Open Source Software Acknowledgement Statement
This software incorporates open source components that are governed by the GNU Lesser General Public License, version 2.1; the GNU Library General Public License, version 2.0; the Mozilla Public License, version 1.1; and the Common Public License, version 1.0. In accordance with these licenses, ProCurve Networking will make available a complete, machine-readable copy of the source code components covered by these licenses upon receipt of a written request. Send a request to:

Hewlett-Packard Company, L.P.
PCM Program
Open Source Code Request
Attn: ProCurve Networking Support
MS: 5554
8000 Foothills Boulevard
Roseville, CA 95747 USA

Licenses for included open source components are available on the PCM Server (default location C:\Program Files\Hewlett-Packard\PNM).

Warranty
See the Customer Support/Warranty booklet included with the product. A copy of the specific warranty terms applicable to your Hewlett-Packard products and replacement parts can be obtained from your HP Sales and Service Office or authorized dealer.
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Introduction

HP ProCurve Manager 3.20 is available in two versions:

- HP ProCurve Manager with a basic set of network management features
- HP ProCurve Manager Plus with a full set of advanced network management features

You may also add the following plug-in modules to PCM to enhance its network management capabilities:

- ProCurve Mobility Manager 3.10
- ProCurve Network Immunity Manager 2.20
- ProCurve Identity Driven Management 3.20

HP ProCurve Manager

HP ProCurve Manager (PCM) 3.20 is a network management application that provides an effective solution for basic monitoring and managing of network devices. PCM is designed for small to medium-sized networks. It 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 has features that reduce network support time and cost including auto-update to keep your network management systems up-to-date with the latest device support, automatic registration of all discovered HP ProCurve devices, and easy updates of software on all HP ProCurve devices.

HP ProCurve Manager is a Microsoft Windows-based network management solution that is available as a downloadable software package. To download a trial version, go to the HP ProCurve Manager Plus web site and click ProCurve Manager Plus 60-day Trial Available. The 60-day trial version of HP ProCurve Manager Plus 3.20 provides all the basic tools needed to manage a network effectively.

HP ProCurve Manager Plus

HP ProCurve Manager Plus (PCM Plus) 3.20 is an advanced network management system. PCM Plus enables mapping, configuration, and monitoring of network devices from a central location. PCM Plus provides security and extensibility for small to large networks with one to many remote sites. Network-wide management control allows network administrators to securely add, customize, and restrict network management access.

PCM Plus also builds on the discovery and network mapping, providing on-demand or scheduled reporting about network inventory, security, and performance of PCM Plus. Policy and event-based management capabilities allow administrators to define policies that can automate notifications and changes as desired.
In addition, PCM Plus configuration management logs all changes to network devices, including who made the change and when. The application includes detailed traffic monitoring capabilities to identify network congestion issues and identify dangerous network usage. PCM Plus provides network administrators with a powerful toolset to effectively configure, monitor, document, and troubleshoot the network.

PCM Plus is available for a 60-day trial and thereafter requires a separately purchased license key.

With ProCurve’s security and wireless solutions, as well as extended third-party support, PCM Plus offers a single pane management solution. For instance, PCM Plus integrates with HP OpenView Network Node Manager (version 7.5, 8i, or 9x) to provide a robust solution for managing ProCurve network products in a multi-vendor environment.

**HP ProCurve Manager Plug-in Modules**

You can install the following plug-in modules with PCM Plus 3.20 to extend its network management capabilities:

- ProCurve Mobility Manager
- ProCurve Identity Driven Manager
- ProCurve Network Immunity Manager

You can install a plug-in module during the PCM Plus 3.20 installation or afterwards when PCM Plus is already running on a management station. The installation of a plug-in module is performed from the same executable installation file as PCM Plus.

**ProCurve Mobility Manager**

HP ProCurve Mobility Manager (PMM) extends the PCM Plus monitoring and configuration tools for use with HP ProCurve Wireless Access Points (APs), HP MultiService Mobility (MSM) solutions, and Wireless Edge Service Modules (WESMs), including their Radio Ports (RPs). The PMM module can be used to monitor all Radios within range of the managed ProCurve APs and RPs, define Trusted Radios, plan RF coverage, and monitor and configure WLANs and SSIDs for Radios on managed APs and RPs.

PMM 3.10 requires PCM Plus 3.20 and can be directly installed after downloading the PCM software package from the Software for Network Management web site. PMM is available for a 60-day trial and thereafter requires a separately purchased license key.

**ProCurve Identity Driven Manager**

HP ProCurve Identity Driven Manager (IDM) provides user authentication and authorization which is enforced at the edge of the network. IDM 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 3.20 requires PCM Plus 3.20 and can be directly installed after downloading the PCM software package from the Software for Network Management web site. IDM is available for a 60-day trial and thereafter requires a separately purchased license key.

**ProCurve Network Immunity Manager**

HP ProCurve Network Immunity Manager (NIM) is a plug-in to PCM Plus that 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 networks. NIM allows users to define policies, collect security events, monitor threats, and automate threat mitigation.
NIM detects suspicious network activity using Network Behavior Anomaly Detection (NBAD) on sampled traffic. NIM accepts threat detection alerts from switches running Virus Throttle software and from supported IDS, IPS, and UTM security appliances. NIM can detect zero day attacks (first attacks by a new threat) and protects against threats from inside the network, such as an employee bringing an infected laptop to work. NIM also provides centralized management of ProCurve TMS zl Modules, including firewall, VPN, and IPS configuration.

NIM 2.20 requires PCM Plus 3.20 and can be directly installed after downloading the PCM software package from the Software for Network Management web site. NIM is available for a 60-day trial and thereafter requires a separately purchased license key.

PCM Documentation

This document provides information on the following topics:

- Hardware and software prerequisites for installing PCM 3.20 software - page 5
- Installing PCM plug-in modules – page 15
- Licensing your PCM 3.20 software – page 49
- Getting started with PCM network management – page 59

Additional documentation is available for ProCurve Manager, Identity Driven Management, Mobility Manager, and Network Immunity Manager, such as:

**Online Help:** Context specific and topical help is available everywhere from within the user interface for PCM, PCM Plus, and its plug-in modules. The help also includes a table of contents, glossary, and search capabilities.

**HP ProCurve Manager Network: 3.20 Administrator's Guide:** Detailed information about all PCM features and uses. This guide is accessible from the Help menu in the program and can be downloaded from the PCM Manuals web page. It is also included as a PDF file on the ProCurve Manager installation disk.

**HP ProCurve Network Management: 3.20 Migration Guide:** Information on how to plan and migrate your network management solution to PCM 3.20. Information about how to upgrade from PCM 2.30 and later to PCM 3.20 (with installed plug-ins) and licensing requirements is also included in this guide, which can be downloaded from the PCM Manuals web page.

**HP ProCurve Identity Driven Manager User's Guide:** Detailed information for configuring network access policy groups and policies. This guide is included as a PDF file on the ProCurve Manager installation disk and can be downloaded from the IDM Manuals web page.

**HP ProCurve Network Immunity Manager Security Administrator'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 Policy Manager feature available in PCM Plus. Detailed information for configuring ProCurve TMS zl Modules is also included in this guide, which can be downloaded from the NIM Manuals web page and is included as a PDF file on the ProCurve Manager installation disk.

**HP ProCurve Mobility Manager Guide:** Detailed information on how to plan and configure your HP ProCurve wireless network. This guide can be downloaded from the PMM Manuals web page and it is included as a PDF file on the ProCurve Manager installation disk.
PCM Plus 3.20: Installation Overview

Important

The installation procedure for PCM Plus 3.20 described in this document is intended only for a new PCM installation in which no previous version of PCM Plus software is running.

If you are running a previous version of PCM Plus and optional plug-in modules, you must follow the installation procedure in the HP ProCurve Network Management 3.20 Migration Guide to upgrade to PCM Plus 3.20.

The instructions in the Migration Guide take into account new prerequisites and special considerations when upgrading to PCM Plus 3.20. **Do NOT use the instructions in this guide to upgrade a previous version of PCM Plus to PCM Plus 3.20. After you upgrade to PCM Plus 3.20, you cannot revert to a previous PCM version.**

To install PCM Plus version 3.20 as a new installation, follow these general steps:

1. Verify that your network management station satisfies the hardware and software prerequisites for PCM Plus (see “Installation Prerequisites” on page 5).

2. Follow the procedure in “PCM Plus 3.20: Installation Procedure” on page 15 to download and install PCM Plus software (PCM Server, local Agent, and local Client), and optionally any of the PCM plug-in modules (Mobility Manager, Identity Driven Management, and Network Immunity Manager) on the network management station.

You will download PCM Plus software from the Software for Network Management web site. The installation includes a a 60-day evaluation license with a full PCM Plus feature set, including all plug-in modules.

Before the 60-day trial period finishes, you can ensure continued use of version 3.20 in either of the following ways:

- You can purchase and register a base software license for ProCurve Manager Plus 3.20 with 50-device and 1-Agent or unlimited-device and unlimited-Agent support.
- You can register a software license for ProCurve Manager 3.20 on the My Networking portal.

See “Licensing PCM Plus Software” on page 49 for more information.

3. (Optional) Install one or more remote Clients (see “Installing Remote Clients” on page 39).

4. (Optional) Install one or more remote Agents (see “Installing Remote Agents” on page 42).
Installation Prerequisites

Before installing ProCurve network management products, ensure your network management station meets the following prerequisites.

**Note:**

**Prerequisites for PCM Plug-in Modules.** The following specifications apply only to the PCM/PCM Plus Server (including local Agent and local Client), remote Client, and remote Agent programs.

For information on the hardware and software requirements for PCM plug-in modules, such as PMM, IDM, and NIM, refer to the datasheet for each module under Network Management on the HP Networking Reference Library web site.

**Before You Start**

While planning the installation of your PCM network, take into account that the required hardware/software environment for PCM varies according to:

- The number of network devices managed by PCM (described in the sections on “Minimum Hardware Requirements”)
- Whether you run PCM on a virtual platform, such as VMware or Hyper-V (see “Supported Virtual Platforms” on page 8)
- Whether you run PCM on a 64-bit Windows operating system (described in the sections on “Supported Operating Systems”)

**Managed Devices**

For a list of all ProCurve devices and third-party devices that can be managed with PCM along with the minimum software version required:

1. Go to the Software for Network Management web page.
2. Click ProCurve Manager Supported Devices on the right side of the page.

**Supported PCM Server Environments**

The PCM 3.20 Server supports the following management environments on a dedicated PC:

- Single management server (using only a local Agent)
- Distributed management solution (with no local Agent)
Supported Operating Systems: Dedicated PC

ProCurve Management software — PCM/PCM Plus Server, remote Client, and remote Agent programs — is supported on the following operating systems on a dedicated PC.

**Important:** PCM is supported only on US English versions of Microsoft Windows operating systems.

<table>
<thead>
<tr>
<th>PCM Server¹</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Windows XP Pro SP3 (32-bit)²</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2008 R2, Enterprise/Standard Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2003 SP2, Enterprise Edition (32-bit)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PCM Remote Agent</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Windows XP Pro SP3 (32-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2008 R2, Enterprise/Standard Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2003 SP2, Enterprise Edition (32-bit)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PCM Remote Client</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Windows 7 Professional (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Vista SP1, Business/Ultimate Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows XP Pro SP3 (32-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2008 R2, Enterprise/Standard Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2003 SP2, Enterprise Edition (32-bit)</td>
<td></td>
</tr>
</tbody>
</table>

¹ On a dedicated PC, the best PCM Server performance is provided by 64-bit MS Windows Server 2008 R2, followed by 32-bit MS Windows Server 2003 SP2, and then 32-bit MS Windows XP Pro SP3.

² MS Windows XP Pro SP3 (32-bit) supports a maximum of 4 GB RAM, and therefore cannot be used in some PCM Server installations where more memory is required. See “Minimum Hardware Requirements: Dedicated PC” on page 7 for more information.
Minimum Hardware Requirements: Dedicated PC

The following conditions apply when you install PCM on a dedicated PC:

■ The system hardware is used only for PCM operation.
■ The system hardware can run only a MS Windows standalone operating system.
■ Each CPU must be an Intel Xeon (current generation) or equivalent.
■ A PCM Server can manage up to 3500 devices.
■ A PCM Server supports up to 10 Clients, including one local Client.
■ A PCM Server supports up to 25 remote Agents.
■ A PCM Agent manages up to 1500 devices.

Note: You can achieve better performance on a distributed PCM Server if a local Agent is not running on the Server.

<table>
<thead>
<tr>
<th>Single PCM Server with local Agent: Hardware Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managed Devices</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Up to 350</td>
</tr>
<tr>
<td>350 to 1000</td>
</tr>
<tr>
<td>1000 to 2500¹</td>
</tr>
</tbody>
</table>

¹ When a single PCM Server with a local Agent manages 1000 to 2500 devices, HP recommends the use of 6 GB memory for better performance.

<table>
<thead>
<tr>
<th>Distributed PCM Server with no local Agent: Hardware Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managed Devices</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>2000 to 3500</td>
</tr>
</tbody>
</table>

¹ When a distributed PCM Server with no local Agent runs on a 32-bit operating system, HP recommends the use of 6 GB memory for better performance.
² When a distributed PCM Server with no local Agent runs on a 64-bit operating system, HP recommends the use of 8 GB memory for better performance.
Installation Prerequisites

Supported Virtual Platforms

PCM 3.20 (PCM Server, Agent, or Client) running on a guest operating system is supported on the following virtualization platforms:
- VMware ESX Server V3.5 and V4.0
- MS Windows Server 2008 R2 Hyper-V

Remote PCM Agent: Hardware Requirements

<table>
<thead>
<tr>
<th>Managed Devices</th>
<th>Memory</th>
<th>CPU Cores Required</th>
<th>Hard Disk Space</th>
<th>NIC Card (dedicated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 50</td>
<td>2 GB</td>
<td>1 Core</td>
<td>40 GB</td>
<td>100 Mbps</td>
</tr>
<tr>
<td>50 to 1500¹</td>
<td>2 GB (32-bit)</td>
<td>2 Cores</td>
<td>80 GB</td>
<td>100 Mbps</td>
</tr>
<tr>
<td></td>
<td>3 GB (64-bit)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ When a remote PCM Agent manages 50 to 1500 devices, HP recommends the use of 3 GB memory for better performance.

Remote PCM Client: Hardware Requirements

<table>
<thead>
<tr>
<th>Managed Devices</th>
<th>Memory</th>
<th>CPU Cores Required</th>
<th>Hard Disk Space</th>
<th>NIC Card (dedicated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1000</td>
<td>2 GB (32-bit)</td>
<td>2 Cores</td>
<td>40 GB</td>
<td>100 Mbps</td>
</tr>
<tr>
<td></td>
<td>4 GB (64-bit)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000 to 5000</td>
<td>2 GB (32-bit)</td>
<td>2 Cores</td>
<td>60 GB</td>
<td>100 Mbps</td>
</tr>
<tr>
<td></td>
<td>4 GB (64-bit)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Supported Operating Systems: VMware

When you run PCM on a VMware platform, VMware ESX Server V3.5 or V4.0 are required. ProCurve Management software is supported on the following guest operating systems on a VMware platform. **Important:** PCM is supported only on US English versions of Microsoft Windows operating systems.

<table>
<thead>
<tr>
<th>PCM Server on VMware</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Windows XP Pro SP2/SP3 (32-bit)</td>
<td>2, 3</td>
</tr>
<tr>
<td>MS Windows Server 2008 R2, Enterprise/Standard Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2003 SP2, Enterprise Edition (32-bit)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PCM Remote Agent on VMware</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Windows XP Pro SP2/SP3 (32-bit)</td>
<td>3</td>
</tr>
<tr>
<td>MS Windows Server 2008 R2, Enterprise/Standard Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2003 SP2, Enterprise Edition (32-bit)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PCM Remote Client on VMware</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Windows 7 Professional (32/64-bit)</td>
<td>1</td>
</tr>
<tr>
<td>MS Windows Vista SP1, Business/Ultimate Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows XP Pro SP2/SP3 (32-bit)</td>
<td>3</td>
</tr>
<tr>
<td>MS Windows Server 2008 R2, Enterprise/Standard Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2003 SP2, Enterprise Edition (32-bit)</td>
<td></td>
</tr>
</tbody>
</table>

1. On VMware, the best PCM Server performance is provided on 64-bit MS Windows Server 2008 R2, followed by 32-bit MS Windows Server 2003 SP2, and then 32-bit MS Windows XP Pro SP2/SP3.

2. MS Windows XP Pro SP2/SP3 (32-bit) supports a maximum of 4 GB RAM, and therefore cannot be used in some PCM Server installations where more memory is required (see the memory requirements in “Minimum Hardware Requirements: VMware” on page 10).

3. 32-bit MS Windows XP Pro SP2/SP3 is supported for a PCM Server, remote Agent, and remote Client as a guest operating system on VMware ESX Server 3.5, but is not supported on VMware ESX Server 4.x.
Minimum Hardware Requirements: VMware

The tables in this section show the minimum hardware requirements for the installation of a PCM Server, remote Agent, and remote Client on a VMware virtual platform.

The following conditions apply when running PCM on a VMware platform:

- The system hardware is used only for PCM operation.
- VMware is running ESX Server V3.5 or V4.0.
- A VMware-based PCM Server can manage up to 1200 devices.
- A VMware-based PCM Server supports up to 10 Clients, including one local Client.
- A VMware-based PCM Server with no local Client performs better than a Server with a local Client installed.
- Installing PCM on a Server with full terminal services is not supported.

### PCM Server with local Agent: VMware Hardware Requirements

<table>
<thead>
<tr>
<th>Managed Devices</th>
<th>Memory</th>
<th>CPU Cores Required</th>
<th>Hard Disk Space</th>
<th>NIC Card (dedicated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 350</td>
<td>2 GB</td>
<td>2 Cores</td>
<td>60 GB</td>
<td>100/1000 Mbps</td>
</tr>
<tr>
<td>350 to 1200</td>
<td>4 GB (32-bit)</td>
<td>4 Cores</td>
<td>100 GB</td>
<td>100/1000 Mbps</td>
</tr>
</tbody>
</table>

### Remote PCM Agent: VMware Hardware Requirements

<table>
<thead>
<tr>
<th>Managed Devices</th>
<th>Memory</th>
<th>CPU Cores Required</th>
<th>Hard Disk Space</th>
<th>NIC Card (dedicated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 50</td>
<td>2 GB</td>
<td>1 Core</td>
<td>40 GB</td>
<td>100 Mbps</td>
</tr>
<tr>
<td>50 to 1500</td>
<td>2 GB</td>
<td>2 Cores</td>
<td>80 GB</td>
<td>100 Mbps</td>
</tr>
</tbody>
</table>

### Remote PCM Client: VMware Hardware Requirements

<table>
<thead>
<tr>
<th>Managed Devices</th>
<th>Memory</th>
<th>CPU Cores Required</th>
<th>Hard Disk Space</th>
<th>NIC Card (dedicated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1200</td>
<td>2 GB</td>
<td>2 Cores</td>
<td>40 GB</td>
<td>100 Mbps</td>
</tr>
</tbody>
</table>
Supported Operating Systems: Hyper-V

When you run PCM on a MS Windows Server 2008 R2 Hyper-V platform, ProCurve Management software is supported on the following guest operating systems.

**Important:** PCM is supported only on US English versions of Microsoft Windows operating systems.

<table>
<thead>
<tr>
<th>PCM Server on Hyper-V¹</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Windows Server 2008 R2, Enterprise/Standard Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2003 SP2, Enterprise Edition (32-bit)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PCM Remote Agent on Hyper-V</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Windows XP Pro SP2/SP3 (32-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2008 R2, Enterprise/Standard Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2003 SP2, Enterprise Edition (32-bit)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>PCM Remote Client on Hyper-V</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>MS Windows 7 Professional (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Vista SP1, Business/Ultimate Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows XP Pro SP2/SP3 (32-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2008 R2, Enterprise/Standard Edition (32/64-bit)</td>
<td></td>
</tr>
<tr>
<td>MS Windows Server 2003 SP2, Enterprise Edition (32-bit)</td>
<td></td>
</tr>
</tbody>
</table>

¹ On Hyper-V, the best PCM Server performance is provided on 64-bit MS Windows Server 2008 R2, followed by 32-bit MS Windows Server 2003 SP2.
Minimum Hardware Requirements: Hyper-V

The tables in this section show the minimum hardware requirements for the installation of a PCM Server, remote Agent, and remote Client on a MS Windows Server Hyper-V virtual platform.

The following conditions apply when running PCM on a Hyper-V platform:

- The system hardware is used only for PCM operation.
- The MS Windows Server 2008 R2 Hyper-V version is running.
- A Hyper-V-based PCM Server can manage up to 1200 devices.
- A Hyper-V-based PCM Server supports up to 10 Clients, including one local Client.
- A Hyper-V-based PCM Server with no local Client performs better than a Server with a local Client installed.

### PCM Server with local Agent: Hyper-V Hardware Requirements

<table>
<thead>
<tr>
<th>Managed Devices</th>
<th>Memory</th>
<th>CPU Cores Required</th>
<th>Hard Disk Space</th>
<th>NIC Card (dedicated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 350</td>
<td>2 GB</td>
<td>2 Cores</td>
<td>60 GB</td>
<td>100/1000 Mbps</td>
</tr>
<tr>
<td>350 to 1200</td>
<td>4 GB (32-bit)</td>
<td>4 Cores</td>
<td>100 GB</td>
<td>100/1000 Mbps</td>
</tr>
</tbody>
</table>

### Remote PCM Agent: Hyper-V Hardware Requirements

<table>
<thead>
<tr>
<th>Managed Devices</th>
<th>Memory</th>
<th>CPU Cores Required</th>
<th>Hard Disk Space</th>
<th>NIC Card (dedicated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 50</td>
<td>1 GB</td>
<td>1 Core</td>
<td>40 GB</td>
<td>100 Mbps</td>
</tr>
<tr>
<td>50 to 1500</td>
<td>2 GB</td>
<td>2 Cores</td>
<td>80 GB</td>
<td>100 Mbps</td>
</tr>
</tbody>
</table>

### Remote PCM Client: Hyper-V Hardware Requirements

<table>
<thead>
<tr>
<th>Managed Devices</th>
<th>Memory</th>
<th>CPU Cores Required</th>
<th>Hard Disk Space</th>
<th>NIC Card (dedicated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1200</td>
<td>2 GB</td>
<td>1-2 Cores(^1)</td>
<td>40 GB</td>
<td>100 Mbps</td>
</tr>
</tbody>
</table>

\(^1\) Two CPU cores are required when running PCM in 64-bit mode on a 64-bit operating system.
Supported Virtual Environments: Summary

The supported virtual environments for PCM vary depending on the platform and guest operating system. Table 1-1 shows the virtual environments in which PCM is supported (Yes) and not supported (No).

<table>
<thead>
<tr>
<th>Virtual Platform</th>
<th>Guest Operating System</th>
<th>PCM Server Local Agent</th>
<th>Remote Agent</th>
<th>Remote Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMware ESX Server V3.5/4.0</td>
<td>MS Windows 7 Professional (32/64-bit)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>MS Windows Vista SP1 Business/Ultimate Edition (32/64-bit)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>MS Windows XP Pro SP2/ SP3 (32-bit)¹</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>MS Windows Server 2008 R2 Enterprise/Standard Edition (32/64-bit)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>MS Windows Server 2003 SP2 Enterprise Edition (32-bit)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>MS Windows Server 2008 R2 Hyper-V</td>
<td>MS Windows 7 Professional (32/64-bit)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>MS Windows Vista SP1 Business/Ultimate Edition (32/64-bit)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>MS Windows XP Pro SP2/ SP3 (32-bit)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>MS Windows Server 2008 R2 Enterprise/Standard Edition (32/64-bit)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>MS Windows Server 2003 SP2 Enterprise Edition (32-bit)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

¹On VMware ESX Server V4.0, MS Windows XP Pro is not supported.

Table 1-1. Supported PCM Virtual Environments
PCM for Network Node Manager: Supported Environments

ProCurve Management software is supported on HP Network Node Manager (NNM) for Windows version 7.5, 8i, and 9x, and on HP Network Node Manager i-series (NNMi) version 8.1x.

When using NNM to determine the hardware requirements for a computer running both NNM and PCM, add the NNM hardware requirements to the PCM hardware requirements to determine the combined hardware requirements. When using NNMi, the NNMi application must reside on a different PC than the PCM Server and adhere to standard NNMi hardware and software requirements.

Supported IDM Environments

- The IDM Agent is supported on the following operating systems:
  - MS Internet Authentication Service (IAS) on MS Windows Server 2003 (32/64-bit)
  - MS Network Policy Server (NPS) on MS Windows Server 2008 R2 (32/64-bit)
  - RADIUS on the ProCurve Network Access Controller 800
  - FreeRADIUS supplied with Red Hat Enterprise Linux (4.7, 5.2)
  - FreeRADIUS supplied with SuSE Enterprise Linux (9.3, 10.2)

- Use of the IDM software requires configuration of one of the following RADIUS-based access control methods: MAC-auth, Web-auth, or 802.1X.

- Because distributed applications require synchronized clocks, clocks on the PCM Server and IDM Agents must be synchronized to within 10 minutes.

- For assistance with the 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 Find a Partner link on the HP Networking home page.
PCM Plus 3.20: Installation Procedure

You install PCM Plus components — PCM Server with local Agent and Client, remote Agents, remote Clients, and plug-in modules such as IDM and IDM Agents, NIM, and PMM — from downloaded software by following the installation procedure described in this section.

Before You Start

**Caution**

- The installation procedure for PCM Plus 3.20 described in this document is intended only for a new PCM installation in which no previous version of PCM Plus software is running.

If you are running a previous version of PCM Plus and optional plug-in modules, you must follow the installation procedure in the *HP ProCurve Network Management 3.20 Migration Guide* to upgrade to PCM Plus 3.20.

The instructions in the *Migration Guide* take into account new prerequisites and special considerations when upgrading to PCM Plus 3.20. **Do NOT use the instructions in this guide to upgrade a previous version of PCM Plus to PCM Plus 3.20. After you upgrade to PCM Plus 3.20, you cannot revert to a previous PCM version.**

- During PCM Plus installation, the Install wizard will prompt you to configure PCM startup defaults and user settings. Be sure to record the following configuration settings BEFORE you start the installation. The configuration of specific settings is described in “Configuring User Settings” on page 25.
  - IDM realm and alias (if you are installing IDM)
  - Server to Agent connection (figure 16 on page 29)
  - PCM Administrator password (figure 17 on page 30)
  - Initial Discovery settings (figure 18 on page 31)
  - Default SNMP parameters (figure 19 on page 32)
  - Default CLI settings (figure 20 on page 33)
  - HTTP proxy (figure 21 on page 34)
  - Auto update preferences
  - RAM size (if you are installing PCM on a 64-bit operating system)
  - IP address, port number, user name, and password used to communicate with the NNMi Server (if you are integrating PCM with NNMi; see figure 14 on page 27)

- In the PCM Install wizard, you can accept the default configuration settings by clicking the **Next** button in an installation screen. Later, you may change any of the default settings by using the Agent Manager and Preferences options in PCM. For more information, refer to the *HP ProCurve Manager 3.20 Network Administrator's Guide*.

- PCM Plus software is not localized for non-English versions of Windows.
Installing the PCM Server, Local Agent, and Plug-In Modules

Start the PCM 3.20 installation at the computer to be used as the network management station. The PCM Installer wizard will install the PCM Server, a local Agent and Client, and selected plug-in modules on this computer.

Prerequisites:
- When installing PCM as a plug-in to Network Node Manager (NNM) or integrating PCM with Network Node Manager i (NNMi), you must first set up the NNM environment and complete the initial discovery of NNM network nodes before you install PCM for NNM.
- When you install PCM Plus software for the first time, no license key is required.

To install PCM Plus 3.20 with (optionally) one or more plug-in modules as a new installation:
1. Log in with an account that has local administrator rights on the system you want to use as the network management station.
2. Install the 60-day trial version of PCM:
   a. Go to the HP ProCurve Manager Plus web site.
   b. In the right column under Software, click ProCurve Manager Plus 60-day Trial Available.
   c. In the Software for Network Management window, scroll down to the 60-day trial entry. Click ProCurve Manager 3.20 download details and follow the instructions to download and save a 60-day trial version of PCM 3.20 for a 32-bit or 64-bit operating system.
   d. To start the installation, double-click the downloaded executable file:
      - On a 32-bit operating system, double-click PCM-c.03.20-build_number-win32.exe.
      - On a 64-bit operating system, double-click the PCM-c.03.20-build_number-x64.exe.

The Installer wizard displays the Introduction window. Click Next to proceed.

Figure 2. PCM Installation: Introduction
In each Installer window:

- Click **Next** to continue the installation and accept the configuration settings displayed in the window. You can later change the default configuration by using the Agent Manager or Preferences options in PCM. Refer to the *HP ProCurve Manager Network 3.20 Administrator's Guide* for details.

- Click **Previous** to return to the previous step in the installation.

- Click **Cancel** to exit the installation.

3. Read through the license agreement. To accept it, select the “I accept...” option and click **Next**.

![Figure 3. PCM Installation: License Agreement](image)
4. Scroll through the Read Me First information and click **Next**.

![Figure 4. PCM Installation: Read Me First](image-url)
5. In the Current Configuration Detection window, click **Next** to start the detection process on your system.

![Figure 5. PCM Installation: Current Configuration Detection](image)

**Figure 5. PCM Installation: Current Configuration Detection**
6. When the PCM installer completes its detection of currently installed software, one of the following windows is displayed:

- If no previous version of PCM software is detected, PCM 3.20 is recommended for installation. Click **Next** to continue with Step 6. No license key will be required.

![Figure 6. PCM Installation: Configurations Detected - PCM Recommended](image)

- If an earlier version of PCM was detected, an Upgrade Notice window is displayed to notify you that your current version of PCM will be upgraded to PCM Plus 3.20 if you proceed.

**Caution**

The installation procedure for PCM Plus 3.20 that is described in this document is intended only for a new PCM installation in which no previous version of PCM Plus software is installed.

If you are running a previous version of PCM Plus and optional plug-in modules, you must follow the installation procedure in the *HP ProCurve Network Management 3.20 Migration Guide* to upgrade to PCM Plus 3.20.

The instructions in the *Migration Guide* take into account new prerequisites and special considerations when upgrading to PCM Plus 3.20. **Do NOT use the instructions in this guide to upgrade a previous version of PCM Plus to PCM Plus 3.20.** After you upgrade to PCM Plus 3.20, you cannot revert to a previous PCM version.
7. In the Choose Install Set window, the **ProCurve Manager 03.20** check box is a required selection and is selected by default.

Select the check box next to each plug-in module that you want to install. The **ProCurve Mobility Manager 03.10** check box is selected by default. A brief description of each plug-in module is displayed in the bottom pane. Uncheck a box if you do not want to install the plug-in module. Then click **Next**.

Note that you are installing PCM Plus software and optional plug-in modules for the first time with a 60-day evaluation license. Before the 60-day trial period finishes, you can ensure continued use of version 3.20 in either of the following ways:

- You can register a software license for HP ProCurve Manager 3.20 on the My Networking portal.
- You can purchase and register a base software license for HP ProCurve Manager Plus 3.20 with 50-device and 1-Agent or unlimited-device and unlimited-Agent support.

See “Licensing PCM Plus Software” on page 49 for more information on PCM licensing.
Installing IDM: If you selected to install Identity Driven Manager in the previous step, requirements for running IDM with PCM 3.20 are displayed. After the PCM installation is complete, you will have to install or upgrade the IDM Agent as described in figure 8. Read through the requirements for installing IDM and click Next to continue.

Figure 8. PCM Installation: IDM and PCM Information
8. In the Choose Install Folder window, click **Next** to install PCM 3.20 in the default (grayed out) directory path.

To select a different installation directory, click **Choose**, enter a new directory path, and click **Next**.

![Figure 9. PCM Installation: Install Folder](image-url)
9. In the Pre-Installation Summary window, review the pre-installation summary and click **Install** to continue.

![Pre-Installation Summary Figure](image1)

**Figure 10. PCM Installation: Pre-Installation Summary**

10. In the Continue Installation window, click **Continue** to proceed with the installation.

**Caution**

When the Installation Wizard begins installing PCM files on your system, you cannot safely cancel the installation. To uninstall PCM, you must wait until the installation process is complete and then uninstall PCM using the Add/Remove Programs function in the Windows Control Panel.

If you 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.

![Continue Installation Figure](image2)

**Figure 11. PCM Installation: Continue Installation**
11. When the Installing HP ProCurve Manager window is displayed, wait for the installation of PCM files to finish.

   After PCM 3.20 is installed, you will be prompted to configure the first of the user-specific settings that you collected in “Before You Start” on page 5.

**Configuring User Settings.** In a PCM 3.20 installation, Steps 12 through 24 allow you to customize the configuration of PCM components. To configure these user-specific settings, refer to the information you collected in “Before You Start” on page 15.

To accept the default configuration presented in an Installer screen, click **Next**. Later, you will be able to modify these settings from PCM by using the Agent Manager and Preferences options. Refer to the *HP ProCurve Manager Network 3.20 Administrator's Guide* for more information.

12. If you are installing IDM 3.20, you are prompted to enter a Realm and an Alias. If you are using Active Directory, the Realm name is automatically set to the fully qualified domain name and the Alias is set to the NETBIOS domain name.

   ![Image of IDM-Domain Connection](image)

   **Figure 12. PCM Installation: IDM-Domain Connection**

   You can enter different Realm and Alias names and click **Next**, or accept the default names and click **Next** to continue.
13. To integrate PCM with NNMi, select the **Integrate PCM with NNMi** check box and click **Next**.

You will need the IP address, port number, user name, and password used to communicate with the NNMi Server to complete integration. When enabled, NNMi will provide device discovery and events to PCM.

![ProCurve Manager](image)

**Figure 13. PCM Installation: Enable NNMi Integration**
14. If you selected to integrate PCM with NNMi in the previous step, enter the settings required by PCM to communicate with the NNMi Server:

![Figure 14. PCM Installation: NNMi Parameters](image)

Figure 14. PCM Installation: NNMi Parameters

- a. Type the NNMi server IP address in the **NNMi Host IP** field.
- b. Type the NNMi JBoss Web server port in the **NNMi Port** field.
- c. Type the user name used to access the NNMi server in the **NNMi Username** field.
- d. Type the password used to access the NNMi server in the **NNMi Password** field.

**Note**

You can reconfigure NNMi communication parameters after installation by selecting the **Tools > Preferences > Integrations** option to open the NNMi Communication Settings window.

- e. Select the protocol used to communicate with the NNMi WSDL URLs by selecting **HTTP** or **HTTPS**. (You can change the protocol only if you have user permission and the PCM Plus license is in compliance.)

If you use HTTPS as the communication protocol, you must enable HTTPS on the NNMi Server (HTTP is enabled by default in NNMi) and copy the nnm.keystore certificate from the NNMi directory to the PCM Server. Detailed HTTPS configuration instructions for NNMi are provided at [http://tomcat.apache.org/tomcat-6.0-doc/ssl-howto.html](http://tomcat.apache.org/tomcat-6.0-doc/ssl-howto.html). The nnm.keystore certificate is stored on the NNMi Server at **Documents and Settings\All Users\Application Data\HP\HP BTO Software\shared\nnm\certificates**.

- f. If you select **HTTPS**:
  - Use the Certificate **Browse** button to browse and enter the directory path of nnm.keystore certificate on the PCM Server.
  - Enter the password of the certificate in the **Password** field.

If you select **HTTP**, the Certificate and Password fields are greyed out.

- g. Click **Next**.
15. In the SSL Certificate window, enter the user credentials used to generate the default SSL certificate for client/server connections, and click Next.

Figure 15. PCM Installation: SSL Certificate
16. Configure communication settings for connections between the PCM Server and remote Agents. Click **Next** if you are not using remote Agents.

![Server to Agent Connection](image)

**Figure 16. PCM Installation: Server to Agent Connection**

To configure communication parameters for Server-Agent connections:

a. For Server Identity, do one of the following:
   - To allow the PCM Server to use the default password to authenticate a remote Agent, select the **Server Identity: Password: use default** check box.
   - To specify a new password to be used in Agent authentication, leave the **Server Identity: Password: use default** box unchecked and enter a unique password.
     
     **You must use this password on ALL remote Agents that communicate with the PCM Server.** When installing a remote Agent, enter the password in the Server Information window in place of the default password ("procurve"). You can change the password from PCM by starting Agent Manager and opening the Server Setup tab.

b. For Server Port Configuration, do one of the following:
   - To allow remote Agents to initiate a connection with the PCM Server, enable the Server port by selecting the **Enable server port** check box.
     To use the default Server port (51111) to communicate with remote Agents, select the **use default** check box. HP recommends that you use the default port unless it conflicts with an existing application.
     If you change the Server port number, all remote Agents that are configured to initiate a connection to the PCM Server must use the new port number.
   - To require all connections with remote Agents to be initiated by the PCM Server, disable the Server port by unchecking the **Enable server port** check box. The **Port** field is greyed out.
c. For Encryption Mode: PCM uses SSL by default (encrypts all messages in both directions) in communication between the Server and remote Agents. To disable SSL encryption, select Plain Text.

d. For Local Agent Port Configuration:
   – To allow the local Agent to connect with the PCM Server using the default Server port (51112), select the use default check box. HP recommends that you use the default port unless it conflicts with an existing application.
   – To change the Server port number, enter a new port number in the Port field.

e. To allow new remote Agents to connect to the PCM Server, select the New Agents: Allow new Agents to connect check box and do one of the following:
   – To enable the default password to be used to connect to the PCM Server, select the New Agents: Password: use default check box. New Agents that initiate a connection with the PCM Server automatically appear in the Agent Manager.
   – To change the password, enter a new password in the Password field. New remote Agents that initiate a connection with the PCM Server must use this password to appear in the Agent Manager in PCM.

f. Click Next.

17. To add an administrator’s password, type the password in both Password fields and click Next. Although a PCM administrator password is not required, it is strongly recommended that you use a password for the Administrator login to ensure the security of your network.

___ Important ___

Be sure to carefully record your Administrator password in a safe place. If the password is lost or forgotten, you will not be able to log in to PCM.

Figure 17. PCM Installation: Administrator Password
18. In the Initial Discovery Settings window, configure how you want the local PCM Agent (automatically installed on the PCM Server) to start the discovery of network devices:

![Initial Discovery Settings Window]

**Figure 18. PCM Installation: Initial Discovery Settings**

a. Specify a **Start from device** by entering its IP address or DNS name. This is a mandatory entry. For the discovery process to operate 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.

b. To automatically register PCM as a trap receiver when a device is discovered, select the **Automatically register as a trap receiver** checkbox.

c. Click **Next**.
19. Use the Set Default SNMP Parameters window to configure SNMP settings:

![Set default SNMP parameters](image)

**Figure 19. PCM Installation: Default SNMP parameters**

If you want PCM to automatically discover the managed devices in your network, the devices must use the same SNMP parameters configured for PCM in the “Set default SNMP parameters” window (figure 19). If you have devices that use different SNMP parameters than the PCM settings, you will have to manually discover those devices.

By default, PCM uses SNMP V2 with Read and Write Community names of “public” to communicate with discovered devices. Refer to the following table to reconfigure the default SNMP settings. If network devices use SNMPV2 and SNMPV3, you can select both SNMP versions in the **Primary Version** and **Secondary Version** fields.

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

To configure SNMP communication settings:

a. Select the **Discovery Versions** to use. To use both SNMP V2 and V3, set one version as the **Primary SNMP version** and the other version as the **Secondary SNMP version** to be used to communicate with network devices.

b. For SNMP V2 Credentials, enter the **Read Community** and **Write Community** names. The default Read and Write community names are “public”. Valid names can contain up to 16 alphanumeric characters; >, <, and blank spaces are not supported.
c. For SNMP V3 Credentials:
   – In the Username field, enter the SNMP V3 user name. The name cannot contain the > or <
     character.
   – Select an Authentication Protocol and enter the Authentication Password.
   – Select a Privacy Protocol and enter the Privacy Password.

d. Set the SNMP Timeout in sec parameter. Maximum: 60 seconds.
e. Set the SNMP Retries parameter. Maximum: 5 retries.
f. Click Next.

20. Use the Set Default CLI Parameters window to reconfigure the communications parameters used
    for Command Line Interface (CLI) access from PCM to ProCurve devices. The default configuration
    uses Telnet.

![Set default CLI parameters window](image)

**Figure 20. PCM Installation: Default CLI parameters**

To customize the CLI settings:

a. Select Telnet and disable SSH, or select SSH and disable Telnet for CLI communication.
b. Set the Timeout parameter to the number of seconds PCM should wait for a connection to be
   established. Maximum: 60 seconds.
c. Set the Retries parameter to the number of times PCM should retry a failed connection.
   Maximum: 5 retries.
d. For SSH parameters:
   – Select the SSH version: SSH1 or SSH2.
   – For SSH authentication, select the Password or Key option. Key authentication is supported
     only for SSH2.
   – For SSH port, enter the Port number to be used for CLI communication.
e. For Telnet and SSH Password authentication:
   – Enter the Manager login and password in the Mgr Username and Mgr Password fields.
   – Enter an optional Operator login and password in the Opr Username and Opr Password
     fields.
f. Click Next.
21. If you use proxies for external web access, configure an HTTP proxy.

PCM needs external web access to download PCM automatic updates, automatically register ProCurve devices, and retrieve the latest ProCurve switch software versions.

Figure 21. PCM Installation: HTTP Proxy

a. Select the **Use HTTP Proxy** check box.

b. Enter the **HTTP Proxy** and **Port** information. **Be sure to enter the same proxy and port number that your default Web browser uses.**

c. (Optional) Enter a **Socks Host** and **Port**.

d. Select a SOCKS version: **SOCKS v4** or **SOCKS v5**.

e. (Optional) If you selected **SOCKS v5**, enter a **Username** and **Password**.

f. Click **Next**.
22. If your PCM Server has more than 6 GB of RAM, the Tune PCM Server Memory Usage window is displayed. Select the size of your PCM-managed network and click Next. This setting configures the amount of dedicated memory used by the PCM Server to manage network devices.

- If your PCM Server manages more than 3000 devices or more than 2000 devices using plug-in modules (NIM, IDM, or PMM), select **Large Size Configuration**.
- If the PCM Server manages less than 3000 devices or less than 2000 devices using plug-in modules, select **Normal Size Configuration**.

You can later change this setting in PCM by selecting **Tools > Preferences > Tune PCM Memory Usage**.

![Figure 22. PCM Installation: Tune PCM Server Memory Usage](image)

**Figure 22. PCM Installation: Tune PCM Server Memory Usage**
23. If your PCM Server is running on a 64-bit operating system with more than 6 GB of RAM, the Tune PCM Local Agent Memory Usage window is displayed. Select the size of the network managed by the local Agent and click Next. This setting configures the amount of dedicated memory used by the local PCM Agent to perform a discovery.

- If the local PCM Agent discovers more than 1000 devices, select **Large Size Configuration**.
  
  **Note:** 8 GB RAM is required on the Server PC if you also configure the use of PCM Server memory for a large configuration (see figure 22 on page 35).

- If the PCM local Agent discovers less than 1000 devices, select **Normal Size Configuration**.

You can later change this setting in PCM by selecting **Tools > Preferences > Tune PCM Memory Usage**.

![Figure 23. PCM Installation: Tune PCM Local Agent Memory](image.png)
24. In the Configure Automatic Updates window:

![Configure Automatic Updates](image)

- 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 installs them automatically. Automatic updates are usually scheduled for the first day of the 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.

b. Click **Next** to continue.

25. In the Install Wizard Complete window, review the summary of your PCM 3.20 configuration.
   - To change a setting, click **Previous** to step back through the User Setting configuration windows.
   - Click **Next** to complete the installation process.

26. In the final Install Complete window, click **Done** to complete the installation and exit the installation wizard.

PCM Plus 3.20 software (PCM Server, local Agent, and local Client) and selected PCM plug-in modules are installed on the network management station. The installation includes a 60-day evaluation license with a full PCM Plus feature set.

Before the 60-day trial period finishes, you can ensure continued use of version 3.20 in either of the following ways:

- You can register a software license for HP ProCurve Manager 3.20 on the **My Networking portal**.
You can purchase and register a base software license for HP ProCurve Manager Plus 3.20 with 50-device and 1-Agent or unlimited-device and unlimited-Agent support. During the 60-day trial period, an Expiring License reminder (figure 25) is displayed each time you log in.

**Figure 25. ProCurve Manager: Expiring License Warning**

For more information on how to purchase and register a PCM software license, see “Licensing PCM Plus Software” on page 49.

**Next Steps**

To extend the monitoring and discovery capabilities of PCM, you may install remote Clients and remote Agents.

- To install one or more remote Clients, follow the procedure in “Installing Remote Clients” on page 39.
- To install one or more remote Agents, follow the procedure in “Installing Remote Agents” on page 42.

When you install a remote PCM Agent or Client, you use a web browser from a remote computer to download the PCM software from the network management station by using the command:

```
http://pcm_server_ip_address:8040
```

Where `pcm_server_ip_address` is the IP address of the network management station.
Installing Remote Clients

When you install PCM 3.20, both the Server and a local Client are installed on the computer. You can also install a remote Client function on other computers in your network that have access to the PCM Server.

To install a remote Client:

1. Configure the PCM Server to allow access from the new Client station. The PCM Server maintains an access.txt file that lists all authorized Clients permitted to log into the Server.
   
   Open the access.txt file on the PCM Server using a text-based editor, such as Notepad. The default directory path is C:\Program Files\Hewlett-Packard\PNM\server\config.

2. Add each actual or potential remote Client to the access.txt file, one entry per line, in either of the following ways:
   - **By IP address.** Type the IP address or DNS name of each Client authorized to log into the PCM Server, one IP address per line. You can configure IP addresses and DNS names with wildcards by using an asterisk (*).
   - **By Password.** If you do not know the IP address of an actual or potential Client, type the selected password (on a line by itself). Wildcards cannot be used in passwords. For example, you might use a password when the Client comes in through a VPN and the IP address of the Client is assigned externally.

   The access.txt file can contain any combination of IP addresses, DNS names, and passwords. An example of a valid access.txt file with IP addresses, DNS Names, wildcards, and the password "procurve" as shown below:

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

3. Start a Web browser such as Microsoft Internet Explorer on the computer where the Client will be installed, and enter the IP address of the PCM Server followed by a colon and the port ID 8040.

   For example, if the IP address of the PCM Server is 10.15.20.25, enter the URL:

   ```http://10.15.20.25:8040```
4. In the HP ProCurve Manager v3 Available Downloads window, click **Download the PCM remote client**.

![Figure 26. Download PCM Remote Client](image)

Contact your HP ProCurve Manager administrator to allow remote access to this server.

Available downloads

- Download the PCM remote client
- Download the Windows PCM/IIM agent
- Download the IDM FreeRADIUS Agent

5. In the next window, click **Download Installer for Windows** and then click **Save** to download the file on the remote Client. When the download completes, close the Download window and the Web browser.

6. On the remote Client, double-click the downloaded **install.exe** file to open the installation wizard. Follow the instructions in the wizard to install remote Client software.

7. (Optional) If the remote Client uses a password to access the PCM Server:
   a. On the PCM Server, edit the **TyphoonServer.cfg** file as follows:
      i. Open the **TyphoonServer.cfg** file using a text-based editor, such as Notepad. The default directory path is `C:\Program Files\Hewlett-Packard\PNM\server\config`.
      ii. In the file, change the `AUTHENTICATION=10` entry to `AUTHENTICATION=100`.
      iii. Save and close the **TyphoonServer.cfg** file.
   b. On the remote Client, edit the **Riptide.cfg** file as follows:
      i. Open the **Riptide.cfg** file using a text-based editor, such as Notepad. The default directory path is `C:\Program Files\Hewlett-Packard\PNM\client\config`.
      ii. Add the following line to the file:
         ```
         PASSWORD = <your password>
         ```
         Do not change any other entries in the file. All entries are necessary for the correct operation of the Client.
      iii. Save and close the **Riptide.cfg** file.
A sample `Riptide.cfg` file that was edited to include the password “procurve” is shown here:

```
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
```

8. Start the remote Client. When the Client starts the first time, the Searching for PCM Servers window is displayed.

   From the list of available PCM Servers, select the PCM Server which you want to associate with the Client. If the desired PCM Server is not displayed in the list, enter the IP address of the PCM Server in the Direct Address field. The PCM Server you specify is then associated with the remote Client each time you start the Client.

   You can later change the PCM Server associated with a Client from the remote Client computer by clicking the Windows Start button and selecting *All Programs > ProCurve Manager > ProCurve Manager Server Discovery*.

9. Disable the firewall on the PCM Server to allow the remote Client and the PCM Server to connect. If a firewall lies between the remote Client and the PCM Server, use VPN for the connection.

   A firewall prevents the remote Client from establishing the connection and receiving the necessary data files from the PCM Server. In most cases, a remote Client will display the error message *no contexts defined* with an empty greyed-out display.
Installing Remote Agents

PCM architecture allows you to logically divide the network and manage devices on remote segments of large networks connected by LAN or WAN links that might or might not be behind a NAT firewall. The architecture relies on Agents (installed as a Windows service) deployed across the network to perform management operations on behalf of the PCM Server. You can install up to 25 Agents, including one local Agent.

**Note:**

**Remote Agent Licensing and Usage.** The PCM Plus software base products (J9173A and J9174A) provide a license for the PCM Server and a separate license for one PCM Agent. In order for the PCM Server to connect to more than one Agent, a license for the use of additional Agents is required. If you want to use more than one PCM Agent, you must purchase an incremental PCM license (J9175A) to add one Agent or an unlimited PCM license (J9176A or J9177A) to add the use of multiple Agents. See “PCM Plus Licensing Overview” on page 49 for more information.

You can also add a remote Agent to your network by using an HP ProCurve ONE Services zl Module (J9289A) in either of the following ways:

- The HP ProCurve PCM+ Agent with ONE zl Module (J9496A) ships with a PCM+ Agent application pre-installed on a ProCurve ONE Services zl Module.
- If you have already installed a ProCurve ONE Services zl Module, you can install a PCM+ Agent application to run on it.

Before you can use a PCM+ Agent application installed on a ProCurve ONE Services zl Module, you must first activate and configure the Agent application. For more information, refer to the *HP ProCurve PCM+ Agent with ONE zl Module: Installation and Getting Started Guide.*

To install a remote Agent:

1. If a firewall prevents the PCM Server and a remote Agent from communicating, reconfigure the firewall to permit communication.

2. Start a Web browser such as Microsoft Internet Explorer on the computer where the Agent will be installed, and enter 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 Server computer is 10.15.20.25, enter the URL: `http://10.15.20.25:8040`

3. Click the **Download the Windows PCM/IDM agent** link, and click **Save** to download the file. When the download completes, close the Download window and the Web browser.

4. Double-click the downloaded `procurve-agent-setup.exe` file to start the Agent Installation wizard. The wizard will guide you through the remote Agent installation.
5. In the Agent Information window of the Agent Installation wizard:

- **Agent Type**
  - PCM Agent
  - IDM Agent

- **Agent Identity**
  - Name:
  - Description:
  - Password: [Use Factory Default]
  - Web Management Port: [8080] [Use Factory Default]

("* Required Field")

**Figure 27. Agent Information**

- a. Select **PCM Agent**.
- b. Enter a name and optional text description for the Agent.
- c. Enter a unique password or select the **Use Factory Default** check box to use the default password “procurve”.
  - This password is used to log into the browser-based Agent UI (user name “admin”) and to authenticate the remote Agent with the PCM Server. **The password you set must match the New Agents password configured in the Server to Agent Connection window during installation** (figure 16).
  - Later, you can reconfigure the password for a remote Agent from the **Agents > Properties** tab of Agent Manager in PCM.
- d. Enter the **Web Management Port** to be used to open the browser-based Agent UI and authenticate with the PCM Server, or select the **Use Factory Default** check box on the same line to use the default port 8080.
- e. Click **Next**.
6. In the Server Information window, configure the Agent-Server connection settings and any required Server information:

**Figure 28. Server Information**

For the Agent to communicate with the PCM Server, these values MUST MATCH the values set on the PCM Server for this Agent.

a. If the Agent will initiate connection to the PCM Server, select the Agent Initiates Connection check box. If the PCM Server will initiate a connection to the Agent, ensure this check box is unchecked.

   All Agents that initiate a connection to the PCM Server must use the same port number and encryption type as configured in the Agent Manager Server Setup tab.

b. To change the default Port that the Agent will use to communicate with the PCM Server, uncheck the Use Default check box and enter the desired port number. The default PCM Server port is 51111, which can be changed to any unused port during PCM Server installation or from the PCM Server.

c. If you do not want to encrypt data sent to the PCM Server, uncheck the Use Default check box and select Plain Text from the Encryption drop-down list. The default encryption method is SSL. If the PCM Server is behind a firewall, HP recommends using SSL encryption.

d. In the IP Address field, enter the IP address of the PCM Server if the Agent is initiating the connection to the PCM Server.

e. In the Password field, enter a unique password or select the Use Default check box to use “procurve” as the default password.

   The password you set must match the Server Identity password configured in the Server to Agent Connection window during installation (figure 16).

f. Click Next.
7. In the Firewall Passage window, either select the **Allow the ProCurve agent to configure your firewall**
check box to instruct PCM to create a firewall rule that will let the Agent communicate with the
PCM Server, or uncheck the box and configure the firewall manually after the PCM Agent is
installed.

8. When the Agent Installation Wizard completes, configure the remote Agent to initiate connections
with the PCM Server or configure the PCM Server to initiate connections with the remote Agent.

   If a firewall or Network Access Controller (NAC) appliance is between the PCM Server and a
   remote Agent, HP recommends initiating the connection from the location with the firewall.
   Instructions for configuring, and activating a remote Agent are provided in the *HP ProCurve
   Manager Network 3.20 Administrator's Guide*.

   Any firewalls must be configured to allow TCP/IP traffic on the configured connection port number.
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 NNM settings.

One Network Management Program per Computer

The PCM installation process will determine if you are running OpenView Network Node Manager and configure PCM 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.

Screen Resolution

To ensure that PCM screens display properly, a minimum screen resolution of 1024 x 768 is required on a computer running a PCM Client.

Using PCM on Multi-homed Systems

A multi-homed system is a Server or PC that has more than one IP address. A computer may be multi-homed for the following reasons:

- More than one network adapter (wired or wireless) is being used by the computer.
- Only one network adapter is used while running network tunneling software, such as a VPN client.

Although the computer only has one physical adapter, it appears to have two network interfaces, each with its own IP address. The VPN client software emulates a second adapter while using the physical adapter.

An example of a multi-homed system is shown in figure 29:

![Figure 29. Multi-homed Example](image-url)
**Multi-Homed PCM Issue:** When a PCM Server, Client, or Agent starts up, it attaches itself to the primary network interface. All network traffic between the Client or Agent and the Server is directed to the primary network interface.

However, as shown in figure 29, if a PCM Client attaches itself to the 10.1.1.1 interface (Network A) while the PCM Server is running on the server on the 192.168.10.0 network (Network B), the Client cannot successfully connect to the Server.

**Multi-Homed Solution:** Edit the PCM configuration file as follows:

1. Open the `commIpAddr.txt` file using a text-based editor, such as Notepad, as follows:
   - On a multi-homed PCM Server, the file is stored by default in the directory path: `C:\Program Files\Hewlett-Packard\PNM\server\config`
   - On a multi-homed PCM Client, the file is stored by default in the directory path: `C:\Program Files\Hewlett-Packard\PNM\client\config`
   - On a multi-homed Agent, you must create the file in the directory path: `C:\Program Files\Hewlett-Packard\PNM\pcm-agent`.

2. On the first line of the `commIpAddr.txt` file, enter the IP address of the interface to which you want the PCM application (Server, Client, or Agent) to attach itself and save the file.
   - For example, for the multi-homed Client device shown in figure 29, you would add the IP address `192.168.10.1` in the first line of the `commIpAddr.txt` file stored on the device.

3. Restart the PCM application (Server, Client, or Agent) on the multi-homed device on which you modified the `commIpAddr.txt` file.
   - To restart a PCM Server, you must restart the HP ProCurve Network Manager Server from the Services control panel (`Windows Control Panel > Administrative Tools > Services` -- click on HP ProCurve Network Manager Server and select Restart).
   - To restart a PCM Client, simply close and re-open the application.
   - To restart a PCM Agent, you must restart the HP ProCurve Network Manager Agent from the Services control panel.
IDM Installation Notes

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

If you are upgrading from PCM 2.3 with IDM v2.x to v3, all policies, alerts, device data, and user data are migrated. Refer to the *HP ProCurve Network Management 3.20 Migration Guide* for more information.

Configuring an IDM Agent

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 Agents.

To install the IDM Agent on a supported Windows system, follow the procedure for installing a remote PCM Agent in “Installing Remote Agents” on page 42. Be sure to select *IDM Agent* on the first wizard screen (figure 27).

The Install wizard guides you through the installation process. During the installation process, you will be prompted to enter the IP address of the PCM Server. This is needed to establish communication between the IDM Agent on the RADIUS server, and the IDM application on the PCM Server.

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

To install the IDM Agent on a supported Linux or ProCurve Network Access Controller system:

1. Start a Web browser, and type 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 Server computer is 10.15.20.25, enter the URL: http://10.15.20.25:8040
2. Click the **Download the IDM FreeRADIUS Agent** link, and click **Save** to download the file.
3. Once the download completes, move the file to a location accessible by the target Agent system, if necessary.
4. Extract the downloaded *HpIdmLinuxAgentInstaller-*<version>*.tar.gz* file to a temporary location on the RADIUS server.
5. Change to the *HpIdmLinuxAgentInstaller-*<version>* directory, run *install.sh* as root, and then follow the prompts.
Licensing PCM Plus Software

By following the procedure in “PCM Plus 3.20: Installation Procedure” on page 15, PCM Plus 3.20 software (PCM Server, local Agent, and local Client) and selected PCM plug-in modules are installed on the network management station.

The installation includes a 60-day evaluation license with a full PCM Plus feature set. Before the 60-day trial period finishes, you can ensure continued use of version 3.20 in either of the following ways:

- You can purchase and register a base software license for HP ProCurve Manager Plus 3.20 with 50-device and 1-Agent or unlimited-device and unlimited-Agent support. You can later purchase an incremental license to add support for more network devices and additional Agents.
  
  See “Licensing and Registering a Base PCM Plus Software License” on page 50 for more information.

  For information on the software licenses available for PCM Plus plug-in modules, refer to the [HP ProCurve Network Management 3.20 Migration Guide](#).

- You can register a software license for HP ProCurve Manager 3.20 on the My Networking portal.
  
  See “Registering a PCM Software License” on page 58 for more information.

PCM Plus Licensing Overview

The available PCM Plus 3.20 licenses that enable a full set of network management features, including product updates and alerts, and permit the continued use of PCM Plus products after the 60-day trial period are described in figure 30.

To register a PCM software license that permits continued use of a reduced set of network management features, follow the procedure in “Registering a PCM Software License” on page 58. See “HP ProCurve Manager” on page 1 for more information.
Licensing and Registering a Base PCM Plus Software License

To purchase and register a base PCM Plus software license (J9174A or J9177A) within the 60-day trial period:

1. Contact your HP sales representative to purchase the appropriate license for PCM Plus software (see figure 30) or go to the HP ProCurve Manager Plus web site and click **Buy Now**. You will receive a Registration ID card with the your purchase.

2. Click the Preferences button on the global toolbar or select **Tools > Preferences**.

3. If your browser uses a proxy and if you have not configured proxy settings during the PCM 3.20 installation, add your proxy settings to the PCM network:
   a. In the Preferences navigation tree, click **Network Settings** to open the Global:Network Settings window.

---

### Figure 30. PCM Plus 3.20 Licensing

<table>
<thead>
<tr>
<th>License Number (SKU)</th>
<th>PCM Plus 3.20 License Description</th>
<th>Supported Devices</th>
<th>Supported Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>J9173A</td>
<td>Upgrade from PCM 2.3 for 50 devices and one Agent, including a 12-month maintenance license <strong>Important</strong>: Refer to the <em>PCM 3.20 Migration Guide</em> before installing.</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>J9174A</td>
<td>Base software for 50 devices and one Agent, including a 12-month maintenance license</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>J9175A</td>
<td>Incremental license for an additional 100 devices and one Agent <strong>Prerequisite</strong>: J9173A or J9174A base software</td>
<td>+100</td>
<td>+1</td>
</tr>
<tr>
<td>J9176A</td>
<td>Upgrade from PCM 2.3 for unlimited devices and Agents, including a 12-month maintenance license <strong>Important</strong>: Refer to the <em>PCM 3.20 Migration Guide</em> before installing.</td>
<td>Up to 3500</td>
<td>25</td>
</tr>
<tr>
<td>J9177A</td>
<td>Base software for unlimited devices and Agents, including a 12-month maintenance license</td>
<td>Up to 3500</td>
<td>25</td>
</tr>
<tr>
<td>J9630A</td>
<td>12-month maintenance license for 50 devices and one Agent <strong>Prerequisite</strong>: J9173A or J9174A base software</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>J9631A</td>
<td>12-month maintenance license for unlimited devices and Agents <strong>Prerequisite</strong>: J9176A or J9177A base software</td>
<td>Up to 3500</td>
<td>25</td>
</tr>
</tbody>
</table>

### Note

For current licensing information and FAQs on PCM Plus 3.20 licenses, refer to the *HP ProCurve Network Management License and Upgrade Selection Guide*. 

---
Figure 31. Registration and Licensing: Network Settings

b. Ensure that the Use proxy check box is checked.

c. If you are using a proxy server, in the HTTP Proxy field, enter the DNS name or IP address of the proxy server for the subnet. **Be sure to enter the same proxy that your default Web browser uses.**

d. In the HTTP Proxy Port field, enter the port number used to access the proxy server. **Be sure to enter the same proxy port number that your default Web browser uses.**

e. If PCM uses a SOCKS host to block SSL connections, enter the DNS name or IP address of the SOCKS host and the port number used to access the SOCKS host.

f. Select the SOCKS version: **SOCKSv4** or **SOCKSv5**.
   - If you are using a SOCKS v5 host, you must also enter a username and password.

g. Click **Apply** to save your changes and leave the Preferences window open.
4. Configure the automatic registration (or non-registration) of the ProCurve networking devices for which you purchased a PCM software license:
   a. In the Preferences navigation tree, expand the Registration and Licensing item and click Device Registration to open the Device Registration window.

   ![Figure 32. Registration and Licensing: Device Registration](image)
   
   b. If necessary, create a new account on the My Networking portal:
      i. Click the https://my.procurve.com link.
      ii. In the HP Networking Customers and Partners web page, enter a My Networking ID and password, and click Create new account.

   c. In the My ProCurve Member ID and MyProCurve Password fields of the Device Registration window (figure 32), enter the e-mail address that you used to register on the My Networking portal and your MyProCurve password.

   d. Do one of the following:
      - To allow ProCurve networking devices running PCM Plus to be automatically registered on the My Networking portal, select Automatically register my network devices at MyProCurve account.
      - To avoid automatic registration of ProCurve devices running PCM Plus, select Do not register new devices.

   e. Click Apply to save your changes and leave the Preferences window open.
5. To register the license you purchased for PCM Plus, PCM Agent, IDM, PMM, or NIM software:
   a. In the Preferences navigation tree, expand the Registration and Licensing item and click Licensing to open the Licensing window.

   ![Licensing window](image)

   **Figure 33. Registration and Licensing: Licensing Preferences**

   In the Licensing window, the Active Licenses tab displays information on each installed product:

   - **Product**
     - Name of the product family being licensed
   - **Expires**
     - Expiration date when the product stops functioning
   - **Valid for**
     - Number of devices, Agents, or users supported by this license
   - **Base**
     - Yes means this product is a base license, which is required before adding an Incremental license for additional devices or users. No means the license is an incremental license, which requires the base to be installed for the incremental license to be operational.
   - **Serial No**
     - Unique serial number assigned to the software product, which is used for ProCurve tracking purposes and does not affect licensing functions.
   - **Type**
     - Type of license in use: Trial or Operational.

   The Deactivated Licenses tab lists licenses that are uninstalled and no longer operational. It contains applicable information for each deactivated license similar to the information displayed on the Active Licenses tab, with the following columns of information:

   - **Uninstall Key**
     - Unique key that guarantees your license has been uninstalled. This key is required to transfer a license to another Server.
   - **Status**
     - Status can be Transferable, Non-Transferable (Trial licenses are not transferable), and Transferred. Transferred means a license was transferred from the source PCM Server to the MyProCurve portal, but does not indicate whether the license was transferred (added) to another PCM Server.

   b. Register a license for your PCM Plus products by following one of these procedures:
      - “Using the Registration Wizard” in PCM (see page 54).
      - “Using the My Networking Web Site” from a Web browser (see page 57).
Using the Registration Wizard

To register a PCM Plus software license using the Registration wizard:

1. In the Preferences Licensing window (figure 33), click Register to start the Registration wizard.
2. In the Welcome window, click Next.
3. In the Registration IDs window:

   a. In the Registration ID field, enter the registration ID that you received when you purchased PCM Plus software.
   b. If you purchased more than one license, click the Add another Registration ID button and enter the next registration ID. Repeat this step to enter the registration IDs of all your PCM Plus products.
   c. Click Next.
4. In the License Request window, you request a license for the registration ID you entered in the previous step:

![License Request Window](image)

**Figure 35. Registration Wizard: License Request**

a. Ensure that PCM could obtain information about each license successfully. To view a log of actions taken, click **View Log**.

b. Click **Next**.

5. In the Preview License Information window:

![Preview License Information Window](image)

**Figure 36. Registration Wizard: Preview License Information**

a. Ensure that the license information is correct. Use the scroll bar on the right to read the complete license agreement. (The license description is provided by the HP My Networking portal and cannot be changed.)

b. At the end of the agreement, select the **I Accept all of the above terms** check box and click **Next**.

The license keys associated with the registration ID are installed in PCM and updated on the My Networking portal. This operation cannot be canceled once it begins.
6. In the Installing Licenses window, confirm that each license was installed successfully. Then click **Next**. To view a log of actions taken, click **View Log**.

![Installing licenses](image)

**Figure 37. Registration Wizard: Installing Licenses**

*Note:* You receive two license keys for each PCM Plus license that you purchase and register: the PCM Plus software license key and a PCM Agent license key. These keys are shown separately in the Licensing Preferences window (figure 33).

7. In the Finished Installation window, click **Finish** to close the wizard.

![Finished Installation](image)

**Figure 38. Registration Wizard: Finished Installation**

The license description is automatically added to the Active Licenses tab in the Licensing Preferences window (figure 33).
Using the My Networking Web Site

To register a PCM Plus software license using a Web browser:

1. Open a Web browser and go to the My Networking portal (http://www.hp.com/networking/mynetworking).

2. Sign in to the portal, click My Licenses, and follow the instructions to complete the registration process. In the last registration screen, click Next. During registration, you will be asked to enter the registration ID you received when you purchased your PCM Plus software product.

3. In the My Licenses window, you are prompted to enter the Install ID. Copy and paste the Install ID from the top left pane of the Licensing Preferences window in PCM (see figure 39). You can enter an optional name and notes. Then click Next.

To open the Licensing Preferences window, select Tools > Preferences > Registration and Licensing > Licensing.

4. Read through the license agreement. At the end of the agreement, select the I Accept all of the above terms check box and click Finish. You will receive a license key on screen and by e-mail.

Note: You receive two license keys for each PCM Plus license that you purchase and register: the PCM Plus software license key and a PCM Agent license key. These keys are shown separately in the Licensing Preferences window (figure 39).
5. In the Licensing Preferences window in PCM:
   a. In the Add license field, enter the license key that you received on screen or by e-mail.
   b. Click Add.
   c. When the confirmation prompt appears, click OK to add the license to PCM.
      The license description is automatically added to the Active Licenses tab in the Licensing
      Preferences window (figure 39).
   d. Repeat these steps to add another license or click Cancel to close the Licensing window.

Registering a PCM Software License

Within the 60-day trial period during which you evaluate PCM Plus 3.20 software (PCM Server, local
Agent, and local Client) and selected PCM plug-in modules, you may decide to register a software
license to continue to use PCM 3.20 features.

Note that the version of PCM software does not include the full set of advanced network features
in PCM Plus. All PCM plug-in modules require PCM Plus 3.20 in order to run.

PCM provides basic features for monitoring and managing network devices. See “HP ProCurve
Manager” on page 1 for more information.

To register a software license for PCM 3.20 within the 60-day trial period:

1. Open a Web browser and go to the My Networking portal (http://www.hp.com/networking/mynetworking).
2. Sign in to the portal and click My Licenses.
3. Under Products without Registration ID, select ProCurve Manager and click Next.
4. When prompted to enter the Install ID, copy and paste the Install ID from the top left pane of the
   Licensing Preferences window in PCM (figure 39). You can enter an optional name and text
   description. Then click Next.

   To open the Licensing Preferences window, select Tools > Preferences > Registration and Licensing >
   Licensing.
5. Read through the license agreement using the scroll bar. At the end of the agreement, select the
   I Accept all of the above terms check box and click Finish.

   A Confirmation window with the license key is displayed.
6. Go to the Licensing Preferences window in PCM:
   a. In the Add license field, enter the license key that you received on screen or by e-mail.
   b. Click Add.
   c. When the confirmation prompt appears, click OK to add the license to PCM.
      The license description is automatically added to the Active Licenses tab in the Licensing
      Preferences window (figure 39).
   d. Click Cancel to close the Licensing window.
Getting Started with ProCurve Manager

When you install ProCurve Management applications, various default settings are configured. You may customize these settings to take advantage of additional options.

For more information on how to change default settings, refer to the *HP ProCurve Manager Network 3.20 Administrator's Guide*. You can also refer to the PCM online help system.

PCM Interface

To display the PCM user interface, click the PCM icon on your desktop. The Network Management Home window for PCM opens with a navigation tree in the left pane, the main PCM window in the right pane, and a menu bar at the top of the window.

Navigation Tree

```
<table>
<thead>
<tr>
<th>Network Management Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Groups</td>
</tr>
<tr>
<td>Agent Groups</td>
</tr>
<tr>
<td>Default Agent Group</td>
</tr>
<tr>
<td>Network Map</td>
</tr>
<tr>
<td>Devices</td>
</tr>
</tbody>
</table>

- ProCurve 100CM
  - 172.16.100.104 (172.16.100.104)
- ProCurve 1800
  - 172.16.100.15 (172.16.100.15)
- ProCurve 2424M
  - 172.16.100.103 (172.16.100.103)
  - 172.16.100.7 (172.16.100.7)
- ProCurve 2500
  - 172.16.100.5 (172.16.100.5)
  - 172.16.100.73 (172.16.100.73)
- ProCurve 2500
  - 172.16.100.12 (172.16.100.12)
  - 172.16.100.15 (172.16.100.15)
  - 172.16.100.150 (172.16.100.150)
  - 172.16.103.11 (172.16.103.11)
- ProCurve 2600
  - 172.16.100.6 (172.16.100.6)
  - 172.16.100.71 (172.16.100.71)
  - 172.16.103.12 (172.16.103.12)
  - 172.16.103.21 (172.16.103.21)
- ProCurve 2600
```

**Figure 40. PCM Navigation Tree**

The navigation tree is a navigational tool that provides a hierarchical view of the structure of your network and all devices discovered by PCM. It contains icons that show the status of devices at the device level and Agent group level. For example, the figure above shows devices in warning and unreachable states.
PCM Right Pane

Depending on the object or function selected, the right pane or window content varies. Many windows contain tabs across the top and some have drill-down or right-click features. Clicking the help button in the upper right displays helpful information about the window being viewed. Most windows also contain Detach View and Print icons in the upper right.

PCM Global Toolbar and Menu Bar

Use the PCM global toolbar functions to access commonly used features. Simply click the button (icon) to launch a feature. Hover the mouse over a button (icon) in the toolbar to display its tool tip. Disabled functions will be grayed out.

The standard Windows-type menu bar at the top of the PCM window also provides access to commonly used features.
Using the Right-Click Menu

You can access most functions provided with PCM and PCM Plus via the right-click menus. Right-click menus are context-sensitive; that is, only items applicable to the selected device or data field are displayed.

To use the right-click menu, right-click an object (folder or device entry) in the navigation tree on the left of the screen to display the menu, and then select the function from the drop-down list. You can also access the right-click menus by right-clicking a device or data field in several PCM windows, such as the Devices List.

![Figure 43. Example of Right-Click Menu in PCM Navigation Tree](image)

Disabled functions are greyed out. An arrow ( ) next to a menu item indicates additional submenu items. Click the arrow to display the submenu.

The options enabled in the right-click menu vary based on the type of user logged in and the navigation tree item or data field selected.
Start-Up and Troubleshooting Tips

- If the Discovery process cannot locate certain devices, try to manually discover them by selecting **Tools > Manual Discovery**.

- If you use network devices from several vendors, enter the IP address of a ProCurve device in the **Seed Device IP Address** field in the **Discovery > General** tab of the Agent Manager for each Agent.

- If you manage a large number of Subnets in your network, you can use the **Tools > Imports > Import Subnets** function to improve PCM discovery performance.

- After the Discovery process runs and the Discovery status in the Network Management Home-Dashboard indicates **Idle**, if some subnets are still not discovered, go to **Agent Manager > Discovery > Managed Subnet** to see whether there are unmanaged subnets that should be moved to the **Managed Subnets** column (see figure 44).

  If a subnet is not listed, you can add it to the list of unmanaged subnets and then move it to the list of managed subnets.

![Figure 44. Agent Manager, Discovery, Managed Subnets](image-url)
If PCM is unable to access a specific device, test the PCM communication parameters by right-clicking the unreachable device in the navigation tree and selecting Device Access > Test Communications in PCM.

If device views in the PCM interface do not appear correctly, check to see if Java Runtime Environment (JRE) software is installed. Normally the required software is installed by default with PCM.

To correctly display the live view of a switch, JRE version 5.0 or later is required on a Windows, VMware, or Hyper-V platform. You can download this software from the Sun Microsystems website at http://java.sun.com.

If PCM is integrated with NNMi, you must add NNMi subnets as managed subnets in PCM.

When you add an NNMi subnet, the following prerequisites apply:

- NNMi must be enabled by selecting Tools > Integrations > NNMi Communication Settings.
- PCM must be registered to receive traps from discovered devices in the imported subnet by opening the Agent Manager, selecting an Agent, selecting Discovery > General, and selecting the Automatically register as a Trap Receiver for new devices check box.

To add an NNMi subnet:

a. In the Agent Manager > Agents > Discovery > Managed Subnets tab for a selected Agent, click the Import Subnets From Integrator button.

b. In the Add Integrator Subnets window, select the subnets to be managed by the Agent.

c. Click OK.

Figure 45. Agent Manager, Discovery, Add NNMi Subnets