

# Quick Start and Documentation Guide for Cisco Performance Visibility Manager 1.0.2

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# Installation Prerequisites

Before you begin installing Cisco PVM, verify that the host and client machines meet the requirements described in Chapter 2, “Installation Requirements,” of the *Cisco PVM Installation Guide*. You can find the *Cisco PVM Installation Guide* online at the following URL:

[http://www.cisco.com/en/US/docs/net\\_mgmt/performance\\_visibility\\_manager/1.0/installation/guide/install.html](http://www.cisco.com/en/US/docs/net_mgmt/performance_visibility_manager/1.0/installation/guide/install.html)

The *Cisco PVM Installation Guide* provides detailed information about how to install Cisco PVM software. This section lists the following prerequisites for successfully installing Cisco PVM:

- [Minimum Server Requirements, page 2](#)
- [Required Software, page 3](#)
- [Required Hardware, page 4](#)
- [Verifying the X Virtual Frame Buffer Installation, page 4](#)
- [Minimum Disk Space Requirements, page 6](#)
- [Minimum Client Requirements, page 6](#)
- [Minimum Network Requirements, page 7](#)
- [Software Compatibility, page 8](#)

See Chapter 2 of the *Cisco PVM Installation Guide* for more detailed information including requirements for host and client machines, network requirements, and OS and third-party software requirements.

## Minimum Server Requirements

The minimum Cisco PVM server requirements are shown in [Table 1](#).

**Table 1**      **Minimum Server Requirements**

Component	Specification
Disk space	79 GB (250 GB is recommended)
Processor	One dual-core 3.4GHz Xeon processor
Network card	100 MB Ethernet

**Table 1** Minimum Server Requirements (continued)

Component	Specification
System memory	2 GB
Software	<ul style="list-style-type: none"> <li>Only English language versions are supported</li> <li>Red Hat Enterprise Linux Version 4 (with Update 4 or higher) or Red Hat Enterprise Linux Version 3 (with Update 8 or higher)</li> </ul>
Browser	Microsoft Internet Explorer 6.0 browser on Windows 2000 and XP (6.0 SP2 is recommended)
PDF viewer	Adobe Acrobat Reader 6.01 or higher

## Required Software

Before installing Cisco PVM, verify that the server has the following software installed:

- Red Hat Enterprise Linux Version 4 (all updates) or Red Hat Enterprise Linux Version 3 (with Update 8 or higher)
- X Virtual Frame Buffer (Xvfb Server)

This X Windows System virtual frame buffer server allows PVM to display traffic statistics. Verify that the Xvfb Server is installed during Red Hat 4.0 OS installation. See the [“Verifying the X Virtual Frame Buffer Installation” section on page 4](#) for information about how to check to see if the Xvfb server is installed and how to install it.

- Internet Explorer 6.0 (6.0 SP2 is recommended)
- Adobe Acrobat Reader 6.01 or higher.

## Required Hardware

Cisco PVM supports a maximum of 200 NAM-2 blades, which is approximately equivalent to 100 NAM-2s plus 300 NM-NAMs. The hardware requirements for Cisco PVM depend on the number of NAMs your system will support. The requirements are broken down into three configurations:

- Small—Used in configurations of up to five NAM-2 blades
- Medium—Used in configurations of up to 50 NM-NAM blades plus 50 NAM-2s
- Large—Used in configurations of up to 300 NM-NAM blades plus 100 NAM-2s or 200 NAM-2 blades

[Table 2](#) summarizes the recommended minimum requirements for small, medium, and large configurations including the maximum number of NAMs supported in each configuration.

**Table 2** *Recommended Configuration Summary*

Maximum NAMs Supported	CPUs	RAM	Disk Space
Five NAM-2s	One dual-core 3.4 GHz Xeon processor	2 GB	250 GB
50 NAM-2s plus 50 NM-NAMs	Two dual-core 3.4 GHz Xeon or One quad-core 3.0 GHz Xeon	4 GB	850 GB in high performance array configuration
100 NAM-2s plus 300 NM-NAMs	Four dual-core 3.4 GHz Xeon or Two quad-core 3.0 GHz Xeon	8 GB	4,600 GB in high performance array configuration

## Verifying the X Virtual Frame Buffer Installation

If you are installing Cisco PVM 1.0.2 on a server that uses RHEL, Version 4, verify that X Virtual Frame Buffer (Xvfb server) is installed. To verify that Xvfb server is installed, complete the following steps:

**Step 1** Enter the following Linux command:

```
rpm -qa | fgrep Xvfb
```

**Step 2** Check for an output statement like those shown in the following examples:

```
xorg-x11-Xvfb-6.8.2-1.EL.13.36
XFree86-Xvfb-4.3.0-81.EL
```

If the command produces any output, the X Virtual Frame Buffer is installed. If the command generates no output, you must manually install the X Virtual Frame Buffer.

If you need to install the X Virtual Frame Buffer, use one of the following procedures.

## Installing the Xvfb Server During RHEL 4.0 OS Installation

To install the Xvfb package during the RHEL 4.0 OS installation, complete the following steps:

- Step 1** Begin the Red Hat Enterprise Linux 4.0 OS installation.
- Step 2** When installing Red Hat Enterprise Linux 4.0, in the Package Group Selection, choose **Customize the set of packages to be installed**.
- Step 3** Choose **Desktops > X Window System > Details > xorg-x11-Xvfb**.
- Step 4** Continue with the RHEL 4.0 OS installation.

## Installing the Xvfb Server Using the Graphical User Interface

To install the X Virtual Frame Buffer using the graphical user interface on an existing RHEL server, complete the following steps:



### Note

To install Xvfb using a CLI, use the instructions provided on the RHEL website.

- Step 1** Choose **Applications > System Settings > Add/Remove Applications > Desktops > X Window System > Details**.
- Step 2** Choose **xorg-x11-Xvfb**.

**Step 3** Insert the RHEL 4.0 OS CD when prompted.

## Minimum Disk Space Requirements

Cisco PVM requires a minimum 79 GB of disk space as shown in [Table 3](#).

**Table 3** *Minimum Disk Space Requirements*

Component	Minimum Space
Cisco PVM	4 GB
Oracle	4 GB
Database	70 GB
Temporary directory	1 GB



**Note**

The Cisco PVM installation will stop if your host machine does not meet these minimum disk space requirements.

## Minimum Client Requirements

[Table 4](#) shows the minimum Cisco PVM client machine requirements.

**Table 4** *Minimum Requirements for the Client Machines*

Component	Requirement
Operating System	Microsoft Windows 2000 or XP
Processor	Pentium 4
System Memory	256 MB
Display Setting — Color Palette	Microsoft Windows True Color

**Table 4** Minimum Requirements for the Client Machines (continued)

Component	Requirement
Browser	Internet Explorer 6.0 with Java, JavaScript, and cookies enabled; Internet Explorer 6.0 SP2 is recommended  <b>Note</b> If you are running Windows 2000 and IE 6.0 SP1, ensure that all available Microsoft updates have been applied.
Adobe PDF	Adobe Reader 6.01 or higher

## Minimum Network Requirements

Cisco PVM requires a 100 Mbps Fast Ethernet LAN with the following firewall ports open and not in use by any other application or process:

- 161 (SNMP)
- 162 (SNMP)
- 1521 (Oracle)
- 8000 (Actuate)
- 8100 (Actuate)
- 8443 (HTTPS)
- 8700 (Actuate administration)
- 8900 (Actuate)

**Note** Cisco PVM supports LDAP v2 and v3.

Network devices must be configured for SNMP access. Firewall and access list restrictions must be appropriately configured.

## Software Compatibility

Cisco PVM software compatibility includes the following:

- Cisco PVM supports English language versions only
- Cisco NAM Software versions 3.4 and 3.5
- CiscoWorks Common Service 3.0 Device Credential Repository

## Installation Overview

Cisco PVM uses 32-bit Oracle. The installation DVD includes Oracle 9i Standard Edition, and the installation software partitions and assigns Oracle variable values. You must shut down Oracle if you are repeating the Cisco PVM installation or if you currently have a version of Oracle running.

The installation process is automated using Cisco PVM installation software on a dedicated server. The installation software installs all components and sets the environment to run Cisco PVM with little user interaction.

The Cisco PVM installation requires root-level access to a Linux server with the disk space specified in the [“Minimum Disk Space Requirements”](#) section on [page 6](#). The automated installation process does the following:

1. Checks for an existing Cisco PVM installation.
2. Prompts you for desired installation location.
3. Prompts you for the desired data storage location.
4. Checks for necessary hard drive space.
5. Creates the installation log files.
6. Installs Oracle.
7. Cleans up temporary files after the installation is complete.

During the installation, status and progress messages are displayed on the console and are also written to a log. In addition, errors related to the application and database installations are displayed on the console and written to the log.

**Note**

The installation stops if an existing Cisco PVM installation is detected. You must uninstall the previous Cisco PVM version before you install the new one.

**Note**

The installation stops if the specified installation path has insufficient space to support the installation. See the [“Minimum Disk Space Requirements”](#) section on [page 6](#) for the required disk space size.

The Cisco PVM installation will ask you to specify the locations for the Cisco PVM application, Oracle application, data storage, and installation logs. At each prompt, you can accept the default, shown in [Table 5](#), or specify an alternate location.

**Table 5** *Cisco PVM Installation Defaults*

<b>Component</b>	<b>Default Location</b>	<b>Minimum size</b>
Cisco PVM	<code>/opt/CSCOpvm</code>	4 GB
Oracle	<code>/opt/CSCOpvm/oracle</code>	4 GB
Data storage	<code>/opt/CSCOpvm/oradata</code>	70 GB
Installation logs	<code>/opt/CSCOpvm/logs</code>	

# Supplemental License Agreement

SUPPLEMENTAL LICENSE AGREEMENT FOR CISCO SYSTEMS  
NETWORK MANAGEMENT SOFTWARE: CISCO PERFORMANCE  
VISIBILITY MANAGER

## IMPORTANT-READ CAREFULLY

This Supplemental License Agreement (SLA) contains additional limitations on the license to the Software provided to Customer under the Software License Agreement between Customer and Cisco. Capitalized terms used in this SLA and not otherwise defined herein shall have the meanings assigned to them in the Software License Agreement. To the extent that there is a conflict among any of these terms and conditions applicable to the Software, the terms and conditions in this SLA shall take precedence.

By installing, downloading, accessing or otherwise using the Software, Customer agrees to be bound by the terms of this SLA. If Customer does not agree to the terms of this SLA, Customer may not install, download, or otherwise use the Software. When used below, the term *server* refers to central processor unit.

## Additional License Restrictions

Cisco Performance Visibility Manager (Cisco PVM) Base Software Kit (Software) includes the necessary software for installing Cisco PVM on to a single server running Red Hat® Enterprise Linux® (RHEL) operating system. Licensing right-to-use is based on the number of Cisco Catalyst 6500 Series and Cisco 7600 Series Network Analysis Modules NAM-1/NAM-2 and Cisco Branch Routers Series Network Analysis Modules NM-NAM managed by the Cisco PVM Software.

In addition to purchasing the Cisco PVM Base Software Kit (CPVM-1.0-BASE-K9), the Customer is required to purchase any one of the following Device License Options that correspond to the number of NAM-1/NAM-2 or NM-NAM devices managed:

- Cisco PVM 1.0 10-Device License Option (CPVM-1.0-6K10-LIC): Manages ten Cisco Catalyst 6500 Series and Cisco 7600 Series Network Analysis Module NAM-1/NAM-2 devices

- Cisco PVM 1.0 25-Device License Option (CPVM-1.0-6K25-LIC): Manages 25 Cisco Catalyst 6500 Series and Cisco 7600 Series Network Analysis Module NAM-1/NAM-2 devices
- Cisco PVM 1.0 50-Device License Option (CPVM-1.0-6K50-LIC): Manages 50 Cisco Catalyst 6500 Series and Cisco 7600 Series Network Analysis Module NAM-1/NAM-2 devices
- Cisco PVM 1.0 10-Device License Option (CPVM-1.0-NM-10): Manages ten Cisco Branch Routers Series Network Analysis Module NM-NAM devices
- Cisco PVM 1.0 25-Device License Option (CPVM-1.0-NM25-LIC): Manages 25 Cisco Branch Routers Series Network Analysis Module NM-NAM devices
- Cisco PVM 1.0 50-Device License Option (CPVM-1.0-NM50-LIC): Manages 50 Cisco Branch Routers Series Network Analysis Module NM-NAM devices

When used anywhere in this SLA, a *device* means a Cisco Catalyst 6500 Series and Cisco 7600 Series Network Analysis Module NAM-1/NAM-2 module or a Cisco Branch Routers Series Network Analysis Module NM-NAM module, belonging to a switch or router that has its own IP address.

Customers who are returning to add additional device licenses to their Cisco PVM Software and server installation may do so by purchasing the Spare Device License Add-on Options. The Spare Device License Add-on Option product ordering codes follow a similar convention as above and simply include an equal sign (=) at the end of the part number (as in CPVM-10-6K10-LIC=, CPVM-10-6K25-LIC=, CPVM-10-6K50-LIC=, CPVM-1.0-NM10-LIC=, CPVM-1.0-NM25-LIC=, CPVM-1.0-NM50-LIC=).

Device restrictions are enforced by license registration.

## Installation and Use

The Software components are provided to Customer solely to install or supplement existing functionality of the applicable Network Management Software product. Some license terms such as device count and proof of preexisting licenses might be electronically enforced.

Customer may install and use the Cisco PVM Software on a single server running Red Hat Linux. The Customer is required to purchase at least one Device License Option that corresponds to the number of NAM-1/NAM-2 or NM-NAM devices they plan on managing in their network management environment.

## Reproduction and Distribution

Customer may not reproduce nor distribute software.

## Other Rights and Limitations

Please refer to the Cisco Systems, Inc. [End User License Agreement](#).

# Licensing Your Product

Cisco PVM requires a license file to be installed to operate in the non-evaluation mode. The license file is not included in the Cisco PVM distribution. You use a Product Authorization Key (PAK) printed on a Software Claim Certificate in the package you receive and specific information about the host that will run Cisco PVM to register your product and obtain a license file. This section contains the following topics:

- [Evaluation and Production Modes of Operation, page 12](#)
- [Obtaining the License File, page 13](#)
- [Installing the License File, page 14](#)
- [License Administration, page 15](#)

## Evaluation and Production Modes of Operation

Without a valid license file installed, Cisco PVM will operate in evaluation mode for 90 days, but will cease operating after the 90-day evaluation period expires. Attempting to log in to Cisco PVM from the web interface after the 90-day evaluation period will cause an error indicating an invalid license.

If you have received the Cisco PVM as an evaluation copy, you need not register the product during the 90-day evaluation period. During the installation process, check that you are installing for Evaluation Only.

The installation process for an evaluation copy is same as that of a purchased product, except that you are prompted by the Cisco PVM application to select the Evaluation Only option from the Licensing Information page.

If you choose to run any application in evaluation mode, the application stops functioning after 90 days. The evaluation period cannot be extended. If you have a purchased copy and you decide to install it in evaluation mode, please use your PAK to register the product on the Cisco online licensing site and receive a valid license.

If you have not purchased the product, the Cisco PVM evaluation server can be reactivated by purchasing Cisco PVM from your authorized Cisco reseller. You can license the product using the PAK provided with the product. For details see the “[Installing the License File](#)” section on page 14.

**Note**

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Adding additional licenses (perhaps to increase the NAMs over the number currently supported) does not require reinstallation of Cisco PVM. In this case, use the `Imrread` command to add the additional license files to support the additional NAM devices.

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## Obtaining the License File

A PAK is printed on a Software Claim Certificate and included with the product you receive from Cisco. The PAK contains resource limitations and is used to register Cisco PVM on Cisco.com. A license file is sent by e-mail to you after you use the PAK to register on Cisco.com.

To obtain your license file, use one of the following URLs to register the PAK with Cisco.com:

- Use this site if you are a registered user of Cisco.com:  
<http://www.cisco.com/go/license>
- Use this site if you are not yet a registered user of Cisco.com:  
<http://www.cisco.com/go/license/public>

You will need the hostname and host ID when you register your product and request your production license.

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**Step 1** Log in as the Cisco PVM Administrator by entering the following:

```
su – pvmadm
```

**Step 2** Obtain the hostname by entering the following:

```
hostname
```

**Step 3** Obtain the host ID by entering the following:

```
cd /opt/CSCOpvm/flexlm/bin/lmhostid
```

---

You can obtain and install your license file at any time. We recommend that you complete the Cisco PVM license registration and receive the product license before installing Cisco PVM.

If the person installing Cisco PVM is not authorized to obtain the license on behalf of the administrator, the product can be installed and used for 90 days in evaluation mode. During the 90-day period, Cisco PVM will remind all users to complete the licensing process.

## Installing the License File

After you receive the product license file and install Cisco PVM software, copy the license file to the host computer where Cisco PVM is installed.

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**Step 1** Log in as the Cisco PVM Administrator by entering the following:

```
su - pvmadm
```

**Step 2** Change the license file name to **sp\_license.dat**, then place the sp\_license.dat file in the **/opt/CSCOpvm/server/etc** directory.

**Step 3** Restart the license server by issuing the following command:

```
Imreread
```

---

## License Administration

Cisco PVM includes the following command-line programs, located in `[install directory]/flexlm/bin`, for handling the licenses.

- **lmstat**—Indicates the status of the license server and whether it is up or down.
- **Imreread**—Reads the license file. This is necessary when the license file is replaced as in the case of obtaining new licensed features.
- **lmhostid**—Provides the host ID information required to generate the license file. All license files are node locked to the host computer for which Cisco PVM is installed.

The Cisco PVM log file, `[install directory]/logs` provides detailed information about when licensed features were checked in and checked out.

## Testing the License Manager

After installing the license file, verify the license manager status. Ensure that the following Cisco PVM components are up and running:

- License Manager license server daemon (*lmgrd*) is UP.
- Vendor daemon (SP\_LM) is UP.
- License server is the current host.

## Verifying the License Manager Status

Perform the following steps to check the status of the License Manager.

---

**Step 1** Log in as the Cisco PVM Administrator.

**Step 2** Invoke the status daemon (*lmstat*):

```
/opt/CSCOpvm/flexlm/bin/lmstat -c
```

```
/opt/CSCOpvm/server/etc/sp_license.dat
```

**Step 3** Ensure that the *lmgrd* process is running by entering **ps -ef | grep lmgrd** at the command prompt.

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## Additional Licensing Information

Cisco PVM Software might need to run on additional servers to support large numbers of NAM-1/NAM-2 and NM-NAM devices or to meet certain performance criteria. When more than one server is used to host the Cisco PVM Software, each server must have an additional licensed copy of the Cisco PVM Base Software Kit and at least one registered NAM-1/NAM-2 or NM-NAM Device License Option installed.

You should not modify the license file. Legal restrictions concerning the distribution of the Cisco PVM Software is described in the [“Supplemental License Agreement” section on page 10](#). More than one copy of Cisco PVM Base Software Kit should not be running in the network unless additional copies of the Software and Device License Options have been purchased and licensed.

# Getting Started With Cisco PVM

This section provides information about getting started with Cisco PVM including the following:

- [Logging in Using the Host Machine, page 17](#)
- [Starting Cisco PVM, page 17](#)
- [Changing the Default Administrator Password, page 18](#)
- [Logging in to the Client, page 18](#)
- [Setting Up NAMs, page 19](#)
- [Setting Up Data Source Groups, page 21](#)
- [Stopping Cisco PVM, page 24](#)

## Logging in Using the Host Machine

At the command prompt, log in as the Cisco PVM Administrator by entering:

```
su – pvmadm
```

## Starting Cisco PVM

Enter the following to start Cisco PVM:

```
[installation directory]/bin/pvm start
```

Verify that Cisco PVM started properly by entering:

```
pvm status
```

You can also check running processes by using the **ps** and **grep** commands:

```
ps -ef | grep pvm
```

You should also check the PVM and Oracle processes:

```
ps -ef | grep ora
```

Statuses should be in “S” (sleeping) state. No errors or statuses “D” (process was started but is dead) or “U” (process is not started, or is in an unknown status, or has an unknown process ID) should be shown.

## Changing the Default Administrator Password

As a security precaution, you should change the default password before you start using Cisco PVM. To change the default password, complete the following steps:

- 
- Step 1** Open Internet Explorer and browse to **https://<hostname of Cisco PVM server>:8443/**.
  - Step 2** Log in to Cisco PVM using the default Administrator credentials:
    - The login ID is **pvmadm**.
    - The password is **Pvmadm\_2006**.
  - Step 3** Click **Admin**.
  - Step 4** Click **Password**.
  - Step 5** Enter **Pvmadm\_2006** in the Old Password field.
  - Step 6** Enter a new password in the New Password field.
  - Step 7** Re-enter the new password in the Confirm Password field.
  - Step 8** Click **OK**.
  - Step 9** Click **Logout**. The system displays the login window.
- 

## Logging in to the Client

To log in to the Cisco PVM client and begin using the system, complete the following steps:

- 
- Step 1** Open Internet Explorer and browse to **https://<hostname of Cisco PVM server>:8443/** (if the login page is not already displayed).
  - Step 2** Enter the user name in the Login ID field.

- Step 3** Enter the password in the Password field.
- Step 4** Click **Login**.
- 

## Setting Up NAMs

The Add NAM feature allows administrators to manually add individual NAMs to Cisco PVM for collection and monitoring. Supporting switch and router information can be added concurrently with the NAM parameters, but a NAM can be added to the system without its supporting device information, and Cisco PVM will still collect and aggregate data from the NAM. In this case, however, switch and router information is unavailable to the Monitor and Report functions. However you can use the Cisco PVM edit function to add switch/router information later.



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You can add multiple NAMs to the system in a single step using Cisco PVM's import capability. See "Importing NAMs" in Chapter 2 of the *Cisco PVM User Guide* for more information.

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- Step 1** Open the NAMs window by either clicking the **Setup** tab or clicking **NAM** in the navigation menu if you are already in the Setup GUI.

The NAMs window appears, showing the list of NAMs that have been set up in Cisco PVM. Initially, the list is empty.

- Step 2** Click **Add**.

The Add a New NAM window appears to enable entry of NAM details for both NAM and supporting device parameters.

- Step 3** Enter or select the appropriate information in the NAM section including:

- NAM name
- NAM type
- IP address
- Enabled status
- Description



---

**Note** Ensure that the Enabled box is checked if you want collection to begin after the NAM is added to the system.

---

**Step 4** Enter or select the appropriate NAM Parameters including:

- SNMP version
- Community strings
- Port
- Timeout

**Step 5** (Optional) Enter or select the appropriate information in the Switch/Router section including:

- Device name
- Device type
- IP address
- Enabled status
- Description



---

**Note** Ensure that the Enabled box is checked if you want collection to begin after the device is added to the system.

---

**Step 6** (Optional) Enter or select the appropriate Switch/Router Parameters including:

- SNMP version
- Community strings
- Port
- Timeout

**Step 7** Click **OK**. The NAMs window appears, listing the new NAM.



---

**Tip** Clicking **Cancel** aborts the add operation and displays the list of NAMs without any changes. Clicking **Reset > OK** clears all entries you have made in the Add a New NAM window, and displays the default values.

---

- Step 8** (Optional) Find the new NAM by filtering the NAM List:
- a. Enter the character string, name, or IP address with which you want to filter the list of NAMs in the Name or Address field.
  - b. Click **Filter**.

The NAMs window displays the filtered list of NAMs.

---

## Setting Up Data Source Groups

To supply traffic information to the Monitor and Reports functions, Cisco PVM uses the concept of the Data Source Group (DSG), a logical collection of raw data sources that Administrators can customize into groups for NAMs, switches, and routers.

Cisco PVM automatically collects all the traffic statistics provided by NAMs or supporting devices as soon as they have been added or imported into the system. Cisco PVM uses DSGs for those system functions that require calculating statistics over multiple data sources, such as in Thresholds and reports.

The DSG setup displays all existing data sources possible by NAM or supporting device, and you can specify only those sources they want to include in the group. It is possible, therefore, to combine similar data sources from multiple NAMs or supporting devices into a single DSG. You can then generate reports, including aggregated statistics, containing performance data from only those sources in the DSG.



### Note

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Data sources are combined into DSGs for either NAMs or supporting devices; a DSG cannot contain data sources from both NAMs and switches or routers.

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## Default Switch DSGs

For every switch that is added to Cisco PVM, the system automatically creates the following DSGs:

- SYSTEM\_<IP\_Address>\_ALLPORTS (includes all the ports on the switch)
- SYSTEM\_<IP\_Address>\_ALLVLAN (includes all the VLANs on the switch)

Neither of these DSGs can be modified or removed.

## Adding Data Source Groups

The Cisco PVM Add a New Data Source Group function allows you to add DSGs across multiple NAMs or switches/routers in a single window. After you assign data sources to the group from one device, you can select another device of the same type and add its data sources to the group. Cisco PVM will not allow you to create a DSG if the DSG:

- Begins with the same name as an existing DSG.
- Begins with the name “SYSTEM\_”.
- Contains the same set of devices and data sources as an existing DSG.
- Contains both NAMs and switches and routers.

To add a data source group, complete the following steps:

- 
- Step 1** Click **Setup** on the Cisco PVM dashboard.
  - Step 2** Click **Data Source Groups** in the Setup navigation menu. The Data Source Groups window appears, showing the list of DSGs currently defined in the system.
  - Step 3** Click **Add**.  
The Add a New Data Source Group window appears.
  - Step 4** Enter the name of the new DSG in the NAM field (required).
  - Step 5** (Optional) Enter a brief description of the DSG in the Description field.
  - Step 6** Select the device type from the Type drop-down list:
    - NAM Type
    - Switch/Router Type

The Select Device list is populated with the devices available in the system based on the device type you selected.



### Note

If you select the device type from the Type drop-down list and add data sources to the group, you cannot change the device type without losing the data sources you have already assigned. If you attempt to change the device type, the system

generates a confirmation dialog box. To change the type, click **OK** and add new data sources to the group. Clicking **Cancel** in the confirmation window aborts the device type change and keeps the data sources you have already added to the group.

**Step 7** Select a single device from the Select Device list and click the workflow arrow button.

The Select Data Source(s) list is populated with the data sources available for the device you selected.



**Note** You can select only one device at a time to populate the Select Data Source(s) list. Each time you select a new device and click the workflow arrow button, the Select Data Source(s) list refreshes to display only those data sources associated with the selected device.

**Step 8** Select the data source(s) you want to include in the new DSG from the Select Data Source(s) list box.



**Tip** You can select multiple data sources by pressing Ctrl or Shift while making your selections, or you can select individual data sources and add them one at a time.

**Step 9** Click the workflow arrow button.

The data source(s) you selected are moved to the Selected Device Data Source(s) list.

**Step 10** (Optional) Continue to add data sources from other devices of the same type by repeating Steps 7 through 9.

**Step 11** Review the list in the Selected Device Data Source(s) and delete any unwanted data sources from the list by selecting the data sources and clicking **Remove**.

The window refreshes to display the Selected Device Data Source(s) list without the data source(s) you selected for removal. The removed data source(s) reappear in the Select Data Source(s) list when that list is populated from the associated device in the Select Device list.

**Step 12** Click **OK**.

Cisco PVM adds the new DSG to the system and the Data Source Groups window appears with the new DSG and the message, “Successfully added new Data Source Group” in the window header.

**Note**

Clicking **Cancel** displays the Data Source Groups window without saving a new DSG. Clicking **Reset > OK** clears the entire Add a New Data Source Group window.

## Stopping Cisco PVM

To stop Cisco PVM, complete the following steps:

**Step 1** At the command prompt, log in as the Cisco PVM Administrator by entering the following:

```
su – pvmadm
```

**Step 2** Change directory to `/opt/CSCOpvm/bin`.

**Step 3** Enter the following:

```
pvm stop
```

## Product Documentation Set

The following is a list of the documentation for Cisco Performance Visibility Manager 1.0.2. You can access the URLs listed for each document on the Documentation CD-ROM and at [www.cisco.com](http://www.cisco.com) on the World Wide Web.

- *Quick Start and Documentation Guide for Cisco Performance Visibility Manager 1.0.2* (78-17305-06) (this document)

[http://www.cisco.com/en/US/docs/net\\_mgmt/performance\\_visibility\\_manager/1.0/quick/guide/pvmdocgd.html](http://www.cisco.com/en/US/docs/net_mgmt/performance_visibility_manager/1.0/quick/guide/pvmdocgd.html)

- *Release Notes for Cisco Performance Visibility Manager 1.0.2* (OL-8615-03)  
[http://www.cisco.com/en/US/products/ps6768/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/ps6768/prod_release_notes_list.html)
- *Cisco Performance Visibility Manager User Guide* (OL-8620-03)  
[http://www.cisco.com/en/US/docs/net\\_mgmt/performance\\_visibility\\_manager/1.0/user/guide/users.html](http://www.cisco.com/en/US/docs/net_mgmt/performance_visibility_manager/1.0/user/guide/users.html)
- *Cisco Performance Visibility Manager Installation Guide* (OL-8614-03)  
[http://www.cisco.com/en/US/docs/net\\_mgmt/performance\\_visibility\\_manager/1.0/installation/guide/install.html](http://www.cisco.com/en/US/docs/net_mgmt/performance_visibility_manager/1.0/installation/guide/install.html)
- *Cisco Performance Visibility Manager Troubleshooting Guide* (OL-8619-03)  
[http://www.cisco.com/en/US/docs/net\\_mgmt/performance\\_visibility\\_manager/1.0/troubleshooting/guide/trouble.html](http://www.cisco.com/en/US/docs/net_mgmt/performance_visibility_manager/1.0/troubleshooting/guide/trouble.html)

## Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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This document is to be used in conjunction with the documents listed in the “[Product Documentation Set](#)” section.

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