MBS Linux Plugin Documentation

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0.1 Introduction

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

0.2 Content

- 1 List of all topics 3
- 2 List of all classes 27
- 3 List of all modules 29
- 4 All items in this plugin 31

Chapter 1

List of Topics

- 7 **Network** 105
  - 7.1.1 class AvahiAddressResolverMBS 105
    - 7.1.3 Constructor(client as AvahiClientMBS) 105
    - 7.1.4 Destructor 106
    - 7.1.5 Resolve(InterfaceIndex as integer, Protocol as integer, address as string, flags as integer = 0) as boolean 106
    - 7.1.7 Client as AvahiClientMBS 106
    - 7.1.8 Handle as Integer 106
    - 7.1.10 Failure(error as string, errorcode as integer) 106
    - 7.1.11 Found(interfaceIndex as integer, Protocol as Integer, address as string, name as string, flags as integer) 107
  - 7.2.1 class AvahiBrowserMBS 108
    - 7.2.3 Browse(InterfaceIndex as Integer, Protocol as Integer, servicetype as string, domain as string = "", flags as Integer = 0) as boolean 108
    - 7.2.4 Constructor(client as AvahiClientMBS) 108
    - 7.2.5 Destructor 108
    - 7.2.7 Client as AvahiClientMBS 109
    - 7.2.8 Handle as Integer 109
    - 7.2.10 AllForNow(type as string) 109
    - 7.2.11 CacheExhausted(type as string) 109
    - 7.2.12 Failure(error as string, errorcode as Integer) 109
    - 7.2.13 ServiceFound(InterfaceIndex as Integer, protocol as Integer, name as string, type as string, domain as string, flags as Integer) 110
    - 7.2.14 ServiceRemoved(InterfaceIndex as Integer, protocol as Integer, name as string, type as string, domain as string, flags as Integer) 110
  - 7.3.1 class AvahiClientMBS 111
    - 7.3.3 Available as boolean 111

* 7.3.4 Constructor(flags as Integer = 0) 111
* 7.3.5 Destructor 111
* 7.3.6 Poll 111
* 7.3.8 DomainName as string 112
* 7.3.9 Handle as Integer 112
* 7.3.10 HostName as string 112
* 7.3.11 State as Integer 112
* 7.3.12 Version as string 113
* 7.3.14 Collision 113
* 7.3.15 Connecting 113
* 7.3.16 Failure(error as string, errorcode as Integer) 113
* 7.3.17 Registering 113
* 7.3.18 Running 113

– 7.4.1 class AvahiDomainBrowserMBS 115

* 7.4.3 BrowseDomains(InterfaceIndex as Integer, Protocol as Integer, domain as string = "", BrowserType as Integer = 0, flags as Integer = 0) as boolean 115
* 7.4.4 Constructor(client as AvahiClientMBS) 115
* 7.4.5 Destructor 115
* 7.4.7 Client as AvahiClientMBS 115
* 7.4.8 Handle as Integer 116
* 7.4.10 AllForNow 116
* 7.4.11 CacheExhausted 116
* 7.4.12 DomainFound(InterfaceIndex as Integer, protocol as Integer, domain as string, flags as Integer) 116
* 7.4.13 DomainRemoved(InterfaceIndex as Integer, protocol as Integer, domain as string, flags as Integer) 116
* 7.4.14 Failure(error as string, errorcode as Integer) 116

– 7.5.1 class AvahiEntryGroupMBS 118

* 7.5.3 AddAddress(InterfaceIndex as integer, Protocol as integer, flags as Integer, name as string, Address as String) 118
* 7.5.4 AddRecord(InterfaceIndex as integer, Protocol as integer, flags as Integer, name as string, Clazz as Integer, Type as Integer, ttl as integer, Data as MemoryBlock) 118
* 7.5.5 AddService(InterfaceIndex as integer, Protocol as integer, flags as Integer, Name as string, type as String, Domain as String, Host as String, Port as Integer) 118
* 7.5.6 AddServiceStrList(InterfaceIndex as integer, Protocol as integer, flags as Integer, Name as string, type as String, Domain as String, Host as String, Port as Integer, List() as String) 119
* 7.5.7 AddServiceSubType(InterfaceIndex as integer, Protocol as integer, flags as Integer, Name as string, type as String, Domain as String, SubType as String) 119
* 7.5.8 Commit 120
* 7.5.9 Constructor(client as AvahiClientMBS) 120
* 7.5.10 Destructor 120

* 7.5.11 Reset 120
* 7.5.12 UpdateServiceStrList(InterfaceIndex as integer, Protocol as integer, flags as Integer, Name as string, type as String, Domain as String, List() as String) 120
* 7.5.14 Client as AvahiClientMBS 121
* 7.5.15 Handle as Integer 121
* 7.5.16 isEmpty as Boolean 121
* 7.5.17 LastError as Integer 121
* 7.5.18 LastErrorMessage as String 122
* 7.5.19 State as Integer 122
* 7.5.21 StateChanged(state as Integer) 122

– 7.6.1 class AvahiHostNameResolverMBS 124

* 7.6.3 Constructor(client as AvahiClientMBS) 124
* 7.6.4 Destructor 124
* 7.6.5 Resolve(InterfaceIndex as integer, Protocol as integer, name as string, aprotocol as Integer = -1, flags as integer = 0) as boolean 124
* 7.6.7 Client as AvahiClientMBS 125
* 7.6.8 Handle as Integer 125
* 7.6.10 Failure(error as string, errorcode as integer) 125
* 7.6.11 Found(interfaceIndex as integer, Protocol as Integer, name as string, address as string, flags as integer) 125

– 7.7.1 class AvahiRecordBrowserMBS 127

* 7.7.3 Constructor(client as AvahiClientMBS) 127
* 7.7.4 Destructor 127
* 7.7.5 Resolve(InterfaceIndex as integer, Protocol as integer, name as string, Clazz as Integer, Type as Integer, flags as integer = 0) as boolean 127
* 7.7.7 Client as AvahiClientMBS 128
* 7.7.8 Handle as Integer 128
* 7.7.10 AllForNow(type as Integer) 128
* 7.7.11 CacheExhausted(type as Integer) 128
* 7.7.12 Failure(error as string, errorcode as integer) 128
* 7.7.13 ServiceFound(InterfaceIndex as integer, protocol as Integer, name as string, clazz as Integer, type as Integer, RecordData as MemoryBlock, flags as integer) 129
* 7.7.14 ServiceRemoved(InterfaceIndex as integer, protocol as Integer, name as string, clazz as Integer, type as Integer, RecordData as MemoryBlock, flags as integer) 129

– 7.8.1 class AvahiResolverMBS 131

* 7.8.3 Constructor(client as AvahiClientMBS) 131
* 7.8.4 Destructor 131
* 7.8.5 Resolve(InterfaceIndex as Integer, Protocol as Integer, name as string, servicetype as string, domain as string, flags as Integer = 0) as boolean 131
* 7.8.7 Client as AvahiClientMBS 132
* 7.8.8 Handle as Integer 132
* 7.8.10 Failure(error as string, errorcode as Integer) 132

* 7.8.11 Found(interfaceIndex as Integer, Protocol as Integer, name as string, type as string, domain as string, hostname as string, port as Integer, address as string, txt as string, flags as Integer) 132

– 7.9.1 class AvahiTypeBrowserMBS 134

* 7.9.3 BrowseTypes(InterfaceIndex as Integer, Protocol as Integer, domain as string = "", flags as Integer = 0) as boolean 134
* 7.9.4 Constructor(client as AvahiClientMBS) 134
* 7.9.5 Destructor 134
* 7.9.7 Client as AvahiClientMBS 134
* 7.9.8 Handle as Integer 135
* 7.9.10 AllForNow 135
* 7.9.11 CacheExhausted 135
* 7.9.12 Failure(error as string, errorcode as Integer) 135
* 7.9.13 TypeFound(InterfaceIndex as Integer, protocol as Integer, type as string, domain as string, flags as Integer) 135
* 7.9.14 TypeRemoved(InterfaceIndex as Integer, protocol as Integer, type as string, domain as string, flags as Integer) 135

- 4 **HTMLViewer** 31
  - 4.1.1 class DesktopHTMLViewer 31
    - 4.1.3 LinuxWebViewMBS as LinuxWebViewMBS 31

- 10 **Window** 165
  - 10.1.1 class DesktopWindow 165
    - 10.1.3 GTKWindow as GTKWindowMBS 165

- 10 **Window** 165
  - 10.2.1 class GTKWindowMBS 166
    - 10.2.3 Constructor(win as DesktopWindow) 166
    - 10.2.4 Constructor(win as window) 166
    - 10.2.5 Deiconify 167
    - 10.2.6 Fullscreen 167
    - 10.2.7 Iconify 167
    - 10.2.8 Maximize 167
    - 10.2.9 SetIcon(pic as picture) 168
    - 10.2.10 SetKeepAbove(setting as boolean) 168
    - 10.2.11 SetKeepBelow(setting as boolean) 168
    - 10.2.12 Stick 169
    - 10.2.13 Unfullscreen 169
    - 10.2.14 Unmaximize 169
    - 10.2.15 Unstick 169
    - 10.2.17 AcceptFocus as Boolean 170
    - 10.2.18 Handle as Integer 170
    - 10.2.19 IsComposited as Boolean 170
    - 10.2.20 Opacity as Double 170
    - 10.2.21 Resizable as Boolean 170
    - 10.2.22 Title as string 171
    - 10.2.23 XWindowID as Integer 171

- 5 **HTMLViewer Linux** 33
  - 5.1.1 class HTMLViewer 33
    - 5.1.3 LinuxWebViewMBS as LinuxWebViewMBS 33

- 6 **Linux** 91
  - 6.1.1 module LinuxIconMBS 91
    - 6.1.3 FileIcon(file as FolderItem, size as integer = 48) as Picture 91
    - 6.1.4 FilePreview(file as FolderItem, size as integer = 48) as Picture 92
    - 6.1.5 FileThumbnail(file as FolderItem) as FolderItem 92
    - 6.1.6 GenericIconName(MimeType as String) as String 92
    - 6.1.7 Icon(MimeType as String, size as integer = 48) as Picture 93
    - 6.1.8 SymbolicIcon(MimeType as String, size as integer = 48) as Picture 93

- 5 **HTMLViewer Linux** 33
  - 5.2.1 class LinuxJavaScriptContextMBS 34
    - 5.2.3 CheckScriptSyntax(script as string, sourceURL as string = "", StartLineNumber as Integer = 0) as boolean 34
    - 5.2.4 CheckScriptSyntax(script as string, sourceURL as string, StartLineNumber as Integer, byref JSException as string) as boolean 34
    - 5.2.5 Constructor 35
    - 5.2.6 Destructor 35
    - 5.2.7 EvaluateScript(script as string, sourceURL as string = "", StartLineNumber as Integer = 0) as string 35
    - 5.2.8 EvaluateScript(script as string, sourceURL as string, StartLineNumber as Integer, byref JSException as string) as string 36
    - 5.2.9 GarbageCollect 36
    - 5.2.11 Handle as Integer 36
    - 5.2.12 HTMLViewer as HTMLViewer 36

13

- 6 **Linux** 91
  - 6.2.1 class LinuxProcessMBS 94
    - 6.2.3 Constructor 94
    - 6.2.4 PID as Integer 94
    - 6.2.5 ProcessByPID(ProcessID as Integer) as LinuxProcessMBS 95
    - 6.2.6 Processes as LinuxProcessMBS() 95
    - 6.2.8 CommandLine as String 95
    - 6.2.9 CurrentWorkingDirectory as String 96
    - 6.2.10 Environment as Dictionary 96
    - 6.2.11 Name as String 96
    - 6.2.12 NumberOfThreads as Integer 97
    - 6.2.13 OpenFiles as Dictionary 97
    - 6.2.14 ParentProcessID as Integer 97
    - 6.2.15 Path as String 97
    - 6.2.16 ProcessID as Integer 98
    - 6.2.17 StartTime as Date 98
    - 6.2.18 State as String 98
  - 6.3.1 class LinuxSuMBS 99
    - 6.3.3 AskPassword(prompt as String) as String 99
    - 6.3.4 Available as boolean 100
    - 6.3.5 ExecuteRun as boolean 100
    - 6.3.6 ExecuteSu as boolean 100
    - 6.3.7 ExecuteSudo as boolean 100
    - 6.3.9 Alert as String 101
    - 6.3.10 AlwaysAskPassword as Boolean 101
    - 6.3.11 Command as String 101
    - 6.3.12 Debug as Boolean 101
    - 6.3.13 Description as String 101
    - 6.3.14 ExitCode as Integer 102
    - 6.3.15 Grab as Boolean 102
    - 6.3.16 Handle as Integer 102
    - 6.3.17 KeepEnvironment as Boolean 102
    - 6.3.18 LastError as Integer 102
    - 6.3.19 LastErrorMessage as String 102
    - 6.3.20 LoginShell as Boolean 103
    - 6.3.21 Message as String 103
    - 6.3.22 User as String 103
    - 6.3.24 AskPassword(prompt as String, byref ErrorCode as Integer, byref ErrorMessage as String) as string 103
    - 6.3.25 PasswordNoNeeded 104

- 9 **System** 159
  - 9.1.1 class LinuxSysInfoMBS 159
    - 9.1.3 Constructor 160
    - 9.1.4 loads(index as Integer) as Double 160
    - 9.1.6 availablePhysicalPages as Integer 160
    - 9.1.7 BufferRam as UInt64 160
    - 9.1.8 FreeHigh as UInt64 160
    - 9.1.9 FreeRam as UInt64 161
    - 9.1.10 FreeSwap as UInt64 161
    - 9.1.11 MemoryUnit as UInt64 161
    - 9.1.12 NumberOfProcesses as Integer 161
    - 9.1.13 NumberOfProcessors as Integer 162
    - 9.1.14 NumberOfProcessorsConfigured as Integer 162
    - 9.1.15 PhysicalPages as Integer 162
    - 9.1.16 SharedRam as UInt64 162
    - 9.1.17 TotalHigh as UInt64 162
    - 9.1.18 TotalRam as UInt64 163
    - 9.1.19 TotalSwap as UInt64 163
    - 9.1.20 upTime as Integer 163
    - 9.1.21 Valid as Boolean 163

15

- 5 **HTMLViewer Linux** 33
  - 5.3.1 class LinuxWebBackForwardListMBS 38
    - 5.3.3 AddItem(item as LinuxWebHistoryItemMBS) 38
    - 5.3.4 BackItem as LinuxWebHistoryItemMBS 38
    - 5.3.5 BackLength as Integer 38
    - 5.3.6 Clear 38
    - 5.3.7 Constructor(webview as LinuxWebViewMBS) 38
    - 5.3.8 ContainsItem(item as LinuxWebHistoryItemMBS) as boolean 39
    - 5.3.9 CurrentItem as LinuxWebHistoryItemMBS 39
    - 5.3.10 Destructor 39
    - 5.3.11 ForwardItem as LinuxWebHistoryItemMBS 39
    - 5.3.12 ForwardLength as Integer 39
    - 5.3.13 GoBack 39
    - 5.3.14 GoForward 40
    - 5.3.15 GoToItem(item as LinuxWebHistoryItemMBS) 40
    - 5.3.16 Item(index as Integer) as LinuxWebHistoryItemMBS 40
    - 5.3.18 Handle as Integer 40
    - 5.3.19 HTMLViewer as HTMLViewer 40
    - 5.3.20 Limit as Integer 41
  - 5.4.1 class LinuxWebCookieMBS 42
    - 5.4.3 Constructor(name as string, value as string, domain as string, path as string, maxAge as Integer) 42
    - 5.4.4 Copy as LinuxWebCookieMBS 43
    - 5.4.5 Destructor 43
    - 5.4.6 Equal(other as LinuxWebCookieMBS) as boolean 43
    - 5.4.7 SetMaxAge(value as Integer) 44
    - 5.4.8 ToCookieHeader as string 44
    - 5.4.9 ToSetCookieHeader as string 44
    - 5.4.11 Handle as Integer 45
    - 5.4.12 Owner as Variant 45
    - 5.4.13 Domain as string 45
    - 5.4.14 Expires as date 45
    - 5.4.15 ExpiresDateTime as DateTime 46
    - 5.4.16 HTTPOnly as boolean 46
    - 5.4.17 Name as string 46
    - 5.4.18 Path as string 46
    - 5.4.19 Secure as boolean 47
    - 5.4.20 Value as string 47
  - 5.5.1 class LinuxWebCookieStoreMBS 48
    - 5.5.3 AddCookie(cookie as LinuxWebCookieMBS) 48
    - 5.5.4 AllCookies as LinuxWebCookieMBS() 48

* 5.5.5 Available as Boolean 49
* 5.5.6 Constructor 49
* 5.5.7 CookieStore as LinuxWebCookieStoreMBS 49
* 5.5.8 DeleteAllCookies 49
* 5.5.9 DeleteCookie(cookie as LinuxWebCookieMBS) 49
* 5.5.10 Destructor 50
* 5.5.11 SetCookieStore(newStore as LinuxWebCookieStoreMBS) 50
* 5.5.13 Handle as Integer 50
* 5.5.14 Owner as Variant 50
* 5.5.15 AcceptPolicy as Integer 50

– 5.6.1 class LinuxWebDataSourceMBS 52

* 5.6.3 Constructor 52
* 5.6.4 Constructor(request as LinuxWebNetworkRequestMBS) 52
* 5.6.5 Data as string 52
* 5.6.6 Destructor 53
* 5.6.7 Encoding as string 53
* 5.6.8 InitialRequest as LinuxWebNetworkRequestMBS 53
* 5.6.9 IsLoading as boolean 53
* 5.6.10 MainResource as LinuxWebResourceMBS 53
* 5.6.11 Request as LinuxWebNetworkRequestMBS 53
* 5.6.12 Subresources as LinuxWebResourceMBS() 54
* 5.6.13 UnrechableURI as string 54
* 5.6.14 WebFrame as LinuxWebFrameMBS 54
* 5.6.16 Handle as Integer 54
* 5.6.17 HTMLViewer as HTMLViewer 54

– 5.7.1 class LinuxWebFrameMBS 56

* 5.7.3 Constructor 56
* 5.7.4 DataSource as LinuxWebDataSourceMBS 56
* 5.7.5 Destructor 56
* 5.7.6 FindFrame(name as string) as LinuxWebFrameMBS 56
* 5.7.7 JSContext as LinuxJavaScriptContextMBS 57
* 5.7.8 LoadAlternateString(content as string, BaseURL as string, unreachableURL as string) 57
* 5.7.9 LoadRequest(request as LinuxWebNetworkRequestMBS) 57
* 5.7.10 LoadStatus as Integer 57
* 5.7.11 LoadString(content as string, MimeType as String, Encoding as String, BaseURL as string) 58
* 5.7.12 LoadURL(URL as string) 58
* 5.7.13 Name as string 58
* 5.7.14 NetworkResponse as LinuxWebNetworkResponseMBS 58
* 5.7.15 Parent as LinuxWebFrameMBS 58

* 5.7.16 Print 59
* 5.7.17 ProvisionalDataSource as LinuxWebDataSourceMBS 59
* 5.7.18 Reload 59
* 5.7.19 StopLoading 59
* 5.7.20 Title as string 59
* 5.7.21 URL as string 60
* 5.7.23 Handle as Integer 60
* 5.7.24 HTMLViewer as HTMLViewer 60
* 5.7.25 WebView as LinuxWebViewMBS 60

– 5.8.1 class LinuxWebHistoryItemMBS 62
* 5.8.3 Constructor 62
* 5.8.4 Constructor(URI as string, Title as string) 62
* 5.8.5 Copy as LinuxWebHistoryItemMBS 62
* 5.8.6 Destructor 62
* 5.8.7 LastVisitedTime as Double 63
* 5.8.8 OriginalURI as string 63
* 5.8.9 Title as string 63
* 5.8.10 URI as string 63
* 5.8.12 Handle as Integer 63
* 5.8.13 HTMLViewer as HTMLViewer 63
* 5.8.14 AlternateTitle as string 64

– 5.9.1 class LinuxWebInspectorMBS 65
* 5.9.3 Close 65
* 5.9.4 Constructor 65
* 5.9.5 Destructor 65
* 5.9.6 InspectCoordinates(x as Double, y as Double) 65
* 5.9.7 InspectedURI as string 66
* 5.9.8 Show 66
* 5.9.9 WebView as LinuxWebViewMBS 66
* 5.9.11 Handle as Integer 66
* 5.9.12 HTMLViewer as HTMLViewer 66

– 5.10.1 class LinuxWebNetworkRequestMBS 68
* 5.10.3 Constructor(url as string) 68
* 5.10.4 Destructor 68
* 5.10.6 Handle as Integer 68
* 5.10.7 HTMLViewer as HTMLViewer 68
* 5.10.8 URL as string 69

– 5.11.1 class LinuxWebNetworkResponseMBS 70
* 5.11.3 Constructor(url as string) 70
* 5.11.4 Destructor 70
* 5.11.6 Handle as Integer 70

* 5.11.7 HTMLViewer as HTMLViewer 70
* 5.11.8 URL as string 71

– 5.12.1 class LinuxWebResourceMBS 72

* 5.12.3 Constructor(data as string, uri as string, mimeType as string, encoding as string = "", FrameName as string = "") 72
* 5.12.4 Data as string 72
* 5.12.5 Destructor 72
* 5.12.6 Encoding as string 72
* 5.12.7 FrameName as string 73
* 5.12.8 MimeType as string 73
* 5.12.9 URL as string 73
* 5.12.11 Handle as Integer 73
* 5.12.12 HTMLViewer as HTMLViewer 73

– 5.13.1 class LinuxWebSettingsMBS 74

* 5.13.3 Constructor 74
* 5.13.4 Copy as LinuxWebSettingsMBS 74
* 5.13.5 Destructor 74
* 5.13.6 UserAgent as string 74
* 5.13.8 Handle as Integer 75
* 5.13.9 HTMLViewer as HTMLViewer 75

– 5.14.1 class LinuxWebViewMBS 76

* 5.14.3 Available as Boolean 76
* 5.14.4 BackForwardList as LinuxWebBackForwardListMBS 76
* 5.14.5 CanCopyClipboard as boolean 77
* 5.14.6 CanCutClipboard as boolean 77
* 5.14.7 CanGoBack as boolean 77
* 5.14.8 CanGoBackOrForward(steps as Integer) as boolean 77
* 5.14.9 CanGoForward as boolean 77
* 5.14.10 CanPasteClipboard as boolean 78
* 5.14.11 CanRedo as boolean 78
* 5.14.12 CanShowMimeType(MimeType as string) as boolean 78
* 5.14.13 CanUndo as boolean 78
* 5.14.14 Constructor 78
* 5.14.15 CookieStore as LinuxWebCookieStoreMBS 78
* 5.14.16 CopyClipboard 79
* 5.14.17 CutClipboard 79
* 5.14.18 DeleteSelection 79
* 5.14.19 Destructor 79
* 5.14.20 Encoding as string 79
* 5.14.21 EvaluateScript(script as string) as string 79
* 5.14.22 ExecuteScript(script as string) 80

* 5.14.23 FocusedFrame as LinuxWebFrameMBS 80
* 5.14.24 GoBack 80
* 5.14.25 GoBackOrForward(steps as Integer) 80
* 5.14.26 GoForward 80
* 5.14.27 GoToItem(item as LinuxWebHistoryItemMBS) as boolean 80
* 5.14.28 HasSelection as boolean 81
* 5.14.29 IconURL as string 81
* 5.14.30 Inspector as LinuxWebInspectorMBS 81
* 5.14.31 IsLoading as Boolean 81
* 5.14.32 JSContext as LinuxJavaScriptContextMBS 81
* 5.14.33 LoadHTMLString(HTMLString as string, BaseURL as string = "") 82
* 5.14.34 LoadRequest(request as LinuxWebNetworkRequestMBS) 82
* 5.14.35 LoadStatus as Integer 82
* 5.14.36 LoadString(content as string, MimeType as String, Encoding as String, BaseURL as string) 82
* 5.14.37 LoadURL(URL as string) 83
* 5.14.38 MainFrame as LinuxWebFrameMBS 83
* 5.14.39 MajorVersion as Integer 83
* 5.14.40 MarkTextMatches(text as string, caseSensitive as boolean = false, limit as Integer = 99) as Integer 83
* 5.14.41 MicroVersion as Integer 83
* 5.14.42 MinorVersion as Integer 84
* 5.14.43 PasteClipboard 84
* 5.14.44 Progress as Double 84
* 5.14.45 Redo 84
* 5.14.46 Reload 84
* 5.14.47 ReloadIgnoreCache 84
* 5.14.48 SearchText(text as string, caseSensitive as boolean = false, forward as boolean = true, wrap as boolean = true) as boolean 85
* 5.14.49 SelectAll 85
* 5.14.50 SetCookieStore(newStore as LinuxWebCookieStoreMBS) 85
* 5.14.51 SetHighlightTextMatches(highlight as boolean) 85
* 5.14.52 SetMaintainsBackForwardList(flag as boolean) 85
* 5.14.53 StopLoading 86
* 5.14.54 Title as string 86
* 5.14.55 Undo 86
* 5.14.56 UnmarkTextMatches 86
* 5.14.57 URL as string 86
* 5.14.58 ZoomIn 86
* 5.14.59 ZoomOut 87
* 5.14.61 Handle as Integer 87
* 5.14.62 HTMLViewer as HTMLViewer 87

* 5.14.63 CacheModel as Integer 87
* 5.14.64 CustomEncoding as string 87
* 5.14.65 Editable as boolean 88
* 5.14.66 FullContentZoom as boolean 88
* 5.14.67 ProxyURL as String 88
* 5.14.68 Settings as LinuxWebSettingsMBS 88
* 5.14.69 Transparent as boolean 88
* 5.14.70 ViewSourceMode as boolean 89
* 5.14.71 ZoomLevel as Double 89

- 8 **RaspberryPiCamera** 137
  - 8.1.1 class RaspberryPiCameraFormatDescriptionMBS 137
    - 8.1.3 Constructor 137
    - 8.1.5 Description as String 137
    - 8.1.6 Flags as Integer 138
    - 8.1.7 Index as Integer 138
    - 8.1.8 Pixelformat as Integer 138
    - 8.1.9 PixelformatString as String 138
    - 8.1.10 Type as Integer 138
  - 8.2.1 class RaspberryPiCameraFormatMBS 139
    - 8.2.3 Constructor 139
    - 8.2.5 BytesPerRow as Integer 139
    - 8.2.6 ColorSpace as Integer 139
    - 8.2.7 Field as Integer 140
    - 8.2.8 Height as Integer 141
    - 8.2.9 Pixelformat as Integer 141
    - 8.2.10 PixelformatString as String 141
    - 8.2.11 SizeImage as Integer 141
    - 8.2.12 Type as Integer 141
    - 8.2.13 Width as Integer 142
  - 8.3.1 class RaspberryPiCameraMBS 143
    - 8.3.3 AvailableFormats as RaspberryPiCameraFormatDescriptionMBS() 143
    - 8.3.4 Capture(WithPicture as boolean = true) as Boolean 143
    - 8.3.5 Close 144
    - 8.3.6 Constructor 144
    - 8.3.7 CurrentFormat as RaspberryPiCameraFormatMBS 144
    - 8.3.8 InitBuffer as Boolean 144
    - 8.3.9 Open(Device as string = "/dev/video0") as Boolean 144
    - 8.3.10 SetCurrentFormat(format as RaspberryPiCameraFormatMBS) as boolean 145
    - 8.3.11 SetJPEGSize(Width as Integer, Height as Integer) as Boolean 145
    - 8.3.12 SetSize(Width as Integer, Height as Integer) as Boolean 145
    - 8.3.14 AutoExposureBias as Integer 146
    - 8.3.15 AutoFocusRange as Integer 146
    - 8.3.16 AutoFocusStart as Integer 146
    - 8.3.17 AutoFocusStatus as Integer 146
    - 8.3.18 AutoFocusStop as Integer 146
    - 8.3.19 AutoNPresetWhiteBalance as Integer 147
    - 8.3.20 Buffer as Ptr 147
    - 8.3.21 BufferLength as Integer 147
    - 8.3.22 BusInfo as String 147
    - 8.3.23 BytesPerRow as Integer 147

* 8.3.24 CanCapture as Boolean 148
* 8.3.25 Capabilities as Integer 148
* 8.3.26 Card as String 148
* 8.3.27 Driver as String 148
* 8.3.28 ErrorMessage as String 148
* 8.3.29 ExposureAbsolute as Integer 149
* 8.3.30 ExposureAuto as Integer 149
* 8.3.31 ExposureAutoPriority as Integer 149
* 8.3.32 ExposureMetering as Integer 149
* 8.3.33 FocusAbsolute as Integer 149
* 8.3.34 FocusAuto as Integer 150
* 8.3.35 FocusRelative as Integer 150
* 8.3.36 Handle as Integer 150
* 8.3.37 Height as Integer 150
* 8.3.38 ImageStabilization as Integer 150
* 8.3.39 IrisAbsolute as Integer 151
* 8.3.40 IrisRelative as Integer 151
* 8.3.41 IsoSensitivity as Integer 151
* 8.3.42 IsoSensitivityAuto as Integer 151
* 8.3.43 JPEG as String 152
* 8.3.44 LastError as Integer 152
* 8.3.45 Lock3A as Integer 152
* 8.3.46 Opened as Boolean 152
* 8.3.47 PanAbsolute as Integer 152
* 8.3.48 PanRelative as Integer 152
* 8.3.49 PanReset as Integer 153
* 8.3.50 PanSpeed as Integer 153
* 8.3.51 Picture as Picture 153
* 8.3.52 PixelFormat as Integer 153
* 8.3.53 PixelformatString as String 153
* 8.3.54 Privacy as Integer 154
* 8.3.55 Recording as Boolean 154
* 8.3.56 SceneMode as Integer 154
* 8.3.57 TiltAbsolute as Integer 154
* 8.3.58 TiltRelative as Integer 154
* 8.3.59 TiltReset as Integer 155
* 8.3.60 TiltSpeed as Integer 155
* 8.3.61 Version as String 155
* 8.3.62 WideDynamicRange as Integer 155
* 8.3.63 Width as Integer 155
* 8.3.64 ZoomAbsolute as Integer 156
* 8.3.65 ZoomContinuous as Integer 156
* 8.3.66 ZoomRelative as Integer 156

- 10 **Window** 165
  - 10.3.1 class Window 172
    - 10.3.3 GTKWindow as GTKWindowMBS 172

- 11 **WiringPi** 173
  - 11.1.1 module WiringPiMBS 173
    - 11.1.3 analogRead(pin as Integer) as Integer 173
    - 11.1.4 analogWrite(pin as Integer, value as Integer) 174
    - 11.1.5 Board40Pin as Integer 174
    - 11.1.6 delay(HowLong as UInt32) 174
    - 11.1.7 delayMicroseconds(HowLong as UInt32) 174
    - 11.1.8 digitalRead(pin as Integer) as Integer 175
    - 11.1.9 digitalReadByte as Integer 175
    - 11.1.10 digitalWrite(pin as Integer, value as Integer) 175
    - 11.1.11 digitalWriteByte(value as Integer) 175
    - 11.1.12 GlobalMemoryAccess as Integer 175
    - 11.1.13 gpioClockSet(pin as Integer, value as Integer) 176
    - 11.1.14 GpioLayout as Integer 176
    - 11.1.15 I2CRead(fd as Integer) as Integer 176
    - 11.1.16 I2CReadReg16(fd as Integer, reg as Integer) as Integer 176
    - 11.1.17 I2CReadReg8(fd as Integer, reg as Integer) as Integer 177
    - 11.1.18 I2CSetup(devId as Integer) as Integer 177
    - 11.1.19 I2CSetupInterface(device as string, devId as Integer) as Integer 177
    - 11.1.20 I2CWrite(fd as Integer, Data as Integer) as Integer 177
    - 11.1.21 I2CWriteReg16(fd as Integer, reg as Integer, Data as Integer) as Integer 178
    - 11.1.22 I2CWriteReg8(fd as Integer, reg as Integer, Data as Integer) as Integer 178
    - 11.1.23 LoadLibrary(File as FolderItem) as boolean 178
    - 11.1.24 LoadLibrary(Path as string) as boolean 178
    - 11.1.25 MemorySize(Index as Integer) as Integer 179
    - 11.1.26 micros as UInt32 179
    - 11.1.27 millis as UInt32 179
    - 11.1.28 physPinToGpio(physPin as Integer) as Integer 179
    - 11.1.29 piBoardId(byref model as Integer, byref Rev as Integer, byref Mem as Integer, byref Maker as Integer, byref OverVolted as Integer) 179
    - 11.1.30 piBoardRev as Integer 180
    - 11.1.31 piHiPri(pri as Integer) as Integer 180
    - 11.1.32 piLock(Key as Integer) 180
    - 11.1.33 piMakerNames(index as Integer) as string 181
    - 11.1.34 piModelNames(index as Integer) as string 181
    - 11.1.35 pinMode(pin as Integer, mode as Integer) 181
    - 11.1.36 piRevisionNames(index as Integer) as string 181
    - 11.1.37 piUnlock(Key as Integer) 181
    - 11.1.38 Processor(Index as Integer) as String 182
    - 11.1.39 pullUpDnControl(pin as Integer, pud as Integer) 182
    - 11.1.40 pwmSetClock(divisor as Integer) 182

* 11.1.41 pwmSetMode(mode as Integer) 182
* 11.1.42 pwmSetRange(range as UInt32) 183
* 11.1.43 pwmToneWrite(pin as Integer, value as Integer) 183
* 11.1.44 pwmWrite(pin as Integer, value as Integer) 183
* 11.1.45 Read(fd as Integer, count as UInt64) as Memoryblock 183
* 11.1.46 RP1Model as Integer 183
* 11.1.47 serialClose(fd as Integer) 184
* 11.1.48 serialDataAvail(fd as Integer) as Integer 184
* 11.1.49 serialFlush(fd as Integer) 184
* 11.1.50 serialGetchar(fd as Integer) as Integer 184
* 11.1.51 serialOpen(device as String, Baud as Integer) as Integer 184
* 11.1.52 serialPutchar(fd as Integer, c as Integer) 184
* 11.1.53 serialPutData(fd as Integer, data as Memoryblock) 185
* 11.1.54 serialPuts(fd as Integer, text as string) 185
* 11.1.55 setPadDrive(group as Integer, value as Integer) 185
* 11.1.56 setPadDrivePin(pin as Integer, value as Integer) 185
* 11.1.57 SetupGpioDevice(PinType as Integer) as Integer 185
* 11.1.58 SetupPinType(PinType as Integer) as Integer 186
* 11.1.59 SPIDataRW(channel as Integer, data as Memoryblock) as Integer 186
* 11.1.60 SPIGetFd(channel as Integer) as Integer 187
* 11.1.61 SPISetup(channel as Integer, speed as Integer) as Integer 187
* 11.1.62 SPISetupMode(channel as Integer, speed as Integer, mode as Integer) as Integer 187
* 11.1.63 UserLevelAccess as Integer 187
* 11.1.64 Version(byref major as Integer, byref minor as Integer) 188
* 11.1.65 wiringPiSetup as Integer 188
* 11.1.66 wiringPiSetupGpio as Integer 188
* 11.1.67 wiringPiSetupPhys as Integer 189
* 11.1.68 wiringPiSetupSys as Integer 189
* 11.1.69 wpiPinToGpio(wpiPin as Integer) as Integer 189
* 11.1.70 Write(fd as Integer, data as Memoryblock) as Integer 190
* 11.1.72 ErrNo as Integer 190
* 11.1.73 LoadError as String 190

Chapter 2

List of all classes

- AvahiAddressResolverMBS 105
- AvahiBrowserMBS 108
- AvahiClientMBS 111
- AvahiDomainBrowserMBS 115
- AvahiEntryGroupMBS 118
- AvahiHostNameResolverMBS 124
- AvahiRecordBrowserMBS 127
- AvahiResolverMBS 131
- AvahiTypeBrowserMBS 134
- DesktopHTMLViewer 31
- DesktopWindow 165
- GTKWindowMBS 166
- HTMLViewer 33
- LinuxJavaScriptContextMBS 34
- LinuxProcessMBS 94
- LinuxSuMBS 99
- LinuxSysInfoMBS 159
- LinuxWebBackForwardListMBS 38
- LinuxWebCookieMBS 42

- LinuxWebCookieStoreMBS 48
- LinuxWebDataSourceMBS 52
- LinuxWebFrameMBS 56
- LinuxWebHistoryItemMBS 62
- LinuxWebInspectorMBS 65
- LinuxWebNetworkRequestMBS 68
- LinuxWebNetworkResponseMBS 70
- LinuxWebResourceMBS 72
- LinuxWebSettingsMBS 74
- LinuxWebViewMBS 76
- RaspberryPiCameraFormatDescriptionMBS 137
- RaspberryPiCameraFormatMBS 139
- RaspberryPiCameraMBS 143
- Window 172

Chapter 3

List of all modules

- LinuxIconMBS 91
- WiringPiMBS 173

Chapter 4

HTMLViewer

4.1 class DesktopHTMLViewer

4.1.1 class DesktopHTMLViewer

Plugin Version: 21.5, Platforms: macOS, Linux, Windows, Targets: Desktop only.

Function: Class in Xojo for HTML rendering.
Notes: We have multiple methods for macOS, Windows and Linux, so please check each method.

4.1.2 Methods

4.1.3 LinuxWebViewMBS as LinuxWebViewMBS

Plugin Version: 24.5, Platform: Linux, Targets: Desktop only.

Function: Queries the linux WebKit web view for the given htmlviewer.
Notes: Requires a recent Xojo version. And libwekit-1.0 must be installed, so Xojo uses it for browsing.
Check Also the Available shared method on LinuxWebViewMBS class.

Chapter 5

HTMLViewer Linux

5.1 class HTMLViewer

5.1.1 class HTMLViewer

Plugin Version: 7.2, Platforms: macOS, Linux, Windows, Targets: Desktop only.

Function: Class in Xojo 2005 for HTML rendering.
Notes: We have multiple methods for macOS, Windows and Linux, so please check each method.

5.1.2 Methods

5.1.3 LinuxWebViewMBS as LinuxWebViewMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Queries the linux WebKit web view for the given htmlviewer.
Notes: Requires a recent Xojo version. And libwekit-1.0 must be installed, so Xojo uses it for browsing.
Check Also the Available shared method on LinuxWebViewMBS class.

5.2 class LinuxJavaScriptContextMBS

5.2.1 class LinuxJavaScriptContextMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The class for a javascript context.
Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.
Blog Entries

- HTMLViewer JavaScript communication for Xojo
- HTMLViewer JavaScript communication for Xojo

5.2.2 Methods

5.2.3 CheckScriptSyntax(script as string, sourceURL as string = "", StartLineNumber as Integer = 0) as boolean

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Checks for syntax errors in a string of JavaScript.
Notes: script: A string containing the script to check for syntax errors.
sourceURL: A string containing a URL for the script's source file. This is only used when reporting exceptions. Pass "" if you do not care to include source file information in exceptions.
startingLineNumber: An integer value specifying the script's starting line number in the file located at sourceURL. This is only used when reporting exceptions.
exception: A string in which to store a syntax error exception, if any.
Returns true if the script is syntactically correct, otherwise false.
See also:

- 5.2.4 CheckScriptSyntax(script as string, sourceURL as string, StartLineNumber as Integer, byref JSException as string) as boolean 34

5.2.4 CheckScriptSyntax(script as string, sourceURL as string, StartLineNumber as Integer, byref JSException as string) as boolean

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Checks for syntax errors in a string of JavaScript.
Notes: script: A string containing the script to check for syntax errors.
sourceURL: A string containing a URL for the script's source file. This is only used when reporting exceptions. Pass "" if you do not care to include source file information in exceptions.
startingLineNumber: An integer value specifying the script's starting line number in the file located at sourceURL. This is only used when reporting exceptions.

exception: A string in which to store a syntax error exception, if any.
Returns true if the script is syntactically correct, otherwise false.
See also:

- 5.2.3 CheckScriptSyntax(script as string, sourceURL as string = "", StartLineNumber as Integer = 0) as boolean 34

5.2.5 Constructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The private constructor.

5.2.6 Destructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.2.7 EvaluateScript(script as string, sourceURL as string = "", StartLineNumber as Integer = 0) as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Evaluates a string of JavaScript.
Notes: script A string containing the script to evaluate.
sourceURL: A string containing a URL for the script's source file. This is only used when reporting exceptions. Pass "" if you do not care to include source file information in exceptions.
startingLineNumber: An integer value specifying the script's starting line number in the file located at sourceURL. This is only used when reporting exceptions.
exception A string in which to store an exception, if any.
Returns the value as string that results from evaluating script, or "" if an exception is thrown.

You can use JavaScriptEngineMBS class to execute JavaScript without HTMLViewer in our own cross platform JavaScript engine.
See also:

- 5.2.8 EvaluateScript(script as string, sourceURL as string, StartLineNumber as Integer, byref JSException as string) as string 36

5.2.8 EvaluateScript(script as string, sourceURL as string, StartLineNumber as Integer, byref JSException as string) as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Evaluates a string of JavaScript.
Notes: script A string containing the script to evaluate.
sourceURL: A string containing a URL for the script's source file. This is only used when reporting exceptions. Pass "" if you do not care to include source file information in exceptions.
startingLineNumber: An integer value specifying the script's starting line number in the file located at sourceURL. This is only used when reporting exceptions.
exception A string in which to store an exception, if any.
Returns the value as string that results from evaluating script, or "" if an exception is thrown.

You can use JavaScriptEngineMBS class to execute JavaScript without HTMLViewer in our own cross platform JavaScript engine.
See also:

- 5.2.7 EvaluateScript(script as string, sourceURL as string = "", StartLineNumber as Integer = 0) as string 35

5.2.9 GarbageCollect

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Performs a JavaScript garbage collection.
Notes: You should not need to call this.

5.2.10 Properties

5.2.11 Handle as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.2.12 HTMLViewer as HTMLViewer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The reference to the parent HTMLViewer.
Notes: (Read and Write property)

5.3 class LinuxWebBackForwardListMBS

5.3.1 class LinuxWebBackForwardListMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The history of a WebView.

5.3.2 Methods

5.3.3 AddItem(item as LinuxWebHistoryItemMBS)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Adds the item to the WebBackForwardList.

5.3.4 BackItem as LinuxWebHistoryItemMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the item that precedes the current item.

5.3.5 BackLength as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the number of items that preced the current item.

5.3.6 Clear

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Clears the webBackForwardList by removing all its elements.
Notes: Note that not even the current page is kept in list when cleared so you would have to add it later. This method also clears the list of visited links which means that all links will appear unvisited.

5.3.7 Constructor(webview as LinuxWebViewMBS)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Creates an instance of the back forward list with a controlling WebView.

5.3.8 ContainsItem(item as LinuxWebHistoryItemMBS) as boolean

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Checks if item is in the back forward list.

5.3.9 CurrentItem as LinuxWebHistoryItemMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The current item.
Notes: Returns a nil value if the back forward list is empty.

5.3.10 Destructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.3.11 ForwardItem as LinuxWebHistoryItemMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The next item forward in the list.
Notes: Returns a nil value if there nothing that succeeds the current item.

5.3.12 ForwardLength as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the number of items that succeed the current item.

5.3.13 GoBack

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Steps backward in the back forward list

5.3.14 GoForward

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Steps forward in the back forward list.

5.3.15 GoToItem(item as LinuxWebHistoryItemMBS)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Go to the specified item in the back forward list.

5.3.16 Item(index as Integer) as LinuxWebHistoryItemMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the item at a given index relative to the current item.

5.3.17 Properties

5.3.18 Handle as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.3.19 HTMLViewer as HTMLViewer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The parent htmlviewer.
Notes: (Read and Write property)

5.3.20 Limit as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The maximum limit of the back forward list.
Notes: (Read and Write computed property)

5.4 class LinuxWebCookieMBS

5.4.1 class LinuxWebCookieMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The class for a cookie used with WebKit on Linux.
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAgeWeek)
MsgBox c.Expires.ShortDate+" "+c.Expires.ShortTime
```

Notes: LinuxWebCookieMBS implements HTTP cookies, primarily as described by the original Netscape cookie specification, but with slight modifications based on RFC 2109, Microsoft's HttpOnly extension attribute, and observed real-world usage (and, in particular, based on what Firefox does).

An HTTP cookie.

name and value will be set for all cookies. If the cookie is generated from a string that appears to have no name, then name will be the empty string.

domain and path give the host or domain, and path within that host/domain, to restrict this cookie to. If domain starts with ".", that indicates a domain (which matches the string after the ".", or any hostname that has domain as a suffix). Otherwise, it is a hostname and must match exactly.

expires will be non-nil if the cookie uses either the original "expires" attribute, or the "max-age" attribute specified in RFC 2109. If expires is nil, it indicates that neither "expires" nor "max-age" was specified, and the cookie expires at the end of the session.

If http_only is set, the cookie should not be exposed to untrusted code (eg, javascript), so as to minimize the danger posed by cross-site scripting attacks.
Blog Entries

- Cookies in HTMLViewer

5.4.2 Methods

5.4.3 Constructor(name as string, value as string, domain as string, path as string, maxAge as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Creates a new cookie with the given attributes.
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAge-
Week)
MsgBox str(c.Name)
```

Notes: Use Secure and HTTPOnly properties if you need to set those attributes on the returned cookie.

maxAge is used to set the "expires" attribute on the cookie; pass -1 to not include the attribute (indicating that the cookie expires with the current session), 0 for an already-expired cookie, or a lifetime in seconds. You can use the constants kMaxAgeHour, kMaxAgeDay, kMaxAgeWeek and kMaxAgeYear (or multiples thereof) to calculate this value. (If you really care about setting the exact time that the cookie will expire, use Expire property.)

name: cookie name
value: cookie value
domain: cookie domain or hostname
path: cookie path, or ""
maxage: max age of the cookie, or -1 for a session cookie

5.4.4 Copy as LinuxWebCookieMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Creates a copy.
Notes: If you want to edit an existing cookie, please make a copy first.

5.4.5 Destructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.4.6 Equal(other as LinuxWebCookieMBS) as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Compares two cookies.
Notes: Returns true if they are equal.

5.4.7 SetMaxAge(value as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Sets cookie's max age to value.
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAgeHour)
c.SetMaxAge(c.kMaxAgeWeek)
MsgBox c.ToSetCookieHeader
```

Notes: If max_age is -1, the cookie is a session cookie, and will expire at the end of the client's session. Otherwise, it is the number of seconds until the cookie expires. You can use the constants kMaxAgeHour, kMaxAgeDay, kMaxAgeWeek and kMaxAgeYear (or multiples thereof) to calculate this value. (A value of 0 indicates that the cookie should be considered already-expired.)

(This sets the same property as Expire.)

5.4.8 ToCookieHeader as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Serializes cookie in the format used by the Cookie header (ie, for returning a cookie from to a server).
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAgeWeek)
MsgBox c.ToCookieHeader
```

5.4.9 ToSetCookieHeader as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Serializes cookie in the format used by the Set-Cookie header (ie, for sending a cookie from to a client).
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAgeWeek)
MsgBox c.ToSetCookieHeader
```

5.4.10 Properties

5.4.11 Handle as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.4.12 Owner as Variant

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The owner of this object.
Notes: (Read and Write property)

5.4.13 Domain as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The domain text.
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAgeWeek)
MsgBox str(c.Domain)
```

Notes: (Read and Write computed property)

5.4.14 Expires as date

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The expiration time.
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAgeWeek)
MsgBox c.Expires.ShortDate+" "+c.Expires.ShortTime
```

Notes: If expires is nil, cookie will be a session cookie and will expire at the end of the client's session.
(Read and Write computed property)

5.4.15 ExpiresDateTime as DateTime

Plugin Version: 20.5, Platform: Linux, Targets: Desktop only.

Function: The expiration time.
Notes: (Read and Write computed property)

5.4.16 HTTPOnly as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The httponly attribute.
Notes: If true, cookie will be marked as "http only", meaning it should not be exposed to web page scripts or other untrusted code.
(Read and Write computed property)

5.4.17 Name as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The name of the cookie.
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAgeWeek)
MsgBox str(c.Name)
```

Notes: (Read and Write computed property)

5.4.18 Path as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The path of the cookie.
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "test", LinuxWebCookieMBS.kMaxAgeWeek)
MsgBox str(c.Path)
```

Notes: (Read and Write computed property)

5.4.19 Secure as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The secure attribute.
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAge-
Week)
MsgBox str(c.Secure)
c.Secure = true
MsgBox str(c.Secure)
```

Notes: Cookie will only be transmitted from the client to the server over secure (https) connections if secure is true.
(Read and Write computed property)

5.4.20 Value as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The value of the cookie.
Example:

```
Var c as new LinuxWebCookieMBS("test", "12345", "mbsplugins.de", "", LinuxWebCookieMBS.kMaxAge-
Week)
MsgBox str(c.Value)
```

Notes: (Read and Write computed property)

5.4.21 Constants

Constants

Constant	Value	Description
kMaxAgeDay	86400	A constant for one day in seconds.
kMaxAgeHour	3600	A constant for one hour in seconds.
kMaxAgeWeek	604800	A constant for one week in seconds.
kMaxAgeYear	31556926	A constant for one year in seconds.

5.5 class LinuxWebCookieStoreMBS

5.5.1 class LinuxWebCookieStoreMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The store for cookies.
Example:

```
Var store as LinuxWebCookieStoreMBS = LinuxWebCookieStoreMBS.CookieStore
Var cookies() as LinuxWebCookieMBS = store.AllCookies
MsgBox str(UBound(cookies)+1)+" cookies"
```

Blog Entries

- Cookies in HTMLViewer

5.5.2 Methods

5.5.3 AddCookie(cookie as LinuxWebCookieMBS)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Adds cookie to store.

5.5.4 AllCookies as LinuxWebCookieMBS()

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns an array with all cookies.
Example:

```
// show all cookies
Var store as LinuxWebCookieStoreMBS = LinuxWebCookieStoreMBS.CookieStore
Var cookies(-1) as LinuxWebCookieMBS = store.AllCookies
Var lines() as string

for each c as LinuxWebCookieMBS in cookies
lines.Append c.ToSetCookieHeader
next

MsgBox Join(lines,EndOfLine)
```

5.5.5 Available as Boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns true if the plugin found all functions for the web cookie store.

5.5.6 Constructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Creates a new cookie store.
Notes: The base LinuxWebCookieStoreMBS class does not support persistent storage of cookies; use a subclass for that.

5.5.7 CookieStore as LinuxWebCookieStoreMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Queries the default cookie store.
Example:

```
Var w as LinuxWebCookieStoreMBS = LinuxWebCookieStoreMBS.CookieStore

MsgBox "AcceptPolicy: "+str(w.AcceptPolicy)
w.AcceptPolicy = w.kAcceptNoThirdParty
MsgBox "AcceptPolicy: "+str(w.AcceptPolicy)
```

5.5.8 DeleteAllCookies

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Deletes all cookies.
Example:

```
Var w as LinuxWebCookieStoreMBS = LinuxWebCookieStoreMBS.CookieStore
w.DeleteAllCookies
```

5.5.9 DeleteCookie(cookie as LinuxWebCookieMBS)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Deletes cookie.

5.5.10 Destructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.5.11 SetCookieStore(newStore as LinuxWebCookieStoreMBS)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Makes the given cookie store the default one.

5.5.12 Properties

5.5.13 Handle as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.5.14 Owner as Variant

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The owner of this object.
Notes: (Read and Write property)

5.5.15 AcceptPolicy as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Get/set the policy for accepting cookies.
Example:

```
Var w as LinuxWebCookieStoreMBS = LinuxWebCookieStoreMBS.CookieStore

MsgBox "AcceptPolicy: "+str(w.AcceptPolicy)
```

```
w.AcceptPolicy = w.kAcceptNoThirdParty
MsgBox "AcceptPolicy: "+str(w.AcceptPolicy)
```

Notes: (Read and Write computed property)

5.5.16 Constants

Cookie Accept Modes

Constant	Value	Description
kAcceptAlways	0	Accept all cookies unconditionally.
kAcceptNever	1	Reject all cookies unconditionally.
kAcceptNoThirdParty	2	No Third party cookies. Accept all cookies set by the main document loaded in the application using libsoup. An example of the most common case, web browsers, would be: If http://www.example.com is the page loaded, accept all cookies set by example.com, but if a resource from http://www.third-party.com is loaded from that page reject any cookie that it could try to set. For libsoup to be able to tell apart first party cookies from the rest, the application must call soup_message_set_first_party() on each outgoing SoupMessage, setting the SoupURI of the main document. If no first party is set in a message when this policy is in effect, cookies will be assumed to be third party by default. (this is done by webkit)

5.6 class LinuxWebDataSourceMBS

5.6.1 class LinuxWebDataSourceMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Data source encapsulates the content of a WebFrame.
Notes: A WebFrame has a main resource and subresources and the data source provides access to these resources. When a request gets loaded initially, it is set to a provisional state. The application can request for the request that initiated the load by asking for the provisional data source and invoking the InitialRequest method of DataSource. This data source may not have enough data and some methods may return empty values. To get a "full" data source with the data and resources loaded, you need to get the non-provisional data source through WebFrame's DataSource method. This data source will have the data after everything was loaded. Make sure that the data source was finished loading before using any of its methods. You can do this via IsLoading.

5.6.2 Methods

5.6.3 Constructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Creates a new WebKitWebDataSource instance.
Notes: The URL of the WebKitWebDataSource will be set to "about:blank".
See also:

- 5.6.4 Constructor(request as LinuxWebNetworkRequestMBS) 52

5.6.4 Constructor(request as LinuxWebNetworkRequestMBS)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Creates a new data source with the given network request.
See also:

- 5.6.3 Constructor 52

5.6.5 Data as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the raw data that represents the the frame's content.
Notes: The data will be incomplete until the data has finished loading. Returns "" if the web frame hasn't loaded any data. Use isLoading to test if data source is in the process of loading.

5.6.6 Destructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.6.7 Encoding as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the text encoding name as set in the WebView, or if not, the text encoding of the response.

5.6.8 InitialRequest as LinuxWebNetworkRequestMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns a reference to the original request that was used to load the web content.
Notes: The NetworkRequest returned by this method is the request prior to the ”committed” load state. See Request for getting the ”committed” request.

5.6.9 IsLoading as boolean

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Determines whether the data source is in the process of loading its content.
Notes: Returns true if loading or false if not.

5.6.10 MainResource as LinuxWebResourceMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the main resource of the data source.

5.6.11 Request as LinuxWebNetworkRequestMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns a NetworkRequest that was used to create this DataSource.
Notes: The NetworkRequest returned by this method is the request that was ”committed”, and hence,

different from the request you get from the InitialRequest method.

5.6.12 Subresources as LinuxWebResourceMBS()

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Gives you a list of WebKitWebResource objects that compose the WebView to which this DataSource is attached.

5.6.13 UnrechableURI as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Return the unreachable URI of data_source.
Notes: The data source will have an unreachable URL if it was created using WebFrame's LoadAlternateHtmlString method.

5.6.14 WebFrame as LinuxWebFrameMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the WebFrame that represents this data source.
Notes: The WebFrame is owned by WebKit and should not be freed or destroyed.
This will return nil if the data_source is not attached to a frame.

5.6.15 Properties

5.6.16 Handle as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.6.17 HTMLViewer as HTMLViewer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The parent HTMLViewer.
Notes: (Read and Write property)

5.7 class LinuxWebFrameMBS

5.7.1 class LinuxWebFrameMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The class for a WebKit WebFrame on Linux.
Notes: 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 Real Studio plug-ins in version 12.4
- MBS Real Studio Plugins, version 12.4pr3
- Linux WebKit Support for Real Studio's HTMLViewer control

5.7.2 Methods

5.7.3 Constructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The private constructor.

5.7.4 DataSource as LinuxWebDataSourceMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the committed data source.

5.7.5 Destructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.7.6 FindFrame(name as string) as LinuxWebFrameMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Searches a frame by name.
Notes: For pre-defined names, returns frame if name is "_self" or "_current", returns frame's parent frame

if name is "_parent", and returns the main frame if name is "_top". Also returns frame if it is the main frame and name is either "_parent" or "_top". For other names, this function returns the first frame that matches name. This function searches frame and its descendents first, then frame's parent and its children moving up the hierarchy until a match is found. If no match is found in frame's hierarchy, this function will search for a matching frame in other main frame hierarchies. Returns nil if no match is found.

name: the name of the frame to be found
Returns the found WebKitWebFrame or nil in case none is found.

5.7.7 JSContext as LinuxJavaScriptContextMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Queries the javascript context for this webframe.

5.7.8 LoadAlternateString(content as string, BaseURL as string, unreachableURL as string)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Request loading of an alternate content for a URL that is unreachable.
Notes: Using this method will preserve the back-forward list. The URI passed in base url has to be an absolute URI.

5.7.9 LoadRequest(request as LinuxWebNetworkRequestMBS)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Connects to a given URI by initiating an asynchronous client request.
Notes: Creates a provisional data source that will transition to a committed data source once any data has been received. Use StopLoading to stop the load. This function is typically invoked on the main frame.

5.7.10 LoadStatus as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the current load state.

5.7.11 LoadString(content as string, MimeType as String, Encoding as String, BaseURL as string)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Requests loading of the given content with the specified MimeType, encoding and BaseURL.
Notes: If mime_type is "", "text/html" is assumed.
If encoding is "", "UTF-8" is assumed.

Content: an URI string
MimeType: the MIME type, or "".
Encoding: the encoding, or "".
BaseURL: the base URI for relative locations.
See also FileExtensionToMimeTypeMBS function.

5.7.12 LoadURL(URL as string)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Requests loading of the specified URI string.

5.7.13 Name as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the frame's name

5.7.14 NetworkResponse as LinuxWebNetworkResponseMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the network response.
Notes: Returns a NetworkResponse object representing the response that was given to the request for the given frame, or nil if the frame was not created by a load. You must unref the object when you are done with it.

5.7.15 Parent as LinuxWebFrameMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the frame's parent frame, or nil if it has none.

5.7.16 Print

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Asks the control to print it's content.

5.7.17 ProvisionalDataSource as LinuxWebDataSourceMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: You use the LoadRequest method to initiate a request that creates a provisional data source.
Notes: The provisional data source will transition to a committed data source once any data has been received. Use DataSource to get the committed data source.

Returns the provisional WebDataSource or nil if a load request is not in progress.

5.7.18 Reload

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Reloads the initial request.

5.7.19 StopLoading

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Stops any pending loads on frame's data source, and those of its children.

5.7.20 Title as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the frame's document title

5.7.21 URL as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the current URI of the contents displayed by the frame.

5.7.22 Properties

5.7.23 Handle as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.7.24 HTMLViewer as HTMLViewer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The parent HTMLViewer.
Notes: (Read and Write property)

5.7.25 WebView as LinuxWebViewMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The reference to the parent webview.
Notes: (Read and Write property)

5.7.26 Constants

Load State Constants

Constant	Value	Description
kLoadCommitted	1	The first data chunk has arrived, meaning that the necessary transport req ments are stabilished, and the load is being performed.
kLoadFailed	4	This state means that some error occurred during the page load that preve it from being completed. You can connect to the error event if you wa know precisely what kind of error occurred.
kLoadFinished	2	This state means that everything that was required to display the page been loaded.
kLoadFirstVisuallyNonEmptyLayout	3	The first layout with actual visible content happened; one or more layouts have happened before that caused nothing to be visible on the screen, bec the data available at the time was not significant enough.
kLoadProvisional	0	No data has been received yet, empty structures have been allocated to per the load; the load may still fail for transport issues such as not being ab resolve a name, or connect to a port.

5.8 class LinuxWebHistoryItemMBS

5.8.1 class LinuxWebHistoryItemMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: One item of the WebBackForwardList and or global history.
Notes: A history item consists out of a title and a uri. It can be part of the WebBackForwardList and the global history. The global history is used for coloring the links of visited sites. WebHistoryItem's constructed with Constructor() are automatically added to the global history.

5.8.2 Methods

5.8.3 Constructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Creates a new WebHistoryItem instance.
See also:

- 5.8.4 Constructor(URI as string, Title as string) 62

5.8.4 Constructor(URI as string, Title as string)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Creates a new WebHistoryItem with the given URI and title.
See also:

- 5.8.3 Constructor 62

5.8.5 Copy as LinuxWebHistoryItemMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Makes a copy of the item for use with other WebView objects.

5.8.6 Destructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.8.7 LastVisitedTime as Double

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The last visited timestamp.

5.8.8 OriginalURI as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The original URL of this item.

5.8.9 Title as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The title of this item.

5.8.10 URI as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The URL of this item.

5.8.11 Properties

5.8.12 Handle as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.8.13 HTMLViewer as HTMLViewer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The parent htmlviewer.
Notes: (Read and Write property)

5.8.14 AlternateTitle as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The alternate title.
Notes: (Read and Write computed property)

5.9 class LinuxWebInspectorMBS

5.9.1 class LinuxWebInspectorMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The WebKit Inspector is a graphical tool to inspect and change the content of a WebKitWebView.
Notes: It also includes an interactive JavaScriptDebugger. Using this class one can get a GtkWidget which can be embedded into an application to show the inspector.

The inspector is available when the WebKitWebSettings of the WebKitWebView has set the "enable-developer-extras" to true otherwise no inspector is available.
This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

5.9.2 Methods

5.9.3 Close

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Causes the Web Inspector to be closed.

5.9.4 Constructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The private constructor.

5.9.5 Destructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.9.6 InspectCoordinates(x as Double, y as Double)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Causes the Web Inspector to inspect the node that is located at the given coordinates of the widget.
Notes: The coordinates should be relative to the WebKitWebView widget, not to the scrollable content, and may be obtained from a GdkEvent directly. This means x, and y being zero doesn't guarantee you will hit the left-most top corner of the content, since the contents may have been scrolled.

x: the X coordinate of the node to be inspected
y: the Y coordinate of the node to be inspected

5.9.7 InspectedURI as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Obtains the URI that is currently being inspected.

5.9.8 Show

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Causes the Web Inspector to be shown.

5.9.9 WebView as LinuxWebViewMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Obtains the WebKitWebView that is used to render the inspector.

5.9.10 Properties

5.9.11 Handle as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.9.12 HTMLViewer as HTMLViewer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The reference to the parent HTMLViewer.
Notes: (Read and Write property)

5.10 class LinuxWebNetworkRequestMBS

5.10.1 class LinuxWebNetworkRequestMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: This class represents the network related aspects of a navigation request.
Notes: It is used whenever WebKit wants to provide information about a request that will be sent, or has been sent. Inside it you can find the URI of the request, and, for valid URIs, a SoupMessage object, which provides access to further information such as headers.

5.10.2 Methods

5.10.3 Constructor(url as string)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Creates a new NetworkRequest initialized with an URI.

5.10.4 Destructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.10.5 Properties

5.10.6 Handle as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.10.7 HTMLViewer as HTMLViewer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The parent HTMLViewer.
Notes: (Read and Write property)

5.10.8 URL as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Get or set the URL for this request.
Notes: (Read and Write computed property)

5.11 class LinuxWebNetworkResponseMBS

5.11.1 class LinuxWebNetworkResponseMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: This class represents the network related aspects of a navigation response.

5.11.2 Methods

5.11.3 Constructor(url as string)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Creates a new response object with the given URL.

5.11.4 Destructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.11.5 Properties

5.11.6 Handle as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.11.7 HTMLViewer as HTMLViewer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The parent HTMLViewer.
Notes: (Read and Write property)

5.11.8 URL as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Get or set the URL for this request.
Notes: (Read and Write computed property)

5.12 class LinuxWebResourceMBS

5.12.1 class LinuxWebResourceMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: A web resource encapsulates the data of the download as well as the URI, MIME type and frame name of the resource.

5.12.2 Methods

5.12.3 Constructor(data as string, uri as string, mimeType as string, encoding as string = "", FrameName as string = "")

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Creates a new WebKitWebResource.
Notes: The encoding can be "". The FrameName argument can be used if the resource represents contents of an entire HTML frame, otherwise pass "".
See also FileExtensionToMimeTypeMBS function.

5.12.4 Data as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the data of the webResource.

5.12.5 Destructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.12.6 Encoding as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the encoding for this resource.

5.12.7 FrameName as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Queries the frame name.

5.12.8 MimeType as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The MIME Type for this resource.
Notes: See also MimeTypeToFileExtensionMBS function.

5.12.9 URL as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The URL for this resource.

5.12.10 Properties

5.12.11 Handle as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.12.12 HTMLViewer as HTMLViewer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The parent HTMLViewer.
Notes: (Read and Write property)

5.13 class LinuxWebSettingsMBS

5.13.1 class LinuxWebSettingsMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: WebSettings can be applied to a WebKitWebView to control text encoding, color, font sizes, printing mode, script support, loading of images and various other things.
Notes: After creation, a WebSettings object contains default settings.

5.13.2 Methods

5.13.3 Constructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Creates a new WebSettings instance with default values.
Notes: It must be manually attached to a WebView.

5.13.4 Copy as LinuxWebSettingsMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Copies an existing WebSettings instance.

5.13.5 Destructor

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.13.6 UserAgent as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns the User-Agent string currently used by the web view(s) associated with the web_settings.

5.13.7 Properties

5.13.8 Handle as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.13.9 HTMLViewer as HTMLViewer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The parent htmlviewer.
Notes: (Read and Write property)

5.14 class LinuxWebViewMBS

5.14.1 class LinuxWebViewMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The class for a WebKit WebView on Linux.
Notes: With MBS Plugin 19.3 and Xojo 2018r2 and later, this plugin will try to load WebKit 2.0 (libwebkit2gtk-4.0.so.37) instead of WebKit 1.0 (libwebkitgtk-3.0.so).

Most functions still work for WebKit 1.x only. Let us know if you need something for WebKit 2.x.
This is an abstract class. You can't create an instance, but you can get one from various plugin functions.
Blog Entries

- News from the MBS Xojo Plugins in version 24.5
- MBS Xojo Plugins, version 24.5pr8
- HTMLViewer JavaScript communication for Xojo
- Upgrading our HTMLViewer functions for Internet Explorer
- MBS Xojo Plugins, version 19.3pr6
- HTMLViewer JavaScript communication for Xojo
- MonkeyBread Software Releases the MBS Real Studio plug-ins in version 12.4
- MBS Real Studio Plugins, version 12.4pr3
- Linux WebKit Support for Real Studio's HTMLViewer control

5.14.2 Methods

5.14.3 Available as Boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether the plugin found libwebkit on linux.
Notes: Returns true on linux if the class can work. Else it returns false.

For Xojo 2018.02 and later we try to load libwebkit2gtk-4.0.so.37 library.

5.14.4 BackForwardList as LinuxWebBackForwardListMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Obtains the BackForwardList associated with the given WebView.
Notes: The BackForwardList is owned by the WebView.

5.14.5 CanCopyClipboard as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether copy is possible.

5.14.6 CanCutClipboard as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether cut is possible.

5.14.7 CanGoBack as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Determines whether web_view has a previous history item.
Notes: Returns true if able to move back, false otherwise.

5.14.8 CanGoBackOrForward(steps as Integer) as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Determines whether web_view has a history item of steps.
Notes: Negative values represent steps backward while positive values represent steps forward.
steps: the number of steps
Returns true if able to move back or forward the given number of steps, false otherwise.

5.14.9 CanGoForward as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Determines whether web_view has a next history item.
Notes: Returns true if able to move forward, false otherwise

5.14.10 CanPasteClipboard as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether paste is possible.

5.14.11 CanRedo as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether redo is possible.

5.14.12 CanShowMimeType(MimeType as string) as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: This functions returns whether or not a MIME type can be displayed using this view.
Notes: MimeType: a MIME type

Return boolean indicating if the MIME type can be displayed.
See also FileExtensionToMimeTypeMBS function.

5.14.13 CanUndo as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether undo is possible.

5.14.14 Constructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The private constructor.

5.14.15 CookieStore as LinuxWebCookieStoreMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Queries the default cookie store.

5.14.16 CopyClipboard

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Copies the current selection inside the web_view to the clipboard.

5.14.17 CutClipboard

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Cuts the current selection inside the web_view to the clipboard.

5.14.18 DeleteSelection

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Deletes the current selection inside the web_view.

5.14.19 Destructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The destructor.

5.14.20 Encoding as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the default encoding of the WebKitWebView.

5.14.21 EvaluateScript(script as string) as string

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Evaluates a string of JavaScript.
Notes: script A string containing the script to evaluate.

Returns the value as string that results from evaluating script, or "" if an exception is thrown.

5.14.22 ExecuteScript(script as string)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Executes java script.

5.14.23 FocusedFrame as LinuxWebFrameMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the frame that has focus or an active text selection.
Notes: Returns the focused frame or nil if no frame is focused

5.14.24 GoBack

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Loads the previous history item.

5.14.25 GoBackOrForward(steps as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Loads the history item that is the number of steps away from the current item.
Notes: Negative values represent steps backward while positive values represent steps forward.

5.14.26 GoForward

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Loads the next history item.

5.14.27 GoToItem(item as LinuxWebHistoryItemMBS) as boolean

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Go to the specified history item.
Notes: Returns true if loading of item is successful, false if not.

5.14.28 HasSelection as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Determines whether text was selected.
Notes: Returns true if there is selected text, false if not

5.14.29 IconURL as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the favorite icon URL for the current website.

5.14.30 Inspector as LinuxWebInspectorMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Obtains the WebKitWebInspector associated with the WebKitWebView.
Notes: Every WebKitWebView object has a WebKitWebInspector object attached to it as soon as it is created, so this function will only return nil if the argument is not a valid WebKitWebView.

5.14.31 IsLoading as Boolean

Plugin Version: 19.3, Platform: Linux, Targets: Desktop only.

Function: Returns true while web view is loading.
Notes: Works for WebKit 1.x and 2.x.

5.14.32 JSContext as LinuxJavaScriptContextMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Queries the javascript context for the main webframe.

5.14.33 LoadHTMLString(HTMLString as string, BaseURL as string = "")

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Loads a HTML string.

5.14.34 LoadRequest(request as LinuxWebNetworkRequestMBS)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Requests loading of the specified asynchronous client request.
Notes: Creates a provisional data source that will transition to a committed data source once any data has been received. Use StopLoading to stop the load.

5.14.35 LoadStatus as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the current load state.
Notes: Works for WebKit 1.x and 2.x.

Name	Value	Description
WEBKIT_LOAD_PROVISIONAL	0	No data has been received yet, empty structures have been allocated to perform the load; the load may still fail for transport issues such as not being able to resolve a name, or connect to a port.
WEBKIT_LOAD_COMMITTED	1	The first data chunk has arrived, meaning that the necessary transport requirements are stabilished, and the load is being performed.
WEBKIT_LOAD_FINISHED	2	This state means that everything that was required to display the page has been loaded.
WEBKIT_LOAD_FIRST_VISUALLY_NON_EMPTY_LAYOUT	3	The first layout with actual visible content happened; one or more layouts may have happened before that caused nothing to be visible on the screen, because the data available at the time was not significant enough.
WEBKIT_LOAD_FAILED	4	This state means that some error occurred during the page load that prevented it from being completed. You can connect to the #WebKitWebView::load-error signal if you want to know precisely what kind of error occurred.

5.14.36 LoadString(content as string, MimeType as String, Encoding as String, BaseURL as string)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Requests loading of the given content with the specified MimeType, encoding and BaseURL.
Notes: If mime_type is "", "text/html" is assumed.
If encoding is "", "UTF-8" is assumed.

Content: an URI string

MimeType: the MIME type, or "".
Encoding: the encoding, or "".
BaseURL: the base URI for relative locations.

See also FileExtensionToMimeTypeMBS function.

5.14.37 LoadURL(URL as string)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Requests loading of the specified URI string.

5.14.38 MainFrame as LinuxWebFrameMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the main frame of the document.

5.14.39 MajorVersion as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns major version of webkit.

5.14.40 MarkTextMatches(text as string, caseSensitive as boolean = false, limit as Integer = 99) as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Attempts to highlight all occurances of string inside webview.
Notes: string: a string to look for
case_sensitive: whether to respect the case of text
limit: the maximum number of strings to look for or 0 for all
Returns the number of strings highlighted.

5.14.41 MicroVersion as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns micro version of webkit.

5.14.42 MinorVersion as Integer

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Returns minor version of webkit.

5.14.43 PasteClipboard

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Pastes the current contents of the clipboard to the webview.

5.14.44 Progress as Double

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The global locating progress in percent.
Notes: 1.0 is full progress.

5.14.45 Redo

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Redos last action if possible.

5.14.46 Reload

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Reloads the initial request.

5.14.47 ReloadIgnoreCache

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Reloads the webview without using any cached data.

5.14.48 SearchText(text as string, caseSensitive as boolean = false, forward as boolean = true, wrap as boolean = true) as boolean

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Looks for a specified string inside webview.
Notes: text: a string to look for.
case_sensitive: whether to respect the case of text.
forward: whether to find forward or not.
wrap: whether to continue looking at the beginning after reaching the end.
Returns trueT on success or false on failure.

5.14.49 SelectAll

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Attempts to select everything inside the webview.

5.14.50 SetCookieStore(newStore as LinuxWebCookieStoreMBS)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Makes the given cookie store the default one.

5.14.51 SetHighlightTextMatches(highlight as boolean)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Highlights text matches previously marked by MarkTextMatches.

5.14.52 SetMaintainsBackForwardList(flag as boolean)

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: Set the view to maintain a back or forward list of history items.

5.14.53 StopLoading

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Stops any pending loads on frame's data source, and those of its children.

5.14.54 Title as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The title of the website.

5.14.55 Undo

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Undos last action if possible.

5.14.56 UnmarkTextMatches

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Unmarks text matches from search.

5.14.57 URL as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the current URL.

5.14.58 ZoomIn

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Increases the zoom level of web_view.
Notes: The current zoom level is incremented by the value of the "zoom-step" property of the settings associated with webview.

5.14.59 ZoomOut

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Decreases the zoom level of webview.
Notes: The current zoom level is decremented by the value of the ”zoom-step” property of the settings associated with webview.

5.14.60 Properties

5.14.61 Handle as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The internal object reference.
Notes: (Read and Write property)

5.14.62 HTMLViewer as HTMLViewer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The reference to the parent HTMLViewer.
Notes: (Read and Write property)

5.14.63 CacheModel as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The cache model for the htmlviewer.
Notes: (Read and Write computed property)

5.14.64 CustomEncoding as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The current WebKitWebView encoding.
Notes: (Read and Write computed property)

5.14.65 Editable as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether the user is allowed to edit the document.
Notes: If flag is true, webview allows the user to edit the document. If flag is false, an element in webview's document can only be edited if the CONTENTEDITABLE attribute has been set on the element or one of its parent elements. You can change webview's document programmatically regardless of this setting. By default a WebKitWebView is not editable.

Normally, an HTML document is not editable unless the elements within the document are editable. This function provides a low-level way to make the contents of a WebKitWebView editable without altering the document or DOM structure.
(Read and Write computed property)

5.14.66 FullContentZoom as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether the zoom level affects only text or all elements.
Notes: False if only text should be scaled (the default), true if the full content of the view should be scaled.
(Read and Write computed property)

5.14.67 ProxyURL as String

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: The proxy URL setting.
Notes: (Read and Write computed property)

5.14.68 Settings as LinuxWebSettingsMBS

Plugin Version: 13.5, Platform: Linux, Targets: Desktop only.

Function: The settings for this webview.
Notes: (Read and Write computed property)

5.14.69 Transparent as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether the WebKitWebView has a transparent background.
Notes: False when the WebKitWebView draws a solid background (the default), otherwise true.
(Read and Write computed property)

5.14.70 ViewSourceMode as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Whether we are viewing the source code.
Notes: (Read and Write computed property)

5.14.71 ZoomLevel as Double

Plugin Version: 12.4, Platform: Linux, Targets: Desktop only.

Function: Returns the zoom level of web_view, i.e. the factor by which elements in the page are scaled with respect to their original size.
Notes: If the "full-content-zoom" property is set to false (the default) the zoom level changes the text size, or if true, scales all elements in the page.
(Read and Write computed property)

5.14.72 Constants

Cache Model Constants

Constant	Value	Description
kCacheModelDocumentViewer	1	Cache in Document Viewer.
kCacheModelWebBrowser	2	Cache in Web Browser.

Load State Constants

Constant	Value	Description
kLoadCommitted	1	The first data chunk has arrived, meaning that the necessary transport req ments are stabilished, and the load is being performed.
kLoadFailed	4	This state means that some error occurred during the page load that preve it from being completed. You can connect to the error event if you wa know precisely what kind of error occurred.
kLoadFinished	2	This state means that everything that was required to display the page been loaded.
kLoadFirstVisuallyNonEmptyLayout	3	The first layout with actual visible content happened; one or more layouts have happened before that caused nothing to be visible on the screen, bec the data available at the time was not significant enough.
kLoadProvisional	0	No data has been received yet, empty structures have been allocated to per the load; the load may still fail for transport issues such as not being ab resolve a name, or connect to a port.

Chapter 6

Linux

6.1 module LinuxIconMBS

6.1.1 module LinuxIconMBS

Plugin Version: 19.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: The module for linux icons.
Blog Entries

- MonkeyBread Software Releases the MBS Xojo Plugins in version 19.1
- MBS Xojo Plugins, version 19.1pr1
- Linux Icon Functions for Xojo

Videos

- Presentation from Xojo Developer Conference 2019 in Miami.

Xojo Developer Magazine

- 17.5, page 43: What's New in the MBS Plugins, With the Plugins growing every year, here are new capabilities you may have missed by Stefanie Juchmes
- 17.3, page 11: News

6.1.2 Methods

6.1.3 FileIcon(file as FolderItem, size as integer = 48) as Picture

Plugin Version: 19.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: Queries file icon for file.
Example:

```
Var f2 as FolderItem = SpecialFolder.Desktop
Canvas2.Backdrop = LinuxIconMBS.FileIcon(f2, Canvas2.Width)
```

Notes: Returns nil in case of error.

6.1.4 FilePreview(file as FolderItem, size as integer = 48) as Picture

Plugin Version: 19.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: Queries preview icon for file.
Notes: Returns nil in case of error.

6.1.5 FileThumbnail(file as FolderItem) as FolderItem

Plugin Version: 19.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: Queries thumbnail path for a given file.
Example:

```
// make an image file
Var p as picture = logoMBS(500) // from Main plugin
Var f as FolderItem = SpecialFolder.Desktop.Child("MBS.jpg")
p.Save(f, p.SaveAsJPEG, 90)

// show thumbnail
Var ThumbnailFile as FolderItem = LinuxIconMBS.FileThumbnail(f)
if ThumbnailFile <>nil then
Canvas6.Backdrop = Picture.Open(ThumbnailFile)
end if
```

Notes: Returns nil in case of error.
Otherwise this may be URL for png file with thumbnail.

6.1.6 GenericIconName(MimeType as String) as String

Plugin Version: 19.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: Queries generic icon name for mime type.

6.1.7 Icon(MimeType as String, size as integer = 48) as Picture

Plugin Version: 19.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: Queries icon for mime type.
Example:

Canvas1.Backdrop = LinuxIconMBS.Icon("image/jpeg", Canvas1.Width)

Notes: Returns nil in case of error.

6.1.8 SymbolicIcon(MimeType as String, size as integer = 48) as Picture

Plugin Version: 19.1, Platform: macOS, Targets: Desktop, Console & Web.

Function: Queries symbolic icon for given mime type.
Example:

Canvas3.Backdrop = LinuxIconMBS.SymbolicIcon("image/jpeg", Canvas3.Width)

Notes: Returns nil in case of error.

6.2 class LinuxProcessMBS

6.2.1 class LinuxProcessMBS

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class for querying linux process details.
Example:

```
// show the path of current process
Var myPID as Integer = LinuxProcessMBS.PID
Var myProcess as LinuxProcessMBS = LinuxProcessMBS.ProcessByPID(myPID)

MsgBox myProcess.path
```

Notes: If your app has not enough permission to read info about other app, values may be missing.
This is an abstract class. You can't create an instance, but you can get one from various plugin functions.
Blog Entries

- Thoughts on the 14.1 plugin release
- MonkeyBread Software Releases the MBS Xojo / Real Studio plug-ins in version 14.1
- MBS Xojo / Real Studio Plugins, version 14.1pr3

Xojo Developer Magazine

- 12.3, page 10: News

6.2.2 Methods

6.2.3 Constructor

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The private constructor.

6.2.4 PID as Integer

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The Process ID of the current process (your app).
Example:

```
Var myPID as Integer = LinuxProcessMBS.PID
MsgBox "my process ID is: "+str(myPID)
```

6.2.5 ProcessByPID(ProcessID as Integer) as LinuxProcessMBS

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Queries the information for a process with given ID.
Example:

```
// show the name of current process
Var myPID as Integer = LinuxProcessMBS.PID
Var myProcess as LinuxProcessMBS = LinuxProcessMBS.ProcessByPID(myPID)

MsgBox myProcess.name
```

Notes: Returns nil on error.

6.2.6 Processes as LinuxProcessMBS()

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Returns array with all processes.
Example:

```
// shows all process names in listbox
Var Processes() as LinuxProcessMBS = LinuxProcessMBS.Processes

for each p as LinuxProcessMBS in Processes
listbox1.addrow p.name
next
```

6.2.7 Properties

6.2.8 CommandLine as String

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The command line used to create this process.
Example:

```
// show the command line of current process
Var myPID as Integer = LinuxProcessMBS.PID
```

```
Var myProcess as LinuxProcessMBS = LinuxProcessMBS.ProcessByPID(myPID)
MsgBox myProcess.CommandLine
```

Notes: (Read only property)

6.2.9 CurrentWorkingDirectory as String

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The current working directory.
Example:

```
// show the current working directory of current process
Var myPID as Integer = LinuxProcessMBS.PID
Var myProcess as LinuxProcessMBS = LinuxProcessMBS.ProcessByPID(myPID)

MsgBox myProcess.CurrentWorkingDirectory
```

Notes: (Read only property)

6.2.10 Environment as Dictionary

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The environment variables.
Notes: (Read only property)

6.2.11 Name as String

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The name of the process.
Example:

```
// shows all process names in listbox
Var Processes() as LinuxProcessMBS = LinuxProcessMBS.Processes

for each p as LinuxProcessMBS in Processes
listbox1.addrow p.name
next
```

Notes: (Read only property)

6.2.12 NumberOfThreads as Integer

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The number of threads used by this process.
Notes: (Read only property)

6.2.13 OpenFiles as Dictionary

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Queries details about open files.
Example:

```
// show the paths of open files of current process in listbox
Var myPID as Integer = LinuxProcessMBS.PID
Var myProcess as LinuxProcessMBS = LinuxProcessMBS.ProcessByPID(myPID)
Var OpenFiles as Dictionary = myProcess.OpenFiles

for each key as Variant in OpenFiles.keys
listbox1.addrow OpenFiles.Value(key).StringValue
next
```

Notes: This dictionary contains the file descriptor number as key and the path to the file as text.
(Read only property)

6.2.14 ParentProcessID as Integer

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The parent process ID.
Notes: (Read only property)

6.2.15 Path as String

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The path for this process.
Example:

```
// show the path of current process
Var myPID as Integer = LinuxProcessMBS.PID
Var myProcess as LinuxProcessMBS = LinuxProcessMBS.ProcessByPID(myPID)
MsgBox myProcess.Path
```

Notes: (Read only property)

6.2.16 ProcessID as Integer

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The process ID.
Notes: (Read only property)

6.2.17 StartTime as Date

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The start time of the process.
Example:

```
// show the start time of current process
Var myPID as Integer = LinuxProcessMBS.PID
Var myProcess as LinuxProcessMBS = LinuxProcessMBS.ProcessByPID(myPID)
Var d as date = myProcess.StartTime
MsgBox d.LongDate+" "+d.LongTime
```

Notes: (Read only property)

6.2.18 State as String

Plugin Version: 14.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The state of the process.
Notes: Can be Running, Sleeping, Disk Sleep, Zombie, Trace or Writing pages.
(Read only property)

6.3 class LinuxSuMBS

6.3.1 class LinuxSuMBS

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class to run stuff with sudo.
Example:

```
Var s as new LinuxSuMBS

s.Command = "/usr/bin/whoami"
s.User = "root"
s.Alert = "Please Root?"
s.Message "Can I install something for you?"

if s.ExecuteSudo then
MsgBox "OK"
else
MsgBox s.LastErrorMessage
end if
```

Notes: Uses the gksu library.
Blog Entries

- MBS Releases the MBS Xojo / Real Studio plug-ins in version 16.1
- MBS Xojo / Real Studio Plugins, version 16.1pr1
- Sudo on Linux

6.3.2 Methods

6.3.3 AskPassword(prompt as String) as String

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Asks for the password.
Notes: Returns password.
Stores error in LastError and LastErrorMessage properties.
See also:

- 6.3.24 AskPassword(prompt as String, byref ErrorCode as Integer, byref ErrorMessage as String) as string 103

6.3.4 Available as boolean

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Whether the gksu library was found and loaded.
Notes: Should return true on linux.
If missing, install the libgksu2-0 library.

6.3.5 ExecuteRun as boolean

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Runs the command.
Notes: Returns true on success.
Stores error in LastError and LastErrorMessage properties.

6.3.6 ExecuteSu as boolean

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Runs the command with su.
Notes: Returns true on success.
Stores error in LastError and LastErrorMessage properties.

6.3.7 ExecuteSudo as boolean

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Runs the command with sudo.
Example:

```
Var s as new LinuxSuMBS

s.Command = "/usr/bin/whoami"
s.User = "root"
s.Alert = "Please Root?"
s.Message "Can I install something for you?"

if s.ExecuteSudo then
MsgBox "OK"
else
MsgBox s.LastErrorMessage
end if
```

Notes: Returns true on success.
Stores error in LastError and LastErrorMessage properties.

6.3.8 Properties

6.3.9 Alert as String

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The alert message.
Notes: (Read and Write property)

6.3.10 AlwaysAskPassword as Boolean

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Whether to always ask for a password.
Notes: (Read and Write property)

6.3.11 Command as String

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The command will run with the target user.
Notes: (Read and Write property)

6.3.12 Debug as Boolean

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Whether debuging information should be printed.
Notes: (Read and Write property)

6.3.13 Description as String

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The description text.
Notes: (Read and Write property)

6.3.14 ExitCode as Integer

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The exit code of the last command run.
Notes: (Read and Write property)

6.3.15 Grab as Boolean

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Grab?
Notes: (Read and Write property)

6.3.16 Handle as Integer

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read and Write property)

6.3.17 KeepEnvironment as Boolean

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Should the environment be kept as it is?
Notes: Defaults to true. Notice that setting this to false may cause the X authorization stuff to fail. (Read and Write property)

6.3.18 LastError as Integer

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The last error code.
Notes: (Read and Write property)

6.3.19 LastErrorMessage as String

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The last error message.
Notes: (Read and Write property)

6.3.20 LoginShell as Boolean

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The shell in which the command will be run be a login shell?
Notes: Finds out if the shell created by the underlying su process will be a login shell.
(Read and Write property)

6.3.21 Message as String

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The message text.
Notes: (Read and Write property)

6.3.22 User as String

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: What user the command will be run as.
Notes: The default is root, but you can run the command as any user.
(Read and Write property)

6.3.23 Events

6.3.24 AskPassword(prompt as String, byref ErrorCode as Integer, byref ErrorMessage as String) as string

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The event to ask for password.
Notes: If you prefer your own dialog.
Return password or set error parameters.
See also:

- 6.3.3 AskPassword(prompt as String) as String 99

6.3.25 PasswordNoNeeded

Plugin Version: 16.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: No password is needed.

6.3.26 Constants

Error Codes

Constant	Value	Description
ErrorCanceled	11	The user cancelled.
ErrorChildFailed	9	Child failed.
ErrorExec	5	Execution failed.
ErrorFork	4	Forking failed.
ErrorHelper	1	The helper tool failed.
ErrorNoCommand	2	Missing command.
ErrorNoPassword	3	Missing password.
ErrorNotAllowed	10	Not allowed.
ErrorPipe	6	Pipe failed.
ErrorPiperead	7	Pipe read error.
ErrorWrongAutoPass	12	Wrong auto Password.
ErrorWrongPass	8	Wrong Password
ErrorXauth	0	XAuth failed.

Chapter 7

Network

7.1 class AvahiAddressResolverMBS

7.1.1 class AvahiAddressResolverMBS

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The lookup for an address.
Blog Entries

- News from the MBS Xojo Plugins in Version 25.1
- MonkeyBread Software Releases the MBS Xojo Plugins in version 25.1
- MBS Xojo Plugins, version 25.1pr1

Xojo Developer Magazine

- 23.4, page 10: News

7.1.2 Methods

7.1.3 Constructor(client as AvahiClientMBS)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The constructor.

7.1.4 Destructor

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The destructor.

7.1.5 Resolve(InterfaceIndex as integer, Protocol as integer, address as string, flags as integer = 0) as boolean

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Resolve an address.

7.1.6 Properties

7.1.7 Client as AvahiClientMBS

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The reference to the parent client object.
Notes: (Read only property)

7.1.8 Handle as Integer

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read only property)

7.1.9 Events

7.1.10 Failure(error as string, errorcode as integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Some error occurred in the resolving.

7.1.11 Found(interfaceIndex as integer, Protocol as Integer, address as string, name as string, flags as integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: A name was found.

7.1.12 Constants

IP Protocols

Constant	Value	Description
kInterfaceAny	-1	Any protocol.
kProtocolAny	-1	Any protocol.
kProtocolIPv4	0	Only IPv4.
kProtocolIPv6	1	Only IPv6.

Lookup Flags

Constant	Value	Description
kLookupNoAddress	8	When doing service resolving, don't lookup A/AAAA record.
kLookupNoTxt	4	When doing service resolving, don't lookup TXT record.
kLookupUseMulticast	2	Force lookup via multicast DNS.
kLookupUseWideArea	1	Force lookup via wide area DNS.

Result Flags

Constant	Value	Description
kResultCached	1	This response originates from the cache.
kResultLocal	8	This record/service resides on and was announced by the local host. Only available in service and record browsers and only on Found event.
kResultMultiCast	4	This response originates from multicast DNS.
kResultOurOwn	16	This service belongs to the same local client as the browser object. Only available in avahi-client, and only for service browsers and only on Found event.
kResultStatic	32	The returned data has been defined statically by some configuration option.
kResultWideArea	2	This response originates from wide area DNS.

7.2 class AvahiBrowserMBS

7.2.1 class AvahiBrowserMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class to browse for services.
Blog Entries

- Bonjour on Linux

7.2.2 Methods

7.2.3 Browse(InterfaceIndex as Integer, Protocol as Integer, servicetype as string, domain as string = "", flags as Integer = 0) as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Browse for services of a type on the network.
Notes: In most cases you probably want to pass kInterfaceAny and kProtocolAny in InterfaceIndex, resp. protocol to browse on all local networks. The specified events will be called whenever a new service appears or is removed from the network. Please note that events may be collapsed to minimize traffic (i.e. a REMOVED followed by a NEW for the same service data is dropped because redundant). If you want to subscribe to service data changes, you should use AvahiResolverMBS class and keep it open, in which case you will be notified via Found event everytime the service data changes.

Only one browse call per AvahiBrowserMBS object please.
Returns true on success and false on failure.

7.2.4 Constructor(client as AvahiClientMBS)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The constructor.

7.2.5 Destructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The destructor.

7.2.6 Properties

7.2.7 Client as AvahiClientMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The reference to the parent client object.
Notes: (Read only property)

7.2.8 Handle as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read only property)

7.2.9 Events

7.2.10 AllForNow(type as string)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: One-time event, to notify the user that more records will probably not show up in the near future, i.e. all cache entries have been read and all static servers been queried.

7.2.11 CacheExhausted(type as string)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: One-time event, to notify the user that all entries from the caches have been sent.

7.2.12 Failure(error as string, errorcode as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Some error occurred.

7.2.13 ServiceFound(InterfaceIndex as Integer, protocol as Integer, name as string, type as string, domain as string, flags as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Found a new object on the network.

7.2.14 ServiceRemoved(InterfaceIndex as Integer, protocol as Integer, name as string, type as string, domain as string, flags as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The service has been removed from the network.

7.2.15 Constants

Constants

Constant	Value	Description
kInterfaceAny	-1	Special constant to use any interface available. Otherwise you would pass the index of the network interface you want to use.

IP Protocols

Constant	Value	Description
kProtocolAny	-1	Any protocol.
kProtocolIPv4	0	Only IPv4.
kProtocolIPv6	1	Only IPv6.

7.3 class AvahiClientMBS

7.3.1 class AvahiClientMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The base class for avahi.
Notes: Typically you create an object of your subclass of AvahiClientMBS at application launch and keep it running.
If events are too slow in GUI events, please use a timer with 50ms and call the AvahiClientMBS.Poll method there.
Blog Entries

- Advertise your Linux app on the network
- MBS Xojo Plugins, version 25.1pr1

7.3.2 Methods

7.3.3 Available as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Whether the avahi library has been found and loaded.

7.3.4 Constructor(flags as Integer = 0)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Initializes the client.

7.3.5 Destructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The destructor.

7.3.6 Poll

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Polls for events.
Example:

```
// in a timer with 50ms
AvahiClientMBS.Poll
```

Notes: This is automatically called by the plugin for GUI applications. If you call it in a timer, you can speedup avahi.
Console applications with their own event loop need to call Poll method regularly.

7.3.7 Properties

7.3.8 DomainName as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Get domain name.
Notes: (Read only property)

7.3.9 Handle as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read only property)

7.3.10 HostName as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Get host name.
Notes: (Read only property)

7.3.11 State as Integer

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the state constants.
Notes: (Read only property)

7.3.12 Version as string

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Get the version of the server.
Notes: (Read only property)

7.3.13 Events

7.3.14 Collision

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: We're still connecting.
Notes: This state is only entered when kClientNoFail has been passed to Constructor() and the daemon is not yet available.

7.3.15 Connecting

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Client is connecting.

7.3.16 Failure(error as string, errorcode as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Some kind of error happened on the client side.

7.3.17 Registering

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Client is registering.

7.3.18 Running

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Client is running.

7.3.19 Constants

Client Flags

Constant	Value	Description
kClientIgnoreUserConfig	1	Don't read user configuration
kClientNoFail	2	Don't fail if the daemon is not available when avahi_client_new() is called, instead enter AVAHI_CLIENT_CONNECTING state and wait for the daemon to appear.

States

Constant	Value	Description
kStateClientConneting	101	We're still connecting. This state is only entered when kClientNoFail has been passed to Constructor() and the daemon is not yet available.
kStateClientFailure	100	Client side failure
kStateCollision	3	Server State: Collision
kStateFailure	4	Server side failure.
kStateInvalid	0	Invalid state
kStateRegistering	1	Server state: Registering
kStateRunning	2	Server state: running

7.4 class AvahiDomainBrowserMBS

7.4.1 class AvahiDomainBrowserMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class to browse for domains.

7.4.2 Methods

7.4.3 BrowseDomains(InterfaceIndex as Integer, Protocol as Integer, domain as string = "", BrowserType as Integer = 0, flags as Integer = 0) as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Browse for domains on the local network.
Notes: Only one BrowseDomains call per AvahiDomainBrowserMBS object please.
Returns true on success and false on failure.

7.4.4 Constructor(client as AvahiClientMBS)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The constructor.

7.4.5 Destructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The destructor.

7.4.6 Properties

7.4.7 Client as AvahiClientMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The reference to the parent client object.
Notes: (Read only property)

7.4.8 Handle as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read only property)

7.4.9 Events

7.4.10 AllForNow

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: One-time event, to notify the user that more records will probably not show up in the near future, i.e. all cache entries have been read and all static servers been queried.

7.4.11 CacheExhausted

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: One-time event, to notify the user that all entries from the caches have been sent.

7.4.12 DomainFound(InterfaceIndex as Integer, protocol as Integer, domain as string, flags as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Found a new domain on the network.

7.4.13 DomainRemoved(InterfaceIndex as Integer, protocol as Integer, domain as string, flags as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The domain has been removed from the network.

7.4.14 Failure(error as string, errorcode as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Some error occurred in the browsing.

7.4.15 Constants

Constants

Constant	Value	Description
kInterfaceAny	-1	Special constant to use any interface available. Otherwise you would pass the index of the network interface you want to use.

Browse modes for domain browsing

Constant	Value	Description
kBrowseTypeBrowse	0	Browse for a list of available browsing domains.
kBrowseTypeBrowseDefault	1	Browse for the default browsing domain.
kBrowseTypeBrowseLegacy	4	Legacy browse domain - see DNS-SD spec for more information.
kBrowseTypeRegister	2	Browse for a list of available registering domains.
kBrowseTypeRegisterDefault	3	Browse for the default registering domain.

Lookup Flags

Constant	Value	Description
kLookupNoAddress	8	When doing service resolving, don't lookup A/AAAA record.
kLookupNoTxt	4	When doing service resolving, don't lookup TXT record.
kLookupUseMulticast	2	Force lookup via multicast DNS.
kLookupUseWideArea	1	Force lookup via wide area DNS.

IP Protocols

Constant	Value	Description
kProtocolAny	-1	Any protocol.
kProtocolIPv4	0	Only IPv4.
kProtocolIPv6	1	Only IPv6.

7.5 class AvahiEntryGroupMBS

7.5.1 class AvahiEntryGroupMBS

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class for publishing services.
Blog Entries

- News from the MBS Xojo Plugins in Version 25.1
- MonkeyBread Software Releases the MBS Xojo Plugins in version 25.1
- Advertise your Linux app on the network
- MBS Xojo Plugins, version 25.1pr1

Xojo Developer Magazine

- 23.3, page 10: News

7.5.2 Methods

7.5.3 AddAddress(InterfaceIndex as integer, Protocol as integer, flags as Integer, name as string, Address as String)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Add a host/address pair.

7.5.4 AddRecord(InterfaceIndex as integer, Protocol as integer, flags as Integer, name as string, Clazz as Integer, Type as Integer, ttl as integer, Data as MemoryBlock)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Add an arbitrary record. I hope you know what you do.

7.5.5 AddService(InterfaceIndex as integer, Protocol as integer, flags as Integer, Name as string, type as String, Domain as String, Host as String, Port as Integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Add a service.
Notes: InterfaceIndex: The interface this service shall be announced on. We recommend to pass kInterfaceAny here, to announce on all interfaces.
Protocol: The protocol this service shall be announced with, i.e. MDNS over IPV4 or MDNS over IPV6. We recommend to pass kProtocolAny here, to announce this service on all protocols the daemon supports.
Flags: Usually 0, unless you know what you do.
Name: The name for the new service. Must be valid service name. i.e. a string shorter than 63 characters and valid UTF-8. May not be empty.
Type: The service type for the new service, such as _http._tcp. May not be empty.
Domain: The domain to register this domain in. We recommend to pass "" here, to let the daemon decide.
Host: The host this services is residing on. We recommend to pass "" here, the daemon will than automatically insert the local host name in that case.
Port: The IP port number of this service.

Please note that this service is not announced on the network before Commit is called.

7.5.6 AddServiceStrList(InterfaceIndex as integer, Protocol as integer, flags as Integer, Name as string, type as String, Domain as String, Host as String, Port as Integer, List() as String)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Add a service, takes an array for TXT records.
Notes: List: The TXT data for this service. You may free this object after calling this function, it is not referenced any further.

Arguments have the same meaning as for AddService().

7.5.7 AddServiceSubType(InterfaceIndex as integer, Protocol as integer, flags as Integer, Name as string, type as String, Domain as String, SubType as String)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Add a subtype for a service.
Notes: InterfaceIndex: The interface this service is announced on. This should match the value passed to the original AddService() call.
Protocol: The protocol this service is announced with. This should match the value passed to the original AddService() call.
flags: Only != 0 if you really know what you do.
Name: The name of the service, as passed to AddService(). Can't be empty.
Type: The type of the service, as passed to AddService(). Can't be empty.
Domain: The domain this service resides is, as passed to AddService(). Can't be empty.

SubType: The new subtype to register for the specified service. Can't be empty.

The service should already be existent in the entry group. You may add as many subtypes for a service as you wish.

7.5.8 Commit

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Commit an AvahiEntryGroup.
Notes: The entries in the entry group are now registered on the network.
Committing empty entry groups is considered an error.

7.5.9 Constructor(client as AvahiClientMBS)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The constructor.

7.5.10 Destructor

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The destructor.

7.5.11 Reset

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Reset an AvahiEntryGroup.
Notes: This takes effect immediately.

7.5.12 UpdateServiceStrList(InterfaceIndex as integer, Protocol as integer, flags as Integer, Name as string, type as String, Domain as String, List() as String)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Update a TXT record for an existing service.
Notes: InterfaceIndex: The interface this service is announced on. This should match the value passed to the original AddService() call.
Protocol: The protocol this service is announced with. This should match the value passed to the original AddService() call.
flags: Only != 0 if you really know what you do.
Name: The name of the service, as passed to AddService(). Can't be empty.
Type: The type of the service, as passed to AddService(). Can't be empty.
Domain: The domain this service resides is, as passed to AddService(). Can't be empty.

The service should already be existent in the entry group.

7.5.13 Properties

7.5.14 Client as AvahiClientMBS

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The reference to the parent client object.
Notes: (Read only property)

7.5.15 Handle as Integer

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read only property)

7.5.16 isEmpty as Boolean

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Check if an AvahiEntryGroup is empty.
Notes: Returns true if this is empty.
(Read only property)

7.5.17 LastError as Integer

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The last error code.
Notes: (Read only property)

7.5.18 LastErrorMessage as String

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The message text for the last error.
Notes: (Read only property)

7.5.19 State as Integer

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Get an AvahiEntryGroup's state.
Notes: (Read only property)

7.5.20 Events

7.5.21 StateChanged(state as Integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The event to inform about a new state.

7.5.22 Constants

Constants

Constant	Value	Description
kInterfaceAny	-1	Special constant to use any interface available. Otherwise you would pass the index of the network interface you want to use.

Publish Flags

Constant	Value	Description
kFlagsAllowMultiple	8	For raw records: Allow multiple local records of this type, even if they are intended to be unique.
kFlagsNoAnnounce	4	For raw records: Do not announce this RR to other hosts.
kFlagsNoCookie	32	For service records: do not implicitly add the local service cookie to TXT data.
kFlagsNone	0	No flags.
kFlagsNoProbe	2	For raw records: Though the RRset is intended to be unique no probes shall be sent.
kFlagsNoReverse	16	For address records: don't create a reverse (PTR) entry.
kFlagsUnique	1	For raw records: The RRset is intended to be unique.
kFlagsUpdate	64	Update existing records instead of adding new ones
kFlagsUseMulticast	256	Register the record using multicast DNS
kFlagsUseWideArea	128	Register the record using wide area DNS (i.e. unicast DNS update)

IP Protocols

Constant	Value	Description
kProtocolAny	-1	Any protocol.
kProtocolIPv4	0	Only IPv4.
kProtocolIPv6	1	Only IPv6.

States

Constant	Value	Description
kStateCollision	3	A name collision for one of the entries in the group has been detected, the entries have been withdrawn.
kStateEstablished	2	The entries have successfully been established.
kStateFailure	4	Some kind of failure happened, the entries have been withdrawn.
kStateRegistering	1	The entries of the group are currently being registered.
kStateUncommited	0	The group has not yet been commited, the user must still call commit.

7.6 class AvahiHostNameResolverMBS

7.6.1 class AvahiHostNameResolverMBS

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: A service resolver object.
Blog Entries

- News from the MBS Xojo Plugins in Version 25.1
- MonkeyBread Software Releases the MBS Xojo Plugins in version 25.1
- MBS Xojo Plugins, version 25.1pr1

Xojo Developer Magazine

- 23.4, page 10: News
- 23.3, page 10: News

7.6.2 Methods

7.6.3 Constructor(client as AvahiClientMBS)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The constructor.

7.6.4 Destructor

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The destructor.

7.6.5 Resolve(InterfaceIndex as integer, Protocol as integer, name as string, aprotocol as Integer = -1, flags as integer = 0) as boolean

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Resolve a host name.

7.6.6 Properties

7.6.7 Client as AvahiClientMBS

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The reference to the parent client object.
Notes: (Read only property)

7.6.8 Handle as Integer

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read only property)

7.6.9 Events

7.6.10 Failure(error as string, errorcode as integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Some error occurred in the resolving.

7.6.11 Found(interfaceIndex as integer, Protocol as Integer, name as string, address as string, flags as integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: An address was found.

7.6.12 Constants

Constants

Constant	Value	Description
kInterfaceAny	-1	Special constant to use any interface available. Otherwise you would pass the index of the network interface you want to use.

Lookup Flags

Constant	Value	Description
kLookupNoAddress	8	When doing service resolving, don't lookup A/AAAA record.
kLookupNoTxt	4	When doing service resolving, don't lookup TXT record.
kLookupUseMulticast	2	Force lookup via multicast DNS.
kLookupUseWideArea	1	Force lookup via wide area DNS.

IP Protocols

Constant	Value	Description
kProtocolAny	-1	Any protocol.
kProtocolIPv4	0	Only IPv4.
kProtocolIPv6	1	Only IPv6.

Result Flags

Constant	Value	Description
kResultCached	1	This response originates from the cache.
kResultLocal	8	This record/service resides on and was announced by the local host. Only available in service and record browsers and only on Found event.
kResultMultiCast	4	This response originates from multicast DNS.
kResultOurOwn	16	This service belongs to the same local client as the browser object. Only available in avahi-client, and only for service browsers and only on Found event.
kResultStatic	32	The returned data has been defined statically by some configuration option.
kResultWideArea	2	This response originates from wide area DNS.

7.7 class AvahiRecordBrowserMBS

7.7.1 class AvahiRecordBrowserMBS

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class for a record browser.
Blog Entries

- News from the MBS Xojo Plugins in Version 25.1
- MonkeyBread Software Releases the MBS Xojo Plugins in version 25.1
- MBS Xojo Plugins, version 25.1pr1

Xojo Developer Magazine

- 23.4, page 10: News

7.7.2 Methods

7.7.3 Constructor(client as AvahiClientMBS)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The constructor.

7.7.4 Destructor

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The destructor.
Notes: Cleans up and frees an AvahiRecordBrowser object.

7.7.5 Resolve(InterfaceIndex as integer, Protocol as integer, name as string, Clazz as Integer, Type as Integer, flags as integer = 0) as boolean

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Starts record browser.

7.7.6 Properties

7.7.7 Client as AvahiClientMBS

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The reference to the parent client object.
Notes: (Read only property)

7.7.8 Handle as Integer

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read only property)

7.7.9 Events

7.7.10 AllForNow(type as Integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: One-time event, to notify the user that more records will probably not show up in the near future, i.e. all cache entries have been read and all static servers been queried.

7.7.11 CacheExhausted(type as Integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: One-time event, to notify the user that all entries from the caches have been sent.

7.7.12 Failure(error as string, errorcode as integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Some error occurred in the browsing.

7.7.13 ServiceFound(InterfaceIndex as integer, protocol as Integer, name as string, clazz as Integer, type as Integer, RecordData as MemoryBlock, flags as integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Found a new object on the network.

7.7.14 ServiceRemoved(InterfaceIndex as integer, protocol as Integer, name as string, clazz as Integer, type as Integer, RecordData as MemoryBlock, flags as integer)

Plugin Version: 25.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The service has been removed from the network.

7.7.15 Constants

Constants

Constant	Value	Description
kInterfaceAny	-1	Special constant to use any interface available. Otherwise you would pass the index of the network interface you want to use.

Lookup Flags

Constant	Value	Description
kLookupNoAddress	8	When doing service resolving, don't lookup A/AAAA record.
kLookupNoTxt	4	When doing service resolving, don't lookup TXT record.
kLookupUseMulticast	2	Force lookup via multicast DNS.
kLookupUseWideArea	1	Force lookup via wide area DNS.

IP Protocols

Constant	Value	Description
kProtocolAny	-1	Any protocol.
kProtocolIPv4	0	Only IPv4.
kProtocolIPv6	1	Only IPv6.

Result Flags

Constant	Value	Description
kResultCached	1	This response originates from the cache.
kResultLocal	8	This record/service resides on and was announced by the local host. Only available in service and record browsers and only on Found event.
kResultMultiCast	4	This response originates from multicast DNS.
kResultOurOwn	16	This service belongs to the same local client as the browser object. Only available in avahi-client, and only for service browsers and only on Found event.
kResultStatic	32	The returned data has been defined statically by some configuration option.
kResultWideArea	2	This response originates from wide area DNS.

7.8 class AvahiResolverMBS

7.8.1 class AvahiResolverMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class to resolve service name to IP address.

7.8.2 Methods

7.8.3 Constructor(client as AvahiClientMBS)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The constructor.

7.8.4 Destructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The destructor.

7.8.5 Resolve(InterfaceIndex as Integer, Protocol as Integer, name as string, servicetype as string, domain as string, flags as Integer = 0) as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Create a new service resolver object.
Notes: Please make sure to pass all the service data you received via Found event, especially interface and protocol. The protocol argument specifies the protocol (IPv4 or IPv6) to use as transport for the queries which are sent out by this resolver. The protocol argument specifies the adress family (IPv4 or IPv6) of the address of the service we are looking for. Generally, on "protocol" you should only pass what was supplied to you as parameter to your Browse function. In protocol you should pass what your application code can deal with when connecting to the service. Or, more technically speaking: protocol specifies if the mDNS queries should be sent as UDP/IPv4 resp. UDP/IPv6 packets. protocol specifies whether the query is for a A resp. AAAA resource record.

Only one resolve call per AvahiResolverMBS object please.
Returns true on success and false on failure.

7.8.6 Properties

7.8.7 Client as AvahiClientMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The reference to the parent client object.
Notes: (Read only property)

7.8.8 Handle as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read only property)

7.8.9 Events

7.8.10 Failure(error as string, errorcode as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Some error occurred.

7.8.11 Found(interfaceIndex as Integer, Protocol as Integer, name as string, type as string, domain as string, hostname as string, port as Integer, address as string, txt as string, flags as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: An address was found.

7.8.12 Constants

Lookup Flags

Constant	Value	Description
kLookupNoAddress	8	When doing service resolving, don't lookup A/AAAA record.
kLookupNoTxt	4	When doing service resolving, don't lookup TXT record.
kLookupUseMulticast	2	Force lookup via multicast DNS.
kLookupUseWideArea	1	Force lookup via wide area DNS.

Result Flags

Constant	Value	Description
kResultCached	1	This response originates from the cache.
kResultLocal	8	This record/service resides on and was announced by the local host. Only available in service and record browsers and only on Found event.
kResultMultiCast	4	This response originates from multicast DNS.
kResultOurOwn	16	This service belongs to the same local client as the browser object. Only available in avahi-client, and only for service browsers and only on Found event.
kResultStatic	32	The returned data has been defined statically by some configuration option.
kResultWideArea	2	This response originates from wide area DNS.

7.9 class AvahiTypeBrowserMBS

7.9.1 class AvahiTypeBrowserMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class to browse for types.

7.9.2 Methods

7.9.3 BrowseTypes(InterfaceIndex as Integer, Protocol as Integer, domain as string = "", flags as Integer = 0) as boolean

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Browse for service types on the local network.
Notes: Only one BrowseTypes call per AvahiTypeBrowserMBS object please.
Returns true on success and false on failure.

7.9.4 Constructor(client as AvahiClientMBS)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The constructor.

7.9.5 Destructor

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The destructor.

7.9.6 Properties

7.9.7 Client as AvahiClientMBS

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The reference to the parent client object.
Notes: (Read only property)

7.9.8 Handle as Integer

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal object reference.
Notes: (Read only property)

7.9.9 Events

7.9.10 AllForNow

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: One-time event, to notify the user that more records will probably not show up in the near future, i.e. all cache entries have been read and all static servers been queried.

7.9.11 CacheExhausted

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: One-time event, to notify the user that all entries from the caches have been sent.

7.9.12 Failure(error as string, errorcode as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Some error occurred in the browsing.

7.9.13 TypeFound(InterfaceIndex as Integer, protocol as Integer, type as string, domain as string, flags as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Found a new type on the network.

7.9.14 TypeRemoved(InterfaceIndex as Integer, protocol as Integer, type as string, domain as string, flags as Integer)

Plugin Version: 12.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The type has been removed from the network.

7.9.15 Constants

Constants

Constant	Value	Description
kInterfaceAny	-1	Special constant to use any interface available. Otherwise you would pass the index of the network interface you want to use.

Lookup Flags

Constant	Value	Description
kLookupNoAddress	8	When doing service resolving, don't lookup A/AAAA record.
kLookupNoTxt	4	When doing service resolving, don't lookup TXT record.
kLookupUseMulticast	2	Force lookup via multicast DNS.
kLookupUseWideArea	1	Force lookup via wide area DNS.

IP Protocols

Constant	Value	Description
kProtocolAny	-1	Any protocol.
kProtocolIPv4	0	Only IPv4.
kProtocolIPv6	1	Only IPv6.

Chapter 8

RaspberryPiCamera

8.1 class RaspberryPiCameraFormatDescriptionMBS

8.1.1 class RaspberryPiCameraFormatDescriptionMBS

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class for a format description.
Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

8.1.2 Methods

8.1.3 Constructor

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The private constructor.

8.1.4 Properties

8.1.5 Description as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The format description.
Notes: (Read only property)

8.1.6 Flags as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The flags.
Notes: Currently can be 1 for compressed and 2 for emulated.
(Read only property)

8.1.7 Index as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Format number.
Notes: (Read only property)

8.1.8 Pixelformat as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The pixel format.
Notes: (Read only property)

8.1.9 PixelformatString as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The pixel format as text.
Notes: (Read only property)

8.1.10 Type as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The buffer type.
Notes: Usually 1 for video capture.
(Read only property)

8.2 class RaspberryPiCameraFormatMBS

8.2.1 class RaspberryPiCameraFormatMBS

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class for format settings.
Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

8.2.2 Methods

8.2.3 Constructor

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The private constructor.

8.2.4 Properties

8.2.5 BytesPerRow as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The number of bytes per row.
Notes: For padding, zero if unused.
(Read and Write property)

8.2.6 ColorSpace as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The colorspace.
Example:

```
// ITU-R 601 – broadcast NTSC/PAL
const V4L2_COLORSPACE_SMPTE170M = 1

// 1125-Line (US) HDTV
const V4L2_COLORSPACE_SMPTE240M = 2

// HD and modern captures.
```

```
const V4L2_COLORSPACE_REC709 = 3

// broken BT878 extents (601, luma range 16-253 instead of 16-235)
const V4L2_COLORSPACE_BT878 = 4

// These should be useful. Assume 601 extents.
const V4L2_COLORSPACE_470_SYSTEM_M = 5
const V4L2_COLORSPACE_470_SYSTEM_BG = 6

// I know there will be cameras that send this. So, this is
// unspecified chromaticities and full 0-255 on each of the
// Y'CbCr components
const V4L2_COLORSPACE_JPEG = 7

// For RGB colourspaces, this is probably a good start.
const V4L2_COLORSPACE_SRGB = 8
```

Notes: Normally zero for default.
(Read and Write property)

8.2.7 Field as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The field.
Example:

```
const V4L2_FIELD_ANY = 0
// driver can choose from none, top, bottom, interlaced
// depending on whatever it thinks is approximate ...
const V4L2_FIELD_NONE = 1
// this device has no fields ...
const V4L2_FIELD_TOP = 2
// top field only
const V4L2_FIELD_BOTTOM = 3
// bottom field only
const V4L2_FIELD_INTERLACED = 4
// both fields interlaced
const V4L2_FIELD_SEQ_TB = 5
// both fields sequential into one
// buffer, top-bottom order
const V4L2_FIELD_SEQ_BT = 6
// same as above + bottom-top order
const V4L2_FIELD_ALTERNATE = 7
// both fields alternating into separate buffers
const V4L2_FIELD_INTERLACED_TB = 8
```

```
// both fields interlaced, top field
// first and the top field is transmitted first
const V4L2_FIELD_INTERLACED_BT = 9
// both fields interlaced, top field
// first and the bottom field is transmitted first
```

Notes: (Read and Write property)

8.2.8 Height as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The height of image in pixels.
Notes: (Read and Write property)

8.2.9 Pixelformat as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The pixel format.
Notes: (Read and Write property)

8.2.10 PixelformatString as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The pixel format as text.
Notes: (Read only property)

8.2.11 SizeImage as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The size of image.
Notes: (Read and Write property)

8.2.12 Type as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The type of data stream.
Notes: With plugin we always use 1 for video capture (V4L2_BUF_TYPE_VIDEO_CAPTURE).
(Read and Write property)

8.2.13 Width as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The width of image in pixels.
Notes: (Read and Write property)

8.3 class RaspberryPiCameraMBS

8.3.1 class RaspberryPiCameraMBS

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class to get pictures from Raspberry Pi camera and similar Linux cameras.
Blog Entries

- MBS Plugin classes for use on Raspberry Pi
- MonkeyBread Software Releases the MBS Xojo Plugins in version 18.0
- MBS Xojo Plugins, version 17.6pr3
- MBS Releases the MBS Xojo / Real Studio plug-ins in version 16.4

Videos

- Presentation from London conference about MBS Plugins.

8.3.2 Methods

8.3.3 AvailableFormats as RaspberryPiCameraFormatDescriptionMBS()

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Queries available formats.
Notes: Lasterror and ErrorMessage are set.
Can return nil in case of error.

8.3.4 Capture(WithPicture as boolean = true) as Boolean

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Captures a new picture.
Notes: If WithPicture is true and pixel format is compatible (RGB 24 or 32bit), we set the picture property.
If capturing JPEG, we copy the JPEG data into the JPEG property.

Returns true on success.
Lasterror and ErrorMessage are set.

8.3.5 Close

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Closes camera device.
Notes: Lasterror and ErrorMessage are set.

8.3.6 Constructor

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The constructor.

8.3.7 CurrentFormat as RaspberryPiCameraFormatMBS

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Queries current format.
Notes: Returns nil in case of error.
Lasterror and ErrorMessage are set.

8.3.8 InitBuffer as Boolean

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Initializes buffer.
Notes: This is done automatically if you capture.

Returns true on success.
Lasterror and ErrorMessage are set.

8.3.9 Open(Device as string = "/dev/video0") as Boolean

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Opens the camera device.
Notes: You need

- a Raspberry Pi computer

- to attach the camera module
- to enable the video camera
- run a command: sudo modprobe bcm2835-v4l2
- to check if you see /dev/video0 in file system.

Returns true on success.
Lasterror and ErrorMessage are set.

8.3.10 SetCurrentFormat(format as RaspberryPiCameraFormatMBS) as boolean

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Sets current format.
Notes: This allows to use any format, even if we can't transform it to picture for you.

Returns true on success.
Lasterror and ErrorMessage are set.

8.3.11 SetJPEGSize(Width as Integer, Height as Integer) as Boolean

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Sets size and format to capture.
Notes: Sets JPEG format with given size.

Returns true on success.
Lasterror and ErrorMessage are set.

8.3.12 SetSize(Width as Integer, Height as Integer) as Boolean

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Sets size and format to capture.
Notes: Sets to capture RGB picture with given size.

Returns true on success.
Lasterror and ErrorMessage are set.

8.3.13 Properties

8.3.14 AutoExposureBias as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
e.g. 12.
(Read and Write property)

8.3.15 AutoFocusRange as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: See kAutoFocusRange* constants
(Read and Write property)

8.3.16 AutoFocusStart as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.17 AutoFocusStatus as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: See kAutoFocusStatus* constants
(Read and Write property)

8.3.18 AutoFocusStop as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.

(Read and Write property)

8.3.19 AutoNPresetWhiteBalance as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: See kWhiteBalance* constants.
e.g. value is 1 for kWhiteBalanceAuto.
(Read and Write property)

8.3.20 Buffer as Ptr

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The pointer to the buffer.
Notes: For the case you want to convert yourself pixel values to a picture.
(Read only property)

8.3.21 BufferLength as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The length of the buffer.
Notes: (Read only property)

8.3.22 BusInfo as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The device bus info.
Notes: e.g. "PCI:test"
(Read only property)

8.3.23 BytesPerRow as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The bytes per row for current image.
Notes: (Read only property)

8.3.24 CanCapture as Boolean

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Whether the device can capture video.
Notes: This is queried by checking if bitwiseAnd(capabilities,1) = 1.
(Read only property)

8.3.25 Capabilities as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Device capabilities bitmap.
Notes: (Read only property)

8.3.26 Card as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The name of the card.
Notes: e.g. "Hauppauge WinTV"
(Read only property)

8.3.27 Driver as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The name of the driver.
Notes: e.g. "bttv"
(Read only property)

8.3.28 ErrorMessage as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The error message for lasterror property.
Notes: (Read only property)

8.3.29 ExposureAbsolute as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
e.g. 1000
(Read and Write property)

8.3.30 ExposureAuto as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: See kExposure* constants.
Value is e.g. 0 for kExposureAuto.
(Read and Write property)

8.3.31 ExposureAutoPriority as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.32 ExposureMetering as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: See kExposureMetering* constants
(Read and Write property)

8.3.33 FocusAbsolute as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
May not work if you don't have a controllable focus on the camera.

(Read and Write property)

8.3.34 FocusAuto as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
May not work if you don't have a controllable focus on the camera.
(Read and Write property)

8.3.35 FocusRelative as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
May not work if you don't have a controllable focus on the camera.
(Read and Write property)

8.3.36 Handle as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The internal file handle.
Notes: (Read only property)

8.3.37 Height as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The height in pixel used for capture.
Notes: (Read only property)

8.3.38 ImageStabilization as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.

(Read and Write property)

8.3.39 IrisAbsolute as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
May not work if you don't have a controllable iris on the camera.
(Read and Write property)

8.3.40 IrisRelative as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
May not work if you don't have a controllable iris on the camera.
(Read and Write property)

8.3.41 IsoSensitivity as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.42 IsoSensitivityAuto as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: See kISOSensitivity* constants.
Usually set to kISOSensitivityAuto for auto mode (1).
(Read and Write property)

8.3.43 JPEG as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The last JPEG image data block.
Notes: (Read only property)

8.3.44 LastError as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The last error code.
Notes: (Read only property)

8.3.45 Lock3A as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: See kLock* constants.
(Read and Write property)

8.3.46 Opened as Boolean

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Whether device is opened.
Notes: (Read only property)

8.3.47 PanAbsolute as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.48 PanRelative as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.49 PanReset as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.50 PanSpeed as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.51 Picture as Picture

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The last captured picture.
Notes: (Read only property)

8.3.52 PixelFormat as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The pixel format.
Notes: (Read only property)

8.3.53 PixelformatString as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The pixel format as text.
Notes: (Read only property)

8.3.54 Privacy as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.55 Recording as Boolean

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: Whether we are recording currently.
Notes: (Read only property)

8.3.56 SceneMode as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: See kSceneMode* constants
(Read and Write property)

8.3.57 TiltAbsolute as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.58 TiltRelative as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.59 TiltReset as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.60 TiltSpeed as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.61 Version as String

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The version of the driver.
Notes: (Read only property)

8.3.62 WideDynamicRange as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.63 Width as Integer

Plugin Version: 16.4, Platform: Linux, Targets: Desktop, Console & Web.

Function: The width in pixel used for capture.
Notes: (Read only property)

8.3.64 ZoomAbsolute as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.65 ZoomContinuous as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.66 ZoomRelative as Integer

Plugin Version: 18.0, Platform: Linux, Targets: Desktop, Console & Web.

Function: One of the camera configuration propertires.
Notes: Lasterror is set.
(Read and Write property)

8.3.67 Constants

AutoFocusRange Values

Constant	Value	Description
kAutoFocusRangeAuto	0	
kAutoFocusRangeInfinity	3	
kAutoFocusRangeMacro	2	
kAutoFocusRangeNormal	1	

AutoFocusStatus Values

Constant	Value	Description
kAutoFocusStatusBusy	1	
kAutoFocusStatusFailed	4	
kAutoFocusStatusIdle	0	
kAutoFocusStatusReached	2	

ExposureAuto Values

Constant	Value	Description
kExposureAperturePriority	3	
kExposureAuto	0	
kExposureManual	1	
kExposureShutterPriority	2	

ExposureMetering Values

Constant	Value	Description
kExposureMeteringAverage	0	
kExposureMeteringCenterWeighted	1	
kExposureMeteringMatrix	3	
kExposureMeteringSpot	2	

IsoSensitivityAuto Values

Constant	Value	Description
kISOSensitivityAuto	1	
kISOSensitivityManual	0	

Lock3A Values

Constant	Value	Description
kLockExposure	1	
kLockFocus	4	
kLockWhiteBalance	2	

ScreenMode Values

Constant	Value	Description
kSceneModeBacklight	1	
kSceneModeBeachSnow	2	
kSceneModeCandleLight	3	
kSceneModeDawnDusk	4	
kSceneModeFallColors	5	
kSceneModeFireworks	6	
kSceneModeLandscape	7	
kSceneModeNight	8	
kSceneModeNone	0	
kSceneModePartyIndoor	9	
kSceneModePortrait	10	
kSceneModeSports	11	
kSceneModeSunset	12	
kSceneModeText	13	

AutoNPresetWhiteBalance Values

Constant	Value	Description
kWhiteBalanceAuto	1	
kWhiteBalanceCloudy	8	
kWhiteBalanceDaylight	6	
kWhiteBalanceFlash	7	
kWhiteBalanceFluorescent	3	
kWhiteBalanceFluorescentH	4	
kWhiteBalanceHorizon	5	
kWhiteBalanceIncandescent	2	
kWhiteBalanceManual	0	
kWhiteBalanceShade	9	

Chapter 9

System

9.1 class LinuxSysInfoMBS

9.1.1 class LinuxSysInfoMBS

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: The class to query memory and processor statistics.
Example:

```
Var l as new LinuxSysInfoMBS

MsgBox str(l.FreeRam)+" bytes free."
```

Blog Entries

- Updater Kit 1.5 and BugReporter Kit 1.1
- MonkeyBread Software releases MBS Real Studio plug-ins in version 12.1
- MBS Real Studio Plugins, version 12.1pr7
- Adding Linux SysInfo class

Xojo Developer Magazine

- 10.4, page 9: News

9.1.2 Methods

9.1.3 Constructor

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Queries values and fills properties.

9.1.4 loads(index as Integer) as Double

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: 1, 5, and 15 minute load averages.

9.1.5 Properties

9.1.6 availablePhysicalPages as Integer

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Return number of available physical pages of memory in the system.
Notes: (Read only property)

9.1.7 BufferRam as UInt64

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Memory used by buffers.
Notes: (Read only property)

9.1.8 FreeHigh as UInt64

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Available high memory size.
Notes: (Read only property)

9.1.9 FreeRam as UInt64

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Available memory size.
Example:

```
Var l as new LinuxSysInfoMBS

MsgBox str(l.FreeRam)+" bytes free."
```

Notes: (Read only property)

9.1.10 FreeSwap as UInt64

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Swap space still available.
Notes: (Read only property)

9.1.11 MemoryUnit as UInt64

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Memory unit size in bytes.
Notes: (Read only property)

9.1.12 NumberOfProcesses as Integer

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Number of current processes.
Example:

```
Var l as new LinuxSysInfoMBS

MsgBox str(l.NumberOfProcesses)+" processes"
```

Notes: (Read only property)

9.1.13 NumberOfProcessors as Integer

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Return number of available processors.
Example:

```
Var l as new LinuxSysInfoMBS

MsgBox str(l.NumberOfProcessors)+" processors"
```

Notes: (Read only property)

9.1.14 NumberOfProcessorsConfigured as Integer

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Return number of configured processors.
Notes: (Read only property)

9.1.15 PhysicalPages as Integer

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Return number of physical pages of memory in the system.
Notes: (Read only property)

9.1.16 SharedRam as UInt64

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Amount of shared memory.
Notes: (Read only property)

9.1.17 TotalHigh as UInt64

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Total high memory size.
Notes: (Read only property)

9.1.18 TotalRam as UInt64

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Total usable main memory size.
Notes: (Read only property)

9.1.19 TotalSwap as UInt64

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Total swap space size.
Notes: (Read only property)

9.1.20 upTime as Integer

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Seconds since boot.
Notes: (Read only property)

9.1.21 Valid as Boolean

Plugin Version: 12.1, Platform: Linux, Targets: Desktop, Console & Web.

Function: Whether constructor got values.
Notes: Should be true on Linux and false on other platforms.
(Read only property)

Chapter 10

Window

10.1 class DesktopWindow

10.1.1 class DesktopWindow

Plugin Version: 21.5, Platforms: macOS, Linux, Windows, Targets: Desktop only.

Function: Extends Xojo's Window Class.
Example:

window1.HasNoTitleBarMBS = true

Notes: In Xojo 2005 and newer you need to use self. in front of the method as the propertyname alone is not accepted.

10.1.2 Methods

10.1.3 GTKWindow as GTKWindowMBS

Plugin Version: 21.5, Platform: Linux, Targets: Desktop only.

Function: Queries a GTKWindow object for this window.
Notes: Returns only a valid object on linux.
On other platforms, this function returns nil.

10.2 class GTKWindowMBS

10.2.1 class GTKWindowMBS

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: The class to control a GTKWindow.
Notes: We can directly modify a window on Linux using this class.
If you need methods to do something special, please do not hesitate to email us.
Blog Entries

- News from the MBS Xojo Plugins Version 24.2
- MBS Xojo Plugins, version 24.2pr1
- MonkeyBread Software Releases the MBS Xojo / Real Studio plug-ins in version 14.0
- MBS Xojo / Real Studio Plugins, version 14.0pr1
- MBS Real Studio Plugins, version 13.0pr1

Xojo Developer Magazine

- 12.2, page 10: News

10.2.2 Methods

10.2.3 Constructor(win as DesktopWindow)

Plugin Version: 22.0, Platform: Linux, Targets: Desktop only.

Function: Creates a new GTKWindow object pointing to a given window.
Notes: Raises exception on Mac/Win to prevent you from creating invalid object.
See also:

- 10.2.4 Constructor(win as window) 166

10.2.4 Constructor(win as window)

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Creates a new GTKWindow object pointing to a given window.
Notes: Raises exception on Mac/Win to prevent you from creating invalid object.
See also:

- 10.2.3 Constructor(win as DesktopWindow) 166

10.2.5 Deiconify

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to deiconify (i.e. unminimize) the specified window.
Notes: Note that you shouldn't assume the window is definitely deiconified afterward, because other entities (e.g. the user or window manager) could iconify it again before your code which assumes deiconification gets to run.

10.2.6 Fullscreen

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to place window in the fullscreen state.
Notes: Note that you shouldn't assume the window is definitely full screen afterward, because other entities (e.g. the user or window manager) could unfullscreen it again, and not all window managers honor requests to fullscreen windows. But normally the window will end up fullscreen. Just don't write code that crashes if not.

10.2.7 Iconify

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to iconify (i.e. minimize) the specified window.
Notes: Note that you shouldn't assume the window is definitely iconified afterward, because other entities (e.g. the user or window manager) could deiconify it again, or there may not be a window manager in which case iconification isn't possible, etc. But normally the window will end up iconified. Just don't write code that crashes if not.

It's permitted to call this function before showing a window, in which case the window will be iconified before it ever appears onscreen.

10.2.8 Maximize

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to maximize window, so that it becomes full-screen.
Notes: Note that you shouldn't assume the window is definitely maximized afterward, because other entities (e.g. the user or window manager) could unmaximize it again, and not all window managers support maximization. But normally the window will end up maximized. Just don't write code that crashes if not.

It's permitted to call this function before showing a window, in which case the window will be maximized when it appears onscreen initially.

10.2.9 SetIcon(pic as picture)

Plugin Version: 14.0, Platform: Linux, Targets: Desktop only.

Function: Assigns an icon to the picture.
Notes: The operation system will scale the picture to required size, so please use bigger images.
Please use picture with alpha channel for best result.

10.2.10 SetKeepAbove(setting as boolean)

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to keep window above, so that it stays on top.
Notes: Note that you shouldn't assume the window is definitely above afterward, because other entities (e.g. the user or window manager) could not keep it above, and not all window managers support keeping windows above. But normally the window will end kept above. Just don't write code that crashes if not.

It's permitted to call this function before showing a window, in which case the window will be kept above when it appears onscreen initially.

Note that, according to the Extended Window Manager Hints specification, the above state is mainly meant for user preferences and should not be used by applications e.g. for drawing attention to their dialogs.

10.2.11 SetKeepBelow(setting as boolean)

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to keep window below, so that it stays in bottom.
Notes: Note that you shouldn't assume the window is definitely below afterward, because other entities (e.g. the user or window manager) could not keep it below, and not all window managers support putting windows below. But normally the window will be kept below. Just don't write code that crashes if not.

It's permitted to call this function before showing a window, in which case the window will be kept below when it appears onscreen initially.

Note that, according to the Extended Window Manager Hints specification, the above state is mainly meant for user preferences and should not be used by applications e.g. for drawing attention to their dialogs.

10.2.12 Stick

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to stick window, which means that it will appear on all user desktops.
Notes: Note that you shouldn't assume the window is definitely stuck afterward, because other entities (e.g. the user or window manager) could unstick it again, and some window managers do not support sticking windows. But normally the window will end up stuck. Just don't write code that crashes if not.

It's permitted to call this function before showing a window.

10.2.13 Unfullscreen

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to toggle off the fullscreen state for window.
Notes: Note that you shouldn't assume the window is definitely not full screen afterward, because other entities (e.g. the user or window manager) could fullscreen it again, and not all window managers honor requests to unfullscreen windows. But normally the window will end up restored to its normal state. Just don't write code that crashes if not.

10.2.14 Unmaximize

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to unmaximize window.
Notes: Note that you shouldn't assume the window is definitely unmaximized afterward, because other entities (e.g. the user or window manager) could maximize it again, and not all window managers honor requests to unmaximize. But normally the window will end up unmaximized. Just don't write code that crashes if not.

10.2.15 Unstick

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Asks to unstick window, which means that it will appear on only one of the user's desktops.
Notes: Note that you shouldn't assume the window is definitely unstuck afterward, because other entities (e.g. the user or window manager) could stick it again. But normally the window will end up stuck. Just don't write code that crashes if not.

10.2.16 Properties

10.2.17 AcceptFocus as Boolean

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Get/Set whether window should receive focus.
Notes: Windows may set a hint asking the desktop environment not to receive the input focus. This function sets this hint.
(Read and Write property)

10.2.18 Handle as Integer

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: The internal window handle.
Notes: (Read and Write property)

10.2.19 IsComposited as Boolean

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Whether this window can rely on having its alpha channel drawn correctly.
Notes: On X11 this function returns whether a compositing manager is running for window's screen.
(Read only property)

10.2.20 Opacity as Double

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Get or set the Opacity of this window.
Notes: Request the windowing system to make window partially transparent, with opacity 0 being fully transparent and 1 fully opaque. (Values of the opacity parameter are clamped to the [0,1] range.) On X11 this has any effect only on X screens with a compositing manager running. See isComposited.
(Read and Write property)

10.2.21 Resizable as Boolean

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Get or set whether the user can resize a window.

Notes: (Read and Write property)

10.2.22 Title as string

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Get or set the window title.
Notes: The title of a window will be displayed in its title bar; on the X Window System, the title bar is rendered by the window manager, so exactly how the title appears to users may vary according to a user's exact configuration. The title should help a user distinguish this window from other windows they may have open. A good title might include the application name and current document filename, for example.
(Read and Write property)

10.2.23 XWindowID as Integer

Plugin Version: 24.2, Platform: Linux, Targets: Desktop only.

Function: Queries the X-Window ID for the window.
Notes: Value is zero if not available.
(Read only property)

10.3 class Window

10.3.1 class Window

Platforms: macOS, Linux, Windows, Targets: Desktop only.

Function: Extends Xojo's Window Class.
Example:

window1.HasNoTitleBarMBS = true

Notes: In Xojo 2005 and newer you need to use self. in front of the method as the propertyname alone is not accepted.

10.3.2 Methods

10.3.3 GTKWindow as GTKWindowMBS

Plugin Version: 13.0, Platform: Linux, Targets: Desktop only.

Function: Queries a GTKWindow object for this window.
Notes: Returns only a valid object on linux.
On other platforms, this function returns nil.

Chapter 11

WiringPi

11.1 module WiringPiMBS

11.1.1 module WiringPiMBS

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: The module to work with wiring pi library.
Notes: Deprecated as underlaying C library is deprecated.
Blog Entries

- News from the MBS Xojo Plugins Version 25.5
- MonkeyBread Software Releases the MBS Xojo Plugins in version 25.5
- MBS Xojo Plugins, version 25.5pr6
- Cleanup Xojo Plugins
- MBS Xojo Plugins, version 19.2pr1
- MBS Xojo / Real Studio Plugins, version 15.3pr2

Xojo Developer Magazine

- 24.1, page 9: News

11.1.2 Methods

11.1.3 analogRead(pin as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This returns the value read on the supplied analog input pin.
Notes: You will need to register additional analog modules to enable this function for devices such as the Gertboard, quick2Wire analog board, etc.

11.1.4 analogWrite(pin as Integer, value as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This writes the given value to the supplied analog pin.
Notes: You will need to register additional analog modules to enable this function for devices such as the Gertboard.

11.1.5 Board40Pin as Integer

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Checks if the current Raspberry Pi model uses the 40-pin GPIO header.
Notes: Returns 1 if the board has a 40-pin header, 0 otherwise.

Added in WiringPi Interface v3.7.

11.1.6 delay(HowLong as UInt32)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This causes program execution to pause for at least howLong milliseconds.
Notes: Due to the multi-tasking nature of Linux it could be longer. Note that the maximum delay is an unsigned 32-bit integer or approximately 49 days.

11.1.7 delayMicroseconds(HowLong as UInt32)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This causes program execution to pause for at least howLong microseconds.
Notes: Due to the multi-tasking nature of Linux it could be longer. Note that the maximum delay is an unsigned 32-bit integer microseconds or approximately 71 minutes.

Delays under 100 microseconds are timed using a hard-coded loop continually polling the system time, Delays over 100 microseconds are done using the system nanosleep() function –You may need to consider the

implications of very short delays on the overall performance of the system, especially if using threads.

11.1.8 digitalRead(pin as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This function returns the value read at the given pin.
Notes: It will be kHIGH or kLOW (1 or 0) depending on the logic level at the pin.

11.1.9 digitalReadByte as Integer

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Reads the state of the first 8 GPIO pins (0–7) and returns them as a bitfield.
Notes: Returns 8-bit value representing each pin,Äôs digital level (1 = HIGH, 0 = LOW).

11.1.10 digitalWrite(pin as Integer, value as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Writes the value kHIGH or kLOW (1 or 0) to the given pin which must have been previously set as an output.
Notes: WiringPi treats any non-zero number as kHIGH, however 0 is the only representation of kLOW.

11.1.11 digitalWriteByte(value as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This writes the 8-bit byte supplied to the first 8 GPIO pins.
Notes: It,Äôs the fastest way to set all 8 bits at once to a particular value, although it still takes two write operations to the Pi,Äôs GPIO hardware.

11.1.12 GlobalMemoryAccess as Integer

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Checks whether WiringPi has access to the global /dev/mem memory interface, allowing unrestricted hardware control.
Notes: Return:
1 if full memory access is available (root or elevated privileges).

0 if restricted to user-level access (via /dev/gpiomem).
Version: Introduced in Interface v3.3.
Notes: Some advanced features (e.g., hardware PWM, clock outputs) require global access.

11.1.13 gpioClockSet(pin as Integer, value as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Sets the clock.

11.1.14 GpioLayout as Integer

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Returns the GPIO layout type of the Raspberry Pi board (e.g., revision 1, 2, 3, etc.).
Notes: Returns an integer identifying the board,Äôs GPIO layout number (used internally to map pins).

This is the recommended way to determine board layout; supersedes piBoardRev().

11.1.15 I2CRead(fd as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Simple device read.
Notes: Some devices present data when you read them without having to do any register transactions.
If the return value is negative then an error has happened and you should consult errno.

11.1.16 I2CReadReg16(fd as Integer, reg as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Simple device read.
Notes: Some devices present data when you read them without having to do any register transactions.
Read a 16-bit value from the device register indicated.

If the return value is negative then an error has happened and you should consult errno.

11.1.17 I2CReadReg8(fd as Integer, reg as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Simple device read.
Notes: Some devices present data when you read them without having to do any register transactions. Read an 8-bit value from the device register indicated.

If the return value is negative then an error has happened and you should consult errno.

11.1.18 I2CSetup(devId as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This initialises the I2C system with your given device identifier.
Notes: The ID is the I2C number of the device and you can use the i2cdetect program to find this out. I2CSetup() will work out which revision Raspberry Pi you have and open the appropriate device in /dev.

The return value is the standard Linux filehandle, or -1 if any error –in which case, you can consult errno as usual.

E.g. the popular MCP23017 GPIO expander is usually device Id 0x20, so this is the number you would pass into wiringPiI2CSetup().

11.1.19 I2CSetupInterface(device as string, devId as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This initialises the I2C system with your given device identifier and name.

11.1.20 I2CWrite(fd as Integer, Data as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Simple device write.
Notes: Some devices accept data this way without needing to access any internal registers.
If the return value is negative then an error has happened and you should consult errno.

11.1.21 I2CWriteReg16(fd as Integer, reg as Integer, Data as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Simple device write.
Notes: Some devices accept data this way without needing to access any internal registers.
Write a 16-bit data value into the device register indicated.

If the return value is negative then an error has happened and you should consult errno.

11.1.22 I2CWriteReg8(fd as Integer, reg as Integer, Data as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Simple device write.
Notes: Some devices accept data this way without needing to access any internal registers.
Write a 8-bit data value into the device register indicated.

If the return value is negative then an error has happened and you should consult errno.

11.1.23 LoadLibrary(File as FolderItem) as boolean

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Loads the library.
Notes: Returns true on success or false on failure.
LoadError is set in case of failure.
See also:

- 11.1.24 LoadLibrary(Path as string) as boolean 178

11.1.24 LoadLibrary(Path as string) as boolean

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Loads the library.
Notes: Returns true on success or false on failure.
LoadError is set in case of failure.
See also:

- 11.1.23 LoadLibrary(File as FolderItem) as boolean 178

11.1.25 MemorySize(Index as Integer) as Integer

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Queries the memory sizes.
Notes: Looks up memory size in an array.
Index is 0 to 7.

11.1.26 micros as UInt32

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This returns a number representing the number of microseconds since your program called one of the wiringPiSetup functions.
Notes: It returns an unsigned 32-bit number which wraps after approximately 71 minutes.

11.1.27 millis as UInt32

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This returns a number representing the number of milliseconds since your program called one of the wiringPiSetup functions.
Notes: It returns an unsigned 32-bit number which wraps after 49 days.

11.1.28 physPinToGpio(physPin as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This returns the BCM_GPIO pin number of the supplied physical pin on the P1 connector.

11.1.29 piBoardId(byref model as Integer, byref Rev as Integer, byref Mem as Integer, byref Maker as Integer, byref OverVolted as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Queries board identifiers.
Notes: Mem is memory in Megabytes.
Maker, Model and Rev are value which match the constants in this module.

11.1.30 piBoardRev as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This returns the board revision of the Raspberry Pi.
Notes: It will be either 1 or 2. Some of the BCM_GPIO pins changed number and function when moving from board revision 1 to 2, so if you are using BCM_GPIO pin numbers, then you need to be aware of the differences.

11.1.31 piHiPri(pri as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This attempts to shift your program (or thread in a multi-threaded program) to a higher priority and enables a real-time scheduling.
Notes: The priority parameter should be from 0 (the default) to 99 (the maximum). This won,Äôt make your program go any faster, but it will give it a bigger slice of time when other programs are running. The priority parameter works relative to others –so you can make one program priority 1 and another priority 2 and it will have the same effect as setting one to 10 and the other to 90 (as long as no other programs are running with elevated priorities)

The return value is 0 for success and -1 for error. If an error is returned, the program should then consult the errno global variable, as per the usual conventions.

Note: Only programs running as root can change their priority. If called from a non-root program then nothing happens.

11.1.32 piLock(Key as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Locks a synchronization lock.
Notes: These allow you to synchronise variable updates from your main program to any threads running in your program. keyNum is a number from 0 to 3 and represents a ‚Äúkey‚Äù. When another process tries to lock the same key, it will be stalled until the first process has unlocked the same key.

You may need to use these functions to ensure that you get valid data when exchanging data between your main program and a thread –otherwise it,Äôs possible that the thread could wake-up halfway during your data copy and change the data –so the data you end up copying is incomplete, or invalid.

11.1.33 piMakerNames(index as Integer) as string

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Maps maker numbers to names.

11.1.34 piModelNames(index as Integer) as string

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Maps model numbers to names.

11.1.35 pinMode(pin as Integer, mode as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This sets the mode of a pin to either INPUT, OUTPUT, PWM_OUTPUT or GPIO_CLOCK.
Notes: Note that only wiringPi pin 1 (BCM_GPIO 18) supports PWM output and only wiringPi pin 7 (BCM_GPIO 4) supports CLOCK output modes.

This function has no effect when in Sys mode. If you need to change the pin mode, then you can do it with the gpio program in a script before you start your program.

11.1.36 piRevisionNames(index as Integer) as string

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Maps revision numbers to names.

11.1.37 piUnlock(Key as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Unlocks a synchronization lock.
Notes: These allow you to synchronise variable updates from your main program to any threads running in your program. keyNum is a number from 0 to 3 and represents a ‚Äúkey‚Äù. When another process tries to lock the same key, it will be stalled until the first process has unlocked the same key.

You may need to use these functions to ensure that you get valid data when exchanging data between your main program and a thread –otherwise it‚Äôs possible that the thread could wake-up halfway during your

data copy and change the data –so the data you end up copying is incomplete, or invalid.

11.1.38 Processor(Index as Integer) as String

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Queries the process name.
Notes: Looks up processor name in an array.
Index is 0 to 4.

11.1.39 pullUpDnControl(pin as Integer, pud as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This sets the pull-up or pull-down resistor mode on the given pin, which should be set as an input.
Notes: Unlike the Arduino, the BCM2835 has both pull-up an down internal resistors. The parameter pud should be; kPUD_OFF, (no pull up/down), kPUD_DOWN (pull to ground) or kPUD_UP (pull to 3.3v) The internal pull up/down resistors have a value of approximately 50KŒ© on the Raspberry Pi.

This function has no effect on the Raspberry Pi,Äôs GPIO pins when in Sys mode. If you need to activate a pull-up/pull-down, then you can do it with the gpio program in a script before you start your program.

11.1.40 pwmSetClock(divisor as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This sets the divisor for the PWM clock.

11.1.41 pwmSetMode(mode as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: The PWM generator can run in 2 modes –,Äúbalanced,Äù and ,Äúmark:space,Äù.
Notes: The mark:space mode is traditional, however the default mode in the Pi is ,Äúbalanced,Äù. You can switch modes by supplying the parameter: kPWM_MODE_BAL or kPWM_MODE_MS.

11.1.42 pwmSetRange(range as UInt32)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This sets the range register in the PWM generator.
Notes: The default is 1024.

11.1.43 pwmToneWrite(pin as Integer, value as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Writes a tone.

11.1.44 pwmWrite(pin as Integer, value as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Writes the value to the PWM register for the given pin.
Notes: The Raspberry Pi has one on-board PWM pin, pin 1 (BMC_GPIO 18, Phys 12) and the range is 0-1024. Other PWM devices may have other PWM ranges.

This function is not able to control the Pi,Äôs on-board PWM when in Sys mode.

11.1.45 Read(fd as Integer, count as UInt64) as Memoryblock

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Read attempts to read count bytes of data from the object referenced by the descriptor fildes into a buffer.
Notes: Returns the memoryblock on success (if we got more than zero bytes).
Errno is set in case of error.

11.1.46 RP1Model as Integer

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Returns the Raspberry Pi RP1 I/O controller model version (used on Pi 5 and newer).
Notes: Return: Integer code identifying the RP1 revision.
Version: Added in WiringPi Interface v3.14.

11.1.47 serialClose(fd as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Closes the device identified by the file descriptor given.

11.1.48 serialDataAvail(fd as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Returns the number of characters available for reading, or -1 for any error condition, in which case errno will be set appropriately.

11.1.49 serialFlush(fd as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This discards all data received, or waiting to be send down the given device.

11.1.50 serialGetchar(fd as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Returns the next character available on the serial device.
Notes: This call will block for up to 10 seconds if no data is available (when it will return -1)

11.1.51 serialOpen(device as String, Baud as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This opens and initialises the serial device and sets the baud rate.
Notes: It sets the port into ,Äúraw,Äù mode (character at a time and no translations), and sets the read timeout to 10 seconds. The return value is the file descriptor or -1 for any error, in which case errno will be set as appropriate.

11.1.52 serialPutchar(fd as Integer, c as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Sends the single byte to the serial device identified by the given file descriptor.

11.1.53 serialPutData(fd as Integer, data as Memoryblock)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Sends the nul-terminated string to the serial device identified by the given file descriptor.
Notes: This sends text with any encoding.

11.1.54 serialPuts(fd as Integer, text as string)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Sends the nul-terminated string to the serial device identified by the given file descriptor.
Notes: This sends text with UTF-8 encoding.

11.1.55 setPadDrive(group as Integer, value as Integer)

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This sets the ‚Äústrength‚Äù of the pad drivers for a particular group of pins.
Notes: There are 3 groups of pins and the drive strength is from 0 to 7. Do not use this unless you know what you are doing.

11.1.56 setPadDrivePin(pin as Integer, value as Integer)

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Sets the drive strength for a specific GPIO pin.
Notes: Parameters:
pin: GPIO pin number.
value: drive strength (2–16 mA).
Version: Introduced in Interface v3.0.

11.1.57 SetupGpioDevice(PinType as Integer) as Integer

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Initializes WiringPi using the /dev/gpiomem or /dev/mem device interface and the specified pin numbering system.

Notes: pinType: pin numbering mode (kWPI_PIN_WPI, kWPI_PIN_BCM, or kWPI_PIN_PHYS constants).

Returns 0 on success, -1 on failure.

Version: Introduced in Interface v3.3.

Notes:
Preferred for modern Raspberry Pi models using the RP1 I/O controller (Pi 5+).
Provides consistent device-level access with correct pin mappings.

11.1.58 SetupPinType(PinType as Integer) as Integer

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Initializes WiringPi using a specified pin numbering type.
Notes: pinType:

- kWPI_PIN_WPI (WiringPi numbering)
- kWPI_PIN_BCM (Broadcom numbering)
- kWPI_PIN_PHYS (Physical pin numbering)

Return: 0 on success, -1 on failure.
Version: Added in Interface v3.3.
Notes: A flexible initializer replacing older mode-specific setup functions.

11.1.59 SPIDataRW(channel as Integer, data as Memoryblock) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This performs a simultaneous write/read transaction over the selected SPI bus.
Notes: Data that was in your buffer is overwritten by data returned from the SPI bus.

That,Äôs all there is in the helper library. It is possible to do simple read and writes over the SPI bus using the standard read() and write() system calls though –write() may be better to use for sending data to chains of shift registers, or those LED strings where you send RGB triplets of data. Devices such as A/D and D/A converters usually need to perform a concurrent write/read transaction to work.

11.1.60 SPIGetFd(channel as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Queries the file descriptor for a channel.

11.1.61 SPISetup(channel as Integer, speed as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This is the way to initialise a channel (The Pi has 2 channels; 0 and 1).
Notes: The speed parameter is an integer in the range 500,000 through 32,000,000 and represents the SPI clock speed in Hz.

The returned value is the Linux file-descriptor for the device, or -1 on error. If an error has happened, you may use the standard errno global variable to see why.

11.1.62 SPISetupMode(channel as Integer, speed as Integer, mode as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This is the way to initialise a channel (The Pi has 2 channels; 0 and 1).
Notes: The speed parameter is an integer in the range 500,000 through 32,000,000 and represents the SPI clock speed in Hz.

The returned value is the Linux file-descriptor for the device, or -1 on error. If an error has happened, you may use the standard errno global variable to see why.

11.1.63 UserLevelAccess as Integer

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: The user level access.
Notes: Returns:
1 if running under /dev/gpiomem (non-root, limited hardware control).
0 if using full /dev/mem access.

Notes: Complements wiringPiGlobalMemoryAccess(); both indicate runtime privilege mode.

11.1.64 Version(byref major as Integer, byref minor as Integer)

Plugin Version: 25.5, Platform: Linux, Targets: Desktop, Console & Web.

Function: Retrieves the version number of the installed WiringPi library.
Notes: major: filled with the major version number.
minor: filled with the minor version number.

11.1.65 wiringPiSetup as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Initializes the library.
Notes: This initialises wiringPi and assumes that the calling program is going to be using the wiringPi pin numbering scheme. This is a simplified numbering scheme which provides a mapping from virtual pin numbers 0 through 16 to the real underlying Broadcom GPIO pin numbers. See the pins page for a table which maps the wiringPi pin number to the Broadcom GPIO pin number to the physical location on the edge connector.

This function needs to be called with root privileges.

One of the setup functions must be called at the start of your program or your program will fail to work correctly. You may experience symptoms from it simply not working to segfaults and timing issues.

11.1.66 wiringPiSetupGpio as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Initializes the library.
Notes: This is identical to wiringPiSetup, however it allows the calling programs to use the Broadcom GPIO pin numbers directly with no re-mapping.

As above, this function needs to be called with root privileges, and note that some pins are different from revision 1 to revision 2 boards.

One of the setup functions must be called at the start of your program or your program will fail to work correctly. You may experience symptoms from it simply not working to segfaults and timing issues.

11.1.67 wiringPiSetupPhys as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Initializes the library.
Notes: Identical to wiringPiSetup, however it allows the calling programs to use the physical pin numbers on the P1 connector only.

As above, this function needs to be called with root priviliges.

One of the setup functions must be called at the start of your program or your program will fail to work correctly. You may experience symptoms from it simply not working to segfaults and timing issues.

11.1.68 wiringPiSetupSys as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Initializes the library.
Notes: This initialises wiringPi but uses the /sys/class/gpio interface rather than accessing the hardware directly. This can be called as a non-root user provided the GPIO pins have been exported before-hand using the gpio program. Pin numbering in this mode is the native Broadcom GPIO numbers –the same as wiringPiSetupGpio() above, so be aware of the differences between Rev 1 and Rev 2 boards.

Note: In this mode you can only use the pins which have been exported via the /sys/class/gpio interface before you run your program. You can do this in a separate shell-script, or by using the system() function from inside your program to call the gpio program.

Also note that some functions have no effect when using this mode as they,Äôre not currently possible to action unless called with root privileges. (although you can use system() to call gpio to set/change modes if needed)

One of the setup functions must be called at the start of your program or your program will fail to work correctly. You may experience symptoms from it simply not working to segfaults and timing issues.

11.1.69 wpiPinToGpio(wpiPin as Integer) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: This returns the BCM_GPIO pin number of the supplied wiringPi pin.
Notes: It takes the board revision into account.

11.1.70 Write(fd as Integer, data as Memoryblock) as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Write to a file descriptor.
Notes: Write attempts to write bytes to the object referenced by the descriptor fildes from the memoryblock pointed to by data.
Upon successful completion the number of bytes which were written is returned. Otherwise, a -1 is returned and the global variable errno is set to indicate the error.

11.1.71 Properties

11.1.72 ErrNo as Integer

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: The last error code from the underlaying linux functions.
Notes: must be called directly after a function to have the result from that function.
Calling any other function including writing a debug log, may cause this value to be reset.
(Read only property)

11.1.73 LoadError as String

Plugin Version: 15.3, Platform: Linux, Targets: Desktop, Console & Web.

Function: Returns the last load error.
Notes: (Read only property)

11.1.74 Constants

Constants

Constant	Value	Description
kHIGH	1	The constant for high value.
kLOW	0	The constant for low value.

Pin Modes

Constant	Value	Description
kGPIO_CLOCK	3	Configures the pin as a clock output driven by the GPIO hardware clock.
kINPUT	0	Sets the pin as a digital input, used to read HIGH or LOW signals.
kOUTPUT	1	Sets the pin as a digital output, used to write HIGH or LOW signals.
kPM_OFF	7	Resets the pin to input mode, effectively turning off or releasing the line.
kPWM_BAL_OUTPUT	9	Configures PWM in balanced mode, distributing on/off times evenly for certain applications.
kPWM_MS_OUTPUT	8	Configures PWM in mark-space (traditional) mode for stable duty cycles.
kPWM_OUTPUT	2	PWM Output
kPWM_TONE_OUTPUT	6	Tone Output
kSOFT_PWM_OUTPUT	4	Enables software-driven PWM output, useful when hardware PWM is unavailable.
kSOFT_TONE_OUTPUT	5	Enables software-generated square wave tones on the pin.

GPIO Layouts

Constant	Value	Description
kGPIO_LAYOUT_DEFAULT	2	Default
kGPIO_LAYOUT_PI1_REV1	1	Pi 1 A/B Revision 1, 1.1, CM

Interrupt Levels

Constant	Value	Description
kINT_EDGE_BOTH	3	Both
kINT_EDGE_FALLING	1	Failing
kINT_EDGE_RISING	2	Rising
kINT_EDGE_SETUP	0	Setup

Models

Constant	Value	Description
kPI_ALPHA	5	Early pre-production prototype board (,ÄúAlpha,Äù) used for internal testing.
kPI_MODELS_MAX	27	Maximum number of recognized Raspberry Pi model identifiers.
kPI_MODEL_2	4	Raspberry Pi 2 Model B —upgraded to a quad-core CPU and 1GB RAM.
kPI_MODEL_3AP	14	Raspberry Pi 3 Model A+ —smaller version of 3B+ with fewer ports but same CPU.
kPI_MODEL_3B	8	Raspberry Pi 3 Model B —integrated Wi-Fi, Bluetooth, and a faster 64-bit processor.
kPI_MODEL_3BP	13	Raspberry Pi 3 Model B+ —improved networking, CPU speed, and thermal performance.
kPI_MODEL_400	19	Raspberry Pi 400 —keyboard-integrated Pi based on Pi 4 hardware.
kPI_MODEL_4B	17	Raspberry Pi 4 Model B —major upgrade with USB 3.0, dual HDMI, and up to 8GB RAM.
kPI_MODEL_5	23	Raspberry Pi 5 —next-generation model with significant performance and I/O improvements.
kPI_MODEL_500	25	Raspberry Pi 500 —all-in-one keyboard computer version of the Pi 5.
kPI_MODEL_A	0	Original Raspberry Pi Model A —early, low-cost version with fewer USB ports and no Ethernet.
kPI_MODEL_AP	2	Raspberry Pi Model A+ —improved power efficiency and smaller form factor than Model A.
kPI_MODEL_B	1	Original Raspberry Pi Model B —added more RAM, Ethernet, and extra USB ports.
kPI_MODEL_BP	3	Model BP
kPI_MODEL_CM	6	Compute Module (CM1) —compact version designed for embedded applications.
kPI_MODEL_CM3	10	Compute Module 3 —based on Raspberry Pi 3 architecture for embedded systems.
kPI_MODEL_CM3P	16	Compute Module 3+ —enhanced version of CM3 with improved thermal management.
kPI_MODEL_CM4	20	Compute Module 4 —modular version of Pi 4 for embedded use with eMMC and I/O flexibility.
kPI_MODEL_CM4S	21	Compute Module 4S —variant of CM4 compatible with CM3 form factor for easier upgrades.
kPI_MODEL_CM5	24	Compute Module 5 —embedded variant of Raspberry Pi 5.
kPI_MODEL_CM5L	26	Compute Module 5 Lite —cost-reduced version of CM5 without onboard eMMC storage.
kPI_MODEL_ZERO	9	Raspberry Pi Zero —ultra-small, low-cost version with minimal connectivity.
kPI_MODEL_ZERO_2W	18	Raspberry Pi Zero 2 W —upgraded Zero with quad-core CPU and wireless connectivity.
kPI_MODEL_ZERO_W	12	Raspberry Pi Zero W —Zero with built-in Wi-Fi and Bluetooth.

Makers

Constant	Value	Description
kPI_MAKER_EGOMAN	1	Egoman
kPI_MAKER_EMBEST	2	Indicates the board was made by Embest (another authorized producer of Pi boards).
kPI_MAKER_SONY	0	Indicates the board was manufactured by Sony (the primary official manufacturer).
kPI_MAKER_UNKNOWN	3	Used when the manufacturer cannot be identified from the board,Äôs revision code.

Versions

Constant	Value	Description
kPI_VERSION_1	0	Identifies the original Raspberry Pi Model 1 (revision 1) board version.
kPI_VERSION_1_1	1	Identifies Raspberry Pi Model 1 revision 1.1, with minor hardware updates.
kPI_VERSION_1_2	2	Identifies Raspberry Pi Model 1 revision 1.2, which added mounting holes and other small changes.
kPI_VERSION_2	3	Identifies Raspberry Pi 2 or later generation boards with upgraded CPU and memory.

Pull Up/Down

Constant	Value	Description
kPUD_DOWN	1	pull to ground
kPUD_OFF	0	no pull up/down
kPUD_UP	2	pull to 3.3v

PWM Modes

Constant	Value	Description
kPWM_MODE_BAL	1	Balanced
kPWM_MODE_MS	0	Mark:Space

wiringPi modes

Constant	Value	Description
kWPI_MODE_GPIO	1	Uses Broadcom (BCM) GPIO pin numbering as used by the SoC.
kWPI_MODE_GPIO_DEVICE_BCM	5	Uses BCM numbering but through the /dev/gpiomem or /dev/mer interface.
kWPI_MODE_GPIO_DEVICE_PHYS	7	Uses physical pin numbering through the GPIO device interface.
kWPI_MODE_GPIO_DEVICE_WPI	6	Uses WiringPi pin numbering through the GPIO device interface.
kWPI_MODE_GPIO_SYS	2	(Deprecated since 3.2) Used system GPIO interface via /sys/class/ access without root.
kWPI_MODE_PHYS	3	Uses the physical pin numbers on the Raspberry Pi header (1–40).
kWPI_MODE_PIFACE	4	Configures access to the PiFace Digital I/O board.
kWPI_MODE_PINS	0	Uses WiringPi,Äôs own pin numbering scheme (0–16), unique to the l
kWPI_MODE_UNINITIALISED	-1	Indicates that WiringPi has not been initialized or that no mode has yet.

Pin Numbering System

Constant	Value	Description
kWPI_PIN_BCM	1	Refers to the Broadcom (BCM) GPIO numbering used by the Raspberry Pi SoC.
kWPI_PIN_PHYS	3	Refers to the physical pin numbers on the Raspberry Pi,Äôs 40-pin GPIO header.
kWPI_PIN_WPI	2	Refers to the WiringPi,Äôs own internal pin numbering scheme.