

vSphere SDK for Perl Installation Guide

ESX 4.1

ESXi 4.1

vCenter Server 4.1

This document supports the version of each product listed and supports all subsequent versions until the document is replaced by a new edition. To check for more recent editions of this document, see <http://www.vmware.com/support/pubs>.

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About This Book

This book, the *vSphere SDK for Perl Installation Guide*, provides information about installing the vSphere SDK for Perl 4.1. VMware® provides several SDK products, each of which targets different developer communities and platforms. This guide is for administrators who want to run vSphere SDK for Perl scripts on vSphere systems and for developers who want to develop vSphere SDK for Perl scripts for vSphere systems.

To view the current version of this book as well as all VMware documentation, go to <http://www.vmware.com/support/pubs>.

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 book.

Table 1. Revision History

Revision	Description
13JUL2010	vSphere 4.1 version of the product. On Linux, installer does not run if required prerequisite software is not available. Linux installer installs recommended Perl modules if no version is currently installed. Linux installer no longer overwrites existing Perl modules. All information about the vSphere Management Assistant can now be found in the <i>vSphere Management Assistant Guide</i> .
21MAY2009	vSphere 4.0 version of the product. Uses the vSphere Management Assistant as the vSphere SDK for Perl appliance. The installer now includes both vSphere SDK for Perl and the vSphere Command-Line Interface (vSphere CLI). Added credential store library and sample to the vSphere SDK.
25JUL2008	Update for VI Perl Toolkit 1.6. Added new options for invocation, changed supported platforms.
10JAN2008	Update for VI Perl Toolkit 1.5. Includes miscellaneous documentation changes. vSphere SDK for Perl no longer available on source forge. Virtual appliance now in OFV format.
15JAN2007	First version of the vSphere SDK for Perl 1.0 documentation.

Intended Audience

This book is intended for anyone who installs the vSphere SDK for Perl. All users must understand how to modify and run Perl scripts on the platform of their choice. Users who want to install the SDK for Perl from source code must also understand the source code installation process.

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Before You Begin

This chapter discusses a few tasks you must perform before installing the vSphere SDK for Perl. Information about installing prerequisite software and the vSphere SDK for Perl itself is in [“Installing a vSphere SDK for Perl Package”](#) on page 9.

The chapter includes the following topics:

- [“Supported Platforms”](#) on page 7
- [“Download the vSphere SDK for Perl Binary”](#) on page 7
- [“Check Connectivity”](#) on page 8
- [“Documentation”](#) on page 8

Supported Platforms

You can install the vSphere SDK for Perl package on the following platforms:

- Windows:
 - Windows 2003 32 bit
 - Windows XP SP3 32 bit
 - Windows Vista Enterprise SP1 32 bit
 - Windows 2008 64 bit
- Linux:
 - Red Hat Enterprise Linux 5.2 (32 bit and 64 bit)
 - SLES 10 (32 bit and 64 bit)
 - SLES 11 (32 bit and 64 bit)
 - Ubuntu 9.04 (32 bit and 64 bit)

On Linux, vSphere SDK for Perl requires a set of prerequisite software. When that software is not available, the installer stops and requests that you install the prerequisites. See [“Installation Process”](#) on page 9.

You can also deploy the vSphere Management Assistant (vMA) OVF on an ESX/ESXi system and use vSphere SDK for Perl from there. See the *vSphere Management Assistant Guide* for information about vMA installation.

Download the vSphere SDK for Perl Binary

Downloading the binary is the same for the different installer packages, and similar on Linux and Windows. If you want to use vMA to run vSphere SDK for Perl commands from, you can either download a ZIP file or deploy vMA using a URL. See the *vSphere Management Assistant Guide*.

To download the vSphere SDK for Perl

- 1 Find the vSphere SDK for Perl on the VMware Download page.
You need a VMware account to download this product.
- 2 In the vSphere SDK for Perl section, click **Download**.
- 3 Log in using your VMware account.
- 4 Read the license agreement and click **Yes** to accept and continue.
- 5 Download the file for the installation you want to perform.

Check Connectivity

Before you start to use the vSphere SDK for Perl, make sure that the connection from your development system to the target ESX/ESXi or vCenter Server system is working. You must be connected to perform the validation task (see [Chapter 4, “Validating the vSphere SDK for Perl Installation,”](#) on page 19) and to run vSphere SDK for Perl or vSphere CLI scripts.

You can use the Managed Object Browser (MOB) to connect to the target system. The MOB is a web-based server application hosted on all ESX/ESXi and vCenter Server systems. You can use the MOB for exploring server-side objects and their methods and properties and for learning about the vSphere object model.

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

To access the MOB on any ESX/ESXi or vCenter Server system

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

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

- 3 Enter the user name and password when prompted.

The host might display a warning message about the SSL certificate authority, such as **Website Certified by an Unknown Authority**. If VMware is the certificate authority, disregard the warning and continue to log in to the MOB. The MOB start page displays.

If the ESX/ESXi or vCenter Server 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 SSL certificate warnings.

After the connection has been established, you can use the MOB to explore the objects, properties, and methods on the target server. See the *vSphere Web Services Reference* for a comprehensive listing.

Documentation

The documentation for the vSphere SDK for Perl also includes a *Programming Guide* and a *Utility Applications Reference*.

Because your Perl scripts retrieve and work with server-side objects, you must understand the vSphere Web Services SDK. The vSphere API Reference is included with the vSphere SDK for Perl documentation. You might also find the *vSphere Web Services SDK Programmer's Guide* helpful.

Installing a vSphere SDK for Perl Package

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You can install a package that includes vSphere SDK for Perl and vSphere Command-Line Interface (vCLI) on Linux or Windows. The two components are always installed together. After you have installed the package on your administration server, you can run vSphere SDK for Perl scripts on your ESX/ESXi or vCenter Server system. You must specify connection parameters, discussed in the *Programming Guide*.

This chapter includes the following topics:

- [“vSphere SDK for Perl Package Linux Installation”](#) on page 9
- [“vSphere SDK for Perl Windows Installation”](#) on page 13
- [“vSphere SDK for Perl Version Compatibility”](#) on page 14

vSphere SDK for Perl Package Linux Installation

The vSphere SDK for Perl package installer installs the vSphere SDK for Perl and the vCLI. How the installer proceeds depends on whether required and recommended software is installed.

Installation Process

During installation, the installer checks whether prerequisites are installed. Depending on the type of prerequisite that is missing, the installer either stops the installation process or continues, as follows.

- 1 The installer checks whether the following required prerequisite packages are installed on the system:

OpenSSL	The vSphere SDK for Perl requires SSL because most connections between the system on which you run the command and the target vSphere system are encrypted with SSL. The OpenSSL library (<code>libssl-dev</code> package) is not included in the default Linux distribution. Installation information for each platform are included below.
LibXML2	Used for XML parsing. The <code>libxml2</code> package is not included in the default Linux distribution. Installation information for each platform are included below.
e2fsprogs	Set of utilities for maintaining the ext2, ext3 and ext4 file systems. Required by the UUID Perl module.

Some additional packages are required on Ubuntu, but are not detected by the installer. See [“Installing Prerequisite Software for Ubuntu Desktop 9.04”](#) on page 11.

- 2 The installer proceeds if it finds all required software. If required prerequisites are missing, the installer stops and informs you that you must install the software.
- 3 The installer checks whether the following recommended Perl modules are found, and whether the correct version is installed.
 - Crypt-SSLeay-0.55 (0.55-0.9.7 or 0.55-0.9.8)
 - IO-Compress-Base-2.005
 - Compress-Zlib-2.005

- IO-Compress-Zlib-2.005
 - Compress-Raw-Zlib-2.017
 - Archive-Zip-1.26
 - Data-Dumper-2.121
 - XML-LibXML-1.63
 - libwww-perl-5.805
 - XML-LibXML-Common-0.13
 - XML-Namespacesupport-1.09
 - XML-SAX-0.16
 - Data-Dump-1.15
 - URI-1.37
 - UUID-0.03
 - SOAP-Lite-0.710.08
 - HTML-Parser-3.60
 - version-0.78
- 4 If a recommended Perl module is not found at all, the installer installs it. If the installer finds a different version of the module, the installer does not install it and proceeds with the installation process.

At the end of the installation process, the installer informs you if a Perl module version on the system does not match the recommended version, and recommends that you install the version vSphere SDK for Perl was tested with. You can install the modules using the package installer for your platform, the Linux installation CD, or CPAN.

IMPORTANT The installer does not overwrite existing versions of recommended Perl modules. You must explicitly update those modules yourself.

If you have uninstalled a previous version of the vSphere SDK for Perl, vCLI, or Remote CLI, and install vSphere SDK for Perl in a different directory, you must reset the PATH environment variable. You can do so before or after the installation, using the command appropriate for your distribution and shell (`setenv`, `export`, and so on). If you do not reset the PATH, the system might still go to the old location to find vSphere SDK for Perl commands.

Installing Prerequisite Software for Red Hat Enterprise Linux 5.2

The vSphere SDK for Perl is supported on Red Hat Enterprise Linux 5.2, 32 bit and 64 bit.

Prerequisite software on RHEL includes required software and recommended Perl modules.

Required Software

If required software is not installed, the installer stops. You can install prerequisites using yum, the RHEL package installer (recommended), or from the installation DVD.

For example, if both OpenSSL development libraries and LibXML2 are missing, type the following at a command prompt:

```
yum install openssl-devel libxml2-dev
```

Recommended Perl Modules

When the installer finishes, it might issue a warning that the version of a module installed on your system does not match the version with which the vSphere SDK for Perl was tested. Install that version using yum or CPAN to resolve the issue. See [“Installation Process”](#) on page 9 for a complete list of modules.

After installing prerequisite software, you can install the vSphere SDK for Perl itself. See [“Unpacking and Installing the vSphere SDK for Perl Package”](#) on page 12.

Installing Prerequisite Software for SLES 10 and SLES 11

The vSphere SDK for Perl is supported on SLES 10, 32 bit and 64 bit and on SLES 11, 32 bit and 64 bit.

Prerequisite software on SLES includes required software and recommended Perl modules.

Required Software

If required software is not installed, the installer stops. You can install the prerequisite packages from the SLES 10 or SLES 11 SDK DVD. When you insert the DVD, it offers to auto run. Cancel the auto run dialog box and use `rpm` or the `yast` package installer to install OpenSSL or other missing required packages.

For example, if OpenSSL development libraries are missing, type the following at a command prompt:

```
yast -i openssl-devel
```

Some users might be authorized to use the Novell Customer Center and use `yast` to retrieve missing packages from there.

Recommended Perl Modules

When the installer finishes, it might issue a warning that the version of a module installed on your system does not match the version with which vSphere SDK for Perl was tested. Install that version using `yast` or CPAN to resolve the issue. See [“Installation Process”](#) on page 9 for a complete list of modules.

After installing prerequisite software, you can install the vSphere SDK for Perl itself. See [“Unpacking and Installing the vSphere SDK for Perl Package”](#) on page 12.

Installing Prerequisite Software for Ubuntu Desktop 9.04

The vSphere SDK for Perl is supported on Ubuntu 9.04 32 bit and 64 bit.

Prerequisite software includes required software and recommended Perl modules.

Required Software

If required software is not installed, the installer stops. On Ubuntu you can use `apt` (advanced packaging tool) to keep a local repository of libraries up to date. You can use `apt` to install the required software.

To install required software on Ubuntu Desktop 9.04

- 1 Connect to the Internet.
- 2 Update the local repository of libraries from a terminal window.


```
sudo apt-get update
```
- 3 Install the required libraries from a terminal window. For Ubuntu Desktop 9.04 64-bit, you must install the 32-bit compatibility libraries or the `resxcli` and `esxcli` commands do not work.

```
32 bit sudo apt-get install libssl-dev perl-doc liburi-perl libxml-libxml-perl
libcrypt-ssleay-perl
```

```
64 bit sudo apt-get install libssl-dev perl-doc liburi-perl libxml-libxml-perl
libcrypt-ssleay-perl ia32-libs
```

Recommended Perl Modules

When the installer finishes, it might issue a warning that the version of a module installed on your system does not match the version with which vSphere SDK for Perl was tested. Install that version using `apt-get` or CPAN to resolve the issue. See [“Installation Process”](#) on page 9 for a complete list of modules.

After installing prerequisite software, you can install the vSphere SDK for Perl itself. See [“Unpacking and Installing the vSphere SDK for Perl Package”](#) on page 12.

Unpacking and Installing the vSphere SDK for Perl Package

This section explains how to unpack and install the vSphere SDK for Perl using the Linux installer.

IMPORTANT Before you install version 4.1 of the vSphere SDK for Perl, you must remove all previous versions of that software. The process differs from simply uninstalling vSphere SDK for Perl.

To remove previous versions of vSphere SDK for Perl

- 1 First run the uninstall script. If you installed vSphere SDK for Perl in the default location, run the following command:

```
/usr/bin/vmware-uninstall-vSphere-CLI.pl
```
- 2 Delete existing versions of vSphere-CLI.xxxx.tar.gz and delete the vmware-vsphere-cli-distrib directory.

To install vSphere SDK for Perl on Linux

- 1 Untar the vSphere SDK for Perl binary you downloaded.

```
tar -zxvf VMware-vSphere-CLI-4.X.X-XXXXX.i386.tar.gz
```

A vmware-vsphere-vcli-distrib directory is created.
- 2 Go to a terminal to start the installer:

```
/<location>/sudo vmware-vsphere-cli-distrib/vmware-install.pl
```

You need superuser privileges.
- 3 When prompted, read the license agreement. To accept the license terms, enter **yes** and press Enter.
- 4 Specify an installation directory, or press Enter to accept the default, which is /usr/bin.

When the installation process completes:

- A success message appears.
- The installer lists different version numbers for required modules (if any).
- The prompt returns to the shell prompt.

If you accepted the defaults during installation, you can find the installed software in the following locations:

- **vCLI scripts** – /usr/bin
- **vSphere SDK for Perl utility applications** – /usr/lib/vmware-vcli/apps
- **vSphere SDK for Perl sample scripts** – /usr/share/doc/vmware-vcli/samples

See the vSphere SDK for Perl documentation on the VMware web site for a reference to all utility applications.

After installation, validate the software. See [“Validating the vSphere SDK for Perl Installation”](#) on page 19.

Uninstalling the vSphere SDK for Perl Package on Linux

You can uninstall the vSphere SDK for Perl package using a script included in the installation.

To uninstall the vSphere SDK for Perl on Linux

- 1 Change to the directory where you installed the vSphere SDK for Perl (default is /usr/bin).
- 2 Run the vmware-uninstall-vSphere-CLI.pl script.

The command uninstalls the vSphere SDK for Perl and the vSphere CLI.

vSphere SDK for Perl Windows Installation

You can install the vSphere SDK for Perl package on Windows platforms listed in [“Supported Platforms”](#) on page 7. The Windows installer includes the ActivePerl runtime from ActiveState and all required Perl modules and libraries. If Perl is already installed on the target Windows system, you might be prompted to remove it.

If you do not want to remove an existing Perl installation, consider using vMA instead. See the *vSphere Management Assistant Guide* for information about vMA installation.

Prerequisites

The `chcp` program must be installed and in your `PATH` environment variable. If it is not, vSphere SDK for Perl programs display the following warning message on startup:

```
'chcp' is not recognized as an internal or external command, operable program or batch file.
```

If this message is displayed, vSphere SDK for Perl uses a default character encoding. With that encoding, some characters might not display correctly on some systems. Otherwise, programs function normally.

Installing the vSphere SDK for Perl on Windows

This section explains how to unpack and install the vSphere SDK for Perl using the Linux installer. Before you start the installation, you must download the package. See [“Download the vSphere SDK for Perl Binary”](#) on page 7.

To install the vSphere SDK for Perl using the Windows installer

- 1 Run the executable you downloaded (see [“Download the vSphere SDK for Perl Binary”](#) on page 7).

If an earlier version of the vSphere SDK for Perl or the vSphere CLI package exists on the target Windows system, the installer offers to remove the existing version and install the new version instead. If you want to keep the existing version, cancel the installation process and install on a different system.

For compatibility information, see [“vSphere SDK for Perl Version Compatibility”](#) on page 14.

- 2 Click **Next** in the Welcome page to continue.
- 3 (Optional) If you do not want to install in the default directory, click **Change** in the Destination Folder page and select a different directory.

The default is `\Program Files\VMware\VMware vSphere CLI\Perl`.

- 4 Click **Next** to continue.
- 5 Click **Install** to proceed with the installation.

The installation might take a few minutes.

After the Installation wizard completes, you can test the installation by running one of the sample scripts or utility applications. See [“Validating the vSphere SDK for Perl Installation”](#) on page 19.

Uninstalling the vSphere SDK for Perl on Windows

You can uninstall the vSphere SDK for Perl from a Windows system at any time by using the **Add or Remove Programs** control panel and choosing vSphere CLI.

NOTE Because vSphere SDK for Perl and vSphere CLI are packaged together, you must uninstall both.

vSphere SDK for Perl Version Compatibility

Different versions of the vSphere SDK for Perl support connectivity to different versions of vSphere, as described in [Table 2-1](#).

Table 2-1. vSphere SDK for Perl and vSphere

vSphere SDK for Perl	vSphere Hosts
Version 1.0	ESX 3.0.x VirtualCenter Server 2.0.x
Version 1.0_RCLI (included with VI CLI 1.0 but not shipped separately)	ESX/ESXi 3.5 VirtualCenter Server 2.5
Version 1.5	ESX 3.0.x, ESX/ESXi 3.5 VirtualCenter Server 2.0, VirtualCenter Server 2.5
Version 1.6	ESX 3.0.x, ESX 3.5, ESXi 3.5 VirtualCenter Server 2.0, VirtualCenter Server 2.5 Includes support for the Update 2 release
Version 4.0	ESX 3.0.x, ESX/ESXi 3.5, ESX/ESXi 4.0, vCenter Server 2.5, vCenter Server 4.0
Version 4.1	ESX 3.0.x, ESX/ESXi 3.5, ESX/ESXi 4.0, ESX/ESXi 4.1, vCenter Server 2.5, vCenter Server 4.0, vCenter Server 4.1

Installing the vSphere SDK for Perl from Source Code

3

Some developers prefer to install the vSphere SDK for Perl from source code instead of installing a complete package. You can install the vSphere SDK for Perl from source code on any platform that supports Perl.

NOTE This chapter does not provide detailed installation instruction. You are expected to know how to install the prerequisite software using CPAN or another mechanism.

Use vMA or one of the vSphere SDK for Perl packages if have no experience installing from source code.

This chapter includes the following topics:

- [“vSphere SDK for Perl Source Code Installation on Linux”](#) on page 15
- [“vSphere SDK for Perl Source Code Installation on Windows”](#) on page 17

vSphere SDK for Perl Source Code Installation on Linux

Some developers prefer a customized installation from source code. This section discusses the source code installation requirements and the installation process on Linux.

Requirements

Before you install the vSphere SDK for Perl, make sure that the following software is installed on your system.

- Perl 5.8 or Perl 5.10
- Required packages. The vSphere SDK does not work if you do not have this software installed.
 - OpenSSL – The vSphere SDK for Perl requires SSL because most connections between the system on which you run the command and the target vSphere system are encrypted with SSL. The OpenSSL library (`libssl-dev` package) is not included in most default Linux distribution.
 - LibXML2 – Used for XML parsing. The `libxml2` package is not included in the default Linux distribution.
 - `e2fsprogs` – A set of utilities for maintaining the ext2, ext3 and ext4 file systems. Required by the UUID Perl module.

Some additional packages are required on Ubuntu. See [“Installing Prerequisite Software for Ubuntu Desktop 9.04”](#) on page 11.

- Recommended Perl modules. Versions of these modules are installed on most Linux distributions. Even if you are using an earlier or later version, the vSphere SDK for Perl most likely performs properly.
 - `Crypt-SSLeay-0.55` (0.55-0.9.7 or 0.55-0.9.8)
 - `IO-Compress-Base-2.005`
 - `Compress-Zlib-2.005`
 - `IO-Compress-Zlib-2.005`

- Compress-Raw-Zlib-2.017
- Archive-Zip-1.26
- Data-Dumper-2.121
- XML-LibXML-1.63
- libwww-perl-5.805
- XML-LibXML-Common-0.13
- XML-NamespaceSupport-1.09
- XML-SAX-0.16
- Data-Dump-1.15
- URI-1.37
- UUID-0.03
- SOAP-Lite-0.710.08
- HTML-Parser-3.60
- version-0.78

NOTE You can obtain and install any missing modules using CPAN. See the cpan.org Web site. You can also use the CPAN module included with your Perl installation.

Installing the vSphere SDK for Perl from Source Code on Linux

The vSphere SDK for Perl source code package contains a single platform-independent compressed file, available from the SDK download page. For download instructions, see [“Download the vSphere SDK for Perl Binary”](#) on page 7.

To build the vSphere SDK for Perl

- 1 Download the vSphere SDK for Perl source bundle from the vSphere SDK for Perl download page.
- 2 Open a Linux shell session and change to the directory to which you downloaded the package, for example:


```
cd /tmp
```
- 3 Unzip the package and extract the files, for example:


```
gunzip <filename>.tar.gz
tar xf <filename>.tar
```
- 4 Connect to the directory containing the extracted files and review the README file for information about licensing, additional requirements, and late-breaking information:
- 5 Run the Makefile.PL for the vSphere SDK for Perl:

```
perl Makefile.PL
```

If a recommended module is already installed on your system, but the version is not the version with which the SDK for Perl is tested, a warning message like the following appears:

```
Warning: prerequisite Data::Dumper 2.121 not found. We have 2.12.
```

Finish installing all prerequisites before you proceed. See [“Requirements”](#) on page 15.

- 6 Build the vSphere SDK for Perl files.


```
make
```
- 7 Test that the build succeeded.


```
make test
```

vSphere SDK for Perl Source Code Installation on Windows

Some developers prefer a customized installation from source code. This section discusses the installation requirements and the installation process on Windows.

Requirements

Before you install the vSphere SDK for Perl, make sure that the following software is installed on your system:

- Perl 5.8. You can obtain and install the most recent version of ActivePerl from ActiveState.
- Required Perl modules:
 - XML-LibXML-Common
 - XML-LibXML
 - Crypt-SSLeay
 - Data-Dumper
 - Class-MethodMaker

You can install the required modules and packages using the Perl Package Manager.

- Microsoft `nmake`, which you can obtain from the Microsoft knowledge base article 132084. This tool does not support paths with spaces in them.

IMPORTANT Make sure Perl is in your path before you start the process.

Installing the vSphere SDK for Perl from Source Code on Windows

The vSphere SDK for Perl source code package contains a single platform-independent compressed file, available from the SDK download page. For download instructions, see [“Download the vSphere SDK for Perl Binary”](#) on page 7.

To build the vSphere SDK for Perl

- 1 Download the vSphere SDK for Perl source bundle from the vSphere SDK for Perl download page.

IMPORTANT Be sure to download the 32-bit tar bundle, not the Windows installer.

- 2 Extract the source bundle into a local directory.
- 3 Open a Windows command prompt (`cmd.exe`).
- 4 Navigate to the location to which you downloaded the source bundle:

```
cd <download_dir>
```

- 5 Run this command:

```
perl Makefile.PL
```

The console displays progress.

- 6 Run `nmake` at the command prompt:

```
nmake
nmake install
```

After the process completes, you can validate the installation. See [“Validating the vSphere SDK for Perl Installation”](#) on page 19.

NOTE For detailed step-by-step instructions for installation on Windows, see Richard Gersthagen’s Web site, which you can find by searching for `run virtual` on the Internet.

Validating the vSphere SDK for Perl Installation

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You can confirm successful vSphere SDK for Perl installation by running one of the utility applications or by running one of the sample scripts.

You can find the utility applications in the following locations if you accepted the default during installation:

Linux	<code>/usr/lib/vmware-vcli/apps</code>
Windows	<code>C:\Program Files\VMware\VMware vSphere CLI\Perl\apps</code>

You can find the sample scripts in the following locations if you accepted the default during installation:

Linux	<code>/usr/lib/vmware-vcli/samples</code>
Windows	<code>C:\Program Files\VMware\VMware vSphere CLI\Perl\samples</code>

You can use the `/samples/discovery/datacenterlisting.pl` script for validating your installation. The script obtains a list of ESX/ESXi hosts and associated virtual machines. The script requires the name of the vCenter Server system and the name of the datacenter as parameters.

NOTE None of the scripts in the samples directory are supported. You can, however, modify and test the scripts and use them in your applications.

To run a script

- 1 Navigate to the `samples` directory, which is in the following location by default:

Linux	<code>/usr/share/doc/vmware-vcli/samples</code>
Windows	<code>C:\Program Files\VMware\VMware vSphere CLI\Perl\samples</code>

- 2 Run the script with its required parameters. The `datacenterlisting.pl` script requires a vCenter Server system as the value of the `--server` parameter. Place quotes around host names and datacenter names that include special characters (single quotes on Linux and double quotes on Windows):

Linux	<code>perl discovery/datacenterlisting.pl --server Server42 --datacenter 'Primary_Datacenter' --username Frog --password 'princ#'</code>
Windows	<code>perl discovery\datacenterlisting.pl --server Server42 --datacenter "Primary_Datacenter" --username Frog --password "princ#"</code>

- 3 Specify the user name and password on the command line or when prompted.

IMPORTANT If the ESX/ESXi host you are targeting is in lockdown mode, you cannot execute Perl scripts directly against the host.
