

InstallShield 2019

Release Notes

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Introduction

InstallShield is the industry standard for authoring high quality Windows Installer, InstallScript-based installations, MSIX package and Microsoft App-V packages. InstallShield 2019 helps you mitigate the risks of OSS code with a quick and easy scan of your daily build. You'll uncover OSS and IP compliance vulnerabilities before you ship, so your build becomes the first line of defense against future OSS data breaches.

InstallShield 2019 also offers new features and enhancements that make it easy to use the latest technologies.

For the latest information about InstallShield 2019, including updates to these release notes, see the [online version of the InstallShield 2019 release notes](#).

New Features

InstallShield 2019 includes the following new features:

- [Use MSIX Project Type to Build an MSIX Package](#)
- [MSI to MSIX Conversion Wizard](#)
- [Build MSIX Validation Suite for Basic MSI](#)
- [Add MSIX in Suite](#)
- [New Project Wizard](#)

Use MSIX Project Type to Build an MSIX Package

MSIX is the Windows app package format that provides a modern packaging experience to all Windows apps. The MSIX package format preserves the functionality of existing app packages and/or install files in addition to enabling new, modern packaging and deployment features to Win32, WPF, and WinForm apps.

In InstallShield 2019, you can now use MSIX project type to build MSIX packages. It contains windows applications for side-loading or distribution via the Windows Store.

- [Package Information](#)
- [Package Payload](#)

- [Media](#)

Package Information

Now you can describe and identify your project by providing:

- **General Information** view to specify details such as the name and format of the project file.
- **MSIX VisualAssets** explorer to offer an integrated, visual method for describing visual aspects of the MSIX apps.
- **Capabilities** view that requires to be enabled in app's package manifest to access certain API or resources like pictures, music, or devices such as the camera or the microphone.
- **Declarations** view that provides a visual tool for creating and managing the application, package level declarations and allows to configure their properties.
- **Content URIs** view to specify the URIs that can use `window.external.notify` to send a Script-Notify event to the app.

Package Payload

Now you can specify the files that designs your MSIX application:

- **Files and Folders** view lets you to add files to your InstallShield project. You can organize these files into folders on the target system.
- **Applications** view offers an integrated, visual method for designing windows app properties that comprises part of or all of the functionality delivered in the package.
- **Registry** view enables you to define registry keys and values to be created by your installation.

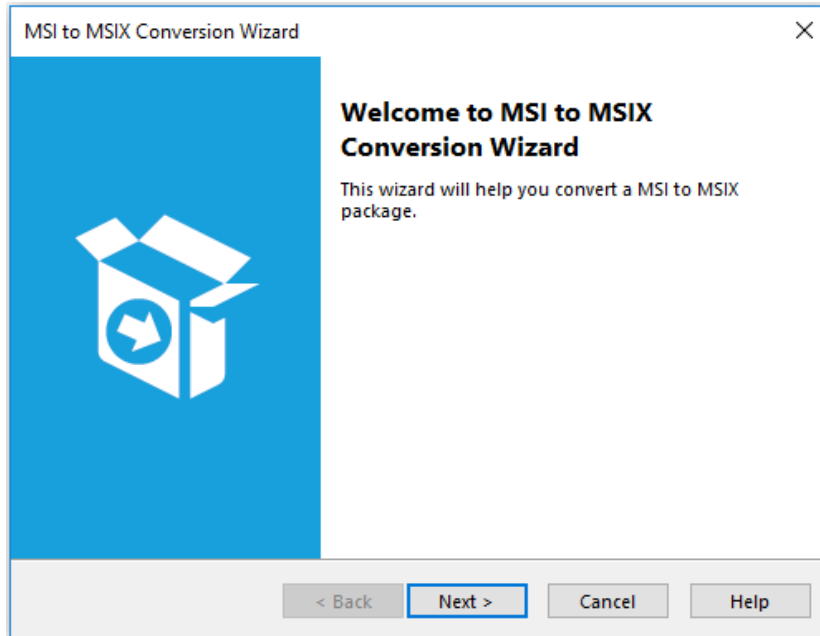
Media

Now you can customize the files and folders that you will use to distribute your installation:

- **Path Variables** view makes your installation easily portable between development systems through the use of variables.
- **Releases** view provides a visual tool for each product in your project.

MSI to MSIX Conversion Wizard

The MSI to MSIX Conversion Wizard helps you convert existing Windows Installer files (.msi files) to MSIX package through Basic MSI project.



Build MSIX Validation Suite for Basic MSI

You can now identify the existing InstallShield projects that require changes to meet the Microsoft MSIX standards. It also provides insights and steps needed to convert MSI project elements to work in MSIX.

Now in InstallShield, you can include a set of validators called the InstallShield MSIX Suitability Suite.

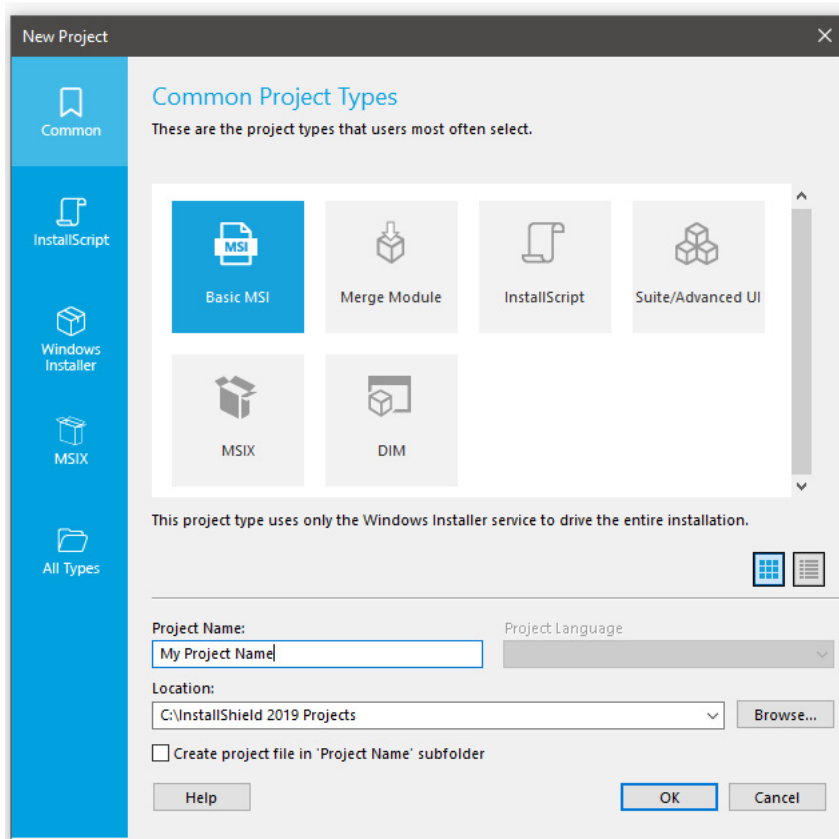
The InstallShield MSIX Suitability validators in this suite scan an.msi package for signs of items that are unsuitable for the MSIX package (.msix) format.

Add MSIX in Suite

In InstallShield 2019, you can add an MSIX package in Suite and install along with other deployment package types.

New Project Wizard

The New Project Wizard helps you to select different project types with ease.



There are different Project Types in the New Project Wizard that are given below:

Project Types	Description
Common	Displays some of the most commonly used project types.
InstallScript	Displays all of the project types that use the InstallShield setup engine, including the InstallScript project.
Windows Installer	Includes projects that use the Microsoft Windows setup engine, including the Basic MSI project.
MSIX	Includes projects that use Windows app package format that provides a modern packaging experience of the Windows apps.
All Types	Displays all of the project types available in InstallShield. It also includes any project templates that you previously saved, as well as any templates that are available in your repository.

Enhancements

InstallShield 2019 releases include the following enhancements:

- [InstallShield 2019](#)

InstallShield 2019

InstallShield 2019 includes the following enhancements:

- [View Details of a Selected Certificate](#)
- [Add Windows Server 2019 for Operating System Requirement](#)
- [Add Predefined Install Conditions](#)
- [Update TimeStamp Server Selection for Digital Signatures](#)
- [Support for Suite Projects using MSBuild](#)
- [Customize Debug Log File Name](#)
- [Customize Custom Return Code](#)
- [Customize Setup File Name](#)
- [Support for InstallShield Standalone Build](#)

View Details of a Selected Certificate



Project • This information applies to the following project types:

- *Basis MSI*
- *InstallScript*
- *InstallScript MSI*
- *InstallScript Object*
- *Merge Module*
- *Suite/Advanced UI*
- *QuickPatch*
- *MSIX*

In InstallShield 2019, the details of the certificate like the general information of the certificate, security details and certification path is listed on the **View Details** option in the **Certificate Selection** dialog box.

Add Windows Server 2019 for Operating System Requirement



Project • This information applies to the following project types:

- *Basis MSI*
- *InstallScript MSI*

In InstallShield 2019, you can add an option for Windows Server 2019 in the operating system requirements section. You can set the appropriate Install Condition in the project by selecting or deselecting the option.

Add Predefined Install Conditions



Project • This information applies to the following project types:

- *Basis MSI*
- *InstallScript MSI*

InstallShield has new predefined system search:

- Microsoft .NET Framework 4.6.2

If your installation requires the above, you can use the System Search view or the Installation Requirements page in the Project Assistant to add this system search 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.

Update TimeStamp Server Selection for Digital Signatures



Project • This information applies to the following project types:

- *Advanced UI*
- *Basis MSI*
- *InstallScript*
- *InstallScript MSI*
- *InstallScript Object*
- *Merge Module*
- *Suite/Advanced UI*

In InstallShield 2019, if you select

- SHA-1 to sign the package, the package will get time timestamped using:

```
<DigitalSignature Timestamp="http://timestamp.verisign.com/scripts/timestamp.dll"/>
```

- SHA-256 to sign the package, the package will get time timestamped using:

<DigitalSignature TimestampRFC3161="http://sha256timestamp.ws.symantec.com/sha256/timestamp"/>

Support for Suite Projects using MSBuild



Project • This information applies to the following project types:

- Suite/Advanced UI

InstallShield supports the Microsoft Build engine (MSBuild) included with the .NET Framework. MSBuild support enables you to build Visual Studio solutions with InstallShield projects where Visual Studio is not installed in the build lab environments.

In InstallShield 2019, you can now build suite projects (.sln) which are created in Visual Studio using MSBuild.

Customize Debug Log File Name



Project • This information applies to the following project types:

- Suite/Advanced UI

An option, **Always Create Debug Log**, had been added to the **Setup.exe** tab of the **Releases** view for Advanced UI and Suite/Advanced UI projects.

Now in InstallShield 2019, you can specify the debug log file name which will be generated.

Customize Custom Return Code



Project • This information applies to the following project types:

- Basic MSI
- InstallScript MSI
- InstallScript

In InstallShield 2019, you can now override the return code of setup.exe with your own custom values during the runtime.

Customize Setup File Name



Project • This information applies to the following project types:

- Basic MSI
- InstallScript MSI
- InstallScript

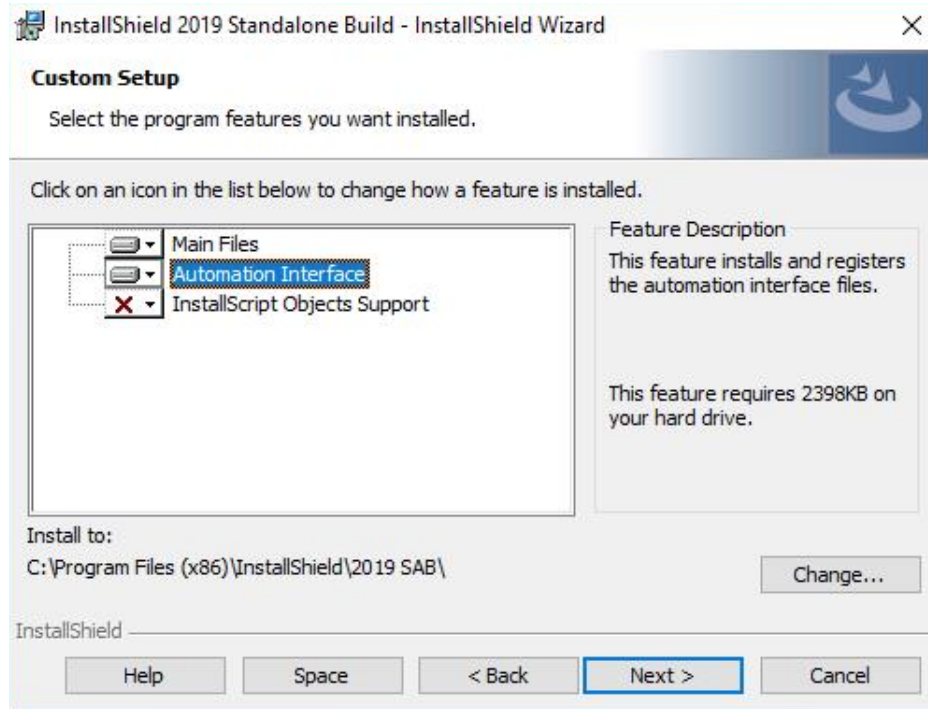
- *Suite/Advanced UI*

In InstallShield 2019, you have the ability to customize the original file name property for setup.exe.

Support for InstallShield Standalone Build

Now when you install the InstallShield Standalone build, the Automation Interface feature is set to default selection.

This allows you to install the Automation Interface feature without selecting manually.



Additional Prerequisites Included

InstallShield 2019 includes the following additional prerequisites:

- [Microsoft .Net Core 2.1 Runtime Prerequisite](#)

Microsoft .Net Core 2.1 Runtime Prerequisite

InstallShield now includes the prerequisites for Microsoft .Net Core 2.1 Runtime in the redistributables view.



Note • *This change was tracked in issue IOJ-1896156.*

Important Information

Note the following important information regarding the InstallShield 2019 release:

- [Evaluating InstallShield](#)
- [Obtaining the Installations for InstallShield, InstallShield Add-Ons, and the Redistributable Files](#)
- [Installing More than One Edition of InstallShield](#)
- [Installing More than One Version of InstallShield](#)
- [Removal of .NET/J# Tab from the Releases View](#)
- [Current Directory Removed from DLL Search Path to Safeguard Against DLL Preloading Attacks](#)

Concurrent License Users Must Update the FlexNet Licensing Server Software

If you are using a concurrent license of InstallShield, you must update the version of the FlexNet Licensing Server software on the licensing server before you can start using InstallShield 2019.

The version of the FlexNet Licensing Server software that shipped with previous versions of InstallShield cannot manage licenses of InstallShield 2019. InstallShield 2019 will not check out licenses from older version of the license server even when those licenses are available.



Note • *The new version of the FlexNet Licensing Server software can manage licenses of both InstallShield 2019 and previous releases of InstallShield.*

You can download the installer for the new FlexNet Licensing Server software from the [Flexera Product and License Center](#).

For instructions on installing the FlexNet Licensing Server software, see [Setting Up Your License Server for Concurrent Licenses of InstallShield 2016 and Later](#).

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 [Functionality Notes for the Evaluation Version of InstallShield](#). 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 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)



Note • As of InstallShield 2019, the Collaboration Edition (DIM Editor) is no longer available.

Installing More than One Edition of InstallShield

Only one edition of InstallShield 2019—Premier, Professional, or Express—can be installed on a system at a time. In addition, the InstallShield 2019 DIM Editor cannot be installed on the same machine with any edition of InstallShield 2019.

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 2019 can coexist on the same machine with other versions of InstallShield.

The InstallShield 2019 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.

Removal of .NET/J# Tab from the Releases View



Project • This information applies to the following project types:

- Basic MSI
- InstallScript MSI

The **.NET/J#** tab in the **Releases** view of the Installation Designer was originally provided to support .NET 1.1/2.0 and J# redistributables. Those technologies have become obsolete and no longer supported by Microsoft. Therefore, in InstallShield 2019, the **.NET/J#** tab of the **Releases** view has been removed (as well as the associated .NET 1.1/2.0 Core Language and .NET 1.1/2.0 Language Packs dialog boxes).

Current Directory Removed from DLL Search Path to Safeguard Against DLL Preloading Attacks

To safeguard installations against DLL preloading attacks, InstallShield has removed the current directory from the standard DLL search path by calling the `SetDllDirectory` Windows API with an empty string (`""`).

If a DLL links implicitly to the other DLLs, or loads them dynamically using `LoadLibrary()` without specifying a fully qualified path name, the `UseDLL()` InstallScript function cannot load the dependencies from the current working directory.

You can work around this issue by prototyping `SetDllDirectoryW` (prototype number `kernel32.SetDllDirectoryW(wstring);`) and call it with `SUPPORTDIR` to get the support folder to be in the DLL load search path.

In InstallShield 2019, the following changes have been made:

- The `DLL_DIRECTORY_SUPPORTDIR` constant was added to the **Enable** function so that customers can explicitly opt-in to using `SUPPORTDIR` as a DLL directory.
- The `DLL_DIRECTORY_SUPPORTDIR` constant was added to the **Disable** function so that customers can explicitly opt-out to using `SUPPORTDIR` as a DLL directory.
- The `SetDllDirectory(szPathName)` wrapper function was added so that customers can explicitly opt-in to using any directory as a DLL directory. If the parameter is an empty string (`""`), the call removes the current directory from the default DLL search order.



Note • This change was tracked in issue IOJ-1839017.

Project Upgrade Alerts

The following information describes possible upgrade issues that may occur when you upgrade projects that were created with InstallShield 2016 and earlier to InstallShield 2019. It also alerts you to possible changes in behavior that you may notice between new InstallShield 2019 projects and projects that are upgraded from InstallShield 2016 or earlier to InstallShield 2019.

- [General Information about Upgrading Projects that Were Created in Earlier Versions of InstallShield](#)
- [Changes to the List of Supported Versions of Windows for Target Systems](#)
- [Localized String Considerations](#)

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

If you use InstallShield 2019 to open a project that was created with an earlier version, InstallShield 2019 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 .777 (for an .ism project) or .2016 (for an .issuite project) before converting it. Delete the .777 or .2016 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 2019 projects in earlier versions of InstallShield.

You can upgrade projects that were created with the following versions of InstallShield to InstallShield 2019: InstallShield 2016 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 2019.

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 were introduced starting 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 2019](#)

InstallShield 2019

The following issues have been resolved in InstallShield 2019.

Issue Number	Issue Summary
IOJ-1920450	MSIConfigureServices action generates error ICE27.
IOJ-1900586	ZLib 1.2.3 version vulnerability in InstallShield.
IOJ-1892604	Dynamic File Links not showing files in Component view.
IOJ-1895875	Update Redistributable Downloader List.
IOJ-1894189	Incorrect Translation for German "IDS__IsVerifyReadyDlg_ModifyReady" String Entry
IOJ-1888066	When the 'Extract from Setup.exe' option is used, the suite build process will change the modify date of included files.
IOJ-1907614	The .NET Framework 4.6.2 prerequisites do not have condition preventing install on Windows Server 2016
IOJ-1884771	When .NET 4.0 is installed, an error (5001) occurs - .NET 4.5.2 on Windows 7 x86 SP1
IOJ-1883550	When the project is closed with certain XML file change elements is selected, an error occurs - "No database is open. Illegal operation"
IOJ-1888425	An error (-5001: 0x80070002) occurs while running the setup out of reboot using a prerequisite with a return code 3010 and pure InstallScript project
IOJ-1867925	There is a only a Windows version of MVSN support available for the Linux Server.
IOJ-1910908	Cannot install License Server prerequisites in an offline environment
IOJ-1911911	The Details page in the Redistributables view does not update for Prerequisites.
IOJ-1907284	InstallShield will crash after browsing for a merge module that has a dependency

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
Processor	Pentium III-class PC (500 MHz or higher recommended)
RAM	256 MB of RAM (512 MB preferred)
Hard Disk	750 MB free space
Display	Designed for XGA resolution at 1024 × 768 or higher
Operating System	<ul style="list-style-type: none">● 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● Windows Server 2019
Privileges	Administrative privileges on the system
Mouse	Microsoft IntelliMouse or other compatible pointing device

Item	Description
Optional Integration with Visual Studio	<p>The following versions of Microsoft Visual Studio can be integrated with InstallShield Premier or Professional Editions:</p> <ul style="list-style-type: none"> ● Visual Studio 2008 ● Visual Studio 2010 ● Visual Studio 2012 ● Visual Studio 2013 ● Visual Studio 2015 ● Visual Studio 2017 ● Visual Studio 2019 <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"> ● Community ● Professional ● Premium ● Ultimate

For Target Systems

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
- Windows Server 2019

Target systems must also support the SSE2 instruction set.

Known Issues

The list of known issues in InstallShield 2019 is given below:

Error Message	Description
Upgrade of VC++ 2015 to 2017 results in deletion of '14.0' key	This error occurs while installing VC++ 2017 on top of VC++ 2015 which results in the registry key typically used for detecting the installation being removed.

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