



# InstallShield 2016 Release Notes

originally released August 2016; updated to include SP2, released May, 2017

<b>Introduction .....</b>	<b>2</b>
<b>Changes in SP2 .....</b>	<b>2</b>
Integration with FlexNet Code Aware .....	2
Resolved Issues in SP2 .....	7
<b>Changes in SP1 .....</b>	<b>8</b>
Support for Microsoft Visual Studio 2017 .....	8
Resolved Issues in SP1 .....	8
<b>New Features .....</b>	<b>8</b>
Support for the Latest Releases of Windows Operating Systems .....	8
Microsoft SQL Server 2016 Support.....	9
Support for Creating UWP App Packages.....	9
UWP App Settings in the Releases View.....	10
UWP App Logo Customization in the Shortcuts View .....	10
UWP App Suitability Testing .....	10
New UWP Condition Checks added to Suites .....	11
SQL Support Added to Suites .....	11
Add a New SQLLogin Predefined Wizard Page .....	12
Execute SQL Statements Directly from Suites .....	12
Tile Configurations.....	12
New InstallShield Prerequisites for Microsoft Visual C++ 2015, .NET Framework 4.6, and More .....	13
Predefined System Searches for Adobe Reader, Microsoft Office and the .NET Framework .....	14
<b>Enhancements.....</b>	<b>14</b>
<b>Direct Editor View Enhancements .....</b>	<b>14</b>
Directory Table Displays Resolved Target Directory Path .....	15
Column Header Schema Information Tooltips.....	15
Table Record Reference Tracking.....	16
Broken References Indicator .....	16
<b>Suite UI Enhancements .....</b>	<b>17</b>
New Close Window and Stop Event UI Actions.....	17
Close Window .....	17
Stop Event .....	18
Suite Loading Splash Screen Added .....	18

Kill Process Custom Action Enhanced .....	18
Ability to Set the Default Value Used for Component Attributes .....	19
Ability to Filter Items by Features in Additional Views .....	19
Digital Signature Updates .....	20
<b>Important Information .....</b>	<b>20</b>
Evaluating InstallShield .....	20
Obtaining the Installations for InstallShield, InstallShield Add-Ons, and the Redistributable Files .....	20
Installing More than One Edition of InstallShield .....	21
Installing More than One Version of InstallShield .....	21
<b>Project Upgrade Alerts .....</b>	<b>21</b>
General Information about Upgrading Projects that Were Created in Earlier Versions of InstallShield .....	21
Changes to the List of Supported Versions of Windows for Target Systems .....	22
Localized String Considerations .....	22
<b>Resolved Issues .....</b>	<b>22</b>
InstallShield 2016 SP2 .....	23
InstallShield 2016 SP1 .....	27
InstallShield 2016 .....	37

## Introduction

InstallShield is the industry standard for authoring high quality Windows Installer– and InstallScript– based installations, as well as Microsoft App–V packages. InstallShield 2016 introduces support for the Desktop Bridge (Project Centennial), enabling you to create Universal Windows Platform app packages and Windows Server App packages.

InstallShield 2016 offers new features and enhancements that make it easy to use the latest technologies.

For the latest information about InstallShield 2016, including updates to these release notes, see the [online version of the InstallShield 2016 release notes](#).

## Changes in SP2

## Integration with FlexNet Code Aware

InstallShield now includes integration with FlexNet Code Aware, an automated open source risk assessment and package discovery solution that enables you to quickly scan your products for security and intellectual property (IP) compliance risk.


The current release of FlexNet Code Aware supports analysis of the following files:

- Java Packages
- Node Packages
- Nuget Packages
- RPM Packages
- Ruby Packages
- EXE & DLL Files

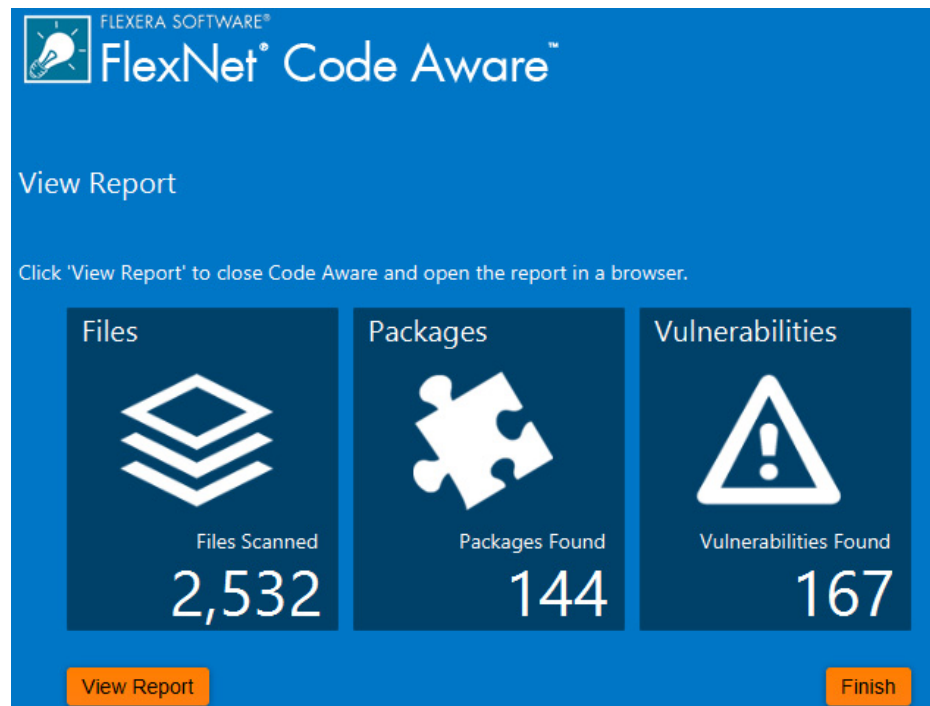
Security vulnerabilities are looked up against the [National Vulnerability Database \(NVD\)](#).

## Running FlexNet Code Aware

FlexNet Code requires a separate license from InstallShield. There is also trial/evaluation version. For more information, refer to the [FlexNet Code Aware product page](#) of the Flexera Software website.

To run FlexNet Code Aware from within InstallShield, click **Scan Project using FlexNet Code Aware** from the InstallShield **Project** menu. This menu option is disabled out if you are not currently in an open InstallShield project. A FlexNet Code Aware icon  is also available on the InstallShield standard toolbar.

When FlexNet Code Aware completes the scan of your project, a summary displays showing the number of files scanned, and the number of open-source packages and vulnerabilities found. A **View report** button is provided if you have a fully licensed version of FlexNet Code Aware. For more information about the details provided in this report, refer to [Reading the FlexNet Code Aware Report](#).



## Reading the FlexNet Code Aware Report



**Note** • The FlexNet Code Aware Report is not available in trial/evaluation mode. A fully licensed version of FlexNet Code Aware is required.

To view the FlexNet Code Aware Report, click **View report** on the summary dialog that appears after FlexNet Code Aware has scanned your project.

The FlexNet Code Aware report consists of several sections:

- The initial Summary View presents the user with a **Scan Summary**, **Operational Risk** assessment, **Security Vulnerability Exposure**, and **License Exposure**.
  - The **Scan Summary** section provides details regarding the codebase that was scanned, including a breakdown of file types, percent of files analyzed, and number of findings.
  - The **Operational Risk** section provides a composite risk rating based on the combination of packages with Intellectual Property (IP) issues and packages with Security Vulnerabilities.
  - The **Security Vulnerability Exposure** and **License Exposure** sections provide a breakdown of the types and categories of identified issues.
- The Package Inventory View, available by clicking **view full package inventory** in the **Scan Summary** section, provides a complete list of discovered open source and third-party packages with associated licenses, security vulnerabilities, dependencies, and detected copyright statements.

The Package Inventory View provides filters that you can use to execute targeted queries to refine the list to various package types of interest.

The following figures show the initial Summary View of a sample FlexNet Code Aware Report.

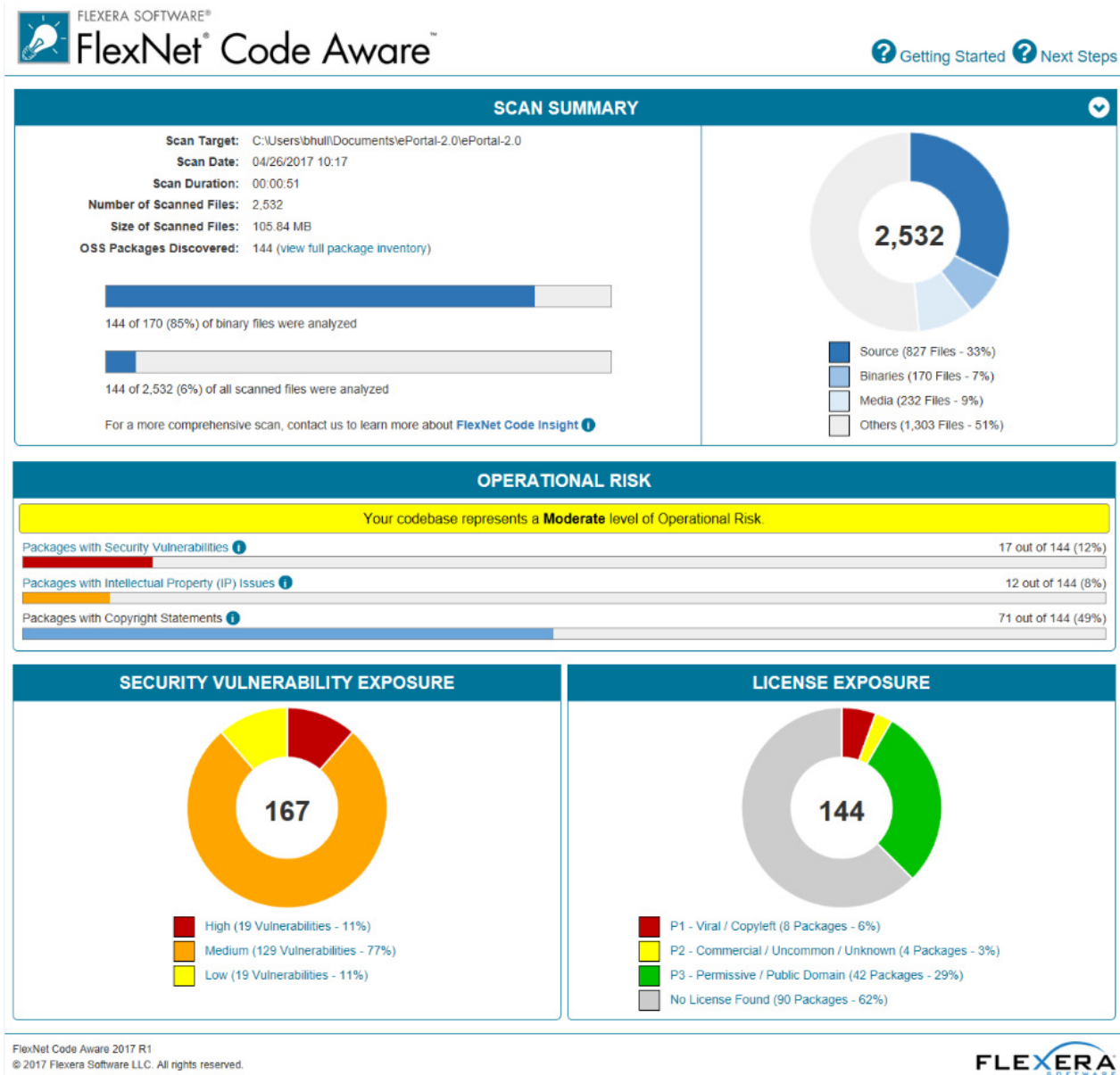
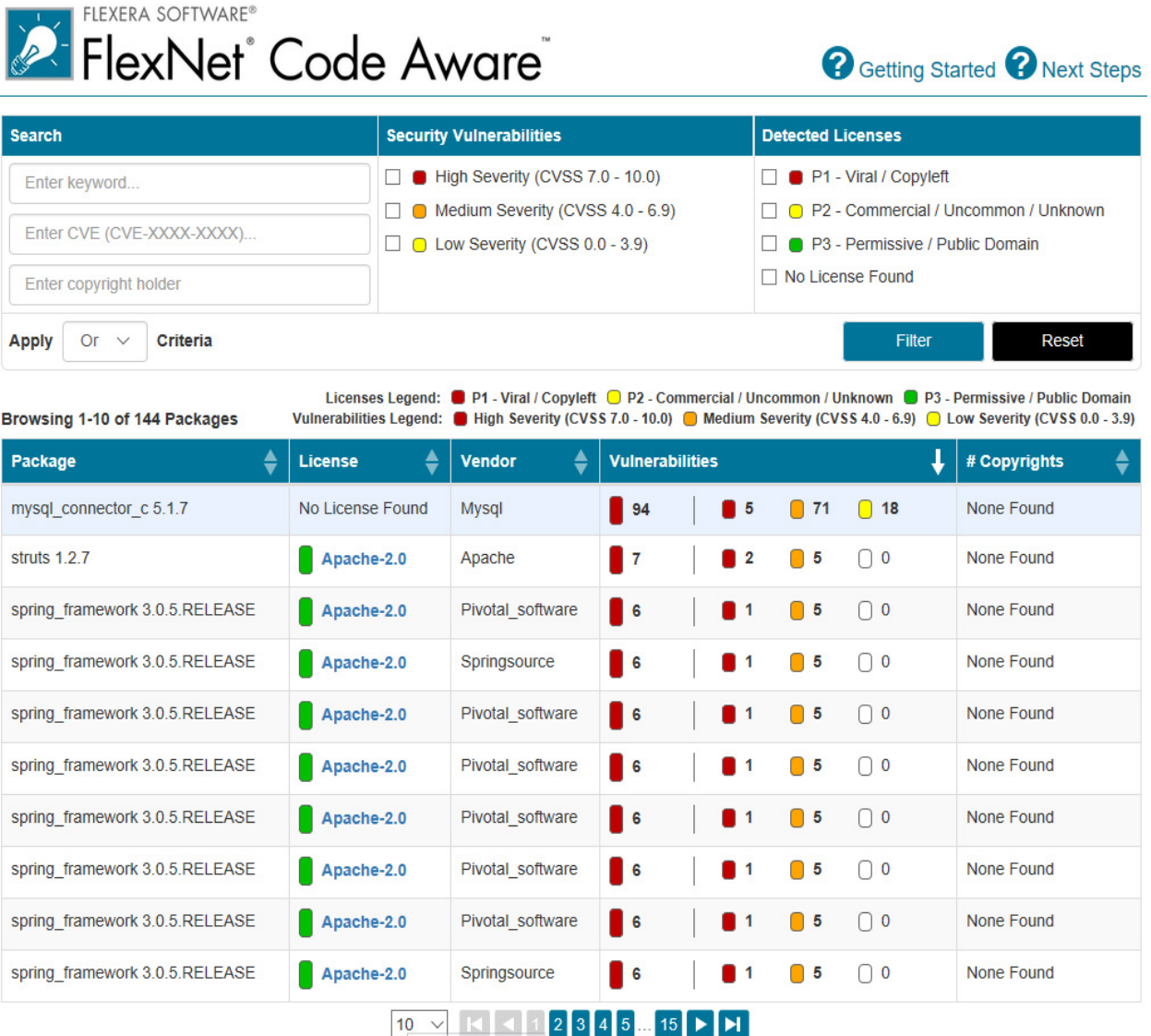


Figure -1: FlexNet Code Aware Initial Summary View

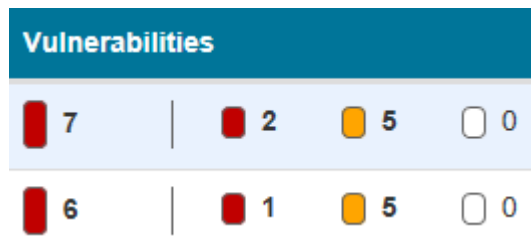
The following figures show the Package Inventory View of a sample FlexNet Code Aware Report.



**Figure -2:** FlexNet Code Aware Package Inventory View

## Viewing Package Details

Click a vulnerability count listed in the Vulnerabilities column of the Package Inventory report page for each package you want to review:



The **Vulnerabilities detail** page appears, covering a portion of the Package Inventory report:

**struts 1.2.7**


**Name**

struts 1.2.7





**Version**

1.2.7

**License**

 **Apache-2.0**

**Vulnerabilities**

 7 |  2  5  0

**Description**

The core of the Struts framework is a flexible control layer based on standard technologies like Java Servlets, JavaBeans, ResourceBundle, and Extensible Markup Language (XML), as well as various Jakarta Commons packages. Struts encourages application architectures based on the Model 2 approach, a variation of the classic Model-View-Controller (MVC) design paradigm. Struts provides its own Controller component and integrates with other technologies to provide the Model and the View. For the Model, Struts can interact with any standard data access technology, including Enterprise Java Beans, JDBC, and Object Relational Bridge. For the View, Struts works well with JavaServer Pages, including JSTL and JSF, as well as Velocity Templates, XSLT, and other presentation systems. The Struts framework provides the invisible underpinnings every professional web application needs to survive. Struts helps you create an extensible development environment for your application, based on published standards and proven design patterns.

**Path**

C:\Users\bhull\Documents\Portal-2.0\Portal-2.0\extras\struts-1.2.7\contrib\struts-el\lib\struts.jar  
C:\Users\bhull\Documents\Portal-2.0\Portal-2.0\extras\struts-1.2.7\lib\struts.jar

**Evidence Type**

pom.xml

**Maven GAV**

struts:struts:1.2.7

**Vendor**


Apache

**Copyrights**

None Found

**Security Vulnerabilities**

**CVE ID:** [CVE-2006-1547](#)

**Severity:**  High

**CVSS Score:** 7.8

## Resolved Issues in SP2

For descriptions of resolved issues in InstallShield 2016 SP1, refer to [InstallShield 2016 SP2](#).

# Changes in SP1

## Support for Microsoft Visual Studio 2017

InstallShield includes support for Visual Studio 2017. You can create InstallShield projects from within this version of Visual Studio.

## Resolved Issues in SP1

For descriptions of resolved issues in InstallShield 2016 SP1, refer to [InstallShield 2016 SP1](#).

## New Features

InstallShield 2016 includes the following new features:

- [Support for the Latest Releases of Windows Operating Systems](#)
- [Microsoft SQL Server 2016 Support](#)
- [Support for Creating UWP App Packages](#)
- [SQL Support Added to Suites](#)
- [Tile Configurations](#)
- [New InstallShield Prerequisites for Microsoft Visual C++ 2015, .NET Framework 4.6, and More](#)
- [Predefined System Searches for Adobe Reader, Microsoft Office and the .NET Framework](#)

## Support for the Latest Releases of Windows Operating Systems

InstallShield 2016 supports the latest releases of the Windows operating system:

- Windows 10 Anniversary Update
- Windows Server 2016

Not only can you install InstallShield on these operating systems, but you can also create installers that target these operating systems.

# Microsoft SQL Server 2016 Support



---

**Project** • Microsoft SQL Server 2016 support is available in the following project types:

- Basic MSI
- DIM
- InstallScript
- InstallScript MSI

InstallShield now includes support for running SQL scripts on SQL Server 2016 database servers. In addition, InstallShield includes SQL Server 2016 in the predefined list of database servers that you can select when you are specifying in the SQL Scripts view the target database servers that your product supports.

If your installation targets SQL Server 2016, the SQLBrowse run-time dialog that is displayed when end users choose to browse for a database server can now list instances of SQL Server 2016, SQL Server 2016 Express, and SQL Server 2014 Express LocalDB. In addition, the SQLBrowse run-time dialog that is displayed when end users choose to browse for a database catalog can now list catalogs on the specified SQL Server 2016 database server.

See [New InstallShield Prerequisites for Microsoft Visual C++ 2015, .NET Framework 4.6, and More](#) for a complete list of new InstallShield prerequisites added to InstallShield.



---

**Note** • Microsoft SQL Server 2016 is now 64-bit (x64) only.

## Support for Creating UWP App Packages



---

**Project** • UWP app creation is available in Basic MSI projects.



---

**Important** • The Windows 10 Anniversary Update is required for installing and testing a UWP app package (.appx) with desktop extensions (Desktop Bridge, formerly known as Project Centennial). To digitally sign the UWP app package, InstallShield must be installed on a Windows 10 machine or a machine with the Windows 10 SDK installed.

The UWP app package (.appx) format is the simple and secure packaging format used to distribute and install apps on Windows 8.x and 10 and is the only format allowed for Universal Windows Platform (UWP) apps. Benefits of UWP app packages include:

- High availability, reliability, and durability, resulting in applications that operate continuously without failure for extended periods of time
- A smooth installation experience through static builds that require minimal configuration and no customizable UI
- The option to sell or provide the application through the Windows Store

- The ability to leverage UWP functionality such as live tiles as well as the ability to utilize UWP APIs
- The only package format with native support on Windows Nano Server

InstallShield now supports creating the UWP app package format (.appx) and its desktop and server extensions through an alternate build output and provides suitability testing to help you identify items unsuitable for the UWP app package format. Refer to the following subsections for details about new functionality added to InstallShield to support the creation of UWP app packages.

- [UWP App Settings in the Releases View](#)
- [UWP App Logo Customization in the Shortcuts View](#)
- [UWP App Suitability Testing](#)
- [New UWP Condition Checks added to Suites](#)

## UWP App Settings in the Releases View

When you select a release in the **Releases** view, a new per-release tab titled **Windows App** has been added that includes settings to create a UWP app package. Here, various core settings can be specified that impact the UWP app package build process. In particular, the **Distribution Method** and **Include Desktop Extensions** or **Include Server Extensions** options will affect what warnings or errors are encountered for certain kinds of installer project data.

For complete information on these new settings, refer to the “Windows App Tab for a Release” topic in the InstallShield Help Library.

## UWP App Logo Customization in the Shortcuts View

In addition to the new UWP app settings added to the **Releases** view, there are new settings to configure the tiles created in an UWP app package. These settings are located in the new **UWP App Package Tile Overrides** area of the **Shortcuts** view.

For complete information on these new settings, refer to the “Shortcut Settings” topic in the InstallShield Help Library.

## UWP App Suitability Testing

InstallShield has added the new InstallShield UWP App Suitability Suite that scans an .msi package for signs of items that are unsuitable for the UWP app package format. To access it, on the **Build** menu, point to **Validation**, and then click **InstallShield UWP App Suitability Suite**.

The InstallShield UWP App Suitability Suite provides a report in the **Releases** view that indicates all tests that found issues and for each issue, an associated column in the report indicates applicability to the known UWP app variants. For traditional CUBs, these columns are not populated. You can view this report by navigating to the **Releases** view and selecting the Validations folder under your release. For complete information, including descriptions of the new ISUWP validations included, refer to the “InstallShield UWP App Suitability Suite” topic in the InstallShield Help Library.

## New UWP Condition Checks added to Suites

When you are building a conditional statement for an exit, detection, eligibility, feature, or wizard interface condition in an Advanced UI or Suite/Advanced UI project, or for an action condition in a Suite/Advanced UI project, you can select from a number of different types of checks that you want to be evaluated on target systems. The following condition checks have been added to Suites.

- **UWP App Package Eligible**—Check target systems for the run time dependencies of the UWP app package to prevent any attempts to install a UWP app package onto a version of Windows or Windows Server that does not support it.



---

**Note** • This condition is available only for the eligibility condition of a UWP app package. If it is used in any other package type, it will not function correctly.

- **UWP Type Present**—Check target systems for the presence of UWP functionality. For example, to create a conditional statement that checks for the presence of the Desktop Bridge, check for the type `Windows.ApplicationModel.FullTrustProcessLauncher`. This can be used to conditionally block installation, or to choose between installing .msi and UWP app package (.appx).



---

**Note** • This always evaluates as false on operating systems before Windows 10. Use of the Type Name subsetting `Windows.ApplicationModel.FullTrustProcessLauncher` requires Windows 10 Anniversary Update or newer.

## SQL Support Added to Suites



---

**Project** • This information applies to Suite/Advanced UI projects.



---

**Edition** • The Suite/Advanced UI project type is available in the Premier edition of InstallShield.

SQL servers are integral to many applications, especially those that benefit from the multiple package support provided by InstallShield Suite installations. Previously, InstallShield SQL support was limited to Basic MSI, InstallScript, and InstallScript MSI projects. Now, SQL support has been added to Suite/Advanced UI projects, giving you the ability to:

- [Add a New SQLLogin Predefined Wizard Page](#)
- [Execute SQL Statements Directly from Suites](#)

To learn more, see the following topics in the InstallShield Help Library:

- [Adding a SQLLogin Predefined Wizard Page in a Suite/Advanced UI Project](#)
- [Configuring an Action for an Element in the Wizard Interface](#)
- [Predefined Task Pages Panel](#)

## Add a New SQLLogin Predefined Wizard Page

InstallShield adds SQL support to Suite/Advanced UI projects by providing a new **SQLLogin** predefined wizard page that can be added to your Suite/Advanced UI project. Previously, if you added an .msi package containing SQL support to a Suite/Advanced UI project, the Advanced UI or Suite/Advanced UI setup launcher automatically suppressed the user interface of Windows Installer. You were required to manually create a custom SQLLogin wizard page for your Suite/Advanced UI project installation.

When adding a new predefined page to your project, select the **Enter login information for a database server** task page and complete the panels in the wizard as needed. The SQLLogin predefined wizard page is then added to your project. This SQLLogin wizard page lets end users enter database server login information (database server name, authentication credentials, database catalog name, etc.) in order to establish a connection to the database server that is targeted by one or more .msi packages in the suite.

Adding a SQLLogin wizard page to your project allows you to:

- Specify properties that identify the SQL login settings in the Suite project and then select the .msi package that receives these properties
- Specify the properties that identify the SQL login settings in the .msi package
- Choose the database technology (Microsoft SQL Server, Microsoft Windows Azure, MySQL, or Oracle) and select the ODBC driver to be targeted

## Execute SQL Statements Directly from Suites

Suite/Advanced UI projects now support directly executing SQL statements on SQL database servers from the user interface, which helps allow SQL database servers to be examined before proceeding with the installation.

The SQL query result can then be accessed in a Suite property. To provide this support, a **Run a SQL String** option is now available in the New Action menu of UI events. The SQL statement is executed using properties and database metadata specified by additional new options available in the New Action menu of UI events: **Configure Database Metadata** and **Override SQL Login Properties**.

## Tile Configurations



**Project** • This information applies to Basic MSI, InstallScript MSI, and InstallScript project types.

Windows 8 introduced a grid of application tiles to the Start screen, replacing the usual list of shortcuts, and also presented tiles in place of shortcuts. InstallShield supports customizing the appearance of a desktop app's tile on the Start screen. The following tile configuration settings are available:

- A toggle between light or dark text when including the app name on medium-sized (150x150) tiles
- Choice of tile background color
- Option to use custom tile images (small: 70x70 and medium:150x150)
- Preference to show or hide the app name on medium-sized tiles

The **Tile Configurations** node appears in the main **Shortcuts** view and in each component's **Shortcuts** subview. Any applicable tile configurations are listed.

To learn more, see the following topics in the InstallShield Help Library:

- *Configuring the Appearance of a Desktop App's Tile on the Start Screen*
- *Tile Configuration Settings*

## New InstallShield Prerequisites for Microsoft Visual C++ 2015, .NET Framework 4.6, and More



---

**Project** • *InstallShield prerequisites can be added to Advanced UI, Basic MSI, InstallScript, InstallScript MSI, and Suite/Advanced UI projects.*

InstallShield includes the following new InstallShield prerequisites:

- Microsoft .NET Framework 4.6.1 Full
- Microsoft .NET Framework 4.6.1 Web
- Microsoft ReportViewer 2015
- Microsoft SQL Server 2014 Express System CLR Types (x86)
- Microsoft SQL Server 2016 Express RTM (x64)
- Microsoft SQL Server 2016 Express RTM LocalDB (x64)
- Microsoft Visual C++ 2015 Update 3 Redistributable Package (x86)
- Microsoft Visual C++ 2015 Update 3 Redistributable Package (x64)
- Windows Management Framework 4.0 for Windows 7 SP1 and Server 2008 R2 SP1 (x64)
- Windows Management Framework 4.0 for Windows Server 2012 (x64)
- Windows Management Framework 5.0 for Windows 7 SP1 (x86)
- Windows Management Framework 5.0 for Windows 7 SP1 and Server 2008 R2 SP1 (x64)
- Windows Management Framework 5.0 for Windows 8.1 (x86)
- Windows Management Framework 5.0 for Windows 8.1 and Server 2012 R2 (x64)
- Windows Management Framework 5.0 for Windows Server 2012 (x64)

These prerequisites install the appropriate technologies on supported target systems.



---

**Note** • *The **Web** prerequisite for the .NET Framework requires an Internet connection. This prerequisite downloads the required redistributable files if appropriate. The **Full** prerequisite for the .NET Framework is a stand-alone installation that does not require an Internet connection.*

# Predefined System Searches for Adobe Reader, Microsoft Office and the .NET Framework



---

**Project** • *Predefined System Searches apply to Basic MSI and InstallScript MSI projects.*

InstallShield has new predefined system searches:

- Adobe Reader 11
- Adobe Reader DC
- Microsoft Office 2013
- Microsoft Office 2016
- Microsoft .NET Framework 4.5.1
- Microsoft .NET Framework 4.5.2
- Microsoft .NET Framework 4.6
- Microsoft .NET Framework 4.6.1

If your installation requires one or both of these, you can use the **System Search** view or the Installation Requirements page in the Project Assistant to add these system searches to your project. When end users launch your installation, Windows Installer checks the target system to see if the requirements are met; if they are not met, the installation displays the error message that is defined for the system search.

## Enhancements

InstallShield 2016 includes the following new enhancements:

- [Direct Editor View Enhancements](#)
- [Suite UI Enhancements](#)
- [Kill Process Custom Action Enhanced](#)
- [Ability to Set the Default Value Used for Component Attributes](#)
- [Ability to Filter Items by Features in Additional Views](#)
- [Digital Signature Updates](#)

## Direct Editor View Enhancements



---

**Project** • *The Direct Editor is available in the following project types:*

- *Basic MSI*
- *DIM*
- *InstallScript*

- *InstallScript MSI*
- *InstallScript Object*
- *Merge Module*
- *MSI Database*
- *MSM Database*
- *QuickPatch*
- *Transform*

InstallShield now adds several Direct Editor enhancements that provide visual insights into tables, schema information, and validation errors designed to boost the productivity of setup authors or packagers who use the Direct Editor for troubleshooting to identify and resolve advanced problems. These enhancements are described in the following sections:

- [Directory Table Displays Resolved Target Directory Path](#)
- [Column Header Schema Information Tooltips](#)
- [Table Record Reference Tracking](#)
- [Broken References Indicator](#)

For complete information, refer to the “Direct Editor” topic in the InstallShield Help Library.

## Directory Table Displays Resolved Target Directory Path

When showing the Directory table, InstallShield shows a read-only, grayed out column that displays the resolved path of each row’s directory location. This column is not actually stored in the project file. You can sort by its visible text, but you cannot insert, update, or delete its values.

## Column Header Schema Information Tooltips

InstallShield now provides tooltips added to column headers that display the following schema information to indicate the column data type allowed:

- **nullable**—The column can be left empty.
- **required**—The column must contain a non-empty value.
- **char(*nn*)**—Character string with fixed-length *nn*.
- **small integer**—Integer numerical (no decimal), containing a value from -32767 to +32767.
- **long integer**—Integer numerical (no decimal), containing a value from -2147483647 to +2147483647.
- **localizable**—This column contains a string that can be translated. Columns without this marker are not localized.
- **stream**—Binary stream, such as the contents of a file.



**Tip** • The **Directory**, **Binary**, and **CustomAction** Direct Editor tables display several of these column types.

## Table Record Reference Tracking

The Direct Editor now includes a Reference Tracking pane that lets you easily visualize relationships between table records. A **Show Reference Tracking** button is added to at the top of the Direct Editor that provides a show/hide toggle of the pane.

Each record may reference one or more other records or be referenced by one or more other records. When a record is highlighted that refers to other records or is referred from other records, the Reference Tracking pane is populated with a **Reference Tables** section showing the tables in which the references reside and an additional section that displays the actual record references. The record references section includes arrow icons that indicate the direction of the reference, where:

- A green arrow pointing to the right indicates that the record that is selected in the Direct Editor table **references** the record displayed in the Reference Tracking pane.
- A blue arrow pointing to the left indicates that the record selected in the Direct Editor table is **referenced by** the record displayed in the Reference Tracking pane.
- Two arrows in both directions (a green arrow pointing right and a blue arrow pointing left) that indicate the record selected in the Direct Editor table **references and is referenced by** the record displayed in the Reference Tracking pane.



**Note** • When multiple Direct Editor records are selected, only the "focused" record's references are shown. In addition, if multiple tables appear in the **Reference Tables** section, this indicates that the record selected in the Direct Editor table references or is referenced by records in multiple tables. You can click any table in the **Reference Tables** section to view the associated records references.



**Tip** • In the Reference Tracking pane, you can quickly jump between record references by double-clicking within a cell.

## Broken References Indicator

There are instances where a Direct Editor table record might reference a foreign key record that no longer exists. InstallShield now displays the cells of such broken references with a red fill color to call attention to the broken reference.

For example, if the **Directory\_** column in the in the **Component** table references a directory name that is not found in the **Directory** table, then the **Directory\_** column is filled in red.



**Note** • The Direct Editor broken reference indicator is unrelated to the **Maintain referential integrity** check box on the [Preferences tab](#) of the Options dialog box. While the **Maintain referential integrity** setting is designed to update the foreign keys when you modify a primary key, the purpose of the broken reference indicator is to display broken references to help you easily identify orphaned records. Therefore, broken references are displayed regardless of the selection of the **Maintain referential integrity** setting.

# Suite UI Enhancements



**Project** • This information applies to the following project types:

- Advanced UI
- Suite/Advanced UI



**Edition** • The Advanced UI project type is available in the Professional edition of InstallShield. The Suite/Advanced UI project type is available in the Premier edition of InstallShield. For information about the differences between these two project types, see the “Advanced UI Projects vs. Suite/Advanced UI Projects” topic in the InstallShield Help Library.

To better support various use cases, InstallShield has added the following functionality to Advanced UI and Suite/Advanced UI projects:

- [New Close Window and Stop Event UI Actions](#)
- [Suite Loading Splash Screen Added](#)

## New Close Window and Stop Event UI Actions

InstallShield includes the following new UI actions:

- [Close Window](#)
- [Stop Event](#)

To learn more, see the “Configuring an Action for an Element in the Wizard Interface” topic in the InstallShield Help Library.

### Close Window

This type of action closes a main wizard page or secondary window, or in some cases, provides conditional closing of a secondary window.

Close Window accepts parameters corresponding to the following predefined Return Code IDs: IDOK, IDCANCEL, IDABORT, IDRETRY, IDIGNORE, IDYES, IDNO, and IDCLOSE.

The behavior of the Close Window action differs slightly on wizard pages and secondary windows:

- For wizard pages, the Close Window action prompts the end user to cancel if its Return Code parameter is set to IDCANCEL (and then interrupts the wizard if the end user specifies Yes). For all other Return Code IDs, the wizard immediately closes.
- For secondary windows, the Close Window action closes the secondary window and in special cases such as with the ISRMFilesInUse and ISRMFileInUse secondary windows, the specified Return Code value is returned.

InstallShield currently provides the following secondary windows that contain customized behavior that is dependent upon the specified Return Code ID:

- ISDownloadProgress
- ISPromptForSourceMedia
- ISFilesInUse
- ISRMFilesInUse
- ISUpgradeParcel

## Stop Event

This type of action allows you to conditionally stop further actions from being processed. For example, this action can be used to prevent the default behavior of a button from occurring.

## Suite Loading Splash Screen Added

During a suite installation where the loading process takes more than half a second, InstallShield will now display a splash screen to indicate that the program has launched and that a loading process needs to complete before the Install Welcome dialog appears. For the splash screen, InstallShield utilizes the largest provided version of the **setup.exe** icon and includes a progress bar on it.

This feature resolves issue: IOJ-1729167.

## Kill Process Custom Action Enhanced



---

**Project** • This information applies to the following project types:

- Basic MSI
- InstallScript MSI

A new **Processes** setting has been added to the Kill-Process Custom Action settings that lets you directly enter executable file names or PIDs of the processes that you want to terminate without having to create a property using the Property Manager and format its value correctly for the action to work.

To learn more, see the “Calling a Kill-Process Custom Action” topic in the InstallShield Help Library.



---

**Tip** • The value of the **Processes** setting may be written to the **ISTerminateProcesses** property. If you have additional kill-process custom actions that do not specify a value in the **Processes** setting, such as those migrated from InstallShield 2015 or earlier, shared use of the **ISTerminateProcesses** property may result in undesired behavior.

# Ability to Set the Default Value Used for Component Attributes

Support for a new property has been added to the **InstallShield** table that lets you set the default value used for component attributes. If a property of **MsiComponentAttributes** exists in the **InstallShield** table, its value overrides the default **Attributes** column value in the **Component** table from 8 to whatever is specified.

For example, to make new components 64-bit, add 256 to the **MsiComponentAttributes** value. You can specify 264 (for 64-bit shared) or optionally enter 256 (for 64-bit unshared). In doing so, the **64-Bit Component** setting and **Shared** settings (shown on the in the General area of the **Components** view) will be updated to Yes or No accordingly.

For more information about the bit values used in calculating the **Attributes** column of the Component table, refer to the [Component Table](#) page in the MSDN Library.



---

**Note** • To set the default value used for component attributes, the **MsiComponentAttributes** property must be updated manually in the **InstallShield** table in the **Direct Editor** of each project. The **Template Summary** setting for a product configuration is ignored for this use case.

## Ability to Filter Items by Features in Additional Views

The following views now contain a View Filter that lets you filter the view list by any feature in your project:

- **Environment Variables View**—You can use the View Filter list at the top of this view to show and hide environmental variables that are associated to a particular feature in your project. You can also select a feature from the View List in order to associate only that feature with a subsequent event (e.g., the creation, modification, or removal of an environmental variable). Lastly, to see all of the environmental variables that are in your project, select the All Application Data option in the View Filter list. For more information, refer to the “Environment Variables View” topic in the InstallShield Help Library.
- **Text File Changes View**—You can use the View Filter list at the top of this view to show and hide text file change sets that are associated to a particular feature in your project. You can select a feature from the View List in order to associate only that feature with a subsequent event (e.g., the creation, modification, ordering, or removal of change sets). The resulting modification takes place at run time on the target system when the feature is installed. Lastly, to see all of the text file change sets that are in your project, select the All Application Data option in the View Filter list. For more information, refer to the “Text File Changes View” topic in the InstallShield Help Library.
- **INI File Changes View**—You can use the View Filter list at the top of this view to show and hide initialization (.ini) files that are associated to a particular feature in your project. You can select a feature from the View List in order to associate only that feature with a subsequent event (e.g., the creation, importing, modification, or removal of .ini files). The resulting modification takes place at run time on the target system when the feature is installed. Lastly, to see all of the .ini files that are in your project, select the All Application Data option in the View Filter list. For more information, refer to the “INI File Changes View” topic in the InstallShield Help Library.

# Digital Signature Updates

Beginning with InstallShield 2015, support was added to enable you to use digital certificates that use the SHA-256 hashing algorithm for signing your installations and files at build time.

In InstallShield 2016, support for SHA-256 digital certificates has been enhanced for Windows Installer and InstallScript projects to:

- Give you the ability to specify a digest type using the new **Signature Digest** drop-down on the Certificate Selection Dialog Box
- RFC3161 timestamping is now supported and can be specified in **settings.xml**, noting that:
  - **DigitalSignature/@Timestamp** can be an **Authenticode** or **RFC3161 server** for .msi, .exe, and .dll files
  - **DigitalSignature/@TimestampRFC3161** used for UWP app package files must be an **RFC3161 server**
- Handle similarly-named certificates in the Certificate Store



**Important** • Any new signatures created or timestamped after Jan 1, 2016 must be SHA-256-based signatures. Any files signed with an SHA-1 certificate need to have a timestamp showing a date and time prior to Jan 1, 2016 in order to continue to be supported. Those files will still be allowed through the "Mark-of-the-web" system until Jan 14, 2020, when all SHA-1 support will stop in all current versions of Windows.

## Important Information

### Evaluating InstallShield

If you have not purchased a license for InstallShield, you can install it and use it for a limited number of days without activating it or connecting it to a license server. When you use InstallShield before activating it or connecting it to a license server, it operates in evaluation mode, and some of its functionality is not available. For details, see KB article [Q200900](#). Note that the evaluation limitations are removed when you activate InstallShield or when you connect it to a license server and check out a license for it.

### Obtaining the Installations for InstallShield, InstallShield Add-Ons, and the Redistributable Files

The following installations are available for download from the Flexera Software Product and License Center as documented in the [InstallShield download and licensing instructions](#):

- InstallShield
- Redistributable files (for example, InstallShield prerequisites and InstallScript objects)
- Add-ons (if you are entitled to them) such as the Standalone Build, InstallShield Collaboration, and the InstallShield MSI Tools

- FlexNet Licensing Server software (if you purchased concurrent licenses and you need to set up your organization's license server)
- Skin Customization Kit
- InstallScript Object templates
- InstallShield service packs (if available)

## Installing More than One Edition of InstallShield

Only one edition of InstallShield 2016—Premier, Professional, or Express—can be installed on a system at a time. In addition, the InstallShield 2015 DIM Editor cannot be installed on the same machine with any edition of InstallShield 2016.

Microsoft Visual Studio can be integrated with only one version of InstallShield at a time. The last version of InstallShield that is installed or repaired on a system is the one that is used for Visual Studio integration.

## Installing More than One Version of InstallShield

InstallShield 2016 can coexist on the same machine with other versions of InstallShield.

The InstallShield 2016 Standalone Build can coexist on the same machine with other versions of the Standalone Build. In most cases, the Standalone Build is not installed on the same machine where InstallShield is installed. If you do install both on the same machine and you want to use the automation interface, review the "Installing the Standalone Build and InstallShield on the Same Machine" topic in the InstallShield Help Library to learn about special registration and uninstallation considerations.

## Project Upgrade Alerts

The following information describes possible upgrade issues that may occur when you upgrade projects that were created with InstallShield 2015 and earlier to InstallShield 2016. It also alerts you to possible changes in behavior that you may notice between new InstallShield 2016 projects and projects that are upgraded from InstallShield 2015 or earlier to InstallShield 2016.

## General Information about Upgrading Projects that Were Created in Earlier Versions of InstallShield

If you use InstallShield 2016 to open a project that was created with an earlier version, InstallShield 2016 displays a message box that asks you if you want to convert the project to the new version. If you reply that you do want to convert it, InstallShield creates a backup copy of the project with a file extension such as .775 (for an .ism project) or .2016 (for an .issuite project) before converting it. Delete the .775 or .2015 part from the original project's file name if you want to reopen the project in the earlier version of InstallShield. Note that you cannot open InstallShield 2016 projects in earlier versions of InstallShield.

You can upgrade projects that were created with the following versions of InstallShield to InstallShield 2016: InstallShield 2015 and earlier, InstallShield 12 and earlier, InstallShield DevStudio, InstallShield Professional 7 and earlier, and InstallShield Developer 8 and earlier. Note that projects that were created with InstallShield MultiPlatform or InstallShield Universal cannot be upgraded to InstallShield 2016

## Changes to the List of Supported Versions of Windows for Target Systems

For all project types except for Suites, Windows XP SP3 and Windows Server 2003 SP2 are the minimum versions of Windows that are required for target systems that run the installations that are created in InstallShield. For suites (Advanced UI, and Suite/Advanced UI project types), Windows Vista and Windows Server 2008 are the minimum versions of Windows that are required for target systems.

## Localized String Considerations

Changes to the handling and detection of localized strings have been introduced in InstallShield 2016. For example, localized string content that includes square brackets around invalid characters can now trigger a build time warning or error. Accordingly, the following new warning and errors might occur when you are working with your installation.

Error or Warning Number	Message	Troubleshooting Information
-7355	The %4 value for string %2 does not meet validation criteria for table %1 column %3.	This warning occurs if a localized string value does not meet validation criteria for a column in the String Editor table. To resolve this warning, update the flagged value in the String Editor.
-7354	The %4 value for string %2 does not contain a legitimate value for table %1 column %3.	This error occurs if a localized string value does not contain a legitimate value in the named column of the String Editor table. To resolve this error, update the flagged value in the String Editor.




## Resolved Issues





This section lists the customer issues that were resolved in the following versions of InstallShield:





- [InstallShield 2016 SP2](#)
- [InstallShield 2016 SP1](#)
- [InstallShield 2016](#)




# InstallShield 2016 SP2



The following issues have been resolved in InstallShield 2016 SP2:

Issue Number	Issue Summary
IOJ-1812110	 <b>Project</b> • This information applies to InstallScript project types.  When outputting the CMDLINE variable, the following value will no longer be included:  <code>-IS_temp -IS_OriginalLauncher:&lt;path_to_setup.exe&gt;</code>  Where <path_to_setup.exe> will resolve to the full path to the setup launcher.  This behavior was caused by a fix for a bootstrapper issue and was introduced in InstallShield 2016 SP1 (File version: 23.0.0.406).
IOJ-1812041	 <b>Project</b> • This information applies to the following project types: <ul style="list-style-type: none"><li>• Advanced UI</li><li>• Suite/Advanced UI</li></ul> Setup.exe files created by InstallScript MSI or Basic MSI projects now include support for the /clone_wait parameter so that the original setup waits for the cloned setup process to complete before exiting. Previously, when a setup.exe was created by InstallScript MSI or Basic MSI project and then added to a suite project, the suite package invoked a dialog box with the following message as a result of child processes not completing:  The installation of setup appears to have failed. Do you want to continue the installation?
IOJ-1811205	 <b>Project</b> • This information applies to the following project types: <ul style="list-style-type: none"><li>• InstallScript</li><li>• InstallScript MSI</li></ul> Setup.exe files created by InstallScript and InstallScript MSI projects now attempt to load DLL named <b>_isuser_0x0000.dll</b> from a SUPPORTDIR directory. Previously, if the language-specific file was not found first, the setup.exe would wind up looking for the language neutral file in the current working directory which was usually the path of the original launching EXE.
IOJ-1814315	InstallShield's signing feature now includes support for SHA-1 RFC 3161 timestamp servers. Previously, InstallShield was unable to timestamp signed files with any SHA-1 RFC 3161 timestamp server.

Issue Number	Issue Summary
IOJ-1813455	<p>InstallScript Debugger now shows breakpoints and the next statement cursor for a .rul file that is referenced by a relative path in a folder outside of the Script Files folder. Previously, when inserting or importing an additional InstallScript .rul file in a location other than the default Script Files folder and including the file using a relative path, the InstallScript Debugger ran into display issues.</p>
IOJ-1812954	<p></p> <p><b>Project</b> • This information applies to Transform project types.</p> <p>Using Transform projects, you can now use right-click context menu options <b>Undo Differences</b> or <b>Undo Differences for Entire Row</b> in the Direct Editor. The menus options were accidentally removed from InstallShield 2009.</p>
IOJ-1812919	<p></p> <p><b>Project</b> • This information applies to Basic MSI projects.</p> <p>Migrating to InstallShield 2016 no longer changes the behavior of the Back push button control on the ReadyToInstall dialog. Previously, a NewDialog event with a condition of "NOT Installed AND _IsSetupTypeMin &lt;&gt; "Custom"" was changed to show the InstallWelcome dialog when the event was configured to show a dialog other than the SetupType dialog.</p>
IOJ-1812303	<p></p> <p><b>Project</b> • This information applies to Transform project types.</p> <p>When a field is changed in a transform project, the changed fields are highlighted in green in the respective Direct Editor tables. Starting with InstallShield 2015 SP1, changed fields were no longer being highlighted in green as expected.</p>
IOJ-1812243	<p></p> <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>PowerShell custom actions are now executing when a PowerShell script file is installed with the product. Previously, PowerShell custom actions that were configured to use a script installed with the product were not able to locate the script file on the target system.</p>
IOJ-1812221	<p>The Browse for Folder dialog in the InstallScript Debugger now displays a Folder edit field that lets you enter the path to a missing rul/h/InstallScript file. Previously, this dialog box provided a selection list only.</p>

Issue Number	Issue Summary
IOJ-1810308	 <p><b>Project</b> • This information applies to Basic MSI and InstallScript project types.</p> <p>In a Basic MSI project and InstallScript MSI project, you can now set the <b>Display Icon</b> (in the <b>General Information</b> view) to an .ico file contained in a folder path that contains a comma. Previously, the path containing a comma was not being handled correctly, resulting, in build error -3204 ("Cannot extract icon with specified index from the file specified for the icon").</p>
IOJ-1809878	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> <li>• InstallScript Object</li> <li>• Merge Module</li> </ul> <p>The InstallShield .NET dependency scanner can now locate .exe dependencies. Previously, InstallShield was able to locate only .dll dependencies.</p>
IOJ-1806480	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>Outputs containing percent symbols (%) from SQL PRINT statements are now written to a Windows Installer log correctly. Previously, InstallShield did not write the output or write truncated output only before the first percent symbol into the log.</p>
IOJ-1805815	 <p><b>Project</b> • This information applies to InstallScript projects.</p> <p>InstallShield no longer crashes when building an InstallScript project containing both Microsoft Jet Database Engine 3.51 and Microsoft Jet Database Engine 4.0 merge modules.</p>




Issue Number	Issue Summary
IOJ-1804749	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>Installations created by Advanced UI and Suite/Advanced UI projects now write error codes to a verbose log, allowing you to check a suite exit code based on whether a suite install failed an exit condition or not. Previously, the actual error code was not being written to the verbose log.</p>
IOJ-1811355	 <p><b>Project</b> • This information applies to Suite/Advanced UI project types.</p> <p>Installations created by Advanced UI and Suite/Advanced UI projects can now run EXE actions that launch a program in a SETUPSUPPORTDIR directory. Previously, the suite actions returned error 0x80070002.</p> <p>This behavior was caused by a fix for a bootstrapper issue and was introduced in InstallShield 2016 SP1 (File version: 23.0.0.406).</p>
IOJ-1817415	<p>Setup.exe files created by InstallScript MSI or Basic MSI projects now resume on reboot even if the setup.exe name contains spaces. Previously, extra double quotes were being written to the RunOnce registry value key, which in turn prevented the install from resuming after reboot.</p> <p>This behavior was caused by a fix for a bootstrapper issue and was introduced in InstallShield 2016 SP1 (File version: 23.0.0.406).</p>
IOJ-1815849	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>Using the /clone_wait parameter and /L language parameter with a Basic MSI or InstallScript MSI setup.exe now works as expected. Previously, using this combination of command line parameters with a Basic MSI or InstallScript MSI was resulting in unexpected results with respect to what language was being displayed.</p>




Issue Number	Issue Summary
IOJ-1816527	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>Uncompressed setup.exe files created by InstallScript MSI or Basic MSI projects can now be launched from the command line using a relative path. Previously, this resulted in unexpected behavior such as an inability to read the setup initialization file.</p> <p>This behavior was caused by a fix for a bootstrapper issue and was introduced in InstallShield 2016 SP1 (File version: 23.0.0.406).</p>
IOJ-1817530	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> <li>• InstallScript Object</li> <li>• Merge Module</li> <li>• MSI Database</li> <li>• MSM Database</li> <li>• QuickPatch</li> <li>• Transform</li> </ul> <p>Holding down the down arrow key to scroll in the Control Table of the Direct Editor no longer results in the IDE crashing.</p>



## InstallShield 2016 SP1

The following issues have been resolved in InstallShield 2016 SP1:

Issue Number	Issue Summary
IOJ-1802041	The <a href="#">Best Practices to Avoid Windows Setup Launcher Executable Issues</a> article has been added to the Flexera Software Knowledge Base.

Issue Number	Issue Summary
IOJ-1799114	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Basic MSI</i></li> <li>• <i>InstallScript</i></li> <li>• <i>InstallScript MSI</i></li> </ul> <p>An issue introduced into include file processing has been resolved that was previously resulting in the path to the file being lost when InstallShield stored a reference to the .rul file location. This caused an issue with error reporting in the IDE build output which resulted in the debugger prompting for the location of the .rul file. With this fix, the debugger is able to successfully locate the referenced .rul file.</p>
IOJ-1781071	 <p><b>Project</b> • <i>This information applies to Transform projects.</i></p> <p>When you are editing a transform (.mst file), the differences between the base package and the applied transform are highlighted in the Direct Editor using icons. In InstallShield 2016, these icons were no longer displaying correctly but the display issue has now been resolved.</p>
IOJ-1780767	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Basic MSI</i></li> <li>• <i>InstallScript MSI</i></li> </ul> <p>When the <b>Generate Autorun.inf</b> option on the Advanced Settings of the Release Wizard is not checked, an Autorun.inf file is not created. Previously, when building a CD-ROM release using the Project Assistant, an Autorun.inf file was being created when building a CD-ROM release even if the <b>Generate Autorun.inf</b> option was not checked.</p>

Issue Number	Issue Summary
IOJ-1779971	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>Entries added to the Processes setting of the kill-process custom action are correctly being retained when using the Custom Action Wizard to modify the custom action and a field for the Processes setting should exist in the Custom Action Wizard. Previously, if you created a New Kill Process custom action and then added an entry for the Processes setting, changes to the Processes setting were not being retained when the custom action was modified using the Custom Action Wizard.</p>
IOJ-1778034	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> </ul> <p>InstallShield 2016 now displays the same -4370 build error ("There were errors compiling InstallScript") as previous InstallShield releases when compiling a <b>setup.rul</b> file with more than one .rul file and there is an error in the secondary script.</p>
IOJ-1774410	 <p><b>Project</b> • This information applies to Suite/Advanced UI projects.</p> <p>After adding a SQLLogin Predefined Wizard Page in a Suite/Advanced UI Project that has been migrated from an older version of InstallShield, the SQL login wizard strings now display properly. The SQL related strings are added to the project and their values resolved and displayed on the Wizard Page. Previously, the Wizard Page was displaying string identifiers (e.g., IDS_SQLLOGIN_SERVER) instead of their the properly resolved names.</p>

Issue Number	Issue Summary
<b>IOJ-1774403</b>	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript MSI</li> <li>• Merge Module</li> </ul> <p>InstallShield has improved internal processing in order to limit the issuance of error -7354 ("The %4 value for string %2 does not contain a legitimate value for table %1 column %3").</p>
<b>IOJ-1774042</b>	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> <li>• MSI Database</li> </ul> <p>The installation conditions for the following .NET framework versions created using the Project Assistant have been fixed to work correctly:</p> <ul style="list-style-type: none"> <li>• .Net Framework 4.5.1</li> <li>• .Net Framework 4.5.2</li> <li>• .Net Framework 4.6.1</li> <li>• .Net 4.6 Full</li> </ul>
<b>IOJ-1773408</b>	<p>A description for <b>SS_REALSIZECONTROL</b> has been added to the tables in the following sections of the InstallShield Help Library:</p> <ul style="list-style-type: none"> <li>• "Other Window Styles for Bitmap, Icon, and Text Area Controls"</li> <li>• "Other Window Styles for Line Controls"</li> </ul>
<b>IOJ-1773250</b>	<p>In the Direct Editor, relationships between entries in the following tables have been updated to display properly in InstallShield 2016:</p> <ul style="list-style-type: none"> <li>• AppSearch and RegLocator</li> <li>• IniLocator, DrLocator and CompLocator</li> </ul> <p>Previously, the References Tables section of the Direct Editor was not correctly showing applicable relationships in these tables.</p>
<b>IOJ-1802350</b>	<p>In the InstallShield Help Library, the "Launching a File Open Dialog" topic has been updated to include additional steps (2n through 2p) in order to provide additional information about how to refresh an MSI property value on a dialog when using the file browse dialog.</p>

**Issue Number****Issue Summary****IOJ-1807101**

**Project** • This information applies to the following project types:

- Basic MSI
- DIM
- InstallScript MSI
- Merge Module

Localized values, such as a Shortcut's Name or a String ID, are now validated at build and can result in the following build warnings and errors:

- -7355: The %4 value for string %2 does not meet validation criteria for table %1 column %3.

This warning occurs if a localized string value does not meet validation criteria for a column in the String Editor table. To resolve this warning, update the flagged value in the String Editor.

- -7354: The %4 value for string %2 does not contain a legitimate value for table %1 column %3.

This error occurs if a localized string value does not contain a legitimate value in the named column of the String Editor table. To resolve this error, update the flagged value in the String Editor.




Previously, these values were not validated, and bad string values could result in incorrect run time behavior with no prior warning. Projects that imported the language before these strings were in InstallShield 2016 SP1 will need to be fixed manually in the String Editor.



**IOJ-1804947**



**Project** • This information applies to the following project types:





- Basic MSI
- InstallScript MSI



Timestamp information in **Settings.xml** can be used successfully for patch builds. Previously, patch build signing code was not properly reading timestamp server information from **Settings.xml**.

Issue Number	Issue Summary
IOJ-1801041	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript MSI</li> <li>• Merge Module</li> </ul> <p>When using Text File Changes change sets in an InstallScript MSI project to modify a text file, changes are made to the text file even if the file to be changed is in the System32 or System64 folder. Previously, text files in these folders were not being updated in InstallScript MSI projects using Text File Changes change sets.</p>
IOJ-1799427	<p>The supported operating systems listed in the "System Requirements for the FlexNet Licensing Server" section have been updated on page: <a href="http://resources.flexerasoftware.com/instructions/productlicensing/en/installshieldconcurrent.htm">http://resources.flexerasoftware.com/instructions/productlicensing/en/installshieldconcurrent.htm</a>.</p>
IOJ-1781229	<p>The InstallShield 2016 Standalone Build setup has been updated to support only Windows Vista, Windows Server 2008, and later. The InstallShield 2016 Standalone Build will now only install on supported versions of Microsoft Windows.</p>
IOJ-1801258	<p>The following note has been added to the "Getting and Setting Properties" topic and the "Windows Installer API Functions" topic in the InstallShield Help Library:</p>  <p><b>Note</b> • It may be necessary to specify a proper buffer size if the property value exceeds 1024 characters. For an example of how to write code for this scenario, refer to "Changes in Behavior for Some MSI APIs That Are Called in InstallScript Custom Actions" in the "Upgrading Projects from InstallShield 2011 or Earlier" topic.</p>
IOJ-1780914	<p>A typo in SYSINFO Members <b>SYSINFO.bIsWow64</b> has been updated in the Japanese version of the InstallShield Help Library.</p>
IOJ-1780766	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>Checked List Box controls on Suite dialogs have been fixed to execute an Item Changed event. Previously, properties were not always being created when an item in the checked list box was selected or toggled.</p>

Issue Number	Issue Summary
<b>IOJ-1773398</b>	Hyperlinks have been updated in the "Other Window Styles Dialog Box" topic in the InstallShield Help Library to link correctly to their corresponding topics. Previously, some of the hyperlinks on this page were not referencing the intended link.
<b>IOJ-1780360</b>	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>Previously, a call to the Import-Module cmdlet in a PowerShell script was failing in some instances with an "Object reference not set to an instance of an object" error. This has been resolved and the PowerShell scripts encountering this error now run without issue.</p>
<b>IOJ-1780731</b>	 <p><b>Project</b> • This information applies to Basic MSI projects.</p> <p>The Open MSI/MSM Wizard is a tool that converts existing installation projects (.msi files) and merge modules (.msm files) to InstallShield installation projects (.ism files). If the original .msi file has InstallScript custom actions, they will no longer result in the following error when using the Open MSI/MSM Wizard and the rebuilt .msi file installs successfully:</p> <p>Error 2721. Custom action NewCustomAction1 not found in Binary table stream</p>
<b>IOJ-1779170</b>	InstallShield no longer crashes when changing a newly created property's value in the Property table. Previously, this scenario was resulting in a C++ runtime error.
<b>IOJ-1780087</b>	The "DISK1SETUPEXENAME" topic in the InstallShield Help Library has been updated to notate that DISK1SETUPEXENAME is intended for InstallScript project types only.



Issue Number	Issue Summary
IOJ-1803062	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> </ul> <p>The built-in Windows Server 2016 prerequisite condition has been added to the Prerequisite Editor. The following platforms have now been included on the <b>Prerequisite Condition</b> dialog box in the <b>Select which platform the prerequisite should run on</b> drop-down list:</p> <ul style="list-style-type: none"> <li>• Windows Server 2016 (Any)</li> <li>• Windows Server 2016 64-bit (Any)</li> <li>• Windows Server 2016 64-bit (x64)</li> </ul>
IOJ-1803451	<p>File property details for <b>ISWiAutomation.dll</b> have been updated. Previously, the property details displayed for this file (that are shown by right-clicking the <b>ISWiAutomation.dll</b> file in File Explorer in the InstallShield 2016 System folder selecting <b>Properties</b> and then viewing the <b>Details</b> tab) were incomplete.</p>
IOJ-1777700	<p>An issue has been fixed that was causing some projects that were built in Visual Studio to result in fatal build error -4340 ("Internal Build error).</p>
IOJ-1774046	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript MSI</li> <li>• Merge Module</li> </ul> <p>InstallShield now generates a verifiable string in some cases that were previously resulting in error -7354 ("The %4 value for string %2 does not contain a legitimate value for table %1 column %3").</p>
IOJ-1777586	<p>In the "DialogSetInfo" topic in the InstallShield Help Library, additional information has been added to the "DLG_INFO_ALTIMAGE_HIDPI" description.</p>
IOJ-1780797	<p>An issue with hotfix IOJ-1745445 which was causing a call to DAO.DBEngine.OpenDatabase to fail has been resolved in InstallShield 2016 SP1.</p>




Issue Number	Issue Summary
IOJ-1777822	 <p><b>Project</b> • This information applies to InstallScript project types.</p> <p>Shortcuts can successfully be created using InstallScript projects built with InstallShield 2015 SP1 Hotfix IOJ-1745445 or InstallShield 2016. Previously, when run on Vista or Windows Server 2008, InstallScript projects that attempted to create a shortcut resulted in an InstallScript Setup Launcher Unicode error being thrown during shortcut creation on Vista and Windows Server 2008 machines.</p>
IOJ-1777421	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>The "Advanced UI and Suite/Advanced UI Projects" topic in the InstallShield Help Library has been updated with the following note:</p> <p>Note that Advanced UI and Suite/Advanced UI installations require Windows Vista or later or Windows Server 2008 or later.</p>
IOJ-1777616	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>An issue with a feature's <b>Visible</b> setting for a UI control in suite projects, which specifies whether the feature will be visible on the InstallationFeatures wizard page during installation, has been resolved. Previously, in InstallShield 2016, unexpected results occurred when using the <b>Visible</b> setting.</p>
IOJ-1771076	 <p><b>Project</b> • This information applies to InstallScript project types.</p> <p>An issue has been resolved that was causing some InstallScript setups on Windows 7 machines to encounter a crash that was environment-specific.</p>




Issue Number	Issue Summary
IOJ-1771076	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Advanced UI</i></li> <li>• <i>Suite/Advanced UI</i></li> </ul> <p>An issue has been resolved that was causing some InstallScript setups on Windows 7 machines to encounter a crash that was environment-specific.</p>
IOJ-1753470	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Advanced UI</i></li> <li>• <i>Suite/Advanced UI</i></li> </ul> <p>An issue has been resolved that was causing a compressed MSI package in a suite project that was attempting to install to a container to not work.</p>

# InstallShield 2016

The following issues have been resolved in InstallShield 2016:

Issue Number	Issue Summary
IOJ-1760351	<p>The .exe files associated to the downloads of the following Microsoft SQL Server 2014 prerequisites have been updated as follows:</p> <ul style="list-style-type: none"><li>• <b>Microsoft SQL Server 2014 Express RTM (x86 &amp; x64Wow)</b>—Previous versions of InstallShield were downloading <b>SQLEXP32_x86.exe</b> for this prerequisite but are now downloading <b>SQLEXP_x86.exe</b>.</li><li>• <b>Microsoft SQL Server 2014 Express RTM (x86)</b>—Previous versions of InstallShield were downloading <b>SQLEXP_x86.exe</b> for this prerequisite but are now downloading <b>SQLEXP32_x86.exe</b>.</li></ul> <p>As a result of this update, the correct platform files are now downloaded and the correct operating system conditions are now checked.</p> <p>For further clarification, the following installation note provided by Microsoft states the correct file names to use on each platform.</p> <p></p> <p><b>Note</b> • Microsoft® SQL Server® 2014 Express includes both 32-bit and 64-bit versions. <b>SQLEXP32_x86</b> is a smaller package that can be used to install SQL Server 2014 Express onto only 32-bit operating systems. <b>SQLEXP_x86</b> is the same product but supports installation onto both 32-bit and 64-bit (WoW) operating systems. <b>SQLEXP_x64</b> is a native 64-bit SQL Server 2014 Express and supports installation onto only 64-bit operating systems. There is no other difference between these packages. Microsoft® SQL Server® 2014 Express is not supported on IA64 systems.</p>
IOJ-1756569	<p></p> <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"><li>• Advanced UI</li><li>• Suite/Advanced UI</li></ul> <p>Suite Object Expression for the format [<b>@Feature(MyFeature).Description</b>] now results in the localized description of MyFeature. Previously this resulted in an empty string.</p>

Issue Number	Issue Summary
IOJ-1767090	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Basic MSI</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> <li>• Merge Module</li> <li>• Suite/Advanced UI</li> </ul> <p>Custom path variables which use &lt;VSSolutionFolder&gt; in their definition (e.g., NewCustomPathVariable= &lt;VSSolutionFolder&gt;\MyFolder) now resolve correctly when building the solution with the Microsoft Build engine (MSBuild). Previously these path variables resolved to the literal path including the invalid string &lt;VSSolutionFolder&gt;.</p>
IOJ-1765530	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• InstallScript</li> <li>• InstallScript MSI</li> </ul> <p>The SQLBrowse dialog text that appears in the <b>Browse - Database Server</b> and <b>Browse - Database Catalog</b> dialogs has been updated to:</p> <ul style="list-style-type: none"> <li>• From the list of servers below, select the database server you would like to target.</li> <li>• From the list of catalog names below, select the database catalog you would like to target.</li> </ul>
IOJ-1765511	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>The Show Details section of the <b>Redistributables</b> view has been updated to properly display when a merge module contains a file with an ampersand in its name. Previously in this scenario the details pane displayed only an error message.</p>

Issue Number	Issue Summary
IOJ-1759079	 <p><b>Project</b> • This information applies to the Suite/Advanced UI project type.</p> <p>A Suite/Advanced UI project now succeeds when installing a Windows Feature that reports that a session reload is required. Previously when this occurred the Suite/Advanced UI would report an error and refuse to install any further packages.</p>
IOJ-1769950	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> <li>• InstallScript Object</li> <li>• Merge Module</li> </ul> <p>The <b>CopyToFolder</b> description in the “ISWiRelease Object” topic of the InstallShield Help Library has been updated to remove Basic MSI, InstallScript MSI, and Merge Module as valid project types associated to the use of the <b>CopyToFolder</b> object. For Basic MSI, InstallScript MSI, and Merge Module projects, you can use the <b>DistributeLoc</b> property instead of <b>CopyToFolder</b> to distribute your release to a folder.</p>
IOJ-1758249	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> <li>• InstallScript Object</li> <li>• Merge Module</li> </ul> <p>Entries with multiple lines of input in the String Editor are now retained properly after switching the project file format from binary to XML and reloading the project.</p> <p>Previously, switching the file format to XML and closing and reopening the project resulted in string entries being collapsed into single lines.</p>

**Issue Number****Issue Summary****IOJ-1757539**

**Project** • This information applies to the following project types:

- Advanced UI
- Basic MSI
- DIM
- InstallScript
- InstallScript MSI
- InstallScript Object
- Merge Module
- Suite/Advanced UI

Localized values, such as a Shortcut's Name, are now validated at build and can result in build warnings and errors:

- -7355: The %4 value for string %2 does not meet validation criteria for table %1 column %3.

This warning occurs if a localized string value does not meet validation criteria for a column in the String Editor table. To resolve this warning, update the flagged value in the String Editor.

- -7354: The %4 value for string %2 does not contain a legitimate value for table %1 column %3.

This error occurs if a localized string value does not contain a legitimate value in the named column of the String Editor table. To resolve this error, update the flagged value in the String Editor.




Previously, these values were not validated, and bad string values could result in incorrect run time behavior with no prior warning.




**IOJ-1756439,  
IOJ-1744882**




**Project** • This information applies to the following project types:




- Basic MSI
- DIM
- Merge Module
- MSI Database
- MSM Database
- Transform




Exporting dialogs (such as the MaintenanceWelcome dialog) and components now succeeds in cases where long identifiers previously caused it to fail.




Issue Number	Issue Summary
IOJ-1756316	 <p><b>Project</b> • <i>This information applies to InstallScript MSI projects.</i></p> <p>Adding Italian as a supported language to your InstallScript MSI project now results in accurate String Editor table entries. Previously, the use of Italian in InstallScript MSI projects caused unexpected string IDs.</p>
IOJ-1755786	<p>InstallShield produces build warning message -1027 if a timestamp is not successfully created for a digital signature. Prior to InstallShield 2015, when a build failed to create a timestamp for the signature, build warning -1027 was issued. In InstallShield 2015 however, no warning or error appeared even if the resulting build contained no timestamp on the signature.</p>
IOJ-1755473	 <p><b>Project</b> • <i>This information applies to Transform projects.</i></p> <p>You can successfully add a dialog to a transform and then add an event to a control on that dialog. Previously, this scenario resulted in a crash.</p>
IOJ-1755060	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Advanced UI</i></li> <li>• <i>Suite/Advanced UI</i></li> </ul> <p>The Prerequisite Editor supports the use of relative paths to define a path to the prerequisite in the <b>LocalFile</b> definition. After importing such a prerequisite into a Suite/Advanced UI or Advanced UI project, InstallShield successfully resolves the path at build time. Previously, when importing a .prq file that had been edited to include a relative path, unexpected behavior occurred. That is, in the <b>Packages</b> view, within <b>Package Files</b>, the <b>LinkTo</b> column showed an unexpected <b>LocalFile</b> path, which resulted in Suite build error -7232: Could not find file.</p>





Issue Number	Issue Summary
IOJ-1754678	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>InstallShield prohibits the value of properties contained in MsiHiddenProperties from being written to the log, including situations where the:</p> <ul style="list-style-type: none"> <li>• Properties are used as arguments for a .NET installer class.</li> <li>• Installation contains a feature prerequisite.</li> </ul> <p>Previously, for the situations outlined in the bulleted list above, InstallShield logged values of such properties in clear text in the log.</p>
IOJ-1754769, IOJ-1754678	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>InstallShield prohibits the value of properties contained in MsiHiddenProperties from being written to the log, including situations where the:</p> <ul style="list-style-type: none"> <li>• Properties are used as arguments for a .NET installer class.</li> <li>• Installation contains a feature prerequisite.</li> </ul> <p>Previously, for the situations outlined in the bulleted list above, InstallShield logged values of such properties in clear text in the log.</p>
IOJ-1754606	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> </ul> <p>On 64-bit systems, a standard DLL custom action which targets a 64-bit DLL executes properly in a strict 64-bit project. (Using a 32-bit version of the DLL and project worked as expected.) Previously, some 64-bit standard DLL custom actions did run correctly in strict 64-bit projects.</p>





Issue Number	Issue Summary
IOJ-1754522	 <p><b>Project</b> • This information applies to InstallScript projects.</p> <p>The "Debugging an Installation on Any Computer" topic in the InstallShield Help Library has been updated to explain the potential need to install the redistributable "Visual C++ Redistributable for Visual Studio 2012" on a debug machine that does not have Visual Studio 2012 installed. The Visual C++ Redistributable Packages install runtime components of Visual C++ libraries that are required to run applications (such as InstallShield) that were developed using Visual Studio 2012.</p>
IOJ-1754277, IOJ-1754278, IOJ-1753445	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Basic MSI</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> <li>• Suite/Advanced UI</li> </ul> <p>InstallShield no longer attempts to install the Microsoft Visual C++ 2015 Redistributable Package (x86) or Microsoft Visual C++ 2015 Redistributable Package (x64) if newer versions are already installed on the target system. Previously, these packages were being added to the list of prerequisites shown in the Redistributables window even if a newer version was already installed on the machine.</p> <p>Also, the Microsoft Visual C++ 2015 Redistributable Package (x64) prerequisite is properly being launched when the Microsoft Visual C++ 2015 Redistributable Package (x86) is installed on the system. Previously, the Microsoft Visual C++ 2015 Redistributable Package (x64) prerequisite was being skipped when the Microsoft Visual C++ 2015 Redistributable Package (x86) was already installed on the system.</p>
IOJ-1754269	 <p><b>Project</b> • This information applies to QuickPatch projects.</p> <p>The <b>Select File</b> window in QuickPatch projects that appears when right-clicking <b>Files to Patch</b> can now be resized. This allows for easier viewing of information in the window. Previously, this window was not resizable, resulting in the need for a workaround such as expanding column sizes and using the scroll bars in the fixed window in order to better view the contents of the window.</p>



Issue Number	Issue Summary
IOJ-1753850	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript MSI</li> <li>• Merge Module</li> <li>• MSI Database</li> <li>• MSM Database</li> <li>• Transform</li> </ul> <p>When a new component is created, an entry is added to the CreateFolder table for the component's destination. After adding a file to the component, the CreateFolder table entry now gets removed. InstallShield 2015 introduced unexpected behavior where the associated CreateFolder table entry was no longer being removed when adding a file to a new component.</p>
IOJ-1753265	 <p><b>Project</b> • This information applies to InstallScript projects.</p> <p>When creating a new InstallScript project, if the install is run on Windows XP SP3, and the <b>Custom</b> option is selected on the <b>Setup Type</b> dialog during install, the feature selection dialog box properly displays the list of features with checkboxes available to select or deselect features. Previously if you created an InstallScript project with InstallShield 2015 SP1 and hotfix IOJ-1745445 applied, checkboxes were missing from the feature selection dialog box during custom installs.</p>
IOJ-1753110	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript MSI</li> <li>• Merge Module</li> <li>• MSI Database</li> <li>• Transform</li> </ul> <p>InstallShield lets you create a scheduled task when specifying the user account as <b>SYSTEM</b> or <b>NT AUTHORITY\SYSTEM</b>. A scheduled task is created successfully. Previously, an error caused scheduled task to not be created and the install was rolled back.</p>



Issue Number	Issue Summary
IOJ-1752427	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript MSI</li> <li>• Merge Module</li> </ul> <p>PowerShell custom actions no longer write messages to the MSI log that can be confused for errors. Previously, a series of "Could not resolve..." statements were included in the MSI log when initializing custom actions.</p>
IOJ-1752004	<p>InstallShield displays files correctly in the <b>Files and Folders</b> view when a user chooses to include dynamically linked files (using the <b>Include Subfolders</b> option). In InstallShield 2015, files included in a subfolder were also being displayed in the parent folder in this scenario, resulting in the appearance of duplicate files.</p>  <p><b>Note</b> • This was a display issue only. The resulting install package installed the correct number of files without duplicates.</p>
IOJ-1751807	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• InstallScript MSI</li> <li>• MSI Database</li> <li>• Transform</li> </ul> <p>The Custom Action Wizard now retains sequencing information correctly in all instances. Previously, when editing a custom action through the Custom Action Wizard in the <b>Insert into Sequence</b> panel, if the action had been sequenced as the first action in the UI sequence, it was absent from the sequence in the Custom Action Wizard. This did not occur if the custom action was <i>not</i> sequenced as the first action nor did it occur if it was sequenced as the first action of the Execute sequence. If the action was not added to the UI sequence again in the wizard it was being removed from the UI sequence when the wizard completed.</p>





Issue Number	Issue Summary
IOJ-1751784	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Basic MSI</i></li> <li>• <i>InstallScript MSI</i></li> </ul> <p>When installing multiple packages using transaction processing so that the packages are chained together and processed as a single transaction, including actions scheduled to execute on rollback (such as xml file changes, scheduled tasks, network shares, text file changes, SQL script execution) now result in successful execution of the rollback script. Previously, a multiple package transaction was resulting in the execute on rollback script to be ignored if the other script failed in situations where the MSI files were not in the same transaction.</p>
IOJ-1751299	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Advanced UI</i></li> <li>• <i>Suite/Advanced UI</i></li> </ul> <p>Wizard text in suite packages is displayed correctly after reboot, even when the chosen language does not match the machine's language settings. Previously, when resuming installation after rebooting, the wizard would display question marks instead of some localized strings.</p>
IOJ-1749081	 <p><b>Project</b> • <i>This information applies to QuickPatch projects types.</i></p> <p>If merge modules with particularly long identifiers (that exceed the length specifications of the relevant columns) are included in the base install of a QuickPatch project with the <b>Streamline QuickPatch</b> setting set to <b>No</b>, an unexpected error at run time is no longer displayed. If the merge module or modules were not included in the base install and subsequent QuickPatch project, the problem was not experienced. Previously, a runtime error was displayed when the <b>Streamline QuickPatch</b> setting was set to <b>No</b> if these types of merge modules were included in the base install.</p>




Issue Number	Issue Summary
IOJ-1748476	 <p><b>Project</b> • <i>This information applies to InstallScript projects.</i></p> <p>You can use double-click to open an InstallScript project that was creating with InstallShield 2014. InstallShield 2016 successfully upgrades the project, and is able to save and open it again by way of a double-click. Previously, when using InstallShield 2015 SP1, unexpected behavior was occurring when attempting to open the InstallShield 2014 .ism file with a double-click.</p>
IOJ-1748317	 <p><b>Project</b> • <i>This information applies to Suite/Advanced UI projects.</i></p> <p>A TextBox that uses a <b>Style</b> setting of <b>ES_MULTILINE</b> successfully stores all the lines into a specified property. Previously, only the first line of the value of a property was being displayed despite the <b>Style</b> setting of <b>ES_MULTILINE</b> specified as <b>True</b>.</p>
IOJ-1748131	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Advanced UI</i></li> <li>• <i>Basic MSI</i></li> <li>• <i>InstallScript</i></li> <li>• <i>InstallScript MSI</i></li> <li>• <i>Suite/Advanced UI</i></li> </ul> <p>The conditions that are configured for the following InstallShield prerequisite have been corrected:</p> <ul style="list-style-type: none"> <li>• Microsoft .NET Framework 4.0 Client</li> </ul> <p>As a result of this update, the prerequisite now installs on a Windows Server 2008 R2 system that does not have .NET 4.0 or higher already installed.</p>
IOJ-1745976	 <p><b>Project</b> • <i>This information applies to InstallScript projects.</i></p> <p>Use of CtrlGetMLEText() successfully retrieves the contents of a multi-line edit field control in a custom dialog. Previously, using CtrlGetMLEText() to retrieve string input resulted in corrupted or missing characters being returned.</p>





Issue Number	Issue Summary
IOJ-1745656	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> </ul> <p>SQL Script execution has been updated to work successfully. In InstallShield 2015, execution of some SQL scripts was not occurring in some instances despite the same scripts working in InstallShield 2014.</p>
IOJ-1745647	 <p><b>Project</b> • This information applies to QuickPatch projects.</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> </ul> <p>Side-by-side registry keys can successfully be modified and accessed in a QuickPatch project. Previously, attempting to access side-by-side registry keys resulted in a crash.</p>
IOJ-1744694	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>If you set a feature description in a suite project to a string property (ISFeatureDescription) it is now properly localized when you add multiple languages to the suite and localize the feature description for each language. Previously, the default English string for the feature description was being shown.</p>
IOJ-1743567	 <p><b>Project</b> • This information applies to InstallScript projects.</p> <p>Using an InstallScript project, you can properly set the DWORD value to an integer value, including the maximum value (0xFFFFFFFF). Previously, InstallShield was converting the registry DWORD string to an incorrect integer value.</p>




Issue Number	Issue Summary
IOJ-1743313	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> <li>• InstallScript Object</li> <li>• Merge Module</li> <li>• MSI Database</li> <li>• MSM Database</li> <li>• Transform</li> </ul> <p>The <b>Open Containing Folder</b> destination file list control has been enabled for dynamically linked files. Previously, after dynamically linking files to a component, this option was not selectable.</p>
IOJ-1743047	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>When migrating a suite to a new version of InstallShield, any Windows Features added to the suite are now updated to support the same operating systems that the new version of InstallShield being migrated to supports. Previously, Windows Features added to the suite were not being updated accordingly.</p>
IOJ-1741079, IOJ-1742968	<p>Beginning with InstallShield 2015, support was added to enable you to use digital certificates that use the SHA-256 hashing algorithm for signing your installations and files at build time InstallShield has now been updated to:</p> <ul style="list-style-type: none"> <li>• Automatically match the hashing algorithm from the certificate.</li> <li>• Let you specify an algorithm for the digest in your signed file to always sign as SHA-1 or SHA-256 regardless of the certificate used.</li> </ul> <p>Previously, the build could fail with signing error -1027 or the signature could not be verified on older versions of Windows.</p>



Issue Number	Issue Summary
IOJ-1742920	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>Suite projects now allow you to suppress build warnings when you disable them in <b>Settings.xml</b>. This functionality already existed in other project types.</p>
IOJ-1742556	<p>InstallShield supports integration with Visual Studio 2013 Update 5. Previously, InstallShield 2015 SP1 integration with Visual Studio 2013 Update 5 was causing you not to be able to click around the solution and access different views or be able to build with Visual Studio 2013 Update 5.</p>
IOJ-1742525	<p>The path to local file for the following prerequisites has been updated to use the predefined search path variable &lt;ISProductFolder&gt;:</p> <ul style="list-style-type: none"> <li>• Microsoft Visual C++ 2013 Redistributable Package (x86)</li> <li>• Microsoft Visual C++ 2013 Redistributable Package (x64)</li> </ul> <p>Previously, an improper path to the local file was resulting in build failures when using the InstallShield Standalone Build because the redistributable package files could not be found.</p>
IOJ-1742214	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> </ul> <p>The "Overriding the Default TCP/IP Network Library with a Different Protocol for a SQL Server Database" topic in the InstallShield Help Library has been updated to direct users about the new way to override the default TCP/IP network library with a different protocol for a SQL server database. This update directs users to the Property table to edit the IS_SQLSERVER_NETLIB_MS field's default value of Network Library=DBMSSOCN in order to update DBMSSOCN to name the override module for the TCP/IP network library. Previously, InstallShield stored this value in the ISSQLDBMetaData table.</p>
IOJ-1742125	<p>InstallShield successfully builds in Microsoft Visual Studio Team Foundation Server or MSBuild when there are parentheses included in the solution name referred to by VSSolutionFolder. Since MSBuild escapes special characters, including parentheses, VSSolutionFolder paths that include parentheses previously resulted in a build failure.</p>




Issue Number	Issue Summary
IOJ-1742112	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>Hyperlinks in Rich Text Box controls in suite project dialogs successfully open the link in a new window. Previously, hyperlinks in Rich Text Box controls in suite project dialogs were ignored.</p>
IOJ-1742088	 <p><b>Project</b> • This information applies to InstallScript MSI projects.</p> <p>InstallShield has improved the performance of InstallScript MSI SQL script execution. Previously, the same SQL scripts were executing faster in Basic MSI projects than they were in InstallScript projects.</p>
IOJ-1741435	 <p><b>Project</b> • This information applies to InstallScript MSI projects.</p> <p>A setup.exe created from an InstallScript MSI project which uses an <b>InstallScript User Interface Type</b> set to <b>New Style</b> now installs successfully. Previously, the <b>New Style</b> setting resulted in MsiExec.exe command-line parameters not being passed to the .msi, leading to Windows Installer error 1639.</p>
IOJ-1741231	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>Support for the BuildErrorCount and BuildWarningCount properties have been added to the suite ISWiSuiteRelease object and can thus now be used to determine if the build was successful or not. Previously only complex workarounds were available.</p>




Issue Number	Issue Summary
IOJ-1740777	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• MSI Database</li> <li>• Transform</li> </ul> <p>In the <b>Upgrades</b> view within the <b>Common</b> tab, the <b>Products sharing my Upgrade Code</b> option has been disabled for MSI Database and Transform project types, preventing accidentally specifying the null GUID as the upgrade code. Previously, selecting the <b>Products sharing my Upgrade Code</b> option resulted in the Upgrade table containing a null GUID instead of the actual upgrade code.</p>
IOJ-1740227	<p>When two digital signing certificates exist in the same certificate store with similar subjects, only the selected certificate is used to sign the setup. Previously, this scenario led to inconsistent results with the incorrect certificate being used to sign in some instances.</p>
IOJ-1740223, IOJ-1739837	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>Japanese translations have been updated in the:</p> <ul style="list-style-type: none"> <li>• <b>Add adjacent Files and Files in Subfolders</b> setting in the <b>Add Files for This Package</b> dialog box</li> <li>• Suite platform <b>Detection Condition</b> drop-down option, for the “or later” portion of the for operating systems listed (e.g., Windows 81. or later)</li> </ul>
IOJ-1739985	 <p><b>Project</b> • This information applies to Basic MSI projects.</p> <p>After converting a Windows Installer (.msi) to an InstallShield project (.ism), on a machine whose language is not supported by InstallShield, you can now successfully change the <b>Setup Languages</b> setting in General Information. Previously this could have crashed the IDE.</p>




Issue Number	Issue Summary
IOJ-1739861	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>If you add a Rich Text Box control in a secondary window in a suite project, the secondary window will always display the rich text box text if accessed more than once during the install. Previously, there were instances of Secondary Windows not showing the Rich Text Box contents upon subsequent openings of the window.</p>
IOJ-1739542	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>In a suite project, the Next button is automatically enabled when a user uses a mouse wheel to scroll to the bottom of the alternate license page. Previously this only worked consistently when dragging the scroll bar, using the scroll bar's menu options, or pressing keys.</p>
IOJ-1739345	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• Transform</li> </ul> <p>InstallShield lets you add an SQL Server ODBC driver to a Basic MSI or Transform project and save and build the project without warnings or errors. Previously, depending on the registry settings for the particular ODBC driver, these scenarios were resulting in warnings and errors with regards to the ODBC driver.</p>
IOJ-1739343	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> </ul> <p>Using the <b>DIM References</b> view in Basic MSI projects, DIM references are properly included in multiple features if the Basic MSI project is configured to have the same DIM reference as a part of more than one feature. Previously in this scenario, a DIM reference was only being included in the first feature.</p>


Issue Number	Issue Summary
IOJ-1737326	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>The function name drop-down now correctly respects the preprocessor directives and preprocessor definitions. Previously functions might have been incorrectly included in or excluded from the drop down list.</p>
IOJ-1737226	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>The Product Version for a suite is now logged in the suite debug log (setup.exe/debuglog).</p>
IOJ-1736383	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>Actions shown in the <b>Events</b> view in a suite project are now organized alphabetically.</p>

Issue Number	Issue Summary
IOJ-1735185	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Advanced UI</i></li> <li>• <i>Suite/Advanced UI</i></li> </ul> <p>Suite properties suppressed by the command line using <code>/PROPERTY:value</code> are now hidden in the debuglog when they are included in <code>ISHiddenProperties</code>.</p> <p>As background, with InstallShield 2015, support was added for suite properties passed on the command line to be hidden in the debuglog by adding the property to <code>ISHiddenProperties</code>. Suites allow properties to be set in two ways:</p> <ul style="list-style-type: none"> <li>• <code>PROPERTY=value</code></li> <li>• <code>/PROPERTY:value</code></li> </ul> <p>Previously, those set using the <code>PROPERTY=value</code> were hidden in the debuglog when included in <code>ISHiddenProperties</code> as expected; however, those set using <code>/PROPERTY:value</code> were not.</p>
IOJ-1734782	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Advanced UI</i></li> <li>• <i>Suite/Advanced UI</i></li> </ul> <p>In instances where two suite projects are running but one is running silently, InstallShield now suppresses the following message:</p> <p>Another instance of this setup is already running. Please wait for the other instance to finish and then try again</p> <p>Instead, the suite setup now returns an error code indicating it exited due to the fact that another instance of the same suite was running. The status is now logged in debuglog with code: 0x80040711.</p>
IOJ-1732554	<p>RFC3161 timestamping is now supported: .msi, .exe, .dll files use the original attribute, but try as either Authenticode or RFC3161 timestamps; .appx files use the new attribute always for RFC3161.</p> <p>Previously, InstallShield did not provide a valid timestamp when attempting to use the RFC 3161 timestamp server.</p>

Issue Number	Issue Summary
IOJ-1732436	<p>The following note has been added to the License Agreement to describe how to upgrade the linkage of the Print button for cases when you use a file name other than LicenseAgreement.rtf:</p> <p>Note that if you want to use a file name other than 'LicenseAgreement.rtf' you need to update the click event link of the Print button to point to the new license agreement RTF file.</p>
IOJ-1730924	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>The behavior of suite properties in wizard pages has been updated to handle the use of bracket [ ] characters in user input. Previously, when creating a suite project and adding a custom dialog to receive customer input, if the end user included bracket [ ] characters in the text control, unexpected behavior occurred.</p>
IOJ-1730907	 <p><b>Project</b> • This information applies to Basic MSI projects.</p> <p>InstallShield successfully registers the 64-bit .Net assemblies and successfully installs</p> <p>InstallShield installs 64-bit COM+ applications after registering the .Net assembly of the COM+ component. Previously, when installing 64-bit COM+ applications, InstallShield was performing a rollback in some instances and in other instances although installing successfully, the COM+ component was not being registered.</p>
IOJ-1729167	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Advanced UI</li> <li>• Suite/Advanced UI</li> </ul> <p>During a suite installation where the loading process takes more than half a second, InstallShield will now display a splash screen to indicate that the program has launched and that a loading process needs to complete before the Install Welcome dialog appears. For the splash screen, InstallShield utilizes the largest provided version of the <b>setup.exe</b> icon and includes a progress bar on it</p>

Issue Number	Issue Summary
IOA-000085326	 <p><b>Project</b> • <i>This information applies to Basic MSI projects.</i></p> <p>The MSI Debugger runs successfully for Basic MSI projects on 64-bit versions of Windows 7 machines.</p> <p>Previously, some Basic MSI projects on Windows 7 (x64) machines were throwing the following error during the ExecuteAction action of the install sequence:</p> <p>Error 1719. Windows Installer service could not be accessed. Contact your support personnel to verify that it is properly registered and enabled.</p>
IOA-000081824	<p>The <a href="#">Best Practices to Avoid Windows Setup Launcher Executable Issues</a> article has been added to the Flexera Software Knowledge Base. The associated hot fixes available for previous versions are included in this release.</p>
IOA-000080197	 <p><b>Project</b> • <i>This information applies to InstallScript projects.</i></p> <p>The InstallShield Help Library has been updated to provide clarification of the InstallScript <b>FileCompare</b>, <b>GetFileInfo</b>, and <b>SetFileInfo</b> functions. In each topic, the description was changed to say that the modify date is used. Previously, there was some confusion about whether the date used in these functions was the modify date or the created date.</p>
IOA-000074928	 <p><b>Project</b> • <i>This information applies to the following project types:</i></p> <ul style="list-style-type: none"> <li>• <i>Advanced UI</i></li> <li>• <i>Suite/Advanced UI</i></li> </ul> <p>Design enhancements have been made to the Feature Selection Tree Control on the InstallationFeatures dialog. A white background is now used and all features shown display in the same color. Previously, when enough features were included that the list scrolled vertically, the InstallationFeatures dialog was showing unexpected colors any feature was selected beyond the scroll.</p>

Issue Number	Issue Summary
IOA-000076537	 <p><b>Project</b> • This information applies to Basic MSI projects.</p> <p>The “Building Your Installation” topic in Tutorial section of the InstallShield Help Library has been updated to provide the following note after the “Click <b>Build Installations</b>” step.</p> <p><i>Note: The build generates warning -7235. This is expected. You can continue to the next step without resolving this warning, or to resolve this warning, configure the settings in the Software Identification Tag area of the General Information view as needed. If Yes is selected for the Use Software Identification Tag setting but you have not entered values in one or more of the required identification settings (the Unique ID, Tag Creator, and Tag Creator ID settings in the General Information view), build warning -7235 occurs, once for each of the settings that are blank. For more information, refer to Including a Software Identification Tag for Your Product.</i></p>
IOA-000068608	 <p><b>Project</b> • This information applies to Basic MSI projects.</p> <p>The “Services View Settings” topic in the InstallShield Help Library has been updated (in the <b>Type</b> setting). The following note has been added:</p> <p><i>Note: The Restart Service action is not supported with .msi packages. Including this action with an .msi package will result in <a href="#">Windows Installer Error 1939</a>.</i></p>
IOA-000066261	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript MSI</li> <li>• Merge Module</li> <li>• MSI Database</li> <li>• MSM Database</li> <li>• Transform</li> <li>• Suite/Advanced UI</li> </ul> <p>InstallShield lets you override the name of the product that is specified in the <b>General Information</b> view by passing command-line build parameters in an .ini file. The <b>Product=</b> entry under the [Project] section in an .ini file now correctly lets you override the Product name value that is specified in the General Information view. Previously, the override was not occurring in some cases.</p>

Issue Number	Issue Summary
IOC-000080520, IOC-000067659	 <p><b>Project</b> • This information applies to the following project types:</p> <ul style="list-style-type: none"> <li>• Basic MSI</li> <li>• DIM</li> <li>• InstallScript</li> <li>• InstallScript MSI</li> <li>• InstallScript Object</li> <li>• Merge Module</li> <li>• MSI Database</li> <li>• MSM Database</li> <li>• QuickPatch</li> <li>• Transform</li> </ul> <p>Support for a new property has been added to the <b>InstallShield</b> table that lets you set the default value used for component attributes. If a property of <b>MsiComponentAttributes</b> exists in the <b>InstallShield</b> table, its value overrides the default <b>Attributes</b> column value in the <b>Component</b> table from 8 to whatever is specified</p> <p>For more information, refer to the <a href="#">Ability to Set the Default Value Used for Component Attributes</a> section of these Release Notes.</p>

## System Requirements

This section contains the minimum requirements for systems that run InstallShield (the authoring environment), as well as for target systems that run the installations created with InstallShield (the run-time environment).

### For Systems Running InstallShield

InstallShield runs on the latest versions of these operating systems, fully updated with the most recent patches and service packs.

Item	Description
<b>Processor</b>	Pentium III-class PC (500 MHz or higher recommended)
<b>RAM</b>	256 MB of RAM (512 MB preferred)
<b>Hard Disk</b>	500 MB free space
<b>Display</b>	Designed for XGA resolution at 1024 × 768 or higher

Item	Description
<b>Operating System</b>	<ul style="list-style-type: none"> <li>• Windows Vista</li> <li>• Windows Server 2008</li> <li>• Windows 7</li> <li>• Windows Server 2008 R2</li> <li>• Windows 8</li> <li>• Windows Server 2012</li> <li>• Windows 8.1</li> <li>• Windows Server 2012 R2</li> <li>• Windows 10</li> <li>• Windows Server 2016</li> </ul>
<b>Privileges</b>	Administrative privileges on the system
<b>Mouse</b>	Microsoft IntelliMouse or other compatible pointing device
<b>Optional Integration with Visual Studio</b>	<p>The following versions of Microsoft Visual Studio can be integrated with InstallShield Premier or Professional Editions:</p> <ul style="list-style-type: none"> <li>• Visual Studio 2008</li> <li>• Visual Studio 2010</li> <li>• Visual Studio 2012</li> <li>• Visual Studio 2013</li> <li>• Visual Studio 2015</li> <li>• Visual Studio 2017</li> </ul> <p>The following editions of these versions of Visual Studio can be integrated with InstallShield Premier or Professional Editions:</p> <ul style="list-style-type: none"> <li>• Community</li> <li>• Professional</li> <li>• Premium</li> <li>• Ultimate</li> </ul>

# For Target Systems



**Project** • For all project types except for Suites (Advanced UI, and Suite/Advanced UI project types), Windows XP SP3 and Windows Server 2003 SP2 are the minimum versions of Windows that are required for target systems that run the installations that are created in InstallShield. For Suites, Windows Vista and Windows Server 2008 are the minimum versions of Windows that are required for target systems.

Target systems must meet the following minimum operating system requirement:

- Windows XP SP3
- Windows Server 2003 SP2
- Windows Vista
- Windows Server 2008
- Windows 7
- Windows Server 2008 R2
- Windows 8
- Windows Server 2012
- Windows 8.1
- Windows Server 2012 R2
- Windows 10
- Windows Server 2016

Target systems must also support the SSE2 instruction set.

## Known Issues

For a list of known issues, see [https://flexeracommunity.force.com/customer/articles/en\\_US/INFO/InstallShield-2016-Known-Issues](https://flexeracommunity.force.com/customer/articles/en_US/INFO/InstallShield-2016-Known-Issues).

# Legal Information

## Copyright Notice

Copyright © 2017 Flexera Software LLC. All Rights Reserved.

This publication contains proprietary and confidential information and creative works owned by Flexera Software LLC and its licensors, if any. Any use, copying, publication, distribution, display, modification, or transmission of such publication in whole or in part in any form or by any means without the prior express written permission of Flexera Software LLC is strictly prohibited. Except where expressly provided by Flexera Software LLC in writing, possession of this publication shall not be construed to confer any license or rights under any Flexera Software LLC intellectual property rights, whether by estoppel, implication, or otherwise.

All copies of the technology and related information, if allowed by Flexera Software LLC, must display this notice of copyright and ownership in full.

## Intellectual Property

For a list of trademarks and patents that are owned by Flexera Software, see <http://www.flexerasoftware.com/intellectual-property>. All other brand and product names mentioned in Flexera Software products, product documentation, and marketing materials are the trademarks and registered trademarks of their respective owners.

## Restricted Rights Legend

The Software is commercial computer software. If the user or licensee of the Software is an agency, department, or other entity of the United States Government, the use, duplication, reproduction, release, modification, disclosure, or transfer of the Software, or any related documentation of any kind, including technical data and manuals, is restricted by a license agreement or by the terms of this Agreement in accordance with Federal Acquisition Regulation 12.212 for civilian purposes and Defense Federal Acquisition Regulation Supplement 227.7202 for military purposes. The Software was developed fully at private expense. All other use is prohibited.