

ProCurve Network Management

ProCurve Manager Plus 2.2

A powerful tool for complete network management

ProCurve Identity Driven Manager 2.1

Provides dynamic, secure and user-customized access to network resources

ProCurve Mobility Manager 1.1

Expands PCM+ to manage a ProCurve wireless LAN

ProCurve Network Immunity Manager 1.0

Pervasive intelligent threat defense for a highly available network



Getting Started Guide

ProCurve Management Software

Getting Started Guide

ProCurve Manager

ProCurve Manager Plus

Mobility Manager

Network Immunity Manager

Identity Driven Manager

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Applicable Products

ProCurve Manager v2.2

ProCurve Manager Plus v2.2

ProCurve Mobility Manager v1.1

ProCurve Network Immunity Manager v1.0

ProCurve Identity Driven Management v2.15

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Introduction

ProCurve Manager (PCM) is a network management application which provides an effective solution for basic monitoring and managing of network devices. PCM provides the core features of network management systems: auto discovery, network mapping, device status monitoring, and network event management. It also provides easy access to configure devices via the web management page or telnet access.

PCM is included with all new ProCurve managed network devices to provide manageability out of the box. It includes an auto-update feature which will keep your management system up to date with new device support. It can be used to easily and automatically register all discovered ProCurve devices, reducing support time from the start. PCM can also be used to easily update ProCurve devices with new device software, part of the ProCurve lifetime warranty for devices. It is free to register for continued use and support.

ProCurve Manager Plus (PCM+) is an advanced network management system. PCM+ provides comprehensive monitoring and management of ProCurve network devices and is also an extensible platform which allows for the integration of other management tools. PCM+ builds on the discovery and network mapping, providing on-demand or scheduled reporting about network inventory, security, and performance. PCM policy and event based management capabilities allow administrators to define policies that can automate notifications and changes as desired. PCM+ configuration management logs all changes to network devices, including who made the change and when. It includes detailed traffic monitoring capabilities to identify network congestion issues and identify dangerous network usage. PCM+ provides network administrators a powerful toolset to effectively configure, monitor, document and troubleshoot the network.

ProCurve Network Management for OV-NT integrates with HP OpenView Network Node Manager (ver. 6.4, 6.41 or 7.01, 7.50) to provide a robust solution for managing ProCurve network products in a multi-vendor environment.

ProCurve Mobility Manager (MM) extends the PCM and PCM plus monitoring and configuration tools for use with ProCurve Wireless Access Points (APs) and Wireless Services Modules (WESM). The MM module can be used to monitor all Radios within range of the managed ProCurve APs, define Trusted Radios, and monitor and configure WLANs and SSIDs for Radios on managed APs.

Mobility Manager requires PCM Plus v2.2 and is bundled with the PCM Plus v2.2 CD. It is available for a free 30 day trial, thereafter it requires a separately purchased license key to enable.

ProCurve Identity Driven Manager (IDM) provides network security at the “edge” of the network. It extends the capabilities of 802.1x authentication, Web-authentication, and MAC-authentication with features for dynamically configuring access rights at the point where users access the network.

IDM requires PCM Plus v2.2 and is bundled with the PCM Plus v2.2 CD. The Identity Driven Manager is available for a free 30 day trial, thereafter it requires a separately purchased license key to enable.

ProCurve Network Immunity Manager (NI) provides an affordable, scalable, and easily manageable solution that delivers per-port intrusion detection and response to stop malicious network traffic on both the wired and wireless network. NI Manager allows users to define policies, collect security events, monitor threats and automate threat mitigation.

NI Manager detects viruses using Network Behavior Anomaly Detection (NBAD) on sampled traffic, and it accepts virus detection alerts from switches running Virus Throttle software, and from select IDS, IPS, and UTM security appliances. The Network Immunity Manager can detect zero day attacks (first attacks by a new virus) and protects against threats from inside the network such as an employee bringing an infected laptop in to work.

NI Manager requires PCM Plus v2.2 and is bundled with the PCM Plus v2.2 CD. The NI Manager is available for a free 30 day trial, thereafter it requires a separately purchased license key to enable.

This book provides information on the following topics:

- Prerequisites for installing ProCurve Management software - page 4
- Installing ProCurve Management software modules – page 8
- Registering your ProCurve Management software – page 26
- Getting started with the ProCurve Management software – page 31

Other documentation that is available with ProCurve Manager, Identity Driven Management, Mobility Manager, and Network Immunity Manager includes:

Online Help: Context specific and topical help is available everywhere from within the user interface for ProCurve Manager Plus. The help also includes a table of contents, index, and search capabilities.

ProCurve Manager Network Administrator's Guide: Detailed information about all of the program's features and uses. This guide is accessible from the Help menu in the program and is included as a PDF file on the ProCurve Manager installation disk.

ProCurve Identity Driven Manager User's Guide: Detailed information for configuring network access groups and policies. This guide is accessible from the Help menu in the program (if IDM is installed) and is included as a PDF file on the ProCurve Manager installation disk.

ProCurve Network Immunity Manager User's Guide: Detailed information for configuring NBAD (threat detection) sensitivity, monitoring suspicious network activity, and configuring automated threat response and mitigation using Security Alerts and Actions with the PCM Plus, Policy Manager feature.

Purchasing ProCurve Manager Software

A 30-day free trial version of ProCurve Manager Plus (PCM+), Mobility Manager (MM), Identity Driven Management (IDM), and Network Immunity Manager (NI) software is included with new ProCurve switches. Contact your HP sales representative or HP reseller to purchase PCM+, MM, NI, or IDM software. You can also go to the ProCurve Web site: <http://www.procurve.com> for more information.

Installation Prerequisites

Before you can install the ProCurve network management products, check that your system meets the following prerequisites.

Supported Software

Use of ProCurve Management software is supported on the following Operating Systems:

- MS Windows 2000
(Server, Advanced Server, or Pro with Service Pack 4 or better)
- MS Windows 2003 Server
- MS Windows XP Pro (Service Pack 2 or better)

For Small to Medium Networks (50 - 250 devices)*

Minimum Hardware System Configuration:

The following requirements assume use of a dedicated server for running PCM/PCM+ as a standalone application for networks with 50 to 250 managed network devices:

- 2 GHz Intel Pentium IV or equivalent processor
- 1 GB RAM
- 10 GB free hard disk space
- 1 GB NIC

Recommended Hardware System Configuration

The following requirements assume use of a dedicated server for running PCM/PCM+, MM, NI, and IDM for networks with 50 to 250 managed network devices:

- 3 GHz Pentium IV or equivalent processor
- 2 GB RAM
- 40 GB free hard disk space
- 1 GB NIC

*Assumes minimum is one 50-device starter license (J9057A), maximum is one 50-device starter license (J9057A) and two 100-device incremental licenses (2 each, J9058A)

For Medium to Large Networks (250-2000 devices)*

Minimum Hardware System Configuration:

The following requirements assume use of a dedicated server for running PCM/PCM+ as a standalone application for networks with 250 to 2000 managed network devices:

- 3 GHz Pentium IV or equivalent processor
- 2 GB RAM
- 40 GB free hard disk space
- 1 GB NIC

Recommended Hardware System Configuration

The following requirements assume use of a dedicated server for running PCM/PCM+, MM, NI, and IDM for networks with 250 to 2000 managed network devices:

- Intel Xeon or equivalent processor
- 4 GB RAM
- 80 GB free hard disk space
- 1 GB NIC

* Assumes minimum is one 50-device starter license (J9057A) and two 100-device incremental licenses (2 each, J9058A), maximum is an Unlimited license (J9059A).

ProCurve Manager for OV-NT Network Node Manager

- ProCurve Management software is supported on HP OpenView Network Node Manager for Windows, versions 6.4, 6.41, 7.01, or 7.5.

ProCurve Identity Driven Manager (IDM)

- Use of the IDM software requires implementation of one of the following access control methods: MAC-auth, Web-auth, an 802.1x supplicant application, or RADIUS.
The following RADIUS versions are supported: Microsoft IAS, Funk's Steel-Belted RADIUS (SBR), and freeRADIUS on the following Linux platforms; RedHat 3, and 4 (Enterprise Edition), SuSe 9.3 Enterprise Edition, and SuSe 10 Desktop Edition.

For assistance with implementation of RADIUS and access control on your network, contact the ProCurve Elite Partner nearest you that can provide ProCurve Access Control Security solutions. You can find ProCurve Direct Elite partners on the web at:

http://hp.via.infonow.net/locator/us_partner/index.jsp

Upgrading from Previous Versions of PCM, MM, IDM

The installation CD for PCM 2.2 contains MM 1.1 and IDM 2.15 installation files. If you are running MM 1.0, you must select the MM option during the PCM 2.2 install process. This will install the GUI and database updates for MM1.1.

If you are running IDM 1.0 or 1.0.x, you must select the IDM option during the PCM 2.2 install process. This is required to support changes made in the underlying PCM and IDM databases. If you have not purchased the IDM 2.0 license, your installation will include the IDM interface changes made for IDM 2.0, but all new functionality (FUNK SBR support, User Import/Export, Access Control, and Endpoint integrity support) will be disabled until you purchase and register an IDM 2.0 license.

If you want to test the IDM 2.0 functionality using the free 30-day trial provided on the PCM 2.2 CD, you need to install the software on a separate system that has no previous IDM version installed or in use.

NOTE: Once you upgrade to PCM or PCM+ Version 2.2 or newer and IDM 2.15, you can not revert to the previously installed version. If you are uncertain if you want to upgrade to the 2.2 Version, it is best to install it on a system that does not have any earlier versions of PCM or IDM installed.

Before Upgrading or Reinstalling PCM+ and IDM

You must have PCM/PCM+ version 1.6, 2.0, or 2.1 installed prior to installing an upgrade version of PCM/PCM+ 2.2

During an upgrade installation (on a box that has PCM 1.6, 2.0, or 2.1 installed) the PCM installer will launch a DB migration tool to migrate configurations currently stored in the PCM database to the new 2.2 version

database. This includes: policies, custom groups, users, devices, VLANs, and topologies. However, the existing policies in older versions, which may contain a mix of settings for STP, Community Names, Authorized Managers, and Trap Receivers, will be divided into a single policy for each type since the policies in PCM version 2.2 are single-purpose.

When upgrading from PCM version 1.6 to a higher version, back up the **PNM\server\db\solid.db database** file before beginning the installation wizard. When upgrading from PCM version 2.0 to a higher version, back up the **PNM\server\mysql** directory before beginning the installation. This lets you back out to the previous version if necessary and prevents the existing database from being lost or corrupted during database migration.

IDM Agent Upgrade Installation. If you are using IDM 1.0 and you install PCM 2.2 without the upgrade to IDM 2.15, you will still get an upgraded version of IDM. This is to accommodate database and other underlying functionality upgrades. You will also need to manually install (upgrade) the IDM Agent on your RADIUS server, as described under “Configuring IDM Agent Access” on page 24 of this guide.

ProCurve Manager Install Instructions

The ProCurve Manager Plus, Identity Driven Manager, Network Immunity Manager, and Mobility Manager software is available through two sources:

1. as a free 30-day trial copy delivered in the box when you purchase managed ProCurve switches
2. purchased from your ProCurve reseller

Both the client and the server parts of ProCurve Manager (PCM), ProCurve Mobility Manager (MM), ProCurve Network Immunity (NI), and ProCurve Identity Driven Manager (IDM), are installed from the CD by the installation process described in this document.

Configuring Default User Settings

When installing PCM on a system the first time, the wizard will prompt you to configure PCM start-up defaults and user settings. Use the following list to determine the settings to use prior to starting the installation process.

Note: If you have already installed PCM 2.0, the PCM 2.1 installation will automatically maintain your current configuration and user settings. You will not be prompted for any new information.

To accept the default settings provided with PCM, simply click the **Next** button to continue to the next window. You can change the settings at a later time using the Preferences options in PCM. See the *ProCurve Manager Network Administrator's Guide* for details.

1. **Administrator password** – Though it is not required, for the security of your network, it is strongly advised that you put a password on the Administrator login.
2. **Initial Discovery settings** – To start the discovery of the network devices, you need to identify a **Start from device** by its IP address or DNS name. For the discovery process to take place most efficiently, this device should be a ProCurve switch that is centrally located in your network. Avoid using non-ProCurve devices, or an “edge” device that is primarily connected to end nodes.

3. **SNMP settings** - The PCM default uses SNMP V2 with Read and Write Community names of “public” to communicate with devices. The following table explains the options for setting SNMP versions that PCM uses to access devices. You can select both versions using the Primary, Secondary configuration if the device(s) support SNMPV2 and SNMPV3.

SNMPV2	Discovery uses only SNMPV2 to discover devices. Devices that do not support SNMPV2 will not be discovered.
SNMPV3	Discovery uses only SNMPV3 to discover devices. Devices that do not support SNMPV3 will not be discovered.
SNMPV2 and SNMPV3	Discovery initially uses the primary SNMP version to discover devices. If communications fail, discovery attempts to communicate with devices using the secondary SNMP version.
None	Network uses only one SNMP version, no alternate needed.

To change SNMP settings:

- a. Select the SNMP Discovery version to use. To use both V2 and V3 set the **Primary SNMP version** and **Secondary SNMP version** to use to communicate with devices on the network.
- b. For SNMP V2 Credentials:

Enter the **Read Community** name, using up to 16 alpha-numeric characters, except >, <, and spaces. (Default is “public”)
Repeat to set the **Write Community** name.
- c. For SNMP V3 Credentials:
 - In the **Username** field, type the USM user name. The name must be unique and cannot contain the > or < character.
 - Select the **Authentication Protocol** to use.
 - Enter the **Authentication Password**.
 - Select the **Privacy Protocol**.
 - Enter the **Privacy Password**.
- d. Set the **SNMP timeout** parameter.
- e. Set the **SNMP retries** parameter. The maximum is 5.

4. **CLI settings** - The default communications parameters for Command Line Interface (CLI) access from PCM to ProCurve devices. The default configuration uses Telnet, SSH1 with Password Authentication.

To customize the CLI settings:

- a. Use **Telnet** for CLI communication and disable SSH.
Use **SSH** for CLI communication and disable Telnet.
 - b. Set the **Timeout** parameter. Maximum is 10 seconds.
 - c. Set the **Retries** parameter. Maximum is 5 retries.
 - d. Set **User Credentials** for use with Telnet or SSH settings:
 - Type the Manager login in the **Mgr Username** field and the associated password in the **Mgr Password** field.
 - To set up an operator login, type the new operator user name in the **Opr Username** field and the associated password in the **Opr Password** field.
 - e. For SSH Credentials:
 - Select the **Password Authentication** or **Key Authentication** option.
 - For Password authentication, define the **User Credentials** that SSH will use to authorize communication with the device.
 - For Key authentication, enter the **Port** number to be used for CLI communication.
5. **Proxy Settings** - Enable the **Use HTTP Proxy** option if you use proxies for external web access. ProCurve Manager needs external web access to license the PCM software, to automatically register ProCurve devices, and to retrieve the latest ProCurve switch software versions.
- a. **HTTP** - Enter the **HTTP Proxy** and **Port** information.
 - b. **SOCKS** - Enter the **Socks Host** and **Port** and select the SOCKS version, **v4** or **v5**.
 - c. For **Socks v5** enter the **Username** and **Password**.

Automatic Updates - Select the option you want to use for automatically installing ProCurve software updates.

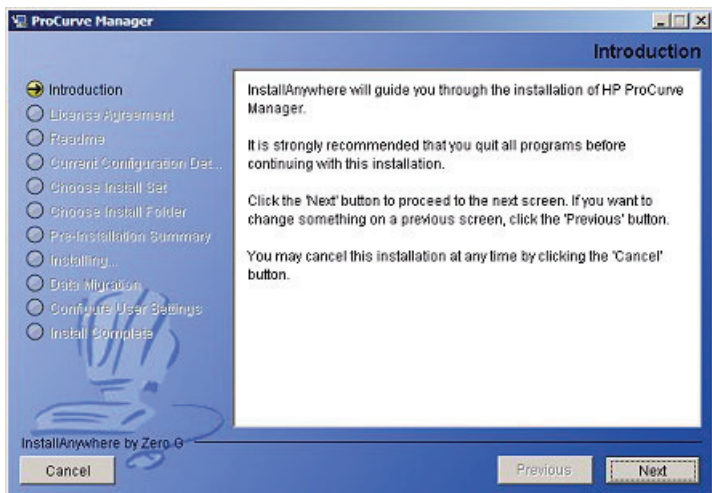
- **Download and install automatically** - PCM checks the HP Web site for updates and install them automatically. By default, automatic updates are scheduled for the first day of every month.
- **Notify if updates are available** - PCM checks the HP Web site for updates and logs an event message for every update available for download. Review the PCM event log to identify updates and install them manually. Automatic update events are named “Automatic Updates” and are a “minor” severity level.
- **Disable automatic updates** - Do not use the automatic update feature.

IDM Domain (Realm) Name - If you are installing IDM 2.0, you will be prompted to enter a **Domain (Realm) Name** that users will be logging into. You can change this name at a later time if needed.

To accept the default User settings provided with PCM, simply click the **Next** button to continue to the next window. You can change the settings at a later time using the Preferences options in PCM. See the *ProCurve Manager Network Administrator's Guide* for details.

Using the PCM Install Wizard

Insert the product CD into the CD ROM drive in the computer that you are using as the network management station. The program will auto install using the PCM Install Wizard. If, for whatever reason, the auto install doesn't work, run the **Install.exe** program from the CD ROM drive.

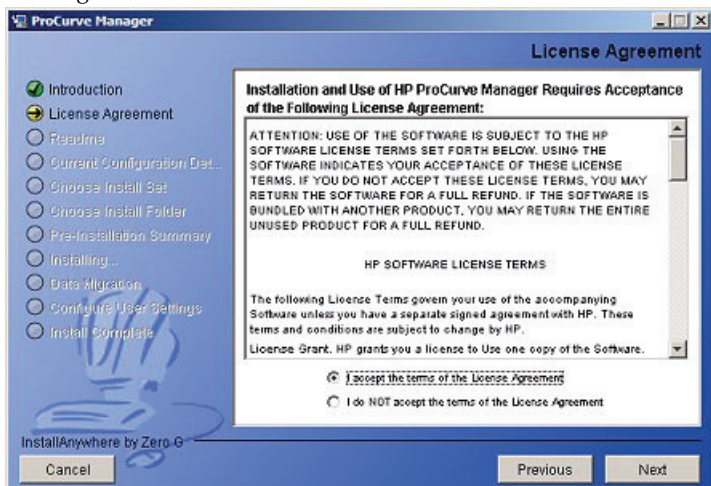


In each window,

- Click **Next** to continue to the next step in the install process.
- Click **Previous** to return go back one window (step) in the process.
- Use **Cancel** to exit the install process.

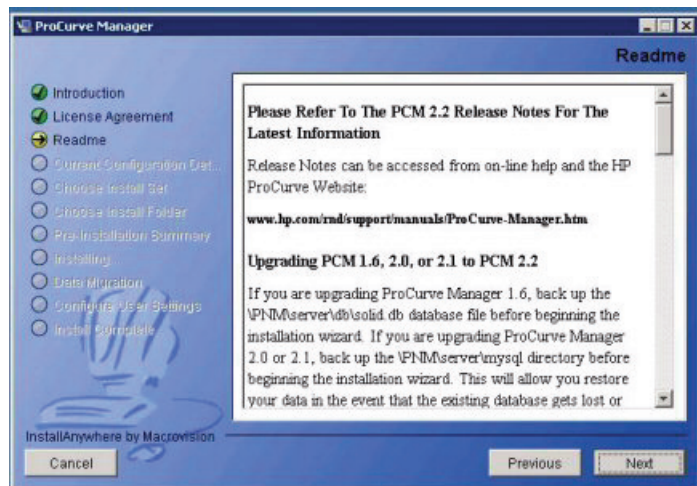
NOTE: Once you install PCM or PCM+ Version 2.2, MM1.1, and IDM 2.15, you can not revert to the previously installed version. If you are uncertain if you want to upgrade to the PCM 2.2 with IDM 2.15 and MM 1.1 version, it is best to install it on a system that does not have any earlier versions of PCM, PCM+, IDM or MM installed.

License Agreement:



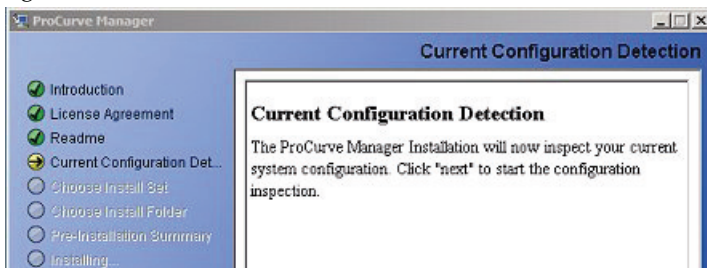
You must click the “**I accept...**” option to continue.

Readme:



Use the scroll bar to review all of the “readme” notes.

Configuration Detection:



The PCM install script will auto-detect the system configuration and determine the appropriate PCM software option, either PCM 2.2 standard, or the PCM-NNM version.

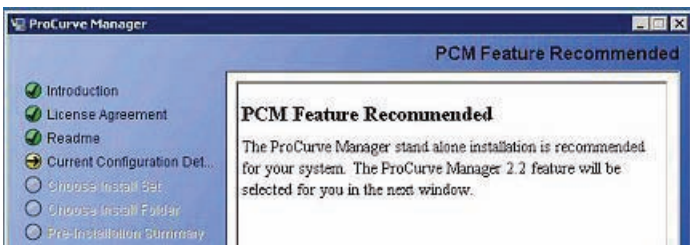
NOTE:

To install PCM-NNM, you must already have OV-NNM installed on your system. Otherwise, the standalone PCM version will be installed.

When the configuration detection process completes, the recommended PCM features for installation on your network displays.

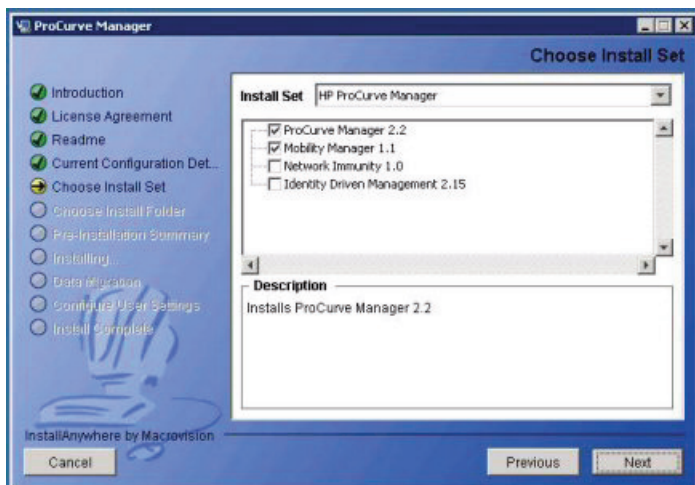
Click **Next** to continue to the Feature Recommendation window.

PCM Features Recommendation



Click **Next** to continue to the Choose Install Set window.

Choose Install Set



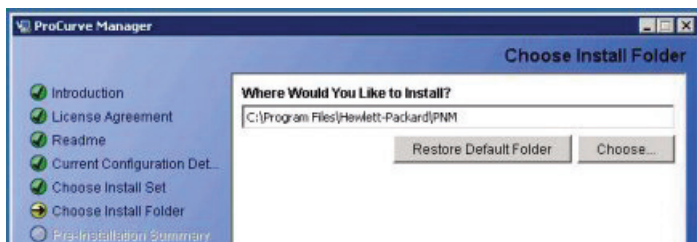
The Install Set indicates the software that will be installed. Click the checkbox to select additional options, or deselect an install option.

Note: If you are upgrading from PCM 1.6, 2.0, or 2.1. with IDM 1.0 or 2.0, you must check the IDM 2.15 option. If you are upgrading from MM 1.0, you must select the MM 1.1 option. This is required to install the database and other underlying functionality upgrades required to use IDM and MM with PCM 2.2.

To install IDM, you must already be using RADIUS for authentication. The IDM Agent can only be installed on a RADIUS server. If no RADIUS server is detected, the IDM Agent will not install, and IDM will not work, even if you select the IDM option in the initial install on the PCM+ server.

Click **Next** to continue to the Choose Install Folder window.

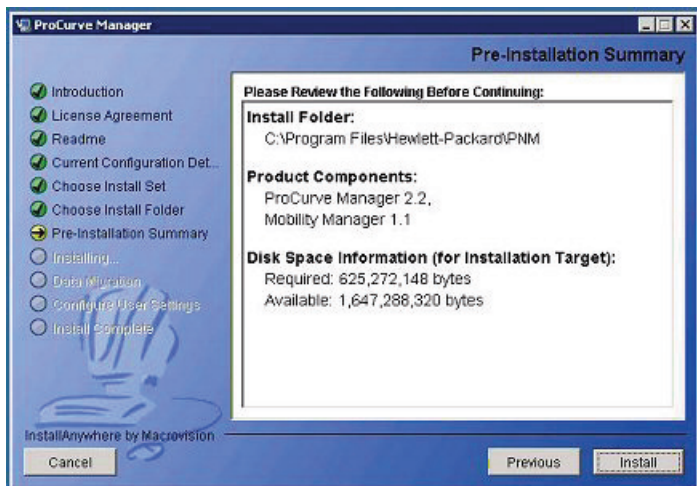
Install Location:



To install PCM in an alternate location, use the **Choose** button to select a different install path, or type in the installation directory path.

Click **Next** to accept the default install location, and continue to the Pre-Installation Summary window.

Pre-Install Summary:



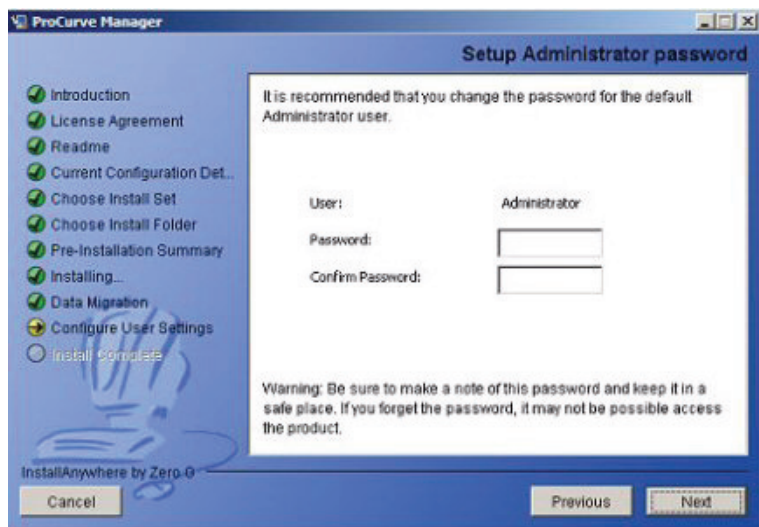
Review the installation summary, then click **Install** to continue with the installation process.

The Installing ProCurve Manager window displays, and provides progress indicators for the file installation process.

Note: Once the Installation Wizard begins the process of installing the PCM files on your system, you cannot safely cancel the installation. You must wait until the installation process is complete, then uninstall PCM using the “Add/Remove Programs” function via the Windows Control Panel.

If you do cancel the installation while files are being copied to your system, PCM may not be able to uninstall the files, or properly reinstall over the existing files.

Configure User Settings

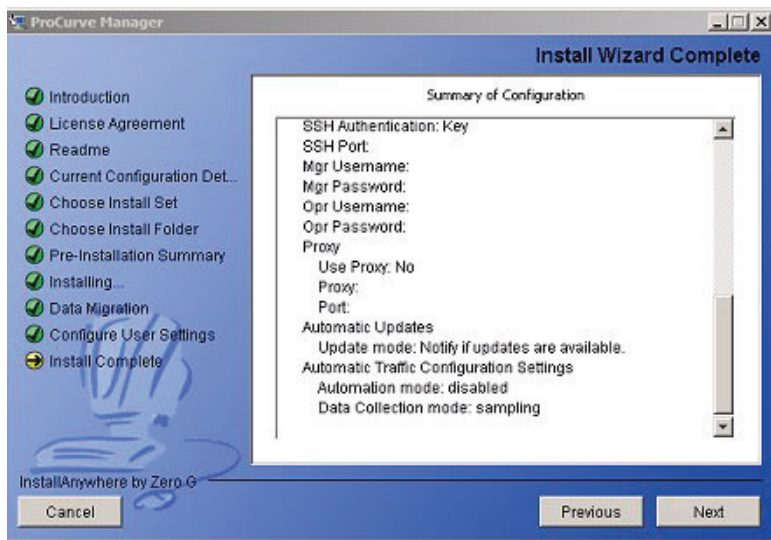


Refer to “Configuring Default User Settings” on page 8 to review the User Settings to configure during installation.

To accept the defaults provided with PCM, simply click the **Next** button to continue to the next window. You can change the settings at a later date using the Preferences options in PCM. See the *ProCurve Manager Network Administrator's Guide* for details.

When you complete the user settings configuration, an installation summary window displays.

Install Summary:



Use the scroll bar to review the configuration information.

Click **Previous** to go back through the User Setting configuration windows to revise the settings.

Click **Next** to complete the installation process.

In the final window click **Done** to exit the installation wizard.

PCM Installation Notes

When installing the “PCM for NNM” module, you will be prompted only for Traffic Management and Proxy settings. The remaining installation parameters are configured based on existing settings in NNM.

One Network Management Program per Computer

The PCM installation process will determine if you are running OpenView Network Node Manager and configure the PCM installation appropriately to install the PCM for HP OV-NT Network Node Manager application.

Because of resource conflicts that will occur if you have any other network management tools running on the same computer, for example during discovery of the network devices, make sure you uninstall any other network management programs (except HP OV-NT Network Node Manager) from your computer before installing ProCurve Manager or ProCurve Manager Plus.

Adding PCM Remote Client Stations

When you install ProCurve Manager, both the server and client functions are installed on the computer. You can also install the client function on any number of other computers in your network that have network access to the server computer.

Note: Before installing remote client stations, you must first configure the server to allow access from each new client station. For more information, see “Configuring Client/Server Access Permissions” on the next page.

To install the client on another computer, simply start a web browser such as Microsoft Internet Explorer on the computer. For the URL, type in the IP address of the server computer followed by a colon and the port ID 8040. For example, if the IP address of the server computer is 10.15.20.25, then you would enter **http://10.15.20.25:8040** on the web browser address line. The client installation wizard will then guide you through the client installation.

Note: If you have multiple ProCurve Manager servers in the network, when you install a remote client, you will be prompted to select the server to which you want the client to attach. This server will be used each time the client program is launched. You can change the server that is being accessed by selecting the “ProCurve Manager Server Discovery” option that was included when you installed the client. From your computer’s Windows Start button, select **Programs**, then **ProCurve Manager**, and then **ProCurve Manager Server Discovery**.

Configuring PCM Client/Server Access Permissions

The Situation: The ProCurve Manager server maintains a list of authorized clients that are permitted to log into the server. By default, when the ProCurve Manager server is installed, the only client allowed to log in is the client on the same system as the server—that is, no remote clients are allowed.

The Solution: ProCurve Manager server has a configuration file that can easily be configured to allow access to any set of actual or potential clients. There are two ways that this file can be configured, depending on what you know about the clients that need to connect.

- **IP addresses.** The **access.txt** file can be configured with a list of IP addresses specifying the clients that are authorized to log into the server. The file may contain as many addresses as needed, one IP address per line; or you may configure IP addresses with wildcards. DNS names are also allowed in the file, including DNS names with wildcards (this is useful for DHCP environments where a system’s DNS name remains unchanged, although it’s actual IP address may change from time to time). For example, below is an example of a valid **access.txt** file:

```
15.255.124.84
15.29.37.*
10.*.*.*
*.rose.hp.com
system1.hp.com
```


To add an entry, open the **access.txt** file, which can be found in the config directory (**C:\Program Files\Hewlett-Packard\PNM\server\config**). Be sure to edit the file using a text-based editor such as Notepad or Wordpad. Edit the file as necessary, one entry per line, then save it. It is NOT necessary to restart the server; the changes will take effect immediately.

- **Passwords.** There are situations where it is not possible to know ahead of time what IP address a potential client will have. This is particularly the case in situations where the client comes in through some sort of VPN, where the IP address of the client is assigned externally. To solve this problem it is possible to add client passwords to the file that correspond to specially configured clients. Note that even though you will be modifying the same **access.txt** file as for the IP Address method (above), the two mechanisms can freely co-exist—that is, the **access.txt** file can contain a combination of IP addresses and passwords. To enable password access for a particular client:

1. First you must change an entry in the server\config\TyphoonServer.cfg file. This file is a text file and can be edited with Notepad or Wordpad. Look for the entry that reads

```
"AUTHENTICATION=10",  
Change it to read "AUTHENTICATION=100"
```

Save the file and restart the server (listed as "HP ProCurve Network Manager Server" in the services list).

2. Edit the **access.txt** file as described above, but instead of entering an IP address, just enter the selected password (on a line by itself). Save the file. It is not necessary to restart the server. For example, if we set the password to "procurve":

```
*.rose.hp.com  
system1.hp.com  
procurve
```

3. On the client (the client must already be installed), you must edit the riptide.cfg file. and add a password line using the format:

```
PASSWORD = your password
```

Do not change any of the other entries in the file, as they are necessary for the correct operation of the client.

A sample **Riptide.cfg** file, once edited with the password “procurve”, would look like this:

```
LEASE_LENGTH = 40000
TRACING_PROPERTY_KEY = CoreServices.Main
MANUFACTURER = Hewlett-Packard
SERVICE_NAME = Typhoon
COMPONENT_DB = config/Components.prp
TRACING_DBFILE = config/Loggers.prp
NETWORK_DELAY = 25000
VERBOSE = true
PASSWORD=procurve
```

4. Once you have saved the **Riptide.cfg** file, start the client and enter the address of the server in the “Direct address” field of the server search dialog. The client should now connect successfully to the server.

Note: If a PCM remote client attempts to connect to a PCM server, and the PCM server has a firewall turned on, it is possible that the PCM remote client will come up with the message “no contexts defined” and a grey (empty) display. The firewall prevents the PCM remote client from getting the necessary connection and data files from the PCM server.

You must disable the firewall on the server, or configure the firewall to allow the PCM remote client to connect to the PCM server.

Using PCM on multi-homed computers

A **multi-homed** system is a server or PC that has more than one IP address. Generally this occurs when more than one network card is installed in the computer, but there are other ways that a computer can be multi-homed. Here are a few of the situations that meet this definition:

1. A computer with two or more network adaptors.
2. A computer with a traditional Ethernet network adaptor, plus a wireless adaptor.

3. A computer with only one network adaptor, that is also running some network tunneling software such as a VPN client. In this situation the computer appears to have two network interfaces (each with its own IP address). But in reality the system only has one physical adaptor, and the VPN client software emulates a second adaptor (while using the original adaptor under the covers).

An example of a multi-homed system is shown below:

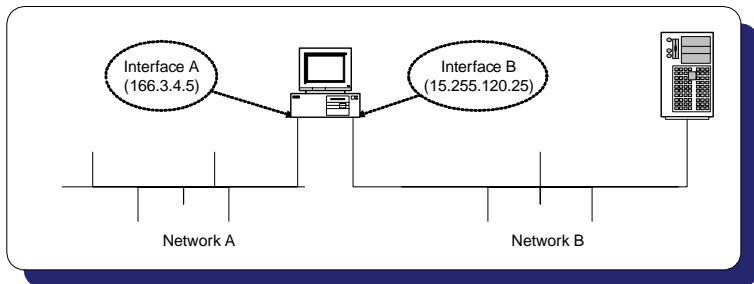


Figure 1. Example Multi-homed Computer

The Situation: When ProCurve Manager (either client or server) starts up, it attaches itself to the primary network interface of the computer. All network traffic between the client and server is directed to the selected network interface.

In the diagram above, if the ProCurve Manager client application attaches itself to the 166.3.4.5 interface, and the ProCurve Manager server is running on the server on the right (somewhere on the 15.255.120.* network), the client cannot connect successfully to the server.

The Solution: Edit the ProCurve Manager configuration file to correct this situation using the following procedure:

1. Find the **commIpAddr.txt** file in the **config** directory under the **client** or **server** directory. For the client, the default file path is:
C:\Program Files\Hewlett-Packard\PNM\client\config.
On the server, the default file path is:
C:\Program Files\Hewlett-Packard\PNM\server\config.

2. Using a text-based editor (such as Notepad), enter the IP address of the interface you want PCM to attach to. For the network illustrated above, you would enter **15.255.120.25** as the first line of the file.
3. Save your changes.
4. Restart the PCM client and server. For the server, you must restart the PCM (PNM) service from the Services control panel.

IDM Installation Notes

You can select to install the IDM application at the same time you install the PCM application, or install it at a later time from the PCM CD.

If you are upgrading from PCM 1.6, 2.0, or 2.1 with IDM 1.0 or 2.0, you must install the IDM 2.15 option. This is required to install the database upgrades required to use IDM 2.15 with PCM 2.2. If you are upgrading from IDM 1.0, the new IDM 2.15 features will be disabled in the IDM client interface (GUI) until you purchase and register an IDM 2.15 application license.

If you want to use the 30-day free trial of PCM 2.2 and IDM 2.15, you should install the software on a new system that has no prior IDM installation. Once PCM 2.2 is installed, you will not be able to revert to the old PCM and IDM version configuration.

Configuring IDM Agent Access

When you select the IDM option during the PCM installation, the IDM module is installed on the target system. To complete the installation process you need to install the IDM agent on your RADIUS server(s). This is similar to the process for adding PCM remote client stations, described on page 19.

Note: Before installing the IDM Agent on the RADIUS server, you must first configure the PCM server to allow access from RADIUS server. This is similar to the process for “Configuring Client/Server Access Permissions” described on page 20. You must add an entry for the IP address of the RADIUS server to the **access.txt** file on the PCM server.

To install the IDM Agent on a RADIUS server, start a web browser (such as MS Internet Explorer on the RADIUS server. For the URL, type in the IP address of the PCM server computer, followed by a colon and the port ID 8040. For example, if the IP address of the PCM server computer is 10.15.20.25, then on the RADIUS server, enter **http://10.15.20.25:8040** on the web browser address line. Select the IDM Agent option. In the install scripts page that appears, select the IDM Agent to download it to the RADIUS server system.

Run the Install.exe that is downloaded to the RADIUS server. The Install Wizard guides you through the installation process. During the installation process, you will be prompted to enter the IP Address for the IDM Server, which is the same as the PCM Server. This is needed to establish communication between the IDM Agent on the RADIUS server, and the IDM (server) application that is included on the PCM Server.

The IDM Agent can only be installed on a system with the RADIUS server configured. If the RADIUS server is not found on the system, the IDM Agent installation displays an error message, and the installation process is aborted.

Registering ProCurve Manager Plus Software

The ProCurve Manager installation CD includes a fully operable version of the PCM application, and a 30 day trial version of the PCM+, Mobility and the IDM applications. Until you have registered your software, an Expiring License warning will be displayed each time you log in, similar to the following.

The process is similar for using IDM and Mobility. That is, until you have registered the IDM and MM application, you will get the expiring license warning.

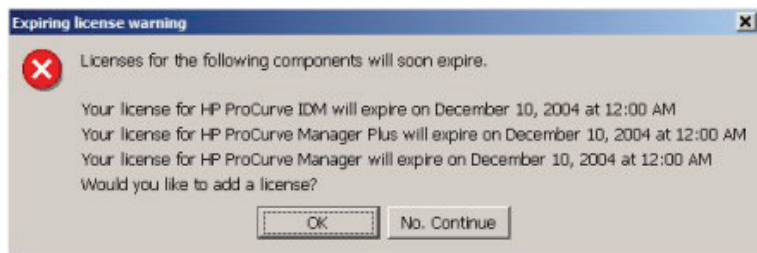


Figure 2. ProCurve Expiring License warning dialogue

Click **No, Continue** to close the dialogue and just start the program. Click **OK** to launch the Licensing administration screen.

The registration process described in the following pages is the same for the PCM+, MM, NI, and IDM software.

1. Contact your HP Sales Representative or HP Reseller to purchase the PCM+, MM, and IDM software. You will receive a Registration ID for the purchased software—either on the Software CD case, or a separate registration card sent with the purchase information.
2. Go to the Licensing window in PCM [Preferences→Licensing and Support→Licensing]. Write down the Installation Identifier for the software as it appears in the upper left corner of the window. You can also leave this window open and use the “copy and paste” functions to enter the Install ID in the My ProCurve software registration window.
3. Click the **Register** button to go to the PCM registration web site.

4. If you have an existing My ProCurve account, log in with your My ProCurve ID and password. Otherwise, click the REGISTER HERE button and create a new user account.
5. In the Registration window:
 - a. select the product to register from the **Product Type** pull-down menu.
 - b. enter the **Registration ID**, found on the back of the software CD case, or on the registration card you received when you purchased the software.
 - c. enter the **Installation Identifier** (from the Licensing window in PCM).
 - d. Click the **Generate License** button.

The window is refreshed and the registration information, including your License key is displayed. The license key is also sent to you via e-mail.


- e. To get the license key for the next software package, click **Generate Another License** and repeat the process in step 5, above.
6. When you receive the License key, go back to the Licensing window in PCM.

Enter the License key number in the **Add license** field, then click **Add**.

To avoid data entry errors, you can copy and paste the number from the e-mail or My ProCurve (My Software) Web page.

NOTE: to get the Registration ID for ProCurve Manager Plus, Identity Driven Manager, Mobility Manager, or Network Immunity Manager you must first purchase a software license for the module. *You do not need to re-install the software from the purchased CD, but you need the Registration ID to complete the registration process.*

The entire registration and licensing process, including samples is shown in the following pages.

1. Go to the Licensing window, available from the Preferences menu. Preferences can be accessed from the PCM Tools menu or by clicking on the Preferences icon in the PCM global tool bar. 

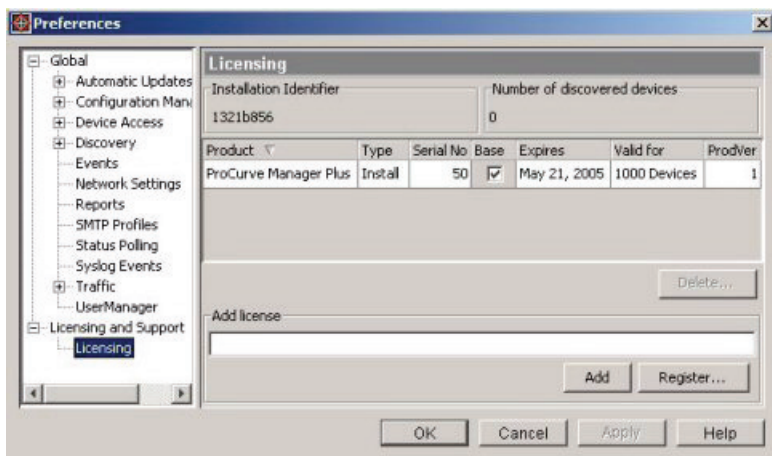


Figure 3. ProCurve License Administration window


To register the ProCurve Manager Plus, Mobility Manager, or IDM software:

2. Write down the **Installation Identifier** in the upper left corner of the screen, or select and copy (Ctrl+c) the text.
3. Click **Register...** to go to the My ProCurve registration Web site.

My ProCurve

My ProCurve Member Sign In and Registration

New to My ProCurve?
It's quick and easy to register!



Sign up today to take advantage of these free My ProCurve benefits:

- Instant access to software update notifications
- Online product registration and inventory tracking
- Special promotion offers
- Newsletter subscriptions and maintenance

[REGISTER HERE](#)

ProCurve Networking Respects Your Right to Privacy
ProCurve is committed to privacy and actively supports current industry initiatives to preserve individual privacy rights on the Internet. [» Privacy Statement](#)

[» Frequently Asked Questions](#)

Member Sign In

My ProCurve ID (email)
mary-ellen.largent@hp.com

Password

[» get assistance](#)

Remember me each time I visit My ProCurve

[» details](#)

Figure 4. My ProCurve Login page

4. Sign in with your My ProCurve ID and password.
If you are a new user, click the “Register Here” button, and then enter the required information to create an account. Click Submit to continue.


My Software

You are signed in as: MaryEllen Largent

[My Profile](#)
[My Products](#)
[My Support](#)
[My Software](#)

[» Sign Out](#)

- [» Frequently Asked Questions \(FAQ\)](#)
- [» Export My Software List](#)



We offer free network designs and can answer any questions you may have about our products.

[» Call Me Now](#)

Please register your ProCurve software and obtain your licenses here.

Obtain your permanent license for all ProCurve software. All software products require a unique **install id** for registration. Most products also require a **registration id**, which can be found on the CD case or Registration card.

Product Type	Registration ID#	Install ID#	Description
ProCurve Manager Plus	<input type="text"/>	<input type="text"/>	<input type="text"/>
» Help me find my registration id		<input type="button" value="Cancel"/>	<input type="button" value="Generate License"/>

Page 1 of 1 Display Row(s) per page

Product Type	Registration ID	Install ID	License Key	Description
--------------	-----------------	------------	-------------	-------------

Figure 5. My Software registration page

5. Select the product to register from the **Product Type** pull-down menu.
6. Enter the **Registration ID**, found on the back of the software CD case, or on the registration card you received when you purchased the software.
7. Enter the **Installation Identifier** (from the Licensing window in PCM).
8. Click the **Generate License** button.

The window is refreshed and the registration information, including your **License key** is displayed. The license key is also sent to you via e-mail.

To get the license key for the next software package, click **Generate Another License** and repeat the process in step 5, above.

9. The License e-mail message will look something like the following example:

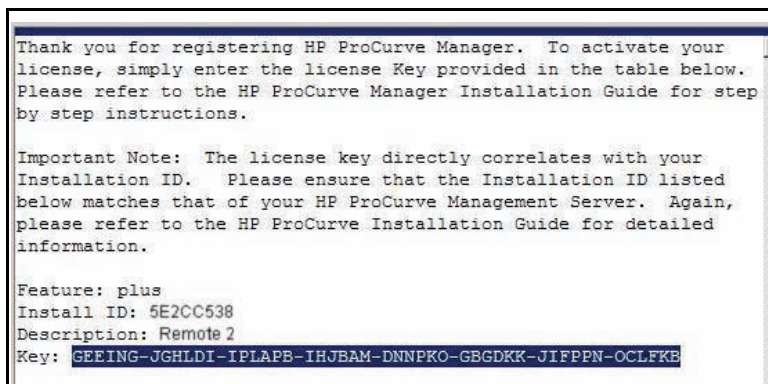


Figure 6. Sample E-mail message with PCMplus License key

10. When you receive the License key, go to the Licensing window in PCM.
Enter the License key number in the **Add license** field, then click **Add**. To avoid data entry errors, you can copy and paste the number from the e-mail or My ProCurve (My Software) Web page.
The screen is updated to show that your product is registered.
11. Select another product to register, or close the Licensing window.

Getting Started with ProCurve Manager

Several default settings are established during installation of your ProCurve Management applications. You may want to customize these settings and take advantage of some additional options.

The customizable features include:

- **Managing user accounts** – you can change the password on the Administrator account, as well as adding other accounts and setting the passwords and security levels on these.
- **Set up the network discovery parameters** – ProCurve Manager Plus automatically discovers the devices in your network, lists them and displays them in network maps. You can modify how often the device discovery process occurs, manually add and remove subnets and devices from the discovery process, and change a number of other parameters that influence the discovery process.
- **Set up Events/Statistics** – there are a number of parameters that you can configure that influence how ProCurve Manager Plus displays network event information and network traffic information.
- **Automatic Traffic Configuration** – ProCurve Manager Plus automatically configures network traffic monitoring on the ports with highest traffic in the network.
- **Manage device configurations** – ProCurve Manager Plus has sophisticated tools for managing the configurations on your network devices. You can configure some of the parameters of the configuration management capabilities.

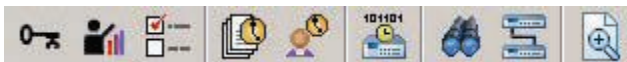
You can access these features via the toolbars and right-click menus in the PCM Client.

For more information on these topics, please see the *ProCurve Network Administrator's Guide* available in PDF format on the Web at:

www.hp.com/rnd/support/manuals/ProCurve-Manager.htm.

You can also refer to the **ProCurve Manager online help system**.

PCM Global Toolbar



Use the PCM global toolbar functions to access commonly used features. Simply click the button (icon) to launch that feature. Reading from left to right, the button (icons) are:

- Login as New User - Use this function to exit your current login account and login to the PCM Client using a different account name and password.
- Manage User Accounts - Use this function to add new user accounts for PCM.
- Global Preferences - Launches the Global Preferences window for PCM. The options available here let you configure the default settings PCM uses for Discovery, Device Access, Events logs, Traffic Monitoring, Configuration Management, and more.
- Policy Manager - Launches the Policy Manager feature, which allows you to create automated policies to assist with network management and administration. You can define actions to be taken in automatically in response to specific events or alerts, and you can create policies that occur on a regular schedule, for example to scan device configuration, or download and apply switch software updates across selected devices in the network.
- Times Configuration - Launches the Times configuration window. Lets you configure specific times that policies will be in effect. Times can also be applied within the Identity Management module.
- Software Update Status - Gives you a summary view of pending switch software updates, and updates recently applied.
- Find Node - You can use this feature to quickly locate a specific device node on the network by IP or MAC address.
- Node-to-Node Path Trace - This functions lets you trace the network connections between the specified source and destination points in the network
- Audit Log - You can use the audit log to track what configuration changes have been made to devices on the network, who made the changes, and when the changes were made.

Using the Right-Click Menu

You can also access most of the "contextual" tools and commands provided with PCM and PCM+ via the right-click menus.

To use the right-click menu, select an object (node) in the navigation tree on the left of the screen, then right-click your mouse to display the menu.

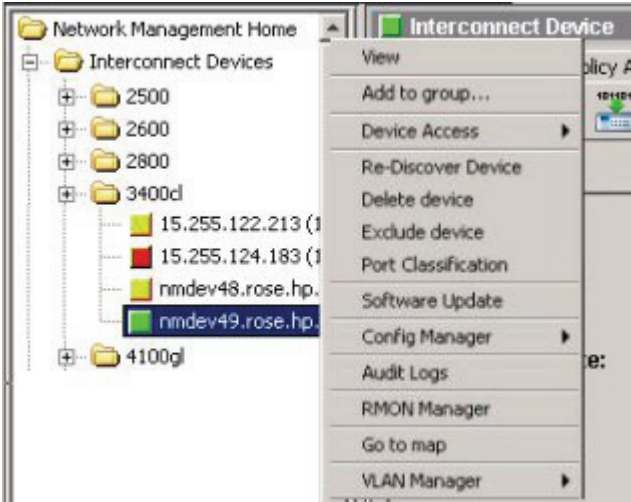


Figure 7. Example of PCM Navigation tree, right-click menu

You can also access the right-click menus when a device is selected in the Devices List and other Tab views. Right-click menus are context-sensitive, that is only items applicable to the selected device or data field will display.

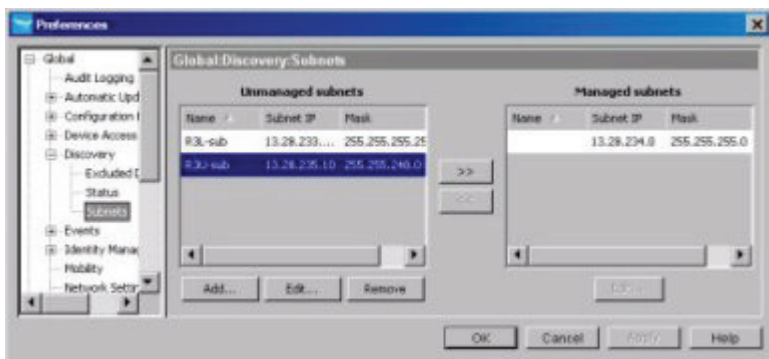
Items in the menu with an arrow (▶) indicates additional sub-menu items. Click the arrow to display the sub-menu.

The options enabled in the right-click menu will vary based on the node you have selected in the navigation tree, or item selected in the tab view, whether you are using PCM or PCM+, and your login account type.

Disabled functions will be grayed out.

Start-Up Tips

- If Discovery is having trouble finding devices, try manually discovering a few devices.
- If you use network devices from several vendors, enter the IP address of a PCM device as the Seed Device in Global Preferences for Discovery.
- If you have a large number of Subnets within your network, you may want to use the Tools->Imports->Import Subnets function to improve PCM discovery performance.
- If Discovery has run (Discovery Status in the Network Management Home-Dashboard indicates 'Idle') and there are subnets that should have been discovered but are not, check Preferences -> Discovery ->Subnets to see whether there are Unmanaged Subnets that should be moved to Managed Subnets, similar to the figure below.



If the subnet is not listed, you can add it to the Unmanaged subnets list, then move it to the Managed subnets list.

See Chapter 3, “Discovering Devices” in the *ProCurve Manager Network Administrator's Guide* for additional details on configuring discovery.

- If unable to access a specific device via PCM, try 'Test Communication Parameters in PCM'. To access this test, right-click on the device in the Navigation Tree, then see the Device Access menu.

See Chapter 6, “Managing Network Devices” in the *ProCurve Manager Network Administrator's Guide* for additional details on configuring communication parameters between PCM and network devices.

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PMM product number: J8990A

NIM product number: J9060A/J9061A/J9062A

PCM/PCM+ version number: B.02.20

IDM version number: A.02.10

PMM version number: A.01.10

NIM version number: A.01.00

Part number: 5991-6271



i n v e n t

