

Installing Windows PowerShell

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[Installing Windows PowerShell](#)

Installing Windows PowerShell

Updated: October 17, 2013

Applies To: Windows PowerShell 3.0, Windows PowerShell 4.0

Windows® 8 and Windows Server® 2012 include Windows PowerShell 3.0 and all of its prerequisites. The system also includes the Windows PowerShell 2.0 engine for backward compatibility with host programs that cannot use Windows PowerShell 3.0.

This topic explains how to install Windows PowerShell 3.0 on earlier systems and install and enable the required features.

This topic includes the following sections:

- [Installing Windows PowerShell on Windows 8 and Windows Server 2012](#)
- [Installing Windows PowerShell on Windows 7 and Windows Server 2008 R2](#)
- [Installing Windows PowerShell on Windows Server 2008](#)
- [Installing Windows PowerShell on Server Core](#)
- [Deploying Windows PowerShell Web Access](#)
- [Installing the Windows PowerShell 2.0 Engine](#)

Installing Windows PowerShell on Windows 8 and Windows Server 2012

Windows PowerShell 3.0 arrives installed, configured, and ready to use. Windows PowerShell Integrated Scripting Environment (ISE) is installed and enabled. For information about starting Windows PowerShell, see [Starting Windows PowerShell on Windows 8 and Windows](#) and [Starting Windows PowerShell on Windows Server](#).

Installing Windows PowerShell on Windows 7 and Windows Server 2008 R2

These instructions explain how to install Windows PowerShell 3.0 on computers running Windows 7 with Service Pack 1 and Windows Server 2008 R2 with Service Pack 1. There are separate installation instructions below for computers running with the Server Core installation option of Windows Server 2008 R2.

Getting ready to install

- Before installing Windows Management Framework 3.0, uninstall any previous versions of Windows Management Framework 3.0.

To install Windows PowerShell 3.0

1. Install the full installation of Microsoft .NET Framework 4.0 (dotNetFx40_Full_setup.exe) from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=212547>.

Or, install Microsoft .NET Framework 4.5 (dotNetFx45_Full_setup.exe) from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=242919>.
2. Install Windows Management Framework 3.0 from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=240290>.

For information about starting Windows PowerShell 3.0, see [Starting Windows PowerShell on Earlier Versions of Windows](#).

Installing Windows PowerShell on Server Core

These instructions explain how to install Windows PowerShell 3.0 on computers running the Server Core installation option of Windows Server 2008 R2 with Service Pack 1.

The first steps in the procedure use Deployment Image Servicing and Management (DISM) commands to install Microsoft .NET Framework 2.0 for Server Core and Windows PowerShell 2.0. These programs are prerequisites for Windows Management Framework 3.0, which is installed in a subsequent step.

Getting ready to install

- Before installing Windows Management Framework 3.0, uninstall any previous versions of Windows Management Framework 3.0.

To install Windows PowerShell 3.0

1. Start Cmd.exe
2. Run the following DISM commands. These commands install .NET Framework 2.0 and Windows PowerShell 2.0.

```
dism /online /enable-feature:NetFx2-ServerCore
dism /online /enable-feature:MicrosoftWindowsPowerShellI
dism /online /enable-feature:NetFx2-ServerCore-WOW64
```

3. Install Microsoft .NET Framework 4.0 full installation for Server Core from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=248450>.
4. Install Windows Management Framework 3.0 from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=240290>.

Installing Windows PowerShell on Windows Server 2008

These instructions explain how to install Windows PowerShell 3.0 on computers running Windows Server 2008 with Service Pack 2.

On Windows Server 2008 systems, Windows Management Framework (Windows PowerShell 2.0, KB 968930) is a prerequisite for Windows Management Framework 3.0. The "Extended Protection for Authentication" feature protects the computer from authentication forwarding attacks and allows you to use the **UseSSL** parameter when creating remote sessions. To install Windows PowerShell 3.0 and the Windows PowerShell 2.0 Engine, use the following procedure.

Getting ready to install

- Before installing Windows Management Framework 3.0, uninstall any previous versions of Windows Management Framework 3.0.

To install Windows PowerShell 3.0

1. Install Microsoft .NET Framework 3.5 with Service Pack 1 from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=242910>.
2. Install Windows Management Framework (Windows PowerShell 2.0, KB 968930) from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=243035>.
3. Install the full installation of Microsoft .NET Framework 4.0 (dotNetFx40_Full_setup.exe) from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=212547>.

Or, install Microsoft .NET Framework 4.5 (dotNetFx45_Full_setup.exe) from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=242919>.
4. Install "Extended Protection for Authentication" (KB 968389) from <http://go.microsoft.com/fwlink/?LinkID=186398>.
5. Install Windows Management Framework 3.0 from the Microsoft Download Center at <http://go.microsoft.com/fwlink/?LinkID=240290>.

See Also

Concepts

[Windows PowerShell System Requirements](#)

Other Resources

[Starting Windows PowerShell](#)

Deploying Windows PowerShell Web Access

Updated: October 17, 2013

Applies To: Windows PowerShell 3.0, Windows PowerShell 4.0

Windows PowerShell Web Access is a new feature in Windows Server 2012 that acts as a Windows PowerShell gateway, providing a web-based Windows PowerShell console that is targeted at a remote computer. This feature enables you to run Windows PowerShell commands and scripts from a Windows PowerShell console in a web browser.

Windows PowerShell Web Access runs only on Windows Server 2012. It is not available on earlier versions of Windows, even when the Windows Management Framework 3.0 is installed. However, you can use the web-based Windows PowerShell console that the gateway provides on any client device browser that supports JavaScript® and accepts cookies.

For information on setting up and configuring the Windows PowerShell Web Access, see [Deploy Windows PowerShell Web Access](#). For information about using the web-based Windows PowerShell console, see [Use the Web-based Windows PowerShell Console](#).

See Also

Other Resources

[Deploy Windows PowerShell Web Access](#)

[Use the Web-based Windows PowerShell Console](#)

Installing the Windows PowerShell 2.0 Engine

Updated: October 17, 2013

Applies To: Windows PowerShell 3.0, Windows PowerShell 4.0

This topic explains how to install the Windows PowerShell 2.0 Engine.

Windows PowerShell 3.0 is designed to be backwards compatible with Windows PowerShell 2.0. Cmdlets, providers, snap-ins, modules, and scripts written for Windows PowerShell 2.0 run unchanged in Windows PowerShell 3.0 and Windows PowerShell 4.0. However, due to a change in the runtime activation policy in Microsoft .NET Framework 4.0, Windows PowerShell host programs that were written for Windows PowerShell 2.0 and compiled with Common Language Runtime (CLR) 2.0 cannot run without modification in later releases of Windows PowerShell, which is compiled with CLR 4.0.

To maintain backward compatibility with commands and host programs that are affected by these changes, the Windows PowerShell 2.0, Windows PowerShell 3.0, and Windows PowerShell 4.0 engines are designed to run side-by-side. Also, the Windows PowerShell 2.0 Engine is included in Windows Server 2012 R2, Windows 8.1, Windows 8, Windows Server 2012, and Windows Management Framework 3.0. The Windows PowerShell 2.0 Engine is intended to be used only when an existing script or host program cannot run because it is incompatible with Windows PowerShell 3.0, Windows PowerShell 4.0, or Microsoft .NET Framework 4.0. Such cases are expected to be rare.

The Windows PowerShell 2.0 Engine is an optional feature of Windows Server 2012 R2, Windows 8.1, Windows® 8 and Windows Server® 2012. On earlier versions of Windows, when you install Windows Management Framework 3.0, the Windows PowerShell 3.0 installation completely replaces the Windows PowerShell 2.0 installation in the Windows PowerShell installation directory. However, the Windows PowerShell 2.0 Engine is retained.

For information about starting the Windows PowerShell 2.0 Engine, see [Starting the Windows PowerShell 2.0 Engine](#).

On Windows 8.1 and Windows 8

On Windows 8.1 and Windows 8, the Windows PowerShell 2.0 Engine feature is turned on by default. However, to use it, you need to turn on the option for Microsoft .NET Framework 3.5, which it requires. This section also explains how to turn the Windows PowerShell 2.0 Engine feature on and off.

To turn on .NET Framework 3.5

1. On the **Start** screen, type **Windows Features**.
2. On the **Apps** bar, click **Settings**, and then click **Turn Windows features on or off**.
3. In the **Windows Features** box, click **.NET Framework 3.5 (includes .NET 2.0 and 3.0)** to select it.

When you select **.NET Framework 3.5 (includes .NET 2.0 and 3.0)**, the box fills to indicate that only part of the feature is selected. However, this is sufficient for the Windows PowerShell 2.0 Engine.

To turn the Windows PowerShell 2.0 Engine on and off

1. On the **Start** screen, type **Windows Features**.
2. On the **Apps** bar, click **Settings**, and then click **Turn Windows features on or off**.
3. In the **Windows Features** box, expand the **Windows PowerShell 2.0** node, and click the **Windows PowerShell 2.0 Engine** box to select or clear it.

On Windows Server 2012 R2 and Windows Server 2012

Use the following procedures to add the Windows PowerShell 2.0 Engine and Microsoft .NET Framework 3.5 features. The Windows PowerShell 2.0 Engine requires Microsoft .NET Framework 2.0.50727 at a minimum. This requirement is fulfilled by Microsoft .NET Framework 3.5.

To add the .NET Framework 3.5 feature

1. In **Server Manager**, from the **Manage** menu, select **Add Roles and Features**.
Or in **Server Manager**, click **All Servers**, right-click a server name, and then select **Add Roles and Features**.
2. On the **Installation Type** page, select **Role-based or feature-based installation**.
3. On the **Features** page, expand the **.NET 3.5 Framework Features** node and select **.NET Framework 3.5 (includes .NET 2.0 and 3.0)**.

The other options under that node are not required for the Windows PowerShell 2.0 Engine.

To add the Windows PowerShell 2.0 Engine feature

- In **Server Manager**, from the **Manage** menu, select **Add Roles and Features**.
Or **Server Manager**, click **All Servers**, right-click a server name, and then select **Add Roles and Features**.
- On the **Installation Type** page, select **Role-based or feature-based installation**.
- On the **Features** page, expand the **Windows PowerShell (Installed)** node and select **Windows PowerShell 2.0 Engine**.

For information about starting the Windows PowerShell 2.0 Engine, see [Starting the Windows PowerShell 2.0 Engine](#).

On Earlier Systems

The [Windows Management Framework 4.0](#) package that installs Windows PowerShell 4.0 on Windows 7, Windows Server 2008 R2, and Windows Server 2012, includes the Windows PowerShell 2.0 Engine. The Windows PowerShell 2.0 Engine is enabled and ready to use, if necessary, without additional installation, setup, or configuration.

The Windows Management Framework 3.0 package that installs Windows PowerShell 3.0 on Windows 7, Windows Server 2008 R2, and Windows Server 2008, includes the Windows PowerShell 2.0 Engine. The Windows PowerShell 2.0 Engine is enabled and ready to use, if necessary, without additional installation, setup, or configuration.

See Also

Concepts

[Windows PowerShell System Requirements](#)

[Installing Windows PowerShell](#)

[Starting the Windows PowerShell 2.0 Engine](#)

Other Resources

[Starting Windows PowerShell](#)

