REFERENCE POSTER

NI TestStand™ API

NI TestStand provides a comprehensive ActiveX Automation server application programming interface (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, edit, run, and debug sequences. You can access the TestStand API from any programming environment that supports access to ActiveX servers.

Refer to the *NI TestStand Help* for a complete description of all TestStand API classes, properties, methods, and events.

Note Some properties and methods from previous versions of TestStand are obsolete and not listed on this poster.

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Engine Classes

Use the Engine class to create and access objects of other classes, control executions, launch built-in dialog boxes, implement a Tools menu, find files and directories, and invoke various utilities. Use the StationOptions class to set preferences for TestStand. Use the UIMessage class to pass information about the state of the engine and the current executions to the TestStand User Interface or TestStand Sequence Editor. Use objects of the WatchExpression class to monitor the values of properties and variables using expressions.

AdditionalResults
AdditionalResult

Properties
AreElementsIncompatibleWithType (Read Only)
CheckedState
Condition
Elements (Read Only)
Flags
Kind (Read Only)
IsAnyType
Name
ParameterObject (Read Only)
ParentAdditionalResult (Read Only)
Type
UnmappedAdditionalResults (Read Only)
ValueToLog

Methods
This class has no methods.

EditTimeMenuItems
EditTimeMenuItem

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

Methods
This class has no methods.

Engine

Properties
ApplicationIsEditor
ApplicationLicense (Read Only)
AppMainHwnd
BuildVersion (Read Only)
ComputerName (Read Only)
ConfigFile (Read Only)
CurrentUser
CurrentWorkspaceFile
DefaultAdapter
DefaultAdapterIndex
DotNetCLRVersion (Read Only)
DotNetGarbageCollectionInterval
ExternalReportViewers (Read Only)
FileDialogDirHistoryList
Globals (Read Only)
GlobalsFile (Read Only)
Images (Read Only)
IsRemote
IsUIMessageQueueEmpty (Read Only)
LargeImageList (Read Only)
LastWorkspacePath
License Type (Read Only)
MajorVersion (Read Only)
MasterEngine
MinorVersion (Read Only)
NumAdapters (Read Only)
NumImages (Read Only)
OutputMessagesEnabled
PersistBreakpoints
PersistConfigFile
PersistWatchExpressions
RevisionVersion (Read Only)
SearchDirectories (Read Only)
SecondsSiInEpi970UniversalCoordinatedTime (Read Only)
SecondsSince1970UniversalCoordinatedTime (Read Only)
SecondsSinceStart (Read Only)
SmallImageList (Read Only)
StationOptions (Read Only)
TemporaryGlobals (Read Only)
UIMessagePollingEnabled
UndoLimit
UniqueEngineId (Read Only)
UserFile (Read Only)
Utility (Read Only)
VersionString (Read Only)
WatchExpressionsEnabled

Methods
AbortAll
AcquireLicense
AddImage
BreakAll
CallFromEndCallbackEx
CanCreateObjectFromClassID
CheckExpr
CheckExpression
CheckExprSyntax
ClearFileNameAndCache
CommitGlobalsToDisk
CopyPropertyObject
CreateNewUniqueStepIds
CreateTempFile
CurrentUserHasPrivilege
DeleteLicenseExpression
DisplayAdapterConfigDialog
DisplayBreakpointDialog
DisplayBrowseExprDialogEx
DisplayBrowsePropertyObjectDialog
DisplayConfigureTypePalettesDialog
DisplayEditBreakAndMultiStepDialog
DisplayEditPathsInFilesDialog
DisplayEditVarDialog
DisplayExpressionEditOptionsDialog
DisplayExternalViewerDialog
DisplayFileDialog
DisplayHelpFile
DisplayHelpTopic
DisplayLockUnlockDialog
DisplayLoginDialog
DisplayLoopOnStepsDialog
DisplayMessageBox
DisplayNewUserDialog
DisplayOptionsDialog
DisplayPasswordProtectTypeDefinitionsDialog
DisplayPreconditionBuilderDialog
DisplayPreconditionDialog
DisplayRunTimeCallbackDialogEx
DisplaySearchDirDialog
DisplaySeqFilePropDialog
DisplaySequenceFileCallbacksDialog
DisplaySequencePropDialog
DisplayStepPropDialog
DisplayStepTypeMenuEditorEx
DisplayToolsMenuDialog
DisplayUnlockTypeDefinitionsDialog
DisplayWorkspaceBrowserDialog
DoDotNetGarbageCollection
FindFile
FindPath
GetAdapter
GetAdapterByKeyName
GetEditTimeToolMenuItems
GetErrorString
GetFileInformation
GetImageIndex
GetImageName
GetInsertStepMenuStructure
GetInsertVariableMenuStructure
GetInternalOption
GetLicenseDescription
GetLocalizedDecimalPoint
GetLocationForNextDialog
GetProductRegistrationInfo
GetResourceString
GetResourceSymbols
GetRunTimeToolMenuItems
GetSequenceFileEx
GetStationModeSequenceFile
GetSyncManager
GetTemplatesFile
GetTestStandPath
GetTypeDefinition
GetTypeNames
GetTypePaletteFileList
GetTypes
GetTypeUsageLocations
GetUIMessage
GetUser
GetUserGroup
GetWatchExpressions
GetWatchExpressionsChangeCount
IsCurrentSequenceFileVersion
LaunchExternalViewer
LoadTypePaletteFilesEx
LocalizeExpression
NewDataType
NewEditArgs
NewEditContext
NewEvaluationTypes
NewExecution
NewExpression
NewHierarchicalExecution
NewInteractiveArgs
NewLocations
NewOutputMessage
NewOutputMessages
NewPropertyObject
NewPropertyObjectFile
NewPropertyObjectType
NewResultLog
NewResultLogger
NewSequence
NewSequenceFile
NewStep
NewStepType
NewTypeUsageList
NewUnidentifiedCreator
NewUndoStack
NewUser
NewWorkspaceFile
NotifyEndOfModalDialog
NotifyStartOfModalDialogEx
OpenWorkspaceFile
ParseLookupString
PostUIMessage
ReadPropertyObjectFile
RegisterModelWindow
RegisterUIMessage
RegisterUIMessageCallback
ReleaseLicense
ReleaseSequenceFileEx
ReloadGlobals
ReloadStringResourceFiles
ResetTypeInstances
SaveAllModifiedSeqFiles
SearchFiles
SerializeObjects
SetConfigDirectory
SetInternalOption
SetLocationForNextDialog
SetProductRegistrationInfo
SetTypePaletteFileList
ShouldAutoLaunchExternalReportViewer
ShutDown
TerminateAll
UnloadAllModules
UnloadTypePaletteFiles
UnregisterModelWindow
UnserializeObjects
UnserializeOptionsAndTypes
UserNameExists
WriteToOldMenuToDisk

Events
UIMessageEvent

Evaluation Types

Properties
AllowedArrayRepresentations
AllowedRepresentations
ArrayOfNamedTypes
NamedTypes
PropertyValueTypeFlags

Methods
This class has no methods.

Expression

Properties
NumTokens (Read Only)
Text

Methods
Evaluate
GetConstantValue
GetToken
Tokenize
Validate
ValidateEvaluationType

ExternalReportViewers
ExternalReportViewer

Properties
Arguments
AutoLaunch
Format
Path

Methods
This class has no methods.

Images

Properties
Count (Read Only)
Item (Read Only)

Method
FindImage

OutputMessages
OutputMessage

PropertyObject
OutputMessage

Properties
Category
ExecutionLocations
FileLocations
IconName
Id (Read Only)
Message
Severity
TextColor
TimeInSeconds
TimeStamp

Methods
AsPropertyObject
Post

RunTimeMenuItems
RunTimeMenuItem

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

Method
InvokeItem

SearchDirectories
SearchDirectory

Properties
Disabled
ExcludedFileExtension
ExcludedHiddenSubdirectories
FileExtensionRestrictions
Path
SearchSubdirectories
Type (Read Only)

Methods
This class has no methods.

SelectedBreakpointItem

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

Methods
IsEndSelected

StationOptions

Properties
AllowAllUsersAccessFromRemoteMachine
AllowAnyoneToUseCrashRecoveryResolution
AllowCancellingPreloadExpression
AllowOtherModels
AllowSequenceCallsFromRemoteMachine
AlwaysGotoCleanupOnFailure
AutoLoginUserExpr
BreakOnSequenceFailure
BreakOnStepFailure
BreakOnUserFailure
CheckOutFilesWhenEdited
CheckOutOnlySelectedFiles
DebugOptions
DefaultCPUAffinityForThreads
DefaultFileWritingFormat
DisableResults
EnableUserPrivilegeChecking
ExecutionMask
FileModificationIndicatorPolicy
InteractiveBranchMode
InteractiveSetPropagateStatus
Language
PreloadProgressDelay
PromptForIndFiles
PromptWhenAddingFilesToSC
RecognizeMBCbars
ReloadDocsWhenOpeningWorkspace
ReloadWorkspaceAtStartup
RequireUserLogin
RTEOption
SeqFileVersionAutoIncrementOpt
ShowEngineTrayIconOnRemoteStations
ShowHiddenProperties
SpecifyStepsByUniqueIdInExpressions
StationID
StationModelSequenceFilePath
SystemDefaultSourceCodeControlProvider
TracingEnabled
TypeVersionAutoIncrementOpt
TypeVersionAutoIncrementPromptOpt
UIMessageDelay
UIMessageMinDelay
UseDialogForCheckOut
UseLocalizedDecimalPoint
UserFilePath
UseStationModel

Methods
GetLanguages
GetTimeLimit
GetTimeLimitAction
GetTimeLimitEnabled
SetTimeLimit
SetTimeLimitAction
SetTimeLimitEnabled

StepAdditionalResults

Properties
CustomResults (Read Only)
ParameterResults (Read Only)

Methods
This class has no methods.

TypeUsageList

Properties
ChangeCount (Read Only)
NumTypes (Read Only)

Methods
AddTypeEx
CreateAndInsertNewTypeFromExisting
GetIsTypeAttachedToFile
GetTypeDefinition
GetTypeIndex
InsertType
MoveType
RemoveType
SetIsTypeAttachedToFile
Union
ValidateNewTypeName

UIMessage
PropertyObject
UIMessage

Properties
ActiveDATA (Read Only)
Event (Read Only)
Execution (Read Only)
IsEmptyEvent (Read Only)
NumericData (Read Only)
StringData (Read Only)
Thread (Read Only)

Methods
Acknowledge
AsPropertyObject

Utility

Properties
Escape
Unescape

Methods
This class has no methods.

WatchExpressions
WatchExpression

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

Methods
BreakpointTriggered
DisplayConfigurationDialog
Evaluate
GetScopingContext

Execution Classes

An execution is an object TestStand creates to contain all the information it uses to run the sequences and subsequences it calls. Use objects of this class to control and get information about executions. Use objects of the Report class to modify, save, load, retrieve, and view reports.

Threads are elements of an Execution. Each thread maintains a call stack that contains a SequenceContext object for each active sequence invocation. The SequenceContext class contains complete information about an execution at a particular point during the execution.

EditArgs
PropertyObject
EditArgs

Properties
This class has no properties.

Methods
AddSelectedPropertyObject
AddSelectedSequence
AddSelectedStep
AsPropertyObject
ClearSelectedPropertyObjects
ClearSelectedSequences
ClearSelectedSteps
SetSelectedLocation
SetSelectedPropertyObjectFile
SetSelectedSequenceFile
SetSelectedStepGroup

Execution
PropertyObject
Execution

Properties
BreakOnEntry (Read Only)
ClientFile
DisableResults
DiscardResults
DisplayName (Read Only)
ErrorObject (Read Only)
ForegroundThread
ForegroundThreadIndex
Id (Read Only)
InInteractiveMode (Read Only)
MaximumResultsPerPostResultsCallback
ModelSequenceFilePath (Read Only)
NumThreads (Read Only)
OverrideNonTerminatableThreads
PostResultsCallbackInterval
PostResultsCallbackMask
PostResultsCallbackOptions
PostResultsCallback_PostFlushMask
PostResultsCallback_PreFlushMask
Report (Read Only)
Reports (Read Only)
ResultObject (Read Only)
ResultStatus
RTEOptionForThisExecution
RunTimeVariables (Read Only)
SecondsAbsInt (Read Only)
SecondsExecuting (Read Only)
SecondsSuspended (Read Only)
SequenceFilePath (Read Only)
StandardResultsEnabled
StartCount (Read Only)
TerminateNonTerminatableThreadsPrompt
ThreadIds (Read Only)
TimeResultsEnabled
TracingDisabled
TypeMask

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

InteractiveArgs
PropertyObject
InteractiveArgs

Properties
LoopCount
NumSteps
Sequence
StepGroup
StopExpression

Methods
AddStepIndex
AsPropertyObject
ClearStepList
ContinueStep
GetStepIndex

InteractiveContext
PropertyObject
InteractiveContext

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

Method
AsPropertyObject

Reports
Report
PropertyObject
Report

Properties
Count (Read Only)
Format
Id (Read Only)
IsEmpty (Read Only)
LatestAppendIndex (Read Only)

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GetInstanceOverrideFlags
GetLocation
GetNthSubProperty
GetNthSubPropertyName
GetNumElements
GetNumSubProperties
GetPropertyObject
GetPropertyObjectByOffset
GetPropertyObjectElements
GetStructureChangeCount
GetSubProperties
GetSubPropertyIndex
GetTypeDefinition
GetTypeDefinitionProtection
GetTypeFlags
GetValBinary
GetValBoolean
GetValBooleanByOffset
GetValDiagram
GetValDiagramByOffset
GetValInteger64
GetValInteger64ByOffset
GetValInterface
GetValInterfaceByOffset
GetValNumber
GetValNumberByOffset
GetValString
GetValStringByOffset
GetValUnsignedInteger64
GetValUnsignedInteger64ByOffset
GetValVariant
GetValVariantByOffset
GetXML
InsertElements
InsertSubProperty
IsAliasObject
IsEqualTo
LockTypeDefinition
NewSubProperty
ReadEx
Search
Serialize
SetFlags
SetInstanceDefaultFlags
SetInstanceOverrideFlags
SetNthSubPropertyName
SetNumElements
SetPropertyObject
SetPropertyObjectByOffset
SetSubPropertyIndex
SetTypeDefinitionProtection
SetTypeFlags
SetValBinary
SetValBoolean
SetValBooleanByOffset
SetValDiagram
SetValDiagramByOffset
SetValInteger64
SetValInteger64ByOffset
SetValInterface
SetValInterfaceByOffset
SetValNumber
SetValNumberByOffset
SetValString
SetValStringByOffset
SetValUnsignedInteger64
SetValUnsignedInteger64ByOffset
SetValVariant
SetValVariantByOffset
SetXML
UnlockTypeDefinition
UnserializeEx
ValidateNewElementName
ValidateNewName
ValidateNewSubPropertyName
Write

PropertyObjectType

Properties
ArrayDimensions (Read Only)
DisplayString (Read Only)
ElementType (Read Only)
IsObject (Read Only)
Representation (Read Only)
TypeName (Read Only)
ValueType (Read Only)

Method
IsEqualTo

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SequenceContext
PropertyObject
SequenceContext

Properties
ApplicationIsEditor (Read Only)
Caller (Read Only)
CallerDiscardsResults (Read Only)
CallingStep (Read Only)
CallStackDepth (Read Only)
CallStackName (Read Only)
CanTrace (Read Only)
Engine (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
LoopSkipFailed
LoopNumIterations
LoopNumPassed
Main (Read Only)
NextStep (Read Only)
NextStepIndex
NumStepsExecuted
Parameters (Read Only)
PreviousStep (Read Only)
PreviousStepIndex
ProcessModelClient
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
StepGroupIsRuntimeInterfaceEnabled
StepIndex
Thread (Read Only)
Tracing

Methods
AsPropertyObject
GetMultipleValues
GetRunTimeErrorMessageEx
GetRunTimeErrorWinHelpInfo
IsInteractiveStep
IsStepExcludedFromExecution
NewExecution
SetMultipleValues

Thread
PropertyObject
Thread

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

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

File Classes

Use the PropertyObjectFile class to read and write PropertyObjects to disk. All TestStand files, including sequence files, type palette files, workspace files, configuration files, the users file, and the globals file, are stored as PropertyObjectFiles.

Objects of the SequenceFile class represent a sequence file that can contain sequences, and objects of the Sequence class represent a sequence that can contain steps. Objects of the WorkspaceFile class represent workspace files that can contain projects. Objects of the WorkspaceObject class represent nodes for workspace and project files on the Workspace pane. Objects of the User class represent the data and privileges TestStand associates with a TestStand user or user group. The UsersFile class represents the files that contain a list of TestStand users and user profiles.

ResultLogger objects write TestStand results to a file. Use a ResultLog object to read the results from the file.

CodeTemplates
CodeTemplate

Properties
Description (Read Only)
Name (Read Only)
Type (Read Only)

Methods
This class has no methods.

FileInformation

Properties
FileExists (Read Only)
FileWritingFormat (Read Only)
IsCustomFile (Read Only)
IsCVIDll (Read Only)
IsDotNetAssembly (Read Only)
IsPropertyObjectFile (Read Only)
IsSequenceFile (Read Only)
PropertyObjectFileType (Read Only)

Methods
GetFileFormatVersion
GetFileVersion

InputStream

Properties
IsAutoStream (Read Only)
Length (Read Only)
Offset
Path (Read Only)

Method
ReadBytes

PropertyObjectFile
PropertyObject
PropertyObjectFile

Properties
ChangeCount
Comment
ContentType
Data
DisplayName
EditPrivilege
FileExtension
FileType (Read Only)
FileTypeDescription
FileWritingFormat
Id (Read Only)
IsDiskFileModified (ReadOnly)
IsDiskFileReadOnly (Read Only)
IsModified (Read Only)
IsModifiedByUser (Read Only)
Locked (Read Only)
OpenStatus
Path
Protection
Requirements (Read Only)
TypeUsageList (Read Only)
Version

Methods
AsPropertyObject
CheckForModifiedTypes
HandleTypeConflicts
IncChangeCount
Lock
ReadFile
SaveFileIfModified
Unlock
WriteFile

ResultLog
PropertyObject
ResultLog

Properties
ClosedWhenWritten (Read Only)
OnTheFly (Read Only)
Path (Read Only)
Scond970UniversalCoordinatedTime (Read Only)
Uniqueid (Read Only)

Methods
Close
GetReportPaths
Open
ReadNextRecord
SetReportPaths

ResultLogger
PropertyObject
ResultLogger

Property
Path
RecordFileWritten

Methods
Close
ContinueInNewFile
DeferrableRename
Flush
GetFileWritten
LogBatchDone
LogBatchStart
LogBegin
LogEnd
LogOnTheFlyStepResults
LogPostBatch
LogPostUUT
LogPreBatch
LogPreUUT
LogUUTDone
LogUUTStart
Open

Sequence
PropertyObject
Sequence

Properties
AllowInteractiveExecutionOfEntryPoint
CopyStepsOnOverride
DisableResults
EntryPointCheckToSaveTitledSeqFiles
EntryPointEnabledExpression
EntryPointIgnoreClient
EntryPointInitially Hidden
EntryPointMenuHint
EntryPointNameExpression
FailureAction
HasMismatchedBlocks (Read Only)
Id (Read Only)
Locals (Read Only)
Name
OptimizeNonReentrantCalls
Parameters (Read Only)
Requirements (Read Only)
SequenceFile (Read Only)
SequenceIndex (Read Only)
ShowEntryPointFailureDialogs
ShowEntryPointForEditorOnly
ShowEntryPointForFailureWindow
ShowEntryPointForFileWindow
Type

Methods
AsPropertyObject
CreateNewUniqueStepIds
DeleteStep
EvalEntryPointEnabledExpressionEx
EvalEntryPointNameExpressionEx
GetBreakOnFailSettings
GetEffectiveType
GetEntryPointMenuFormatHint
GetNumSteps
GetStep
GetStepByName
GetStepByUniqueId
GetStepIndex
GetSteps
LoadModules
RemoveStep
SetBreakOnFailSettings
StepNameExists
UnloadModules

SequenceFile
PropertyObject
SequenceFile

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

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

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User
PropertyObject
User

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

Methods
AsPropertyObject
HasPrivilege
ValidatePassword

UsersFile
PropertyObject
UsersFile

Properties
UserGroupList
UserList

Methods
AsPropertyObjectFile
ReloadFromDisk

WorkspaceFile
PropertyObject
WorkspaceFile

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

Methods
AsPropertyObjectFile
DisplayAddFileToWorkspaceDialog
FindWorkspaceObject
RunSourceControlProvider
SaveWorkspaceAndProjectFiles

WorkspaceObject
PropertyObject
WorkspaceObject

Properties
CodeModuleSeqFilePath
DisplayName
FileExists (Read Only)
IsCodeModule (Read Only)
IsSourceControlMessages (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

Objects of the StepType class represent step types in TestStand files, and objects of the Step class represent steps in TestStand 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.

Step
PropertyObject
Step

Properties
AdapterKeyName (Read Only)
AdditionalResults (Read Only)
AdditionalResultsHints (Read Only)
BatchSyncOption
BlockIndIndex
BlockFlags
BlockLevel
BlockLevelsUnmatched
BlockNextIndex
BlockParentIndex
BlockPreviousIndex
BlockStartIndex
CancelCurrentExecution
CancelCurrentModuleExecution
CancelStepCallback
CanCreateCode (Read Only)
CanEditCode (Read Only)
CanSpecifyModule (Read Only)
CausesSequenceFailure
CurrentLoopIsResult
CustomActionExpression
CustomFalseAction
CustomFalseActionTargetByExpr
CustomTrueAction
CustomTrueActionTargetByExpr
EditAsReadOnly
EvalPreconditionForInteractiveExecution
FailAction
FailActionTargetByExpr
IconName
IgnoreRTE
IsSequenceCall (Read Only)
LargeIcon (Read Only)
LargeIconIndex (Read Only)
LastStepResult
LoopIncExpression
LoopInitExpression
LoopStatusExpression
LoopType
LoopWhileExpression
Module (Read Only)
ModuleLoadOption
ModuleUnloadOption
MutexNameOnRefExpr
Name
PassAction
PassActionTargetByExpr
PostExpression
Precondition
PreExpression
RecordLoopIterationResults
Requirements (Read Only)
ResultRecordingOption
ResultStatus
Sequence (Read Only)
SmallIcon (Read Only)
SmallIconIndex (Read Only)
StatusExpression
StepFailCausesSequenceFail
StepGroup (Read Only)
StepIndex (Read Only)
StepType (Read Only)
SwitchExecConnectionLifetime
SwitchExecEnabled
SwitchExecMulticonnectMode
SwitchExecOperation
SwitchExecOperationOrder
SwitchExecRoutesToConnect
SwitchExecRoutesToDisconnect
SwitchExecVirtualDevice
SwitchExecWaitForDebounce
UniqueStepId (Read Only)
UseMutex
WindowActivation

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

StepType
PropertyObject
StepType

Properties
AdditionalResultsHints (Read Only)
AppliesToBlockStructure
BatchSyncOption
BlockEndTypes
BlockStartTypes
CanEncapsulate
CanSpecifyModule (Read Only)
CodeTemplates (Read Only)
CustomActionExpression
CustomFalseAction
CustomFalseActionTargetByExpr
CustomTrueAction
CustomTrueActionTargetByExpr
DefaultNameExpr
DescriptionExpr
DesignatedAdapter (Read Only)
DimmablePropertyKeyNames (Read Only)
EvalPreconditionforInteractiveExecution
FailAction
FailActionTargetByExpr
IconName
IgnoreRTE
LoopIncExpression
LoopInitExpression
LoopStatusExpression
LoopType
LoopWhileExpression
MenuGroupName
MenuIcon (Read Only)
MenuIconIndex (Read Only)
MenuItemNameExpr
Module (Read Only)
ModuleLoadOption
ModuleUnloadOption
MutexNameOnRefExpr
Name
NumSubsteps (Read Only)
PassAction
PassActionTargetByExpr
PostExpression
Precondition
PreExpression
RecordLoopIterationResults
ResultRecordingOption
RunMode
StatusExpression
StepFailCausesSequenceFail
SwitchExecConnectionLifetime
SwitchExecEnabled
SwitchExecMulticonnectMode
SwitchExecOperation
SwitchExecOperationOrder
SwitchExecRoutesToConnect
SwitchExecRoutesToDisconnect
SwitchExecVirtualDevice
SwitchExecWaitForDebounce
UseMutex
WindowActivation

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

Analyzer Classes

Use the AnalysisContext class in an analysis module to access information about the current object being analyzed or about the current analysis transition. An object of the AnalysisMessage class represents a message an analysis module creates while performing an analysis. Use objects of the AnalysisUtilities class in an analysis module to perform common analysis functions.

Use the objects of the RuleConfiguration class to access the configuration information of a rule. Use the objects of the RuleConfigurationContext class in a rule configuration module to access the rule configuration data. Use objects of the RuleSettingValues class to obtain rule setting values.

AnalysisContext

Properties
AnalysisId (Read Only)
EditContext (Read Only)
Engine (Read Only)
File (Read Only)
Object (Read Only)
StepRequested (Read Only)
Transition (Read Only)
UserInterfaceContext

Methods
GetRuleAnalysisData
GetRuleConfiguration
NewMessage
ReportMessage
StopAnalysis

AnalysisMessage

Properties
Locations (Read Only)
RuleId
Text

Methods
This class has no methods.

AnalysisUtilities

Property
AutomationPropertyCheckingEnabled

Methods
ValidateExpression
ValidateFile
ValidateRemoteHost

RuleConfiguration

Properties
ConfigurationData (Read Only)
Description
Enabled
RuleId (Read Only)
RuleSettingValues (Read Only)
Severity

Methods
This class has no methods.

RuleConfigurationContext

Properties
Engine (Read Only)
IsModified
RuleConfiguration (Read Only)

Methods
This class has no methods.

RuleSettingValues

Properties
This class has no properties.

Methods
GetBooleanValue
GetNumberValue
GetStringValue

Search Classes

Use the search-related classes to search files and property objects in TestStand. When you call the `PropertyObject.Search` or `Engine.SearchFiles` methods, TestStand 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.

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

SearchResults

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

Methods
Cancel
GetMatch
GetWarning
IsComplete

Adapter Classes

The adapter-specific and module-specific classes derive from the Adapter and Module base classes. Use the Adapter base class to configure and obtain information about the module adapters. Use the Module base class to specify and obtain information about code modules that steps or step type substeps execute.

Adapter
PropertyObject
Adapter

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

Methods
AsPropertyObject
Configure

Module
PropertyObject
Module

Properties
Adapter (Read Only)
CanCreateCode (Read Only)
CanEditCode (Read Only)
CanSpecify (Read Only)
IsPrototypeIndependent (Read Only)
Step (Read Only)
UnmappedArgumentValues (Read Only)

Methods
AsPropertyObject
CreateCode
EditCode
GetDescription
GetLastLoadWarnings
Load
LoadPrototype
Specify
Unload

UnmappedArgumentValues
UnmappedArgumentValue
PropertyObject
UnmappedArgumentValue

Properties
Name (Read Only)
TypeName (Read Only)
UnmappedArgumentValues (Read Only)
ValueExpr (Read Only)

Methods
This class has no methods.

Common C Adapter Classes

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

CommonCAdapter
PropertyObject
Adapter
CommonCAdapter

Property
DefaultPackingPackingPacking

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

CommonCModule
PropertyObject
Module
CommonCModule

Properties
CodeTemplateName
FunctionCall (Read Only)
FunctionName
ModulePath
ProjectFilePath
SourceFilePath
WorkspaceFilePath

Methods
AcceptFunctionCall
AsModule
LoadPrototypeFromCodeTemplate
UpdatePrototypeFromSource
VerifyPrototype
VerifyPrototypeFromSource

CommonCParameter
PropertyObject
CommonCParameter

Properties
ArrayDimensions
DisplayValueExpr (Read Only)
EnumTypeName (Read Only)
Flags
ParameterName
Pass
PassArrayElementBy
ResultAction
StringBufferSizeExpr
StructType
UnknownInfo
UserData (Read Only)
ValidEvaluationTypes (Read Only)
ValueExpr
ValueExprIsIgnored (Read Only)
ValueExprIsOptional (Read Only)

Methods
AsPropertyObject
GetArrayDimensionsSizeExpr
GetDescription
GetEnumValues
SetArrayDimensionSizeExpr

Methods
This class has no methods.

CVIAdapter
PropertyObject
Adapter
CommonCAdapter
CVIAdapter

Properties
CodeTemplatePolicy
ExecuteStepsInExternalInstance
ExecutionServerProjectPathName

Methods
AsAdapter
AsCommonCAdapter
NewModule

CVIArguments
CVIArgument

Property
Value

Methods
This class has no methods.

CVIModule
PropertyObject
Module
CommonCModule
CVIModule

Properties
AlwaysRunInProcess
ModuleType
Parameters (Read Only)

Methods
AsCommonCModule
Execute

CVIParameters
CVIParameter
PropertyObject
CommonCParameter
CVIParameter

Properties
Category
Type

Method
AsCommonCParameter

DllAdapter
PropertyObject
Adapter
CommonCAdapter
DllAdapter

Properties
VisualStudioDTEVersionForDebugging
VisualStudioDTEVersionForEditing

Methods
AsAdapter
AsCommonCAdapter
NewModule

DllArguments
DllArgument

Properties
ImaginaryPartValue
Value

Methods
This class has no methods.

DllFunctions
DllFunction

Properties
DisplayName (Read Only)
HasParameterInformation (Read Only)
HelpContext (Read Only)
HelpFilePath (Read Only)
ParameterTypeWarnings (Read Only)
SymbolName (Read Only)
UniqueDisplayName (Read Only)

Methods
This class has no methods.

DllModule
PropertyObject
Module
CommonCModule
DllModule

Properties
CodeLocationTarget
Parameters (Read Only)

Methods
AsCommonCModule
Execute

DllParameters
DllParameter
PropertyObject
CommonCParame