

# Administrator's Guide

Update Manager – PowerShell Library 1.0



Update Manager PowerShell Library Administrator's 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 *Update Manager - PowerShell Library Administrator's Guide*, provides information about installing and using the VMware Update Manager – PowerShell Library 1.0 cmdlets for downloading software updates, creating baselines, scanning and remediating virtual machines and hosts.

## Revision History

This guide 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
20080331	First version of the documentation for the Update Manager – PowerShell Library 1.0.

To view the most current version of this guide, see the VMware Web site documentation page at:

<http://www.vmware.com/support/pubs>

## Intended Audience

This book is intended for administrators who need to install and use VMware Update Manager – PowerShell Library 1.0.

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**NOTE** All VMware Update Manager – PowerShell Library users are expected to be familiar with the VMware Infrastructure Toolkit (for Windows) cmdlets, VMware Infrastructure administration, VMware Update Manager, and the Windows operating system. To find more information about the VMware Infrastructure Toolkit (for Windows), visit the [VMware Infrastructure Toolkit \(for Windows\) home page](#).

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

# Installing the VMware Update Manager – PowerShell Library

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# 1

VMware Update Manager – PowerShell Library may be installed and used on any machine that has VMware Infrastructure Toolkit (for Windows) installed and access to a VirtualCenter server. It does not require to be installed on the same machine as the VMware Update Manager or the VirtualCenter Server. You can install Update Manager – PowerShell Library by a stand-alone Windows installer or as a part of the installation process of the VMware Update Manager (Update Manager server or Update Manager plug-in).

This chapter covers the following topics:

- [“Supported Platforms”](#) on page 7
- [“Prerequisites”](#) on page 7
- [“Installing Update Manager – PowerShell Library Using the Stand-Alone Installer”](#) on page 8
- [“Installing Update Manager – PowerShell Library Using Update Manager Installer”](#) on page 8
- [“Uninstalling Update Manager – PowerShell Library”](#) on page 8

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**NOTE** To install Update Manager – PowerShell Library, you need to have the VMware Infrastructure Toolkit (for Windows) installed on the target machine. To obtain the VI Toolkit (for Windows) package, go to the [VMware Infrastructure Toolkit \(for Windows\) download page](#).

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## Supported Platforms

Update Manager – PowerShell Library 1.0 is supported on the 32-bit versions of the following Windows operating systems:

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

## Prerequisites

To install and use Update Manager – PowerShell Library 1.0 , you need to have installed the following:

- .NET 2.0 SP1
- Windows PowerShell 1.0
- VI Toolkit (for Windows) 1.0

Update Manager – PowerShell Library 1.0 works only with Update Manager 1.0 Update 2.

## Installing Update Manager – PowerShell Library Using the Stand-Alone Installer

You can download the VMware Update Manager – PowerShell Library installer package from the VMware Update Manager Library section on the SDK and API download page at <http://www.vmware.com/download/sdk/index.html>.

### To install the VMware Update Manager – PowerShell Library using the stand-alone installer

- 1 Launch the Update Manager – PowerShell Library installer.
- 2 Click **Next** in the Welcome page to continue with the installation.
- 3 Read and accept the license agreement terms.
- 4 Click **Install** to proceed with the installation.
- 5 Click **Finish** to complete the installation process.

## Installing Update Manager – PowerShell Library Using Update Manager Installer

The VMware Update Manager (Server or User Interface Plugin) installer provides an option to install Update Manager – PowerShell Library if you already have VI Toolkit (for Windows) installed on the target system.

### To install the VMware Update Manager – PowerShell Library as part of the VMware Update Manager (Update Manager Server or Update Manager plugin) installation

- 1 Launch the VMware Update Manager installer and follow the wizard instructions.
- 2 In the VMware Update Manager Toolkit page, select the **Install VMware Update Manager Toolkit** check box.
- 3 Proceed with the VMware Update Manager installation.

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**NOTE** To find more information about the VMware Update Manager installation process, see the *VMware Update Manager Administration Guide* on [http://www.vmware.com/pdf/vi3\\_vum\\_10\\_admin\\_guide.pdf](http://www.vmware.com/pdf/vi3_vum_10_admin_guide.pdf).

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## Uninstalling Update Manager – PowerShell Library

To uninstall the Update Manager – PowerShell Library from your Windows system, use the **Add or Remove Programs** control panel.



# Using VMware Update Manager – PowerShell Library

# 2

This chapter explores the basics of the Update Manager – PowerShell Library 1.0 cmdlets usage.

The chapter discusses the following topics:

- [“Getting Started with Update Manager – PowerShell Library”](#) on page 9
- [“Examples of Usage of Update Manager – PowerShell Library Cmdlets”](#) on page 9

## Getting Started with Update Manager – PowerShell Library

The VMware Update Manager - PowerShell Library provides a set of 13 cmdlets for downloading software updates, creating baselines, and for scanning and remediating virtual machines or hosts. These cmdlets are stored in the `VMware.VUMAutomation` plug-in, and are available through the VI Toolkit (for Windows) console.

To get started with Update Manager – PowerShell Library, launch the VI Toolkit (for Windows) console from the Windows **Start** menu or by clicking the VI Toolkit shortcut icon.

To get a list of all Update Manager - PowerShell Library cmdlets, run the `Get-Help` command with the `-PSSnapin` parameter:

```
Get-Help -PSSnapin VMware.VUMAutomation
```

To find information on a specific cmdlet, run the `Get-Help` cmdlet with the cmdlet name:

```
Get-Help Get-Update
```

## Examples of Usage of Update Manager – PowerShell Library Cmdlets

The following procedures demonstrate the basic usage of the Update Manager – PowerShell Library cmdlets. Note that VI Toolkit (for Windows) cmdlets are also used in some of the examples to manage the VMware Infrastructure objects. To implement the examples code, you should have an existing VMware infrastructure.

### Working with Baselines

The following procedure illustrates some basic actions with software update baselines, such as creating baselines, attaching baselines to virtual machines, detaching and deleting baselines.

- 1 Connect to a VMware Infrastructure server:

```
Connect-VIServer <VI_server_address>
```

Here, `<VI_server_address>` is the IP address or DNS name of a server in the existing VMware Infrastructure. When prompted, provide a user name and password for authentication on the server.

- 2 Find a virtual machine object by its name and assign it to the `$targetVm` variable:

```
$targetVm = Get-VM -Name <virtual_machine_name>
```

Here, `<virtual_machine_name>` is the name of a virtual machine in your existing VMware Infrastructure.

- 3 Get all updates released after 1st January 2008 and create a static baseline named `My Static Baseline`, containing the retrieved updates:

```
$staticUpdates = Get-Update -After "1 Jan 2008"
```

```
$staticBaseline = New-Baseline -Static -Name "My Static Baseline" -IncludedUpdate $updates
-TargetType VM
```

The `-TargetType` parameter specifies whether the baseline is attached to a virtual machine (VM) or to a host (VMHost).

- 4 Create a dynamic baseline named `My Dynamic Baseline` using a fetch all query:

```
$dynamicBaseline = New-Baseline -Dynamic -Name "My Dynamic Baseline" -TargetType VM
```

- 5 Attach both baselines to the virtual machine specified in the `$targetVm` variable:

```
Attach-Baseline -Baseline $staticBaseline, $dynamicBaseline -Entity $targetVm
```

- 6 To scan asynchronously the virtual machine for baselines attached to it, run the following command:

```
$task = Scan-Inventory $targetVm -RunAsync
```

The command initializes a task on the server, returns a snapshot object of the initial state of the task, and saves it in the `$task` variable. This is not part of the result. To make sure that the task has initialized successfully, run:

```
$task
```

---

**NOTE** Note that the task object is not updated with the actual state of the task process running on the server. Thus even after the task completion, the `$task` variable value is `running`. To view the actual status of the tasks running on the server, use the `Get-Task` cmdlet.

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To watch online the process progress and to wait for the task to complete before running other commands, use the `Wait-Task` cmdlet:

```
Wait-Task -Task $task
```

- 7 Verify the compliance between the virtual machine and the baselines attached to it:

```
Get-Compliance -Entity $targetVm
```

- 8 Detach the two baselines from the virtual machine:

```
Detach-Baseline -Baseline $dynamicBaseline, $staticBaseline -Entity $targetVm
```

- 9 Delete the baselines :

```
Remove-Baseline -Baseline $staticBaseline, $dynamicBaseline
```

### Remediating a Virtual Machine

The following procedure shows how to remediate a virtual machine. For more information about VMware Infrastructure objects remediation, see the [Update Manager Administration Guide](#).

- 1 Connect to a VMware Infrastructure server:

```
Connect-VIServer <VI_server_address>
```

`<VI_server_address>` is the IP address or DNS name of a server in the existing VMware Infrastructure. When prompted, provide a user name and password for authentication with the server.

- 2 Find a virtual machine object by its name and assign it to the `$targetVm` variable:

```
$targetVm = Get-VM -Name <virtual_machine_name>
```

- 3 Get all baselines attached to the virtual machine:

```
$baselines = Get-Baseline -Entity $targetVm
```

- 4 Remediate the virtual machine:

```
Remediate-Inventory -Entity $targetVm -Baseline $baselines
```

### Updating the VMware Update Manager Server Configuration

The following procedure demonstrates how to change the configuration settings of Update Manager Server. You might need to restart the server before some of the changes take effect.

- 1 Connect to a VMware Infrastructure server:

```
Connect-VIServer <VI_server_address>
```

<VI\_server\_address> is the IP address or DNS name of a server in the existing VMware Infrastructure. When prompted, provide a user name and password for authentication with the server.

- 2 Get the current configuration of the server:

```
Get-VumConfig
```

- 3 Set specific values for all available configuration parameters:

```
Set-VumConfig -UseProxy $TRUE -ProxyPort 7890 -ProxyAddress proxy.vmware.com -ProxyUsername myUserName -ProxyPassword myPass -GuestCreateSnapshot $TRUE -GuestKeepSnapshotHours 9 -GuestTakeMemoryDump $TRUE -HostFailureAction Retry -HostNumberOfRetries 5 -HostRetryDelay 10 -SoapPort 808 -WebPort 809
```

