

# vSphere PowerCLI Installation Guide

VMware vSphere PowerCLI 4.1

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**VMware, Inc.**  
3401 Hillview Ave.  
Palo Alto, CA 94304  
[www.vmware.com](http://www.vmware.com)

# Contents

About This Book	5
<b>1 Before You Begin</b>	<b>7</b>
Supported Platforms	7
Additional Prerequisites	8
Downloading the vSphere PowerCLI Binary	8
Connectivity Check	8
Documentation	8
<b>2 Installing a vSphere PowerCLI Package</b>	<b>11</b>
Installing vSphere PowerCLI on Windows	11
Uninstalling vSphere PowerCLI	12
<b>3 Validating the vSphere PowerCLI Installation</b>	<b>13</b>
Launching the vSphere PowerCLI Console	13
Setting the Properties to Support RemoteSigning	13
Running the Connect-VIServer Cmdlet	13



# About This Book

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The *vSphere PowerCLI Installation Guide* provides information about installing VMware vSphere PowerCLI and validating the installation. This guide is intended for administrators who want to run .NET applications and vSphere PowerCLI cmdlets on VMware® vSphere hosts.

## Intended Audience

This book is intended for anyone who needs to install vSphere PowerCLI. All users need to understand how to use .NET applications and vSphere PowerCLI cmdlets on their Windows platform.

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# Before You Begin

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This chapter presents important prerequisites for installing vSphere PowerCLI. The chapter discusses the following topics:

- [“Supported Platforms”](#) on page 7
- [“Additional Prerequisites”](#) on page 8
- [“Downloading the vSphere PowerCLI Binary”](#) on page 8
- [“Connectivity Check”](#) on page 8
- [“Documentation”](#) on page 8

## Supported Platforms

VMware vSphere PowerCLI 4.1 is supported on the 32-bit and 64-bit versions of the following Windows operating systems:

- Windows 7
- Windows Server 2008
- Windows Vista
- Windows XP Service Pack 2
- Windows 2003 Server Service Pack 2

vSphere PowerCLI 4.1 is compatible with the following VMware environments:

- VMware ESX 4.1/vCenter Server 4.1
- VMware ESXi 4.1
- VMware ESX 4.0 Update 2/vCenter Server 4.0 Update 2
- VMware ESX 4.0 Update 1/vCenter Server 4.0 Update 1
- VMware ESX 4.0i Update 1
- VMware ESX 3.5 Update 5
- VMware ESXi 3.5 Update 5
- VMware VirtualCenter 2.5 Update 6
- VMware ESX 3.0.3 Update 1

## Additional Prerequisites

To use vSphere PowerCLI, you must have installed the following:

- .NET 2.0 SP1
- Windows PowerShell 1.0/2.0

## Downloading the vSphere PowerCLI Binary

### To download vSphere PowerCLI

- 1 Go to the SDK and API download page at <http://www.vmware.com/download/sdk/index.html>.
- 2 In the VMware vSphere PowerCLI section, click **Download**.
- 3 Read and accept vSphere PowerCLI Agreement to continue.
- 4 Download the binary for the installation you want to perform.

## Connectivity Check

Before you start to use vSphere PowerCLI, make sure the connection from your development system to the target ESX host or to the vCenter Server is working. The connection is required for the validation task in [Chapter 3, “Validating the vSphere PowerCLI Installation,”](#) on page 13.

This section discusses how to connect to the target system and launch the Managed Object Browser (MOB). The MOB is a Web-based server application hosted on all ESX hosts and vCenter Server systems. The MOB lets you explore the objects on the system and obtain information about available properties and methods. It's a great tool for investigating server-side objects and for learning about the VMware Infrastructure object model.

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**NOTE** If the ESX or vCenter Server uses HTTPS (the default), you need a user name and password to log in to the MOB.

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### To access the MOB on any ESX or vCenter Server

- 1 Launch a Web browser on your development system.
- 2 Connect to the MOB by using the fully-qualified domain name (or the IP address) of the ESX host or the vCenter Server as follows:

```
https://<hostname.yourcompany.com>/mob
```

The browser prompts you for a user name and password for the host.

- 3 Enter the user name and password.

After you enter the user name and password, the host might display a warning message regarding the SSL certificate authority, such as **Website Certified by an Unknown Authority**. If VMware is the certificate authority, you can disregard such warnings and continue to log in to the MOB.

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**NOTE** If the ESX or the vCenter Server has been configured to support HTTP (not HTTPS) connections and you used `http` in the URL, the system does not prompt you for a user name and password, and does not display any SSL-certificate-related warnings.

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## Documentation

The documentation for vSphere PowerCLI includes *Administration Guide*, *VMware vSphere SDK for .NET Developer's Guide*, and *Cmdlet Reference Guide* available on the SDK download site.

Because your .NET applications and vSphere PowerCLI cmdlets retrieve and work with server-side objects, it is also essential that you understand the VMware vSphere SDK. The *vSphere SDK for .NET Reference Guide* is included with the vSphere PowerCLI installation. Some users might find the *vSphere SDK Programming Guide* helpful. It is available from the SDK download site at <http://www.vmware.com/download/sdk/index.html>.







# Installing a vSphere PowerCLI Package

# 2

This chapter explains how to install the vSphere PowerCLI package on Windows. After you have installed the package on your machine, you can invoke vSphere PowerCLI cmdlets to connect to your ESX or vCenter Server system by specifying the appropriate connection parameters. See the *vSphere PowerCLI Administration Guide* for a list of connection parameters you can use.

This chapter discusses the following topics:

- [“Installing vSphere PowerCLI on Windows”](#) on page 11
- [“Uninstalling vSphere PowerCLI”](#) on page 12

## Installing vSphere PowerCLI on Windows

You can install the vSphere PowerCLI package on the following 32-bit and 64-bit Windows platforms:

- Windows Vista
- Windows XP SP 2
- Windows 2003 Server SP 2



**CAUTION** The vSphere PowerCLI installer does not include installation of Windows PowerShell. Before initializing the installation of vSphere PowerCLI, make sure that you have Windows PowerShell installed on the target Windows system.

### To install vSphere PowerCLI using the Windows installer

- 1 Launch the installer by double-clicking the executable file you downloaded. See [“Downloading the vSphere PowerCLI Binary”](#) on page 8.
- 2 Click **Next** in the Welcome page to continue with the installation.
- 3 Read and accept the license agreement terms.
- 4 Click **Next**.  
The Destination Folder page appears.
- 5 If you do not want to install the vSphere PowerCLI in the default location, click **Change** and select a different directory.  
The default location is:  
C:\Program Files\VMware\Infrastructure\vSphere PowerCLI
- 6 Click **Next**.
- 7 In the Ready to Install the Program page choose whether to create a desktop shortcut.
- 8 Click **Install** to proceed with the installation.  
Click **Finish** to complete the installation process.

If the PowerShell Execution Policy on your machine is set incorrectly, a warning message appears before finalizing the vSphere PowerCLI installation. Ignore it and continue with the installation. To find more information about the PowerShell Execution Policy, see [“Setting the Properties to Support RemoteSigning”](#) on page 13.

After the installation is completed, you can test it by running one of the sample scripts. See [Chapter 3, “Validating the vSphere PowerCLI Installation,”](#) on page 13.

## Uninstalling vSphere PowerCLI

To uninstall the vSphere PowerCLI from your Windows system use the **Add or Remove Programs** control panel.

# Validating the vSphere PowerCLI Installation

# 3

This chapter explains how to launch the vSphere PowerCLI console and validate the installation by running vSphere PowerCLI cmdlets.

This chapter discusses the following topics:

- [“Launching the vSphere PowerCLI Console”](#) on page 13
- [“Setting the Properties to Support RemoteSigning”](#) on page 13
- [“Running the Connect-VIServer Cmdlet”](#) on page 13

## Launching the vSphere PowerCLI Console

You can launch the vSphere PowerCLI console in one of two ways: from the **Start** menu, or through the desktop icon.

### To launch the vSphere PowerCLI console from the Start menu

Choose **Start > Programs > VMware > VMware vSphere PowerCLI > VMware vSphere PowerCLI**

The vSphere PowerCLI console window opens.

## Setting the Properties to Support RemoteSigning

For security reasons, Windows PowerShell 1.0 supports an execution policy feature. It determines whether scripts are allowed to run and whether they must be digitally signed. By default, the execution policy is set to **Restricted**, which is the most secure policy. If you want to run scripts or load configuration files, you can change the execution policy by using the `Set-ExecutionPolicy` cmdlet. To do this, in the vSphere PowerCLI console window, type the following:

```
Set-ExecutionPolicy RemoteSigned
```

If the command is successful, you will be able to run scripts and load configuration files.

To get more information about the execution policy and script digital signing in Windows PowerShell 1.0, use the following command:

```
Get-Help About_Signing
```

## Running the Connect-VIServer Cmdlet

To verify that vSphere PowerCLI is properly installed, you can try to get access to a vSphere server.

In the vSphere PowerCLI console window type the following pipeline cmdlet:

```
Connect-VIServer -Server <VI_server_address> -Protocol <hypertext_transfer_protocol> -User <user_name> -Password <password>
```

Where <VI\_server\_address> is the IP address or the DNS name of the target VI server and <HyperText\_Transfer\_Protocol> can be http or https. For example:

```
Connect-VIServer -Server 10.23.120.252 -Protocol https -User Administrator -Password connect
```

After you execute the `Connect-VIServer` cmdlet, you might receive warning messages regarding server certificates. If your certification authority is VMware, you can disregard these warnings.

You are now ready to manage VMware vSphere server-side objects using the vSphere PowerCLI cmdlets.