CHAPTER 1

Planning the Installation

Cisco Performance Visibility Manager (PVM) provides server-side components and processes deployed to a single host within the required operating environment. The client-side application is an HTML-based Graphical User Interface (GUI) accessed through a supported web browser.

Note Details of the Cisco PVM operating environment and system installation are included in Chapter 2, “Installation Requirements”.

This chapter contains the following topics:

Installation Process

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 minimum user interaction.

The Cisco PVM installation requires root-level access to a Linux server that has been configured in accordance with the operating environment requirements specified in Chapter 2, “Installation Requirements”. The automated installation process performs the following steps:

1. Performs an initial system check for minimum system requirements, including the hardware platform, system memory, and Linux kernel release version.
2. Checks for an existing Cisco PVM installation.

3. Prompts you for desired installation location.
4. Prompts you for the desired data storage location.
5. Checks for necessary hard drive space.
6. Installs Cisco PVM.
7. Installs the database.
8. Performs post-install operations, including creating log files, generating an evaluation license, cleaning up temporary files, and performing post-install verification.

LDAP Authentication

By default, Cisco PVM relies on its own authentication and authorization repository created during installation. After installation, the system can be configured to use a Lightweight Directory Access Protocol (LDAP) server for user authorizations.

Cisco PVM supports the following LDAP versions:

- LDAP v2
- LDAP v3

Note To use LDAP authentication, an ACS server is required.

Existing Installations

If the installer finds a previous version of Cisco PVM running, it will ask you to stop Cisco PVM and reinstall. If an existing installation is found and Cisco PVM is not running, Cisco PVM will ask you if you want to remove the installation and directories. If you answer yes, the installer performs the necessary actions and continues with the installation. If you answer no, installation is terminated.

Note Cisco PVM 1.0.1 and Cisco PVM 1.0 had two system-wide bash environment files located at /etc/profile.d/oracle.sh and /etc/profile.d/shellrc. These files are not used by Cisco PVM 1.0.2, and they can conflict with the Cisco PVM 1.0.2 installation. If you are upgrading to Cisco PVM 1.0.2 from an earlier Cisco PVM version, uninstall the earlier version using that version's uninstall utility, or manually remove the two bash files to avoid problems with the upgrade.

Note Previously installed versions of Cisco PVM application and database should be stopped prior to installation to avoid termination. The installer will detect and report any running instance of Cisco PVM or running database processes and abort the installation.

Installation Location

The installation software will prompt you to specify the desired location for the Cisco PVM application. The application is, by default, installed to **`/opt/CSCOpvm`**. You can accept this default location by pressing **`Enter`**. Alternately, you can override the default by entering a different installation path.

Oracle Installation Location

The installation software will prompt you to specify the desired location for the Oracle application installation. The application is, by default, installed to **`/opt/CSCOpvm/oracle`**. You can accept this default location by pressing **`Enter`**. Alternately, you can override the default by entering a different installation path.

Data Storage Location

The installation software prompts you to specify the desired location for the Cisco PVM database files. The database files, by default, will be installed to **`/opt/CSCOpvm/oradata`**. You can accept this default location by pressing **`Enter`**. Alternately, you can override the default by entering a different database data path.

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 installations differ depending on the number of NAMs your system is intended to 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 1-1 provides a summary of the recommended minimum requirements for large, medium, and small configurations.

Table 1-1 Recommended Configuration Summary

Maximum NAMs Supported	CPUs	RAM	Disk Space
Five NAM-2s	Two 3.4 GHz Intel Xeon	2 GB	70 GB
50 NAM-2s plus 50 NM-NAMs	Four 3.4 GHz Intel Xeon	4 GB	850 GB in high performance array configuration
100 NAM-2s plus 300 NM-NAMs	Four 3.0 GHz Intel Xeon Dual-Core	8 GB	4,600 GB in high performance array configuration

Note PVM runs on 32-bit OS architecture. The installer will issue an error message and terminate the installation if it detects a 64-bit architecture on the system.

Minimum Disk Space Requirements

The installer will check to ensure that the specified installation directories have the recommended amount of free disk space available. Table 1-2 provides a summary of the recommended minimum requirements for free disk space.

Table 1-2 Minimum Disk Space Requirements

Installation Directories	Recommended Amount of Free Disk Space
PVM Install Directory	4 GB
Oracle Install Directory	4 GB
Temporary Storage (`/tmp`)	1 GB
Oracle Data Directory	70 GB

Note Before installing Cisco PVM, ensure that your host machine meets these minimum disk space requirements.

The default database directory is **`/opt/CSCOpvm/oradata`** (you can override the default by entering a different installation path), and the installation defaults to a predefined database size.

The installation software checks to ensure that the specified installation path contains sufficient space to support the installation. The installation aborts in the event of insufficient disk space availability.

- Cisco PVM will check to ensure that the system has the minimum required RAM (2 GB).
- Depending on the number and type of NAMs to be supported, disk space required for the Cisco PVM database installation can vary. Cisco PVM requires that a minimum of 70 GB of disk space be available in the data storage directory. Table 1-1 provides examples of required storage space based on the number of NAMs you intend to support.

Installation Logs

The installation software provides status messages during the installation. These messages are provided to the console and are also written to a log. Additionally, errors related to the application and database installations are raised to the console and written to the respective log files located at **`installation directory]/logs`**.

Note During installation, `/tmp` will be used for temporary storage of installation files. If the installation fails, an error message appears showing the name of the log file and its location.

Oracle Installation

Cisco PVM runs using 32-bit Oracle. The installation DVD includes Oracle 9i Standard Edition, and the installation software assigns Oracle variable values.

Caution The embedded Oracle installation cannot be used for anything other than Cisco PVM.

Oracle Password Changes

Changes to the Oracle database passwords, normally done by the DBA, are not recommended. Cisco PVM has specific passwords that are required for product support.

Temporary File Cleanup

Upon successful installation, Cisco PVM cleans up all temporary files.

Note If you abort the installation, the installation process will stop but no automatic rollback or cleanup will be performed.