

## RELEASE NOTES

# NI TestStand™

## Version 2014

These release notes contain NI TestStand 2014 system requirements, licensing information, and installation instructions. The release notes also contain instructions for upgrading TestStand 2014 Beta to TestStand 2014, instructions for migrating to the current version of TestStand, and information about new features and other changes since TestStand 2013.

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# Getting Started

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The best way to familiarize yourself with TestStand is to explore the *Guide to TestStand Documentation* topic in the *NI TestStand Help*, which contains links to all the TestStand documentation in electronic format. You can access the *NI TestStand Help* in the following ways:

- Select **Help»NI TestStand Help** in the TestStand Sequence Editor.
- **(Windows 8.1/8)** Click the **NI Launcher** tile on the Start screen and select **TestStand»Documentation»TestStand Help**.
- **(Windows 7 or earlier)** Select **Start»All Programs»National Instruments»TestStand»Documentation»TestStand Help**.

## Software Requirements

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Refer to the following sections for information about the software National Instruments requires or supports for use with TestStand 2014.

### Recommended System Requirements

National Instruments recommends the system requirements described in the following table to run TestStand 2014.

**Table 1.** Recommended and Minimum System Requirements

Requirement	Recommended	Minimum
Processor	Pentium 4/M or equivalent	Pentium III, 1 GHz or equivalent
Memory	2 GB	512 MB
Disk space for TestStand (32- or 64-bit)	1 GB	—
Disk space for Microsoft .NET Framework version 4.0, if not already installed	2 GB	—
Disk space for device drivers from the National Instruments Device Drivers DVD	Amount of space required varies depending on the drivers you install. Install only the drivers necessary for the hardware you will use.	—
Video adapter	—	1024 x 768 resolution

# Supported Microsoft Windows Operating Systems and Recommended Service Packs

Use the Microsoft Windows operating systems and service packs described in the following table with TestStand 2014. You can run 32-bit TestStand 2014 on 32-bit Microsoft Windows operating systems or on 64-bit Windows operating systems, as shown in the following table. 64-bit TestStand 2014 requires a 64-bit version of Windows 7 or later or Windows Server 2008 or later.

**Table 2.** Supported Microsoft Windows Operating Systems

Operating System	Edition	Service Pack (or equivalent)	Comments
Windows 8.1	Professional, Enterprise	—	Refer to the <i>How to Use NI Software with Microsoft Windows 8</i> section of the <i>TestStand 2014 Readme</i> for more information about using TestStand on Windows 8.1 and 8.
Windows 8	Professional, Enterprise	—	
Windows 7	Starter, Professional, Enterprise, Ultimate	SP1	Refer to the <i>TestStand and Windows 7/ Vista</i> section of the <i>NI TestStand Version 2012 Release Notes</i> for more information about using TestStand on Windows 7/Vista. Visit <a href="http://ni.com/info">ni.com/info</a> and enter the Info Code <code>exgmjr</code> to locate the <i>NI TestStand 2012 Release Notes</i> .  64-bit TestStand does not support Windows Vista.
Windows Vista	Business, Enterprise, Ultimate	SP2	
Windows XP (32-bit)	Professional	SP3	—

**Table 2.** Supported Microsoft Windows Operating Systems (Continued)

Operating System	Edition	Service Pack (or equivalent)	Comments
Windows Server 2012 (64-bit)	Enterprise	R2	TestStand supports only R2 editions of Windows Server.
Windows Server 2008 (64-bit)	Enterprise	R2	
Windows Server 2003 (32-bit)	Enterprise	R2	



**Note** National Instruments recommends that you install Microsoft Hotfix 2588507 for 64-bit Windows operating systems. Visit [ni.com/info](http://ni.com/info) and enter the Info Code `mshotfix` for more information about Microsoft Hotfix 2588507.

## Supported Microsoft Software

Use the following Microsoft software with TestStand 2014:

- Microsoft Internet Explorer 11, 10, 9, or 8
- Microsoft Visual Studio 2013, 2012, or 2010 (Visual Studio 2008 is allowed but not supported.)
- Microsoft .NET Framework 4.5 or 4.0

TestStand includes features that automate Visual Studio for debugging, generating, and editing code module source code. Visual Studio Express Editions do not support these features.

The .NET and Microsoft Foundation Class (MFC) examples include projects and solutions created in Visual Studio 2010.

## Supported National Instruments Software

Use the National Instruments application development environments (ADEs) described in the following tables with 32-bit TestStand and 64-bit TestStand:

**Table 3.** Supported National Instruments Software for 32-bit TestStand 2014

<b>Software</b>	<b>Supported</b>	<b>Allowed but not Supported</b>	<b>Comments</b>
LabVIEW (32- and 64-bit)	2014, 2013, 2012, 2011	2010, 2009	<p>LabVIEW examples and user interfaces use files created with LabVIEW 2011 SP1.</p> <p>TestStand API support files for LabVIEW use files saved with LabVIEW 2009 SP1.</p> <p>LabVIEW 2013 or later is required for LabVIEW Property Node call support.</p> <p>LabVIEW 2012 or later is required for directly calling LabVIEW classes from TestStand.</p> <p>TestStand supports calling 32-bit VIs using LabVIEW 32-bit RTE, and 32- and 64-bit VIs using the LabVIEW ADE.</p>
LabWindows/CVI	2013, 2012, 2010	2009 and earlier	<p>LabWindows/CVI examples, user interfaces, and API use files created with LabWindows/CVI 2010 SP1.</p> <p>TestStand supports calling only 32-bit code modules.</p>
NI Measurement Studio Enterprise Edition - Visual Studio 2010 and 2012 C++ MFC Legacy classes	2013, 2012, 2010	2009 and earlier	—
NI Switch Executive	3.7, 3.6, 3.5, 2.1	—	—

**Table 4.** Supported National Instruments Software for 64-bit TestStand 2014

Software	Supported	Allowed but not Supported	Comments
LabVIEW (32- and 64-bit)	2014, 2013 (SP1 or later required)	—	<p>LabVIEW examples and user interfaces use files created with LabVIEW 2013 SP1.</p> <p>TestStand API support files for LabVIEW use files saved with LabVIEW 2013 SP1.</p> <p>TestStand supports calling 64-bit VIs using LabVIEW 64-bit RTE, and 32- and 64-bit VIs using the LabVIEW ADE.</p>
LabWindows/CVI	2013 (SP1 or later required)	—	<p>LabWindows/CVI examples, user interfaces, and API use files created with LabWindows/CVI 2013 SP1.</p> <p>TestStand supports calling only 64-bit code modules.</p>
NI Measurement Studio Enterprise Edition - Visual Studio 2010 and 2012 C++ MFC Legacy classes	—	—	Measurement Studio classes cannot be used in 64-bit applications.
NI Switch Executive	3.7, 3.6, 3.5, 2.1	—	NI Switch Executive supports only 32-bit drivers.

TestStand can execute code modules developed with versions of ADEs other than the listed supported versions, but National Instruments performs only limited testing with earlier versions of ADEs. TestStand might be able to execute code modules developed with versions of ADEs later than the listed supported versions, but National Instruments cannot ensure support for versions released after TestStand 2014. Visit [ni.com/info](http://ni.com/info) and enter the Info Code `tslscp` for more information about the TestStand life cycle policy.

## Recommended Database Client Software

Use the following recommended database client software with the database components included with TestStand:

- **Microsoft Access—(32-bit TestStand)** Use the Microsoft Jet 4.0 Object Linking and Embedding Database (OLE DB) Provider. **(64-bit TestStand)** Use the Microsoft Office

12.0 Access Database Engine OLE DB Provider. You can download this provider from the Microsoft website at [www.microsoft.com](http://www.microsoft.com).



**Note** You cannot install the Microsoft Office 12.0 Access Database Engine OLE DB Provider with 32-bit Microsoft Office. Visit [ni.com/info](http://ni.com/info) and enter the Info Code 64TSaccdb to access the National Instruments support article, *Using Microsoft Access Databases with 64-bit TestStand*, for more information about installing this provider.

- **Microsoft SQL Server**—Use the SQL Server Native Client 10.0 or later or the Microsoft OLE DB Provider for SQL Server provider.
- **Oracle**—Use the latest Oracle Provider for OLE DB and Oracle Client software. National Instruments recommends Oracle Client 12c Release 1, version 12.1.0.1.0 or later. You can download the Oracle Provider from the Oracle website at [www.oracle.com](http://www.oracle.com).



**Note** National Instruments does not recommend using the Microsoft OLE DB Provider for Oracle because it does not support all the OLE DB features TestStand requires.



**Note** Oracle recommends using Oracle Provider 11.1.0.6.0 or later if you want to read 64-bit integer values stored in NUMBER columns.

- **MySQL**—Use the MySQL Open Database Connectivity (ODBC) Driver 5.1 or later.
- **Sybase SQL Anywhere**—Use the Adaptive Server Anywhere ODBC Driver 10.0 or later.

## Activating TestStand Licenses

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After you install TestStand, you must use the NI Activation Wizard to activate the software or initiate the evaluation period for the software. You must have the serial number and the name of the software kit to activate TestStand. You can find both of these items on the Certificate of Ownership card included in your software kit. Refer to the *Activating Your Software* topic in the *NI TestStand Help* for more information about how to activate TestStand.

National Instruments offers a variety of licenses for the different ways you can use TestStand in development and deployment applications. You can select from the following types of licenses:

- TestStand Development System License
- TestStand Custom Sequence Editor License
- TestStand Debug Deployment Environment License
- TestStand Base Deployment Engine License

In most cases, when you first install TestStand, you activate a TestStand Development System License. Use the other licenses to activate TestStand on computers to which you deploy TestStand custom sequence editors or user interfaces you develop.

Contact a local National Instruments representative for more information or for questions about specific licensing needs.



**Note** If you upgrade TestStand with a service pack release by installing TestStand or a deployment that includes the TestStand Engine, the TestStand Engine on the computer becomes unlicensed. You must reactivate the license on the computer. A TestStand Development System License or a Debug Deployment Environment License must be current with the Standard Service Program (SSP) to reactivate a service pack license. You can reactivate a Custom Sequence Editor License for a service pack upgrade, even if the SSP for the original license lapsed. A TestStand Base Deployment License does not require SSP to reactivate a service pack license.

Refer to the *Licensing Options for TestStand Systems* section of Chapter 1, *Introduction to TestStand*, of the *Getting Started with TestStand* manual for information about how to use the available licenses when you build a TestStand-based test solution. Use the following descriptions only as a reference for the licensing options. Visit [ni.com/activate](http://ni.com/activate) for more information about activating TestStand licenses. Visit [ni.com/teststand](http://ni.com/teststand) to purchase a TestStand license.



**Note** This document does not replace the National Instruments Software License Agreement installed in the <Program Files>\National Instruments \Shared\MDF\Legal\license\NIReleased directory.

## TestStand Evaluation Package

When you run TestStand in Evaluation Mode, the software expires after 7 days. You can generate a User Profile at [ni.com](http://ni.com) to extend the evaluation period for an additional 45 days.

The Evaluation Mode software runs as a fully functional TestStand Development System during the evaluation period. You can activate a license at any point during or after the evaluation period.

## TestStand Development System License (777777-09)

Activate the TestStand Development System License to develop and edit test sequences and to save sequence files within the TestStand Sequence Editor, within a TestStand custom sequence editor, or programmatically using the TestStand API. This license also grants the ability to develop custom sequence editors and operator interfaces. You must have an [ni.com](http://ni.com) User Profile to activate a TestStand Development System license.

## TestStand Custom Sequence Editor License (777775-01)

Activate the TestStand Custom Sequence Editor License to develop and edit test sequences and sequence files within a custom sequence editor or programmatically using the TestStand API.



## TestStand Debug Deployment Environment License (779851-09)

The TestStand Debug Deployment Environment License offers the most flexibility for deploying TestStand and LabVIEW-based, LabWindows/CVI-based, and Measurement Studio-based systems.

Activate this license to install the development versions of TestStand, LabVIEW, LabWindows/CVI, Measurement Studio, and any corresponding add-on toolkits on a single test station so you can debug deployed test applications on the test station. This license grants the ability to make minor edits to fix bugs in deployed test applications but does not grant the ability to perform any development tasks using TestStand, LabVIEW, LabWindows/CVI, or Measurement Studio on the test station.

You cannot activate and deactivate the TestStand Debug Deployment Environment License and reuse it on multiple computers. If you need to use a single debug license across multiple computers, contact National Instruments for more information about the Concurrent TestStand Debug Deployment Environment License.

## TestStand Base Deployment Engine License (777774-03)

The TestStand Base Deployment Engine License is the minimum license required for all deployed TestStand-based applications. Activate this license to deploy the TestStand Runtime, a TestStand Operator Interface, and sequence files to the single test station to which the license applies. This license does not grant the ability to perform any development tasks using the TestStand Sequence Editor, a TestStand custom sequence editor, or the TestStand API.

## Installation Instructions

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Unless you specify another location during installation, the TestStand installer copies core files to <Program Files>\National Instruments\TestStand 2014.



**Note** You cannot install TestStand to a network path or a mapped network path. You must install TestStand on a local computer.

National Instruments recommends exiting all programs before running the TestStand installer. Applications that run in the background, such as virus scanning utilities, might cause the installer to take longer than necessary to complete.

Complete the following steps to install TestStand.

1. Log on as an administrator or as a user with administrator privileges.
2. Insert the TestStand installation media and follow the instructions that appear on the screen.

National Instruments recommends installing the complete TestStand program. If you perform a custom installation and do not install all the TestStand features, you can run the installation program again later to install additional features.



**Note** If you do not install some TestStand features and then you later use the standard Windows Control Panel facility for adding and removing programs to install the features, the features might not correctly register, and TestStand will display a COM error the next time you launch TestStand. This error occurs even if you restart the computer after you use the Windows Control Panel to install the features. National Instruments recommends that you reactivate TestStand using the TestStand Version Selector after you install the features.

## Installing Additional Software Components



**Note** TestStand includes the device driver software on a DVD. If you require device driver software on CDs, visit [ni.com/info](http://ni.com/info) and enter the Info Code `drivercd`.

TestStand installs the following additional software components:

- .NET Framework 4.0
- LabVIEW 2013 SP1 Run-Time Engine (RTE) and LabVIEW 2011 SP1 RTE
- LabWindows/CVI 2013 SP2 RTE
- LabWindows/CVI SQL Toolkit DLL version 2.2, `cvidb32.dll`
- National Instruments Session Manager
- NI Update Service
- NI License Manager
- TestStand Version Selector



**Note** TestStand can use newer versions of the LabVIEW RTE when you install LabVIEW on a development system. You can include newer versions of the LabVIEW RTE in deployments using the Drivers and Components dialog box of the TestStand Deployment Utility. Refer to the *NI TestStand Help* for more information about the Drivers and Components dialog box.

The National Instruments Device Driver DVD contains the following suggested components:

- National Instruments Measurement & Automation Explorer (MAX)
- Interchangeable Virtual Instrument (IVI) Compliance Package (ICP)

To use IVI, download and install IVI-compliant drivers from the Instrument Driver Network, located at [ni.com/devzone/idnet](http://ni.com/devzone/idnet).

## Installing Multiple Versions of TestStand on the Same Computer

You can install TestStand 2014 on a computer that contains a previous TestStand version, but you cannot install TestStand 2014 over a previous TestStand version. You cannot install TestStand 2014 in the default installation directory for a previous version of TestStand. For example, TestStand 2014 does not install in `<Program Files>\National Instruments\TestStand 2013`. If you installed a previous version of TestStand in a non-default

directory, you can uninstall the previous version of TestStand and install TestStand 2014 to that directory.

## Related Information

[Migrating to the Current Version of TestStand](#) on page 12

# Using the TestStand Version Selector



**Note** If you installed the Beta version of TestStand 2014, navigate to the standard Windows Control Panel facility for adding and removing programs and select **National Instruments Software** to uninstall the beta versions of the TestStand Version Selector and NI TestStand Service before installing the released version of TestStand 2014.

The TestStand Version Selector application indicates the active version of TestStand and can activate a different version of TestStand. Although you can install more than one version of TestStand on a computer, only one version of TestStand can be active and can run at a time. If you must install the current version of TestStand on the same computer as a previous version, use the TestStand Version Selector to specify the active version.

The TestStand Version Selector application, `TSVerSelect.exe`, is located in the `<Program Files>\National Instruments\Shared\TestStand Version Selector` directory. You can launch the TestStand Version Selector in the following ways:

- **(Windows 8.1/8)** Click the **NI Launcher** tile on the Start screen and select **TestStand Shared»TestStand Version Selector**.
- **(Windows 7 or earlier)** Select **Start»All Programs»National Instruments»TestStand Shared»TestStand Version Selector**.

The Current Active Version control shows the currently active version of TestStand. Select a version in the **Installed TestStand versions** control and click the **Make Active** button to activate a specific version of TestStand. The **Path where 32-bit version is installed** and **Path where 64-bit version is installed** controls show the location of the selected version of TestStand. When activation is complete, the selector displays a message to indicate success or display any warnings. Click the **Launch 32-bit** or **Launch 64-bit** button to run the sequence editor application for the active version of TestStand.

If you activate TestStand 2014 and run a TestStand User Interface from a previous TestStand version, the user interface uses the TestStand 2014 Engine, step types, and components. If you activate a previous TestStand version and run a TestStand 2014 User Interface or the sequence editor, those applications do not function correctly.



**Note** The TestStand Version Selector does not typically require administrator privileges to activate a specific version of TestStand on Microsoft Windows 8.1/8/7/Vista. To require administrator privileges for using the TestStand Version Selector, add the `/reqadmin` command-line option to the selector shortcut.

Refer to the *NI TestStand Help* for more information about using the TestStand Version Selector.

# Upgrading TestStand 2014 Beta to TestStand 2014

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When you compile a C# or Microsoft Visual Basic .NET binary, such as the TestStand user interfaces, the binary is strongly bound to the TestStand API interop assemblies. Binaries compiled against TestStand 2014 Beta will not work with the final release version of TestStand 2014. You must recompile the binaries using the released TestStand API interop assemblies before you can use them with the final release version of TestStand 2014.

TestStand 2014 Beta installs C# and Microsoft Visual Basic .NET user interface executables located in the `<TestStand Public>\TestStand 2014\UserInterfaces` directory. TestStand 2014 Beta does not uninstall the C# and VB .NET user interface files and the final release version of TestStand 2014 does not overwrite these files. Before you install the final release version of TestStand 2014, you must first uninstall TestStand 2014 Beta and then manually delete the `<TestStand Public>\TestStand 2014\User Interfaces` directory.

## Migrating to the Current Version of TestStand

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If you are upgrading from TestStand 2010 or later, you can use the TestStand Migration Utility to migrate customizations and configuration settings from the earlier version of TestStand. You can also upgrade manually. Visit [ni.com/info](http://ni.com/info) and enter the Info Code `tsmigrate` for more information about migrating to the current version of TestStand, including information about tasks you need to perform to upgrade manually from TestStand 4.2.1 or earlier.

You can also migrate from 32-bit TestStand 2014 to 64-bit TestStand 2014 or from 64-bit TestStand 2014 to 32-bit TestStand 2014. Refer to the Cross-Bitness Migration section of this document for more information about migrating to or from 64-bit TestStand 2014.

## Migrating from TestStand 2010 or Later Using the TestStand Migration Utility

Complete the following steps to use the TestStand Migration Utility to copy settings, configuration, and public component files from the directories of TestStand 2010 or later to the current version of TestStand.

1. Launch the TestStand Migration Utility.

Platform	Description
Windows 8.1/8	Click the <b>NI Launcher</b> tile on the Start screen and select <b>TestStand»Tools»Compatibility»TestStand Migration Utility</b> .
Windows 7 or earlier	Select <b>Start»All Programs»National Instruments»TestStand»Tools»Compatibility»TestStand Migration Utility</b> .

If you have more than one version of TestStand installed on the computer, the utility launches a dialog box in which you can specify the previous version of TestStand from which you want to migrate.



**Note** When you migrate from TestStand 2010 SP1 or TestStand 2010 to the current version of TestStand, the utility migrates the report and database options to the format for result processing configuration options for the current version of TestStand. Refer to the *NI TestStand Help* for more information about the using the TestStand Migration Utility. Visit [ni.com/info](http://ni.com/info) and enter the Info Code `tsmigrate` for more information about using the utility to migrate result processing configuration options.

2. Select the previous version of TestStand.

The utility checks the computer for all the files you can migrate to determine whether the files have changed since installation. The utility launches a status indicator dialog box during this process. When the utility finishes checking the files for changes, the utility main window launches.

3. Use the **Files to Copy** control to select the files you want to copy.

By default, the utility selects files you added or modified in the previous version of TestStand.

4. Expand the directories in the Files to Copy control to view the files you can migrate and whether those files have changed since installation.

The Conflicts column includes any conflicts that might affect the migration of the files you specify.



**Note** The utility overwrites any file you create or modify in the current version of TestStand if the file also exists in the corresponding directory of the previous version of TestStand and if you select the file in the Files to Copy control. Although the utility creates a backup copy of all overwritten files, verify that the utility will not overwrite any files you intend to keep in the version of TestStand to which you are migrating.

5. Click **Migrate Files** to begin the migration.

When the migration completes successfully, the utility generates a text file report that contains the results of the migration, including where the utility stored the file backups and which files were moved.



**Note** Consider the following behavior when using the TestStand Migration Utility:

- The utility only moves files and does not update any other information or settings, such as registry keys.
- If the `<TestStand Public>\Components` directory of the previous version of TestStand includes files installed by an installer other than the TestStand installer, you might need to use that specific installer to move the files for the files to function and uninstall properly from the `<TestStand Public>\Components` directory of TestStand 2014. National Instruments recommends that you use an installer that targets

TestStand 2014 to install any such components instead of using the utility to copy the components. However, some installed components can function properly when copied to another directory and are safe to migrate with the utility.

- The Migration Utility does not copy files in the <TestStand>\Examples, <TestStand>\Tutorial, or <TestStand>\AdapterSupport directories. These directories do not appear in the Files to Migrate column of the utility.

## Cross-Bitness Migration

National Instruments recommends upgrading to 64-bit TestStand 2014 in two steps. First, upgrade to 32-bit TestStand 2014 and validate that the system works as expected. Then, migrate from 32-bit TestStand 2014 to 64-bit TestStand 2014. Performing the upgrade in two steps can help isolate the root cause of issues you might encounter.

Migrating to 64-bit TestStand 2014 might require additional manual steps after the Migration Utility completes. You must update bitness-specific files to support the new architecture. For example, if the Migration Utility copies a LabWindows/CVI DLL code module from 32-bit TestStand to 64-bit TestStand, 64-bit TestStand cannot load the 32-bit DLL. You must replace the 32-bit DLL with an equivalent 64-bit DLL. Additionally, code modules you place or install under the <TestStand Public> directory might require additional work depending on the type and implementation of the code module.

Refer to the *64-bit TestStand and Migrating from 32-bit TestStand* book in the *Fundamentals* book of the *NI TestStand Help* for more information about migrating between 32- and 64-bit TestStand.

## Migrating TestStand 2010 SP1 or Earlier Result Processing Options to the Current Version of TestStand

The TestStand 2012 or later process models include significant changes to implement a plug-in architecture for model sequence files. TestStand 2012 or later uses the plug-in mechanism to decouple result processing from the process models. As part of this change, the result processing options move from the `TestStandModelReportOptions.ini` and `TestStandDatabaseOptions.ini` files into a single `ResultProcessing.cfg` file, located in the <TestStand Application Data>\Cfg directory, that stores configuration information for all result processing model plug-ins.

The result processing options files from TestStand 2010 SP1 or earlier are not compatible with TestStand 2012 or later process models. Refer to the *Process Model Result Processing Plug-in Architecture* section of the *TestStand 2012 New Features* topic in the *NI TestStand Help* for more information about the TestStand 2012 or later process models. Refer to the *Using the Legacy Model Switcher Tool* section of the *TestStand 2012 New Features* topic in the *NI TestStand Help* for more information about using the Legacy Model Switcher tool to use the equivalent legacy TestStand 2010 process models.

The following table describes the migration actions you can select in the TestStand Migration Utility to migrate the result processing configuration options from TestStand 2010 SP1 or earlier to the current version of TestStand.



**Note** The utility does not support migrating the configuration files from TestStand 2010 SP1 or earlier if you modified the ReportOptions or DatabaseOptions data types defined in the default process models.

**Table 5. Migration Actions**

Migration Action	Description
Apply to new models	Creates a new configuration in a configuration set named <b>Migrated from TestStand &lt;version&gt;</b> . The utility automatically selects a unique name for the configuration if the utility has already used the default name in a previously completed migration. Refer to the migration report for the specific configuration names the utility uses.
Apply to legacy models	Copies the options files from TestStand 2010 SP1 or earlier to the current TestStand directory so you can use the previous configurations with the equivalent legacy TestStand 2010 process models in the current version of TestStand. When you migrate database options, the utility renames TestStandDatabaseOptions.ini to TestStandDatabaseSchemas.ini.
Apply to new and legacy models	Adds a new configuration in the <b>Migrated from TestStand &lt;version&gt;</b> configuration set and copies the options files from a previous version of TestStand.

If you are upgrading from TestStand 4.2.1 or earlier, you can manually migrate result processing options for use with TestStand 2012 or later process models or the equivalent legacy TestStand 2010 process models. Visit [ni.com/info](http://ni.com/info) and enter Info Code `tsmigrate` for more information about manually migrating result processing options to TestStand 2014.

## Behavior Changes in TestStand 2014

TestStand introduces the following behavior changes between version 2013 and version 2014:



**Note** Refer to the *TestStand 2014 Compatibility and Known Issues* topic in the *NI TestStand Help* for more information about behavior changes between earlier versions of TestStand.

- The TestStand - Start Modal Dialog VI includes a **VI to make Modal (Current VI)** parameter you can use as a reference to the VI you want to make modal. If you do not specify this parameter, the VI that calls the Start Modal Dialog VI is made modal.
- The TestStand - End Modal Dialog VI includes a **VI to make non-Modal (Current VI)** parameter you can use as a reference to the for which you want to end TestStand modality. This reference must be the same reference as previously passed into the

TestStand - Start Modal Dialog VI. If you do not specify this parameter, the VI that calls the End Modal Dialog VI is made non-modal.

- For the **Refnum** parameter of the Refnum to Session VI and the Session to Refnum VI, pass only a VISA or IVI refnum created using the LabVIEW VISA Open function or the IVI New Session function. Passing an invalid refnum or a refnum constant can lead to undefined behavior and is not supported.
- **64-bit TestStand** The `PropertyObject.SetPropertyObjectByOffset` method and the `PropertyObject.ArrayElementPrototype` property now return an error if the you are trying to set for the element or array element prototype already has a parent object. As described in the *PropertyObject.SetPropertyObject* help topic, an object can have only one parent, therefore, you should not specify an object that is already contained within another object. 32-bit TestStand does not return an error to preserve backward compatibility.

## What's New in TestStand 2014

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TestStand 2014 includes the following new features and other changes since TestStand 2013. Refer to the *TestStand 2014 New Features* topic in the *NI TestStand Help* or visit [ni.com/info](http://ni.com/info) and enter the Info Code `ts2014new` for more information about each new feature.

- 64-bit native TestStand (Refer to the *64-bit TestStand and Migrating from 32-bit TestStand* book in the *Fundamentals* book of the *NI TestStand Help* for more information about the differences between 32-bit TestStand and 64-bit TestStand.)
- Redesigned Database Viewer application and Database Options dialog box
- Enhanced TestStand examples
- Custom TestStand data type and LabVIEW cluster synchronization
- Sharing .NET objects between LabVIEW and TestStand
- Improved logs for debugging deployment builds in the TestStand Deployment Utility
- Enhanced graph control for reports
- Additional enhancements in TestStand 2014

## TestStand API and TestStand UI Controls API Additions

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Refer to the *TestStand 2014 API and UI Controls Additions and Changes* topic in the *NI TestStand Help* for more information about new API classes, methods, and properties. Additionally, some API methods and properties are now obsolete. The *NI TestStand Help* also documents API changes and additions for some earlier versions of TestStand.



**Note** Although some components, such as the sequence editor, expose .NET assemblies, TestStand does not support the use of undocumented assembly API.



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