

Notes: Empty if library is not used in the CURL library you use.

(Read only property)

4.30.19 LibZVersion as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: An ascii string (there is no numerical version).

Notes: If libCURL has no libz support, this is "".

e.g. "1.2.3"

(Read only property)

4.30.20 nghttp2Version as String

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: The version string for nghttp2 library.

Notes: (Read only property)

4.30.21 nghttp2VersionNumber as Integer

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: The version number for nghttp2.

Notes: Numeric nghttp2 version: (MAJOR * 65536) + (MINOR * 256) + PATCH

(Read only property)

4.30.22 ProtocolCount as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The number of entries in the Protocol array.

Notes: (Read only property)

4.30.23 quicVersion as String

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: The version of quic version.

Notes: human readable quic (+ HTTP/3) library version.

(Read only property)

4.30.24 SSLVersion as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: An ascii string for the OpenSSL version used.

Notes: If libCURL has no SSL support, this is "".

e.g. " OpenSSL/0.9.7l"

(Read only property)

4.30.25 SupportsASYNCHDNS as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL was built with support for asynchronous name lookups, which allows more exact timeouts (even on Windows) and less blocking when using the multi interface.

Notes: (added in 7.10.7)

(Read only property)

4.30.26 SupportsBrotli as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Brotli features are present.

Notes: (Read only property)

4.30.27 SupportsConv as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Character conversions supported.

Notes: (Read only property)

4.30.28 SupportsGSSAPI as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Built against a GSS-API library.

Notes: (Read only property)

4.30.29 SupportsGSSNEGOTIATE as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL supports HTTP GSS-Negotiate

Notes: (added in 7.10.6)

(Read only property)

4.30.30 SupportsHTTP2 as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether currently used CURL library supports HTTP2.

Example:

```
dim c as new CURLSMBS
dim v as CURLSVersionMBS = c.version
```

```
if v.SupportsHTTP2 then
MsgBox "HTTP2 is supported"
else
MsgBox "HTTP2 is not supported"
end if
```

Notes: While our CURL Plugin with CURLSMBS plugin may not support this currently, you could use LoadLibrary function to load a CURL library supporting it.

(Read only property)

4.30.31 SupportsHTTP3 as Boolean

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether HTTP3 features are present.

Notes: (Read only property)

4.30.32 SupportsHTTPSProxy as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: HTTPS-proxy support built-in.

Notes: (Read only property)

4.30.33 SupportsIDN as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL was built with support for IDNA, domain names with international letters.

Notes: (Added in 7.12.0)

(Read only property)

4.30.34 SupportsIPV6 as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL supports IPv6

Notes: (Read only property)

4.30.35 SupportsKERBEROS4 as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL supports kerberos4 (when using FTP).

Notes: (Read only property)

4.30.36 SupportsKerberos5 as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Kerberos V5 auth is supported.

Notes: (Read only property)

4.30.37 SupportsLARGEFILE as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL was built with support for large files.

Notes: (Added in 7.11.1)

(Read only property)

4.30.38 SupportsLIBZ as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL supports HTTP deflate using libz

Notes: (Added in 7.10)

(Read only property)

4.30.39 SupportsMultiSSL as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Multiple SSL backends available.

Notes: (Read only property)

4.30.40 SupportsNTLM as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL supports HTTP NTLM

Example:

```
dim c as new CURLSMBS
dim v as CURLSVersionMBS = c.Version
```

```
MsgBox "SupportsNTLM: "+str(v.SupportsNTLM)
```

Notes: (added in 7.10.6)

(Read only property)

4.30.41 SupportsNTLMWB as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: NTLM delegation to winbind helper is supported.

Notes: (Read only property)

4.30.42 SupportsPSL as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Mozilla's Public Suffix List, used for cookie domain verification.

Notes: (Read only property)

4.30.43 SupportsSPNEGO as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL was built with support for SPNEGO authentication

Notes: (Simple and Protected GSS-API Negotiation Mechanism, defined in RFC 2478.) (added in 7.10.8)
(Read only property)

4.30.44 SupportsSSL as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL supports SSL (HTTPS/FTPS)

Notes: (Added in 7.10)
(Read only property)

4.30.45 SupportsSSPI as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether libCURL was built with support for SSPI.

Notes: This is only available on Windows and makes libCURL use Windows-provided functions for NTLM authentication. It also allows libCURL to use the current user and the current user's password without the app having to pass them on. (Added in 7.13.2)
(Read only property)

4.30.46 SupportsTLSAUTHSRP as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: TLS-SRP auth is supported.

Notes: (Read only property)

4.30.47 SupportsUnicode as Boolean

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether unicode for Windows is enabled.

Notes: libcurl was built with Unicode support on Windows. This makes non-ASCII characters work in filenames and options passed to libcurl. (Added in 7.72.0)
(Read only property)

4.30.48 SupportsUnixSockets as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: All.

Function: Unix domain sockets support.

Notes: (Read only property)

4.30.49 SupportsZSTD as Boolean

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Supports HTTP zstd content encoding using zstd library.

Notes: Added in CURL 7.72.0

(Read only property)

4.30.50 Version as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: An ascii string for the libCURL version.

Notes: e.g. "7.13.1"

(Read only property)

4.30.51 VersionNumber as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: All.

Function: The version of libCURL as number.

Notes: a 24 bit number created like this:

<8 bits major number>| <8 bits minor number>| <8 bits patch number>.

Version 7.9.8 is therefore returned as 0x070908.

(Read only property)

4.30.52 zstdVersion as String

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Human readable string version for zstd library.

Notes: (Read only property)

4.30.53 `zstdVersionNumber` as Integer

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Numeric Zstd version.

Notes: Major 8 bits, minor 12 bits, Patch 12 bits.
(Read only property)

4.31 class CURLSWebSocketFrameMBS

4.31.1 class CURLSWebSocketFrameMBS

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The class for a WebSocket frame.

Notes: dim curl as CURLSMBS // your curl handle

```
dim m as CURLSWebSocketFrameMBS = curl.WebSocketReceive
```

```
if m <>nil then  
  TextAreaLog.AddText "Received: "+m.Text  
end if
```

Blog Entries

- [News from the MBS Xojo Plugins in Version 23.0](#)
- [MonkeyBread Software Releases the MBS Xojo Plugins in version 23.0](#)
- [MBS Xojo Plugins, version 22.6pr3](#)

4.31.2 Properties

4.31.3 BytesLeft as Int64

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: Number of pending bytes left of the payload.

Notes: (Read only property)

4.31.4 BytesReceived as Int64

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The number of bytes received.

Notes: (Read only property)

4.31.5 Data as MemoryBlock

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The data read.

Notes: (Read only property)

4.31.6 FlagBinary as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is binary data.

Notes: (Read only property)

4.31.7 FlagClose as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: Close this transfer.

Notes: (Read only property)

4.31.8 FlagContinue as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is not the final fragment of the message, which implies that there will be another fragment coming as part of the same message where this bit is not set.

Notes: (Read only property)

4.31.9 FlagOffset as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is a partial fragment.

Notes: The provided data is only a partial fragment and there will be more in a following call to `WebSocketSend()`. When sending only a piece of the fragment like this, the `fragsize` must be provided with the total expected fragment size in the first call and it needs to be zero in subsequent calls.

(Read only property)

4.31.10 FlagPing as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This as a ping.

Notes: (Read only property)

4.31.11 FlagPong as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is a pong.

Notes: (Read only property)

4.31.12 Flags as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: Flags for this packet.

Notes: See kFlag* constants.

(Read only property)

4.31.13 FlagText as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The buffer contains text data.

Notes: Note that this makes a difference to WebSocket but CURL itself will not make any verification of the content or precautions that you actually send valid UTF-8 content.

(Read only property)

4.31.14 Offset as Int64

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The offset of this data into the frame.

Notes: (Read only property)

4.31.15 Text as String

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The data read as text.

Notes: If this is not a binary transfer, we put the text here.

(Read only property)

4.31.16 Constants

Flags

Constant	Value	Description
kFlagBinary	2	This is binary data.
kFlagClose	8	Close this transfer.
kFlagContinue	4	This is not the final fragment of the message, which implies that there will be another fragment coming as part of the same message where this bit is not set.
kFlagOffset	32	This is a partial fragment. The provided data is only a partial fragment and there will be more in a following call to <code>WebSocketSend()</code> . When sending only a piece of the fragment like this, the <code>fragsize</code> must be provided with the total expected fragment size in the first call and it needs to be zero in subsequent calls.
kFlagPing	16	This as a ping.
kFlagPong	64	This is a pong.
kFlagText	1	The buffer contains text data. Note that this makes a difference to <code>WebSocket</code> but <code>CURL</code> itself will not make any verification of the content or precautions that you actually send valid UTF-8 content.

4.32 class CURLURLMBS

4.32.1 class CURLURLMBS

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The class for CURL's URL parser.

Example:

```
dim c as new CURLURLMBS
c.URL = "www.test.de/Hello World test.pdf"
// setting URL will repair the spaces
c.path = c.Path
MsgBox c.URL
```

4.32.2 Methods

4.32.3 Clone as CURLURLMBS

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Duplicates the object.

4.32.4 Constructor

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Creates a new URL object.

4.32.5 Properties

4.32.6 Flags as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The flags to use.

Notes: Our default is combination of:

- kFlagsNoDefaultPort
- kFlagsNonSupportScheme
- kFlagsURLDecode
- kFlagsURLEncode
- kFlagsGuessScheme
- kFlagsDefaultScheme

(Read and Write property)

4.32.7 Fragment as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set fragment part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.32.8 Handle as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Internal object reference.

Notes: (Read and Write property)

4.32.9 Host as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set host part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.32.10 Lasterror as Integer

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The last error code reported by one of the functions.

Notes: This changes while using debugger because getting or setting properties also sets this property.

(Read and Write property)

4.32.11 Options as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set options part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.32.12 Password as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set password part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.32.13 Path as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set path part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.32.14 Port as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set port part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.32.15 Query as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set query part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.32.16 Scheme as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set scheme part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.32.17 URL as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set full URL.

Example:

`Dim c As New CURLURLMBS`

```
// load absolute URL
```

```
c.URL = "http://domain.com/folder/page1.htm"
```

```
// load relative URL
```

```
c.URL = "page2.htm"
```

```
// get final URL
```

```
MsgBox c.URL
```

Notes: Sets lasterror property.

(Read and Write property)

4.32.18 User as String

Plugin Version: 18.5, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Get/Set user part of URL.

Notes: Sets lasterror property.

(Read and Write property)

4.32.19 ZoneID as String

Plugin Version: 19.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The zone ID.

Notes: (Read and Write property)

4.32.20 Constants

Constants

Constant	Value	Description
kFlagsNoAuthority	1024	Allow URLs without authority. Allow empty authority when the scheme is unknown.

Error Constants

Constant	Value	Description
kErrorBadFileURL	19	The file:// URL is invalid.
kErrorBadFragment	20	The fragment part of the URL contained bad or invalid characters.
kErrorBadHostname	21	The hostname contained bad or invalid characters.
kErrorBadIPv6	22	The IPv6 address hostname contained bad or invalid characters.
kErrorBadLogin	23	The login part of the URL contained bad or invalid characters.
kErrorBadPassword	24	The password part of the URL contained bad or invalid characters.
kErrorBadPath	25	The path part of the URL contained bad or invalid characters.
kErrorBadQuery	26	The query part of the URL contained bad or invalid characters.
kErrorBadScheme	27	The scheme part of the URL contained bad or invalid characters.
kErrorBadSlashes	28	The URL contained an invalid number of slashes.
kErrorBadUser	29	The user part of the URL contained bad or invalid characters.
kErrorNoZoneID	18	There is no zoneid set in the URL.

Error Codes

Constant	Value	Description
kErrorBadHandle	1	An argument that should be a CURLU pointer was passed in as a NULL. Should never happen with plugin as you would get exception.
kErrorBadPartpointer	2	A NULL pointer was passed to the 'part' argument of curl_url_get. Should never happen with plugin as you would get exception.
kErrorBadPortNumber	4	The port number was not a decimal number between 0 and 65535.
kErrorLacksIDN	30	IDN missing.
kErrorMalformedInput	3	A malformed input was passed to a URL API function.
kErrorNoFragment	17	There is no fragment part in the URL.
kErrorNoHost	14	There is no host part in the URL.
kErrorNoOptions	13	There is no options part in the URL.
kErrorNoPassword	12	There is no password part in the URL.
kErrorNoPort	15	There is no port part in the URL.
kErrorNoQuery	16	There is no query part in the URL.
kErrorNoScheme	10	There is no scheme part in the URL.
kErrorNoUser	11	There is no user part in the URL.
kErrorOk	0	No error.
kErrorOutOfMemory	7	A memory function failed.
kErrorUnknownPart	9	An unknown part ID was passed to a URL API function.
kErrorUnsupportedScheme	5	This libcurl build doesn't support the given URL scheme.
kErrorUrlDecode	6	
kErrorUserNotAllowed	8	Credentials was passed in the URL when prohibited.

Flags

Constant	Value	Description
kFlagsAllowSpace	2048	Whether to allow space character in URLs.
kFlagsAppendQuery	256	Append a form style part.
kFlagsDefaultPort	1	Return default port number.
kFlagsDefaultScheme	4	Return default scheme if missing.
kFlagsDisallowUser	32	No user+password allowed.
kFlagsGuessScheme	512	Legacy curl-style guessing.
kFlagsNoDefaultPort	2	Act as if no port number was set, if the port number matches the default for the scheme.
kFlagsNonSupportScheme	8	Allow non-supported scheme.
kFlagsPathAsIs	16	Leave dot sequences.
kFlagsPunyCode	4096	get the host name in punycode
kFlagsURLDecode	64	URL decode on get.
kFlagsURLEncode	128	URL encode on set.

4.33 class CURLVersionMBS

4.33.1 class CURLVersionMBS

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: A class to hold version information from libCURL.

Blog Entries

- [News from the MBS Xojo Plugins in Version 23.0](#)
- [News from the MBS Xojo Plugins Version 21.1](#)

4.33.2 Methods

4.33.3 Constructor

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The constructor.

4.33.4 FeatureNames as String()

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries the feature names.

Example:

```
dim v as new CURLVersionMBS
dim features() as string = v.FeatureNames
dim Names as string = string.FromArray(features)
MessageBox Names
```

Notes: Values are e.g. alt-svc AsynchDNS HSTS HTTPS-proxy IPv6 Largefile libz NTLM NTLM_WB SSL threadsafe TLS-SRP UnixSockets zstd

4.33.5 Protocol(index as Integer) as string

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An array containing the names protocols that libCURL supports (using lowercase letters).

Notes: The protocol names are the same as would be used in URLs.

Index is zero based.

4.33.6 Protocols as String()

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An array containing the names protocols that libCURL supports (using lowercase letters).

Example:

```
dim v as new CURLVersionMBS
dim Protocols() as string = v.Protocols
dim Names as string = string.FromArray(Protocols)
MessageBox Names
```

Notes: The protocol names are the same as would be used in URLs.

4.33.7 Properties

4.33.8 brotliVersion as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Brotli library version string.

Notes: Empty if library is not used in the CURL library you use.

(Read only property)

4.33.9 brotliVersionNumber as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Version of brotli version.

Notes: (Read only property)

4.33.10 CAInfo as String

Plugin Version: 20.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The built-in default CURLOPT_CAINFO.

Notes: Should be empty within plugin.

(Read only property)

4.33.11 CAPath as String

Plugin Version: 20.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The built-in default CURLOPT_CAPATH.

Notes: Should be empty within plugin.
(Read only property)

4.33.12 Features as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Bits which define what features libCURL can and can't.

Notes: Use the Supports Boolean properties instead.
Additional feature bits may be found in the libCURL documentation.
(Read only property)

4.33.13 gsaslVersion as String

Plugin Version: 21.3, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version string of the GNU SASL Library version.

Notes: (Read only property)

4.33.14 Host as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An ascii string showing what host information that this libCURL was built for.

Notes: As discovered by a configure script or set by the build environment.
e.g. "powerpc-apple-darwin8.0"
(Read only property)

4.33.15 hyperVersion as String

Plugin Version: 21.1, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Human readable string.

Notes: (Read only property)

4.33.16 iconvVersionNumber as Integer

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Version number of iconv library.

Notes: (Read only property)

4.33.17 libidnVersion as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Version of LibIDN used.

Notes: Empty if library is not used in the CURL library you use.

(Read only property)

4.33.18 libsshVersion as String

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Version of LibSSH2 used.

Notes: Empty if library is not used in the CURL library you use.

(Read only property)

4.33.19 LibZVersion as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An ascii string (there is no numerical version).

Notes: If libCURL has no libz support, this is "".

e.g. "1.2.3"

(Read only property)

4.33.20 nghttp2Version as String

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version string for nghttp2 library.

Notes: (Read only property)

4.33.21 nhttp2VersionNumber as Integer

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version number for nhttp2.

Notes: Numeric nhttp2 version: (MAJOR * 65536) + (MINOR * 256) + PATCH
(Read only property)

4.33.22 ProtocolCount as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The number of entries in the Protocol array.

Notes: (Read only property)

4.33.23 quicVersion as String

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version of quic version.

Notes: human readable quic (+ HTTP/3) library version.
(Read only property)

4.33.24 SSLVersion as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An ascii string for the OpenSSL version used.

Notes: If libCURL has no SSL support, this is "".
e.g. " OpenSSL/0.9.7l"
(Read only property)

4.33.25 SupportsASYNCHDNS as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for asynchronous name lookups, which allows more exact timeouts (even on Windows) and less blocking when using the multi interface.

Notes: (added in 7.10.7)
(Read only property)

4.33.26 SupportsBrotli as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Brotli features are present.

Notes: (Read only property)

4.33.27 SupportsConv as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Character conversions supported.

Notes: (Read only property)

4.33.28 SupportsGSSAPI as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Built against a GSS-API library.

Notes: (Read only property)

4.33.29 SupportsGSSNEGOTIATE as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports HTTP GSS-Negotiate

Notes: (added in 7.10.6)

(Read only property)

4.33.30 SupportsHTTP2 as Boolean

Plugin Version: 15.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether currently used CURL library supports HTTP2.

Example:

```
dim c as new CURLMBS
dim v as CURLVersionMBS = c.version
```

```
if v.SupportsHTTP2 then
MsgBox "HTTP2 is supported"
else
```

```
MsgBox "HTTP2 is not supported"  
end if
```

Notes: While our CURL Plugin with CURLMBS plugin may not support this currently, you could use LoadLibrary function to load a CURL library supporting it.
(Read only property)

4.33.31 SupportsHTTP3 as Boolean

Plugin Version: 19.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether HTTP3 features are present.

Notes: (Read only property)

4.33.32 SupportsHTTPSProxy as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: HTTPS-proxy support built-in.

Notes: (Read only property)

4.33.33 SupportsIDN as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for IDNA, domain names with international letters.

Notes: (Added in 7.12.0)

(Read only property)

4.33.34 SupportsIPV6 as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports IPv6

Notes: (Read only property)

4.33.35 SupportsKERBEROS4 as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports kerberos4 (when using FTP).

Notes: (Read only property)

4.33.36 SupportsKerberos5 as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Kerberos V5 auth is supported.

Notes: (Read only property)

4.33.37 SupportsLARGEFILE as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for large files.

Notes: (Added in 7.11.1)

(Read only property)

4.33.38 SupportsLIBZ as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports HTTP deflate using libz

Notes: (Added in 7.10)

(Read only property)

4.33.39 SupportsMultiSSL as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Multiple SSL backends available.

Notes: (Read only property)

4.33.40 SupportsNTLM as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports HTTP NTLM

Example:

```
dim c as new CURLMBS
dim v as CURLVersionMBS = c.Version
```

```
MsgBox "SupportsNTLM: "+str(v.SupportsNTLM)
```

Notes: (added in 7.10.6)

(Read only property)

4.33.41 SupportsNTLMWB as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: NTLM delegation to winbind helper is supported.

Notes: (Read only property)

4.33.42 SupportsPSL as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Mozilla's Public Suffix List, used for cookie domain verification.

Notes: (Read only property)

4.33.43 SupportsSPNEGO as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for SPNEGO authentication

Notes: (Simple and Protected GSS-API Negotiation Mechanism, defined in RFC 2478.) (added in 7.10.8)

(Read only property)

4.33.44 SupportsSSL as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL supports SSL (HTTPS/FTPS)

Notes: (Added in 7.10)

(Read only property)

4.33.45 SupportsSSPI as Boolean

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether libCURL was built with support for SSPI.

Notes: This is only available on Windows and makes libCURL use Windows-provided functions for NTLM authentication. It also allows libCURL to use the current user and the current user's password without the app having to pass them on. (Added in 7.13.2)

(Read only property)

4.33.46 SupportsTLSAUTHSRP as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: TLS-SRP auth is supported.

Notes: (Read only property)

4.33.47 SupportsUnicode as Boolean

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Whether unicode for Windows is enabled.

Notes: libcurl was built with Unicode support on Windows. This makes non-ASCII characters work in filenames and options passed to libcurl. (Added in 7.72.0)

(Read only property)

4.33.48 SupportsUnixSockets as Boolean

Plugin Version: 18.2, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Unix domain sockets support.

Notes: (Read only property)

4.33.49 SupportsZSTD as Boolean

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Supports HTTP zstd content encoding using zstd library.

Notes: Added in CURL 7.72.0

(Read only property)

4.33.50 Version as String

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: An ascii string for the libCURL version.

Notes: e.g. "7.13.1"

(Read only property)

4.33.51 VersionNumber as Integer

Plugin Version: 9.8, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: The version of libCURL as number.

Notes: a 24 bit number created like this:

<8 bits major number>| <8 bits minor number>| <8 bits patch number>.

Version 7.9.8 is therefore returned as 0x070908.

(Read only property)

4.33.52 zstdVersion as String

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Human readable string version for zstd library.

Notes: (Read only property)

4.33.53 zstdVersionNumber as Integer

Plugin Version: 20.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Numeric Zstd version.

Notes: Major 8 bits, minor 12 bits, Patch 12 bits.

(Read only property)

4.34 class CURLWebSocketFrameMBS

4.34.1 class CURLWebSocketFrameMBS

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The class for a WebSocket frame.

Notes: dim curl as CURLMBS // your curl handle

```
dim m as CURLWebSocketFrameMBS = curl.WebSocketReceive
```

```
if m <>nil then
  TextAreaLog.AddText "Received: "+m.Text
end if
```

Blog Entries

- [News from the MBS Xojo Plugins in Version 23.0](#)

4.34.2 Properties

4.34.3 BytesLeft as Int64

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: Number of pending bytes left of the payload.

Notes: (Read only property)

4.34.4 BytesReceived as Int64

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The number of bytes received.

Notes: (Read only property)

4.34.5 Data as MemoryBlock

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The data read.

Notes: (Read only property)

4.34.6 FlagBinary as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is binary data.

Notes: (Read only property)

4.34.7 FlagClose as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: Close this transfer.

Notes: (Read only property)

4.34.8 FlagContinue as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is not the final fragment of the message, which implies that there will be another fragment coming as part of the same message where this bit is not set.

Notes: (Read only property)

4.34.9 FlagOffset as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is a partial fragment.

Notes: The provided data is only a partial fragment and there will be more in a following call to `WebSocketSend()`. When sending only a piece of the fragment like this, the `fragsize` must be provided with the total expected fragment size in the first call and it needs to be zero in subsequent calls.

(Read only property)

4.34.10 FlagPing as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This as a ping.

Notes: (Read only property)

4.34.11 FlagPong as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: This is a pong.

Notes: (Read only property)

4.34.12 Flags as Integer

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: Flags for this packet.

Notes: See kFlag* contants.

(Read only property)

4.34.13 FlagText as Boolean

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The buffer contains text data.

Notes: Note that this makes a difference to WebSocket but CURL itself will not make any verification of the content or precautions that you actually send valid UTF-8 content.

(Read only property)

4.34.14 Offset as Int64

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The offset of this data into the frame.

Notes: (Read only property)

4.34.15 Text as String

Plugin Version: 23.0, Platforms: macOS, Linux, Windows, iOS, Targets: All.

Function: The data read as text.

Notes: If this is not a binary transfer, we put the text here.

(Read only property)

4.34.16 Constants

Flags

Constant	Value	Description
kFlagBinary	2	This is binary data.
kFlagClose	8	Close this transfer.
kFlagContinue	4	This is not the final fragment of the message, which implies that there will be another fragment coming as part of the same message where this bit is not set.
kFlagOffset	32	This is a partial fragment. The provided data is only a partial fragment and there will be more in a following call to <code>WebSocketSend()</code> . When sending only a piece of the fragment like this, the <code>fragsize</code> must be provided with the total expected fragment size in the first call and it needs to be zero in subsequent calls.
kFlagPing	16	This as a ping.
kFlagPong	64	This is a pong.
kFlagText	1	The buffer contains text data. Note that this makes a difference to <code>WebSocket</code> but <code>CURL</code> itself will not make any verification of the content or precautions that you actually send valid UTF-8 content.

4.35 Globals

4.35.1 FileExtensionToMimeTypeMBS(FileExtension as String) as string

Plugin Version: 15.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Finds a mime type for a file extension.

Example:

```
dim FileExtension as string = MimeTypeToFileExtensionMBS("application/pdf")
dim MimeType as string = FileExtensionToMimeTypeMBS("pdf")
Break
```

Notes: Please report any missing mime type in our lookup table, so we can add more.

See also MimeTypeToFileExtensionMBS.

Returns empty string if not found.

Blog Entries

- [MBS Xojo Plugins, version 19.4pr2](#)
- [MBS Xojo / Real Studio Plugins, version 15.4pr1](#)

4.35.2 MimeTypeToFileExtensionMBS(MimeType as String) as string

Plugin Version: 15.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: Returns file extension for given mime type.

Example:

```
dim FileExtension as string = MimeTypeToFileExtensionMBS("application/pdf")
dim MimeType as string = FileExtensionToMimeTypeMBS("pdf")
Break
```

Notes: Extension is returned with dot prefix.

Please report any missing file extensions in our lookup table, so we can add more.

See also FileExtensionToMimeTypeMBS.

Returns empty string if not found.

Blog Entries

- [MBS Xojo Plugins, version 19.4pr2](#)
- [MBS Xojo / Real Studio Plugins, version 15.4pr1](#)

Xojo Developer Magazine

- [22.1, page 80: Parse your Mails in Xojo, Using EmailParser by Stefanie Juchmes](#)

Chapter 5

EmailParser

5.1 class MimeAddressListMBS

5.1.1 class MimeAddressListMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for a list of addresses.

Xojo Developer Magazine

- [22.1, page 80: Parse your Mails in Xojo, Using EmailParser by Stefanie Juchmes](#)

5.1.2 Methods

5.1.3 Addresses as MimeAddressMBS()

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of addresses.

See also:

- [5.1.4 Addresses\(index as Integer\) as MimeAddressMBS](#)

695

5.1.4 Addresses(index as Integer) as MimeAddressMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries address by index.

Notes: Index is zero based.

See also:

- 5.1.3 Addresses as MimeAddressMBS()

5.1.5 Constructor(TextToParse as String)

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Parses a text with addresses.

5.1.6 Properties

5.1.7 AddressesVariant as Variant

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of addresses.

Notes: This property is only to see array in debugger.
(Read only property)

5.1.8 Count as Integer

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The number of addresses in this list.

Notes: (Read only property)

5.1.9 StringValue as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The address list as a string.

Notes: (Read only property)

5.2 class MimeAddressMBS

5.2.1 class MimeAddressMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for an address which can be an email or a group.

Xojo Developer Magazine

- [22.1, page 80: Parse your Mails in Xojo, Using EmailParser by Stefanie Juchmes](#)

5.2.2 Methods

5.2.3 Constructor(TextToParse as String)

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Parses an address from text.

Example:

```
dim m as new MimeAddressMBS("=?utf-8?Q?M=C3=BCller?= <zivi@mac.com>")
MsgBox m.Mailbox.LabelDecoded
```

5.2.4 Properties

5.2.5 Group as MimeGroupMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The group for this address.

Notes: (Read only property)

5.2.6 isGroup as Boolean

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether this address is a group.

Notes: (Read only property)

5.2.7 Mailbox as MimeMailboxMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mailbox for this address.

Notes: (Read only property)

5.2.8 StringValue as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The address as a string.

Notes: (Read only property)

5.3 class MimeAttachmentMBS

5.3.1 class MimeAttachmentMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for an attachment.

Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

Blog Entries

- [MBS Xojo Plugins, version 22.6pr3](#)

Xojo Developer Magazine

- [22.1, page 80: Parse your Mails in Xojo, Using EmailParser by Stefanie Juchmes](#)
- [22.1, page 78: Parse your Mails in Xojo, Using EmailParser by Stefanie Juchmes](#)

5.3.2 Methods

5.3.3 Constructor

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The private constructor.

5.3.4 Properties

5.3.5 Body as MimeBodyMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The reference to the body of this attachment.

Notes: The StringValue of the body has the attachment's encoded data.
(Read only property)

5.3.6 ContentDescription as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content description.

Notes: (Read only property)

5.3.7 ContentDisposition as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content disposition.

Notes: e.g. inline; filename="agb.pdf"
(Read only property)

5.3.8 contentId as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content ID for inline graphics.

Notes: e.g. c1441531740.48804.1@MacbookPro-Christian.local
(Read only property)

5.3.9 ContentTransferEncoding as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content transfer encoding.

Notes: e.g. base64
(Read only property)

5.3.10 ContentType as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content type.

Notes: e.g. text/plain, charset=utf-8 or application/pdf; name="agb.pdf"
(Read only property)

5.3.11 Data as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The data for this attachment.

Notes: Decoded for your convenience.
(Read only property)

5.3.12 Filename as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The filename for this attachment.

Notes: The class pulls this from various header fields and decodes it if necessary.

The file name may contain invalid characters for your platform.

Like double colons for OS X or backslash for Windows.

(Read only property)

5.3.13 Header as MimeHeaderMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The header details for this attachment.

Notes: (Read only property)

5.3.14 MimeType as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime type of the attachment.

Notes: e.g. "application/pdf" for a PDF file

See also MimeTypeToFileExtensionMBS function.

(Read only property)

5.3.15 MimeVersion as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime version of the attachment.

Notes: e.g. "1.0"

(Read only property)

5.4 class MimeBodyMBS

5.4.1 class MimeBodyMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for a body of a mime entity.

Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

5.4.2 Methods

5.4.3 Constructor

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The private constructor.

5.4.4 Parts as MimeEntityMBS()

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of parts.

Notes: Mime Entities are organized often in a tree. The email is an entity and has sub entities for html, plain text and attachments.

See also:

- 5.4.5 Parts(index as Integer) as MimeEntityMBS 702

5.4.5 Parts(index as Integer) as MimeEntityMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries part by index.

Notes: Index is zero based.

See also:

- 5.4.4 Parts as MimeEntityMBS() 702

5.4.6 Properties

5.4.7 epilogue as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The epilogue of the body.

Notes: (Read only property)

5.4.8 PartsVariant as Variant

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of parts.

Notes: Mime Entities are organized often in a tree. The email is an entity and has sub entities for html, plain text and attachments.

This property is only to see array in debugger.

(Read only property)

5.4.9 preamble as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The preamble of the body.

Notes: This is sometimes a message like: "This is a MIME encoded message."

(Read only property)

5.4.10 StringValue as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The string value of the body.

Notes: (Read only property)

5.5 class MimeEmailMBS

5.5.1 class MimeEmailMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for an email.

Notes: Subclass of the MimeEntityMBS class.

Blog Entries

- [MBS Xojo Plugins, version 22.5pr3](#)
- [MBS Xojo Plugins, version 22.2pr4](#)
- [MBS Xojo Plugins, version 21.6pr3](#)
- [MonkeyBread Software Releases the MBS Xojo Plugins in version 21.0](#)
- [MBS Xojo Plugins, version 20.6pr1](#)
- [MBS Xojo Plugins, version 20.4pr7](#)
- [MBS Xojo Plugins, version 17.5pr2](#)
- [MBS Xojo / Real Studio Plugins, version 16.5pr2](#)
- [MBS Xojo / Real Studio Plugins, version 16.0pr8](#)
- [MBS Xojo / Real Studio plug-ins in version 15.4](#)

Xojo Developer Magazine

- [22.1, page 77: Parse your Mails in Xojo, Using EmailParser by Stefanie Juchmes](#)
- [19.2, page 10: News](#)

5.5.2 Methods

5.5.3 Attachments as MimeAttachmentMBS()

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of attachments.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
MsgBox str(m.Attachments.Ubound+1)+" attachments and "+str(m.Inlines.Ubound+1)+" inlines"
```

5.5. CLASS MIMEEMAILMBS

705

for each a as MimeAttachmentMBS in m.Inlines
MsgBox "Inline: " + a.FileName
next

See also:

- 5.5.4 Attachments(index as Integer) as MimeAttachmentMBS

705

5.5.4 Attachments(index as Integer) as MimeAttachmentMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries attachment by index.

Notes: Index is zero based.

See also:

- 5.5.3 Attachments as MimeAttachmentMBS()

704

5.5.5 Constructor(Content as MemoryBlock)

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Parses an email from a memoryblock.

See also:

- 5.5.6 Constructor(Content as string)
- 5.5.7 Constructor(File as FolderItem)

705

706

5.5.6 Constructor(Content as string)

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Parses an email from a string.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim b as BinaryStream = BinaryStream.Open(f)
dim s as string = b.Read(b.Length)
dim m as new MimeEmailMBS(s)
```

MsgBox m.Subject

Notes: This is to parse raw email text, e.g. eml file.

To parse eml, open the text file and read the first line. The first line contains the length of the email. Then read the following number of bytes of that value and that is the eml content. Followed by a plist structure. See also:

- 5.5.5 Constructor(Content as MemoryBlock) 705
- 5.5.7 Constructor(File as FolderItem) 706

5.5.7 Constructor(File as FolderItem)

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Parses an email from a text file.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
MsgBox m.Subject
```

Notes: You can pass here an EML file.

See also:

- 5.5.5 Constructor(Content as MemoryBlock) 705
- 5.5.6 Constructor(Content as string) 705

5.5.8 DecodeInline(Text as String) as String

Plugin Version: 16.5, Platforms: macOS, Linux, Windows, Targets: All.

Function: Decodes a text with inline encoded text.

Example:

```
dim e,s as string
```

```
s = "=?UTF-8?B?WW91ciBBY2NvdW50IFNuYXBzaG90?="
e = MimeEmailMBS.DecodeInline(s)
```

```
MsgBox e
```

Notes: This is the function our plugin uses to decode names and subject in the email. You don't need to use it unless you got subject/name encoded from somewhere else.

5.5.9 HTMLToPlainText(HTMLText as String) as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Converts html to plain text.

Notes: This is the function our plugin uses internally to fill PlainText field for html only email. Removes HTML tags, decodes entities and adds returns where appropriated.

5.5.10 Inlines as MimeAttachmentMBS()

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of inline items.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
MsgBox str(m.Attachments.Ubound+1)+" attachments and "+str(m.Inlines.Ubound+1)+" inlines"
```

```
for each a as MimeAttachmentMBS in m.Inlines
MsgBox "Inline: " + a.FileName
next
```

Notes: Inline items are like attachments, but shown in the email and normally referenced by ID from the html text.

See also:

- 5.5.11 Inlines(index as Integer) as MimeAttachmentMBS

707

5.5.11 Inlines(index as Integer) as MimeAttachmentMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries inline by index.

Notes: Index is zero based.

See also:

- 5.5.10 Inlines as MimeAttachmentMBS()

707

5.5.12 Properties

5.5.13 AttachmentsVariant as Variant

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of attachments.

Notes: This property is only to see array in debugger.

(Read only property)

5.5.14 Date as Date

Plugin Version: 15.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries the sent date of the email.

Notes: Can be undefined and return nil.

The plugin looks in email headers for a Date: header and parses the date.

The returned date is normalized to current time zone.

(Read only property)

5.5.15 HTMLText as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The html text of the email.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
MsgBox m.HTMLText
```

Notes: Decoded for your convenience.

You may want to use ReplaceLineEndings to make sure the line endings are what you need them to be.

(Read only property)

5.5.16 InlinesVariant as Variant

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of inline items.

Notes: Inline items are like attachments, but shown in the email and normally referenced by ID from the

html text.

This property is only to see array in debugger.
(Read only property)

5.5.17 PlainText as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The plain text of the email.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
MsgBox m.PlainText
```

Notes: Decoded for your convenience.

You may want to use `ReplaceLineEndings` to make sure the line endings are what you need them to be.
(Read only property)

5.5.18 RaiseUnknownFormatExceptions as Boolean

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether to raise an exception when plugin finds encoding in email which is not in list of known encodings.

Notes: Used to find unknown encodings.
(Read and Write property)

5.5.19 ReceivedDate as Date

Plugin Version: 16.4, Platforms: macOS, Linux, Windows, Targets: Desktop, Console & Web.

Function: Queries the receive date of the email.

Notes: Can be undefined and return nil.

The plugin looks in email headers for a `Receive:` header and parses the date.

The returned date is normalized to current time zone.

(Read only property)

5.5.20 Source as String

Plugin Version: 15.4, Platforms: macOS, Linux, Windows, Targets: All.

Function: The source code of the email parsed.

Notes: (Read only property)

5.5.21 Subject as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The decoded subject line of the email.

Notes: (Read only property)

5.6 class MimeEntityMBS

5.6.1 class MimeEntityMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for a mime entity.

Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

5.6.2 Methods

5.6.3 Constructor

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The private constructor.

5.6.4 Properties

5.6.5 Body as MimeBodyMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The raw content of this entity.

Notes: This may be quoted printable, base64 or otherwise encoded.
(Read only property)

5.6.6 BodyDecoded as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The decoded body content.

Notes: (Read only property)

5.6.7 Header as MimeHeaderMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The header for this entity.

Notes: The email itself has header, but each entity in the mime tree has also headers.

(Read only property)

5.7 class MimeFieldMBS

5.7.1 class MimeFieldMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for a header field.

5.7.2 Methods

5.7.3 Constructor(**TextToParse** as String)

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Parses the text in a field.

5.7.4 Properties

5.7.5 Name as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The field name.

Notes: (Read only property)

5.7.6 Value as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The field value.

Notes: (Read only property)

5.8 class MimeGroupMBS

5.8.1 class MimeGroupMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for an email group.

Example:

```
dim g as new MimeGroupMBS("clients:=?utf-8?Q?Josef=20M=C3=BCller?= <josef@test.test>, =?utf-8?Q?Peter=20M=C3=BCller?= <peter@test.test>")
```

```
MsgBox g.NameDecoded+" "+str(g.Count)
```

```
MsgBox g.Mailboxes(0).LabelDecoded
```

```
MsgBox g.Mailboxes(1).LabelDecoded
```

5.8.2 Methods

5.8.3 Constructor(TextToParse as String)

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Parses a group.

Example:

```
dim g as new MimeGroupMBS("clients:=?utf-8?Q?Josef=20M=C3=BCller?= <josef@test.test>, =?utf-8?Q?Peter=20M=C3=BCller?= <peter@test.test>")
```

```
MsgBox g.NameDecoded+" "+str(g.Count)
```

5.8.4 Mailboxes as MimeMailboxMBS()

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of mailboxes in this group.

See also:

- 5.8.5 Mailboxes(index as Integer) as MimeMailboxMBS

714

5.8.5 Mailboxes(index as Integer) as MimeMailboxMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries a mailbox in the group.

Example:

```
dim g as new MimeGroupMBS("clients=?utf-8?Q?Josef=20M=C3=BCller?= <josef@test.test>, =?utf-8?Q?Peter=20M=C3=BCller?= <peter@test.test>")
```

```
MsgBox g.Mailboxes(0).LabelDecoded
```

```
MsgBox g.Mailboxes(1).LabelDecoded
```

See also:

- 5.8.4 Mailboxes as MimeMailboxMBS()

714

5.8.6 Properties

5.8.7 Count as Integer

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The number of emails in this group.

Notes: (Read only property)

5.8.8 MailboxesVariant as Variant

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of mailboxes in this group.

Notes: This property is only to see array in debugger.

(Read only property)

5.8.9 Name as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The name of the group.

Notes: The name property has the raw name while the NameDecoded property has the decoded version for displaying to user.

(Read only property)

5.8.10 NameDecoded as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The name of the group.

Notes: The name property has the raw name while the NameDecoded property has the decoded version for displaying to user.

(Read only property)

5.8.11 StringValue as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The group as a string.

Notes: (Read only property)

5.9 class MimeHeaderMBS

5.9.1 class MimeHeaderMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for headers of a mime entity.

Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

Xojo Developer Magazine

- [22.1, page 80: Parse your Mails in Xojo, Using EmailParser by Stefanie Juchmes](#)

5.9.2 Methods

5.9.3 Constructor

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The private constructor.

5.9.4 FieldByName(name as string) as MimeFieldMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Finds a field by name.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)

dim h as MimeHeaderMBS = m.Header
MsgBox h.FieldByName("Date").Value
```

Notes: e.g. "Sat, 5 Sep 2015 23:52:13 +0200" for the date field.

5.9.5 Fields as MimeFieldMBS()

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of fields in this header.

See also:

- 5.9.6 Fields(index as Integer) as MimeFieldMBS

718

5.9.6 Fields(index as Integer) as MimeFieldMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries field by index.

Notes: Index is zero based.

See also:

- 5.9.5 Fields as MimeFieldMBS()

717

5.9.7 hasField(name as string) as boolean

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Whether a certain field exists.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
dim h as MimeHeaderMBS = m.Header
if h.hasField("Date") then
MsgBox "Has date: "+h.FieldByName("Date").Value
end if
```

5.9.8 Properties

5.9.9 bcc as MimeAddressListMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The BCC address list.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
dim h as MimeHeaderMBS = m.Header
// get BCC
dim l as MimeAddressListMBS = h.BCC
// get addresses
dim a() as MimeAddressMBS = l.Addresses
```

```
// get first one
dim b as MimeAddressMBS = a(0)
// assume it's an email and get it
dim x as MimeMailboxMBS = b.Mailbox
// and show to user with name and email
MsgBox x.LabelDecoded+" "+x.Email
```

Notes: (Read only property)

5.9.10 cc as MimeAddressListMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The CC address list.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)

dim h as MimeHeaderMBS = m.Header
// get CC
dim l as MimeAddressListMBS = h.CC
// get addresses
dim a() as MimeAddressMBS = l.Addresses
// get first one
dim b as MimeAddressMBS = a(0)
// assume it's an email and get it
dim x as MimeMailboxMBS = b.Mailbox
// and show to user with name and email
MsgBox x.LabelDecoded+" "+x.Email
```

Notes: (Read only property)

5.9.11 ContentDescription as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content description.

Notes: (Read only property)

5.9.12 ContentDisposition as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content disposition.

Notes: (Read only property)

5.9.13 contentId as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content ID for an inline graphic.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
dim h as MimeHeaderMBS = m.Header
MsgBox h.contentId
```

Notes: (Read only property)

5.9.14 ContentTransferEncoding as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content transfer encoding.

Notes: e.g. base64
(Read only property)

5.9.15 ContentTransferEncodingMechanism as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content transfer encoding mechanism.

Notes: base64
(Read only property)

5.9.16 ContentType as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content type.

Notes: e.g. "multipart/alternative; boundary="Apple-Mail=_F9738882-571C-4469-8349-574115CE32F4""
(Read only property)

5.9.17 from as MimeMailboxListMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The from address list.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)

dim h as MimeHeaderMBS = m.Header
// get from
dim l as MimeMailboxListMBS = h.from
// get mailboxes
dim a() as MimeMailboxMBS = l.Mailboxes
// get first one
dim b as MimeMailboxMBS = a(0)
// and show to user with name and email
MsgBox b.LabelDecoded+" "+b.Email

```

Notes: (Read only property)

5.9.18 messageid as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The message ID for this email.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)

dim h as MimeHeaderMBS = m.Header
MsgBox h.messageid

```

Notes: e.g. "<599782DA-09A0-4461-8474-2BE9F3197CAF@macsw.de>"
(Read only property)

5.9.19 MimeVersion as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The mime version.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
dim h as MimeHeaderMBS = m.Header
MsgBox h.MimeVersion
```

Notes: e.g. "1.0"
(Read only property)

5.9.20 replyto as MimeAddressListMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The replyto address field.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
dim h as MimeHeaderMBS = m.Header
// get replyto
dim l as MimeAddressListMBS = h.replyto
// get addresses
dim a() as MimeAddressMBS = l.Addresses
// get first one
dim b as MimeAddressMBS = a(0)
// assume it's an email and get it
dim x as MimeMailboxMBS = b.Mailbox
// and show to user with name and email
MsgBox x.LabelDecoded+" "+x.Email
```

Notes: (Read only property)

5.9.21 sender as MimeMailboxMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The sender of the email.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
dim h as MimeHeaderMBS = m.Header
dim b as MimeMailboxMBS = h.sender
MsgBox b.Email
```

Notes: May be different from "from" field.
(Read only property)

5.9.22 subject as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The original subject line.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)
```

```
dim h as MimeHeaderMBS = m.Header
MsgBox h.subject
```

Notes: The subject property has the original subject line while the plugin provides the decoded subjected line in the subjectDecoded for display to user.
(Read only property)

5.9.23 subjectDecoded as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The decoded subject line.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)

dim h as MimeHeaderMBS = m.Header
MsgBox h.subjectDecoded

```

Notes: The subject property has the original subject line while the plugin provides the decoded subjected line in the subjectDecoded for display to user.
(Read only property)

5.9.24 too as MimeAddressListMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The TO receivers.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.eml")
dim m as new MimeEmailMBS(f)

dim h as MimeHeaderMBS = m.Header
// get to
dim l as MimeAddressListMBS = h.too
// get addresses
dim a() as MimeAddressMBS = l.Addresses
// get first one
dim b as MimeAddressMBS = a(0)
// assume it's an email and get it
dim x as MimeMailboxMBS = b.Mailbox
// and show to user with name and email
MsgBox x.LabelDecoded+" "+x.Email

```

Notes: Named "too" in this class as "to" is a reserved word.
(Read only property)

5.10 class MimeMailboxListMBS

5.10.1 class MimeMailboxListMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for a list of mailboxes.

Xojo Developer Magazine

- [22.1, page 80: Parse your Mails in Xojo, Using EmailParser by Stefanie Juchmes](#)

5.10.2 Methods

5.10.3 Constructor(TextToParse as String)

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Parses a list of mailboxes.

Example:

```
dim m as new MimeMailboxListMBS("=?utf-8?Q?M=C3=BCller?= <test@test.com>")
MsgBox str(m.Count)
```

5.10.4 Mailboxes as MimeMailboxMBS()

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of mailboxes.

See also:

- [5.10.5 Mailboxes\(index as Integer\) as MimeMailboxMBS](#)

725

5.10.5 Mailboxes(index as Integer) as MimeMailboxMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries mailbox by index.

Notes: Index is zero based.

See also:

- [5.10.4 Mailboxes as MimeMailboxMBS\(\)](#)

725

5.10.6 Properties

5.10.7 Count as Integer

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Queries number of mailboxes in list.

Example:

```
dim m as new MimeMailboxListMBS("=?utf-8?Q?M=C3=BCller?= <test@test.com>")
MsgBox str(m.Count)
```

Notes: (Read only property)

5.10.8 MailboxesVariant as Variant

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The array of mailboxes.

Notes: This property is only to see array in debugger.

(Read only property)

5.10.9 StringValue as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The content of this list as a string.

Notes: (Read only property)

5.11 class MimeMailboxMBS

5.11.1 class MimeMailboxMBS

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The class for an email address.

Example:

```
dim m as new MimeMailboxMBS("=?utf-8?Q?M=C3=BCller?= <zivi@mac.com>")
MsgBox m.LabelDecoded+" "+m.Email
```

5.11.2 Methods

5.11.3 Constructor(TextToParse as String)

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: Parses an email address.

Example:

```
dim m as new MimeMailboxMBS("=?utf-8?Q?M=C3=BCller?= <zivi@mac.com>")
MsgBox m.LabelDecoded+" "+m.Email
```

5.11.4 Properties

5.11.5 Domain as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The domain name of the email address.

Notes: (Read only property)

5.11.6 Email as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The email address.

Notes: Mailbox and Domain together.

(Read only property)

5.11.7 Label as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The label for this email address.

Notes: Label is the raw value and LabelDecoded is the decoded value.
So please use LabelDecoded for display.
(Read only property)

5.11.8 LabelDecoded as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The label for this email address.

Notes: Label is the raw value and LabelDecoded is the decoded value.
So please use LabelDecoded for display.
(Read only property)

5.11.9 Mailbox as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The name of the email mailbox.

Notes: (Read only property)

5.11.10 Sourceroute as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The source route parameter.

Notes: (Read only property)

5.11.11 StringValue as String

Plugin Version: 15.3, Platforms: macOS, Linux, Windows, Targets: All.

Function: The email address as a string.

Notes: (Read only property)

Chapter 6

List of Questions in the FAQ

- 7.0.1 Can anyone help me convert seconds to time in this format hh:mm:ss? 739
- 7.0.2 Do you have plugins for Android? 740
- 7.0.3 How do I get the proper highlight color on Mac OS X for active/inactive selection? 740
- 7.0.4 How to catch delete key? 741
- 7.0.5 How to convert cmyk to rgb? 742
- 7.0.6 How to delete a folder? 743
- 7.0.7 How to detect if CPU is 64bit processor? 744
- 7.0.8 How to query variant type string for a variant? 745
- 7.0.9 How to refresh a htmlviewer on Windows? 746
- 7.0.10 Is there an example for vector graphics in Xojo? 747
- 7.0.11 Picture functions do not preserve resolution values? 748
- 7.0.12 A toolbox call needs a rect - how do I give it one? 748
- 7.0.13 API client not supported? 748
- 7.0.14 Can I access Access Database with Java classes? 749
- 7.0.15 Can I create PDF from Xojo Report using DynaPDF? 750
- 7.0.16 Can I use AppleScripts in a web application? 750
- 7.0.17 Can I use graphics class with DynaPDF? 750
- 7.0.18 Can I use sockets on a web application? 751
- 7.0.19 Can I use your ChartDirector plugin on a web application? 751

- 7.0.20 Can I use your DynaPDF plugin on a web application? 752
- 7.0.21 Can I use your plugin controls on a web application? 753
- 7.0.22 Can you get an unique machine ID? 753
- 7.0.23 ChartDirector: Alignment Specification 753
- 7.0.24 ChartDirector: Color Specification 754
- 7.0.25 ChartDirector: Font Specification 757
- 7.0.26 ChartDirector: Mark Up Language 761
- 7.0.27 ChartDirector: Parameter Substitution and Formatting 765
- 7.0.28 ChartDirector: Shape Specification 769
- 7.0.29 Copy styled text? 770
- 7.0.30 Do you have code to validate a credit card number? 771
- 7.0.31 Do you have plugins for X-Rite EyeOne, eXact or i1Pro? 772
- 7.0.32 Does SQL Plugin handle stored procedures with multiple result sets? 772
- 7.0.33 Does the plugin home home? 772
- 7.0.34 folderitem.absolutepath is limited to 255 chars. How can I get longer ones? 773
- 7.0.35 Has anyone played round with using CoreImage to do things like add dissolve transitions say when changing from one tab to another within a window? 773
- 7.0.36 How about Plugin support for older OS X? 774
- 7.0.37 How can I detect whether an Intel CPU is a 64bit CPU? 775
- 7.0.38 How can I disable the close box of a window on Windows? 776
- 7.0.39 How can I get all the environment variables from Windows? 776
- 7.0.40 How can i get similar behavior to Roxio Toast or iTunes where clicking a 'burn' button allows the next inserted blank CD-R to bypass the Finder and be accepted by my application? 777
- 7.0.41 How can I get text from a PDF? 777
- 7.0.42 How can I get text from a Word Document? 777
- 7.0.43 How can I get the item string for a given file creator? 778
- 7.0.44 How can I launch an app using it's creator code? 779
- 7.0.45 How can I learn what shared libraries are required by a plugin on Linux? 779
- 7.0.46 How can I validate an email address? 781
- 7.0.47 How do I decode correctly an email subject? 781

	731
• 7.0.48 How do I enable/disable a single tab in a tabpanel?	782
• 7.0.49 How do I find the root volume for a file?	783
• 7.0.50 How do I get the current languages list?	783
• 7.0.51 How do I get the Mac OS Version?	784
• 7.0.52 How do I get the printer name?	785
• 7.0.53 How do I make a metal window if RB does not allow me this?	786
• 7.0.54 How do I make a smooth color transition?	786
• 7.0.55 How do I read the applications in the dock app?	787
• 7.0.56 How do I truncate a file?	788
• 7.0.57 How do update a Finder's windows after changing some files?	788
• 7.0.58 How to access a USB device directly?	789
• 7.0.59 How to add icon to file on Mac?	789
• 7.0.60 How to ask the Mac for the Name of the Machine?	789
• 7.0.61 How to automatically enable retina in my apps?	790
• 7.0.62 How to avoid leaks with Cocoa functions?	790
• 7.0.63 How to avoid trouble connecting to oracle database with SQL Plugin?	791
• 7.0.64 How to avoid ___NSAutoreleaseNoPool console messages in threads?	791
• 7.0.65 How to bring app to front?	792
• 7.0.66 How to bring my application to front?	792
• 7.0.67 How to catch Control-C on Mac or Linux in a console app?	793
• 7.0.68 How to change name of application menu?	793
• 7.0.69 How to change the name in the menubar of my app on Mac OS X?	794
• 7.0.70 How to check if a folder/directory has subfolders?	794
• 7.0.71 How to check if Macbook runs on battery or AC power?	795
• 7.0.72 How to check if Microsoft Outlook is installed?	796
• 7.0.73 How to check on Mac OS which country or language is currently selected?	796
• 7.0.74 How to code sign my app with plugins?	797
• 7.0.75 How to collapse a window?	797
• 7.0.76 How to compare two pictures?	798

- 7.0.77 How to compile PHP library? 800
- 7.0.78 How to convert a `BrowserType` to a `String` with `WebSession.Browser`? 801
- 7.0.79 How to convert a `EngineType` to a `String` with `WebSession.Engine`? 802
- 7.0.80 How to convert a `PlatformType` to a `String` with `WebSession.Platform`? 802
- 7.0.81 How to convert a text to iso-8859-1 using the `TextEncoder`? 803
- 7.0.82 How to convert `ChartTime` back to Xojo date? 804
- 7.0.83 How to convert line endings in text files? 804
- 7.0.84 How to convert picture to string and back? 805
- 7.0.85 How to copy an array? 806
- 7.0.86 How to copy an dictionary? 806
- 7.0.87 How to copy parts of a movie to another one? 806
- 7.0.88 How to create a birthday like calendar event? 807
- 7.0.89 How to create a GUID? 808
- 7.0.90 How to create a Mac picture clip file? 808
- 7.0.91 How to create a PDF file in Xojo? 809
- 7.0.92 How to create `EmailAttachment` for PDF Data in memory? 809
- 7.0.93 How to create PDF for image files? 810
- 7.0.94 How to CURL Options translate to Plugin Calls? 811
- 7.0.95 How to delete file with ftp and curl plugin? 812
- 7.0.96 How to detect display resolution changed? 812
- 7.0.97 How to detect retina? 813
- 7.0.98 How to disable force quit? 813
- 7.0.99 How to disable the error dialogs from Internet Explorer on javascript errors? 813
- 7.0.100 How to display a PDF file in Xojo? 813
- 7.0.101 How to do a lottery in RB? 814
- 7.0.102 How to do an asycron DNS lookup? 815
- 7.0.103 How to draw a dashed pattern line? 815
- 7.0.104 How to draw a nice antialiased line? 816
- 7.0.105 How to dump java class interface? 817

	733
• 7.0.106 How to duplicate a picture with mask or alpha channel?	818
• 7.0.107 How to enable assistive devices?	819
• 7.0.108 How to encrypt a file with Blowfish?	819
• 7.0.109 How to extract text from HTML?	820
• 7.0.110 How to find empty folders in a folder?	820
• 7.0.111 How to find iTunes on a Mac OS X machine fast?	820
• 7.0.112 How to find network interface for a socket by it's name?	821
• 7.0.113 How to find version of Microsoft Word?	822
• 7.0.114 How to fix CURL error 60/53 on connecting to server?	823
• 7.0.115 How to format double with n digits?	823
• 7.0.116 How to get a time converted to user time zone in a web app?	824
• 7.0.117 How to get an handle to the frontmost window on Windows?	824
• 7.0.118 How to get CFAbsoluteTime from date?	825
• 7.0.119 How to get client IP address on web app?	825
• 7.0.120 How to get fonts to load in charts on Linux?	825
• 7.0.121 How to get fonts to load in DynaPDF on Linux?	826
• 7.0.122 How to get GMT time and back?	827
• 7.0.123 How to get good crash reports?	827
• 7.0.124 How to get list of all threads?	828
• 7.0.125 How to get parameters from webpage URL in Xojo Web Edition?	828
• 7.0.126 How to get the color for disabled textcolor?	828
• 7.0.127 How to get the current free stack space?	829
• 7.0.128 How to get the current timezone?	830
• 7.0.129 How to get the current window title?	831
• 7.0.130 How to get the cursor blink interval time?	832
• 7.0.131 How to get the list of the current selected files in the Finder?	833
• 7.0.132 How to get the Mac OS system version?	834
• 7.0.133 How to get the Mac OS Version using System.Gestalt?	834
• 7.0.134 How to get the screensize excluding the task bar?	835

- 7.0.135 How to get the size of the frontmost window on Windows? 835
- 7.0.136 How to get the source code of a HTMLViewer? 836
- 7.0.137 How to get Xojo apps running Linux? 836
- 7.0.138 How to handle really huge images with GraphicsMagick or ImageMagick? 836
- 7.0.139 How to handle tab key for editable cells in listbox? 837
- 7.0.140 How to hard link MapKit framework? 838
- 7.0.141 How to have a PDF downloaded to the user in a web application? 839
- 7.0.142 How to hide all applications except mine? 839
- 7.0.143 How to hide script errors in HTMLViewer on Windows? 840
- 7.0.144 How to hide the grid/background/border in ChartDirector? 840
- 7.0.145 How to hide the mouse cursor on Mac? 840
- 7.0.146 How to insert image to NSTextView or TextArea? 840
- 7.0.147 How to jump to an anchor in a htmlviewer? 841
- 7.0.148 How to keep a movieplayer unclickable? 841
- 7.0.149 How to keep my web app from using 100% CPU time? 842
- 7.0.150 How to kill a process by name? 842
- 7.0.151 How to know how many CPUs are present? 843
- 7.0.152 How to know the calling function? 843
- 7.0.153 How to launch an app using it's creator code? 844
- 7.0.154 How to launch disc utility? 844
- 7.0.155 How to make a lot of changes to a REAL SQL Database faster? 845
- 7.0.156 How to make a NSImage object for my retina enabled app? 845
- 7.0.157 How to make a window borderless on Windows? 845
- 7.0.158 How to make an alias using AppleEvents? 846
- 7.0.159 How to make AppleScripts much faster? 847
- 7.0.160 How to make double clicks on a canvas? 847
- 7.0.161 How to make my Mac not sleeping? 849
- 7.0.162 How to make my own registration code scheme? 850
- 7.0.163 How to make small controls on Mac OS X? 850

	735
• 7.0.164 How to mark my Mac app as background only?	851
• 7.0.165 How to move a file or folder to trash?	851
• 7.0.166 How to move an application to the front using the creator code?	852
• 7.0.167 How to move file with ftp and curl plugin?	853
• 7.0.168 How to normalize string on Mac?	853
• 7.0.169 How to obscure the mouse cursor on Mac?	854
• 7.0.170 How to open icon file on Mac?	854
• 7.0.171 How to open PDF in acrobat reader?	854
• 7.0.172 How to open printer preferences on Mac?	855
• 7.0.173 How to open special characters panel on Mac?	856
• 7.0.174 How to optimize picture loading in Web Edition?	856
• 7.0.175 How to parse XML?	856
• 7.0.176 How to play audio in a web app?	857
• 7.0.177 How to pretty print xml?	858
• 7.0.178 How to print to PDF?	858
• 7.0.179 How to query Spotlight's Last Open Date for a file?	859
• 7.0.180 How to quit windows?	860
• 7.0.181 How to read a CSV file correctly?	860
• 7.0.182 How to read the command line on windows?	861
• 7.0.183 How to render PDF pages with PDF Kit?	861
• 7.0.184 How to restart a Mac?	862
• 7.0.185 How to resume ftp upload with curl plugin?	862
• 7.0.186 How to rotate a PDF page with CoreGraphics?	863
• 7.0.187 How to rotate image with CoreImage?	864
• 7.0.188 How to run a 32 bit application on a 64 bit Linux?	865
• 7.0.189 How to save HTMLViewer to PDF with landscape orientation?	865
• 7.0.190 How to save RTFD?	865
• 7.0.191 How to save RTFD?	866
• 7.0.192 How to scale a picture proportionally with mask?	866

- 7.0.193 How to scale a picture proportionally? 867
- 7.0.194 How to scale/resize a CImageMBS? 868
- 7.0.195 How to scale/resize a picture? 869
- 7.0.196 How to search with regex and use unicode codepoints? 869
- 7.0.197 How to see if a file is invisible for Mac OS X? 870
- 7.0.198 How to set cache size for SQLite or REALSQLDatabase? 871
- 7.0.199 How to set the modified dot in the window? 871
- 7.0.200 How to show a PDF file to the user in a Web Application? 871
- 7.0.201 How to show Keyboard Viewer programmatically? 872
- 7.0.202 How to show the mouse cursor on Mac? 873
- 7.0.203 How to shutdown a Mac? 873
- 7.0.204 How to sleep a Mac? 874
- 7.0.205 How to speed up rasterizer for displaying PDFs with DynaPDF? 874
- 7.0.206 How to use PDFLib in my RB application? 874
- 7.0.207 How to use quotes in a string? 875
- 7.0.208 How to use Sybase in Web App? 875
- 7.0.209 How to use the Application Support folder? 875
- 7.0.210 How to use the IOPMCopyScheduledPowerEvents function in Xojo? 876
- 7.0.211 How to validate a GUID? 879
- 7.0.212 How to walk a folder hierarchie non recursively? 879
- 7.0.213 I got this error: PropVal, QDPictMBS.Name (property value), Type mismatch error. Expected CGDataProviderMBS, but got Variant, Name:QDPictMBS 880
- 7.0.214 I registered the MBS Plugins in my application, but later the registration dialog is shown. 880
- 7.0.215 I want to accept Drag & Drop from iTunes 881
- 7.0.216 I'm drawing into a listbox but don't see something. 883
- 7.0.217 I'm searching for a method or so to move a window from position x.y to somewhere else on the screen. 883
- 7.0.218 If I use one of your plug-ins under windows, would this then impose the use of dll after compilation or my would my compiled soft still be a stand-alone single file software? 883
- 7.0.219 Is the fn key on a powerbook keyboard down? 884
- 7.0.220 Is there a case sensitive Dictionary? 884

- 7.0.221 Is there a way to use the MBS plugin to get only the visible item and folder count on a volume?
885
- 7.0.222 Is there an easy way I can launch the Displays preferences panel? 885
- 7.0.223 List of Windows Error codes? 886
- 7.0.224 Midi latency on Windows problem? 886
- 7.0.225 My Xojo Web App does not launch. Why? 886
- 7.0.226 SQLiteDatabase not initialized error? 887
- 7.0.227 Textconverter returns only the first x characters. Why? 887
- 7.0.228 The type translation between CoreFoundation/Foundation and Xojo data types. 888
- 7.0.229 Uploaded my web app with FTP, but it does not run on the server! 890
- 7.0.230 What classes to use for hotkeys? 890
- 7.0.231 What do I need for Linux to get picture functions working? 890
- 7.0.232 What does the NAN code mean? 891
- 7.0.233 What font is used as a 'small font' in typical Mac OS X apps? 891
- 7.0.234 What is last plugin version to run on Mac OS X 10.4? 892
- 7.0.235 What is last plugin version to run on PPC? 892
- 7.0.236 What is last version of the plugins for macOS 32-bit? 893
- 7.0.237 What is the difference between Timer and WebTimer? 893
- 7.0.238 What is the list of Excel functions? 893
- 7.0.239 What is the replacement for PluginMBS? 894
- 7.0.240 What to do on Xojo reporting a conflict? 894
- 7.0.241 What to do with a NSImageCacheException? 895
- 7.0.242 What to do with MySQL Error 2014? 895
- 7.0.243 What to do with SQL Plugin reporting Malformed string as error? 895
- 7.0.244 Where is CGGetActiveDisplayListMBS? 895
- 7.0.245 Where is CGGetDisplaysWithPointMBS? 896
- 7.0.246 Where is CGGetDisplaysWithRectMBS? 896
- 7.0.247 Where is CGGetOnlineDisplayListMBS? 896
- 7.0.248 Where is GetObjectClassNameMBS? 896
- 7.0.249 Where is NetworkAvailableMBS? 896

- 7.0.250 Where is StringHeight function in DynaPDF? 897
- 7.0.251 Where is XLSDocumentMBS class? 897
- 7.0.252 Where to get information about file formats? 897
- 7.0.253 Where to register creator code for my application? 898
- 7.0.254 Which Mac OS X frameworks are 64bit only? 898
- 7.0.255 Which plugins are 64bit only? 899
- 7.0.256 Why application doesn't launch because of a missing ddraw.dll!? 899
- 7.0.257 Why application doesn't launch because of a missing shlwapi.dll!? 899
- 7.0.258 Why do I hear a beep on keydown? 899
- 7.0.259 Why does folderitem.item return nil? 899
- 7.0.260 Why doesn't showurl work? 899
- 7.0.261 Why don't the picture functions not work on Linux? 900
- 7.0.262 Why have I no values in my chart? 900
- 7.0.263 Will application size increase with using plugins? 900
- 7.0.264 XLS: Custom format string guidelines 900
- 7.0.265 Xojo doesn't work with your plugins on Windows 98. 901
- 7.0.266 Xojo or my RB application itself crashes on launch on Mac OS Classic. Why? 902

Chapter 7

The FAQ

7.0.1 Can anyone help me convert seconds to time in this format hh:mm:ss?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Sure, here's a routine I use (which has an advantage over the previously-posted Date-based solution in that you don't have to rely on the creation of an object – all that happens is some division and string concatenation):

Example:

```
Function SecsToTimeString(timeInSecs as Integer, padHours as boolean, padMinutes as boolean) as string
// Given an amount time (in seconds), generates a string representing that amount
// of time. The padHours and padMinutes parameters determine whether to display
// hours and minutes if their values are zero.
```

```
// Examples:
// timeInSecs = 90, padHours = true; returns "00:01:30"
// timeInSecs = 1, padHours = false, padMinutes = true; returns "00:01"
// timeInSecs = 3601, padMinutes = false; returns "01:00:01"
```

```
dim hours, minutes, seconds as Integer
dim hoursString, minutesString as string
```

```
hours = timeInSecs / 3600
minutes = (timeInSecs mod 3600) / 60
seconds = timeInSecs mod 60
```

```
if hours = 0 then
if padHours then
hoursString = "00:"
else
hoursString = ""
end if
```

```

else
hoursString = Format(hours, "##\:")
end if
if minutes = 0 then
if hours <>0 or padMinutes then
minutesString = "00:"
else
minutesString = ""
end if
else
minutesString = Format(minutes, "00\:")
end if

return hoursString + minutesString + Format(seconds, "00")
End Function

```

Notes: (from the rb mailinglist)

7.0.2 Do you have plugins for Android?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Since there is no plugin SDK for Android, we have no way to make a plugin for Android.

Notes: We support macOS, Windows, Linux and iOS.

7.0.3 How do I get the proper highlight color on Mac OS X for active/inactive selection?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use functions from NSColor to get proper highlight color in RGB:

Example:

```

Function ProperHighlightColor(active as Boolean) As Color
#if TargetCocoa
Dim theColor As NSColorMBS
If active Then
theColor = NSColorMBS.alternateSelectedControlColor
Else
theColor = NSColorMBS.secondarySelectedControlColor
End If

```

```

Dim rgbColor As NSColorMBS = theColor.colorUsingColorSpaceName(NSColorSpaceMBS.NSCalibrate-

```

```

dRGBColorSpace)
If rgbColor <>Nil Then
Dim red as Integer = rgbColor.redComponent * 255.0
Dim green as Integer = rgbColor.greenComponent * 255.0
Dim blue as Integer = rgbColor.blueComponent * 255.0
Return RGB(red, green, blue)
Else
Return HighlightColor
End If
#else
return HighlightColor
#endif
End Function

```

Notes: As you see we convert color to Calibrated RGB for best results.
See also:

- 7.0.4 How to catch delete key? 741
- 7.0.5 How to convert cmyk to rgb? 742
- 7.0.6 How to delete a folder? 743
- 7.0.7 How to detect if CPU is 64bit processor? 744
- 7.0.8 How to query variant type string for a variant? 745
- 7.0.9 How to refresh a htmlviewer on Windows? 746

7.0.4 How to catch delete key?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: The following is the code in keydown event catches delete or backspace keys.

Example:

```

Function KeyDown(Key As String) As Boolean
if asc(key) = 8 or asc(key) = 127 then
MsgBox "Delete"
Return true
end if
End Function

```

See also:

- 7.0.3 How do I get the proper highlight color on Mac OS X for active/inactive selection? 740

- 7.0.5 How to convert cmyk to rgb? 742
- 7.0.6 How to delete a folder? 743
- 7.0.7 How to detect if CPU is 64bit processor? 744
- 7.0.8 How to query variant type string for a variant? 745
- 7.0.9 How to refresh a htmlviewer on Windows? 746

7.0.5 How to convert cmyk to rgb?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

The following is the code to convert cmyk values to an RGB color datatype.

It's just a basic estimate of the color values. If you are looking for completely color accurate solution, this is not it. It should work for most people. :)

Example:

Function CMYKToRGB(c as Integer, m as Integer, y as Integer, k as Integer) As color

// converts c,m,y,k values (0-100) to color data type RGB

// place this in a method. Supply C,M,Y,K values-

// it returns color datatype

```
dim color_RGB as color
```

```
dim r, g, b as Integer
```

```
r=255-round(2.55*(c+k))
```

```
if r<0 then
```

```
r=0
```

```
end if
```

```
g=255-round(2.55*(m+k))
```

```
if g<0 then
```

```
g=0
```

```
end if
```

```
b=255-round(2.55*(y+k))
```

```
if b<0 then
```

```
b=0
```

```
end if
```

```
color_RGB=RGB(r,g,b)
```

```
return color_RGB
```

```
End Function
```

Notes:

(from the rb mailinglist)
See also:

- 7.0.3 How do I get the proper highlight color on Mac OS X for active/inactive selection? 740
- 7.0.4 How to catch delete key? 741
- 7.0.6 How to delete a folder? 743
- 7.0.7 How to detect if CPU is 64bit processor? 744
- 7.0.8 How to query variant type string for a variant? 745
- 7.0.9 How to refresh a htmlviewer on Windows? 746

7.0.6 How to delete a folder?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: The following is the code that deletes a folder recursively.

Example:

```
Sub deletefolder(f as folderitem)
dim files(-1) as FolderItem

if f=nil then Return

// delete single file
if f.Directory=false then
f.Delete
Return
end if

// get a list of all items in that folder
dim i,c as Integer
c=F.Count
for i=1 to c
files.Append f.TrueItem(i)
next

// delete each item
for each fo as FolderItem in files
if fo=nil then
' ignore
elseif fo.Directory then
deletefolder fo
fo.delete
else ' file
```

```
fo.Delete
end if
next
```

```
f.Delete
End Sub
```

See also:

- 7.0.3 How do I get the proper highlight color on Mac OS X for active/inactive selection? 740
- 7.0.4 How to catch delete key? 741
- 7.0.5 How to convert cmyk to rgb? 742
- 7.0.7 How to detect if CPU is 64bit processor? 744
- 7.0.8 How to query variant type string for a variant? 745
- 7.0.9 How to refresh a htmlviewer on Windows? 746

7.0.7 How to detect if CPU is 64bit processor?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Via CPUID you can ask CPU:

Example:

```
dim c as new CPUIDMBS

if c.Flags(CPUIDMBS.kFeatureLM) then
MsgBox "64-bit CPU"
else
MsgBox "32-bit CPU"
end if
```

Notes: Should work on all intel compatible CPUs.

See also:

- 7.0.3 How do I get the proper highlight color on Mac OS X for active/inactive selection? 740
- 7.0.4 How to catch delete key? 741
- 7.0.5 How to convert cmyk to rgb? 742
- 7.0.6 How to delete a folder? 743
- 7.0.8 How to query variant type string for a variant? 745
- 7.0.9 How to refresh a htmlviewer on Windows? 746

7.0.8 How to query variant type string for a variant?

Plugin Version: 20.5, Platforms: macOS, Linux, Windows.

Answer: The following example function returns type string for variant.

Example:

```
Public Function VariantTypeString(v as Variant) as string
// Xojo's VarType doesn't know Unsigned integers
'Dim type As Integer = VarType(v)

// MBS VarType can detect unsigned integer
Dim type As Integer = GetVariantTypeMBS(v)

Dim IsArray As Boolean = BitwiseAnd(type, Variant.TypeArray) = Variant.TypeArray

// type without array
type = BitwiseAnd(type, Bitwise.OnesComplement(Variant.TypeArray))

// build a dictionary to map types on first call
Static TypeMap As Dictionary
If TypeMap = Nil Then
TypeMap = New Dictionary
TypeMap.Value(Variant.TypeBoolean) = "Boolean"
TypeMap.Value(Variant.TypeCFStringRef) = "CFStringRef"
TypeMap.Value(Variant.TypeColor) = "Color"
TypeMap.Value(Variant.TypeCString) = "CString"
TypeMap.Value(Variant.TypeCurrency) = "Currency"
TypeMap.Value(Variant.TypeDate) = "Date"
TypeMap.Value(Variant.TypeDateTime) = "DateTime"
TypeMap.Value(Variant.TypeDouble) = "Double"
TypeMap.Value(Variant.TypeInt32) = "Int32"
TypeMap.Value(Variant.TypeInt64) = "Int64"
TypeMap.Value(Variant.TypeInteger) = "Integer"
TypeMap.Value(Variant.TypeNil) = "Nil"
TypeMap.Value(Variant.TypeObject) = "Object"
TypeMap.Value(Variant.TypeOSType) = "OSType"
TypeMap.Value(Variant.TypePString) = "PString"
TypeMap.Value(Variant.TypePtr) = "Ptr"
TypeMap.Value(Variant.TypeSingle) = "Single"
TypeMap.Value(Variant.TypeString) = "String"
TypeMap.Value(Variant.TypeStructure) = "Structure"
TypeMap.Value(Variant.TypeText) = "Text"
TypeMap.Value(Variant.TypeWindowPtr) = "WindowPtr"
TypeMap.Value(Variant.TypeWString) = "WString"

// MBS extra types
TypeMap.Value(Variant.TypeInt32+100) = "UInt32"
TypeMap.Value(Variant.TypeInt64+100) = "UInt64"
```

End If

```
// lookup type

#if DebugBuild then
If Not TypeMap.HasKey(type) Then
Break // missing type
End If
#endif

If IsArray Then
Return "Array of " + TypeMap.Lookup(type,"?")
Else
Return TypeMap.Lookup(type,"?")
End If
End Function
```

See also:

- 7.0.3 How do I get the proper highlight color on Mac OS X for active/inactive selection? 740
- 7.0.4 How to catch delete key? 741
- 7.0.5 How to convert cmyk to rgb? 742
- 7.0.6 How to delete a folder? 743
- 7.0.7 How to detect if CPU is 64bit processor? 744
- 7.0.9 How to refresh a htmlviewer on Windows? 746

7.0.9 How to refresh a htmlviewer on Windows?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can ask the browser to reload the website with this code line:

Example:

```
call htmlViewer1.IERunJavaScriptMBS("javascript:document.location.reload()")
```

See also:

- 7.0.3 How do I get the proper highlight color on Mac OS X for active/inactive selection? 740
- 7.0.4 How to catch delete key? 741
- 7.0.5 How to convert cmyk to rgb? 742

- 7.0.6 How to delete a folder? 743
- 7.0.7 How to detect if CPU is 64bit processor? 744
- 7.0.8 How to query variant type string for a variant? 745

7.0.10 Is there an example for vector graphics in Xojo?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Try this example inside the paint event of a window:

Example:

```
dim v as Group2D
dim r as RectShape
dim s as StringShape
```

```
const pi=3.14
```

```
s=new StringShape
s.Text="Hello World!"
s.TextFont="Geneva"
s.TextSize=24
s.FillColor=rgb(0,0,255)
s.Italic=true
s.y=5
s.x=0
```

```
r=new RectShape
```

```
r.X=0
r.y=0
r.Height=100
r.Width=180
r.BorderColor=rgb(255,0,0)
r.FillColor=rgb(0,255,0)
r.BorderWidth=5
r.Border=50
```

```
v=new Group2d
v.Append r
v.Append s
v.Rotation=pi*-20.0/180.0
v.x=150
v.y=150
```

```
g.DrawObject v
```

7.0.11 Picture functions do not preserve resolution values?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, the picture functions return pictures with no/default resolution values.

Example:

```
dim l as Picture = LogoMBS(500)
```

```
l.HorizontalResolution = 300
```

```
l.VerticalResolution = 300
```

```
dim r as Picture = l.Rotate90MBS
```

```
MsgBox str(r.HorizontalResolution)+" x "+str(r.VerticalResolution)
```

```
r.HorizontalResolution = l.HorizontalResolution
```

```
r.VerticalResolution = l.VerticalResolution
```

```
MsgBox str(r.HorizontalResolution)+" x "+str(r.VerticalResolution)
```

Notes: So please fix them yourself after calling a function.

Maybe in the future this changes, but currently you can't really set this easily from plugin code.

7.0.12 A toolbox call needs a rect - how do I give it one?

Plugin Version: all, Platforms: macOS, Windows.

Answer: Fill a memoryblock like this:

Example:

```
Dim MB As Memoryblock
```

```
MB = NewMemoryBlock(8)
```

```
MB.Short(0) = window1.Top
```

```
MB.Short(2) = window1.Left
```

```
MB.Short(4) = window1.Height+window1.Top // bottom
```

```
MB.Short(6) = window1.Width+window1.Left // right
```

7.0.13 API client not supported?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: If you get this exception message on `SQLConnectionMBS.Connect`, we may have a problem.

Notes: First case is that the given thing is not supported (e.g. MS SQL directly on Mac).

Second case is that the plugin compilation went wrong and the support for the database was not linked into the plugin. Like MySQL missing or MS SQL on Windows missing. In that case please contact us to fix the plugin.

7.0.14 Can I access Access Database with Java classes?

Plugin Version: all, Platform: Windows.

Answer: You can use `ucanaccess` to access databases created with Microsoft

Example:

```

dim options(-1) as string

// load all the jar files we have in a folder called java:

dim appFolder as FolderItem = GetFolderItem("")

Dim count as Integer = appFolder.Parent.Child("java").Count
dim libjs() as string
For i as Integer = 1 to count
Dim f As FolderItem = appFolder.Parent.Child("java").item(i)
If f <> Nil and f.Exists Then
libjs.append f.NativePath+";"
End If
Next

// now init virtual machine
dim library as string = Join(libjs, "")
dim vm as new JavaVMMBS(library)

if vm.Handle = 0 then
MsgBox "Failed to initialize virtual machine"
else
// now make a new database connection with ucanaccess
dim d as new JavaDatabaseMBS(vm,"net.ucanaccess.jdbc.UcanaccessDriver")
Dim DbFile as FolderItem = appFolder.Parent.Child("Database11.accdb")
dim j as JavaConnectionMBS = d.getConnection("jdbc:ucanaccess://" + DbFile.NativePath)

// select and show values
dim r as JavaResultSetMBS = j.MySelectSQL("Select * From test")
while r.NextRecord
MsgBox r.getString("FirstName") + " " + r.getString("LastName")
wend

end if

```

Exception e as JavaExceptionMBS

```
MsgBox e.message+" errorcode: "+str(e.ErrorNumber)
```

Notes: see website:

<http://ucanaccess.sourceforge.net/site.html>

7.0.15 Can I create PDF from Xojo Report using DynaPDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, we have a graphics class integration for DynaPDF.

Notes: Since MBS Plugin in version 19.2, we can integrate reports with Xojo.

7.0.16 Can I use AppleScripts in a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, but they run on the server, not on the client.

Example:

```
dim a as new AppleScriptMBS
```

```
// query my application name
```

```
a.Compile "tell application ""System Events"" to return name of current application"
```

```
// run
```

```
a.Execute
```

```
// show result
```

```
label1.text = a.Result
```

```
// shows something like "My Application.fcgi.debug"
```

Notes: This can be useful to control the server from remote, if and only if the your sever is running Mac OS X.

7.0.17 Can I use graphics class with DynaPDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Sorry, no. We can't provide a graphics subclass from plugin.

Notes: This is a feature request to allow graphics subclasses:
Feedback case 11391: [feedback://showreport?report_id=11391](https://feedback.apple.com/feedback/showreport?report_id=11391)

7.0.18 Can I use sockets on a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, but they run on the server, not on the client.

Notes: You can use `HTTPSocket`, `SMTPSocket`, `POP3Socket`, `SMTPSecureSocket`, `SecurePOP3Socket`, `EasyTCPSocket`, `EasyUDPSocket`, `AutoDiscovery`, our Bonjour classes or our `CURL*` classes. But all of them work on the server, not on the client.

This means if you search for a printer with Bonjour, you can find the printers in the local network on your server hosting site. Using `SMTPSocket` may be a good idea for sending emails from the server like notifications.

7.0.19 Can I use your ChartDirector plugin on a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, our ChartDirector plugin works just fine on the Xojo Web Edition.

Example:

```
// The data for the pie chart
dim data(-1) as Double=array(55.0, 18.0, 25.0, 22.0, 18.0, 30.0, 35.0)

// The labels for the pie chart, Words are chosen random to check font!
dim labels(-1) as string=array("Germany", "Italy", "France", "Spain", "UK", "Poland", "Russia")

// The colors to use for the sectors
dim colors(-1) as Integer

colors.Append &h66aaee
colors.Append &heebb22
colors.Append &hbbsbbb
colors.Append &h8844ff

if TargetLinux then
CDBaseChartMBS.SetFontSearchPath "/usr/share/fonts/truetype/msttcorefonts"
end if

// Create a PieChart object of size 360 x 300 pixels
dim c as new CDPieChartMBS(700, 600)
```

```

c.setBackground(c.linearGradientColor(0, 0, 0, c.getHeight(), &h0000cc, &h000044))
c.setRoundedFrame(&hffffff, 16)
dim tt as CDTextBoxMBS = c.addTitle("ChartDirector Demonstration", "timesbi.ttf", 18)
tt.setMargin(0, 0, 16, 0)
tt.setFontColor(&hFFFFFF)

// Set the center of the pie at (180, 140) and the radius to 100 pixels
c.setPieSize 350,300,150
// Set the sector colors
c.setColors(c.kDataColor, colors)

// Draw the pie in 3D with a pie thickness of 20 pixels
c.set3D(20)

dim t as CDTextBoxMBS = c.setLabelStyle("arialbd.ttf", 10, &h000000)
t.setBackground(CDPieChartMBS.kSameAsMainColor, CDPieChartMBS.kTransparent, CDPieChartMBS.soft-
Lighting(CDPieChartMBS.kRight, 0))
t.setRoundedCorners(8)

// Use local gradient shading for the sectors, with 5 pixels wide
// semi-transparent white (bbffffff) borders
c.setSectorStyle(CDPieChartMBS.kLocalGradientShading, &hbbffffff, 0)

// Set the pie data and the pie labels
c.setData data,labels
call c.setLabelStyle "arialbd.ttf",18

dim pic as picture = c.makeChartPicture
dim wp as new WebPicture(pic, Picture.FormatJPEG) // JPEG makes it smaller and faster

ImageView1.Picture=wp

```

Notes: Be aware that our plugin produces pictures for you, which you assign to ImageViews. Transferring those pictures takes time, so you can optimize that with using WebPicture class. There you can decide between different compressions to improve speed (use JPEG instead of PNG).

e.g. if you use ubuntu, you can install the ttf-mscorefonts-installer package and call this method with `"/usr/share/fonts/truetype/msttcorefonts"` as the path. No backslash on the end of a path, please.

7.0.20 Can I use your DynaPDF plugin on a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, our DynaPDF plugin works just fine on the Xojo Web Edition.

Notes: PDF files are created on the server. You may want to offer a preview to the user which uses reduced resolution images to reduce the time to download the PDF.

See our Create PDF example for the Xojo Web Edition.

7.0.21 Can I use your plugin controls on a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: No.

7.0.22 Can you get an unique machine ID?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: There is nothing like an unique machine ID.

Notes: 1:

You can use the MAC IDs of the network interfaces.

This can be changed by the user with software tools.

And the list of network interfaces changes if user reorder the interfaces.

2:

You can use the system folder creation date/time.

This may stay equal after cloning machines or after migration to new PC.

3:

You can use the Mac Serialnumber.

Mac only and it can happen that a Mac does not have a serial number.

4:

You can use the x86 CPU ID.

This is x86 CPU only and does not avoid running on the same CPU in different PCs.

7.0.23 ChartDirector: Alignment Specification

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Alignment Specification

Notes: In many ChartDirector objects, you may specify the alignment of the object's content relative to its boundary. For example, for a TextBox object, you may specify the text's alignment relative to the box boundary by using TextBox.setAlignment.

The ChartDirector API defines several constants for the alignment options.

ConstantValueDescription

BottomLeft	1	The leftmost point on the bottom line.
BottomCenter	2	The center point on the bottom line.
BottomRight	3	The rightmost point on the bottom line.
Left	4	The leftmost point on the middle horizontal line.
Center	5	The center point on the middle horizontal line.
Right	6	The rightmost point on the middle horizontal line.
TopLeft	7	The leftmost point on the top line.
TopCenter	8	The center point on the top line.
TopRight	9	The rightmost point on the top line.
Bottom	2	The center point on the bottom line. Same as BottomCenter.
Top	8	The center point on the top line. Same as TopCenter.
TopLeft2	10	An alternative top-left position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, TopLeft2 refers to refers to the left of the top side, while TopLeft refers to the top of the left side. The reverse applies for a horizontal axis.
TopRight2	11	An alternative top-right position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, TopRight2 refers to refers to the right of the top side, while TopRight refers to the top of the right side. The reverse applies for a horizontal axis.
BottomLeft2	12	An alternative bottom-left position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, BottomLeft2 refers to refers to the left of the bottom side, while BottomLeft refers to the bottom of the left side. The reverse applies for a horizontal axis.
BottomRight2	13	An alternative bottom-right position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, BottomRight2 refers to refers to the right of the bottom side, while BottomRight refers to the bottom of the right side. The reverse applies for a horizontal axis.

7.0.24 ChartDirector: Color Specification

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Color Specification

Notes: Many functions in the ChartDirector API accept colors as parameters. ChartDirector supports col-

ors specified in web and HTML compatible ARGB format, in which ARGB refers to the Alpha transparency, Red, Green and Blue components of the color.

In addition to ARGB colors, ChartDirector supports "dynamic" colors. A dynamic color is a color that changes depending on the position of the pixels. The "dynamic" colors that ChartDirector supports include "pattern colors", "metal colors", "gradient colors", "zone colors" and "dash line colors".

ChartDirector supports specifying colors indirectly using "palette colors". When a "palette color" is used, the color is specified as an index to a palette. The actual color is looked up from the palette. ARGB Color ARGB color consists of 4 components - alpha transparency, red, green and blue. The four components are encoded as a 32-bit number, with each component occupying 8 bits. In hexadecimal notation, it is AAR-RGGBB, where AA, RR, GG and BB are the alpha transparency, red, green and blue components.

Each component ranges from 00 - FF (0 - 255), representing its intensity. For example, pure red color is 00FF0000, pure green color is 0000FF00, and pure blue color is 000000FF. White color is 00FFFFFF, and black color is 00000000.

Most programming language requires you to put special prefix in front of hexadecimal characters. For C++, the prefix is "0x". For example, the syntax for the hexadecimal number 00FFFFFF is 0x00FFFFFF, or simply 0xFFFFFF.

For the alpha transparency component, a zero value means the color is not transparent at all. This is equivalent to traditional RGB colors. A non-zero alpha transparency means the color is partially transparent. The larger the alpha transparency, the more transparent the color will be. If a partially transparent color is used to draw something, the underlying background can still be seen.

For example, 80FF0000 is a partially transparent red color, while 00FF0000 is a non-transparent red color.

Note that ChartDirector's ARGB color is web and HTML compatible. For example, red is FF0000, the same as in HTML. There are many resources on the web that provide tables in which you can click a color and it will show its HTML color code. These color codes can be used in ChartDirector.

If alpha transparency is FF (255), the color is totally transparent. That means the color is invisible. It does not matter what the RGB components are. So in ChartDirector, only one totally transparent color is used - FF000000. All other colors of the form FFnnnnnn are reserved to represent palette colors and dynamic colors, and should not be interpreted as the normal ARGB colors.

The totally transparent color FF000000 is often used in ChartDirector to disable drawing something. For example, if you want to disable drawing the border of a rectangle, you can set the border color to totally transparent.

For convenience, ChartDirector defines a constant called Transparent, which is equivalent to FF000000. Pattern Color

A pattern color is a dynamic color that changes according to a 2D periodic pattern. When it is used to fill an area, the area will look like being tiled with a wallpaper pattern.

Pattern colors are created using `BaseChart.patternColor`, `BaseChart.patternColor2`, `DrawArea.patternColor` and `DrawArea.patternColor2`. The `patternColor` method creates pattern colors using an array of colors as a bitmap. The `patternColor2` method creates pattern colors by loading the patterns from image files.

These methods return a 32-bit integer acting as a handle to the pattern color. The handle can be used in any `ChartDirector` API that expects a color as its input.

A metal color is a color of which the brightness varies smoothly across the chart surface as to make the surface look shiny and metallic. `ChartDirector` supports using any color as the base color of the metal color. In particular, using yellow and grey as the base colors will result in metal colors that look gold and silver.

Metal colors are most often used as background colors of charts. They are created using `CDBaseChartMBS.metalColor`, `CDBaseChartMBS.goldColor` and `CDBaseChartMBS.silverColor`. The first method allows you to specify an arbitrary base color. The second and third methods use yellow and grey as the base colors, resulting in gold and silver metal colors.

These methods return a 32-bit integer acting as a handle to the gradient color. The handle can be used in any `ChartDirector` API that expects a color as its input.

A gradient color is a color that changes progressively across a direction.

Gradient colors are created using `BaseChart.gradientColor`, `BaseChart.gradientColor2`, `DrawArea.gradientColor` and `DrawArea.gradientColor2`. The `gradientColor` method creates a 2-point gradient color that changes from color A to color B. The `gradientColor2` method creates a multi-point gradient colors that changes from color A to B to C

These methods return a 32-bit integer acting as a handle to the gradient color. The handle can be used in any `ChartDirector` API that expects a color as its input.

One common use of multi-point gradient colors is to define colors that have metallic look and feel. Please refer to `DrawArea.gradientColor2` for details.

A dash line color is a color that switches on and off periodically. When used to draw a line, the line will appear as a dash line.

Dash line colors are created using `BaseChart.dashLineColor` and `DrawArea.dashLineColor`. They accept a line color and a dash pattern code as arguments, and return a 32-bit integer acting as a handle to the dash line color. The handle can be used in any `ChartDirector` API that expects a color as its input.

Zone Colors
A zone color is for XY charts only. It is a color that automatically changes upon reaching a data threshold value along the x-axis or y-axis. Zone colors are created using `Layer.xZoneColor`, `Layer.yZoneColor`, `XYChart.xZoneColor` or `XYChart.yZoneColor`.

Palette Colors
Palette colors are colors of the format `FFFFnnnn`, where the least significant 16 bits (`nnnn`) are the index to the palette. A palette is simply an array of colors. For a palette color, the actual color is obtained by

looking up the palette using the index. For example, the color FFFF0001 is the second color in the palette (first color is index 0).

The colors in the palette can be ARGB colors or "dynamic" colors (pattern, gradient and dash line colors).

The first eight palette colors have special significance. The first three palette colors are the background color, default line color, and default text color of the chart. The 4th to 7th palette colors are reserved for future use. The 8th color is a special dynamic color that is equal to the data color of the "current data set".

The 9th color (index = 8) onwards are used for automatic data colors. For example, in a pie chart, if the sector colors are not specified, ChartDirector will automatically use the 9th color for the first sector, the 10th color for the second sector, and so on. Similarly, for a multi-line chart, if the line colors are not specified, ChartDirector will use the 9th color for the first line, the 10th color for the second line, and so on.

The ChartDirector API defines several constants to facilitate using palette colors.

ConstantValueDescription

Palette	FFFF0000	The starting point of the palette. The first palette color is (Palette + 0). The nth palette color is (Palette + n - 1).
BackgroundColor	FFFF0000	The background color.
LineColor	FFFF0001	The default line color.
TextColor	FFFF0002	The default text color.
[Reserved]	FFFF0003 - FFFF0006	These palette positions are reserved. Future versions of ChartDirector may use these palette positions for colors that have special significance.
SameAsMainColor	FFFF0007	A dynamic color that is equal to the data color of the current data set. This color is useful for objects that are associated with data sets. For example, in a pie chart, if the sector label background color is SameAsMainColor, its color will be the same as the corresponding sector color.
DataColor	FFFF0008	The starting point for the automatic data color allocation.

When a chart is created, it has a default palette. You may modify the palette using BaseChart.setColor, BaseChart.setColors, or BaseChart.setColors2.

The advantages of using palette colors are that you can change the color schemes of the chart in one place. ChartDirector comes with several built-in palettes represented by the following predefined constants.

ConstantDescription

7.0.25 ChartDirector: Font Specification

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

defaultPalette	An array of colors representing the default palette. This palette is designed for drawing charts on white backgrounds (or lightly colored backgrounds).
whiteOnBlackPalette	An array of colors useful for drawing charts on black backgrounds (or darkly colored backgrounds).
transparentPalette	An array of colors useful drawing charts on white backgrounds (or lightly colored backgrounds). The data colors in this palette are all semi-transparent.

Answer: ChartDirector: Font Specification

Notes: Font Name

In ChartDirector, the font name is simply the file name that contains the font. For example, under the Windows platform, the "Arial" font is "arial.ttf", while the "Arial Bold" font is "arialbd.ttf".

NOTE: Mac OS X Specific Information

In Mac OS X, in addition to ".ttf", ChartDirector also supports Mac OS X font file formats, such as Font Suitcase files and Datafork files (.dfont). These files often contain multiple fonts. For example, the "GillSans.dfont" file contains 6 fonts.

So in addition to the file name, an index is needed to determine the font. The index is specified by appending a " | " character to the font name, followed by the index number. For example, the third font in "GillSans.dfont" is denoted as "GillSans.dfont | 2". (Note: The first font starts at 0.) If no index number is provided, the first font is assumed.

ChartDirector also supports using Mac OS X Font Manager names. For example, one may use "Gill Sans Light Italic" instead of using "GillSans.dfont | 1" as the font name. However, the Mac OS X Font Manager is active only if someone has logged into the Mac GUI console, so this method is only recommended for developing applications that run on the GUI console.

The sample programs that come with ChartDirector are designed to run on all operating systems, so they use generic font file names (eg. "arial.ttf") instead of Mac OS X specific names. To allow them to run on Mac OS X, ChartDirector on Mac OS X has a built-in table to map common font file names to Mac OS X font names:

"arial.ttf", "arialbd.ttf", "ariali.ttf" and "arialbi.ttf" are mapped to "Arial | 0" (Arial), "Arial | 1" (Arial Bold), "Arial | 2" (Arial Italic) and "Arial | 3" (Arial Bold Italic)

"times.ttf", "timesbd.ttf", "timesi.ttf" and "timesbi.ttf" are mapped to "Times New Roman | 0" (Times New Roman), "Times New Roman | 1" (Times New Roman Bold), "Times New Roman | 2" (Times New Roman Italic) and "Times New Roman | 3" (Times New Roman Bold Italic)

"cour.ttf", "courbd.ttf", "couri.ttf" and "courbi.ttf" are mapped to "Courier New | 0" (Courier New), "Courier New | 1" (Courier New Bold), "Courier New | 2" (Courier New Italic) and "Courier New | 3" (Courier New Bold Italic)

Font Location

ChartDirector on Windows does not come with any font files. It relies on the operating system's font files in the " [windows] \Fonts" directory. To see what fonts are installed in your operating system and their file names, use the File Explorer to view that directory.

ChartDirector on Windows will also search for the font files in the "fonts" subdirectory (if it exists) under the directory where the ChartDirector DLL "chartdir.dll" is installed. This is useful for private fonts. Also, for some especially secure web servers, the web anonymous user may not have access to the " [windows] \Fonts" directory. In this case, you may copy the font files to the above subdirectory.

ChartDirector on Mac OS X relies on operating system font files in "/Library/Fonts" and "/System/Library/Fonts".

ChartDirector on Linux, FreeBSD and Solaris assume the fonts files are in the "fonts" subdirectory under the directory where the ChartDirector shared object "libchartdir.so" is installed. ChartDirector on Linux, FreeBSD and Solaris come with a number of font files in the "fonts" subdirectory.

To keep the download size small, ChartDirector on Linux, FreeBSD and Solaris only come with some commonly used fonts. You may download additional fonts from the Internet. In particular, the Microsoft fonts at

http://sourceforge.net/project/showfiles.php?group_id=34153&release_id=105355

is highly recommended. Please refer to

<http://www.microsoft.com/typography/faq/faq8.htm>

on how you could use the fonts legally in your system.

ChartDirector supports True Type fonts (.ttf), Type 1 fonts (.pfa and .pfb) and Windows bitmap fonts (.fon). On Mac OS X, ChartDirector also supports Font Suitcase and Datafork (.dfont) files. On Linux, FreeBSD and Solaris, ChartDirector also supports Portable Compiled Fonts (.pcf fonts).

If you want ChartDirector to search other directories for the font files, you may list the directories in an environment variable called "FONTSPATH".

If you specify an absolute path name for the font file, ChartDirector will use the absolute path name and will not search other directories.

Artificial Boldening and Italicizing
Whereas most popular font comes with different styles for "normal", "bold", "italic" and "bold italic", some fonts only come with one style (the normal style). For example, the Monotype Corsiva font that comes with MS Office only has the normal style (mtcorsva.ttf). For these cases, you may append the "Bold" and/or "Italic" words after the font file name (separated with a space) to ask ChartDirector to artificially bolden and/or italicize the font. For example, you may specify the font name as "mtcorsva.ttf Bold".

Font List
Instead of specifying a single font file as the font name, you may specify a list of font files as the font name, separated by semi-colons. This is useful when using international characters that are only available in some fonts.

For example, if you would like to use the Arial font ("arial.ttf") for western characters, and the MingLiu font "mingliu.ttc" for Chinese characters (since the Arial font does not have Chinese characters), you may specify the font name as "arial.ttf;mingliu.ttc". In this case, ChartDirector will try the Arial font first. If it cannot find a certain character there, it will try the MingLiu font.

ChartDirector supports several special keywords for specifying the font name indirectly. When these keywords are used as font names, ChartDirector will look up the actual font names from a font table. The keywords are as follows:

KeywordsDescription

"normal"	This default normal font, which is the first font in the font table. This is initially mapped to "arial.ttf" (Arial).
"bold"	The default bold font, which is the second font in the font table. This is initially mapped to "arialbd.ttf" (Arial Bold).
"italic"	The default italic font, which is the third font in the font table. This is initially mapped to "ariali.ttf" (Arial Italic).
"boldItalic"	The default bold-italic font, which is the fourth font in the font table. This is initially mapped to "arialbi.ttf" (Arial Bold Italic).
"fontN"	The (N + 1)th font in the font table (the first font is "font0").

The font table can be modified using `BaseChart.setFontTable` or `DrawArea.setFontTable`.

The advantage of using indirect font names is that you can change the fonts in your charts in one place.

Most font files contain one font. However, it is possible a font file contains multiple fonts (that is, a font collection). For example, in True Type fonts, font files with extension ".ttc" may represent a font collection.

If a font file contains multiple font, the font index can be used to specify which font to use. By default, the font index is 0, which means the first font in the font file will be used.

The font size decides how big a font will appear in the image. The font size is expressed in a font unit called points. This is the same unit used in common word processors.

Instead of specifying font size, some ChartDirector API (eg. `TextBox.setFontSize`) allow you to specify font height and font width separately. You may use different point sizes for font height and font width to create special effects.

This is the color to draw the font. (See Color Specification on how colors are represented in ChartDirector.)

This is the angle in degrees by which the font should be rotated anti-clockwise.

By default, text are laid out horizontally, with characters being drawn from left to right.

ChartDirector also supports vertical layout, with characters being drawn from top to bottom. For example, you may use `BaseChart.addText` to add text that are laid out vertically. Vertical layout is common for

oriental languages such as Chinese, Japanese and Korean.

7.0.26 ChartDirector: Mark Up Language

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Mark Up Language

Notes: ChartDirector Mark Up Language (CDML) is a language for including formatting information in text strings by marking up the text with tags.

CDML allows a single text string to be rendered using multiple fonts, with different colors, and even embed images in the text. **Font Styles**

You can change the style of the text by using CDML tags. For example, the line:

```
<*font=timesi.ttf,size=16,color=FF0000>Hello <*font=arial.ttf,size=12,color=8000*>world!
```

will result in the following text rendered:

In general, all tags in CDML are enclosed by <*> and *>. Attributes within the tags determine the styles of the text following the tags within the same block.

If you want to include <*> in text without being interpreted as CDML tags, use «* as the escape sequence.

The following table describes the supported font style attributes in CDML. See [Font Specification](#) for details on various font attributes.

Attribute	Description
super	Set the following text to be in superscript style. This attribute does not need to have a value. (You may use "super" as the attribute instead of "super=1".)

Note that unlike HTML tags, no double or single quotes are used in the tags. It is because CDML tags are often embedded as string literals in source code. The double or single quotes, if used, will conflict with the string literal quotes in the source code. Therefore in CDML, no quotes are necessary and they must not be used.

Also, unlike HTML tags, CDML uses the comma character as the delimiter between attributes. It is because certain attributes may contain embed spaces (such as the font file name). So space is not used as the delimiter and the comma character is used instead.

Note the font attribute above starts a new style section, while other attributes just modify the current style

font	Starts a new style section, and sets the font name. You may use this attribute without a value (that is, use "font" instead of "font=arial.ttf") to create a new style section without modifying the font name.
size	The font size.
width	The font width. This attribute is used to set the font width and height to different values. If the width and height are the same, use the size attribute.
height	The font height. This attribute is used to set the font width and height to different values. If the width and height are the same, use the size attribute.
color	The text color in hex format.
bgColor	The background color of the text in hex format.
underline	The line width of the line used to underline the following characters. Set to 0 to disable underline.
sub	Set the following text to be in subscript style. This attribute does not need to have a value. (You may use "sub" as the attribute instead of "sub=1".)
super	Set the following text to be in superscript style.
xoffset	Draw the following the text by shifting the text horizontally from the original position by the specified offset in pixels.
yoffset	Draw the following the text by shifting the text vertically from the original position by the specified offset in pixels.
advance	Move the cursor forward (to the right) by the number of pixels as specified by the value this attribute.
advanceTo	Move the cursor forward (to the right) to the position as specified by the value this attribute. The position is specified as the number of pixels to the right of the left border of the block. If the cursor has already passed through the specified position, the cursor is not moved.

section. You may use `<*/font*>` to terminate a style section, which will restore the font styles to the state before the style section.

Blocks and Lines

In CDML, a text string may contain multiple blocks. A block may contain multiple lines of text by separating them with new line characters ("`\n`") or with `<*br*>`. The latter is useful for programming languages that cannot represent new line characters easily.

For example, the line:

```
<*size=15*><*block*><*color=FF*>BLOCK<*br*>ONE<*/*>and <*block*><*color=FF00*>BLOCK<*br*>TWO
```

will result in the following text rendered:

The above example contains a line of text. The line contains two blocks with the characters " and " in between. Each block in turn contains two lines. The blocks are defined using `<*block*>` as the start tag and

`<*/*>` as the end tag.

When a block ends, font styles will be restored to the state before entering the block. Embedding Images
CDML supports embedding images in text using the following syntax:

```
<*img=my_image_file.png*>
where my_image_file.png is the path name of the image file.
```

For example, the line:

```
<*size=20*>A <*img=sun.png*>day
will result in the following text rendered:
```

ChartDirector will automatically detect the image file format using the file extension, which must either png, jpg, jpeg, gif, wbmp or wmp (case insensitive).

Please refer to `BaseChart.setSearchPath` or `DrawArea.setSearchPath` on the directory that ChartDirector will search for the file.

The `<*img*>` tag may optionally contain width and height attributes to specify its pixel width and height. In this case, ChartDirector will stretch or compress the image if necessary to the required width and height. Blocks Attributes

CDML supports nesting blocks, that is, a block can contain other sub-blocks. Attributes are supported in the `<*block*>` tag to control the alignment and orientation of the sub-blocks. The `<*img=my_image_file.png*>` is treated as a block for layout purposes.

For example, the line:

```
<*block,valign=absmiddle*><*img=molecule.png*><*block*>Hydrazino\nMolecule<*/*><*/*>
will result in the following text rendered:
```

The the above starts `<*block,valign=absmiddle*>` which specifies its content should align with each others in the vertical direction using the absolute middle alignment. The block contains an image, followed by a space characters, and then another block which has two lines of text.

The following table describes the supported attributes inside `<*block*>` tag:

AttributeDescription

The value `baseline` means the baseline of sub-blocks should align with the baseline of the block. The `baseline`

width	The width of the block in pixels. By default, the width is automatically determined to be the width necessary for the contents of the block. If the width attribute is specified, it will be used as the width of the block. If the width is insufficient for the contents, the contents will be wrapped into multiple lines.
height	The height of the block in pixels. By default, the height is automatically determined to be the height necessary for the contents of the block. If the height attribute is specified, it will be used as the height of the block.
maxwidth	The maximum width of the block in pixels. If the content is wider than maximum width, it will be wrapped into multiple lines.
truncate	The maximum number of lines of the block. If the content requires more than the maximum number of lines, it will be truncated. In particular, if truncate is 1, the content will be truncated if it exceeds the maximum width (as specified by maxwidth or width) without wrapping. The last few characters at the truncation point will be replaced with "...".
linespacing	The spacing between lines as a ratio to the default line spacing. For example, a line spacing of 2 means the line spacing is two times the default line spacing. The default line spacing is the line spacing as specified in the font used.
bgColor	The background color of the block in hex format.
valign	The vertical alignment of sub-blocks. This is for blocks that contain sub-blocks. Supported values are baseline, top, bottom, middle and absmiddle.

is the underline position of text. This is normal method of aligning text, and is the default in CDML. For images or blocks that are rotated, the baseline is the same as the bottom.

The value top means the top line of sub-blocks should align with the top line of the block.

The value bottom means the bottom line of sub-blocks should align with the bottom line of the block.

The value middle means the middle line of sub-blocks should align with the the middle line of the block. The middle line is the middle position between the top line and the baseline.

The value absmiddle means the absolute middle line of sub-blocks should align with the absolute middle line of the block. The absolute middle line is the middle position between the top line and the bottom line.

halign The horizontal alignment of lines. This is for blocks that contain multiple lines. Supported values are left, center and right.

The value left means the left border of each line should align with the left border of the block. This is the default.

The value center means the horizontal center of each line should align with the horizontal center of the block.

The value right means the right border of each line should align with the right border of the block.

angle Rotate the content of the block by an angle. The angle is specified in degrees in counter-clockwise direction.

7.0.27 ChartDirector: Parameter Substitution and Formatting

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Parameter Substitution and Formatting

Notes: ChartDirector charts often contain a lot of text strings. For example, sector labels in pie charts, axis labels for x and y axes, data labels for the data points, HTML image maps, etc, are all text strings.

ChartDirector uses parameter substitution to allow you to configure precisely the information contained in the text and their format.

Format Strings

In parameter substitution, format strings are used to specify the entities to be include into labels and how to format numbers and dates.

For example, when drawing a pie chart with side label layout, the default sector label format string is:

```
" { label } ( { percent } %)"
```

When the sector label is actually drawn, ChartDirector will replace " { label } " with the sector name, and " { percent } " with the sector percentage. So the above label format will result is a sector label similar to "ABC (34.56%)".

You may change the sector label format by changing the format string. For example, you may change it to:

```
" { label } : US$ { value | 2 } K ( { percent } %)"
```

The sector label will then become something like "ABC: US\$ 123.00 (34.56%)".

In general, in ChartDirector parameter substitution, parameters enclosed by curly brackets will be substituted with their actual values when creating the texts.

For parameters that are numbers or dates/times, ChartDirector supports a special syntax in parameter substitution to allow formatting for these values. Please refer to the Number Formatting and Date/Time Formatting sections below for details.

Parameter Expressions

ChartDirector supports numeric expressions in format strings. They are denoted by enclosing the expression with curly brackets and using "=" as the first character. For example:

```
"USD { value } (Euro { = { value } *0.9 } )"
```

In the above, "{ value }" will be substituted with the actual value of the sector. The expression "{ = { value } *0.9 }" will be substituted with the actual value of the sector multiplied by 0.9.

ChartDirector parameter expressions support operators "+", "-", "*", "/", "%" (modulo) and "^" (exponentiation). Operators "*", "/", "%", "^" is computed first, followed by "+" and "-". Operators of the same precedence are computed from left to right). Parenthesis "(" and ")" can be used to change the computation order.

Parameters for Pie Charts

The following table describes the parameters available for pie charts.

Parameter	Description
sector	The sector number. The first sector is 0, while the nth sector is (n-1).
dataSet	Same as { sector } . See above.
label	The text label of the sector.
dataSetName	Same as { label } . See above.
value	The data value of the sector.
percent	The percentage value of the sector.
fieldN	The (N + 1)th extra field. For example, { field0 } means the first extra field. An extra field is an array of custom elements added using BaseChart.addExtraField or BaseChart.addExtraField2.

Parameters for All XY Chart Layers

The followings are parameters that are apply to all XY Chart layers in general. Some layer types may have additional parameters (see below).

Note that certain parameters are inapplicable in some context. For example, when specifying the aggregate label of a stacked bar chart, the { dataSetName } parameter is inapplicable. It is because a stacked bar is composed of multiple data sets. It does not belong to any particular data set and hence does not have a data set name.

{ fieldN } means the extra field is indexed by the data point number. The Pth data point corresponds to the Pth element of the extra field.

Additional Parameters for Line Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for Trend Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for Box-Whisker Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for HLOC and CandleStick Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for Vector Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Parameters for All Polar Layers

The followings are parameters that are apply to all Polar Chart layers in general. Some layer types may have additional parameters (see below).

{ fieldN } means the extra field is indexed by the data point number. The Pth data point corresponds to the Pth element of the extra field.

Additional Parameters for PolarVector Layers

The followings are parameters that are in additional to the parameters for all Polar Chart layers.

Parameters for Axis

The following table describes the parameters available for pie charts.

Number Formatting

For parameters that are numbers, ChartDirector supports a number of formatting options in parameter substitution.

For example, if you want a numeric field { value } to have a precision of two digits to the right of the decimal point, use ',' (comma) as the thousand separator, and use '.' (dot) as the decimal point, and you may use { value | 2, . } . The number 123456.789 will then be displayed as 123,456.79.

For numbers, the formatting options are specified using the following syntax:

```
{ [ param ] | [ a ] [ b ] [ c ] [ d ] }
```

where:

If this field starts with "E" or "e", followed by a number, it means formatting the value using scientific notation with the specified number of decimal places. If the "E" or "e" is not followed by a number, 3 is assumed.

For example, { value | E4 } will format the value 10.3 to 1.0300E+1, and { value | e4 } will format the same value to 1.0300e+1.

If this field starts with "G" or "g", followed by a number, it means formatting the value using the scientific notation only if the value is large and requires more than the specified number of digits, or the value is less than 0.001. If scientific notation is used, the number following "G" or "g" also specifies the number of significant digits to use. If the "G" or "g" is not followed by a number, 4 is assumed.

For example, consider the format string { value | G4 } . The value 10 will be formatted to 10. The value 100000 will be formatted to 1.000E+5. Similarly, for { value | g4 } , the value 10 will be formatted to 10, while the value 100000 will be formatted to 1.000e+5.

If you skip this argument, ChartDirector will display the exact value using at most 6 decimal places.

You may skip [b] [c] [d] . In this case, the default will be used.

Date/Time Formatting

For parameters that are dates/times, the formatting options can be specified using the following syntax:

```
{ [ param ] | [ datetime_format_string ] }
```

where [datetime_format_string] must start with an english character (A-Z or a-z) that is not "G", "g", "E" or "e", and may contain any characters except ' ' . (If it starts with "G", "g", "E" or "e", it will be considered as a number format string.)

Certain characters are substituted according to the following table. Characters that are not substituted will be copied to the output.

For example, a parameter substitution format of { value | mm-dd-yyyy } will display a date as something similar to 09-15-2002. A format of { value | dd/mm/yy hh:nn:ss a } will display a date as something similar to 15/09/02 03:04:05 pm.

If you want to include characters in the format string without substitution, you may enclose the characters in single or double quotes.

For example, the format { value | mmm '<*color=dd0000*>'yyyy } will display a date as something like Jan <*color=dd0000*>2005 (the <*color=dd0000*> is a CDML tag to specify red text color). Note that the <*color=dd0000*> tag is copied directly without substitution, even it contains "dd" which normally will be substituted with the day of month.

Escaping URL/HTML/CDML characters

Parameter substitution is often used to create HTML image maps. In HTML, some characters has special meanings and cannot be used reliably. For example, the '>' is used to represent the end of an HTML tag.

Furthermore, if the field happens to be used as an URL, characters such as '?', '&' and '+' also have special meanings.

By default, ChartDirector will escape template fields used in URL and query parameters when generating image maps. It will modify URL special characters to the URL escape format "%XX" (eg. "?" will become "%3F"). After that, it will modify HTML special characters to the HTML escape format "&#nn;" (eg. ">" will become ">"). Similarly, it will escape other attributes in the image map using HTML escape format (but not URL escape format).

In addition to escaping HTML and URL special characters, ChartDirector will also remove CDML fields in creating image maps. It is because CDML is only interpreted in ChartDirector, should not be useful outside of ChartDirector (such as in browser tool tips).

In some cases, you may not want ChartDirector to escape the special characters. For example, if the parameters have already been escaped before passing to ChartDirector, you may want to disable ChartDirector from escaping them again.

ChartDirector supports the following special fields to control the escape methods - " { escape_url } ", " { noescape_url } ", " { escape_html } ", " { noescape_html } ", " { escape_cdml } " and " { noescape_cdml } ". These fields enable/disable the escape methods used in the template fields that follow them.

7.0.28 ChartDirector: Shape Specification

Plugin Version: 8.2, Platforms: macOS, Linux, Windows.

Answer: ChartDirector: Shape Specification

Notes: Several ChartDirector API accept shape specification as arguments. For example, BarLayer.setBarShape and BarLayer.setBarShape2 can be used to specify shapes of bars in bar charts, while DataSet.setDataSymbol, DataSet.setDataSymbol4, PolarLayer.setDataSymbol and PolarLayer.setDataSymbol4 can be used to specify shapes for data symbols.

Note that in addition to shapes, in many cases ChartDirector also accepts images or custom draw objects for data representation. For example, see DataSet.setDataSymbol2, DataSet.setDataSymbol3, PolarLayer.setDataSymbol2 and PolarLayer.setDataSymbol3.

Built-In Shapes

Built-in shapes are specified as integers. The integers can be explicit constants, or can be generated by a `ChartDirector` method for parameterized shapes. For example, a circle is represented by an explicit constant `CircleShape (=7)`. On the other hand, the number representing a polygon depends on the number of sides the polygon has, so it is generated by using the `PolygonShape` method, passing in the number of sides as argument.

The following table illustrates the various `ChartDirector` shapes:

Custom Shapes

In `ChartDirector`, custom shapes are specified as an array of integers `x0, y0, x1, y1, x2, y2 ...` representing the coordinates of the vertices of the custom polygonal shape.

The polygon should be defined with a bounding square of 1000 x 1000 units, in which the x-axis is from -500 to 500 going from left to right, and the y-axis is from 0 to 1000 going from bottom to top.

`ChartDirector` will automatically scale the polygon so that 1000 units will become to the pixel size as requested by the various `ChartDirector` API.

As an example, the shape of the standard diamond shape in `ChartDirector` is represented as an array with 8 numbers:

```
0, 0, 500, 500, 0, 1000, -500, 500
```

7.0.29 Copy styled text?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: How to quickly copy styled text from one textarea to another?

Example:

```
#if TargetWin32 then
TextArea1.WinRTFDataMBS = TextArea2.WinRTFDataMBS
#elseif TargetMacOS then
TextArea1.NSTextViewMBS.textStorage.setAttributedString TextArea2.NSTextViewMBS.textStorage
#else
TextArea1.StyledText = TextArea2.StyledText
#endif
```

Notes: The code above uses special plugin functions on Mac and Windows and falls back to framework for Linux.

7.0.30 Do you have code to validate a credit card number?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can check the checksum to tell if a credit card number is not valid.

Example:

```

Dim strNumber As String
Dim nLength as Integer
Dim nValue as Integer
Dim nChecksum as Integer
Dim nIndex as Integer

strNumber = EditField1.Text
nLength = Len(strNumber)
nChecksum = 0

For nIndex = 0 To nLength - 2
nValue = Val(Mid(strNumber, nLength - (nIndex + 1), 1)) * (2 - (nIndex Mod 2))
If nValue <10 Then
nChecksum = nChecksum + nValue
Else
nChecksum = nChecksum + (nValue - 9)
End If
Next

If Val(Mid(strNumber, Len(strNumber), 1)) = (10 - (nChecksum Mod 10)) Mod 10 Then
MsgBox("The credit card number looks valid")
Else
MsgBox("The credit card number is invalid")
End IF

```

Notes: Here's some code that will validate the checksum for a credit card. It works for Visa, MasterCard, American Express and Discover. Not sure about others, but I imagine they use the same basic algorithm. Of course, this doesn't actually mean that the credit card is valid, it's only useful for helping the user catch typos.

The above code doesn't have any error checking and it expects that the credit card number will be entered without spaces, dashes or any other non-numeric characters. Addressing those issues will be an exercise left to the reader. :)

(From Mike Stefanik)

7.0.31 Do you have plugins for X-Rite EyeOne, eXact or i1Pro?

Plugin Version: all.

Answer: Our EyeOne plugin is available on request for licensees of the X-Rite SDKs.

Notes: Please first go to X-Rite and get a SDK license.

Then we can talk about the plugin.

7.0.32 Does SQL Plugin handle stored procedures with multiple result sets?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Yes, the plugin can work with multiple recordsets.

Notes: You need to use SQLCommandMBS class. When you get back results, you use FetchNext to walk over all records in the first result set. Then you simply start again with FetchNext to get the second record set.

Even the RecordSet functions should work, just use them twice to get all records from both record sets.

7.0.33 Does the plugin home home?

Plugin Version: all, Platform: macOS.

Answer: Yes, we like to know who is using the plugin, so the plugin may contact our server.

Example:

none.

Notes: Please note that this does not affect your users as the plugin will only do this in the IDE and the relevant plugin part is never included in your applications.

The plugin if used for some hours, does contact our server to provide statistical data about Xojo version and OS versions. This way we know what versions are used. We can return the version number of the current plugin which may be visible in future versions somehow. And we transmit partial licenses data so we can track use of illegal license keys.

If you do not like to have this, you can block Xojo IDE from contacting our website via your Firewall.

Blocking the transfer will not disable the plugin or change the features.

Or contact us for a plugin version which explicitly does not contain this feature.

7.0.34 folderitem.absolutePath is limited to 255 chars. How can I get longer ones?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Paths on a Mac are not unique, so use them only to display them to the user.

Example:

```
Function AbsolutePath(f as FolderItem) As String
Dim s as string
Dim nf as FolderItem
nf = f
s = ""
while nf<>nil
s = nf.name + "." + s
nf = nf.parent
wend
Return s
End Function
```

7.0.35 Has anyone played round with using CoreImage to do things like add dissolve transitions say when changing from one tab to another within a window?

Platform: macOS.

Answer: This code implements animations for a tabpanel change:

Example:

// in a tabpanel.change event:

```
dim r as CGSTransitionRequestMBS
dim co as new CGSConnectionMBS
dim cw as CGSWindowMBS
dim ct as CGSTransitionMBS
static OldTab as Integer

cw=co.CGSWindow(window1)
If cw = Nil Then
return // 10.3...
End If
r=new CGSTransitionRequestMBS
r.TransitionType=r.CGSFlip
r.HasBackGround=false
r.HasBackColor=false
r.Win=cw
```

```

// watch the value of the clicked tab versus the last tab
if tabpanel1.Value=0 or tabpanel1.Value <OldTab then
r.TransitionOption=r.CGSLeft
ct=co.NewTransition(r)
if ct<>Nil then
Refresh
ct.Invoke(1)
ct.Wait(1)
ct.Release
else
MsgBox "Error creating the transition."
end if
else
r.TransitionOption=r.CGSRight
ct=co.NewTransition(r)
if ct<>Nil then
Refresh
ct.Invoke(1)
ct.Wait(1)
ct.Release
else
MsgBox "Error creating the transition."
end if
end if
// Keep track of the last tab clicked
OldTab = tabpanel1.Value

```

Notes: See CGS* classes for more details.

7.0.36 How about Plugin support for older OS X?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We support in general Mac OS X 10.5 and newer.

Notes: All the 64-bit plugins on Mac require OS X 10.7.

Intel 32-bit plugins on Mac require OS X 10.5 or newer.

Currently the ChartDirector 6, GraphicsMagick and GameKit plugins requires Mac OS X 10.6. Also for SQL Plugin the built in SQLite library requires 10.6.

7.0.37 How can I detect whether an Intel CPU is a 64bit CPU?

Plugin Version: all.

Answer: Look on the CPU family returned by sysctl:

Example:

Function is64bit() As Boolean

```
#if TargetLittleEndian
```

```
dim m as MemoryBlock = NewMemoryBlock(8)
```

```
dim family as Integer
```

```
dim s as string
```

```
m=SystemControlNameToMIBMBS("hw.cpufamily")
```

```
m=SystemControlMBS(m)
```

```
if m<>nil then
```

```
m.LittleEndian=True
```

```
family=m.Long(0)
```

```
const CPUFAMILY_INTEL_6_14 = &h73d67300 /* "Intel Core Solo" and "Intel Core Duo" (32-bit Pentium-M with SSE3) */
```

```
const CPUFAMILY_INTEL_6_15 = &h426f69ef /* "Intel Core 2 Duo" */
```

```
const CPUFAMILY_INTEL_6_23 = &h78ea4fbc /* Penryn */
```

```
const CPUFAMILY_INTEL_6_26 = &h6b5a4cd2 /* Nehalem */
```

```
Select case family
```

```
case CPUFAMILY_INTEL_6_14
```

```
Return false
```

```
case CPUFAMILY_INTEL_6_15
```

```
Return true
```

```
case CPUFAMILY_INTEL_6_23
```

```
Return true
```

```
case CPUFAMILY_INTEL_6_26
```

```
Return true
```

```
// newer CPUs may be missing here
```

```
end Select
```

```
end if
```

```
#endif
```

```
Return false
```

```
Exception
```

```
Return false
```

```
End Function
```

Notes: This code is written for Mac OS X where you only have a limited number of possible CPUs.

7.0.38 How can I disable the close box of a window on Windows?

Plugin Version: all, Platform: Windows.

Answer: The following code will remove the close item from the system menu of the window.

Example:

```
#if TargetWin32 then
Declare Function GetSystemMenu Lib "user32" (hwnd as Integer, bRevert as Integer) as Integer
Declare Function RemoveMenu Lib "user32" (hMenu as Integer, nPosition as Integer, wFlags as Integer) as Integer
Dim hSysMenu as Integer
hSysMenu = GetSystemMenu(me.WinHWND, 0)
RemoveMenu hSysMenu, &HF060, &H0
#endif
```

Notes: The window may not be updated directly.

7.0.39 How can I get all the environment variables from Windows?

Plugin Version: all, Platform: Windows.

Answer: Try this code:

Example:

```
#if targetWin32
declare function GetEnvironmentStrings Lib "kernel32" () as ptr
dim m as memoryBlock
dim n as Integer

m=GetEnvironmentStrings()

n=0
do
msgBox m.cstring(n)
while m.byte(n)<>0
n=n+1
wend
n=n+1
```

```
loop until m.byte(n)=0
#endif
```

Notes: The MBS Plugin has an EnvironmentMBS class for this.

7.0.40 How can i get similar behavior to Roxio Toast or iTunes where clicking a 'burn' button allows the next inserted blank CD-R to bypass the Finder and be accepted by my application?

Plugin Version: all, Platform: macOS.

Answer: You need to get a media reservation.

Example:

```
dim d as DRDeviceMBS // get a device
d.AcquireMediaReservation
```

Notes: Use the plugin function AcquireMediaReservation and later release it using ReleaseMediaReservation.

See plugin examples on how to use it and check Apples DiscRecording framework documentation for more details.

7.0.41 How can I get text from a PDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Crossplatform you can use DynaPDF Pro.

Notes: On Mac OS X you can also use PDFKit for the same job.

While DynaPDF Pro gives you each bit of text with rotation, font information and encoding details, PDFKit gives you only the text string for a PDF page.

7.0.42 How can I get text from a Word Document?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: to get the text string from a doc file, use the NSAttributedStringMBS class.

Notes: The NSAttributedStringMBS class is Mac OS X only and we have currently no solution for Windows or Linux.

Use the `NSAttributedStringMBS initWithDocFormat(data as string)` as boolean method.

7.0.43 How can I get the item string for a given file creator?

Plugin Version: all.

Answer: Try this function:

Example:

```
Sub pullNativeDocs(aCREA As string)
Dim result as Integer
Dim m, k as memoryBlock
Dim f as folderItem
Dim newType as string
Dim anIcon As picture
Dim ofs as Integer
```

```
Declare Function GetFileTypesThatAppCanNativelyOpen Lib "Carbon" (appVRefNumHint as Short, appSignature as OSType, nativeTypes as Ptr) as Short Inline68K("701CABFC")
Declare Function GetDocumentKindString Lib "Carbon" (docVRefNum as Short, docType as OSType, docCreator as OSType, kindString as ptr) as Short Inline68K("7016ABFC")
```

```
listBox1.deleteAllRows
```

```
m = newMemoryBlock(1024)
result = GetFileTypesThatAppCanNativelyOpen(Volume(0).MacVRefNum, aCREA, m)
if result <> 0 then
listBox1.addRow "<Not found.>"
return
end if
```

```
do
if m.byte(ofs*4) = 0 then
exit
else
newType = m.OSTypeMBS(ofs*4)
listBox1.addRow newType
k = newMemoryBlock(64)
result = GetDocumentKindString(Volume(0).MacVRefNum, newType, aCREA, k)
if result = 0 then
listBox1.cell(ofs,1) = k.pString(0)
ofs = ofs + 1
else
listBox1.cell(ofs,1) = "(unknown)"
end if
end if
```

loop

End Sub

Notes: Change "Translation" to "CarbonLib" for Mac OS X.

7.0.44 How can I launch an app using it's creator code?

Plugin Version: all, Platform: macOS.

Answer: Send an AppleEvent "odoc" with the creator code to the Finder ("MACS"):

Example:

```
Function LaunchByCreator(C As String) As Boolean
Dim A As AppleEvent
A = NewAppleEvent("aevt","odoc","MACS")
A.ObjectSpecifierParam("—") = GetUniqueIDObjectDescriptor("appf",nil,C)
return A.Send
End Function
```

7.0.45 How can I learn what shared libraries are required by a plugin on Linux?

Plugin Version: all, Platform: macOS.

Answer: Please use the ldd command in the terminal.

Notes: You build an app on any platform, but for Linux.

For the resulting .so files in the libs folder, you can run the ldd command with the library path as parameter. It shows you references lib files and you can make sure you have those installed.

This is a sample run of our graphicsmagick plugin:

```
cs@Ubuntu32:
textasciitilde /MeinProgramm/MeinProgramm Libs$ ldd libMBSGraphicsMagickPlugin17744.so
linux-gate.so.1 =>(0xb76ee000)
libdl.so.2 =>/lib/i386-linux-gnu/libdl.so.2 (0xb6f0e000)
libgtk-x11-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgtk-x11-2.0.so.0 (0xb6aa6000)
libpthread.so.0 =>/lib/i386-linux-gnu/libpthread.so.0 (0xb6a8a000)
libstdc++.so.6 =>/usr/lib/i386-linux-gnu/libstdc++.so.6 (0xb69a5000)
libm.so.6 =>/lib/i386-linux-gnu/libm.so.6 (0xb6979000)
libgcc_s.so.1 =>/lib/i386-linux-gnu/libgcc_s.so.1 (0xb695b000)
libc.so.6 =>/lib/i386-linux-gnu/libc.so.6 (0xb67b1000)
```

```

/lib/ld-linux.so.2 (0xb76ef000)
libgdk-x11-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgdk-x11-2.0.so.0 (0xb6701000)
libpangocairo-1.0.so.0 =>/usr/lib/i386-linux-gnu/libpangocairo-1.0.so.0 (0xb66f4000)
libX11.so.6 =>/usr/lib/i386-linux-gnu/libX11.so.6 (0xb65c0000)
libXfixes.so.3 =>/usr/lib/i386-linux-gnu/libXfixes.so.3 (0xb65ba000)
libatk-1.0.so.0 =>/usr/lib/i386-linux-gnu/libatk-1.0.so.0 (0xb659a000)
libcairo.so.2 =>/usr/lib/i386-linux-gnu/libcairo.so.2 (0xb64ce000)
libgdk_pixbuf-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgdk_pixbuf-2.0.so.0 (0xb64ad000)
libgio-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgio-2.0.so.0 (0xb6356000)
libpangoft2-1.0.so.0 =>/usr/lib/i386-linux-gnu/libpangoft2-1.0.so.0 (0xb632a000)
libpango-1.0.so.0 =>/usr/lib/i386-linux-gnu/libpango-1.0.so.0 (0xb62e0000)
libfontconfig.so.1 =>/usr/lib/i386-linux-gnu/libfontconfig.so.1 (0xb62ab000)
libgobject-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgobject-2.0.so.0 (0xb625c000)
libglib-2.0.so.0 =>/lib/i386-linux-gnu/libglib-2.0.so.0 (0xb6163000)
libXext.so.6 =>/usr/lib/i386-linux-gnu/libXext.so.6 (0xb6151000)
libXrender.so.1 =>/usr/lib/i386-linux-gnu/libXrender.so.1 (0xb6147000)
libXinerama.so.1 =>/usr/lib/i386-linux-gnu/libXinerama.so.1 (0xb6142000)
libXi.so.6 =>/usr/lib/i386-linux-gnu/libXi.so.6 (0xb6132000)
libXrandr.so.2 =>/usr/lib/i386-linux-gnu/libXrandr.so.2 (0xb6129000)
libXcursor.so.1 =>/usr/lib/i386-linux-gnu/libXcursor.so.1 (0xb611e000)
libXcomposite.so.1 =>/usr/lib/i386-linux-gnu/libXcomposite.so.1 (0xb611a000)
libXdamage.so.1 =>/usr/lib/i386-linux-gnu/libXdamage.so.1 (0xb6115000)
libfreetype.so.6 =>/usr/lib/i386-linux-gnu/libfreetype.so.6 (0xb607b000)
libxcb.so.1 =>/usr/lib/i386-linux-gnu/libxcb.so.1 (0xb605a000)
libpixman-1.so.0 =>/usr/lib/i386-linux-gnu/libpixman-1.so.0 (0xb5fc2000)
libpng12.so.0 =>/lib/i386-linux-gnu/libpng12.so.0 (0xb5f98000)
libxcb-shm.so.0 =>/usr/lib/i386-linux-gnu/libxcb-shm.so.0 (0xb5f93000)
libxcb-render.so.0 =>/usr/lib/i386-linux-gnu/libxcb-render.so.0 (0xb5f89000)
libz.so.1 =>/lib/i386-linux-gnu/libz.so.1 (0xb5f73000)
libgmodule-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgmodule-2.0.so.0 (0xb5f6e000)
libselinux.so.1 =>/lib/i386-linux-gnu/libselinux.so.1 (0xb5f4f000)
libresolv.so.2 =>/lib/i386-linux-gnu/libresolv.so.2 (0xb5f36000)
libexpat.so.1 =>/lib/i386-linux-gnu/libexpat.so.1 (0xb5f0c000)
libffi.so.6 =>/usr/lib/i386-linux-gnu/libffi.so.6 (0xb5f05000)
libpcre.so.3 =>/lib/i386-linux-gnu/libpcre.so.3 (0xb5ec9000)
librt.so.1 =>/lib/i386-linux-gnu/librt.so.1 (0xb5ec0000)
libXau.so.6 =>/usr/lib/i386-linux-gnu/libXau.so.6 (0xb5ebb000)
libXdmcp.so.6 =>/usr/lib/i386-linux-gnu/libXdmcp.so.6 (0xb5eb4000)
cs@Ubuntu32:
textasciitilde /MeinProgramm/MeinProgramm Libs$

```

As you see all library have been found and their load address is printed behind the name. If a library is missing, you usually see the address missing there or being zero.


```

while theRegexMatch <>nil
theStart = theRegexMatch.subExpressionStartB(0) + len(theRegexMatch.subExpressionString(0))

result = result + theRegexMatch.subExpressionString(1)
infoCharset = theRegexMatch.subExpressionString(2)
encodedPart = theRegexMatch.subExpressionString(4)
if theRegexMatch.subExpressionString(3) = "B" then
encodedPart = DecodeBase64(encodedPart)
elseif theRegexMatch.subExpressionString(3) = "Q" then
encodedPart = DecodeQuotedPrintable(encodedPart)
end if
if right(result, 1) = " " then
result = mid(result, 1, len(result)-1)
end if
encodedPart = encodedPart.DefineEncoding(GetInternetTextEncoding(infoCharset))
result = result + encodedPart

theRegex.SearchStartPosition = theStart
theRegexMatch = theRegex.search()
wend

result = result + mid(src, theStart+1)

else
result = src
end if
// theRegexMatch = theRegex.search

msgbox result

```

Notes: May not look nice depending on the controls used.
This is no longer needed when using MimeEmailMBS class which decodes for you.

7.0.48 How do I enable/disable a single tab in a tabpanel?

Plugin Version: all, Platform: macOS.

Answer: Use the TabpanelEnabledMBS method.

Example:

```
TabpanelEnabledMBS(tabpanel1, 1, false)
```

Notes: Use Carbon for MachO and CarbonLib for Mac Carbon and AppearanceLib for Mac OS Classic as

library.

For Cocoa, please use enabled property of NSTabViewItemMBS class.

7.0.49 How do I find the root volume for a file?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Try this function:

Example:

```
Function GetRootVolume(f as FolderItem) as FolderItem
dim root, dum as folderItem
if f <>nil then
root = f // f might be the volume
do
dum = root.parent
if dum <>nil then
root = dum
end if
loop until dum = nil
return root
end if
End Function
```

7.0.50 How do I get the current languages list?

Plugin Version: all, Platform: macOS.

Answer: Try this code:

Example:

```
dim p as new CFPreferencesMBS
dim a as CFArrayMBS
dim s as CFStringMBS
dim o as CFOBJECTMBS
dim sa(-1) as string

o=p.CopyAppValue("AppleLanguages",".GlobalPreferences")

if o<>Nil then
a=CFArrayMBS(o)

dim i,c as Integer
```

```
c=a.Count-1
for i=0 to c
o=a.Item(i)

if o isa CFStringMBS then
s=CFStringMBS(o)
sa.Append s.str
end if
next
end if

MsgBox Join(sa,EndOfLine)
```

Notes: On Mac OS X you can get the list of current languages like this list:

```
de
en
ja
fr
es
it
pt
pt-PT
nl
sv
nb
da
fi
ru
pl
zh-Hans
zh-Hant
ko
```

Which has German (de) on the top for a German user.
This code has been tested on Mac OS X 10.5 only.

7.0.51 How do I get the Mac OS Version?

Plugin Version: all, Platform: macOS.

Answer: Try this code:

Example:

```

dim i as Integer
if system.gestalt("sysv", i) then
//do this in an 'If' in case you don't get any value back at all and system.gestalt returns boolean
if i = &h750 then //If OS is 7.5
//do stuff
elseif i = &h761 then //If OS is 7.6.1
//do stuff
end if
end if

```

Notes: The MBS Plugin has a function SystemInformationMBS.OSVersionString for this.

7.0.52 How do I get the printer name?

Plugin Version: all.

Answer: For Mac OS Classic see the code below and for Mac OS X use the Carbon Print Manager Classes from the MBS Plugin.

Example:

```

dim s as String
dim i as Integer

s=app.ResourceFork.GetResource("STR ",-8192)
if s<>"" then
i=ascb(leftb(s,1))
s=mid(s,2,i)

MsgBox s
end if

```

Notes: A note from Craig Hoyt:

After looking at your example I had a little deja-vu experience. Several years ago I played around with this same code if FutureBasic. I discovered that it did not and still doesn't provide the 'Printer Name', it does return the print driver name. If it returns 'LaserWriter 8' as the print driver you can look into this file and get the 'PAPA' resource #-8192 to get the actual Printer Name. Unfortunately this does not hold true for other printers. My Epson and HP Printers (the Epson has an Ethernet Card and the HP is USB) do not provide this info in their drivers. As far as I can tell it only returns the name by polling the printer itself.

7.0.53 How do I make a metal window if RB does not allow me this?

Plugin Version: all, Platform: macOS.

Answer: The following declare turns any window on Mac OS X 10.2 or newer into a metal one.

Example:

```
declare sub ChangeWindowAttributes lib "Carbon" (win as windowptr, a as Integer, b as Integer)
```

```
ChangeWindowAttributes window1,256,0
```

Notes: May not look nice depending on the controls used.

7.0.54 How do I make a smooth color transition?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

I'd like to show in a report some bars, which start with color A and end with color B.

The color change should be very smooth.

My problem: If I would start from 255,0,0 and end by 0,0,0, I would have 255 different colors. If the bars are longer than 255 pixels, would this look nice?

Example:

```
// Window.Paint:
Sub Paint(g As Graphics)
dim w,w1,x,p as Integer
dim c1,c2,c as color
dim p1,p2 as Double

c1=rgb(255,0,0) // start color
c2=rgb(0,255,0) // end color

w=g.Width
w1=w-1

for x=0 to w1
p1=x/w1
p2=1.0-p1
```

```

c=rgb(c1.red*p1+c2.red*p2, c1.green*p1+c2.green*p2, c1.blue*p1+c2.blue*p2)

g.ForeColor=c
g.DrawLine x,0,x,g.Height

next
End Sub

```

Notes:

Try the code above in a window paint event handler.

7.0.55 How do I read the applications in the dock app?

Plugin Version: all, Platform: macOS.

Answer: Use CFPREFERENCESMBS class like in this example:

Example:

```

// Reads file names from persistent dock applications and puts them into the list

dim pref as new CFPREFERENCESMBS

dim persistentapps as CFStringMBS = NewCFStringMBS("persistent-apps")
dim ApplicationID as CFStringMBS = NewCFStringMBS("com.apple.dock")
dim tiledata as CFStringMBS = NewCFStringMBS("tile-data")
dim filelabel as CFStringMBS = NewCFStringMBS("file-label")

// get the array of persistent applications from dock preferences
dim o as CObjectMBS = pref.CopyValue(persistentapps, ApplicationID, pref.kCFPreferencesCurrentUser,
pref.kCFPreferencesAnyHost)

if o isa CFArrayMBS then
dim a as CFArrayMBS = CFArrayMBS(o)

// walk over all items in array
dim c as Integer = a.Count-1
for i as Integer = 0 to c

// get dictionary describing item
o = a.Item(i)

if o isa CFDictionaryMBS then
dim d as CFDictionaryMBS = CFDictionaryMBS(o)

```

```

// and pick tile data dictionary
o = d.Value(tiledata)
if o isa CFDictionaryMBS then
d = CFDictionaryMBS(o)

// and pick there the file label
o = d.Value(filelabel)
if o isa CFStringMBS then
// and display it
dim name as string = CFStringMBS(o).str
List.AddRow name
end if
end if
end if

next

else
MsgBox "Failed to read dock preferences."
end if

```

Notes: You can use the `CFPreferencesMBS.SetValue` to change a value and `CFPreferencesMBS.Synchronize` to write the values to disc. You may need to restart the `Dock.app` if you modified things.

7.0.56 How do I truncate a file?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: In a `binarystream` you can set the `length` property to truncate.

7.0.57 How do update a Finder's windows after changing some files?

Plugin Version: all, Platform: macOS.

Answer: Try this code:

Example:

```

dim f as folderitem // some file
dim ae as appleevent
ae=newappleevent("fndr","fupd","MACS")
ae.folderitemparam("—")=f
if not ae.send then
//something went wrong

```

end if

Notes: The `folderitem.finderupdate` from the MBS Plugin does something like this.

7.0.58 How to access a USB device directly?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: First, it depends on the device.

Notes: Some devices can be talked directly from user mode code, but some require a kernel driver.

For some devices you can use plugins to access them like:

- Audio and Video sources using the `QTGrabberClassMBS`
- Mass storage devices using the `folderitem` class.
- Serial devices using the `System.SerialPort` function.
- HID USB devices can be used with `MacHIDMBS`, `WinHIDMBS` or `LinuxHIDInterface` class.
- Any USB device may be used with `MacUSBMBS` or `WinUSBMBS` classes.

In general it is always the best to take the most high level access to have others do the work for the details.

7.0.59 How to add icon to file on Mac?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use `FolderItem.AddCustomIcon` or `NSWorkspaceMBS.setIcon` functions.

Notes: Please close any open stream for the file you want to add an icon.

7.0.60 How to ask the Mac for the Name of the Machine?

Plugin Version: all, Platform: macOS.

Answer: Using Apple Events you can use this code:

Example:

Function `Computername()` *As string*

```

dim theEvent as AppleEvent
dim err as boolean

theEvent = newAppleEvent("mchn","getd","MACS")

err = theEvent.send

return theevent.ReplyString

End Function

```

Notes: Code above is for Mac OS 9!

Also the MBS Plugin has a function for this which may be faster and work also on Macs without Filesharing (which handles this event).

7.0.61 How to automatically enable retina in my apps?

Plugin Version: all, Platform: macOS.

Answer: You can run a build script on each build with this code:

Example:

```

Dim App As String = CurrentBuildLocation + "/" + CurrentBuildAppName + ".app"
Call DoShellCommand("/usr/bin/defaults write " + App + "/Contents/Info ""NSHighResolutionCapable""
YES")

```

Notes: This will set the NSHighResolutionCapable flag to YES.

7.0.62 How to avoid leaks with Cocoa functions?

Plugin Version: all, Platform: macOS.

Answer: You can try this code on Mac OS X:

Example:

```

// in a Timer Action event:
Sub Action()
static LastPool as NSAutoreleasePoolMBS = nil
static CurrentPool as NSAutoreleasePoolMBS = nil

```

```

LastPool = CurrentPool
CurrentPool = new NSAutoreleasePoolMBS

```

End Sub

Notes: With Xojo 2009r4 the code above should not be needed as Xojo runtime does automatically handle the `NSAutoreleasePools` for you. For older Xojo versions you need to use code with a timer with the action event above to avoid memory leaks.

Please do not use Xojo 2009r4 and newer with plugins before version 9.5. You can get crashes there which typically show a line with a `objc_msgSend` call.

7.0.63 How to avoid trouble connecting to oracle database with SQL Plugin?

Plugin Version: all, Platform: macOS.

Answer: For oracle the most important thing is to point the plugin to the libraries from oracle.

Notes: In environment variables, the paths like `ORACLE_HOME` must be defined.

On Mac OS X you also need to define `DYLD_LIBRARY_PATH` to point to the dylib files from oracle.

For that you need to modify `/etc/launchd.conf` for Mac OS X 10.8 and newer.

In older versions those variables in `.MacOSX/environment.plist` file in user's home.

Another way for the case you bundle things inside your app is to use the `LSEnvironment` key in `info.plist`. In `info.plist` it looks like this:

```
<key>LSEnvironment</key>
<dict>
<key>test</key>
<string>Hello World</string>
</dict>
```

7.0.64 How to avoid `___NSAutoreleaseNoPool` console messages in threads?

Plugin Version: all, Platform: macOS.

Answer: You need to use your own `NSAutoreleasePool` on a thread like this:

Example:

```
sub MyThread.run
dim pool as new NSAutoreleasePoolMBS
// do work here

pool=nil
```

end sub

Notes: For more details read here:

http://developer.apple.com/mac/library/documentation/Cocoa/Reference/Foundation/Classes/NSAutoreleasePool_Class/Reference/Reference.html

7.0.65 How to bring app to front?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Mac you can use this code:

Example:

```
// First way:
app.FrontMostMBS = true

// second way:
dim p as new ProcessMBS
p.GetCurrentProcess
p.FrontProcess = true

// third way:
NSApplicationMBS.sharedApplication.activateIgnoringOtherApps(true)

// for Windows:
RemoteControlMBS.WinBringWindowToTop
```

Notes: This will bring a Mac app to the front layer.

7.0.66 How to bring my application to front?

Plugin Version: all, Platform: macOS.

Answer: This makes SimpleText (Code txt) to the frontmost application:

Example:

```
Dim A As AppleEvent
A = NewAppleEvent("misc", "actv", "")
If Not A.Send then
Beep
end if
```

Notes: (Code is Mac only)

7.0.67 How to catch Control-C on Mac or Linux in a console app?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use SignalHandlerMBS class for this.

Example:

```
// watch for Control-C on Mac
call SignalHandlerMBS.SetFlagHandler(2)

dim ende as boolean = false
do
if SignalHandlerMBS.IsFlagSet(2) then
Print "Flag 2 set. Existing..."
ende = true
end if

DoEvents 1
loop until ende
```

Notes: The signal is caught, a flag is set and you can ask later in your normal application flow for the result.

7.0.68 How to change name of application menu?

Plugin Version: all, Platforms: macOS, Windows.

Answer: Use this code to change the application menu name on Mac OS X:

Example:

```
dim mb as new MenubarMBS
dim m as MenuMBS = mb.item(1) // 1 is in my tests the app menu
if m<>Nil then
m.MenuTitle = "Hello World"
end if
```

Notes: This code is for Carbon only.

7.0.69 How to change the name in the menubar of my app on Mac OS X?

Plugin Version: all, Platform: macOS.

Answer:

You mean it screws up if the file name of the bundle itself is different than the name of the executable file in the MacOS folder within the bundle? If so, you should find something like this within your Info.plist file (or the 'plst' resource that the RB IDE builds for you):

```
<key>CFBundleExecutable</key>
<string>Executable file name here</string>
```

Just make sure that file name matches.

However, if your question involves how you can change the name of the app that appears in the menu and the dock, that's different. You can make this name different from the file name by changing the CFBundleName key:

```
<key>CFBundleName</key>
<string>Name for menu here</string>
```

Note that if you use my free AppBundler program, this second part is taken care of for you – just fill in a custom name in the right field. You can find AppBundler (from Thomas Reed) at <http://www.bitjuggler.com/products/appbundler/>.

7.0.70 How to check if a folder/directory has subfolders?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this to check all items in a folder:

Example:

```
Function HasSubFolder(folder as FolderItem) As Boolean
dim c as Integer = folder.Count
```

```
for i as Integer = 1 to c
dim item as FolderItem = folder.TrueItem(i)
```

```
if item<>Nil and item.Directory then
Return true
end if
```

next

End Function

Notes: We use trueitem() here to avoid resolving alias/link files. Also we check for nil as we may not have permission to see all items. And if one is a directory, we return without checking the rest.

7.0.71 How to check if Macbook runs on battery or AC power?

Plugin Version: all, Platform: macOS.

Answer: Please use our IOPowerSourcesMBS class like this:

Example:

```
Function PowerSourceState() as Integer
dim p as new IOPowerSourcesMBS

// check all power sources
dim u as Integer = p.Count-1
for i as Integer = 0 to u
dim d as CFDictionaryMBS = p.Item(i)
if d<>nil then
// check if they have a power source state key:
dim o as CFObjectMBS = d.Value(NewCFStringMBS("Power Source State"))
if o isa CFStringMBS then
dim s as string = CFStringMBS(o).str

'MsgBox s

if s = "AC Power" then
Return 1
elseif s = "Battery Power" then
Return 2
end if
end if
end if
next
Return 0 // unknown
End Function
```

Notes: If you want to check the CFDictionaryMBS content, simply use a line like "dim x as dictionary = d.dictionary" and check the contents in the debugger.

7.0.72 How to check if Microsoft Outlook is installed?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: If you need Outlook for Scripting, you should simply check registry for the required Outlook.Application class:

Example:

```
Function OutlookInstalled() As Boolean
    #if TargetWin32 then

    try
    dim r as new RegistryItem("HKEY_CLASSES_ROOT\Outlook.Application\CLSID", false)

    Return true

    catch r as RegistryAccessErrorException
    // not installed
    Return false

    end try

    #else

    // Windows only, so false on other platforms
    Return false

    #endif

End Function
```

7.0.73 How to check on Mac OS which country or language is currently selected?

Plugin Version: all, Platform: macOS.

Answer: The code below returns a country value.

Example:

```
dim result as Integer

IF TargetMacOS THEN

CONST smScriptLang = 28
```

```

CONST smSystemScript = -1

DECLARE FUNCTION GetScriptManagerVariable LIB "Carbon" ( selector as Integer) as Integer
DECLARE FUNCTION GetScriptVariable LIB "Carbon" ( script as Integer, selector as Integer) as Integer

result=GetScriptVariable(smSystemScript, smScriptLang)

END IF

```

Notes: Returns values like:

For more values, check "Script.h" in the frameworks.

7.0.74 How to code sign my app with plugins?

Plugin Version: all, Platform: macOS.

Answer: When you try to code sign the application with plugin dylibs on Mac OS X, you may see error message that there is actually a signature included.

Notes: Please use the -f command line parameter with codesign utility to overwrite our MBS signature. We sign our plugins for MacOS, iOS and Windows to make sure they have not been modified.

In terminal, you do like this:

```

cd <Path to folder of app>

xattr -cr <Appname>.app
codesign -f -s "Developer ID Application: <Your Name>" <Appname>.app/Contents/Frameworks/*.dylib
codesign -f -s "Developer ID Application: <Your Name>" <Appname>.app/Contents/Frameworks/*.framework
codesign -f -s "Developer ID Application: <Your Name>" <Appname>.app

```

Please use the name of your certificate (See keychain), the name of your app and the path to the app folder. If you have helper apps you need to sign them first.

You can use a build step to automatically sign your app on build.

7.0.75 How to collapse a window?

Plugin Version: all, Platform: macOS.

Answer: Use this function (Mac only):

Example:

```
Sub CollapseRBwindow(w as window, CollapseStatus as boolean)
dim state, err as Integer
dim wh as MemoryBlock
```

```
Declare Function CollapseWindow Lib "Carbon" (window as Integer, collapse as Integer) as Integer
```

```
IF CollapseStatus THEN
state = 1
ELSE
state = 0
END IF
```

```
err = CollapseWindow(w.MacWindowPtr, state)
```

```
End Sub
```

Notes: Also the MBS Plugin has a window.collapsedmbs property you can set. For Windows the MBS Plugin has a window.isiconicmbs property.

7.0.76 How to compare two pictures?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can try this code:

Example:

```
Function ComparePictures(p as picture,q as picture) as Integer
dim r,u as RGBSurface
dim x,y,n,m,h,w as Integer
dim w1,w2,h1,h2,d1,d2 as Integer
dim c1,c2 as color
```

```
h1=p.Height
h2=q.Height
w1=p.Width
w2=q.Width
d1=p.Depth
d2=q.Depth
```

```
if d1<>d2 then
Return 1
elseif w1<>w2 then
```

```

return 2
elseif h1<>h2 then
Return 3
else
r=p.RGBSurface
u=q.RGBSurface

if r=nil or u=nil then
Return -1
else
h=h1-1
w=w1-1
m=min(w,h)

for n=0 to m
c1=r.Pixel(n,n)
c2=u.Pixel(n,n)
if c1<>c2 then
Return 4
end if
next

for y=0 to h
for x=0 to w
c1=r.Pixel(x,y)
c2=u.Pixel(x,y)
if c1<>c2 then
Return 5
end if
next
next

// 0 for equal
// -1 for error (no RGBsurface)
// 1 for different depth
// 2 for different width
// 3 for different height
// 4 for different pixels (fast test)
// 5 for different pixels (slow test)
end if
end if

Exception
Return -1
End Function

```

Notes: Remember that this only works on bitmap pictures, so the `picture.BitmapMBS` function may be useful.

7.0.77 How to compile PHP library?

Plugin Version: all, Platform: macOS.

Answer: You have to download the source code and compile a static version of the library.

Notes: This instructions were written based on PHP 5.2.6 on Mac OS X:

- Best take a new Mac with current Xcode version installed.
- Download the source code archive. e.g. "php-5.2.6.tar.bz2"
- Expand that archive on your harddisc.
- Open terminal window
- change directory to the php directory. e.g. "cd /php-5.2.6"
- execute this two lines to define the supported CPU types and the minimum Mac OS X version:
- export CFLAGS="-arch ppc -arch i386 -mmacosx-version-min=10.3"
- export CXXFLAGS="-arch ppc -arch i386 -mmacosx-version-min=10.3"
- the command "./configure help" does show the configure options.
- use configure with a line like this:
- ./configure --enable-embed --with-curl --enable-ftp --enable-zip --enable-sockets --enable-static --enable-soap --with-zlib --with-bz2 --enable-exif --enable-bcmath --enable-calendar
- start the compilation with "make all"
- other option is to use "make install" which first does the same as "make all" and than does some installation scripts.
- you may get an error about a duplicate symbole __yytext. Search the file "zend_ini_scanner.c", search a line with "char *yytext;" and change it to "extern char *yytext;".
- On the end you get a lot of error messages, but you have a working library (named libphp5.so) file in the invisible ".libs" folder inside your php source folder.

Possible problems and solutions:

- If the path to your files has spaces, you can get into trouble. e.g. "/RB Plugins/PHP" is bad as files will be searched sometimes in "/RB".

- If you have in /usr/local/lib libraries which conflict with the default libraries, you can get into trouble.
- If you installed some open source tools which compiled their own libraries, you can get into conflicts.
- if you have to reconfigure or after a problem, you may need to use "make clean" before you start "make all" again.

Feel free to install additional libraries and add more packages to the configure line.

7.0.78 How to convert a BrowserType to a String with WebSession.Browser?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this:

Example:

```
Function GetBrowserName(s as WebSession.BrowserType) As string
Select case s
case WebSession.BrowserType.Android
Return "Andriod"
case WebSession.BrowserType.Blackberry
Return "Blackberry"
case WebSession.BrowserType.Chrome
Return "Chrome"
case WebSession.BrowserType.ChromeOS
Return "ChromeOS"
case WebSession.BrowserType.Firefox
Return "Firefox"
case WebSession.BrowserType.InternetExplorer
Return "InternetExplorer"
case WebSession.BrowserType.Opera
Return "Opera"
case WebSession.BrowserType.Safari
Return "Safari"
case WebSession.BrowserType.SafariMobile
Return "SafariMobile"
case WebSession.BrowserType.Unknown
Return "Unknown"
else
Return "Unkown: "+str(integer(s))
end Select

End Function
```

7.0.79 How to convert a EngineType to a String with WebSession.Engine?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this:

Example:

```
Function GetRenderingEngineName(s as WebSession.EngineType) As string
Select case s
case WebSession.EngineType.Gecko
Return "Gecko"
case WebSession.EngineType.Presto
Return "Presto"
case WebSession.EngineType.Trident
Return "Trident"
case WebSession.EngineType.Unknown
Return "Unknown"
case WebSession.EngineType.WebKit
Return "WebKit"
else
Return "Unkown: "+str(integer(s))
end Select

End Function
```

7.0.80 How to convert a PlatformType to a String with WebSession.Platform?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this:

Example:

```
Function GetPlatformName(s as WebSession.PlatformType) As string
Select case s
case WebSession.PlatformType.Blackberry
Return "Blackberry"
case WebSession.PlatformType.iPad
Return "iPad"
case WebSession.PlatformType.iPhone
Return "iPhone"
case WebSession.PlatformType.iPodTouch
Return "iPodTouch"
case WebSession.PlatformType.Linux
Return "Linux"
case WebSession.PlatformType.Macintosh
Return "Macintosh"
```

```

case WebSession.PlatformType.PS3
Return "PS3"
case WebSession.PlatformType.Unknown
Return "Unknown"
case WebSession.PlatformType.WebOS
Return "WebOS"
case WebSession.PlatformType.Wii
Return "Wii"
case WebSession.PlatformType.Windows
Return "Windows"
else
Return "Unkown: "+str(integer(s))
end Select

End Function

```

7.0.81 How to convert a text to iso-8859-1 using the TextEncoder?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

This code can help you although it's not perfect.
You need to set lc to the current color you use.

Example:

```

dim outstring as string
dim theMac, thePC as textencoding
dim Mac2PC as textconverter

theMac = getTextEncoding(0) // MacRoman
thePC = getTextEncoding(&h0201) // ISOLatin1

Mac2PC = getTextConverter(theMac, thePC)
// if you wanted to do the opposite just create a converter
// PC2Mac = getTextConverter(thePC, theMac)

outstring = Mac2PC.convert("Bj√rn, this text should be converted")
Mac2PC.clear

```

Notes:

You have to call Mac2PC.clear after every conversion to reset the encoding engine.
See also newer TextConverterMBS class.

7.0.82 How to convert ChartTime back to Xojo date?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We have this example code:

Example:

```
Function ChartTimeToDate(ChartTime as Double) As date
static diff as Double = 0.0
```

```
if diff = 0.0 then
dim d2 as Double = CDBaseChartMBS.chartTime(2015, 1, 1)
dim da as new date(2015, 1, 1)
dim ts as Double = da.TotalSeconds
```

```
diff = ts - d2
end if
```

```
dim d as new date
d.TotalSeconds = diff + ChartTime
```

```
Return d
End Function
```

Notes: As you see we calculate the difference in base date from Date and ChartTime and later use difference to convert.

7.0.83 How to convert line endings in text files?

Plugin Version: all, Platform: macOS.

Answer: You can simply read file with TextInputStream and write with new line endings using TextOutputStream class.

Example:

```
dim inputfile as FolderItem = SpecialFolder.Desktop.Child("test.txt")
dim outputfile as FolderItem = SpecialFolder.Desktop.Child("output.txt")
dim it as TextInputStream = TextInputStream.Open(inputfile)
dim ot as TextOutputStream = TextOutputStream.Create(outputfile)
```

```
ot.Delimiter = EndOfLine.Windows // new line ending
while not it.EOF
ot.WriteLine it.ReadLine
wend
```

Notes: `TextInputStream` will read any input line endings and with `delimiter` property in `TextOutputStream` you can easily define your new delimiter.

7.0.84 How to convert picture to string and back?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use this plugin functions:

Notes: JPEG:

`JPEGStringToPictureMBS(buf as string)` as picture
`JPEGStringToPictureMBS(buf as string,allowdamaged as Boolean)` as picture
`PictureToJPEGStringMBS(pic as picture,quality as Integer)` as string

PNG:

`PictureToPNGStringMBS(pic as picture, gamma as single)` as string
`PictureToPNGStringMBS(pic as picture, mask as picture, gamma as single)` as string
`PictureToPNGStringMBS(pic as picture, gamma as single, Interlace as Boolean, FilterType as Integer)` as string
`PictureToPNGStringMBS(pic as picture, mask as picture, gamma as single, Interlace as Boolean, FilterType as Integer)` as string
`PNGStringToPictureMBS(data as string, gamma as single)` as picture
`PNGStringToPNGPictureMBS(data as string, gamma as single)` as PNGpictureMBS

Tiff:

`TIFFStringToPictureMBS(data as string)` as picture
`TIFFStringToTiffPictureMBS(data as string)` as TiffPictureMBS

BMP:

`BMPStringtoPictureMBS(data as string)` as picture
`Picture.BMPDataMBS(ResolutionValueDPI as Integer=72)` as string

GIF:

`GifStringToGifMBS(data as string)` as GIFMBS
`GifStringToPictureMBS(data as string)` as Picture

7.0.85 How to copy an array?

Plugin Version: all, Platform: macOS.

Answer: You can use a function like this to copy an array:

Example:

```
Function CopyArray(a() as Double) as Double()  
dim r() as Double  
for each v as Double in a  
r.Append v  
next  
Return r  
End Function
```

Notes: If needed make several copies of this method with different data types, not just double.
For a deep copy of an array of objects, you need to change code to also make a copy of those objects.

7.0.86 How to copy a dictionary?

Plugin Version: all, Platform: macOS.

Answer: You can use a function like this to copy a dictionary:

Example:

```
Function CopyDictionary(d as Dictionary) As Dictionary  
dim r as new Dictionary  
for each key as Variant in d.keys  
r.Value(key) = d.Value(key)  
next  
Return r  
End Function
```

Notes: If needed make several copies of this method with different data types, not just double.
For a deep copy of a dictionary of objects, you need to change code to also make a copy of those objects.

7.0.87 How to copy parts of a movie to another one?

Plugin Version: all, Platforms: macOS, Windows.

Answer: The code below copies ten seconds of the snowman movie to the dummy movie starting at the 5th second.

Example:

```

dim f as FolderItem
dim md as EditableMovie
dim ms as EditableMovie

f=SpecialFolder.Desktop.Child("Our First Snowman.mov")
ms=f.OpenEditableMovie

ms.SelectionStartMBS=5
ms.SelectionLengthMBS=10

f=SpecialFolder.Desktop.Child("dummy.mov")
md=f.CreateMovie

msgbox str(md.AddMovieSelectionMBS(ms))

```

Notes: If result is not 0, the method fails.

7.0.88 How to create a birthday like calendar event?

Plugin Version: all, Platform: macOS.

Answer: Try this code:

Example:

```

// start a connection to the calendar database
dim s as new CalCalendarStoreMBS

// needed for the error details
dim e as NSErrorMBS

dim r as CalRecurrenceRuleMBS = CalRecurrenceRuleMBS.initYearlyRecurrence(1, nil) // repeat every
year without end

dim a as new CalAlarmMBS // add alarm
a.action = a.CalAlarmActionDisplay
a.relativeTrigger = -3600*24 // 24 Hours before

// create a new calendar
dim c as new CalEventMBS

dim d as new date(2011, 04, 20) // the date

dim calendars() as CalCalendarMBS = s.calendars

```

```

// set properties
c.Title="Test Birthday"
c.startDate=d
c.recurrenceRule = r
c.calendar=calendars(0) // add to first calendar
c.addAlarm(a)
c.endDate = d
c.isAllDay = true

// save event
call s.saveEvent(c,s.CalSpanAllEvents, e)
if e<>nil then
MsgBox e.localizedDescription
else
MsgBox "New event was created."
end if

```

Notes: This adds an event to iCal for the given date with alarm to remember you and repeats it every year.

7.0.89 How to create a GUID?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the UUIDMBS class for this.

7.0.90 How to create a Mac picture clip file?

Plugin Version: all, Platform: Windows.

Answer: You can use code like this one.

Example:

```

dim f As FolderItem
dim p As Picture

f=SpecialFolder.Desktop.Child("Test.pictClipping")
if f=nil then Return

p=new Picture(300,200,32) 'Make a sample picture
p.Graphics.ForeColor=RGB(0,255,255)
p.Graphics.FillOval 0,0,99,99

```

```
p.Graphics.ForeColor=RGB(255,0,0)
p.Graphics.DrawOval 0,0,99,99
```

```
dim r As ResourceFork 'ResourceFork is needed for a clip file
```

```
// Please define a file type Any
r=f.CreateResourceFork("Any")
```

```
// get PICT data using plugin function
dim pictdata as string = p.PicHandleDataMBS
r.AddResource(pictdata,"PICT",256,"Picture")
```

```
dim m as new MemoryBlock(8)
```

```
m.LittleEndian = false
m.Int16Value(0) = 0
m.Int16Value(2) = 0
m.Int16Value(4) = p.Width
m.Int16Value(6) = p.Height
```

```
r.AddResource(m,"RECT",256,"")
```

```
'Values taken from a sample file and irrelevant to the problem
```

```
dim data as string = DecodeBase64("AQAAAAAAAAAAAAAAAAACAFRDRVIAAAABAAAAAAAAAAABUQ0IQAAAAA")
r.AddResource(data,"drag",128,"") 'ditto
r.Close
```

Notes: In general Apple has deprecated this, but a few application still support clippings.

7.0.91 How to create a PDF file in Xojo?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Check our DynaPDF plugin and the examples.

Notes: An alternative can be to use the CoreGraphics and Cocoa functions on Mac OS X. For Windows, we can only suggest our DynaPDF plugin.

7.0.92 How to create EmailAttachment for PDF Data in memory?

Plugin Version: all, Platform: macOS.

Answer: You can use code like the one below:

Example:

Function EmailAttachmentFromPDFData(PDFData as string, filename as string) As EmailAttachment
 dim a as new EmailAttachment

```
a.data = EncodeBase64(PDFData, 76)
a.ContentEncoding = "base64"
a.MIMETYPE = "application/pdf"
a.MacType = "PDF "
a.MacCreator = "prvw"
a.Name = filename
```

Return a

End Function

Notes: Compared to sample code from Xojo documentation, we set the mime type correct for PDF. The MacType/MacCreator codes are deprecated, but you can still include them for older Mac email clients. "prvw" is the creator code for Apple's preview app.

7.0.93 How to create PDF for image files?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use DynaPDF like this:

Example:

```
Function CreatePrintPDF(jpgFiles() as folderitem, pdfFile as FolderItem, PageWidth as Integer, PageHeight as Integer) As Boolean
  // have files?
  If pdfFile = Nil Then Return False
  If jpgFiles = Nil Then Return False

  If jpgFiles.Ubound < 0 Then Return False

  // new DynaPDF
  Dim pdf As New MyDynapdfMBS

  // page width/height in MilliMeter
  Dim pdfWidth as Integer = PageWidth * 72 / 25.4
  Dim pdfHeight as Integer = PageHeight * 72 / 25.4

  // put your license here
  Call pdf.SetLicenseKey "Starter"

  // create pdf
  Call pdf.CreateNewPDF pdfFile
```

```

// set a couple of options
Call pdf.SetPageCoords(MyDynaPDFMBS.kpcTopDown)
Call pdf.SetResolution(300)
Call pdf.SetUseTransparency(False)
Call pdf.SetSaveNewImageFormat(False)
Call pdf.SetGStateFlags(MyDynaPDFMBS.kgfUseImageColorSpace, False)
Call pdf.SetJPEGQuality(100)

// set page size
Call pdf.SetBBox(MyDynaPDFMBS.kpbMediaBox, 0, 0, pdfWidth, pdfHeight)
Call pdf.SetPageWidth(pdfWidth)
Call pdf.SetPageHeight(pdfHeight)

// append pages with one image per page
For i as Integer = 0 To jpgFiles.Ubound
Call pdf.Append
Call pdf.InsertImageEx(0, 0, pdfWidth, pdfHeight, jpgFiles(i), 1)
Call pdf.EndPage
Next

// close
Call pdf.CloseFile

Return True
End Function

```

Notes: This is to join image files in paper size to a new PDF.
e.g. scans in A4 into an A4 PDF.

7.0.94 How to CURL Options translate to Plugin Calls?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Below a few tips on how to translate command line CURL calls to plugin calls.

Notes: `curl -vX PUT http://localhost:5984/appserials/78569238475/DocumentRegister.docx?rev=3-25634563456 -data-binary @DocumentRegister.docx -H "Content-Type: application/msword"`

- The option `-v` means verbose. You can use `OptionVerbose` and listen for messages in the `DebugMessage` event.
- The option `-X PUT` means we want to do a HTTP PUT Request. So set `OptionPut` to true. Also you will want to set `OptionUpload` to true as you upload data.
- We have the URL which you put into `OptionURL` property.

- The `-data-binary` option tells CURL to pass the given data. With the `@` before the data, it is interpreted as a file name, so the data is read from the given file. You'll need to open this file and pass data with the Read event as needed. (See CURLS ftp file upload example project)
- The last option `-H` specifies an additional header for the upload. Pass this additional header with the `SetOptionHTTPHeader` method.

```
curl -X PUT http://127.0.0.1:5984/appserials/f2f4e540bf8bb60f61cfc4328001c59 -d '{ "type": "Product", "description": "Application Serial", "acronym": "AppSerial", "dateAdded": "2011-03-21 14:57:36" } '
```

- Option `-X PUT` like above.
- Pass the URL again in `OptionURL`
- This time data is passed in command line for CURL. You'd put this data in the quotes into a string and make it available in the Read event. (See CURLS ftp upload example project)

7.0.95 How to delete file with ftp and curl plugin?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can set post/pre quotes to have ftp commands executed before or after the download/upload.

Example:

```
dim d as CURLMBS // your curl object
```

```
// delete file
```

```
dim ws() As String
```

```
ws.Append "DELE Temp.txt"
```

```
d.SetOptionPostQuote(ws)
```

Notes: Use `SetOptionPostQuote`, `SetOptionPreQuote` or `SetOptionQuote`.

The ftp commands you pass here are native ftp commands and not the commands you use with ftp applications. To delete use `DELE` and the file path.

7.0.96 How to detect display resolution changed?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Mac OS X simply listen for display changed notifications.

Notes: Use the "Distribution Notification Center.rbp" example project as a base and use it to listen to notifications with the name "O3DeviceChanged".

7.0.97 How to detect retina?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use `Window.BackingScaleFactorMBS` to query the factor.

Example:

```
msgbox str(window1.BackingScaleFactorMBS)
```

7.0.98 How to disable force quit?

Plugin Version: all, Platform: macOS.

Answer:

Please visit this website and get the control panel for Mac OS 9 there:

<http://www3.sk.sympatico.ca/tinyjohn/DFQ.html>

For Mac OS X use the MBS Plugin with the `SetSystemUIModeMBS` method.

Notes:

Please use `presentationOptions` in `NSApplicationMBS` for Cocoa applications.

7.0.99 How to disable the error dialogs from Internet Explorer on javascript errors?

Plugin Version: all, Platform: Windows.

Answer: You can use this code in the `htmlviewer` open event:

Example:

```
if targetwin32 then
htmlviewer1._ole.Content.value("Silent") = True
end if
```

Notes: This disables the error dialogs from Internet Explorer.

7.0.100 How to display a PDF file in Xojo?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Mac OS X you can use CoreGraphics or PDFKit to display a PDF.

Notes: An alternative can be to load the PDF into a htmlviewer so the PDF plugin can display it.

On Windows you may need to use the Acrobat ActiveX control from Adobe or launch Acrobat Reader.

7.0.101 How to do a lottery in RB?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Try this function:

Example:

```

Sub Lotto(max as Integer,count as Integer,z() as Integer)
// Lotto count numbers of max put into the array z beginning at index 0
dim n(0) as Integer ' all the numbers
dim m as Integer ' the highest field in the current array
dim i,a,b,d as Integer ' working variables

'fill the array with the numbers
m=max-1
redim n(m)

for i=0 to m
n(i)=i+1
next

' unsort them by exchanging random ones
m=max*10
for i=1 to m
a=rnd*max
b=rnd*max

d=n(a)
n(a)=n(b)
n(b)=d
next

' get the first count to the dest array
m=count-1
redim z(m)
for i=0 to m
z(i)=n(i)
next

'sort the result
z.sort
End Sub

```



```

b=true
x=x1
while (x<x2) and (y<y2)
  ox=x
  oy=y

  x=x+dx
  y=y+dy

  if b then
    g.DrawLine ox,oy,x,y
  end if

  b=not b
wend

```

End Sub

Notes: It would be possible to add this to the plugin, but I think it's better if you do it in plain Xojo code, so it even works on Windows.

7.0.104 How to draw a nice antialiased line?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

This code can help you although it's not perfect.
You need to set lc to the current color you use.

Example:

```

Sub drawLine(xs as Integer, ys as Integer, xe as Integer, ye as Integer, face as RGBSurface, lineColor as
color)
  dim intX, intY, count, n, xDiff, yDiff as Integer
  dim v, v1, floatX, floatY, xx, yy, xStep, yStep as Double
  dim c as color

  const st=1.0

  xDiff=xe-xs
  yDiff=ye-ys
  count=max(abs(xDiff), abs(yDiff))
  xStep=xDiff/count
  yStep=yDiff/count

```

```

xx=xs
yy=ys
for n=1 to count
intX=xx
intY=yy
floatX=xx-intX
floatY=yy-intY

v=(1-floatX)*(1-floatY)*st
v1=1-v
c=face.pixel(intX, intY)
face.pixel(intX, intY)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
v=floatX*(1-floatY)*st
v1=1-v
c=face.pixel(intX+1, intY)
face.pixel(intX+1, intY)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
v=(1-floatX)*floatY*st
v1=1-v
c=face.pixel(intX, intY+1)
face.pixel(intX, intY+1)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
v=floatX*floatY*st
v1=1-v
c=face.pixel(intX+1, intY+1)
face.pixel(intX+1, intY+1)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)

xx=xx+xStep
yy=yy+yStep
next

End Sub

```

Notes:

PS: st should be 1 and face should be a RGBSurface or a Graphics object.

7.0.105 How to dump java class interface?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: In terminal you can use "javap -s <classname>" to display the class with the method names and parameters.

Notes: For example show ResultSet class: javap -s java.sql.ResultSet

7.0.106 How to duplicate a picture with mask or alpha channel?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this function:

Example:

```
Function Duplicate(extends p as Picture) As Picture
#if RBVersion >= 2011.04 then
if p.HasAlphaChannel then

// create nw picture and copy content:
dim q as new Picture(p.Width, p.Height)
q.Graphics.DrawPicture p,0,0

Return q

end if
#endif

// create new picture
dim q as new Picture(p.Width, p.Height, 32)

// get mask
dim oldMask as Picture = p.mask(false)
if oldMask = nil then
// no mask, so simple copy
q.Graphics.DrawPicture p,0,0
Return q
end if

// remove mask
p.mask = nil

// copy picture and mask
q.Graphics.DrawPicture p, 0, 0
q.mask.Graphics.DrawPicture oldMask,0,0

// restore mask
p.mask = oldmask

Return q
End Function
```

Notes: Simply copy it to a module and call it like this: `q = p.duplicate`.

The code above works with old Xojo versions because of the `#if` even if your RS version does not support alpha channel pictures. This way it's future proof.

7.0.107 How to enable assistive devices?

Plugin Version: all, Platform: macOS.

Answer: You can use AppleScript code like below:

Notes: tell application "System Events"
activate

```
set UI elements enabled to true
```

```
return UI elements enabled
end tell
```

You can run this with AppleScriptMBS class.

7.0.108 How to encrypt a file with Blowfish?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this:

Example:

```
dim fi as FolderItem = SpecialFolder.Desktop.Child("test.xojo_binary_project")
dim fo as FolderItem = SpecialFolder.Desktop.Child("test.encrypted")
```

```
// read input
```

```
dim bi as BinaryStream = BinaryStream.Open(fi)
```

```
dim si as string = bi.Read(bi.Length)
```

```
bi.Close
```

```
// encrypt
```

```
dim so as string = BlowfishMBS.Encrypt("MyKey",si)
```

```
// write output
```

```
dim bo as BinaryStream = BinaryStream.Create(fo)
```

```
bo.Write so
```

```
bo.Close
```

Notes: Of course you can decrypt same way, just use Decrypt function and of course swap files.

7.0.109 How to extract text from HTML?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use both RemoveHTMLTagsMBS and DecodingFromHTMLMBS like this:

Example:

```
dim html as string = "<p><B>Gr&uuml;&szlig;e</B></P>"
dim htmltext as string = RemoveHTMLTagsMBS(html)
dim text as string = DecodingFromHTMLMBS(htmltext)
```

MsgBox text // shows: Gr√üë

Notes: You can use it together with RemoveHTMLTagsMBS to remove html tags. What you get will be the text without tags.

DecodingFromHTMLMBS turns HTML escapes back to unicode characters. Like ä to √§.

7.0.110 How to find empty folders in a folder?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Try this code:

Example:

```
dim folder as folderitem // your folder

dim c as Integer = folder.count
for i as Integer = 1 to c
dim item as folderitem = folder.trueitem(i)
if item = nil then
// ignore
elseif item.directory then
// folder
if item.count = 0 then
// found empty folder
end if
end if
next
```

7.0.111 How to find iTunes on a Mac OS X machine fast?

Plugin Version: all, Platform: macOS.

Answer: You can try Launch Services.

Example:

```
dim f as FolderItem

f=LaunchServicesFindApplicationForInfoMBS("hook","com.apple.iTunes","iTunes.app")

MsgBox f.NativePath
```

7.0.112 How to find network interface for a socket by it's name?

Plugin Version: all, Platform: macOS.

Answer: You can use our plugin to build a lookup table.

Example:

```
Function FindNetworkInterface(name as string) As NetworkInterface
name = name.trim

if name.len = 0 then Return nil

// search by IP/MAC
dim u as Integer = System.NetworkInterfaceCount-1
for i as Integer = 0 to u
dim n as NetworkInterface = System.GetNetworkInterface(i)
if n.IPAddress = name or n.MACAddress = name then
Return n
end if
next

// use MBS Plugin to build a mapping
dim interfaces() as NetworkInterfaceMBS = NetworkInterfaceMBS.AllInterfaces
dim map as new Dictionary

for each n as NetworkInterfaceMBS in interfaces
dim IPv4s() as string = n.IPv4s
dim IPv6s() as string = n.IPv6s

for each IPv4 as string in IPv4s
map.Value(IPv4) = n.Name
next
for each IPv6 as string in IPv6s
map.Value(IPv6) = n.Name
next
if n.MAC<>>" then
map.Value(n.MAC) = n.Name
```

```

end if
next

// now search interfaces by name, IPv4 or IPv6
for i as Integer = 0 to u
dim n as NetworkInterface = System.GetNetworkInterface(i)
if map.Lookup(n.IPAddress, "") = name then
Return n
end if

if map.Lookup(n.MACAddress, "") = name then
Return n
end if
next

End Function

```

Notes: The code above uses a lookup table build using NetworkInterfaceMBS class to find the network interface by name.

7.0.113 How to find version of Microsoft Word?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this:

Example:

```

// find Word
dim f as FolderItem = LaunchServicesFindApplicationForInfoMBS("", "com.microsoft.Word", "")

// open bundle
dim c as new NSBundleMBS(f)

// read info
dim d as Dictionary = c.infoDictionary

// show version
MsgBox d.Lookup("CFBundleVersion", "")

```

Notes: Older versions of Word can be found with creator code "MSWD".

7.0.114 How to fix CURL error 60/53 on connecting to server?

Plugin Version: all, Platform: macOS.

Answer: You probably connect with SSL and you have no valid certificate.

Example:

```
dim d as new CURLSMBS

// Disable SSL verification
d.OptionSSLVerifyHost = 0 // don't verify server
d.OptionSSLVerifyPeer = 0 // don't proofs certificate is authentic

// With SSL Verification:
dim cacert as FolderItem = Getfolderitem("cacert.pem")
d.OptionCAInfo = cacert.NativePath
d.OptionSSLVerifyHost = 2 // verify server
d.OptionSSLVerifyPeer = 1 // proofs certificate is authentic
```

Notes: You can either use the code above to disable the SSL verification and have no security. Or you use the cacert file and enable the verification. Than you only get a connection if the server has a valid certificate.

see also:

<http://curl.haxx.se/ca/>

7.0.115 How to format double with n digits?

Plugin Version: all, Platform: macOS.

Answer: You can use the FormatMBS function for this.

Example:

```
dim d as Double = 123.4567890
listbox1.AddRow FormatMBS("%f", d)
listbox1.AddRow FormatMBS("%e", d)
listbox1.AddRow FormatMBS("%g", d)

listbox1.AddRow FormatMBS("%5.5f", d)
listbox1.AddRow FormatMBS("%5.5e", d)
listbox1.AddRow FormatMBS("%5.5g", d)

d = 0.000000123456
listbox1.AddRow FormatMBS("%f", d)
listbox1.AddRow FormatMBS("%e", d)
```

```
listbox1.AddRow FormatMBS("%g", d)

listbox1.AddRow FormatMBS("%5.5f", d)
listbox1.AddRow FormatMBS("%5.5e", d)
listbox1.AddRow FormatMBS("%5.5g", d)
```

Notes: see FormatMBS for details.

In general %f is normal style, %e is scientific and %g is whichever gives best result for given space.

7.0.116 How to get a time converted to user time zone in a web app?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the WebSession.GMTOffset property.

Example:

```
Sub Open()
// current date on server
dim d as new date
dim s as string = d.LongTime

// adjust to client GMT offset
d.GMTOffset = d.GMTOffset + Session.GMTOffset

dim t as string = D.LongTime

MsgBox s+EndOfLine+t
End Sub
```

7.0.117 How to get an handle to the frontmost window on Windows?

Plugin Version: all, Platform: Windows.

Answer: This function returns a handle for the frontmost window:

Example:

```
Function GetForegroundWindowHandle() as Integer
#if targetwin32 then
declare function GetForegroundWindow Lib "user32.dll" as Integer
Return GetForegroundWindow()
#endif
End Function
```

7.0.118 How to get CFAbsoluteTime from date?

Plugin Version: all, Platforms: macOS, Windows.

Answer: Use code like this:

Example:

```
dim d as new date
dim t as CFTimeZoneMBS = SystemCFTimeZoneMBS
dim g as new CFGregorianCalendarMBS
g.Day = d.Day
g.Month = d.Month
g.Year = d.Year
g.Minute = d.Minute
g.Hour = d.Hour
g.Second = d.Second

dim at as CFAbsoluteTimeMBS = g.AbsoluteTime(t)
dim x as Double = at.Value
```

```
MsgBox str(x)
```

Notes: As you see we need a timezone and put the date values in a gregorian date record. Now we can query absolute time for the given timezone.

7.0.119 How to get client IP address on web app?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the WebSession.RemoteAddress property.

Example:

```
Sub Open()
Title = Session.RemoteAddress
End Sub
```

7.0.120 How to get fonts to load in charts on Linux?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use the `SetFontSearchPath` method in the `CDBaseChartMBS` class to specify where your fonts are.

Example:

```

if TargetLinux then
CDBaseChartMBS.SetFontSearchPath "/usr/share/fonts/truetype;/usr/share/fonts/truetype/msttcorefonts"
else
// on Mac and Windows we use system fonts.
end if

// also you can later switch default fonts:

dim Chart as CDBaseChartMBS // your chart

#If TargetARM And TargetLinux Then
// use specific fonts on Linux on Raspberry Pi
Call Chart.setDefaultFonts("/usr/share/fonts/truetype/piboto/PibotoLt-Regular.ttf", "/usr/share/fonts/truetype/piboto/Pi
#EndIf

```

Notes: On macOS, iOS and Windows, the fonts are loaded from the system's font folder.

e.g. if you use ubuntu, you can install the `ttf-mscorefonts-installer` package and call this method with `"/usr/share/fonts/truetype/msttcorefonts"` as the path. No backslash on the end of a path, please.

7.0.121 How to get fonts to load in DynaPDF on Linux?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use the `AddFontSearchPath` method in the `DynaPDFMBS` class to specify where your fonts are.

Example:

```

dim d as new DynaPDFMBS
if TargetLinux then
call d.AddFontSearchPath "/usr/share/fonts/truetype", true
else
// on Mac and Windows we use system fonts.
end if

```

Notes: On Mac OS X and Windows, the fonts are loaded from the system's font folder.

e.g. if you use ubuntu, you can install the `ttf-mscorefonts-installer` package and call this method with `"/usr/share/fonts/truetype/msttcorefonts"` as the path. No backslash on the end of a path, please.

7.0.122 How to get GMT time and back?

Plugin Version: all, Platform: macOS.

Answer: You can use the date class and the GMTOffset property.

Example:

```
// now
dim d as new date

// now in GMT
dim e as new date
e.GMTOffset = 0

// show
MsgBox str(d.TotalSeconds,"0.0")+ " " +str(e.TotalSeconds, "0.0")

dim GMTTimeStamp as Double = e.TotalSeconds

// restore
dim f as new date

// add GMT offset here
f.TotalSeconds = GMTTimeStamp + f.GMTOffset*3600
// because here it's removed
f.GMTOffset = f.GMTOffset

MsgBox d.ShortTime+" (" +str(d.GMTOffset)+") " +str(d.TotalSeconds,"0.0")+EndOfLine+_
e.ShortTime+" (" +str(e.GMTOffset)+") " +str(e.TotalSeconds,"0.0")+EndOfLine+_
f.ShortTime+" (" +str(f.GMTOffset)+") " +str(f.TotalSeconds,"0.0")
```

Notes: It's sometimes a bit tricky with the date class as setting one property often changes the others.

7.0.123 How to get good crash reports?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Check this website from the webkit website:

Notes: <http://webkit.org/quality/crashlogs.html>

7.0.124 How to get list of all threads?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use the runtime module like in this function:

Example:

```
Function Threads() As Thread()
#pragma DisableBackgroundTasks
dim t() as Thread

Dim o as Runtime.ObjectIterator=Runtime.IterateObjects
While o.MoveNext
if o.Current isa Thread then
t.Append thread(o.current)
end if
Wend

Return t
End Function
```

Notes: This returns an array of all thread objects currently in memory.

The pragma is important here as it avoids thread switches which may cause a thread to be created or deleted.

7.0.125 How to get parameters from webpage URL in Xojo Web Edition?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the Webpage.ParametersReceived event.

Example:

```
Sub ParametersReceived(Variables As Dictionary)
for each key as Variant in Variables.keys
MsgBox key+" ->" +Variables.Value(key)
next
End Sub
```

Notes: The text encodings of this strings is not defined in Xojo 2010r5. Please use DefineEncoding.

7.0.126 How to get the color for disabled textcolor?

Plugin Version: all, Platform: macOS.

Answer: Ask the appearance manager:

Example:

```
Function GetThemeTextColor(inColor as Integer, inDepth as Integer, inColorDev as Boolean) As Color
declare function GetThemeTextColor lib "Carbon" (inColor as Integer, inDepth as Integer, inColorDev as
Boolean, outColor as Ptr) as Integer
```

```
dim i as Integer
```

```
dim col as MemoryBlock
```

```
col = newMemoryBlock(6)
```

```
i = GetThemeTextColor(inColor, inDepth, inColorDev, col)
```

```
return RGB(col.UShort(0)\256, col.UShort(2)\256, col.UShort(4)\256)
```

```
End Function
```

Notes: The color for this is:

```
const kThemeTextColorDialogInactive = 2.
```

```
c = GetThemeTextColor(kThemeTextColorDialogInactive, Screen(0).Depth, true)
```

For Mac OS X you should use "CarbonLib" instead of "AppearanceLib" ...

7.0.127 How to get the current free stack space?

Plugin Version: all, Platform: macOS.

Answer: You can something like the code below:

Example:

```
Sub ShowStackSize()
```

```
dim threadid as Integer
```

```
dim size as Integer
```

```
declare function GetCurrentThread lib "Carbon" (byref threadid as Integer) as short
```

```
declare function ThreadCurrentStackSize lib "Carbon" (threadid as Integer, byref size as Integer) as short
```

```
if GetCurrentThread(threadid)=0 then
```

```
if 0=ThreadCurrentStackSize(threadid,size) then
```

```
MsgBox str(size)
```

```
end if
```

```
end if
```

End Sub

Notes: For Mac OS 9, use "ThreadLib" instead of "CarbonLib". You can use #if if you like for that.

7.0.128 How to get the current timezone?

Plugin Version: all, Platforms: macOS, Windows.

Answer:

You can use the TimeZoneMBS class or the CFTimeZoneMBS class.
Or code like below:

Example:

```
Function GMTOffsetInMinutes() as Integer
// Returns the offset of the current time to GMT in minutes.
// supports Mac OS and Windows, but not Linux yet (let me know if
// you have code for that, please)
//
// Note that the offset is not always an even multiple of 60, but
// there are also half hour offsets, even one 5:45h offset

// This version by Thomas Tempelmann (rb@tempel.org) on 25 Nov 2005
// with a fix that should also make it work with future Intel Mac targets.
//
// Using code from various authors found on the RB NUG mailing list

dim result, bias, dayLightbias as Integer
dim info as memoryBlock
dim offset as Integer

#if targetMacOS then

Declare Sub ReadLocation lib "Carbon" (location As ptr)

info = NewMemoryBlock(12)
ReadLocation info
if false then
// bad, because it does not work on Intel Macs:
'offset = info.short(9) * 256 + info.byte(11)
else
offset = BitwiseAnd (info.long(8), &hFFFFFF)
end

offset = info.short(9) * 256 + info.byte(11)
```

```

offset = offset \60
return offset

#endif

#if targetWin32 then

Declare Function GetTimeZoneInformation Lib "Kernel32" ( tzInfoPointer as Ptr ) as Integer
// returns one of
// TIME_ZONE_ID_UNKNOWN 0
// - Note: e.g. New Delhi (GMT+5:30) and Newfoundland (-3:30) return this value 0
// TIME_ZONE_ID_STANDARD 1
// TIME_ZONE_ID_DAYLIGHT 2

info = new MemoryBlock(172)
result = GetTimeZoneInformation(info)

bias = info.Long(0)
// note: the original code I found in the NUG archives used Long(84) and switched to Long(0)
// only for result=1 and result=2, but my tests found that Long(0) is also the right value for result=0

if result = 2 then
daylightBias = info.long(168)
end if
offset = - (bias + dayLightbias)
return offset

#endif

End Function

```

7.0.129 How to get the current window title?

Plugin Version: all, Platform: macOS.

Answer: The code below returns the current window title for the frontmost window on Mac OS X if Accessibility services are

Example:

```

Function CurrentWindowTitle() As string
// your application needs permissions for accessibility to make this work!

dim SystemWideElement,FocusedApplicationElement,FocusedWindowElement as AXUIElementMBS
dim FocusedApplication,FocusedWindow,Title as AXValueMBS
dim s as String
dim cs as CFStringMBS

```

```

SystemWideElement=AccessibilityMBS.SystemWideAXUIElement
if SystemWideElement<>nil then
FocusedApplication=SystemWideElement.AttributeValue(AccessibilityMBS.kAXFocusedApplicationAttribute)
if FocusedApplication.Type=AccessibilityMBS.kAXUIElementMBSTypeID then
FocusedApplicationElement=new AXUIElementMBS
FocusedApplicationElement.Handle=FocusedApplication.Handle
FocusedApplicationElement.RetainObject

FocusedWindow=FocusedApplicationElement.AttributeValue(AccessibilityMBS.kAXFocusedWindowAttribute)

if FocusedWindow<>nil and AccessibilityMBS.kAXUIElementMBSTypeID=FocusedWindow.Type then

FocusedWindowElement=new AXUIElementMBS
FocusedWindowElement.Handle=FocusedWindow.Handle
FocusedWindowElement.RetainObject

Title=FocusedWindowElement.AttributeValue(AccessibilityMBS.kAXTitleAttribute)
if Title<>nil and Title.Type=kCFStringMBSTypeID then
cs=new CFStringMBS
cs.handle=Title.Handle
cs.RetainObject
Return cs.str
end if
end if
end if
end if
End Function

```

7.0.130 How to get the cursor blink interval time?

Plugin Version: all, Platform: macOS.

Answer: On Mac OS you can use GetCaretTime from the toolbox.

Example:

```
declare function GetCaretTime lib "Carbon" () as Integer
```

```
MsgBox str(GetCaretTime()+ " ticks")
```

Notes: 60 ticks make one second.

7.0.131 How to get the list of the current selected files in the Finder?

Plugin Version: all, Platform: macOS.

Answer:

Use the AppleScript like this one:

```
tell application "finder"
return selection
end tell
```

Which translates into this AppleEvent:

```
Process("Finder").SendAE "core,getd,'—':obj { form:prop, want:type(prop), seld:type(sele), from:'null'() }
"
```

and as Xojo code it looks like this:

Example:

```
dim ae as appleEvent
dim o1 as appleEventObjectSpecifier
dim f as folderItem
dim alist as appleEventDescList
dim i as Integer
dim dateiname as string

// setup the AppleEvent
o1=getpropertyObjectDescriptor( nil, "sele")
ae= newappleEvent("core", "getd", "MACS")
ae.objectSpecifierParam("—")=o1

// send it
if ae.send then
// got the list
alist=ae.replyDescList

// now show the list of filename into an editfield:

for i=1 to alist.count
f=alist.folderItem(i)

dateiname=f.name
// editfield1 with property "multiline=true"!
editfield1.text=editfield1.text + dateiname + chr(13)
next
```

end if

7.0.132 How to get the Mac OS system version?

Plugin Version: all, Platform: macOS.

Answer: The following code queries the value and displays the version number:

Example:

```

dim first as Integer
dim second as Integer
dim third as Integer
dim l as Integer

if System.Gestalt("sysv",l) then

Third=Bitwiseand(l,15)
second=Bitwiseand(l\16,15)
first=Bitwiseand(l\256,15)+10*Bitwiseand(l\256\16,15)
end if

if First>=10 then
msgbox "Mac OS X "+str(First)+" "+str(Second)+" "+str(third)
else
msgbox "Mac OS "+str(First)+" "+str(Second)+" "+str(third)
end if

```

7.0.133 How to get the Mac OS Version using System.Gestalt?

Plugin Version: all, Platform: macOS.

Answer: Try this code:

Example:

```

Dim s As String
Dim b As Boolean
Dim i, resp as Integer

// Systemversion
b = System.Gestalt("sysv", resp)
If b then
s = Hex(resp)

```

```

For i =Len(s)-1 DownTo 1
s=Left(s,i)+””+Mid(s,i+1)
Next
MsgBox ”Systemversion: Mac OS ” + s
end if

```

Notes: The MBS Plugin has a SystemInformationMBS.OSVersionString function for this.

7.0.134 How to get the screensize excluding the task bar?

Plugin Version: all, Platform: Windows.

Answer: Try this code:

Notes: Use the Screen class with the available* properties.

7.0.135 How to get the size of the frontmost window on Windows?

Plugin Version: all, Platform: Windows.

Answer: Try this code:

Notes: Make yourself a class for the WindowRect with four properties:

```

Bottom as Integer
Left as Integer
Right as Integer
Top as Integer

```

Add the following method to your class:

```

Sub GetWindowRect(windowhandle as Integer)
dim err as Integer
dim mem as memoryBlock
#if targetwin32 then
Declare Function GetWindowRect Lib ”user32.dll” (hwnd as Integer, ipRect As Ptr) as Integer

mem = newmemoryBlock(16)
err = GetWindowRect(windowhandle, mem)
Left = mem.long(0)
Top = mem.Long(4)
Right = mem.Long(8)
Bottom = mem.Long(12)

```

```
#endif  
End Sub
```

Good to use for the MDI Master Window!

7.0.136 How to get the source code of a HTMLViewer?

Plugin Version: all, Platform: macOS.

Answer: Try this code:

Example:

```
// for Windows:
```

```
msgbox HTMLViewer1.IEHTMLTextMBS
```

```
// for MacOS with WebKit 2.x:
```

```
msgbox HTMLViewer1.WKWebViewMBS.HTMLText
```

7.0.137 How to get Xojo apps running Linux?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You need to install some require packages.

Notes: You need CUPS as well as GTK packages. On 64 bit systems also the ia32-libs package.

Please note that you need a x86 compatible Linux. So no PPC, Power, ARM or other CPUs.

7.0.138 How to handle really huge images with GraphicsMagick or ImageMagick?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Sometimes it may be better to use an extra application to process images.

Notes: A typical 32 bit app made with Xojo can use around 1.8 GB on Windows and 3 GB on Mac OS X. Some images may be huge, so that processing them causes several copies of the image to be in memory. With a 500 MB image in memory, doing a scale or rotation may require a temp image. So with source, temp and dest images with each 500 MB plus your normal app memory usage, you may hit the limit of Windows with 1.8 GB.

In that case it may be worth running a tool like gm in the shell class. gm is the command line version of GraphicsMagick. There you can run the 64 bit version which is not limited in memory like your own application. Also you can monitor progress and keep your app responsive.

7.0.139 How to handle tab key for editable cells in listbox?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this function:

Example:

```
Function HandleTabInList(list as listbox, row as Integer, column as Integer, key as String) As Boolean
// Handle tab character in Listbox.CellKeyDown event
```

```
Select case asc(key)
case 9
if Keyboard.AsyncShiftKey then
// back

// look for column left
for i as Integer = column-1 downto 0
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next

// not found, so look in row before
row = row - 1
if row >= 0 then
for i as Integer = list.ColumnCount-1 downto 0
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next
end if
else
// forward

// look for column right
for i as Integer = column+1 to list.ColumnCount-1
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next
```

```

// not found, so look in row below
row = row + 1
if row <list.ListCount then
for i as Integer = 0 to list.ColumnCount-1
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next
end if
end if
end Select
End Function

```

Notes: You call it from CellKeyDown event like this:

```

EventHandler Function CellKeyDown(row as Integer, column as Integer, key as String) As Boolean
if HandleTabInList(me, row, column, key) then Return true
End EventHandler

```

As you see in the code, we handle tab and shift + tab for moving back and forward. Also we wrap to previous/next row if needed. Feel free to extend this to wrap from last to first row or create a new row for editing.

7.0.140 How to hard link MapKit framework?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Our MapKit classes weak link the framework. If you need hard linking it for the App Store, you can add this method to a class:

Example:

```

Sub ReferenceMapKit()
// just put this in window or app class

#if TargetMachO and Target64Bit then
Declare sub testing Lib "MapKit" Selector "test" (id as ptr)
testing(nil)
#endif

End Sub

```

Notes: No need to call the method.

Just having it in a window or app, will cause the compiler to hard link the framework.

7.0.141 How to have a PDF downloaded to the user in a web application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use a WebHTMLViewer control and load the PDF file with the PDF plugin from the browser.

Example:

```
dim CurrentFile as WebFile // a property of the WebPage

// define the PDF file
CurrentFile = new WebFile
CurrentFile.Filename = "test.pdf"
CurrentFile.MIMEType = "application/pdf"
CurrentFile.Data = "some pdf data" // MyDynaPDF.GetBuffer
CurrentFile.ForceDownload = true

// start the download
showurl(CurrentFile.url)
```

Notes: See our Create PDF example for the Xojo Web Edition.

7.0.142 How to hide all applications except mine?

Platform: macOS.

Answer: The code below will on Mac OS hide all applications except your one:

Example:

```
dim p as new ProcessMBS

p.GetFirstProcess
do
if not p.FrontProcess then
p.Visible=false
end if
loop until not p.GetNextProcess
```

7.0.143 How to hide script errors in HTMLViewer on Windows?

Plugin Version: all, Platform: Windows.

Answer: Set Internet Explorer to silent mode with code like this:

Example:

```
htmlviewer1._ole.Content.value("Silent") = True
```

Notes: Simply put this code in the open event of your htmlviewer control (using me instead of htmlviewer1).

7.0.144 How to hide the grid/background/border in ChartDirector?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: If you want to hide something in a chart, simply assign the kTransparent constant as color.

7.0.145 How to hide the mouse cursor on Mac?

Plugin Version: all, Platform: macOS.

Answer: Try this declare:

Example:

```
Declare Sub HideCursor Lib "Carbon" () Inline68K("A852")
```

```
HideCursor
```

Notes: The MBS Plugin has this function and supports it on Windows, too.

7.0.146 How to insert image to NSTextView or TextArea?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: With NSTextViewMBS you can use this code to insert file:

Example:

```
// insert a file to textview
```

```
Public Sub InsertFile(textview as NSTextViewMBS, f as FolderItem)
```

```
// read to file
```

```

dim b as BinaryStream = BinaryStream.Open(f)
dim s as string = b.Read(b.Length)

// build wrapper
dim fileWrapper as NSFileWrapperMBS = NSFileWrapperMBS.initRegularFileWithContents(s)
fileWrapper.preferredFilename = f.name

// make attachment
dim fileAttachment as new NSTextAttachmentMBS(fileWrapper)
dim attributedString as NSAttributedStringMBS = NSAttributedStringMBS.attributedStringWithAttachment(fileAttachment)

// add to a NSTextViewMBS
textview.insertText attributedString

End Sub

```

Notes: For TextArea you can query the underlying NSTextViewMBS object via TextArea.NSTextViewMBS method.

7.0.147 How to jump to an anchor in a htmlviewer?

Plugin Version: all, Platforms: macOS, Windows.

Answer: You can use javascript to change the current window's location.

Example:

```

// load website
htmlviewer1.LoadURL "http://www.monkeybreadsoftware.net/addressbook-abpersonmbs.shtml"

// later jump to anchor named "16":

if TargetWin32 then
call HTMLViewer1.IERunJavaScriptMBS "window.location = ""#16""
end if

```

7.0.148 How to keep a movieplayer unclickable?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: To keep the user away from clicking on a playing Movie you can just drop a Canvas in front of the Movieplayer and take the clicks there.

Example:

```
Function Canvas1.MouseDown(X as Integer, Y as Integer) as boolean
return true // take it and do nothing
End Function
```

7.0.149 How to keep my web app from using 100% CPU time?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Linux and MacOS you can use renice command in the terminal. On Windows use the task manager to reduce priority.

Notes: If you launch your app with nohup on Linux or Mac OS X like this from the terminal or a script:

```
nohup /webapps/MyApp/MyApp &
```

you can simply have a second line saying this:

```
renice 20 $ !
```

which tells the system to lower priority to lowest value for the latest background process.

7.0.150 How to kill a process by name?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can kill a process (or application) by name if you loop over all the processes and kill the one you need.

Example:

```
dim p as new ProcessMBS
p.GetfirstProcess ' get first
do
if p.name = "TextEdit" then
call p.KillProcess
Return
end if
loop until not p.GetNextProcess
```

Notes: You may want to check the result of killProcess function. Not every user is allowed to kill every application.

7.0.151 How to know how many CPUs are present?

Plugin Version: all, Platform: macOS.

Answer: Try this function:

Example:

```
Function GetCPUCount() as Integer
Declare Function MPProcessors Lib "Carbon" () as Integer
```

```
Return MPProcessors()
End Function
```

Notes: Your app will than need that library to launch on Classic. To avoid this the MBS plugin checks if this library is available and return 1 if it's not available.

7.0.152 How to know the calling function?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: On Mac you can use a helper function like this this code:

Example:

```
Public Function CallingFunction() as string
// Query name of calling function of a function
```

```
#Pragma BreakOnExceptions false
```

```
try
```

```
// raise a dummy exception
dim r as new NilObjectException
raise r
```

```
catch x as NilObjectException
```

```
// get stack
dim stack() as string = x.Stack
```

```
// pick function name and return
dim name as string = stack(2)
Return name
```

```
end try
End Function
```

Notes: You need to include function names in your application.

7.0.153 How to launch an app using it's creator code?

Plugin Version: all, Platform: macOS.

Answer: Send an AppleEvent "oapp" with the creator code to the Finder ("MACS"):

Example:

```
Dim a as AppleEvent
dim creator as string

creator = "MSIE" ' here the Internet Explorer

a = NewAppleEvent("aevt", "odoc", "MACS")
a.Timeout = -1

a.ObjectSpecifierParam("—") = GetUniqueIDObjectDescriptor("appf", nil, creator)

if not a.send then
msgBox "An error has occured"
else

end if
```

7.0.154 How to launch disc utility?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use this code:

Example:

```
dim f as FolderItem = LaunchServicesFindApplicationForInfoMBS("", "com.apple.DiskUtility", "")

if f<>Nil then
f.Launch
end if
```

Notes: This works even if people renamed the disc utility or moved it to another folder.

7.0.155 How to make a lot of changes to a REAL SQL Database faster?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You may try to embed your changes to the database between two transaction calls.

Example:

```
dim db as Database // some database

db.SQLiteExecute "BEGIN TRANSACTION"
// Do some Stuff
db.SQLiteExecute "END TRANSACTION"
```

Notes: This can increase speed by some factors.

7.0.156 How to make a NSImage object for my retina enabled app?

Plugin Version: all, Platform: macOS.

Answer: You can use code like this:

Example:

```
Function NewRetinaImage(pic as Picture, mask as Picture = nil) As NSImageMBS
// first make a NSImageMBS from it
dim n as new NSImageMBS(pic, mask)

// now set to half the size, so we have 2x pixels for the image
n.size = new NSSizeMBS(n.width/2, n.height/2)

// and return
Return n
End Function
```

Notes: The thing to do is to have 2x the pixels, but assign a size to the image which gives it the right size in points.

You can pass the NSImageMBS from here to NSMenuItemMBS. For Retina displays, the full resolution is used. For others it will be reduced.

7.0.157 How to make a window borderless on Windows?

Plugin Version: all, Platform: Windows.

Answer: Try this declares:

Example:

```
// Sets window to borderless popup type, and sets its initial dimensions.
// Call this method, then Win32SetBorderlessPos, and then RB's Show
// method. Use RB Frame type 7 (Global Floating Window).

Const SWP_NOMOVE = &H2
Const SWP_FRAMECHANGED = &H20
Const HWND_TOPMOST = -1
Const GWL_STYLE = -16
Const WS_POPUPWINDOW = &H80880000

Dim styleFlags as Integer

#If TargetWin32 Then

Declare Function SetWindowLong Lib "user32" Alias "SetWindowLongA" (hwnd as Integer, nIndex as Integer, dwNewLong as Integer) as Integer
Declare Function SetWindowPos Lib "user32" (hwnd as Integer, hWndInstertAfter as Integer, x as Integer, y as Integer, cx as Integer, cy as Integer, flags as Integer) as Integer

styleFlags = SetWindowLong( w.WinHWND, GWL_STYLE, WS_POPUPWINDOW )
styleFlags = BitwiseOr( SWP_FRAMECHANGED, SWP_NOMOVE )
styleFlags = SetWindowPos( w.WinHWND, HWND_TOPMOST, 0, 0, wd, ht, styleFlags )

#EndIf
```

7.0.158 How to make an alias using AppleEvents?

Plugin Version: all, Platform: macOS.

Answer: Try this code:

Example:

```
Sub MakeAlias(folder as folderitem, target as folderitem, aliasname as string)
dim ev as AppleEvent
dim myResult as boolean
dim properties as AppleEventRecord

ev = NewAppleEvent("core", "crel", "MACS")
ev.MacTypeParam("kocl") = "alis"
ev.FolderItemParam("to ") = target
ev.FolderItemParam("insh") = folder

properties=new AppleEventRecord
```

```

properties.StringParam("pnam")=aliasname

ev.RecordParam("prdt")=properties

myResult = ev.send
// true on success, false on error
End Sub

```

Notes: Call it like this:

```
MakeAlias SpecialFolder.Desktop, SpecialFolder.Desktop.Child("Gif Copy.rb"), "test.rb alias"
```

Seems to not work on Mac OS X 10.6

7.0.159 How to make AppleScripts much faster?

Plugin Version: all, Platform: macOS.

Answer: use "ignoring application responses" like in this example:

```

Notes: on run { fn,fpx,fpy }
ignoring application responses
tell app "Finder" to set the position of folder fn to fpx,fpy
end ignoring
end run

```

7.0.160 How to make double clicks on a canvas?

Plugin Version: all, Platform: macOS.

Answer:

Update: Newer Xojo versions support DoubleClick event, so you don't need this code.

Here's my tip from the tips list on how to add a double-click event to the Canvas control. The technique could easily be used for a window or any Rectcontrol:

Because of its built-in drawing methods, the Canvas control is often used to create custom interface controls. But while the Canvas control has event handlers for most mouse events, it doesn't have an event handler for DoubleClick events. Fortunately, you can add a double-click event handler to a Canvas control easily. Basically, you're going to create a new class based on Canvas and add a double-click event to that. You can then use the new class anytime you need a Canvas with a double-click event.

To create a new Canvas class with a DoubleClick event handler, do this:

1. Add a new class to your project.
2. Set the Super property of the new class to "Canvas".
3. Change the name of this new class to "DoubleClickCanvas".

A double-click occurs when two clicks occur within the users double-click time (set in the Mouse control panel on both Macintosh and Windows) and within five pixels of each other. So, you'll need a few properties to store when and where the last click occurred.

4. Add a new property with the following declaration and mark it as private: lastClickTicks as Integer
5. Add a new property with the following declaration and mark it as private: lastClickX as Integer
6. Add a new property with the following declaration and mark it as private: lastClickY as Integer

Since the Canvas control doesn't have a DoubleClick event, you will need to add one.

7. Add a new event to your class by choosing New Event from the Edit menu and enter "DoubleClick" as the event name.

Double-clicks occur on MouseUp. In order for the mouseUp event to fire, you must return True in the MouseDown event.

8. In the MouseDown event, add the following code:
Return True

In the MouseUp event, you will need to determine what the users double-click time is. This value is represented on both the Mac and Windows in ticks. A tick is 1/60th of a second. Since there isn't a built-in function for this, you'll need to make a toolbox call. The mouseUp event code below makes the appropriate toolbox call for both Macintosh and Windows. It then compares the time of the users last click to the time of the current click and compares the location of the users last click to the location of the current click.

9. Add the following code to the MouseUp event:

```
dim doubleClickTime, currentClickTicks as Integer

#if targetMacOS then
Declare Function GetDbtTime Lib "Carbon" () as Integer
doubleClickTime = GetDbtTime()
#endif

#if targetWin32 then
Declare Function GetDoubleClickTime Lib "User32.DLL" () as Integer
```

```

doubleClickTime = GetDoubleClickTime()/60 // convert to ticks from milliseconds
#endif

currentClickTicks = ticks
//if the two clicks happened close enough together in time
if (currentClickTicks - lastClickTicks) <= doubleClickTime then
//if the two clicks occurred close enough together in space
if abs(X - lastClickX) <= 5 and abs(Y - LastClickY) <= 5 then
DoubleClick //a double click has occurred so call the event
end if
end if
lastClickTicks = currentClickTicks
lastClickX = X
lastClickY = Y

```

10. Now to test out your new DoubleClickCanvas, drag the class from the Project window to a window in your project to create an instance of it.

11. Double-click on the canvas you just added to your window to open the Code Editor. Notice that the canvas has a DoubleClick event handler. In this event handler, add the following code:
BEEP

7.0.161 How to make my Mac not sleeping?

Plugin Version: all, Platform: macOS.

Answer: Just inform the Mac OS about some system activity with code like this:

Example:

```

Sub UpdateSystemActivity()

#if TargetCarbon
declare function myUpdateSystemActivity lib "Carbon" alias "UpdateSystemActivity" (activity as Integer)
as short

const OverallAct = 0 // Delays idle sleep by small amount */
const UsrActivity = 1 // Delays idle sleep and dimming by timeout time */
const NetActivity = 2 // Delays idle sleep and power cycling by small amount */
const HDAActivity = 3 // Delays hard drive spindown and idle sleep by small amount */
const IdleActivity = 4 // Delays idle sleep by timeout time */

dim e as Integer

e=myUpdateSystemActivity(UsrActivity)

```

```
// you may react on an error if e is not 0 after the call.
```

```
#endif
End Sub
```

Notes: You may use another constant if you prefer some different behavior. Call it maybe every second.

7.0.162 How to make my own registration code scheme?

Plugin Version: all, Platform: Windows.

Answer: There are excellent articles about how to make a registration code scheme, but you can also simply use our RegistrationEngineMBS class.

Notes: If you need a license text, why not use the one from Xojo as a starting point?

7.0.163 How to make small controls on Mac OS X?

Plugin Version: all, Platform: macOS.

Answer: You can try this code on Mac OS X:

Example:

```

'/*
** Use the control's default drawing variant. This does not apply to
** Scroll Bars, for which Normal is Large.
**/
const kControlSizeNormal = 0

'/*
** Use the control's small drawing variant. Currently supported by
** the Check Box, Combo Box, Radio Button, Scroll Bar, Slider and Tab
** controls.
**/
const kControlSizeSmall = 1

'/*
** Use the control's small drawing variant. Currently supported by
** the Indeterminate Progress Bar, Progress Bar and Round Button
** controls.
**/
const kControlSizeLarge = 2

```

```

'/*
' * Control drawing variant determined by the control's bounds. This
' * ControlSize is only available with Scroll Bars to support their
' * legacy behavior of drawing differently within different bounds.
' */
const kControlSizeAuto = &hFFFF

const kControlSizeTag = "size"

declare function SetControlData lib "Carbon" (controlhandle as Integer, part as short, tagname as OS-
Type, size as Integer, data as ptr) as short

dim m as MemoryBlock

m=NewMemoryBlock(2)
m.UShort(0)=kControlSizeSmall

Title=str(SetControlData(CheckBox1.Handle, 0, kControlSizeTag, 2, m))

```

7.0.164 How to mark my Mac app as background only?

Plugin Version: all, Platform: macOS.

Answer: You can run a build script on each build with this code:

Example:

```

Dim App As String = CurrentBuildLocation + "/" + CurrentBuildAppName + ".app"
Call DoShellCommand("/usr/bin/defaults write " + App + "/Contents/Info ""NSUIElement"" YES")

```

Notes: This will set the NSUIElement flag to YES.

7.0.165 How to move a file or folder to trash?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like below:

Example:

```

Function MoveToTrash(f as FolderItem) As Boolean
#If TargetMacOS then
dim r as FolderItem
dim e as Integer = MacFileOperationMBS.MoveObjectToTrashSync(f, r, MacFileOperationMBS.kFSFile-
OperationDefaultOptions)

```

```

if e = 0 then
Return true // Ok
end if

#elseif TargetWin32 then
dim w as new WindowsFileCopyMBS

dim flags as Integer = w.FileOperationAllowUndo + w.FileOperationNoErrorUI + w.FileOperationSilent
+ w.FileOperationNoConfirmation
if w.FileOperationDelete(f, flags) then
Return true // OK
end if

flags = w.FileOperationNoErrorUI + w.FileOperationSilent + w.FileOperationNoConfirmation
if w.FileOperationDelete(f, flags) then
Return true // OK
end if
#else
// Target not supported
break
Return false
#endif
End Function

```

Notes: If you want to move a file to trash, you could use `f.movefileto f.trashfolder`, but that will overwrite existing files in the trash. You can use our `MacFileOperationMBS` class to move a file on Mac to the trash. And it uses the same code as the Finder, so files are renamed when the same name is already in use in the trash:

On Windows we use `WindowsFileCopyMBS` class.
Requires Mac OS X 10.5.

7.0.166 How to move an application to the front using the creator code?

Plugin Version: all, Platform: macOS.

Answer: This makes SimpleText (Code ttxt) to the frontmost application:

Example:

```

dim a as appleevent

a=newappleEvent("misc","actv","ttxt")

```

```
if a.send then
end if
```

Notes: (Code is Mac only)

7.0.167 How to move file with ftp and curl plugin?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can set post/pre quotes to have ftp commands executed before or after the download/upload.

Example:

```
dim d as CURLMBS // your curl object

// rename/move file
dim ws() As String
ws.Append "RNFR Temp.txt"
ws.append "RNTO MyFile.txt"

d.SetOptionPostQuote(ws)
```

Notes: Use SetOptionPostQuote, SetOptionPreQuote or SetOptionQuote.

The ftp commands you pass here are native ftp commands and not the commands you use with ftp applications. So rename is two commands. First RNFR to tell where to rename from and second RNTD with the new file name. To delete use DELE and the file path.

7.0.168 How to normalize string on Mac?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like below:

Example:

```
Function Normalize(t as string) As string
const kCFStringNormalizationFormD = 0 // Canonical Decomposition
const kCFStringNormalizationFormKD = 1 // Compatibility Decomposition
const kCFStringNormalizationFormC = 2 // Canonical Decomposition followed by Canonical Composition
const kCFStringNormalizationFormKC = 3 // Compatibility Decomposition followed by Canonical Composition

dim s as CFStringMBS = NewCFStringMBS(t)
dim m as CFMutableStringMBS = s.Normalize(kCFStringNormalizationFormD)
```

[Return m.str](#)
[End Function](#)

Notes: This uses Apple's CFString functions to normalize unicode variants.

7.0.169 How to obscure the mouse cursor on Mac?

Plugin Version: all, Platform: macOS.

Answer: Try this declare:

Example:

```
Declare Sub ObscureCursor Lib "Carbon" ()
```

```
ObscureCursor
```

Notes: The MBS Plugin has this function, but it's not supported for Windows.

7.0.170 How to open icon file on Mac?

Plugin Version: all, Platform: macOS.

Answer: Use the NSImageMBS class like this:

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.ico")
```

```
dim n as new NSImageMBS(f)
```

```
window1.Backdrop = n.CopyPictureWithMask
```

7.0.171 How to open PDF in acrobat reader?

Plugin Version: all, Platform: macOS.

Answer: Try this code:

Example:

```
dim pdf as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
```

```

// open PDF in Acrobat Reader on Mac:

// find app
dim bundleID as string = "com.adobe.Reader"
dim app as FolderItem = LaunchServicesFindApplicationForInfoMBS("", bundleID, "")

if app<>nil then

// launch app with parameters

dim docs() as FolderItem
docs.Append pdf

dim param as new LaunchServicesLaunchParameterMBS
param.Defaults = true
param.Application = app

dim x as FolderItem = LaunchServicesOpenXMBS(docs, param)

// on failure, simply launch it
if x = nil then
pdf.Launch(true)
end if

else
pdf.Launch(true)
end if

```

Notes: On Windows, simply use pdf.launch or WindowsShellExecuteMBS.

7.0.172 How to open printer preferences on Mac?

Plugin Version: all, Platform: macOS.

Answer: You can use our OpenMacOSXPreferencesPaneMBS function like this:

Example:

```

dim e as Integer = OpenMacOSXPreferencesPaneMBS("PrintAndFax")
if 0 = e then
MsgBox "OK"
elseif e = -43 then
MsgBox "File not found."
else
MsgBox "Error: "+str(e)
end if

```

7.0.173 How to open special characters panel on Mac?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We have functions for that in Cocoa and Carbon.

Example:

```
dim a as new NSApplicationMBS
a.orderFrontCharacterPalette
```

Notes: For Cocoa, you can use `orderFrontCharacterPalette` method in `NSApplicationMBS` class.

Or simply for Carbon and Cocoa the `ShowCharacterPaletteMBS` method.

7.0.174 How to optimize picture loading in Web Edition?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the `WebPicture` class.

Notes: Take your picture and create a `WebPicture` object. Store this `WebPicture` in a property of the `WebPage`, `Session` or `app` (as global as possible). On the first time you use this picture on an user session, the browser will load it. Second time you use it, the browser will most likely pick it from the cache.

Having pictures in `App` or some module reuses the same picture for all sessions which reduces memory footprint.

This does not work well with pictures you change very often or use only for one webpage on one user.

If you like to see an example, check our `Map` example.

7.0.175 How to parse XML?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use code like this:

Example:

```
dim s as string = "<test><test /></test>"
```

```
try
```

```

dim x as new XmlDocument(s)
MsgBox "OK"
catch xe as XmlException
MsgBox "invalid XML"
end try

```

Notes: If you got an exception, you have a parse error.

7.0.176 How to play audio in a web app?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use the HTML5 audio tag and control it with javascript.

Notes: This is just another example app I made today. It plays a christmas song. The audio file is provided by the application to the server, so no external web server is needed and this application can run stand alone. To compile and run you need Xojo 2010r5.

In the open event we search the audio files and open them as binarystreams. We create the two webfile objects. Those webfiles are part of the app class, so we have them globally. There we set the data with the content of our streams. We also define file names and mime types. They are needed so browser know what we have here:

```

audioFileM4V = new WebFile
audioFileM4V.Data = bM.Read(BM.Length)
audioFileM4V.Filename = "music.m4a"
audioFileM4V.MIMETYPE = "audio/m4a"

```

```

audioFileOGG = new WebFile
audioFileOGG.Data = bO.Read(BO.Length)
audioFileOGG.Filename = "music.ogg"
audioFileOGG.MIMETYPE = "audio/ogg"

```

Next in the open event of the webpage we have a PageSource control. The location is set to be before content. In the open event we define the html code for this. First we pick the URLs for the audio files. Than we build the html to use the audio tag. As you see, we give it an ID for later use and have it preload automatically. If you add an autoplay tag, you can have the audio play right away. Inside the audio tag we have two sources so we provide audio for both Firefox (OGG) and Safari (MPEG4). Finally we have a text to display if HTML5 audio tag is not supported.

You can set the source in the EditSource event:

```
dim urlO as string = app.audioFileOGG.URL
dim urlM as string = app.audioFileM4V.URL
me.Source = "<audio id=""mymusic"" preload=""auto""><source src="""+urlO+""" type=""audio/ogg""
/><source src="""+urlM+""" type=""audio/mpeg"" />Your browser does not support the audio ele-
ment.</audio>"
```

Next in the Play button we execute code to play the audio. This is a short javascript code which searches in the html document for the element with the ID "mymusic" which is the ID of our audio tag above. Once we got the object, we call it's play method to start playback.

```
me.ExecuteJavaScript("document.getElementById('mymusic').play();")
```

same for pause:

```
me.ExecuteJavaScript("document.getElementById('mymusic').pause();")
```

and finally for changing volume:

```
me.ExecuteJavaScript("document.getElementById('mymusic').volume="+str(me.Value/100.0)+"");")
```

7.0.177 How to pretty print xml?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use the XML Transform method with the right XLS.

Notes: Learn more here:

<http://docs.xojo.com/index.php/XMLDocument.Transform>

7.0.178 How to print to PDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: This code below shows how to redirect printing to a PDF file on Mac OS X.

Example:

```
// get Xojo printer setup
dim p as new PrinterSetup

// now put it into NSPrintInfo to manipulate
dim n as new NSPrintInfoMBS
n.SetupString = p.SetupString
```

```

// change destination to file
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
n.SetSaveDestination(f)

// move back
p.SetupString = n.SetupString

// and print as usual
dim g as Graphics = OpenPrinter(p)
g.DrawString "Hello World", 20, 20

```

Notes: And you can use normal graphics class for that.

7.0.179 How to query Spotlight's Last Open Date for a file?

Plugin Version: all, Platform: macOS.

Answer: You can use a MDItemMBS objec to query this value:

Example:

```

Function LastOpenedDate(Extends F As FolderItem, DefaultOtherDates As Boolean = True) As Date
#If TargetMacOS Then
Dim xMDItem as New MDItemMBS(F)
Dim xDate as Variant

If xMDItem <>Nil Then
xDate = xMDItem.GetAttribute(xMDItem.kMDItemLastUsedDate).DateValue
If xDate IsA Date Then Return xDate
Else
If xDate <>Nil Then Break
End If
#EndIf

If DefaultOtherDates Then
If F.ModificationDate <>Nil Then Return F.ModificationDate
If F.CreationDate <>Nil Then Return F.CreationDate
End If
End Function

```

Notes: Thanks for Josh Hoggan for this example code.

7.0.180 How to quit windows?

Plugin Version: all, Platform: Windows.

Answer: Try this code:

Example:

```
#if targetwin32 then
dim i1,i2,r as Integer
declare function ExitWindowsEx lib "user32" (uFlags as Integer, dwReserved as Integer) as Integer
i1 = 2
i2 = 0
r = ExitWindowsEx(i1,i2)
if r<>0 then
' Error()
end if

#endif
```

Notes: uFlags parameters:

```
'4 = EWX_Force
'0 = EWX_Logoff
'2 = EWX_Reboot
'1 = EWX_shutdown, should shut down computer
```

Also check the ExitWindowsMBS method.

7.0.181 How to read a CSV file correctly?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: With all the rules for quotes and delimiters, you can simply use the SplitCommaSeparatedValuesMBS method in our plugins like this:

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.csv")
dim t as TextInputStream = f.OpenAsTextFile

while not t.EOF
dim s as string = t.ReadLine(encodings.ASCII)

dim items() as string = SplitCommaSeparatedValuesMBS(s, ";", """")
```

```
List.AddRow """
dim u as Integer = UBound(items)
for i as Integer = 0 to u
List.Cell(List.LastIndex,i) = items(i)
next

wend
```

Notes: Please make sure you choose the right text encoding.

7.0.182 How to read the command line on windows?

Plugin Version: all, Platform: Windows.

Answer: Try this code:

Example:

```
#if targetwin32 then
dim line as string
Dim mem as MemoryBlock

Declare Function GetCommandLineA Lib "kernel32" () As Ptr

mem=GetCommandLineA()
s=mem.cstring(0)

#endif
```

Notes: Newer Xojo versions have a system.commandline property.

7.0.183 How to render PDF pages with PDF Kit?

Plugin Version: all, Platform: Windows.

Answer: Try this code:

Example:

```
// choose a file
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")

// open it as PDF Document
dim sourceFile as New PDFDocumentMBS(f)
```

```

if sourceFile.handle <>0 then // it is a PDF file

// get upper bound of pages
dim c as Integer = sourceFile.pageCount-1

// from first to last page
for n as Integer = 0 to c

// pick that page
dim page as PDFPageMBS = sourceFile.pageAtIndex(n)

// render to image
dim p as NSImageMBS = page.Render

// and convert to RB picture and display
Backdrop = p.CopyPictureWithMask

next

end if

```

Notes: PDFKit works only on Mac OS X.

7.0.184 How to restart a Mac?

Plugin Version: all, Platform: macOS.

Answer: Ask the Finder via Apple Events:

Example:

```

dim ae as appleevent
ae=newappleEvent("FNDR","rest","MACS")
if not ae.send then
msgBox "The computer couldn't be restarted."
end if

```

7.0.185 How to resume ftp upload with curl plugin?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: CURL supports that and you simply need to set the right options.

Notes: First of course OptionUpload must be true. Second OptionFTPAppend must be true so the OptionResumeFrom is used. Store there (or in OptionResumeFromLarge) your start value. Don't forget to implement the read event and return data there as requested.

7.0.186 How to rotate a PDF page with CoreGraphics?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: This code opens a PDF and draws the first page into a new PDF with 90–∞ rotation.

Example:

```
// Rotate a PDF page

// our files
dim sourcefile as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim destfile as FolderItem = SpecialFolder.Desktop.Child("rotated.pdf")

// open PDF
dim pdf as CGPDFDocumentMBS = sourcefile.OpenAsCGPDFDocumentMBS

// query media size of first page
dim r as CGRectMBS = pdf.MediaBox(1)

// create new PDF
dim c as CGContextMBS = destfile.NewCGPDFDocumentMBS(r,"title","Author","Creator")

// create rotated rectangle
dim nr as new CGRectMBS(0,0,r.Height,r.Width)

// create new page
c.BeginPage nr
c.SaveGState

const pi = 3.14159265

// rotate by 90–∞
c.RotateCTM pi*1.5

// fix origin
c.TranslateCTM -r.width,0

// draw PDF
c.DrawCGPDFDocument pdf,r,1

// cleanup
c.RestoreGState
c.EndPage
```

```
c = nil

// show in PDF viewer
destfile.Launch
```

Notes: This code is Mac only as it needs CoreGraphics.

7.0.187 How to rotate image with CoreImage?

Plugin Version: all, Platform: macOS.

Answer: Use the code like the one below:

Example:

```
// Rotate image with CoreImage

// load image
dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim image as new CIImageMBS(f)

// rotate 45 degree
dim n as new NSAffineTransformMBS
n.rotateByDegrees(45)

dim TransformFilter as new CIFilterAffineTransformMBS
TransformFilter.inputImage = image
TransformFilter.inputTransform = n

// get result
dim resultImage as CIImageMBS = TransformFilter.outputImage

// for saving to file
dim outputImage as NSImageMBS = resultImage.RenderNSImage(false)

f = SpecialFolder.Desktop.Child("output.png")
dim b as BinaryStream = BinaryStream.Create(f, true)
b.Write outputImage.PNGRepresentation

// as Xojo picture object for display
dim pic as Picture = outputImage.CopyPictureWithMask

Backdrop = pic
```

7.0.188 How to run a 32 bit application on a 64 bit Linux?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Install 32 bit compatibility libraries.

Notes: The package is called ia32-libs for ubuntu (and others).

Some applications need to be run on a 32 bit system as they need some hardware related libraries. Like libUSB or libHID for USB devices.

7.0.189 How to save HTMLViewer to PDF with landscape orientation?

Plugin Version: all, Platform: macOS.

Answer: You can use NSPrintInfoMBS to change the options for PrintToPDFFile function.

Example:

```
// make it landscape
dim n as NSPrintInfoMBS = NSPrintInfoMBS.sharedPrintInfo
n.orientation = n.NSLandscapeOrientation

// save html to file
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
call HTMLViewer1.PrintToPDFFileMBS(f,10,30,10,30)
```

Notes: You may want to reset options later.
This code is only for Mac OS X.

7.0.190 How to save RTFD?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: With NSTextViewMBS you can use this code to save to RTFD:

Example:

```
// save text as RTFD including image attachments
dim f as FolderItem = GetSaveFolderItem(FileTypes1.ApplicationRtfd, "test.rtf")

if f = nil then Return

dim a as NSAttributedStringMBS = textView.textStorage
dim w as NSFFileWrapperMBS = a.RTFDFileWrapperFromRange(0, a.length, DocumentAttributes)

dim e as NSErrorMBS
if w.writeToFile(f, e) then
```

```

else
MsgBox e.LocalizedDescription
end if

```

Notes: For TextArea you can query the underlying NSTextViewMBS object via TextArea.NSTextViewMBS method.

7.0.191 How to save RTFD?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: How to load PDF to htmlviewer on desktop?

Example:

```

Public Sub LoadPDFData(viewer as HTMLViewer, PDFData as string)
Dim base64string As String = EncodeBase64(PDFData)

// remove line endings to make it a big line
base64string = ReplaceLineEndings(base64string, "")

// build data URL
// https://en.wikipedia.org/wiki/Data_URI_scheme
Dim dataURL As String = "data:application/pdf;base64," + base64string

// show in webviewer
HTMLViewer1.LoadURL(dataURL)

// may not work everywhere due to URL length limit
// for Web projects, use WebFile instead!
End Sub

```

Notes: This avoids a temporary file, which may also work.
For Web Apps, please use WebFile.

7.0.192 How to scale a picture proportionally with mask?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: For a proportional scaling, we calculate the new picture size relative to the target maximum size.

Example:

```

Function ProportionalScaledWithMask(extends pic as Picture, Width as Integer, Height as Integer) As Pic-
ture
// Calculate scale factor

dim faktor as Double = min( Height / Pic.Height, Width / Pic.Width)

// Calculate new size
dim w as Integer = Pic.Width * faktor
dim h as Integer = Pic.Height * faktor

// create new picture
dim NewPic as new Picture(w,h,32)

// check if we have a mask and clear it
dim m as picture = pic.mask(False)
pic.mask = nil

// draw picture in the new size
NewPic.Graphics.DrawPicture Pic, 0, 0, w, h, 0, 0, Pic.Width, Pic.Height

if m <>nil then
// restore mask and scale it
pic.mask = m
NewPic.mask.Graphics.DrawPicture m, 0, 0, w, h, 0, 0, Pic.Width, Pic.Height
end if

// return result
Return NewPic
End Function

```

Notes: This version handles mask. As you see we actually have to remove mask in order to copy the picture part correctly.

7.0.193 How to scale a picture proportionally?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: For a proportional scaling, we calculate the new picture size relative to the target maximum size.

Example:

```

Function ProportionalScaled(extends pic as Picture, Width as Integer, Height as Integer) As Picture
// Calculate scale factor

dim faktor as Double = min( Height / Pic.Height, Width / Pic.Width)

```

```

// Calculate new size
dim w as Integer = Pic.Width * faktor
dim h as Integer = Pic.Height * faktor

// create new picture
dim NewPic as new Picture(w,h,32)

// draw picture in the new size
NewPic.Graphics.DrawPicture Pic, 0, 0, w, h, 0, 0, Pic.Width, Pic.Height

// return result
Return NewPic
End Function

```

Notes: This does not handle mask, but you can scale the mask the same way and assign it to the new picture.
(see other FAQ entry with mask)

7.0.194 How to scale/resize a CIIImageMBS?

Plugin Version: all, Platform: Windows.

Answer: Use the CIFilterLanczosScaleTransform filter to scale down a picture to a specific size.

Example:

```

Dim pic As Picture = LogoMBS(500)
Dim image As CIIImageMBS = CIIImageMBS.imageWithPicture(pic)

Dim filter As New CIFilterLanczosScaleTransformMBS

Const targetWidth = 600.0
Const targetHeight = 400.0

Dim scale As Double = targetHeight / image.Extent.Height
Dim aspect As Double = targetWidth / (image.Extent.Width * scale)

filter.inputImage = image
filter.inputScale = scale
filter.inputAspectRatio = aspect

Dim result As Picture = filter.outputImage.RenderPicture

Backdrop = result

```

Notes: This is same code as our scaleTo convenience method.

7.0.195 How to scale/resize a picture?

Plugin Version: all, Platform: Windows.

Answer: There are several ways to scale or resize a picture. The easiest way may be the ScaleMBS function in the Picture class.

Example:

```
dim Original,Scaled as Picture
```

```
Original=LogoMBS(500)
Scaled=Original.ScaleMBS(100,100,true)
```

Notes: The plugin ways:

- GraphicsMagick can scale/resize.
- CoreImage scale filter may result in the fastest and best images on Mac OS X 10.4.
- NSImageMBS can scale, but is Mac OS X only.
- CGImageMBS can scale, but is Mac OS X only.
- CIImageMBS can scale, but is Mac OS X only.
- QuickTime Graphics exporter and importer can be connected to scale. (this was used more often a few years ago)
- ImageMagick can scale very nice and crossplatform. But the ImageMagick libraries are big.
- The picture.ScaleMBS function is self written and results in equal output on Mac, Windows and Linux without any additional libraries installed.
- Picture.ScalingMBS does crossplatform scaling with several modes.

with pure Xojo:

- make a new picture and draw the old one with new size inside.

7.0.196 How to search with regex and use unicode codepoints?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can specify unicode characters in search string with backslash x and digits.

Example:

```
dim r as RegExMbs
dim s as string
dim c as Integer
```

```

s="123 √$√√° ABC 456"

r=new RegExMBS
if r.Compile("√") then
c=r.Execute(s,0)
MsgBox str(c)+" "+str(r.Offset(0))+" "+str(r.Offset(1))
// shows: 1 4 10
// 1 for ubound of the offset array
// 4 for 4 bytes before the matched pattern
// 10 for the 10 bytes before the end of the matched pattern
end if

r=new RegExMBS
if r.Compile("\xF6") then // finds √ using Unicode codepoint
c=r.Execute(s,0)
MsgBox str(c)+" "+str(r.Offset(0))+" "+str(r.Offset(1))
// shows: 1 4 10
// 1 for ubound of the offset array
// 4 for 4 bytes before the matched pattern
// 10 for the 10 bytes before the end of the matched pattern
end if

```

7.0.197 How to see if a file is invisible for Mac OS X?

Plugin Version: all, Platform: macOS.

Answer: Try this function:

Example:

```

Function Invisible(F As FolderItem) As Boolean
Dim TIS As TextInputStream
Dim S,All As String
Dim I as Integer
dim g as folderitem

If Left(F.Name,1)="." or not f.visible Then
Return True
End If

g=F.Parent.Child(".hidden")
If g.Exists Then
TIS=g.OpenAsTextFile
if tis<>Nil then
All=TIS.ReadAll
For I=1 to CountFields(All,Chr(11))
S=NthField(All, Chr(11), I)

```

```

If S=F.name Then
Return True
End If
Next
end if
End if
End Function

```

7.0.198 How to set cache size for SQLite or REALSQLDatabase?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You use the pragma cache_size command on the database.

Example:

```

// set cache size to 20000 pages which is about 20 MB for default page size
dim db as REALSQLDatabase
db.SQLExecute "PRAGMA cache_size = 20000"

```

Notes: Default cache size is 2000 pages which is not much.

You get best performance if whole database fits in memory.

At least you should try to have a cache big enough so you can do queries in memory.

You only need to call this pragma command once after you opened the database.

7.0.199 How to set the modified dot in the window?

Plugin Version: all, Platform: macOS.

Answer: Try this declares:

Example:

```

window1.ModifiedMBS=true

```

7.0.200 How to show a PDF file to the user in a Web Application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use a WebHTMLViewer control and load the

Example:

```

dim CurrentFile as WebFile // a property of the WebPage

// define the PDF file
CurrentFile = new WebFile
CurrentFile.Filename = "test.pdf"
CurrentFile.MIMEType = "application/pdf"
CurrentFile.Data = "some pdf data" // MyDynaPDF.GetBuffer

// load into html viewer
HTMLViewer1.URL = CurrentFile.URL

```

Notes: See our Create PDF example for the Xojo Web Edition.

7.0.201 How to show Keyboard Viewer programmatically?

Platform: macOS.

Answer: Use Xojo or AppleScript to launch the KeyboardViewerServer.app.

Example:

```

dim a as new AppleScriptMBS
dim text as string
dim lines(-1) as string

lines.append "set theApplication to ""KeyboardViewerServer""
lines.append "set thePath to ""/System/Library/Components/KeyboardViewer.component/Contents/Shared-
Support/KeyboardViewerServer.app""
lines.append ""
lines.append "set POSIXPath to ((POSIX file thePath) as string)"
lines.append "tell application ""System Events"" to set isRunning to 0 <(count (application processes whose
name is theApplication))"
lines.append "if isRunning then tell application POSIXPath to quit"
lines.append "delay 0.15"
lines.append ""
lines.append "ignoring application responses"
lines.append " tell application POSIXPath to run"
lines.append "end ignoring"

text=join(lines,EndOfLine.macintosh)

a.Compile text
a.Execute

```

Notes: AppleScript code:

```
set theApplication to "KeyboardViewerServer"
set thePath to "/System/Library/Components/KeyboardViewer.component/Contents/SharedSupport/KeyboardViewerServer.app"
```

```
set POSIXPath to ((POSIX file thePath) as string)
tell application "System Events" to set isRunning to 0 <(count (application processes whose name is theApplication))
if isRunning then tell application POSIXPath to quit
delay 0.15
```

```
ignoring application responses
tell application POSIXPath to run
end ignoring
```

7.0.202 How to show the mouse cursor on Mac?

Plugin Version: all, Platform: macOS.

Answer: Try this declare:

Example:

```
Declare Sub ShowCursor Lib "Carbon" ()
```

```
ShowCursor
```

Notes: The MBS Plugin has this function and supports it on Windows, too.

7.0.203 How to shutdown a Mac?

Plugin Version: all, Platform: macOS.

Answer: Ask the Finder via Apple Events:

Example:

```
dim ae as appleevent
ae=newappleEvent("FNDR", "shut", "MACS")
if not ae.send then
msgBox "The computer couldn't be shutdown."
end if
```

Notes: Or toolbox call (Attention: This method will stop the computer immediatly: No document asked to be saved, all applications quitting without knowing).

```
Declare Sub ShutDwnPower Lib "Carbon" ()
ShutDwnPower
```

7.0.204 How to sleep a Mac?

Plugin Version: all, Platform: macOS.

Answer: Ask the Finder via Apple Events:

Example:

```
dim ae as appleevent
ae=newappleEvent("FNDR","slep","MACS")
if not ae.send then
msgBox "The computer doesn't want to sleep."
end if
```

7.0.205 How to speed up rasterizer for displaying PDFs with DynaPDF?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Here a few speed tips:

Notes:

- Use the DynaPDFRasterizerMBS function instead of our render functions.
- Reuse DynaPDFRasterizerMBS as long as the target picture size doesn't change.
- Import only the PDF pages you want to display.
- Let DynaPDF do zooming, rotating or other effects instead of you change it.

7.0.206 How to use PDFLib in my RB application?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: The PDFlib plugin was discontinued in favor of our DynaPDF plugin.

Notes: If you need help to move, please contact us.

7.0.207 How to use quotes in a string?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Just double them.

Example:

```
msgbox "This String contains ""quotes"""
```

7.0.208 How to use Sybase in Web App?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use our MBS Xojo SQL Plugin to connect to a Sybase Database in your web application.

Notes: If you see db.Connect giving the error message "cs_ctx_alloc ->CS_MEM_ERROR", than some things are not setup right for Sybase.

The Apache process may not have all the SYBASE environment variables being set when the CGI was launched.

Adding these lines to /etc/httpd/conf/httpd.conf stopped the faux memory errors for us:

```
SetEnv LD_LIBRARY_PATH /opt/sybase/OCS-15_0/lib:/opt/sybase/OCS-15_0/lib3p64:/opt/sybase/OCS-15_0/lib3p:
SetEnv SYBROOT /opt/sybase
SetEnv SYBASE_OCS /opt/sybase
SetEnv SYBASE /opt/sybase
```

7.0.209 How to use the Application Support folder?

Plugin Version: all, Platform: macOS.

Answer:

I was saving a registration code for an app to the Preference folder. People on the list have suggested that it would be better in the ApplicationSupportFolder. How do I save the file called CWWPrefs into that folder using MBS?

I have checked for examples and the docs but can't see how to apply it

```
//f = SpecialFolder.Preferences.child("CWWPrefs")
f = ApplicationSupportFolderMBS(-32768)
```

Example:

```

dim folder,file as FolderItem

folder = createApplicationSupportFolderMBS(-32763)

if folder=nil then
// Some very old Mac OS Versions may not support it
// or the plugin may fail for any reason
folder=SpecialFolder.Preferences
end if

file=folder.Child("CWWPrefs")

MsgBox file.NativePath

```

Notes:

You may not be able to write there with a normal user account!

7.0.210 How to use the IOPMCopyScheduledPowerEvents function in Xojo?

Plugin Version: all, Platform: macOS.

Answer: You can use the following code which does this using the SoftDeclareMBS class.

Example:

```

Sub Open()
dim c as CFDateMBS
dim t as CFAbsoluteTimeMBS

// get current date
c=NewCFDateMBS

// in absolute time (seconds since x)
t=c.AbsoluteTime

// add 600 seconds (= 10 Minutes)
t.Value=t.Value+600

// Make a Date from it
c=t.Date

// Schedule the event
// 0 on success
// E00002C1 for missing root rights

```

```

Title=hex(schedulePowerEvent(c, "wake"))

// Just for information, display the scheduled stuff
CFShowMBS CopyScheduledPowerEvents
End Sub

Function CopyScheduledPowerEvents() As carrayMBS
dim s as SoftDeclareMBS
dim m as MemoryBlock

s=new SoftDeclareMBS

if s.LoadLibrary("IOKit.framework") then
if s.LoadFunction("IOPMCopyScheduledPowerEvents") then
if s.CallFunction(0,nil) then
Return NewCFArrayMBSHandle(s.Result,true)
else
MsgBox "Failed to Call IOPMCopyScheduledPowerEvents."
end if
else
MsgBox "Failed to load IOPMCopyScheduledPowerEvents."
end if
else
MsgBox "Failed to load IOKit."
end if

Return nil
End Function

Function SchedulePowerEvent(time_to_wake as CFDateMBS, Type as CFStringMBS) as Integer
dim s as SoftDeclareMBS
dim m as MemoryBlock

'/*
'* Types of power event
'* These are potential arguments to IOPMSchedulePowerEvent().
'* These are all potential values of the kIOPMPowerEventTypeKey in the CFDictionaryes
'* returned by IOPMCopyScheduledPowerEvents().
'*/
'/*!
'@define kIOPMAutoWake
'@abstract Value for scheduled wake from sleep.
'*/
'#define kIOPMAutoWake "wake"
,
'/*!
'@define kIOPMAutoPowerOn
'@abstract Value for scheduled power on from off state.

```

```

*/
`#define kIOPMAutoPowerOn "poweron"
,
`/*!
`@define kIOPMAutoWakeOrPowerOn
`@abstract Value for scheduled wake from sleep, or power on. The system will either wake OR
`power on, whichever is necessary.
*/
,
`#define kIOPMAutoWakeOrPowerOn "wakepoweron"
`/*!
`@define kIOPMAutoSleep
`@abstract Value for scheduled sleep.
*/
,
`#define kIOPMAutoSleep "sleep"
`/*!
`@define kIOPMAutoShutdown
`@abstract Value for scheduled shutdown.
*/
,
`#define kIOPMAutoShutdown "shutdown"

s=new SoftDeclareMBS

if s.LoadLibrary("IOKit.framework") then
if s.LoadFunction("IOPMSchedulePowerEvent") then

m=NewMemoryBlock(12)
m.Long(0)=time_to_wake.handle
m.Long(4)=0 // nil
m.Long(8)=type.Handle

if s.CallFunction(3,m) then
Return s.Result
end if
end if
end if

End Function

```

Notes: Requires Mac OS X and to execute root rights.

7.0.211 How to validate a GUID?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use this function below which uses a regular expression to verify that the string is a valid UUID/GUID:

Example:

Function IsGUID(guid as string) As Boolean

dim r as new RegEx

```
r.SearchPattern = "^(\{ { 0,1 } ( [ 0-9a-fA-F ] ) { 8 } -( [ 0-9a-fA-F ] ) { 4 } -( [ 0-9a-fA-F ] ) { 4 } -( [ 0-9a-fA-F ] ) { 4 } -( [ 0-9a-fA-F ] ) { 12 } \} { 0,1 } )$ "
```

Return r.Search(guid)<>nil

End Function

Notes: Simply parsing the GUID with CFUUIDMBS does not give the same result as CFUUIDMBS will also take a string like "DDDD".

7.0.212 How to walk a folder hierarchie non recursively?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Use code like this one:

Example:

Sub Walk(folder as FolderItem)

dim folders() as FolderItem

folders.Append folder

while UBound(folders)>=0

dim currentFolder as FolderItem = folders.pop

dim c as Integer = currentFolder.Count

for i as Integer = 1 to c

dim item as FolderItem = currentFolder.TrueItem(i)

if item = Nil then

// no permission

elseif item.Visible then // only visible

if item.Directory then

folders.Append item

```
else
// work with file here
end if

end if

next

wend
End Sub
```

Notes: As you see we go with a long loop which runs until we don't have more folders to process. We ignore items we can't access due to permission limits. And we only work visible items. If you like, check `folderitem.isBundleMBS` on item to handle packages and applications better on Mac OS X.

7.0.213 I got this error: PropVal, QDPictMBS.Name (property value), Type mismatch error. Expected CGDataProviderMBS, but got Variant, Name:QDPictMBS

Plugin Version: all, Platform: macOS.

Answer: The plugins MacOSX and MacOSXCF belong together. If you use one part, please also install the other part.

Notes: We splitted the plugin because the Xojo IDE on Windows crashed on compilation.

7.0.214 I registered the MBS Plugins in my application, but later the registration dialog is shown.

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: There are two main reasons.

Notes: 1. you may use the plugin before registering them. This is often the case if you register in a window open event and use the plugin in a control open event.

On the console on Mac OS X or Windows, you may see a message like this "MBS Plugins were used by the application before the RegisterMBSPlugin function was called. Please fix this in your code!".

2. you may have mixed different plugin versions which are not compatible.

In this case you can see a message "Internal plugin registration error." on the console on Mac OS X. Newer plugins may show a message dialog reporting this. Older version simply think they are not registered.

If the installer just merges old and new applications, users may have libraries of older and newer plugin versions in the libs folder. If your application loads the wrong version, the registration fails.

If you use remote debugging, make sure you clear the temporary files there, too. Otherwise you may have old DLLs on your hard disc which may disturb your application.

You can run into issues if you use your registration code on different places of your app. Please register only once in app.open (or app Constructor). If you have several codes, simply call them one after the other.

Also check that you only call RegisterMBSPlugin with valid serial number. If you later call RegisterMBSPlugin with Demo like in example code above, you remove the license.

Next check if you can clear the Xojo caches and that helps. This includes the Xojo Scratch folder and the Plugins & Project caches. Simply locate those folders and delete them. For Windows look in hidden AppData folder in your user folder. For Mac, please check textasciitilde /Library/Caches and your temp folders.

Finally make sure you use the right serial number. Not an older one or a misspelled one.

7.0.215 I want to accept Drag & Drop from iTunes

Plugin Version: all, Platform: macOS.

Answer: You need to accept AcceptMacDataDrop "itun" and Handle the DropObject.

Example:

```
Sub Open()
window1.AcceptMacDataDrop "itun"
End Sub
```

```
Sub DropObject(obj As DragItem)
dim s as string
dim f as folderItem
dim d as CFDictionaryMBS
dim o as CFObjectMBS
dim key as CFStringMBS
dim dl as CFDictionaryListMBS
dim i,c as Integer
dim u as CFURLMBS
dim file as FolderItem
```

```
if obj.MacDataAvailable("itun") then
s = obj.MacData("itun")
```

```
// Parse XML
o=NewCFOBJECTMBSFromXML(NewCFBinaryDataMBS(s))

// Make dictionary
if o isa CFDictionaryMBS then
d=CFDictionaryMBS(o)

// get Tracks Dictionary
key=NewCFStringMBS("Tracks")
o=d.Value(key)

if o isa CFDictionaryMBS then
d=CFDictionaryMBS(o)
dl=d.List

// Walk over all entries in the Tracks dictionary
c=dl.Count-1
for i=0 to c
o=dl.Value(i)

if o isa CFDictionaryMBS then
d=CFDictionaryMBS(o)

key=NewCFStringMBS("Location")
o=d.Value(key)
if o isa CFStringMBS then
u=NewCFURLMBS(CFStringMBS(o),nil)

file=u.file
if file<>nil then
MsgBox file.NativePath
end if
end if
end if
next
end if
end if
end if
End Sub
```

Notes: The code above inside a window on Xojo 5.5 with MBS Plugin 5.3 will do it nice and show the paths.

7.0.216 I'm drawing into a listbox but don't see something.

Plugin Version: all.

Answer: If you draw this in a listbox cellbackground, you need to draw on the correct position

Example:

```
Function CellBackgroundPaint(g As Graphics, row as Integer, column as Integer) As Boolean
dim f as FolderItem
f=SpecialFolder.Desktop
f.DrawWideIconMBS(g,listbox1.left,listbox1.top+row*20,16)
Return true
End Function
```

Notes: Try this in a listbox. The Graphics object there has a clipping and an offset which the plugin doesn't know about.

7.0.217 I'm searching for a method or so to move a window from position x.y to somewhere else on the screen.

Platform: macOS.

Answer:

The code I produced in RB isn't smooth enough. Is there a call in MBS, if not, can it be done? The speed of it has to be like the show of a DrawerWindow.

Try the declare below for Carbon. With WindowLib it will work on Mac OS 8.5 and newer.

Notes:

See Window.Transition functions.

7.0.218 If I use one of your plug-ins under windows, would this then impose the use of dll after compilation or my would my compiled soft still be a stand-alone single file software?

Platforms: macOS, Linux, Windows.

Answer: Stand alone.

Notes: Xojo compiles all used plugins into the application binary.

Some plugin parts need external dlls but you will find that in the documentation. (e.g. pdfiib for some classes)

7.0.219 Is the fn key on a powerbook keyboard down?

Plugin Version: all, Platform: macOS.

Answer: I am unable to figure out how or if it is possible to detect if the fn key is down on a powerbook keyboard. Is it possible?

Example:

' Window.Open Event of a blank project:

```
dim i as Integer

for i=0 to 127
if keyboard.asynckeydown(i) then
title=str(i) // found
return
end if
next
title="" // not found
```

Notes: This test application shows the keycode (decimal) 63 for the fn key.

7.0.220 Is there a case sensitive Dictionary?

Plugin Version: all.

Answer: The MBS Plugin has several classes which can work as a replacement.

Notes: First you could use VariantToVariantHashMapMBS or VariantToVariantOrderedMapMBS.

If you know that all keys are Strings or Integers only, you can use the specialized classes which are a little bit faster due to avoiding variants:

```
IntegerToIntegerHashMapMBS class
IntegerToIntegerOrderedMapMBS class
IntegerToStringHashMapMBS class
IntegerToStringOrderedMapMBS class
IntegerToVariantHashMapMBS class
IntegerToVariantOrderedMapMBS class
StringToStringHashMapMBS class
StringToStringOrderedMapMBS class
StringToVariantHashMapMBS class
StringToVariantOrderedMapMBS class
```

7.0.221 Is there a way to use the MBS plugin to get only the visible item and folder count on a volume?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can use the DirectorySizeMBS class for this as in the example below:

Example:

```
dim d as DirectorySizeMBS

d=new DirectorySizeMBS

// volume(1) as my boot volume is very full
if d.update(volume(1),true,0) then
MsgBox str(d.VisibleItemCount)+" visible items, "+str(d.HiddenItemCount)+" invisible items."
end if
```

Notes: Complete Question: Is there a way to use the MBS plugin to get only the visible item and folder count on a volume? The FileCount and FolderCount properties of VolumeInformationMBS seem to provide the total # of items including invisible items such as .DS_Store and more importantly .Trashes which is causing me a great amount of difficulty during a recursive scan of a volume. I've got a progress bar which uses the total of the filecount and foldercount properties as the maximum value, but my routine needs to filter out all invisible items, as it is creating a catalog of a volume for archiving purposes. Any thoughts how I could get accurate number.

7.0.222 Is there an easy way I can launch the Displays preferences panel?

Plugin Version: all, Platform: macOS.

Answer: Use the code below:

Example:

```
dim error as Integer

error=OpenMacOSXPreferencesPaneMBS("Displays")
if error<>0 then
MsgBox "Failed to launch QuickTime System Preferences panel."
end if
```

7.0.223 List of Windows Error codes?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We have a list of windows error codes on our website.

Notes: <http://www.monkeybreadsoftware.de/xojo/winerror.shtml>

7.0.224 Midi latency on Windows problem?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: The issue is system related, not a problem with RB or the plugin.

Notes: Two things will adversely affect the timing:

(1) latency of the software synthesizer output driver. The default Windows wavetable synthesizer has considerable latency. I don't know how many milliseconds, but it is noticeable.

(2) latency of the digital audio output driver. Different systems have different drivers for different audio hardware. My Dell laptop has a minimum 15ms latency in the audio driver.

These two things put together were causing a very sluggish MIDI response. I was able to verify these as the culprits by routing MIDI directly out of RB into a sample player, which only introduces the latency of (2) and does not include latency of (1).

I don't know how widely known are these facts, if not then you may want to add this information to the documentation, since Windows programmers using the MIDI plugin may not know those problems, and might mistakenly blame your plugin, as I did :) Sorry about that!

(From Aaron Andrew Hunt)

7.0.225 My Xojo Web App does not launch. Why?

Plugin Version: all, Platform: macOS.

Answer: Here is a list of checks to do for linux apache installations with Xojo or Xojo Web applications:

Notes: Just a list of checks to do for linux apache installations:

- You have 64bit linux? Than you need 32 bit compatibility libraries.
- The folder of your app is writable? Set permissions to 777.
- The cgi script is executable? Set permissions to 755.

- The app file itself is executable? Set permissions to 755.
- You uploaded cgi file as text, so it has unix line endings? (this often gives error "Premature end of script headers" in apache log)
- You uploaded config.cfg file and made it writable? Set permissions to 666.
- Your apache allows execution of cgi scripts? You enabled cgi for apache and uncommented addhandler command for CGI on a new apache installation?
- You uploaded the app file and libraries as binary files? Upload as text breaks them.
- You did upload the libs folder?
- You don't have code in app.open, session.open and other events which crashes app right at launch?
- You don't have a print command in your app.open event? (see feedback case 23817)
- You allowed htaccess file to overwrite permissions?

7.0.226 SQLiteDatabase not initialized error?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Before you can use SQLiteDatabaseMBS, it must be initialized.

Example:

```
dim d as new SQLiteDatabaseMBS
```

Notes: This happens normally when you use "new SQLiteDatabaseMBS".

But if you just have a SQLConnectionMBS and get a recordset there, the initialization may not have happened, yet.

So please simply add a line "dim d as new SQLiteDatabaseMBS" to your app.open code after registration, so the plugin part can initialize and late provide recordsets.

7.0.227 Textconverter returns only the first x characters. Why?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

Some older Xojo versions limit the Textconverter to around 1024 characters in input and output. This should be fixed with RB5.

Notes:

Xojo seems not to support Textconverters at all on Windows.

7.0.228 The type translation between CoreFoundation/Foundation and Xojo data types.

Plugin Version: all, Platform: macOS.

Answer: The plugin does conversion between Cocoa/Carbon data types and native Xojo data types. The following list help you knowing what the current plugins support:

Notes: Cocoa NSObject to Variant:

```

nil ->nil
NSDictionary ->Dictionary
NSData ->MemoryBlock
NSString ->String
NSAttributedString ->NSAttributedStringMBS
NSDate ->Date
NSNumber ->double/integer/Int64/UInt64/UInt32/Boolean
NSURL ->String
NSValue with NSRect ->NSRectMBS
NSValue with NSPoint ->NSPointMBS
NSValue with NSSize ->NSSizeMBS
NSValue with NSRange ->NSRangeMBS
NSValue with QTTime ->QTTimeMBS
NSValue with QTTimeRange ->QTTimeRangeMBS
NSArray ->Array of Variant
QuartzFilter ->QuartzFilterMBS

```

- ->*MBS

Variant to Cocoa NSObject:

```

nil ->nil
Dictionary ->NSDictionary
Boolean ->NSNumber
Integer ->NSNumber
Color ->NSColor
Int64 ->NSNumber
Single ->NSNumber
Double ->NSNumber
Date ->NSDate
MemoryBlock ->NSData
String ->NSString
NSImageMBS ->NSImage
NSAttributedStringMBS ->NSAttributedString
NSColorMBS ->NSColor
NSRectMBS ->NSValue with NSRect
NSSizeMBS ->NSValue with NSSize

```

NSPointMBS ->NSValue with NSPoint
 NSRangeMBS ->NSValue with NSRange
 NSBurnMBS ->NSBurn
 NSViewMBS ->NSView
 NSFontMBS ->NSFont
 NSParagraphStyleMBS ->NSParagraphStyle
 NSAttributedStringMBS ->NSAttributedString
 WebPolicyDelegateMBS ->WebPolicyDelegate
 WebUIDelegateMBS ->WebUIDelegate
 WebFrameLoadDelegateMBS ->WebFrameLoadDelegate
 WebResourceLoadDelegateMBS ->WebResourceLoadDelegate
 NSIndexSetMBS ->NSIndexSet
 QTTimeMBS ->QTTime
 QTTimeRangeMBS ->QTTimeRange
 Array of Variant ->NSArray
 Array of String ->NSArray
 CFStringMBS ->NSString
 CFNumberMBS ->NSNumber
 CFDataMBS ->NSData
 CFURLMBS ->NSURL
 CFArrayMBS ->NSArray
 CFDictionaryMBS ->NSDictionary
 CFBinaryDataMBS ->NSData

Carbon CTypeRef to Variant:

CFDictionaryRef ->Dictionary
 CFStringRef ->String
 CFDataRef ->String
 CFURL ->String
 CFNumber ->Integer/Double/Int64
 CFArray ->Array
 CFDate ->date
 nil ->nil
 CGColorSpace ->CGColorSpaceMBS
 CGColor ->CGColorMBS
 CGImage ->CGImageMBS
 CF* ->CF*MBS

Variant to Carbon CTypeRef:

Dictionary ->CFDictionaryRef
 Boolean ->CFBooleanRef
 Color ->CFNumberRef
 Integer ->CFNumberRef

Int64 ->CFNumberRef
 Single ->CFNumberRef
 Double ->CFNumberRef
 String ->CFStringRef
 Color ->CGColorRef
 Date ->CFDateRef
 nil ->nil
 Memoryblock ->CFDataRef
 FolderItem ->CFURLRef
 Dictionary ->CFDictionaryRef
 Array of Variant/String/Date/Double/Single/Int64/Integer ->CFArray
 CGRectMBS ->CGRect as CFDataRef
 CGSizeMBS ->CGSize as CFDataRef
 CGPointMBS ->CGPoint as CFDataRef
 CGColorMBS ->CGColor
 CGColorSpaceMBS ->CGColorSpace
 CGImageMBS ->CGImage
 CGDataConsumerMBS ->CGDataConsumer
 CGDataProviderMBS ->CGDataProvider
 CF*MBS ->CF*

Strings without encodings should be put into dictionaries as memoryblocks.

7.0.229 Uploaded my web app with FTP, but it does not run on the server!

Plugin Version: all, Platform: Windows.

Answer: If you see errors like a simple "Segmentation Fault" on Linux or some other wired errors, you may want to check your FTP upload mode. It must be binary for web apps. ASCII mode corrupts the application.

7.0.230 What classes to use for hotkeys?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use CarbonHotKeyMBS class on Mac and WindowsKeyFilterMBS on Windows.

Notes: CarbonHotKeyMBS will also work fine in Cocoa apps.

7.0.231 What do I need for Linux to get picture functions working?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: In order to get our plugins working on Linux systems without GUI, the plugin loads graphics

libraries dynamically.

Notes: To get it working, the plugin tries to load gtk with this paths:

- libgtk-x11-2.0.so”
- libgtk-x11-2.0.so.0”
- /usr/lib/libgtk-x11-2.0.so”
- /usr/lib32/libgtk-x11-2.0.so”
- /usr/lib/libgtk-x11-2.0.so.0”
- /usr/lib32/libgtk-x11-2.0.so.0”

gdk is loaded with this paths:

- libgdk-x11-2.0.so”
- libgdk-x11-2.0.so.0”
- /usr/lib/libgdk-x11-2.0.so”
- /usr/lib32/libgdk-x11-2.0.so”
- /usr/lib/libgdk-x11-2.0.so.0”
- /usr/lib32/libgdk-x11-2.0.so.0”

For the paths without explicit path, the system will search in /lib, /usr/lib and all directories in the LD_LIBRARY_PATH environment variable.

7.0.232 What does the NAN code mean?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

7.0.233 What font is used as a 'small font' in typical Mac OS X apps?

Plugin Version: all, Platform: macOS.

Answer:

Xojo 4.5 has a constant "SmallSystem" to use for a font name.

For older versions try this code:

Example:

```

Sub GetThemeFont(fontType as Integer, ByRef fontName as String, ByRef fontSize as Integer, ByRef
fontName as Integer)
dim err as Integer
dim theFont, theFontSize, theFontStyle as MemoryBlock

const smSystemScript = -1

Declare Function GetThemeFont Lib "Carbon" (inFontID as Integer, inScript as Integer, outFontName
as Ptr, outFontSize as Ptr, outStyle as Ptr) as Integer

theFont = NewMemoryBlock(256) //Str255
theFontSize = NewMemoryBlock(2) //SInt16
theFontStyle = NewMemoryBlock(1) //Style

err = GetThemeFont(fontType, smSystemScript, theFont, theFontSize, theFontStyle)

if err = 0 then
fontName = theFont.PString(0)
fontSize = theFontSize.UShort(0)
fontStyle = theFontStyle.Byte(0)
else
fontName = ""
fontSize = 0
fontStyle = 0
end if
End Sub

```

7.0.234 What is last plugin version to run on Mac OS X 10.4?

Plugin Version: all, Platform: Windows.

Answer: Last Version with 10.4 support is version 15.4.

Notes: With version 15.4 you can build applications for OS X 10.4 and newer.

For Version 16.0 we disabled 10.4 and moved minimum to 10.5. We may be able to enable it again to build a version of 16.x, but may need to charge for this by hour.

7.0.235 What is last plugin version to run on PPC?

Plugin Version: all, Platform: Windows.

Answer: Last Version with PPC is 15.4.

Notes: With version 15.4 you can build PPC applications for OS X 10.4 and newer.

For Version 16.0 we disabled PPC. We may be able to enable it again to build a PPC version of 16.x, but may need to charge for this by hour.

7.0.236 What is last version of the plugins for macOS 32-bit?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use version 23.0 or older.

Notes: We stopped including 32-bit code for macOS in version 23.1.

Please use older versions if you use an old Xojo.

Xojo 2017r3 and newer load our 64-bit plugins.

7.0.237 What is the difference between Timer and WebTimer?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Timer is server side and WebTimer client side.

Notes: Timer is the normal timer class in Xojo. It runs on the server. On the side the WebTimer runs on the client. It triggers a request to the server to perform the action. So a WebTimer is good to keep the connection running and the website updated regularly. A timer on the server is good to make regular jobs like starting a database backup every 24 hours.

7.0.238 What is the list of Excel functions?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Below a list of function names known by LibXL.

Notes: LibXL parses the functions and writes tokens to the excel file. So even if Excel can do more functions, we can only accept the ones known by LibXL.

ABS, ABSREF, ACOS, ACOSH, ACTIVE.CELL, ADD.BAR, ADD.COMMAND, ADD.MENU, ADD.TOOLBAR, ADDRESS, AND, APP.TITLE, AREAS, ARGUMENT, ASC, ASIN, ASINH, ATAN, ATAN2, ATANH, AVEDEV, AVERAGE, AVERAGEA, BAHTTEXT, BETADIST, BETAINV, BINOMDIST, BREAK, CALL, CALLER, CANCEL.KEY, CEILING, CELL, CHAR, CHECK.COMMAND, CHIDIST, CHIINV, CHITEST, CHOOSE, CLEAN, CODE, COLUMN, COLUMNS, COMBIN, CONCATENATE, CONFIDENCE, CORREL, COS, COSH, COUNT, COUNTA, COUNTBLANK, COUNTIF, COVAR, CREATE.OBJECT, CRITBINOM, CUSTOM.REPEAT, CUSTOM.UNDO, DATE, DATEDIF, DATESTRING, DATEVALUE, DAVERAGE, DAY, DAYS360, DB, DBCS, DCOUNT, DCOUNTA, DDB, DEGREES, DELETE.BAR, DELETE.COMMAND, DELETE.MENU, DELETE.TOOLBAR, Deref, DEVSQ, DGET, DIALOG.BOX, DIRECTORY, DMAX, DMIN, DOCUMENTS, DOLLAR, DPRODUCT, DSTDEV, DSTDEVP, DSUM, DVAR, DVARP, ECHO, ELSE, ELSE.IF, ENABLE.COMMAND, ENABLE.TOOL, END.IF, ERROR, ERROR.TYPE, EVALUATE, EVEN, EXACT, EXEC, EXECUTE, EXP, EXPONDIST, FACT, FALSE, FCLOSE, FDIST, FILES, FIND, FINDB, FINV, FISHER, FISHERINV, FIXED, FLOOR, FOPEN, FOR, FOR.CELL, FORECAST,

FORMULA.CONVERT, FPOS, FREAD, FREADLN, FREQUENCY, FSIZE, FTEST, FV, FWRITE, FWRITELN, GAMMADIST, GAMMAINV, GAMMALN, GEOMEAN, GET.BAR, GET.CELL, GET.CHART.ITEM, GET.DEF, GET.DOCUMENT, GET.FORMULA, GET.LINK.INFO, GET.MOVIE, GET.NAME, GET.NOTE, GET.OBJECT, GET.PIVOT.FIELD, GET.PIVOT.ITEM, GET.PIVOT.TABLE, GET.TOOL, GET.TOOLBAR, GET.WINDOW, GET.WORKBOOK, GET.WORKSPACE, GETPIVOTDATA, GOTO, GROUP, GROWTH, HALT, HARMEAN, HELP, HLOOKUP, HOUR, HYPERLINK, HYPGEOMDIST, IF, INDEX, INDIRECT, INFO, INITIATE, INPUT, INT, INTERCEPT, IPMT, IRR, ISBLANK, ISERR, ISERROR, ISLOGICAL, ISNA, ISNONTEXT, ISNUMBER, ISPMT, ISREF, ISTEXT, ISTHAIDIGIT, KURT, LARGE, LAST.ERROR, LEFT, LEFTB, LEN, LENB, LINEST, LINKS, LN, LOG, LOG10, LOGEST, LOGINV, LOGNORMDIST, LOOKUP, LOWER, MATCH, MAX, MAXA, MDETERM, MEDIAN, MID, MIDB, MIN, MINA, MINUTE, MINVERSE, MIRR, MMULT, MOD, MODE, MONTH, MOVIE.COMMAND, N, NA, NAMES, NEGBINOMDIST, NEXT, NORMDIST, NORMINV, NORMSDIST, NORMSINV, NOT, NOTE, NOW, NPER, NPV, NUMBERSTRING, ODD, OFFSET, OPEN.DIALOG, OPTIONS.LISTS.GET, OR, PAUSE, PEARSON, PERCENTILE, PERCENTRANK, PERMUT, PHONETIC, PI, PIVOT.ADD.DATA, PMT, POISSON, POKE, POWER, PPMT, PRESS.TOOL, PROB, PRODUCT, PROPER, PV, QUARTILE, RADIANS, RAND, RANK, RATE, REFTTEXT, REGISTER, REGISTER.ID, RELREF, RENAME.COMMAND, REPLACE, REPLACEB, REPT, REQUEST, RESET.TOOLBAR, RESTART, RESULT, RESUME, RETURN, RIGHT, RIGHTB, ROMAN, ROUND, ROUNDBAHTDOWN, ROUNDBAHTUP, ROUNDDOWN, ROUNDUP, ROW, ROWS, RSQ, RTD, SAVE.DIALOG, SAVE.TOOLBAR, SCENARIO.GET, SEARCH, SEARCHB, SECOND, SELECTION, SERIES, SET.NAME, SET.VALUE, SHOW.BAR, SIGN, SIN, SINH, SKEW, SLN, SLOPE, SMALL, SPELLING.CHECK, SQRT, STANDARDIZE, STDEV, STDEVA, STDEVP, STDEVPA, STEP, STEYX, SUBSTITUTE, SUBTOTAL, SUM, SUMIF, SUMPRODUCT, SUMSQ, SUMX2MY2, SUMX2PY2, SUMXMY2, SYD, T, TAN, TANH, TDIST, TERMINATE, TEXT, TEXT.BOX, TEXTREF, THAIDAYOFWEEK, THAIDIGIT, THAIMONTHOFYEAR, THAINUMSOUND, THAINUMSTRING, THAISTRINGLENGTH, THAIYEAR, TIME, TIMEVALUE, TINV, TODAY, TRANSPOSE, TREND, TRIM, TRIMMEAN, TRUE, TRUNC, TTEST, TYPE, UNREGISTER, UPPER, USDOLLAR, USERDEFINED, VALUE, VAR, VARA, VARP, VARPA, VDB, VIEW.GET, VLOOKUP, VOLATILE, WEEKDAY, WEIBULL, WHILE, WINDOW.TITLE, WINDOWS, YEAR and ZTEST.

7.0.239 What is the replacement for PluginMBS?

Plugin Version: all, Platform: macOS.

Answer: Use the SoftDeclareMBS class to load libraries dynamically.

7.0.240 What to do on Xojo reporting a conflict?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

I get an error like "This item conflicts with another item of the same name" when using one of the plugin functions.

Xojo just wants to tell you that you dropped something in the plugins folder what is not a plugin.

Notes:

Some users dropped the examples, the documentation or other files into the plugins folder. Don't do it.

7.0.241 What to do with a NSImageCacheException?

Plugin Version: all, Platforms: macOS, Windows.

Answer: You need to add exception handlers for NSExcptionMBS in order to catch this exception.

Notes: You may also add code to write the stack of the exception into a log file for later locating the error source.

A NSImage has several image representations in memory. So basicly you pass in the base image and for whatever size an image is needed, the NSImage class will create a cache image representation of the requested size so on the next query it can use that cache for the same requested size.

7.0.242 What to do with MySQL Error 2014?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: You can get this error on MySQL if you have a recordset open while you create another one.

7.0.243 What to do with SQL Plugin reporting Malformed string as error?

Plugin Version: all, Platform: macOS.

Answer: Please make sure the table and/or database fields have a text encoding set.

Notes: For Firebird our plugin tries to use UTF-8 encoding if possible and to correctly convert between various tables, the tables and their fields need to have a text encoding defined.

e.g. if the text field in the table is windows-1252 and the other ISO 8859-5, then the Firebird database can convert them to UTF-8 and deliver texts to the plugin.

If encoding is set to none, it may get confused for non-ascii text.

7.0.244 Where is CGGetActiveDisplayListMBS?

Plugin Version: all, Platform: Windows.

Answer: This is now CGDisplayMBS.GetActiveDisplayList.

7.0.245 Where is CGGetDisplaysWithPointMBS?

Plugin Version: all, Platform: Windows.

Answer: This is now CGDisplayMBS.GetDisplaysWithPoint.

7.0.246 Where is CGGetDisplaysWithRectMBS?

Plugin Version: all, Platform: Windows.

Answer: This is now CGDisplayMBS.GetDisplaysWithRect.

7.0.247 Where is CGGetOnlineDisplayListMBS?

Plugin Version: all, Platform: Windows.

Answer: This is now CGDisplayMBS.GetOnlineDisplayList.

7.0.248 Where is GetObjectClassNameMBS?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Please use this replacement method:

Example:

```
Function GetObjectClassNameMBS(o as Object) As string
dim t as Introspection.TypeInfo = Introspection.GetType(o)
Return t.FullName
End Function
```

Notes: GetObjectClassNameMBS was removed from the plugins.

7.0.249 Where is NetworkAvailableMBS?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: We removed NetworkAvailableMBS some versions ago. It was not working right and basically it's not useful. If you want to check whether you have a network, than do a DNS resolve:

Example:

```

// two independent domain names
const domain1 = "www.google.com"
const domain2 = "www.macsw.de"

// resolve IPs
dim ip1 as string = DNSNameToAddressMBS(Domain1)
dim ip2 as string = DNSNameToAddressMBS(Domain2)

// if we got IPs and not the same IPs (error/login pages)
if len(ip1)=0 or len(ip2)=0 or ip1=ip2 then
MsgBox "no connection"
else
MsgBox "have connection"
end if

```

Notes: This way you can detect whether you got something from DNS. And you can make sure that a DNS redirection to a login page won't catch you.

7.0.250 Where is StringHeight function in DynaPDF?

Plugin Version: all, Platform: Windows.

Answer: Use the function GetFTextHeight or GetFTextHeightEx.

Notes: Be aware that GetFTextHeight works with format commands and you may want to escape your text if you don't use them.

7.0.251 Where is XLSDocumentMBS class?

Plugin Version: all, Platform: macOS.

Answer: This class has been removed in favor of XLBookMBS class.

Notes: This classes have been removed XLSCellMBS, XLSDocumentMBS, XLSFormatRecordMBS, XLSMergedCellsMBS, XLSRowMBS and XLSSheetMBS.

7.0.252 Where to get information about file formats?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

Please visit this web page:

<http://www.wotsit.org>

7.0.253 Where to register creator code for my application?

Plugin Version: all, Platform: macOS.

Answer:

Register at Apple:

<http://developer.apple.com/dev/cftype/information.html>

7.0.254 Which Mac OS X frameworks are 64bit only?

Plugin Version: all, Platform: macOS.

Answer: Some frameworks from Mac OS X do not support 32 bit applications, so we can't provide plugins for Xojo until 64bit target is available.

Notes: For Mac OS X 10.8:

- Accounts
- EventKit
- GLKit
- Social

and in 10.9:

- Accounts
- AVKit
- EventKit
- GameController
- GLKit
- MapKit
- MediaLibrary
- Social
- SpriteKit

In general Apple makes all new frameworks being 64 bit only.

7.0.255 Which plugins are 64bit only?

Plugin Version: all, Platform: macOS.

Answer: Some of our plugins work only in 64 bit modes as operation systems do not provide 32 bit code.

Notes: This effects currently: EventKit, Accounts, Social frameworks from Apple and our matching plugins.

7.0.256 Why application doesn't launch because of a missing ddraw.dll!?

Plugin Version: all, Platform: Windows.

Answer: Some RB versions require that you install DirectX from Microsoft on your Windows.

7.0.257 Why application doesn't launch because of a missing shlwapi.dll!?

Plugin Version: all, Platform: Windows.

Answer: Some RB versions require that you install the Internet Explorer from Microsoft on your Windows.

Notes: This bug is for several older Windows 95 editions.

7.0.258 Why do I hear a beep on keydown?

Plugin Version: all, Platform: Windows.

Answer: When the user presses a key, RB goes through all keydown event handlers till on returns true.

Notes: If no keydown event handler returns true for the key, a beep is performed.

7.0.259 Why does folderitem.item return nil?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer: Because Xojo fails to make a folderitem for you. Reason may be an alias file which can't be resolved or simply that you don't have enough access rights to read the folder content.

Notes: A more rarely reason is that the directory changed and the file with the given index or name does no longer exist.

7.0.260 Why doesn't showurl work?

Plugin Version: all, Platforms: macOS, Linux, Windows.

Answer:

There are three main reasons:

1. showurl is not supported by Xojo in 68k applications.
2. there is now application defined for the protocol (e.g. http) in the Internet Control panel.
3. You don't have Internet Config installed.

You can use the InternetConfigMBS class to check for this stuff.

7.0.261 Why don't the picture functions not work on Linux?

Plugin Version: all, Platform: macOS.

Answer: Please make sure libcairo is installed.

Notes: For accessing pictures on Linux, the MBS Plugin relays on the cairo library.

Please install the package if you don't have it already.

Our plugin looks for library called libcairo.so or libcairo.so.2.

7.0.262 Why have I no values in my chart?

Plugin Version: all, Platforms: macOS, Windows.

Answer: You have no data points visible, there may be several reasons:

Notes: For example one of the data values may be infinite or invalid.

Or the scaling may be out of range, so you simply see nothing.

7.0.263 Will application size increase with using plugins?

Plugin Version: all, Platform: Windows.

Answer: All plugins used by your application will be included in the application.

Notes: If you use no plugins, your application will not change size.

And if you use one class from the plugins, your application size will increase by a few kilobytes.

The documentation of the plugins include a list of all plugin parts and their sizes for the different platforms.

7.0.264 XLS: Custom format string guidelines

Plugin Version: all, Platform: macOS.

Answer: You have to download the source code and compile a static version of the library.

Notes: Up to four sections of format codes can be specified. The format codes, separated by semicolons, define the formats for positive numbers, negative numbers, zero values, and text, in that order. If only two sections are specified, the first is used for positive numbers and zeros, and the second is used for negative numbers. If only one section is specified, it is used for all numbers. Four sections example:

```
#,###.00_); [ Red ] (,###.00);0.00;"sales "@
```

The following table describes the different symbols that are available for use in custom number formats.

Specify colors

To set the text color for a section of the format, type the name of one of the following eight colors in square brackets in the section. The color code must be the first item in the section.

Instead of using the name of the color, the color index can be used, like this [Color3] for Red. Valid numeric indexes for color range from 1 to 56, which reference by index to the legacy color palette.

Specify conditions

To set number formats that will be applied only if a number meets a specified condition, enclose the condition in square brackets. The condition consists of a comparison operator and a value. Comparison operators include: = Equal to; >Greater than; <Less than; >= Greater than or equal to, <= Less than or equal to, and <>Not equal to. For example, the following format displays numbers that are less than or equal to 100 in a red font and numbers that are greater than 100 in a blue font.

```
[ Red ] [ <=100 ] ; [ Blue ] [ >100 ]
```

If the cell value does not meet any of the criteria, then pound signs ("##") are displayed across the width of the cell.

Dates and times

Examples

7.0.265 Xojo doesn't work with your plugins on Windows 98.

Plugin Version: all, Platform: Windows.

Answer: Please upgrade your Windows version.

7.0.266 Xojo or my RB application itself crashes on launch on Mac OS Classic.
Why?

Plugin Version: all.

Answer:

You may check if the application has enough memory to be loaded.

RB should have on Mac OS Classic more than 20 MB of RAM.

I preferred to use 50 MB and for an application a 10 MB partition is a good way to start.

Parameter	Description
x	The x value of the data point. For an enumerated x-axis (see <code>Axis.setLabels</code> on what is an enumerated axis), the first data point is 0, and the nth data point is (n-1).
xLabel	The bottom x-axis label of the data point.
x2Label	The top x-axis label of the data point.
value	The value of the data point.
accValue	The sum of values of all data points that are in the same x position and same data group as the current data point, and with data set number less than or equal to the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
totalValue	The sum of values of all data points that are in the same x position and same data group as the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
percent	The percentage of the data point based on the total value of all data points that are in the same x position and same data group as the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
accPercent	The accumulated percentage of the data point based on the total value of all data points that are in the same x position and same data group as the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
gpercent	The percentage of the data point based on the total value of all data points in a layer.
dataSet	The data set number to which the data point belongs. The first data set is 0. The nth data set is (n-1).
dataSetName	The name of the data set to which the data point belongs.
dataItem	The data point number within the data set. The first data point is 0. The nth data point is (n-1).
dataGroup	The data group number to which the data point belongs. The first data group is 0. The nth data group is (n-1).
dataGroupName	The name of the data group to which the data point belongs.
layerId	The layer number to which the data point belongs. The first layer is 0. The nth layer is (n-1).
fieldN	The (N + 1)th extra field. For example, { field0 } means the first extra field. An extra field is an array of custom elements added using <code>Layer.addExtraField</code> , <code>Layer.addExtraField2</code> , <code>BaseChart.addExtraField</code> or <code>BaseChart.addExtraField2</code> .

diFieldN	Same as fieldN. See above.
dsFieldN	Similar to fieldN, except that dsFieldN means the extra field is indexed by data set number. The Pth data set corresponds to the Pth element of the extra field.
dsdiFieldN	Similar to fieldN, except that dsdiFieldN means the extra fields are indexed by both the data set number and data point number. The Pth data item of the Qth data set corresponds to the Pth element of the (N + Q)th extra field.

Parameter	Description
zx	The symbol scale in the x dimension. Applicable for layers with symbol scales set by <code>LineStyle.setSymbolScale</code> .
zy	The symbol scale in the y dimension. Applicable for layers with symbol scales set by <code>LineStyle.setSymbolScale</code> .
z	The symbol scale without distinguishing the dimension to use. Applicable for layers with symbol scales set by <code>LineStyle.setSymbolScale</code> .

Parameter	Description
slope	The slope of the trend line.
intercept	The y-intercept of the trend line.
corr	The correlation coefficient in linear regression analysis.
stderr	The standard error in linear regression analysis.

Parameter	Description
top	The value of the top edge of the box-whisker symbol.
bottom	The value of the bottom edge of the box-whisker symbol.
max	The value of the maximum mark of the box-whisker symbol.
min	The value of the minimum mark of the box-whisker symbol.
med	The value of the median mark of the box-whisker symbol.

Parameter	Description
high	The high value.
low	The low value.
open	The open value.
close	The close value.

Parameter	Description
dir	The direction of the vector.
len	The length of the vector.

Parameter	Description
radius	The radial value of the data point.
value	Same as { radius } . See above.
angle	The angular value of the data point.
x	Same as { angle } . See above.
label	The angular label of the data point.
xLabel	Same as { label } . See above.
name	The name of the layer to which the data point belongs.
dataSetName	Same as { name } . See above.
i	The data point number. The first data point is 0. The nth data point is (n-1).
dataItem	Same as { i } . See above.
z	The symbol scale. Applicable for layers with symbol scales set by Polar-Layer.setSymbolScale.
fieldN	The (N + 1)th extra field. For example, { field0 } means the first extra field. An extra field is an array of custom elements added using Layer.addExtraField, Layer.addExtraField2, BaseChart.addExtraField or BaseChart.addExtraField2.
diFieldN	Same as fieldN. See above.
dsFieldN	Similar to fieldN, except that dsFieldN means the extra field is indexed by layer index. The Pth layer corresponds to the Pth element of the extra field.
dsdiFieldN	Similar to fieldN, except that dsdiFieldN means the extra fields are indexed by both the data set number and data point number. The Pth data item of the Qth layer corresponds to the Pth element of the (N + Q)th extra field.
Parameter	Description
dir	The direction of the vector.
len	The length of the vector.
Parameter	Description
value	The axis value at the tick position.
label	The axis label at the tick position.
Parameter	Description
[param]	The name of the parameter
[a]	If this field a number, it specifies the number of decimal places (digits to the right of the decimal point).

[b]	The thousand separator. Should be a non-alphanumeric character (not 0-9, A-Z, a-z). Use ' '.
textasciitilde ' for no thousand separator. The default is ' '.	
textasciitilde ', which can be modified using BaseChart.setNumberFormat.	
[c]	The decimal point character. The default is '.', which can be modified using BaseChart.setNumberFormat.
[d]	The negative sign character. Use ' '.
textasciitilde ' for no negative sign character. The default is '-', which can be modified using BaseChart.setNumberFormat.	

Parameter	Description
yyyy	The year in 4 digits (e.g. 2002)
yyy	The year showing only the least significant 3 digits (e.g. 002 for the year 2002)
yy	The year showing only the least significant 2 digits (e.g. 02 for the year 2002)
y	The year showing only the least significant 1 digits (e.g. 2 for the year 2002)
mmm	The month formatted as its name. The default is to use the first 3 characters of the english month name (Jan, Feb, Mar ...). The names can be configured using BaseChart.setMonthNames.
mm	The month formatted as 2 digits from 01 - 12, adding leading zero if necessary.
m	The month formatted using the minimum number of digits from 1 - 12.
MMM	The first 3 characters of the month name converted to upper case. The names can be configured using BaseChart.setMonthNames.
MM	The first 2 characters of the month name converted to upper case. The names can be configured using BaseChart.setMonthNames.
M	The first character of the month name converted to upper case. The names can be configured using BaseChart.setMonthNames.
dd	The day of month formatted as 2 digits from 01 - 31, adding leading zero if necessary.
d	The day of month formatted using the minimum number of digits from 1 - 31.
w	The name of the day of week. The default is to use the first 3 characters of the english day of week name (Sun, Mon, Tue ...). The names can be configured using BaseChart.setWeekDayNames.
hh	The hour of day formatted as 2 digits, adding leading zero if necessary. The 2 digits will be 00 - 23 if the 'a' option (see below) is not specified, otherwise it will be 01 - 12.
h	The hour of day formatted using the minimum number of digits. The digits will be 0 - 23 if the 'a' option (see below) is not specified, otherwise it will be 01 - 12.
nn	The minute formatted as 2 digits from 00 - 59, adding leading zero if necessary.
n	The minute formatted using the minimum number of digits from 00 - 59.
ss	The second formatted as 2 digits from 00 - 59, adding leading zero if necessary.
s	The second formatted using the minimum number of digits from 00 - 59.
a	Display either 'am' or 'pm', depending on whether the time is in the morning or afternoon. The text 'am' and 'pm' can be modified using BaseChart.setAMPM.

Shape Id	Value	Description
SquareShape	1	Square shape. See (1, 1) above.
DiamondShape	2	Diamond shape. See (2, 1) above.
TriangleShape	3	Triangle shape pointing upwards. See (3, 1) above.
RightTriangleShape	4	Triangle shape pointing rightwards. See (4, 1) above.
LeftTriangleShape	5	Triangle shape pointing leftwards. See (5, 1) above.
InvertedTriangleShape	6	Triangle shape pointing downwards. See (1, 2) above.
CircleShape	7	Circle shape. See (2, 2) above.
StarShape	[Method]	Star shapes of various points. See (2, 3), (2, 4), (2, 5), (3, 1), (3, 2), (3, 3), (3, 4), (3, 5) above for stars with 3 to 10 points.
PolygonShape	[Method]	Polygon shapes symmetrical about a vertical axis with a vertex at the top center position. See (4, 1), (4, 3), (4, 5), (5, 1) for polygons of 5 to 8 sides.
Polygon2Shape	[Method]	Polygon shapes symmetrical about a vertical axis but without any vertex at the top center position. See (4, 2), (4, 4) for polygons of 5 and 6 sides.
CrossShape	[Method]	'+' shapes. See (5, 2), (5, 3), (5, 4), (5, 5), (6, 1), (6, 2), (6, 3) for '+' shape with arm width of 0.1 - 0.7.
Cross2Shape	[Method]	'X' shapes. See (6, 4), (6, 5), (7, 1), (7, 2), (7, 3), (7, 4), (7, 5) for 'X' shapes with arm width of 0.1 - 0.7.

langEnglish	0	Roman script
langFrench	1	Roman script
langGerman	2	Roman script
langItalian	3	Roman script
langDutch	4	Roman script
langSwedish	5	Roman script
langSpanish	6	Roman script
langDanish	7	Roman script
langPortuguese	8	Roman script
langNorwegian	9	Roman script
langHebrew	10	Hebrew script
langJapanese	11	Japanese script
langArabic	12	Arabic script
langFinnish	13	Roman script
langGreek	14	Greek script using smRoman script code
langIcelandic	15	modified smRoman/Icelandic script
langMaltese	16	Roman script
langTurkish	17	modified smRoman/Turkish script
langCroatian	18	modified smRoman/Croatian script
langTradChinese	19	Chinese (Mandarin) in traditional characters
langUrdu	20	Arabic script
langHindi	21	Devanagari script
langThai	22	Thai script
langKorean	23	Korean script

Nan	Meaning
1	Invalid square root (negative number, usually)
2	Invalid addition (indeterminate such as infinity + (-infinity))
4	Invalid division (indeterminate such as 0/0)
8	Invalid multiplication (indeterminate such as 0*infinity)
9	Invalid modulo such as (a mod 0)
17	Try to convert invalid string to a number like val("x7")
33	Invalid argument in a trig function
34	Invalid argument in an inverse trig function
36	Invalid argument in a log function
37	Invalid argument in Pow function
38	Invalid argument in toolbox financial function
40	Invalid argument in hyperbolic function
42	Invalid argument in a gamma function

Symbol	Description and result
0	Digit placeholder. For example, if the value 8.9 is to be displayed as 8.90, use the format #.00
#	Digit placeholder. This symbol follows the same rules as the 0 symbol. However, the application shall not display extra zeros when the number typed has fewer digits on either side of the decimal than there are # symbols in the format. For example, if the custom format is #.##, and 8.9 is in the cell, the number 8.9 is displayed.
?	Digit placeholder. This symbol follows the same rules as the 0 symbol. However, the application shall put a space for insignificant zeros on either side of the decimal point so that decimal points are aligned in the column. For example, the custom format 0.0? aligns the decimal points for the numbers 8.9 and 88.99 in a column.
. (period)	Decimal point.
%	Percentage. If the cell contains a number between 0 and 1, and the custom format 0% is used, the application shall multiply the number by 100 and add the percentage symbol in the cell.
, (comma)	Thousands separator. The application shall separate thousands by commas if the format contains a comma that is enclosed by number signs (#) or by zeros. A comma that follows a placeholder scales the number by one thousand. For example, if the format is #.0,, and the cell value is 12,200,000 then the number 12.2 is displayed.
E- E+ e- e+	Scientific format. The application shall display a number to the right of the "E" symbol that corresponds to the number of places that the decimal point was moved. For example, if the format is 0.00E+00, and the value 12,200,000 is in the cell, the number 1.22E+07 is displayed. If the number format is #0.0E+0, then the number 12.2E+6 is displayed.
\$ -+/():space	Displays the symbol. If it is desired to display a character that differs from one of these symbols, precede the character with a backslash (\). Alternatively, enclose the character in quotation marks. For example, if the number format is (000), and the value 12 is in the cell, the number (012) is displayed.
\	Display the next character in the format. The application shall not display the backslash. For example, if the number format is 0\!, and the value 3 is in the cell, the value 3! is displayed.
*	Repeat the next character in the format enough times to fill the column to its current width. There shall not be more than one asterisk in one section of the format. If more than one asterisk appears in one section of the format, all but the last asterisk shall be ignored. For example, if the number format is 0*x, and the value 3 is in the cell, the value 3xxxxxx is displayed. The number of x characters that are displayed in the cell varies based on the width of the column.
_ (underline)	Skip the width of the next character. This is useful for lining up negative and positive values in different cells of the same column. For example, the number format _(0.0_);(0.0) aligns the numbers 2.3 and -4.5 in the column even though the negative number is enclosed by parentheses.
"text"	Display whatever text is inside the quotation marks. For example, the format 0.00 "dollars" displays 1.23 dollars when the value 1.23 is in the cell.
@	Text placeholder. If text is typed in the cell, the text from the cell is placed in the format where the at symbol (@) appears. For example, if the number format is "Bob "@ Smith" (including quotation marks), and the value "John" is in the cell, the value Bob John Smith is displayed.

[Black] [Green] [White] [Blue] [Magenta] [Yellow] [Cyan] [Red]

To display	As	Use this code
Months	1-12	m
Months	01-12	mm
Months	Jan-Dec	mmm
Months	January-December	mmmm
Months	J-D	mmmmm
Days	1-31	d
Days	01-31	dd
Days	Sun-Sat	ddd
Days	Sunday-Saturday	dddd
Years	00-99	yy
Years	1900-9999	yyyy
Hours	0-23	h
Hours	00-23	hh
Minutes	0-59	m
Minutes	00-59	mm
Seconds	0-59	s
Seconds	00-59	ss
Time	4 AM	h AM/PM
Time	4:36 PM	h:mm AM/PM
Time	4:36:03 P	h:mm:ss A/P
Time	4:36:03.75	h:mm:ss.00
Elapsed time	1:02	[h] :mm
Elapsed time	62:16	[mm] :ss
Elapsed time	3735.80	[ss] .00

To display	As	Use this code
1234.59	1234.6	#####.#
8.9	8.900	#.000
.631	0.6	0.#
12	12.0	#.0#
1234.568	1234.57	#.0#
44.398	44.398	???.???
102.65	102.65	???.???
2.8	2.8	???.???
5.25	5 1/4	# ??/??
5.3	5 3/10	# ??/??
12000	12,000	#,###
12000	12	#,
12400000	12.4	0.0,,