

# Installation Guide

VMware Infrastructure Toolkit (for Windows) 1.0



VI Toolkit (for Windows) Installation Guide

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© 2008 VMware, Inc. All rights reserved. Protected by one or more U.S. Patent Nos. 6,397,242, 6,496,847, 6,704,925, 6,711,672, 6,725,289, 6,735,601, 6,785,886, 6,789,156, 6,795,966, 6,880,022, 6,944,699, 6,961,806, 6,961,941, 7,069,413, 7,082,598, 7,089,377, 7,111,086, 7,111,145, 7,117,481, 7,149,843, 7,155,558, 7,222,221, 7,260,815, 7,260,820, 7,269,683, 7,275,136, 7,277,998, 7,277,999, 7,278,030, 7,281,102, 7,290,253, and 7,356,679; patents pending.

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# About This Book

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This book, the *VI Toolkit (for Windows) Installation Guide*, discusses installing the VMware Infrastructure (VI) Toolkit (for Windows) and validating the installation. This guide is intended for administrators who want to run .NET applications and VI Toolkit (for Windows) cmdlets on VMware® Infrastructure hosts.

## Revision History

This book is revised with each release of the product or when necessary. A revised version can contain minor or major changes. [Table 1](#) summarizes the significant changes in each version of this guide.

**Table 1.** Revision History

| Revision | Description  |
|----------|--|
| 20080313 | First version of the VI Toolkit (for Windows) 1.0 documentation.   |
| 20080626 | Revised version of the VI Toolkit (for Windows) 1.0 documentation. |

To view the current version of this guide, go to:

[http://www.vmware.com/support/pubs/sdk\\_pubs.html](http://www.vmware.com/support/pubs/sdk_pubs.html)

## Intended Audience

This book is intended for anyone who needs to install the VI Toolkit (for Windows). All users need to understand how to use .NET applications and VI Toolkit cmdlets on their Windows platform.

## Document Feedback

VMware welcomes your suggestions for improving our documentation. Send your feedback to:

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## Technical Support and Education Resources

The following sections describe the technical support resources available to you. To access the current versions of other VMware manuals, go to:

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<http://mylearn1.vmware.com/mgrreg/index.cfm>

# Before You Begin

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This chapter presents important prerequisites for installing the VI Toolkit (for Windows). The chapter discusses the following topics:

- [“Supported Platforms”](#) on page 7
- [“Additional Prerequisites”](#) on page 7
- [“Downloading the VI Toolkit \(for Windows\) Binary”](#) on page 8
- [“Connectivity Check”](#) on page 8
- [“Documentation”](#) on page 9

## Supported Platforms

VI Toolkit (for Windows) is supported on the 32-bit and 64-bit versions of these Windows operating systems:

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

VI Toolkit (for Windows) is compatible with the following VMware environments:

- VMware ESX Server 3.5
- VMware ESX Server 3i
- VMware VirtualCenter 2.5
- VMware ESX Server 3.0/VC 2.0

## Additional Prerequisites

To use the VI Toolkit (for Windows) console, you need to have installed the following:

- .NET 2.0 SP1
- Windows PowerShell 1.0

## Downloading the VI Toolkit (for Windows) Binary

### To download the VI Toolkit (for Windows)

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

## Connectivity Check

Before you start to use the VI Toolkit (for Windows), make sure the connection from your development system to the target ESX Server host or to the VirtualCenter server is working. The connection is required for the validation task in [Chapter 3, “Validating the VI Toolkit \(for Windows\) 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 Server hosts and VirtualCenter 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 Server or VirtualCenter system 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 Server or VirtualCenter host system

- 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 Server host or the VirtualCenter Server as follows:

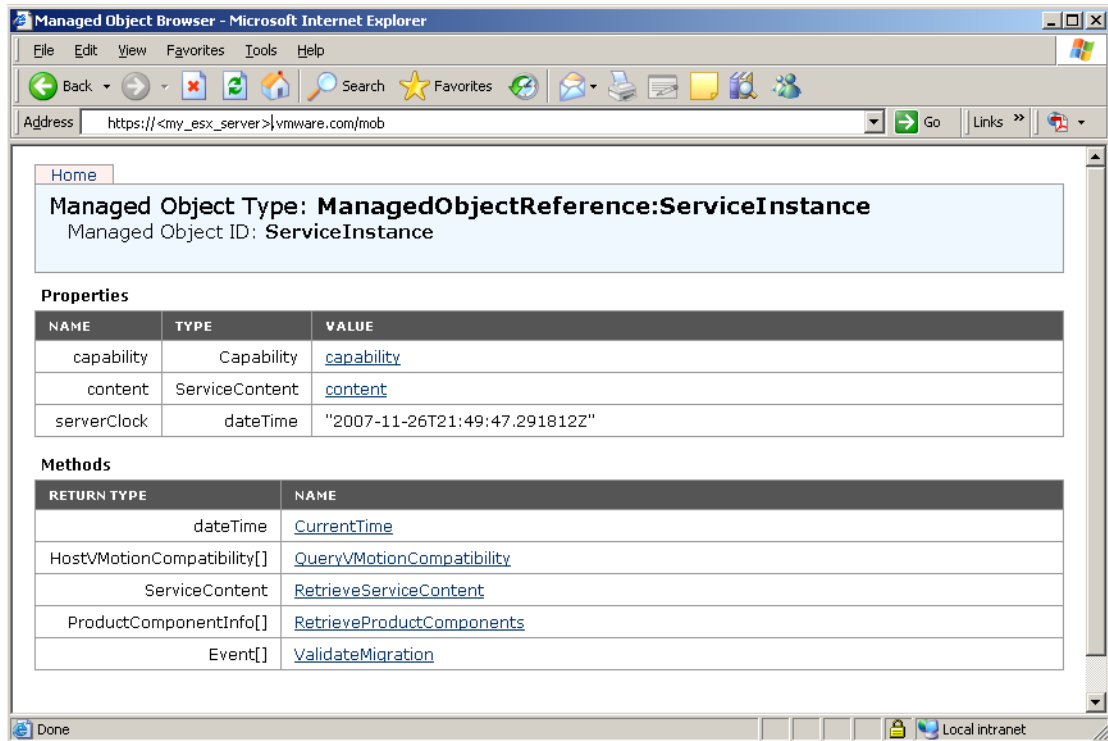
```
https://<hostname.yourcompany.com>/mob
```

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. The following page is displayed:



**NOTE** If the ESX Server or the VirtualCenter host system 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.

## Documentation

The documentation for the VI Toolkit (for Windows) includes an *Administrator's Guide*, *Cmdlet Reference Guide* and *VI API Reference Guide* available on the SDK download site.

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



# Installing a VI Toolkit (for Windows) Package

# 2

This chapter explains how to install the VI Toolkit (for Windows) package on Windows. After you have installed the package on your machine, you can invoke `toolkit cmdlets` to connect to your ESX Server or VirtualCenter Server system by specifying the appropriate connection parameters. See the *Administrator's Guide for VI Toolkit (for Windows)* for a list of connection parameters you can use.

This chapter discusses the following topics:

- [“Installing the VI Toolkit \(for Windows\) on Windows”](#) on page 11
- [“Uninstalling the VI Toolkit \(for Windows\)”](#) on page 12

## Installing the VI Toolkit (for Windows) on Windows

You can install the VI Toolkit (for Windows) package on the following 32-bit and 64-bit Windows platforms:

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



**CAUTION** The VI Toolkit (for Windows) installer does not include installation of Windows PowerShell 1.0. Before initializing the installation of VI Toolkit (for Windows), make sure that you have Windows PowerShell 1.0 installed on the target Windows system.

### To install the VI Toolkit (for Windows) using the Windows installer

1 Launch the installer by double-clicking the executable file you downloaded. See [“Downloading the VI Toolkit \(for Windows\) 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 toolkit in the default location, click **Change** and select a different directory.

The default location is:

`C:\Program Files\VMware\Infrastructure\VIToolkitForWindows`

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 VI Toolkit 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 VI Toolkit \(for Windows\) Installation,”](#) on page 13.

## Uninstalling the VI Toolkit (for Windows)

To uninstall the VI Toolkit (for Windows) from your Windows system use the **Add or Remove Programs** control panel.

# Validating the VI Toolkit (for Windows) Installation

# 3

This chapter explains how to launch the VI Toolkit (for Windows) console and validate the installation by running VI Toolkit (for Windows) cmdlets.

This chapter discusses the following topics:

- [“Launching the VI Toolkit \(for Windows\) Console”](#) on page 13
- [“Setting the Properties to Support RemoteSigning”](#) on page 13
- [“Running the Connect-VIServer Cmdlet”](#) on page 14

## Launching the VI Toolkit (for Windows) Console

You can launch the VI Toolkit (for Windows) console in one of two ways: from the **Start** menu, or through the desktop icon.

### To launch the VI Toolkit (for Windows) console from the Start menu

Choose **Start > Programs > VMware > VMware Infrastructure Toolkit > VMware VI Toolkit (for Windows)**

The VI Toolkit (for Windows) 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 VI Toolkit 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 VI Toolkit (for Windows) is properly installed, you can try to get access to a VI server.

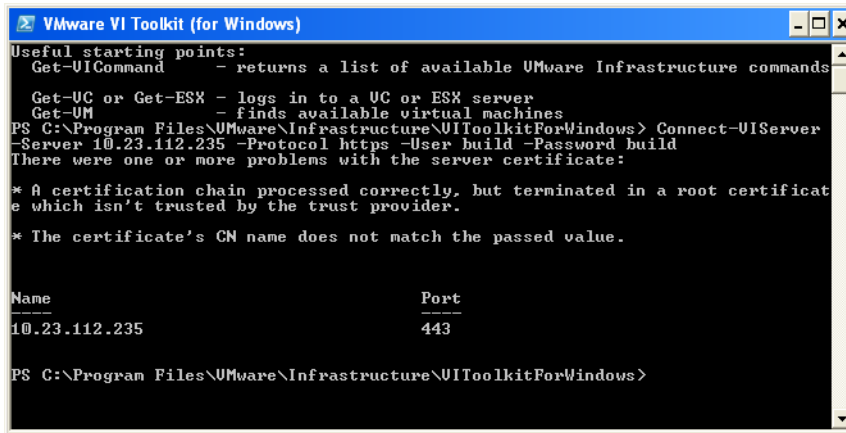
In the VI Toolkit console window type the following pipeline cmdlet:

```
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 10.23.112.235 -Protocol https -User build -Password build
```

**Figure 3-1.** Connecting to a VMware Infrastructure Server Using the VI Toolkit (for Windows) Console.



```
VMware VI Toolkit (for Windows)
Useful starting points:
  Get-VICommand - returns a list of available VMware Infrastructure commands
  Get-UC or Get-ESX - logs in to a UC or ESX server
  Get-VM - finds available virtual machines
PS C:\Program Files\VMware\Infrastructure\UIToolkitForWindows> Connect-VIServer
-Server 10.23.112.235 -Protocol https -User build -Password build
There were one or more problems with the server certificate:
* A certification chain processed correctly, but terminated in a root certificat
e which isn't trusted by the trust provider.
* The certificate's CN name does not match the passed value.

Name                               Port
----                               -
10.23.112.235                       443

PS C:\Program Files\VMware\Infrastructure\UIToolkitForWindows>
```

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 Infrastructure server-side objects using the VI Toolkit cmdlets.