

ProCurve Network Management

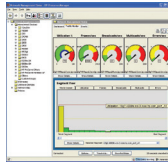
Getting Started Guide

ProCurve Manager Plus

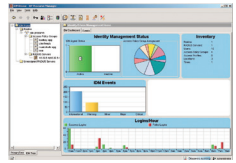
A powerful tool for complete network management

Identity Driven Manager

The safe and simple way to manage network policies



ProCurve Manager Plus



Identity Driven Manager

**The all-in-one solution for managing
ProCurve networks**

ProCurve Manager Plus

Identity Driven Manager

Getting Started Guide

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Applicable Products

ProCurve Manager)
ProCurve Manager Plus
ProCurve Identity Driven Management

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Introduction

ProCurve Manager is a Windows-based network management solution shipped with all manageable ProCurve devices. It provides all of the tools you need to effectively manage your network: mapping and polling capabilities, device auto-discovery and topology, tools for device configuration and management, monitoring network traffic, and alerts and troubleshooting data for ProCurve networks.

The graphical interface in ProCurve Manager (PCM) provides a streamlined method for reviewing network activity and device information. It also provides a simplified interface for managing and configuring the network and devices, with easy access to device Web Agents and the Command Line Interface.

ProCurve Network Management for OV-NT integrates with HP OpenView Network Node Manager (ver. 6.01, 6.1 or 6.2) on Windows NT/2000 to provide a robust solution for managing ProCurve network products in a multi-vendor environment.

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.

This document provides information on the following topics:

- Installing ProCurve Manager version 1.6 and ProCurve Identity Driven Manager version 1.0 – page 5
- Registering ProCurve Manager Plus – page 18
- Registering ProCurve Identity Driven Manager - page XX
- Customizing Your ProCurve Manager Plus – page 25
- The ProCurve Manager Plus Features – page 26

Other documentation that is available with ProCurve 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 and is included as a PDF file on the ProCurve Manager installation disk.

Installation Prerequisites

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

ProCurve Manager

- Minimum Processor: 2 GHz Intel Pentium III or equivalent
- Recommended Processor: 3 GHz Intel Pentium III or equivalent
- Minimum Memory: 1 GB RAM
- Recommended Memory: 2 GB RAM
- Disk Space: 250 MB free hard disk space minimum, 500MB recommended.
- Supported Operating System:
 - MS Windows 2003
 - MS Windows XP Pro (Service Pack 1 or better)
 - MS Windows 2000
(Server, Advanced Server, or Pro with Service Pack 4 or better)

Additional processing power and additional disk space may be required for larger networks, and to support extensive traffic monitoring.

ProCurve Manager for OV-NT Network Node Manager

- All of the system prerequisites listed for ProCurve Manager
- HP OpenView Network Node Manager for Windows NT, versions 6.0x, 7.01, or 7.5.

ProCurve Identity Driven Manager (IDM)

- All of the system prerequisites listed for ProCurve Manager, plus an additional 250MB free hard disk space (500 MB total).
- Implementation of Microsoft's Internet Authentication Service, RADIUS authentication server on Windows 2000 or 2003 Server (Enterprise or Standard Edition)

- Implementation of an access control method, using either MAC-auth, Web-auth, or 802.1x supplicant application.

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

Before Upgrading or Reinstalling PCM+

If you are reinstalling ProCurve Manager or upgrading to a higher version, back up the **PNM\server\db\solid.db** database file before beginning the installation wizard. This lets you back out to the previous version if necessary and prevents the existing database from being lost or corrupted during database migration.

During an upgrade installation (on a box that has PCM 1.0 installed) the PCM installer will launch a DB migration tool that will migrate configurations currently stored in the PCM 1.0 or 1.5 database to the new 1.6 version database. This includes: policies, custom groups, users, devices, VLANs, and topologies. However, the existing policies in 1.0, 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 1.5 or newer are single-purpose.

ProCurve Manager Install Instructions

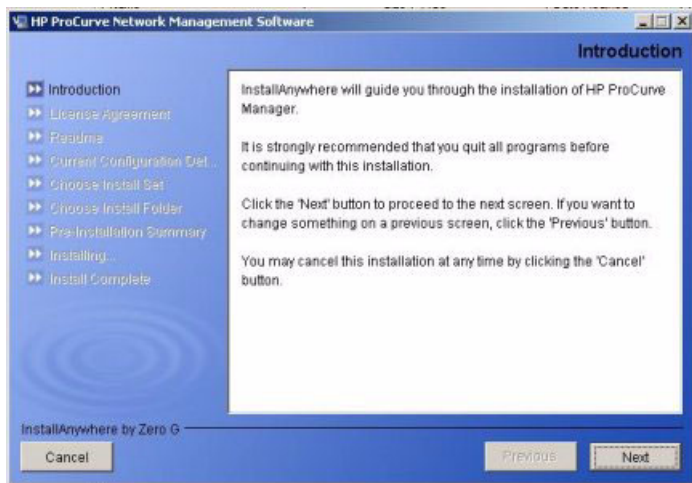
ProCurve Manager software is available through two sources:

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) and ProCurve Identity Driven Manager (IDM) are installed from the CD by this installation process.

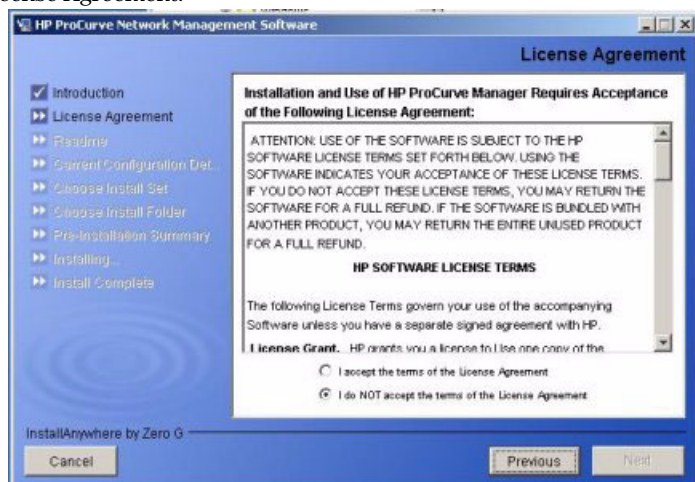
Insert the product CD into the CD ROM drive in the computer that you are using as the network management station. The program will auto install. If, for whatever reason, the auto install doesn't work, run the **Install.bat** program from the CD ROM drive.

Follow the instructions on the PCM installation wizard screens.



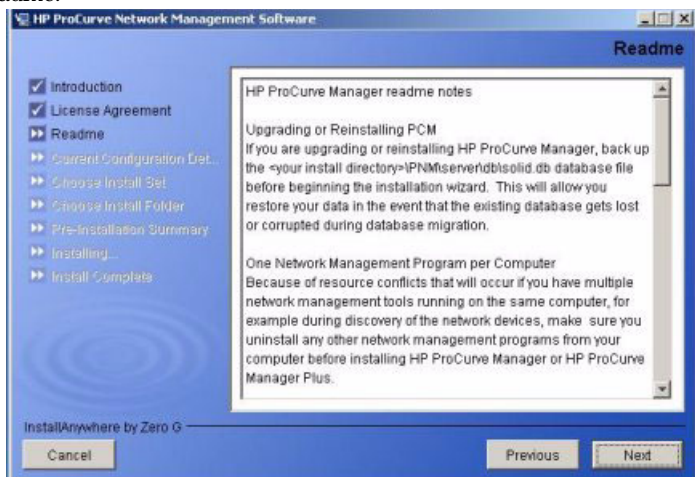
Click Next to continue to the next step in the installation, or click Cancel to exit the installation process.

License Agreement:



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

Readme:



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

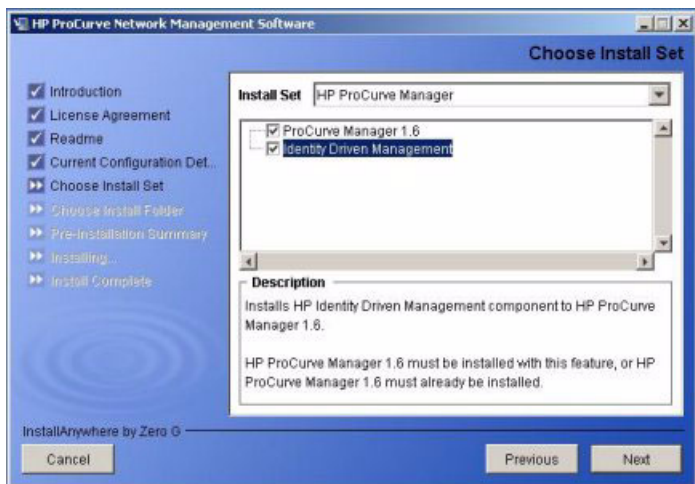
Configuration Detection:



The PCM install script will auto-detect the system configuration and determine the appropriate PCM software option, either PCM 1.6 standard, or the PCM-NNM version.

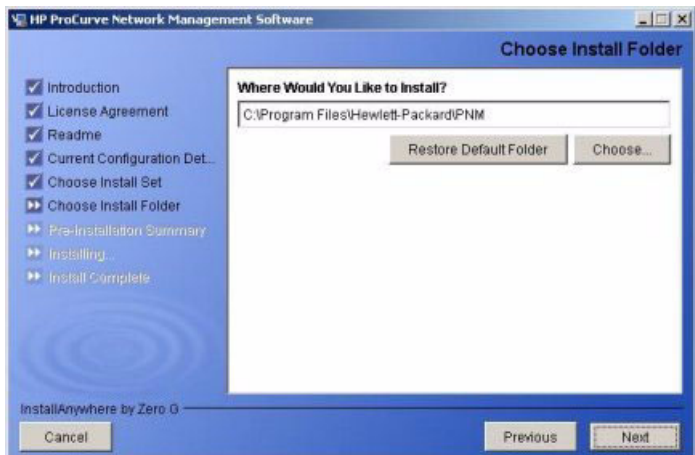
Note: To install PCM-NNM, you must already have OV-NNM installed on your system. Otherwise, the standalone PCM version will be installed.

Install List:



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

Install Location:



Click Next to accept the default install location.

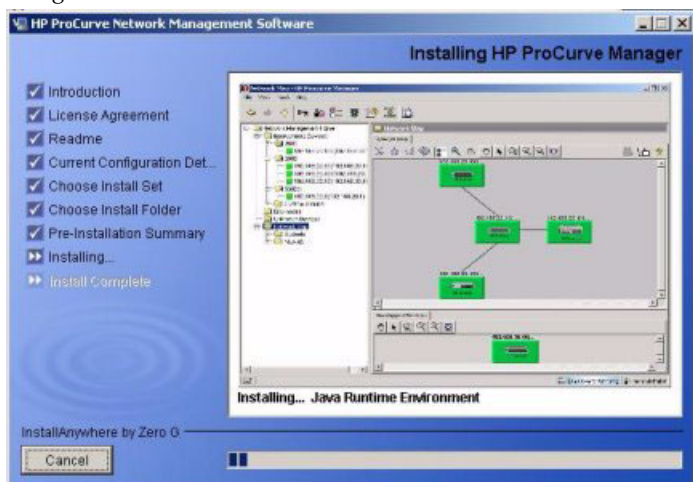
To install PCM in an alternate location, use the Choose button or type in the installation directory path, then click Next.

Pre-Install Summary:

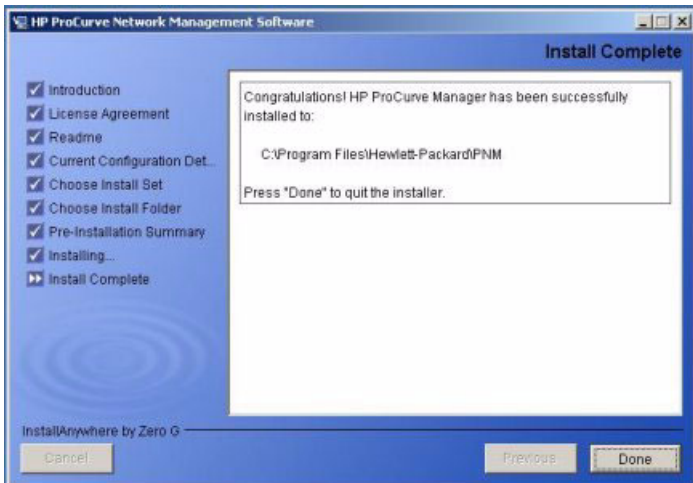


Review the installation summary, then click Install to complete the installation process.

Installing Files



Install Done:



Click Done to close the window and exit the install program.

PCM Installation Notes

If this is the first time you are installing PCM, you will be prompted by the installation wizard to enter the following initial setup information:

- **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.
- **Initial Network Discovery settings** – to start the discovery of the network devices, you need to identify a starting device by its IP address or DNS name. For the discovery process to take place most efficiently, this device should be centrally located in your network, not an “edge” device that is primarily connected to end nodes.
- **Default SNMP Read and Write Community Names and Telnet Username and Password** – by default, the Read and Write Community names are “public”. Change these if you are using a different SNMP Community name in your network. Also, for certain configuration management features to operate correctly, you must specify the default Telnet username and password.
- **HTTP Proxy** – ProCurve Manager Plus needs external web access to retrieve the latest switch software files for ProCurve network devices from the ProCurve web site. If you are using an HTTP proxy for external web access, enter the proxy and port information.
- **Automatic Traffic Configuration** - Enabling this option will automatically configure Traffic Management to monitor inter-switch communication using data obtained during the discovery process. You will then receive traffic utilization information without having to manually configure the Traffic monitor.

The **Sampling** option configures all discovered interconnect links to monitor with sFlow or EASE technology. The **Stats** option configures interconnect links to monitor with RMON technology.

For additional information on using Traffic Management features, refer to the *ProCurve Manager Network Administrator's Guide*.

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 **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 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 **access.txt** 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:
 - a. Edit the **access.txt** file as described above, but instead of entering IP addresses or DNS names, just enter a selected password (on a line by itself). Save the file. It is not necessary to restart the server.
 - b. On the client (the client must already be installed), you must edit the **Riptide.cfg** file. This file exists in the config directory of the client (**C:\Program Files\Hewlett-Packard\PNM\client**). This file already has several entries in it. You must add a line similar to the following:

PASSWORD=yourpassword

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

- c. 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.

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:

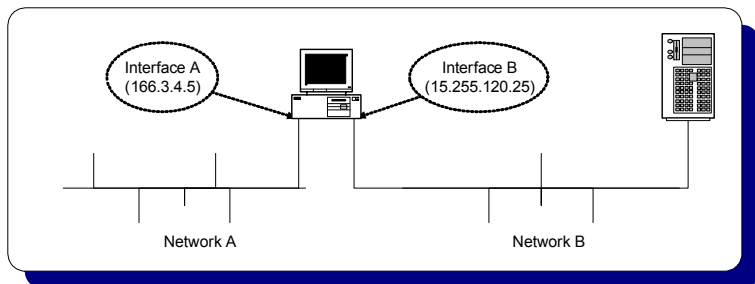


Figure 1. Example Multi-homed Computer

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 1.0 application at the same time you install the PCM application, or install it at a later time from the PCM 1.6 CD.

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 12.

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 13. 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 Microsoft 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 Your ProCurve Manager Software

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

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

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

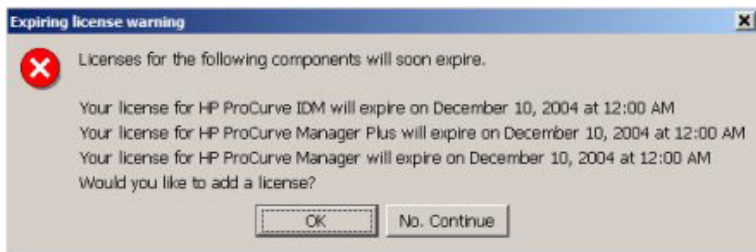


Figure 2. ProCurve Expiring License warning dialogue

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

NOTE: You must first purchase a copy of ProCurve Manager Plus and/or Identity Driven Manager from your networking reseller to get the Registration ID. *You do not need to re-install the software from the purchased CD, but you need the Registration ID from that CD to complete the registration process.*

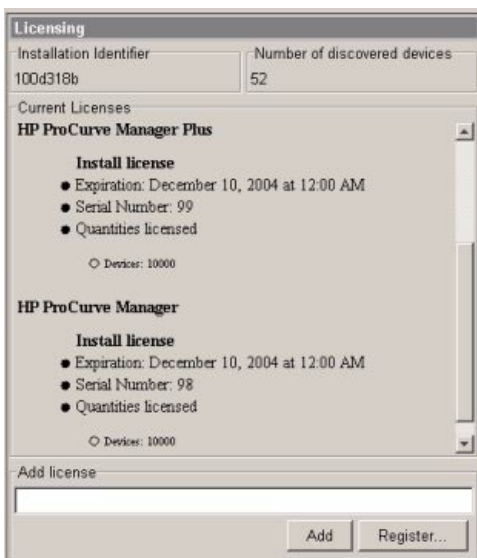


Figure 3. ProCurve License Administration dialogue

You can also get to this screen from the Preferences window which can be accessed from the PCM Tools menu or by clicking on the Preferences icon in the tool bar. 

To register the ProCurve Manager Plus software:

1. Make a note of the Installation Identifier in the upper left corner of the screen and of the Registration ID that is printed on the front of the ProCurve Manager Plus CD.

Note: If you are attempting to register ProCurve Manager Plus from the CD that came in the box with your ProCurve networking device, you must first purchase a copy of ProCurve Manager Plus from your networking reseller to get the Registration ID.

2. Click **Register** to go to the ProCurve Registration Web site.

ProCurve Networking

HP ProCurve Network Management Registration

Obtain your permanent license for **HP ProCurve Manager**, **HP ProCurve Manager Plus** or **Identity Driven Manager**.

Note: In order to register your PCM and IDM products you will first need to obtain an **Installation Identifier**. For PCM Plus registration you will also need the **Registration ID** located on the back of your CD case.

Important: For IDM Registration, it is required that you first register your PCM Plus product.

New Users

New users, please [click here to register](#).

Registered Users

Already registered? Please enter your username and password, then click finish.

Username:

Password:

Finish>>

Figure 4. New User selection screen

3. Click the link under the “new users” section of the page to display the “User Information” page.
4. On the next screen that is displayed, fill in all of the fields with your information. The fields with bold lettered titles are the required fields. Then click **finish** to continue.

The “Product Registration” page is then displayed.

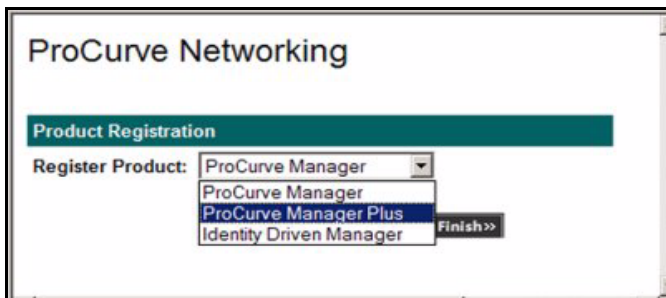


Figure 5. Product registration page

5. Select ProCurve Manager Plus from the pull down menu, then click **Finish**.

The “Enter a PCM+ registration number” window is displayed.

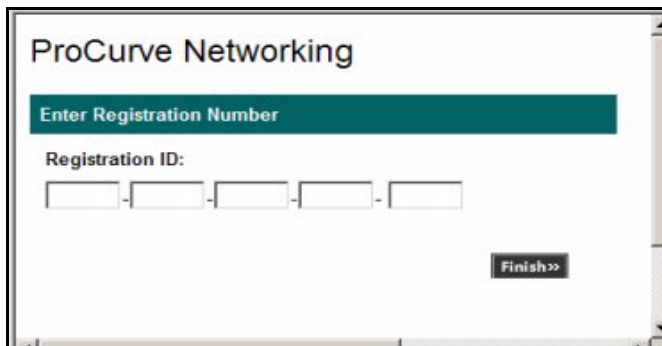


Figure 6. Entering a PCM+ registration number

6. Type in the Registration ID from your PCM+ software CD, then click **Finish**.

The “Register Software” window is then displayed.

Note: If you are registering just PCM (not PCM+), step 6 is skipped. You enter only an Install ID as shown in the next step.

ProCurve Networking

Please enter your software registration information. When your information is complete, click **finish**.

Register software

The product you are registering requires a unique Installation ID.

Installation ID:

Re-enter Installation ID:

Description:

Finish>>

Figure 7. Register software screen

7. Type in the Install ID as shown in “Installation Identifier” field in the PCM Licensing dialogue (see figure 3). Re-enter the Install ID, to make sure it is correct. You can also enter a short description of this copy of the software, to identify the PC that it is being installed on, for example. Then click **finish**.

The “Register Information” window is displayed.

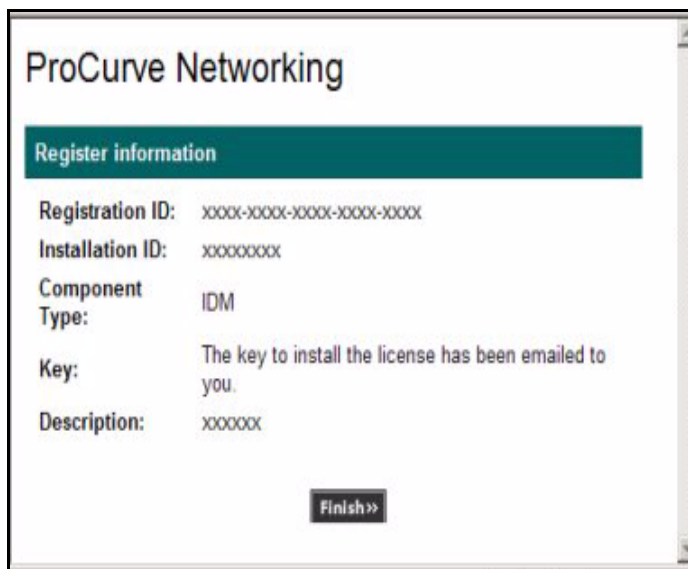


Figure 8. Register information screen

8. Review the information to make sure it is correct, then click **finish**.

ProCurve Manager Plus will automatically send a license key to the E-mail address you gave in the "User Information" window, similar to the message show in Figure 10.

The "Product Registration" window is then displayed.

9. Select another product to register, or close the registration window. It is not necessary to click on the "Click Here" hot spot. The license key has already been E-mailed. The message will look something like the following example:

Thank you for registering HP ProCurve Manager. To activate your license, simply enter the license Key provided in the table below. Please refer to the HP ProCurve Manager Installation Guide for step by step instructions.

Important Note: The license key directly correlates with your Installation ID. Please ensure that the Installation ID listed below matches that of your HP ProCurve Management Server. Again, please refer to the HP ProCurve Installation Guide for detailed information.

Feature: plus

Install ID: 5E2CC538

Description: Remote 2

Key: GEEING-JGHLDI-IPLAPB-IHJBAM-DNNPKO-GBGDKK-JIFPPN-OCLFKE

Figure 9. Sample E-mail message with registration key

10. You can copy and paste the License key into the “Add License” field of the PCM Licensing screen, as shown in figure 3 on page 19.
11. Click “Add” and the registration information on the screen will be updated to show that your product is registered.

Now you can proceed with your login.

Customizing ProCurve Manager

Several default settings were established during installation of your ProCurve Manager application. 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.
- **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.
- **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.

For more information on these topics, please see the **ProCurve Manager online help system**. There is a topic in the help called “Getting Started” that provides more information on these topics and has links to other help topics that give you detailed information for performing these customizing tasks. You can also refer to the *ProCurve Network Administrator’s Guide* available in PDF format on the installation CD.

The ProCurve Manager Features

ProCurve Manager offers the basic functionality required by most IT organizations for network management. ProCurve Manager Plus includes all the features listed on this page, as well as the advanced features on the next page. For more detailed information on these features and their uses, please see the *ProCurve Manager Network Administrator's Guide* that is included on the product CD.

Network status summary. Upon boot-up, a Network Status screen displays high-level information on network devices, end nodes, events, and traffic levels, all on one screen. From here, you can drill down on any one of these areas to get specific details.

Alerts and troubleshooting. An Events Summary displays alerts and categorizes them by severity, making it easier to track where bottlenecks and issues exist in the network. Alert details provides information on the problem, even down to the specific port. You can also configure Alerts related to critical or serious events to be forwarded to e-mail, send pop-up messages to a console or workstation, or take other actions (issue commands).

Automatic device discovery: Customized for fast discovery of all ProCurve manageable network devices. You can also define specific IP subnets and VLANs on which to perform discovery.

Network Topology and mapping: Automatically creates a map of discovered network devices. Maps are color-coded to reflect device status and can be viewed at multiple levels (physical view, subnet view, or VLAN view).

Device management: Many device-focused tasks can be performed directly by the software, or you can access web and command-line interfaces with the click of a button to manage individual devices from inside the PCM Client.

ProCurve Manager Plus Features

The ProCurve Manager Plus (PCM+) package includes all of the functionality of PCM, along with advanced functionality that can dramatically improve the performance of an IT organization.

Network Traffic Analysis: The Traffic Monitor helps you collect, measure, and analyze data about enterprise network traffic. Traffic Monitor allows you to quickly identify issues, isolate problems, and optimize resource usage.

The Traffic Monitor interface provides detailed information on traffic throughout the network. Leveraging enhanced traffic analysis protocols such as extended RMON and sFlow, you can monitor overall traffic levels, network segments with the highest traffic, or even the top users within a network segment.

VLAN Management: The VLAN Manager in PCM+ provides a single tool to create, track, and manage VLANs on your network. The VLAN management interface lets you create and assign VLANs across the entire network, without having to access each network device individually. The VLAN Manager also provides Wizards for creating VLANs, and modifying VLAN configuration, significantly reducing the likelihood of error in working with VLANs.

Configuration Management: The Configuration Manager in PCM+ automatically tracks and logs configuration changes. You can archive configurations, then apply an archived configuration to one or many devices. Configurations can also be compared over time or between two devices, with differences automatically highlighted for you.

This functionality helps significantly decrease unplanned network downtime and reduce the number of repetitive, configuration tasks that consume hours of your valuable time.

Group and Policy Management: The PCM+ Group and Policy management features allow you to create device groups and set group policies for managing all devices in the group. In addition, you can use the Policy

Manager to automatically apply pre-defined configurations across a group of devices, or to any new devices that are added to the network. New in this release, Policies can be scheduled for regular enforcement, or to automatically apply updates at times when it will have the least impact on network operations.

Device firmware updates: The Firmware Update tool allows you to automatically update devices and obtain new device firmware images from HP. You can also configure scheduled firmware updates across large groups of devices—when it is most convenient for your network.

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