REFERENCE POSTER

# TestStand™ API

TestStand provides a comprehensive ActiveX API for building sophisticated test management systems and other sequencing applications. Use the TestStand API to read and write data from TestStand properties, including TestStand sequences and steps, or to create and control sequence executions. You can use the TestStand API from any software development environment that supports access to ActiveX automation servers.

**Note** National Instruments strongly recommends using the TestStand User Interface (UI) Controls for writing TestStand applications, such as operator interfaces. For more information about the TestStand UI Controls, refer to the *TestStand Help* and the *TestStand User Interface Controls Reference Poster.*

This poster is a reference tool. You should familiarize yourself with the information presented in the *TestStand System and Architecture Overview Card* and in *Using TestStand* to gain a better understanding of API concepts. Refer to the *TestStand Help* for a complete description of the classes, properties, methods, and events listed on this poster.

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NATIONAL INSTRUMENTS™

## Legend

| | |
|---|---|
| **Object** | A programmable software component representing an instance of a class. You interact with the object using the properties, methods, and events that the class defines. |
| **Property** | A container of information, which stores and maintains a setting or attribute of an object. A property can contain a single value, an array of values of the same type, or no value at all. |
| **(Read Only)** | Properties that can be read but not changed. |
| **Method** | Performs an operation or function on an object.<br>**Note** Some properties and methods from previous versions of TestStand are obsolete in TestStand 3.0 and are not listed on this poster. Although obsolete methods and properties are supported in TestStand 3.0, National Instruments recommends that you update your files to reflect these changes and to ensure backwards compatibility with future versions of TestStand. Refer to the *Obsolete* topics in the *TestStand Help* for a list of suggested new properties and methods to use. |
| **Event** | Method that an object invokes to inform a client application of a status or state change. |
| **Collection** | An object that contains zero or more objects of the same class. |
| ***(Collection class)*** **(Class)** | Denotes a class that has a corresponding collection class. The top (lighter) box represents the collection. The lower (darker) box represents the type of object the collection contains. |
| PropertyObject / *(class)* | Denotes inheritance or the classes that the class can inherit from. |
| - - - - - - - - - - - - - - - | Indicates a grouping of classes that are commonly used together. |

## Execution Classes

Use the Execution classes to control and get information about executions. The Execution class contains all the information the TestStand Engine needs to run a sequence, its steps, and any other TestStand sequences it calls. The Report class contains report text for an execution, the report format, and location information.

The Thread class maintains a call stack. The SequenceContext class contains information about the execution at a particular call stack level. Use the EditArgs and InteractiveArgs classes to pass information about the current state of the client application to a new execution. The Interactive Context class contains information about a nested interactive execution.

### Execution

**Base Class**

PropertyObject → Execution

**Properties**
BreakOnEntry (Read Only)
ClientFile
DisableResults
DisplayName (Read Only)
ErrorObject (Read Only)
ForegroundThread
ForegroundThreadIndex
Id (Read Only)
InInteractiveMode (Read Only)
ModelSequenceFilePath (Read Only)
NumThreads (Read Only)
Report (Read Only)
ResultObject (Read Only)
ResultStatus
RTEOptionForThisExecution
RunTimeVariables (Read Only)
SecondsAtStart (Read Only)
SecondsExecuting (Read Only)
SecondsSuspended (Read Only)
SequenceFilePath (Read Only)
StandardResultsEnabled
StartCount (Read Only)
TimeResultsEnabled
TracingDisabled
TypeMask (Read Only)

**Methods**
Abort
AddExtraResult
AddPostStepCustomUIMessage
AsPropertyObject
Break
CancelTermination
ClearExtraResultList
ClearTemporaryBreakpoints
DeleteExtraResult
EnableCallback
GetFileGlobals
GetModelSequenceFile
GetSequenceFile
GetStates
GetTerminationMonitorStatus
GetThread
InitTerminationMonitor
IsCallbackEnabled
RemovePostStepCustomUIMessage
RestartEx
Resume
StepInto
StepOut
StepOver
Terminate
TerminateInteractiveExecution
WaitForEndEx

### SequenceContext

**Base Class**

PropertyObject → SequenceContext

**Properties**
ApplicationIsEditor (Read Only)
Caller (Read Only)
CallerDiscardsResults (Read Only)
CallStackDepth (Read Only)
CallStackName (Read Only)
Engine (Read Only)
EngineAsDispatch (Read Only)
ErrorReported
Execution (Read Only)
FileGlobals (Read Only)
GotoCleanup
Id (Read Only)
InInteractiveMode (Read Only)
InteractiveContext (Read Only)
IsProcessModel (Read Only)
Locals (Read Only)
LoopIndex
LoopNumFailed
LoopNumIterations
LoopNumPassed
Main (Read Only)
NextStep (Read Only)
NextStepIndex
Parameters (Read Only)
PreviousStep (Read Only)
PreviousStepIndex
ProcessModelClient (Read Only)
Report (Read Only)
Root (Read Only)
SelectedExecution (Read Only)
SelectedFile (Read Only)
SelectedPropertyObjectFile (Read Only)
SelectedPropertyObjects (Read Only)
SelectedSequences (Read Only)
SelectedStepGroup
SelectedSteps (Read Only)
Sequence (Read Only)
SequenceErrorCode
SequenceErrorMessage
SequenceErrorOccurred
SequenceFailed
SequenceFile (Read Only)
SequenceIndex (Read Only)
StationGlobals (Read Only)
Step (Read Only)
StepGroup
StepGroupStartedInteractiveExe (Read Only)
StepIndex
Thread (Read Only)
Tracing

**Methods**
AddToBatch
AsPropertyObject
ClearCurrentRTE
ClearTemporaryBreakpoint
DoInteractiveExecution
GetSequenceContext
PostUIMessageEx
Resume
SetBatchRTEOption
SetStepInto
SetStepOut
SetStepOver
WaitForEnd

### Report

**Base Classes**

PropertyObject → Report

**Properties**
All (Read Only)
Format
Id (Read Only)
IsEmpty (Read Only)
LatestAppendIndex (Read Only)
Location
ResetCount (Read Only)
StyleSheetPath
TempFileDirectory

**Methods**
Append
AsPropertyObject
GetSection
GetTempFile
LaunchViewer
Load
Reset
Save

### Thread

**Base Class**

PropertyObject → Thread

**Properties**
Batch (Read Only)
CallStackSize (Read Only)
DisplayName (Read Only)
Execution (Read Only)
ExternallySuspended
Id (Read Only)
RunTimeVariables (Read Only)
UniqueThreadId (Read Only)

**Methods**
AddToBatch
AsPropertyObject
ClearCurrentRTE
ClearTemporaryBreakpoint
DoInteractiveExecution
GetSequenceContext
PostUIMessageEx
Resume
SetBatchRTEOption
SetStepInto
SetStepOut
SetStepOver
WaitForEnd

### EditArgs

**Base Classes**

PropertyObject → EditArgs

**Properties**
**Note** This class has no properties.

**Methods**
AddSelectedPropertyObject
AddSelectedSequence
AddSelectedStep
AsPropertyObject
ClearSelectedPropertyObjects
ClearSelectedSequences
ClearSelectedSteps
SetSelectedExecution
SetSelectedPropertyObjectFile
SetSelectedSequenceFile
SetSelectedStepGroup

### InteractiveArgs

**Base Classes**

PropertyObject → InteractiveArgs

**Properties**
LoopCount
NumSteps (Read Only)
Sequence
StepGroup
StopExpression

**Methods**
AddStepIndex
AsPropertyObject
ClearStepList
ContainsStep
GetStepIndex

### InteractiveContext

**Base Classes**

PropertyObject → InteractiveContext

**Properties**
IsRootExecution (Read Only)
SavedNextStepIndex (Read Only)
SavedPreviousStepIndex (Read Only)
SavedStepIndex (Read Only)

**Method**
AsPropertyObject

## Engine Classes

Use the Engine class to create and access objects of other classes, control executions, display built-in dialog boxes, implement a Tools menu, find files and directories, and invoke various utilities. Use the StationOptions class to set preferences for your TestStand station. Use the UIMessage class to pass information to the client application about the state of the engine and the current executions. Use the WatchExpression class to monitor changes in variable and property values during an execution.

### Engine

**Properties**
ApplicationIsEditor
AppMainHwnd
BinDirectory (Read Only)
ComputerName (Read Only)
ConfigDirectory (Read Only)
ConfigFile (Read Only)
CurrentUser
CurrentWorkspaceFile
DefaultAdapter
DefaultAdapterIndex
ExternalReportViewers (Read Only)
FileDialogDirHistoryList
Globals (Read Only)
GlobalsFile (Read Only)
Images (Read Only)
IsRemote
IsUIMessageQueueEmpty (Read Only)
LargeImageList (Read Only)
LastWorkspacePath
LicenseType (Read Only)
MajorVersion (Read Only)
MasterEngine
MinorVersion (Read Only)
NumAdapters (Read Only)
NumImages (Read Only)
PersistBreakpoints
PersistWatchExpressions
RevisionVersion (Read Only)
SearchDirectories (Read Only)
SecondsSince1970UniversalCoordinatedTime (Read Only)
SecondsSinceStart (Read Only)
SmallImageList (Read Only)
StationOptions (Read Only)
TemporaryGlobals (Read Only)
TestStandDirectory (Read Only)
UIMessagePollingEnabled
UniqueEngineId (Read Only)
UsersFile (Read Only)
VersionString (Read Only)
WatchExpressionsEnabled

**Methods**
AbortAll
AddImage
BreakAll
CallFromEndCallbackEx
CanCreateStep
CheckExpression
CheckExprSyntax
CommitGlobalsToDisk
CopyPropertyObject
CreateNewUniqueStepIds
CreateTempFile
CurrentUserHasPrivilege
DelocalizeExpression
DisplayAdapterConfigDialog
DisplayBreakpointDialog
DisplayBrowseExprDialogEx
DisplayBrowsePropertyObjectDialog
DisplayEditBreakAndWatchDialog
DisplayEditNumericFormatDialog
DisplayEditPathsInFilesDialog
DisplayEditUserDialog
DisplayExpressionEditOptionsDialog
DisplayExternalViewerDialog
DisplayFileDialog
DisplayHelpFile
DisplayHelpTopic
DisplayLoginDialog
DisplayLoopOnStepsDialog
DisplayMessageBox
DisplayNewUserDialog
DisplayOptionsDialog
DisplayPreconditionDialog
DisplayRunTimeErrorDialogEx
DisplaySearchDirDialog
DisplaySeqFilePropDialog
DisplaySequenceFileCallbacksDialog
DisplaySequencePropDialog
DisplayStepPropDialog
DisplayStepTypeMenuEditorEx
DisplayToolMenuDialog
DisplayWorkspaceBrowserDialog
FindFile
FindPath
GetAdapter
GetAdapterByKeyName
GetEditTimeToolMenuItems
GetErrorString
GetImageIndex
GetImageName
GetInsertStepMenuStructure
GetInsertVariableMenuStructure
GetInternalOption
GetLicenseDescription
GetLocalizedDecimalPoint
GetProductRegistrationInfo
GetResourceString
GetResourceSymbols
GetRunTimeToolMenuItems
GetSequenceFileEx
GetStationModelSequenceFile
GetSyncManager
GetTypeDefinition
GetTypeNames
GetTypePaletteFileList
GetTypeUsageLocations
GetUIMessage
GetUser
GetUserProfile
GetWatchExpressions
GetWatchExpressionsChangeCount
IsCurrentSequenceFileVersion
LaunchExternalViewer
LoadTypePaletteFileEx
LocalizeExpression
NewDataType
NewEditArgs
NewEditContext
NewExecution
NewExpression
NewHierarchicalExecution
NewInteractiveArgs
NewPropertyObject
NewPropertyObjectFile
NewSequence
NewSequenceFile
NewStep
NewStepType
NewTypeUsageList
NewUser
NewWorkspaceFile
NotifyEndOfModalDialog
NotifyStartOfModalDialogEx
OpenWorkspaceFile
PostUIMessage
RegisterModalWindow
RegisterUIMessage
RegisterUIMessageCallback
ReleaseSequenceFileEx
ReloadGlobals
ReloadStringResourceFiles
ResetTypeInstances
SaveAllModifiedSeqFiles
SearchFiles
SerializeObjects
SetInternalOption
SetLocationForNextDialog
SetProductRegistrationInfo
SetTypePaletteFileList
ShouldAutoLaunchExternalReportViewer
ShutDown
TerminateAll
UnloadAllModules
UnloadTypePaletteFiles
UnregisterModalWindow
UnserializeObjects
UnserializeObjectsAndTypes
UserNameExists
WriteToolMenuToDisk

**Event**
UIMessageEvent

### StationOptions

**Properties**
AllowAllUsersAccessFromRemoteMachine
AllowOtherModels
AllowSequenceCallsFromRemoteMachine
AlwaysGotoCleanupOnFailure
AutoLoginSystemUser
BreakpointsEnabled
CheckOutFilesWhenEdited
CheckOutOnlySelectedFiles
DisableResults
EnableUserPrivilegeChecking
ExecutionMask
InteractiveBranchMode
InteractiveExePropagateStatus
Language
PromptToFindFiles
PromptWhenAddingFilesToSC
RecognizeMBCchars
ReloadDocsWhenOpeningWorkspace
ReloadWorkspaceAtStartup
RequireUserLogin
RTEOption
SeeFileVersionAutoIncrementOpt
ShowEngineTrayIconOnRemoteStations
ShowHiddenProperties
SpecifyStopsByUniqueIdInExpressions
StationID
StationModelSequenceFilePath
SystemDefaultSourceCodeControlProvider
TracingEnabled
TypeVersionAutoIncrementOpt
TypeVersionAutoIncrementPromptOpt
UIMessageDelay
UIMessageMinDelay
UseDialogForCheckOut
UseLocalizedDecimalPoint
UserFilePath
UseStationModel

**Methods**
GetLanguages
GetTimeLimit
GetTimeLimitAction
GetTimeLimitEnabled
SetTimeLimit
SetTimeLimitAction
SetTimeLimitEnabled

### SearchDirectories / SearchDirectory

**Properties**
Disabled
ExcludeFileExtension
FileExtensionRestrictions
Path
SearchSubdirectories
Type (Read Only)

**Methods**
**Note** This class has no methods.

### UIMessage

**Base Classes**

PropertyObject → UIMessage

**Properties**
ActiveXData (Read Only)
Event (Read Only)
Execution (Read Only)
IsSynchronous (Read Only)
NumericData (Read Only)
StringData (Read Only)
Thread (Read Only)

**Methods**
Acknowledge
AsPropertyObject

### TypeUsageList

**Properties**
ChangeCount (Read Only)
NumTypes (Read Only)

**Methods**
AddUsedTypes
GetIsTypeAttachedToFile
GetTypeDefinition
GetTypeIndex
InsertType
MoveType
RemoveType
SetIsTypeAttachedToFile
Union
ValidateNewTypeName

### ExternalReportViewers / ExternalReportViewer

**Properties**
Arguments
AutoLaunch
Format
Path

**Methods**
**Note** This class has no methods.

### Expression

**Properties**
NumTokens (Read Only)
Text

**Methods**
Evaluate
GetToken
Tokenize
Validate

### WatchExpressions / WatchExpression

**Properties**
BreakpointType
ClientSequenceFile
ExecutionScope
Expression
NumericFormat
SequenceFileScope
SequenceScope
UniqueWatchId (Read Only)
UseScopingContext

**Methods**
BreakpointTriggered
DisplayConfigurationDialog
Evaluate
GetScopingContext

### SelectedBreakpointItem

**Properties**
SequenceFile (Read Only)
SequenceName (Read Only)
StepGroup (Read Only)
StepId (Read Only)

**Method**
IsEndSelected

### RunTimeMenuItems / RunTimeMenuItem

**Properties**
EditsSelectedFile (Read Only)
ItemEnabled (Read Only)
SeparatorBefore (Read Only)
SubMenuItems (Read Only)
Text (Read Only)

**Method**
InvokeItem

### EditTimeMenuItems / EditTimeMenuItem

**Properties**
CommandArguments
CommandInitialDirectory
CommandPath
Editable
EditsSelectedFile
EnabledExpression
HiddenExpression
ItemTextExpression
SeparatorBefore
SequenceFilePath
SequenceName
SubMenuItems (Read Only)
Type

**Methods**
**Note** This class has no methods.

## PropertyObject Class

Use the PropertyObject class to manipulate and access the values of variables and properties of other classes. Use the AsPropertyObject method on a class that derives from the PropertyObject class to obtain the PropertyObject interface for that class. Typically, you use the PropertyObject class to get or set the values of custom step properties, sequence local variables, sequence file global variables, and station global variables.

### PropertyObject

**Properties**
ArrayElementPrototype
CanAddSubProperty (Read Only)
Comment
IsRootTypeDefinition (Read Only)
IsTypeDefinition (Read Only)
Name
NumericFormat
Parent (Read Only)
TypeCategory (Read Only)
TypeLastModified (Read Only)
TypeMinimumTestStandVersion
TypeVersion

**Methods**
Clone
ContainsTypeInstance
DeleteElements
DeleteSubProperty
DisplayArrayBoundsDialog
DisplayFlagsDialog
DisplayPropertiesDialog
EvaluateEx
Exists
GetArrayIndex
GetArrayOffset
GetDimensions
GetDisplayNames
GetFlags
GetFormattedValue
GetInstanceDefaultFlags
GetInstanceOverrideFlags
GetLocation
GetNthSubPropertyName
GetNumElements
GetNumSubProperties
GetPropertyObject
GetPropertyObjectByOffset
GetStructureChangeCount
GetSubPropertyIndex
GetType
GetTypeDefinition
GetTypeDisplayString
GetTypeFlags
GetValBoolean
GetValBooleanByOffset
GetValDispatch
GetValDispatchByOffset
GetValInterface
GetValInterfaceByOffset
GetValNumber
GetValNumberByOffset
GetValString
GetValStringByOffset
GetValVariant
GetValVariantByOffset
GetXML
InsertSubProperty
IsAliasObject
IsEqualTo
NewSubProperty
ReadEx
Search
Serialize
SetDimensions
SetFlags
SetInstanceDefaultFlags
SetInstanceOverrideFlags
SetNthSubPropertyName
SetNumElements
SetPropertyObject
SetPropertyObjectByOffset
SetSubPropertyIndex
SetTypeFlags
SetValBoolean
SetValBooleanByOffset
SetValDispatch
SetValDispatchByOffset
SetValInterface
SetValInterfaceByOffset
SetValNumber
SetValNumberByOffset
SetValString
SetValStringByOffset
SetValVariant
SetValVariantByOffset
UnserializeEx
ValidateNewElementName
ValidateNewName
ValidateNewSubPropertyName
Write

### PropertyObjectFile

**Base Classes**

PropertyObject → PropertyObjectFile

**Properties**
ChangeCount (Read Only)
Comment
ContentType
Data
DisplayName
EditPrivilege
FileSection
FileType (Read Only)
FileTypeDescription
Id (Read Only)
IsDiskFileModified (ReadOnly)
IsDiskFileReadOnly (Read Only)
IsModified (Read Only)
IsModifiedByUser (Read Only)
OpenStatus
Path
TypeUsageList (Read Only)
Version

**Methods**
AsPropertyObject
CheckForModifiedTypes
HandleTypeConflicts
IncChangeCount
ReadFile
SaveFileIfModified
WriteFile

### SequenceFile

**Base Classes**

PropertyObject → PropertyObjectFile → SequenceFile

**Properties**
BatchSyncOption
CanUnload (Read Only)
ChangeCount (Read Only)
FileGlobalsDefaultValues (Read Only)
HasModel (Read Only)
Id (Read Only)
IsExecuting (Read Only)
ModelOption
ModelPath
ModuleLoadOption
ModuleUnloadOption
NumSequences (Read Only)
Path
SequenceFileType
UnloadCallbackEnabled

**Methods**
AsPropertyObject
AsPropertyObjectFile
CreateCallbackOverrideSequence
DeleteSequence
GetModelAbsolutePath
GetModelCallbackNames
GetModelSequenceFile
GetReservedCallbackNames
GetSequence
GetSequenceByName
GetSequenceIndex
InsertSequenceEx
LoadModules
NewEditContext
RemoveSequence
Save
SequenceNameExists
UnloadModules

### Sequence

**Base Classes**

PropertyObject → Sequence

**Properties**
AllowInteractiveExecutionOfEntryPoint
CopyStepsOnOverride
DisableResults
EntryPointCheckToSaveTitledSeqFiles
EntryPointEnabledExpression
EntryPointIgnoreClient
EntryPointInitiallyHidden
EntryPointMenuHint
EntryPointNameExpression
GotoCleanupOnFailure
Locals (Read Only)
Name
OptimizeNonReentrantCalls
Parameters (Read Only)
SequenceFile (Read Only)
ShowEntryPointForAllWindows
ShowEntryPointForEditorOnly
ShowEntryPointForExeWindow
ShowEntryPointForFileWindow
Type

**Methods**
AsPropertyObject
CreateNewUniqueStepIds
DeleteStep
EvalEntryPointEnabledExpressionEx
EvalEntryPointNameExpressionEx
GetBreakOnEndSettings
GetEffectiveType
GetEntryPointMenuFromHint
GetNumSteps
GetStep
GetStepByName
GetStepByUniqueId
GetStepIndex
InsertStep
LoadModules
RemoveStep
SetBreakOnEndSettings
StepNameExists
UnloadModules

### UsersFile

**Base Class**

PropertyObject → PropertyObjectFile → UsersFile

**Properties**
UserList
UserProfileList

**Methods**
AsPropertyObjectFile
ReloadFromDisk

### User

**Base Class**

PropertyObject → User

**Properties**
FullName
LoginName
Password
Privileges (Read Only)

**Methods**
AsPropertyObject
HasPrivilege
ValidatePassword

### WorkspaceFile

**Base Classes**

PropertyObject → PropertyObjectFile → WorkspaceFile

**Properties**
IsConnectedToSCProvider (Read Only)
OptionsFile (Read Only)
ProviderName (Read Only)
RootWorkspaceObject (Read Only)

**Methods**
AsPropertyObjectFile
DisplayAddFileToWorkspaceDialog
FindWorkspaceObject
RunSourceControlProvider
SaveWorkspaceAndProjectFiles

### WorkspaceObject

**Base Classes**

PropertyObject → WorkspaceObject

**Properties**
CodeModuleSeqFilePath
DisplayName
FileExists (Read Only)
IsCodeModule (Read Only)
LastSourceControlMessages (Read Only)
NumContainedObjects (Read Only)
ObjectType (Read Only)
Path
ProjectFile (Read Only)
SourceControlStatus (Read Only)

**Methods**
AsPropertyObject
CanDoSourceControlCommand
DoSourceControlCommand
GetAbsolutePath
GetContainedObject
GetParentContainer
InsertCodeModules
InsertObject
NewFile
NewFolder
RemoveObject
UpdateStatus

## Step Classes

The StepType class represents step types, while the Step class represents steps in sequences. Every step is an instance of a step type. A StepType object defines default properties and values as well as standard behaviors for each step of that type. A Step object defines the code module to call, required preconditions, looping and switching requirements, and failure and error handling instructions.

### StepType

**Base Classes**

PropertyObject → StepType

**Properties**
BatchSyncOption
CanSpecifyModule (Read Only)
CustomActionExpression
CustomFailseAction
CustomFailseActionTargetByExpr
CustomTrueAction
CustomTrueActionTargetByExpr
DefaultNameExpr
DescriptionExpr
DesignatedAdapter (Read Only)
DimmablePropertyKeyNames (Read Only)
EvalPrecondForInteractiveExecution
FailAction
FailActionTargetByExpr
IconName
IgnoreRTE
LoopIncExpression
LoopInitExpression
LoopStatusExpression
MenuGroupName
MenuIcon (Read Only)
MenuIconIndex (Read Only)
MenuItemNameExpr
Module (Read Only)
ModuleLoadOption
ModuleUnloadOption
MutexNameOrRefExpr
Name
NumSubsteps (Read Only)
PassAction
PassActionTargetByExpr
PostExpression
PreExpression
RecordLoopIterationResults
RecordResult
RunMode
StatusExpression
StepFailCausesSequenceFail
UseMutex
WindowActivation

**Methods**
AddSubstep
AsPropertyObject
ChangeDesignatedAdapter
CreateCombinedStepType
DimProperty
GetDefaultName
GetDimmablePropertyDisplayName
GetSubstep
IsPropertyDimmed
RemoveSubsteps
SpecifyModule
SwapSubsteps

### Step

**Base Classes**

PropertyObject → Step

**Properties**
AdapterKeyName (Read Only)
BatchSyncOption
CancelCurrentExecution
CancelStepCallback
CanCreateCode (Read Only)
CanEditCode (Read Only)
CanSpecifyModule (Read Only)
CausedSequenceFailure
CurrentLoopResult (Read Only)
CustomActionExpression
CustomFalseAction
CustomFalseActionTargetByExpr
CustomTrueAction
CustomTrueActionTargetByExpr
EditAsReadOnly
EvalPrecondForInteractiveExecution
FailAction
FailActionTargetByExpr
IconName (Read Only)
IgnoreRTE
IsSequenceCall (Read Only)
LargeIcon (Read Only)
LargeIconIndex (Read Only)
LastStepResult (Read Only)
LoopIncExpression
LoopInitExpression
LoopStatusExpression
LoopType
LoopWhileExpression
Module (Read Only)
ModuleLoadOption
ModuleUnloadOption
MutexNameOrRefExpr
Name
PassAction
PassActionTargetByExpr
PostExpression
Precondition
PreExpression
RecordLoopIterationResults
RecordResult
ResultStatus
Sequence (Read Only)
SmallIcon (Read Only)
SmallIconIndex (Read Only)
StatusExpression
StepFailCausesSequenceFail
StepGroup (Read Only)
StepIndex (Read Only)
StepType (Read Only)
UniqueStepId (Read Only)
UseMutex
WindowActivation

**Methods**
AsPropertyObject
CanChangeAdapter
CanChangeStepType
CanExecuteSubstep
ChangeAdapter
ChangeStepType
CreateCode
CreateNewUniqueStepId
EditCode
ExecuteSubstep
GetBreakSettings
GetDescriptionEx
GetEditSubstepMenuStructure
GetExecutionFlowString
GetResultStatusDisplayString
GetRunModeEx
LoadModule
SetBreakSettings
SetRunModeEx
SpecifyModule
UnloadModule

## Adapter Base Classes

The adapter-specific and module-specific classes derive from the Adapter and Module base classes. Use the Adapter base class to set basic configuration information and to obtain display names and icons associated with an adapter. Use the Module base class to perform adapter-specific operations associated with a step, such as specifying, creating, editing, and loading/unloading code modules.

### Adapter

**Base Classes**

PropertyObject → Adapter

**Properties**
DisplayName (Read Only)
Hidden
IconName (Read Only)
IsConfigurable (Read Only)
KeyName (Read Only)
LargeIcon (Read Only)
LargeIconIndex (Read Only)
ShowArgsInStepDescription
SmallIcon (Read Only)
SmallIconIndex (Read Only)

**Methods**
AsPropertyObject
Configure

### Module

**Base Classes**

PropertyObject → Module

**Properties**
Adapter (Read Only)
CanCreateCode (Read Only)
CanEditCode (Read Only)
CanSpecify (Read Only)
Step (Read Only)

**Methods**
AsPropertyObject
CreateCode
EditCode
GetDescription
Load
Specify
Unload

## Adapter-Specific Classes

The adapter-specific classes include classes that represent module adapters, code modules that adapters call, and parameters that code modules require. Use the adapter-specific classes to configure and obtain information about each specific adapter. Use the module-specific classes to specify which code module to call and to obtain the list of parameters. Use the parameter-specific classes to specify the type, direction, and expression value of a parameter.

### DotNetAdapter

**Base Classes**

PropertyObject → Adapter → DotNetAdapter

**Properties**
**Note** This class has no properties.

**Methods**
AsAdapter
GetExcludedFromStructure
GetStructureMemberLabel
GetStructurePassingEnabled
SetExcludedFromStructure
SetStructureMemberLabel
SetStructurePassingEnabled

### DotNetModule

**Base Classes**

PropertyObject → Module → DotNetModule

**Properties**
ClassName
ClassReference
ConstructorIndex
ConstructorParameters (Read Only)
CreateObject
DisposeObject
MemberFlags
MemberIndex
MemberName
MemberType
Parameters (Read Only)
RemoteHost
SpecifyHostByExpression
UseStepLoadOptions

**Methods**
AsModule
GetAssembly
LoadConstructorInfo
LoadMemberInfo
SetAssembly

### DotNetParameters / DotNetParameter

**Base Class**

PropertyObject → DotNetParameter

**Properties**
DefaultValue (Read Only)
Direction (Read Only)
DisplayType (Read Only)
DisposeObject
Elements (Read Only)
Flags (Read Only)
ParameterName (Read Only)
Type (Read Only)
UseDefaultValue
ValueExpr

**Method**
AsPropertyObject

### HTBasicAdapter

**Base Classes**

PropertyObject → Adapter → HTBasicAdapter

**Properties**
DefaultWorkingDirectory
DevelopmentServerPath
RunTimeServerPath
SpecWorkingDirectoryPath
UseDevelopmentServer

**Method**
AsAdapter

### HTBasicModule

**Base Classes**

PropertyObject → Module → HTBasicModule

**Properties**
ShowHTBasicApp
SubroutineFilePath
SubroutineName
WorkingDirectory
WorkingDirectorySpecifiedPath

**Method**
AsModule

## Common C Adapter Classes

The module and parameter classes for the LabWindows™/CVI™ and C/C++ DLL Adapters derive from the Common C Adapter classes. Use these classes to set and get information about the C-style adapters, code modules, and parameters.

### DllAdapter

**Base Classes**

PropertyObject → Adapter → CommonCAdapter → DllAdapter

**Properties**
**Note** This class has no properties.

**Methods**
AsAdapter
AsCommonCAdapter

### DllModule

**Base Classes**

PropertyObject → Module → CommonCModule → DllModule

**Properiey**
Parameters (Read Only)

**Method**
AsCommonCModule

### DllParameters / DllParameter

**Base Classes**

PropertyObject → CommonCParameter → DllParameter

**Properties**
Category
TSObjectParameterType
Type

**Method**
AsCommonCParameter

### CommonCAdapter

**Base Classes**

PropertyObject → Adapter → CommonCAdapter

**Property**
DefaultStructPacking

**Methods**
AsAdapter
GetAllowStructPassing
GetExcludeFromStruct
GetStructMemberArrayStorage
GetStructMemberStorage
GetStructMemberStringBufferSize
GetStructMemberType
GetStructPacking
SetAllowStructPassing
SetExcludeFromStruct
SetStructMemberArrayStorage
SetStructMemberStorage
SetStructMemberStringBufferSize
SetStructMemberType
SetStructPacking

### CommonCModule

**Base Classes**

PropertyObject → Module → CommonCModule

**Properties**
FunctionName
ModulePath
ProjectFilePath
SourceFilePath
WorkspaceFilePath

**Methods**
AsModule
LoadPrototype
UpdatePrototypeFromSource
VerifyPrototypeFromSource

### CommonCParameter

**Base Classes**

PropertyObject → CommonCParameter

**Properties**
ArrayDimensions
Flags
ParameterName
Pass
ResultAction
StringBufferSize
StructType
UnknownInfo (Read Only)
ValueExpr

**Methods**
AsPropertyObject
GetArrayDimensionSize
GetDescription
SetArrayDimensionSize

### CVIAdapter

**Base Classes**

PropertyObject → Adapter → CommonCAdapter → CVIAdapter

**Properties**
CodeTemplatePolicy
ExecuteStepsInExternalInstance
ExecutionServerProjectPathName

**Methods**
AsAdapter
AsCommonCAdapter

### CVIModule

**Base Classes**

PropertyObject → Module → CommonCModule → CVIModule

**Properties**
AlwaysRunInProcess
ModuleType
Parameters (Read Only)

**Method**
AsCommonCModule

### CVIParameters / CVIParameter

**Base Classes**

PropertyObject → CommonCParameter → CVIParameter

**Properties**
Category
Type

**Method**
AsCommonCParameter

### LabVIEWAdapter

**Base Classes**

PropertyObject → Adapter → LabVIEWAdapter

**Properties**
CodeTemplatePolicy
ReserveLoadedVIsForExec
UUTIterationNumberExpression
UUTSerialNumberExpression

**Methods**
AsAdapter
GetClusterMemberLabel
GetClusterPassingEnabled
GetExcludeFromCluster
GetServerInfo
SetClusterMemberLabel
SetClusterPassingEnabled
SetExcludeFromCluster
SetServerInfo

### LabVIEWModule

**Base Classes**

PropertyObject → Module → LabVIEWModule

**Properties**
Parameters (Read Only)
RemoteConnectionTimeout
RemoteHost
RemotePortNumber
RemoteVIPath
SpecifyHostByExpression
VICallOptions
VIDescription (Read Only)
VIPath

**Methods**
AsModule
LoadPrototype

### LabVIEWParameters / LabVIEWParameter

**Base Classes**

PropertyObject → LabVIEWParameter

**Properties**
Category (Read Only)
DefaultValue (Read Only)
Direction (Read Only)
Elements (Read Only)
ParameterName (Read Only)
PassAsBinaryString
Type (Read Only)
UseDefaultValue
ValueExpr
WireRequirement (Read Only)

**Method**
AsPropertyObject

### LabVIEWParameterElements / LabVIEWParameterElement

**Base Classes**

PropertyObject → LabVIEWParameterElement

**Properties**
Category (Read Only)
ElementName (Read Only)
Elements (Read Only)
PassAsBinaryString
Type (Read Only)
ValueExpr

**Method**
AsPropertyObject

### CommonCAdapter

**Base Classes**

PropertyObject → Adapter → CommonCAdapter

**Property**
DefaultStructPacking

**Methods**
AsAdapter
GetAllowStructPassing
GetExcludeFromStruct
GetStructMemberArrayStorage
GetStructMemberStorage
GetStructMemberStringBufferSize
GetStructMemberType
GetStructPacking
SetAllowStructPassing
SetExcludeFromStruct
SetStructMemberArrayStorage
SetStructMemberStorage
SetStructMemberStringBufferSize
SetStructMemberType
SetStructPacking

### ActiveXAdapter

**Base Classes**

PropertyObject → Adapter → ActiveXAdapter

**Properties**
ShowActiveXControlsWhenSpecifyingModule
UnloadUnusedActiveXServersAfterExec
UseLateBinding

**Methods**
AsAdapter
UpdateAutomationIDs

### ActiveXModule

**Base Classes**

PropertyObject → Module → ActiveXModule

**Properties**
ActiveXReferenceExpr
CoClassName
CreateOption
FilePath
InterfaceName
MemberName
MemberType
Parameters (Read Only)
RemoteHost
ServerId
SpecifyHostByExpression
UseStepLoadOptions

**Methods**
AsModule
LoadMemberInfo

### ActiveXParameters / ActiveXParameter

**Base Class**

PropertyObject → ActiveXParameter

**Properties**
Direction (Read Only)
DisplayType (Read Only)
ParameterName (Read Only)
Type (Read Only)
ValueExpr

**Method**
AsPropertyObject

### SequenceAdapter

**Base Classes**

PropertyObject → Adapter → SequenceAdapter

**Properties**
**Note** This class has no properties.

**Method**
AsAdapter

### SequenceCallModule

**Base Classes**

PropertyObject → Module → SequenceCallModule

**Properties**
IgnoreTermination
MultithreadingAndRemoteExecOption
NewExecutionBreakOnEntryExpr
NewExecutionModelOption
NewExecutionModelPath
NewExecutionTypeMask
NewExecutionTypeMaskExpr
NewExecutionWaitForCompletion
NewThreadOptions
ParameterPrototype (Read Only)
Parameters (Read Only)
RemoteHost
SequenceFilePath
SequenceName
SpecifyByExpression
SpecifyHostByExpression
StoreActiveXReferenceExpr
TraceSetting
UseCurrentFile
UseSequenceParameterPrototype

**Methods**
AsModule
LoadParameters

### SequenceCallParameters / SequenceCallParameter

**Base Class**

PropertyObject → SequenceCallParameter

**Properties**
UseDefaultValue
ValueExpr

**Method**
AsPropertyObject

## Search Classes

Use search classes to search files and property objects in TestStand. A Search operation returns a SearchResults object, which contains a list of SearchMatch objects. Use the SearchMatch class to identify the type and location of a match and to perform Replace operations.

### SearchResults

**Properties**
NumMatches (Read Only)
NumWarnings (Read Only)
StatusMessage (Read Only)

**Methods**
Cancel
GetMatch
GetWarning
IsComplete

### SearchMatch

**Properties**
FileDisplayName (Read Only)
FileId (Read Only)
FilePath (Read Only)
MatchedText (Read Only)
MatchIsValid (Read Only)
PropertyValueAsString (Read Only)
PropertyValueType (Read Only)
TypeCategoryOfMatch (Read Only)
UserData

**Methods**
GetLocation
GetPropertyPath
UpdateForReplace
UpdateForReplaceValue