



## Quick Start Guide for Routed WAN Management Solution, Release 1.3

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# 1 SUPPLEMENTAL LICENSE AGREEMENT

## SUPPLEMENTAL LICENSE AGREEMENT FOR CISCO SYSTEMS NETWORK MANAGEMENT SOFTWARE: CISCOWORKS ROUTED WAN MANAGEMENT SOLUTION

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The Software components are provided to Customer solely to install, update, supplement, or replace existing functionality of the applicable Network Management Software product. Customer may install and use following Software components:

- CiscoWorks Common Services with CiscoView: Contains shared resources used by other components in this bundle. In many cases, all components in this bundle can be installed on a single server. If some components of this bundle are installed on separate servers, a copy of CiscoWorks Common Services with CiscoView can be installed with each component in Customer's network management environment.
- Resource Manager Essentials (RME): May be installed on one (1) server in Customer's network management environment.
- Access Control List Manager (ACL Manager): May be installed on one (1) server in Customer's network management environment.
- Internetwork Performance Monitor (IPM): May be installed on one (1) server in Customer's network management environment.

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Customer may not reproduce nor distribute software.

### DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS

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## 2 Routed WAN Management Solution 1.3 Overview

The Routed WAN Management Solution (RWAN) provides a collection of powerful management applications to configure, administer, monitor, and troubleshoot a routed wide-area network.

In this document you will find:

- RWAN contents, including directions to online documentation.
- Hardware and software requirements for optimal performance.
- Installation paths and pointers to additional documentation that provides detailed procedures for installing each product. If you already have other CiscoWorks products installed on your system, you might not need to install all of the products included in RWAN.
- Information about ordering documentation and contacting Cisco Systems for additional assistance.

### RWAN Contents

Table 1 describes the contents of the Routed WAN Management Solution, Release 1.3, for Solaris and Windows.

**Table 1**      **RWAN 1.3 Contents**

<b>This product..</b>	<b>Allows you to...</b>	<b>And includes these components</b>
CiscoWorks Common Services 2.2 with CiscoView 5.5	Provide common software and services for all other RWAN products. You can deploy, monitor, and troubleshoot devices across your network. CiscoWorks Common Services 2.2 includes: <ul style="list-style-type: none"><li>• Common Services 2.2—A set of shared application services.</li><li>• CiscoView 5.5—A graphical device management tool.</li><li>• Integration Utility—A module that supports third-party Network Management Systems (NMS).</li></ul>	<ul style="list-style-type: none"><li>• CiscoWorks Common Services 2.2 with CiscoView 5.5 product CD</li><li>• <i>Release Notes for Common Services 2.2 (includes CiscoView 5.5) on Solaris</i></li><li>• <i>Release Notes for Common Services 2.2 (includes CiscoView 5.5) on Windows 2000</i></li></ul>

**Table 1 RWAN 1.3 Contents (continued)**

<b>This product..</b>	<b>Allows you to...</b>	<b>And includes these components</b>
Resource Manager Essentials 3.5	Manage network inventory and device changes, network configuration, and software images. Also allows you to monitor network availability and perform syslog analysis.	<ul style="list-style-type: none"> <li>• Resource Manager Essentials 3.5 product CD</li> <li>• <i>Release Notes for Resource Manager Essentials 3.5 on Solaris</i></li> <li>• <i>Release Notes for Resource Manager Essentials 3.5 on Windows</i></li> </ul>
Access Control List Manager 1.5	Set up, manage, and optimize Cisco IOS and Cat OS software-based IP and Internet Packet Exchange (IPX) traffic filtering and device ACLs.	<ul style="list-style-type: none"> <li>• Access Control List Manager 1.5 product CD</li> <li>• <i>Release Notes for Access Control List Manager 1.5</i></li> </ul>
Internetwork Performance Monitor 2.5	Troubleshoot wide-area network response times and availability proactively. You can do this by using instrumentation inside the devices on the network.	<ul style="list-style-type: none"> <li>• Internetwork Performance Monitor 2.5 product CD</li> <li>• <i>Release Notes for Internetwork Performance Monitor 2.5</i></li> </ul>

Registered Cisco.com users can access the most current Incremental Device Updates and CiscoView Device Package Updates at the following locations:

- Incremental Device Updates for Resource Manager Essentials:  
<http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-rme>
- CiscoView Device Package Updates:  
<http://www.cisco.com/cgi-bin/Software/CiscoView/cvplanner.cgi>

### 3 Server and Client System Requirements

This section provides Routed WAN Management Solution 1.3 server and client requirements:

- Table 2 describes the server requirements for installing RWAN on Solaris systems.
- Table 3 describes the server requirements for installing RWAN on Windows systems.
- Table 4 describes the client system requirements for all platforms.
- Table 5 describes the browser requirements for all platforms.
- Table 6 lists the required Solaris operating system patches for RWAN.
- Table 7 lists the ports RWAN uses.

These minimum system requirements are based on managing 500 devices with RWAN loaded on a single server. If you are managing more than 500 devices or if you are running additional Cisco or third-party applications on the server, the requirements may be higher. See the individual RWAN application installation guides for specific requirements.

**Table 2** Minimum Server Requirements for Solaris Systems

Component	Minimum Requirement
Hardware	<ul style="list-style-type: none"><li>• One of the following<sup>1</sup>:<ul style="list-style-type: none"><li>– Sun UltraSPARCII</li><li>– Sun UltraSPARCIII (Sun Blade 1000 Workstation or Sun Fire 280R Workgroup Server)</li></ul></li><li>• Dual processor required for hosting multiple management solutions</li><li>• CD-ROM drive</li><li>• Color monitor with video card capable of 256 colors or more</li><li>• 10BaseT or faster (10 Mbps or faster network connection)</li></ul>
Software for Solaris <sup>2</sup>	<ul style="list-style-type: none"><li>• One of the following<sup>3</sup>:<ul style="list-style-type: none"><li>– For UltraSPARCII: Solaris 2.7 or 2.8</li><li>– For UltraSPARCIII: Solaris 2.8</li></ul></li></ul>

**Table 2**      **Minimum Server Requirements for Solaris Systems (continued)**

<b>Component</b>	<b>Minimum Requirement</b>
Available memory (RAM)	<ul style="list-style-type: none"> <li>• One of the following:               <ul style="list-style-type: none"> <li>– For UltraSPARC II: 1 GB RAM minimum</li> <li>– For UltraSPARCIII Workstation: 1 GB RAM minimum</li> <li>– For UltraSPARCIII Server: 2 GB RAM minimum</li> </ul> </li> <li>• 8 MB E-Cache</li> </ul>
Available disk space	<ul style="list-style-type: none"> <li>• One of the following:               <ul style="list-style-type: none"> <li>– For UltraSPARC II: 9 GB, with 2 GB swap space</li> <li>– For UltraSPARCIII Workstation: 40 GB internal FC-AL disk drive</li> <li>– For UltraSPARCIII Server: Dual 40 GB internal FC-AL disk drives</li> </ul> </li> <li>• UNIX file system recommended<sup>4</sup></li> </ul>

1. A Sun UltraSPARCII running Solaris 2.7 or 2.8 is the minimum possible hardware configuration. If you plan to manage a network with more than 500 devices, or run other management solutions on the same server, an UltraSPARCIII running Solaris 2.8 is strongly recommended.
2. CiscoWorks Common Services 2.2 supports only the US English and Japanese versions of these operating systems. It does not support any other language versions. Set the default locale to US-English for the US-English version and Japanese for the Japanese version.
3. Install Solaris patches as required for the Solaris version you are using. See the “Required Solaris Patches for Routed WAN Management Solution” section on page 9.
4. To verify the file system: Enter `df -k` at the command prompt.

**Table 3 Minimum Server Requirements for Windows Systems**

Component	Minimum Requirement
Hardware	<ul style="list-style-type: none"> <li>• IBM PC-compatible computer with 550 MHz or faster Pentium III (dual processor required for hosting multiple management solutions)</li> <li>• Color monitor with video card capable of 256 colors or more</li> <li>• CD-ROM drive</li> <li>• 10BaseT or faster (10 Mbps or faster network connection)</li> </ul>
Software for Windows <sup>1</sup>	<ul style="list-style-type: none"> <li>• One of the following:               <ul style="list-style-type: none"> <li>– Windows 2000 Professional</li> <li>– Windows 2000 Server</li> <li>– Windows 2000 Advanced Server<sup>2</sup></li> </ul> </li> <li>• Service Pack 3<sup>3</sup></li> </ul>
Available memory (RAM)	<ul style="list-style-type: none"> <li>• 1 GB RAM minimum</li> </ul>
Available disk space	<ul style="list-style-type: none"> <li>• 40 GB minimum</li> <li>• 2 GB virtual memory</li> <li>• NTFS file system required<sup>4</sup></li> </ul>
Network Management System (NMS)	<ul style="list-style-type: none"> <li>• HP OpenView 6.2</li> <li>• NetView 6.0</li> <li>• NetView 7.1 will be supported by CiscoView, Resource Manager Essentials, and the Integration Utility</li> </ul>

1. CiscoWorks Common Services 2.2 supports only the US English and Japanese versions of these operating systems. It does not support any other language versions. Set the default locale to US-English for the US-English version and Japanese for the Japanese version.
2. This version of RWAN supports Windows 2000 Advanced Server *without* Terminal Services. Terminal Services must be turned off when you install RWAN.
3. To verify the Service Pack version you have installed, select **Start > Run**, then enter **winver**.
4. Do not install RWAN on a FAT file system. To verify that you are using NTFS: On the Windows desktop, double-click My Computer. Right-click the drive on which you plan to install RWAN and select **Properties** from the popup menu. The file system type appears in the General tab of the Properties dialog box.

**Table 4** *Minimum Client Hardware and Software Requirements*

<b>Component</b>	<b>Minimum Requirement</b>
Hardware/software	<ul style="list-style-type: none"> <li>• One of these systems:                             <ul style="list-style-type: none"> <li>– Sun UltraSPARC 10 with 333 MHz processor, running Solaris 2.7 or 2.8.</li> <li>– IBM PC-compatible computer with 300 MHz Pentium processor, running Windows XP Professional with Service Pack 1<sup>1</sup>, Windows 2000 Professional with Service Pack 2 or 3, or Windows 2000 Server with Service Pack 2 or 3.</li> </ul> </li> <li>• Color monitor with video card set to 256 colors.</li> </ul>
Available disk space	<ul style="list-style-type: none"> <li>• One of the following:                             <ul style="list-style-type: none"> <li>– For Solaris: 512 MB swap space</li> <li>– For Windows: 512 MB virtual memory</li> </ul> </li> </ul>
Available memory (RAM)	<ul style="list-style-type: none"> <li>• 256 MB RAM</li> </ul>

1. Be sure to install Service Pack 1 only. Do *not* install Service Pack 1a or later.

**Table 5** *Browser Requirements*

<b>Browser</b>	<b>Version<sup>1</sup></b>	<b>JVM<sup>2</sup></b>	<b>Platform</b>
Internet Explorer (recommended)	6.0 or 6.0 with Service Pack 1	5.1.3186 or later	Windows XP Professional or Windows 2000
Netscape Navigator	4.78 or 4.79	—	Windows XP Professional or Windows 2000
Netscape Navigator <sup>3</sup>	4.76	—	Solaris 2.7 or 2.8

1. To verify the browser version, select Help > About.

2. To verify the Java Virtual Machine (JVM) in Internet Explorer: Select View > Java Console. If Java Console is not listed, select Tools > Internet Options > Advanced. In the Microsoft VM section, select the Java Console option, then restart Internet Explorer. In Netscape Navigator, select Tools > Server > Java Console.

3. Use this version only if it has been downloaded from the Sun Microsystems site.

# Required Solaris Patches for Routed WAN Management Solution

Table 6 lists the Solaris patches required for RWAN 1.3.



**Note**

A warning message is displayed if obsolete Solaris patches are present on your system. Before running CiscoWorks Common Services 2.2, download and install the latest recommended patches from [www.sunsolve.sun.com](http://www.sunsolve.sun.com).

**Table 6**      *Solaris Patches for RWAN <sup>1</sup>*

<b>Operating System</b>	<b>Required</b>	<b>Recommended</b>
Solaris 2.7	106980-10	108376-03
	106327-05	112300-01
	107081-11	108301-02
	107636-03	108482-02
Solaris 2.8	111626-01	110951-01
	111327-02	110662-02
	110945-02	110615-01
	110934-01	110286-02
	110898-02	109324-02
	110700-01	111085-02
	109326-05	108964-06
	108827-30	
	108652-51	
	108528-18	
	108921-14	
108940-24		

1. To verify that these patches have been applied, enter `showrev -p` at the command prompt.

## Routed WAN Management Solution Port Usage

Table 7 lists the ports used by RWAN applications. Before installing RWAN, check etc/services on a Solaris server, or the documentation for other applications installed on a Windows server, for possible port conflicts. You can change the port usage for some RWAN applications during installation.

**Table 7** *RWAN 1.3 Port Usage*

<b>Protocol</b>	<b>Port</b>	<b>Service Name</b>	<b>Applications</b>	<b>Direction</b>
ICMP	-	Ping	Resource Manager Essentials	Server to Device
TCP	22	Secure Shell (SSH)	CiscoWorks Common Services, Resource Manager Essentials	Server to Device
TCP	23	Telnet	CiscoWorks Common Services, Resource Manager Essentials	Server to Device
TCP	25	Simple Mail Transfer Protocol (SMTP)	Resource Manager Essentials	Server Internal
TCP	80	HyperText Transfer Protocol (HTTP)	CiscoWorks Common Services, CiscoView	Client to Server
TCP	514	Remote Copy Protocol	CiscoWorks Common Services	Server to Device
TCP	514	rsh Daemon	Resource Manager Essentials	Server to Device
TCP	1683	Internet Inter-ORB Protocol (IIOP)	CiscoWorks Common Services, Access Control List Manager	Client to Server
TCP	1684	Internet Inter-ORB Protocol (IIOP)	CiscoWorks Common Services, Access Control List Manager	Server to Client
TCP	1741	CiscoWorks HTTP Protocol	CiscoWorks Common Services, CiscoView, Resource Manager Essentials	Client to Server
TCP	1742	SSL (HTTPS)	CiscoWorks Common Services, Resource Manager Essentials	Client to Server
TCP	1744	IPM web server	Internetwork Performance Monitor	Client to Server
TCP	1783	IIOP port for IPM gatekeeper	Internetwork Performance Monitor	Client to Server
TCP	1784	IIOP port for IPM gatekeeper	Internetwork Performance Monitor	Server to Client

**Table 7**      **RWAN 1.3 Port Usage (continued)**

<b>Protocol</b>	<b>Port</b>	<b>Service Name</b>	<b>Applications</b>	<b>Direction</b>
TCP	8088	HIOP	CiscoWorks Common Services, Access Control List Manager	Server to Client, Client to Server
TCP	9088	HIOP port for IPM gatekeeper	Internetwork Performance Monitor	Client to Server
TCP	9191	HIOP port for IPM gatekeeper	Internetwork Performance Monitor	Client to Server
TCP	9192	IIOOP port for IPM gatekeeper	Internetwork Performance Monitor	Client to Server
TCP	9193	IIOOP port for IPM gatekeeper	Internetwork Performance Monitor	Client to Server
TCP	9194	HIOP port for IPM gatekeeper	Internetwork Performance Monitor	Client to Server
TCP	10033	CMF Licensing	CiscoWorks Common Services	Server Internal
TCP	42340	CiscoWorks Daemon Manager - Tool for Server Processes	CiscoWorks Common Services	Server Internal
TCP	42343	JRun	CiscoWorks Common Services	Server Internal
TCP	42344	ANI HTTP Server	CiscoWorks Common Services	Server Internal
TCP	42351	Event Services Software (ESS) Listening (Alternate port is 44351/tcp)	CiscoWorks Common Services	Server Internal
TCP	42352	ESS HTTP (Alternate port is 44352/tcp)	CiscoWorks Common Services	Client to Server
TCP	42353	ESS Routing (Alternate port is 44352/tcp)	CiscoWorks Common Services	Server Internal
TCP	43441 <sup>1</sup>	CMF Database	CiscoWorks Common Services	Server Internal
TCP	43442 <sup>1</sup>	RME Database	Resource Manager Essentials	Server Internal
TCP	44341	IPM Server database	Internetwork Performance Monitor	Server Internal

**Table 7 RWAN 1.3 Port Usage (continued)**

<b>Protocol</b>	<b>Port</b>	<b>Service Name</b>	<b>Applications</b>	<b>Direction</b>
TCP	57860	JRun - JRun Server Manager Control Server	CiscoWorks Common Services	Server Internal
UDP	69	Trivial File Transfer Protocol (TFTP)	CiscoWorks Common Services, Resource Manager Essentials	Server to Device, Device to Server
UDP	161	Simple Network Management Protocol (SNMP)	CiscoWorks Common Services, CiscoView, Resource Manager Essentials	Server to Device, Device to Server
UDP	162	SNMP Traps (Standard Port)	CiscoWorks Common Services, Resource Manager Essentials	Server to Device, Device to Server
UDP	514	Syslog	CiscoWorks Common Services, Resource Manager Essentials	Device to Server
UDP	42342	OSAGENT	CiscoWorks Common Services, Resource Manager Essentials	Server Internal (Common Services); RSAC to Server via OSAGENT (RME)
UDP	42350	Event Services Software (ESS) (Alternate port is 44350/udp)	CiscoWorks Common Services	Server Internal
UDP	44342	IPM Naming server	Internetwork Performance Monitor	Client to Server

1. All TCP ports in the range 43441-43459 are checked for availability during CiscoWorks Common Services 2.2 installation on Solaris. However, only the ports specified in this table are actually used by the installed products.

## 4 Installation Paths

If you already have another CiscoWorks product installed on your server, you may need to follow a different installation path, or upgrade some components, before you install RWAN 1.3. Review the information in Table 8 to determine what software is required for the RWAN 1.3 components to function properly.

**Table 8**      **Recommended Installation Paths**

<b>If you are installing Routed WAN Management Solution (RWAN) on a system that has...</b>	<b>Then do this</b>
No other CiscoWorks products installed	Install RWAN 1.3 using the instructions in this <i>Quick Start Guide</i> .
CiscoWorks LAN Management Solution (LMS) Release 2.1 or 2.0 installed	First upgrade to LMS 2.2. Then install Access Control List Manager 1.5 and Internetwork Performance Monitor 2.5 using the instructions in this <i>Quick Start Guide</i> .

## 5 Upgrade Options

Table 9 describes the recommended sequence for upgrading individual Routed WAN Management Solution (RWAN) component applications when prior versions of those components are already installed on your system.



**Note** For specific upgrading and installing instructions, see the installation documentation provided with each of the RWAN components (see the “Related Documentation” section on page 29).

**Table 9** *Recommended Upgrade Sequence*

<b>If the following product is already installed...</b>	<b>And one or more of the following products are also already installed...</b>	<b>You should upgrade in the following order...</b>
CD One, 5th or 4th Edition	—	Common Services 2.2 (with CiscoView 5.5)
Resource Manager Essentials 3.4 or 3.3	<ul style="list-style-type: none"> <li>• CD One, 5th or 4th Edition</li> </ul>	<ul style="list-style-type: none"> <li>• Common Services 2.2 (with CiscoView 5.5)</li> <li>• Resource Manager Essentials 3.5</li> </ul>
Access Control List Manager 1.4 or 1.3	<ul style="list-style-type: none"> <li>• CD One, 5th or 4th Edition</li> </ul>	<ul style="list-style-type: none"> <li>• Common Services 2.2 (with CiscoView 5.5)</li> <li>• Access Control List Manager 1.5</li> </ul>
Internetwork Performance Monitor 2.4 or 2.3	<ul style="list-style-type: none"> <li>• CD One, 5th or 4th Edition</li> </ul>	<ul style="list-style-type: none"> <li>• Common Services 2.2 (with CiscoView 5.5)</li> <li>• Internetwork Performance Monitor 2.5</li> </ul>

## 6 Installing RWAN 1.3

To install an application, log in as root (on Solaris) or local administrator (on Windows) on the system on which you want to install the application.

Before you begin:

- You must check the factors to be considered before installing RWAN 1.3. See the “Prerequisites” section, below.
- Locate the PDF versions of the installation guides for each RWAN application. Print them or have them open for viewing while you perform the installation. For details on locating the installation guides, see the application installation sections of this *Quick Start Guide*.
- Close all open or active programs. Do not run other programs during the installation process.
- Be aware of the following:
  - You must install Common Services 2.2 before installing any other applications.
  - Once you have installed Common Services, you must install each RWAN 1.3 application separately. While it is strongly recommended that you follow the order given in the “Order of Installation” section on page 17, you can install Resource Manager Essentials, Access Control List Manager, and Internetwork Performance Monitor in any order.

### Prerequisites

This section describes the factors that you should consider before installing RWAN 1.3:

Ensure you complete the following tasks before installation:

- 
- Step 1** Install required operating system upgrades. See the “Server and Client System Requirements” section on page 5
  - Step 2** Install required service packs. See the “Server and Client System Requirements” section on page 5.
  - Step 3** Read the “Important Installation Notes” section on page 16.
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## Important Installation Notes

This section contains important information that you should read before you begin installation:

- To ensure that you retain the latest device support and bug fixes for Resource Manager Essentials, you must install the latest Incremental Device Updates (IDU) after installing the application. You can download the latest IDU from <http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-rme>.
- With the exception of Internetwork Performance Monitor (see the “Installing Internetwork Performance Monitor 2.5” section on page 25), RWAN applications are installed in the following default directories:
  - On Solaris: /opt/CSCOPx
  - On Windows: \\Program Files\CSCOPx

If you select another directory during installation, the application is installed in that directory.

- On Solaris, if you select an installation directory different from the default, the /opt/CSCOPx directory is created as link to the directory you selected. If you remove the link after installation, the product might malfunction.
- If errors occurred during installation, check the installation log file /var/tmp/ciscoininstall.log.
- You can press **Ctrl-C** (on Solaris) or click **Cancel** (on Windows) at any time to end the installation. However, any changes to your system (for example, installation of new files or changes to system files) will not be undone.
- If you want to use secure access between the client browser and the management server, you can enable or disable SSL from the CiscoWorks desktop.

If SSL is enabled:

- The URL begins with https instead of http to indicate a secure connection.
- The port number succeeding the server name is 1742 instead of 1741.

You cannot enable SSL on the CiscoWorks Server if there is an application that is not SSL-compliant installed on the Server. All of the RWAN applications are SSL compliant.

For help with SSL, consult the *User Guide for Common Services 2.2*. You can find this document:

- On the CiscoWorks Common Services 2.2 product CD, in Adobe Acrobat PDF form.  
From the CD's root directory, look for \\Documentation\UserGuideForCommonServices.pdf
- On Cisco.com, in both HTML and PDF form.

From your [www.cisco.com](http://www.cisco.com) home page, select **Products and Services > Network Management CiscoWorks > CiscoWorks Common Services > Technical Documentation > User Guide for Common Services 2.2**.

- If your CiscoWorks Management Server is integrated with any Network Management Station (NMS) in your network using the integration utility (Network Management Integration Module), you must perform the integration every time you enable or disable SSL in the CiscoWorks Common Services 2.2 Server. You must do this to update the application registration in the NMS.

For help with NMS integration, consult the section “Integrating with Third-Party Vendors” in *Using CiscoView 5.5*. You can find this document:

- On the CiscoWorks Common Services 2.2 product CD, in Adobe Acrobat PDF form.

From the CD's root directory, look for \Documentation\ug\_ciscoview.pdf

- On Cisco.com, in both HTML and PDF form.

From your [www.cisco.com](http://www.cisco.com) home page, select **Products and Services > Network Management CiscoWorks > CiscoWorks Common Services > Technical Documentation > Using CiscoView 5.5**

- Network inconsistencies can cause installation errors while installing from a remote mount point.
- Applications not supported by CiscoWorks Common Services 2.2 are disabled during upgrade.

## Order of Installation

Install each RWAN 1.3 application in the following order:

- 
- Step 1** Install CiscoWorks Common Services 2.2 with CiscoView 5.5. See the “Installing CiscoWorks Common Services 2.2” section on page 18.
  - Step 2** Install Resource Manager Essentials 3.5. See the “Installing Resource Manager Essentials 3.5” section on page 21.
  - Step 3** Install Access Control List Manager 1.5. See the “Installing Access Control List Manager 1.5” section on page 23.
  - Step 4** Install Internetwork Performance Monitor 2.5. See the “Installing Internetwork Performance Monitor 2.5” section on page 25.
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## 7 Installing CiscoWorks Common Services 2.2

Installing CiscoWorks Common Services takes approximately 40 minutes.

Before you begin:

- Verify that the server on which you intend to install Common Services 2.2 with CiscoView 5.5 meets the requirements listed in the tables in the “Server and Client System Requirements” section on page 5.
- If the server has other Cisco products that use CD One or CiscoWorks already installed, you must follow the recommended upgrade actions described in the “Installation Paths” section on page 13.
- If the server has CD One already installed, you must follow the recommended upgrade actions described in the “Upgrade Options” section on page 14.

### Installing CiscoWorks Common Services 2.2 on Solaris

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- Step 1** Locate *Installation and Setup Guide for Common Services 2.2 (includes CiscoView 5.5) on Solaris*. You can find this document:
- On the installation CD, in Adobe Acrobat PDF form.  
From the CD's root directory, look for  
`/Documentation/InstallSetupGuideForComSerCVSol.pdf`.
  - On Cisco.com, in both HTML and PDF form.  
From your [www.cisco.com](http://www.cisco.com) home page, select: **Products and Services > Network Management CiscoWorks > CiscoWorks Common Services > Technical Documentation > Installation and Setup Guide for Common Services 2.2 (includes CiscoView 5.5) on Solaris**.
- Step 2** In Chapter 2, “Installing CiscoWorks Common Services”, read the section “Preparing to Install CiscoWorks Common Services”. As explained in that section, be sure you:
- Have root access to the server on which you plan to install CiscoWorks Common Services.
  - Know the server's IP address.
  - Verify that the ports that CiscoWorks Common Services uses will not create conflicts with existing applications (see Table 7 on page 10).
- Step 3** Determine the password that you want the CiscoWorks Common Services administrator to use. For rules to follow when forming passwords, see the section “Admin Password” in Appendix C, “Password Information”.

**Step 4** Follow the steps in the section “Performing a New Installation”, in Chapter 2, “Installing CiscoWorks Common Services”.

We recommend that you select an Express install. Select another install option only if you want to specify a destination other than /opt/CSCOPx. If you select a Custom install, you must install all products. Otherwise, RWAN will not function correctly.

**Step 5** After you complete installing, verify that CiscoWorks Common Services was installed correctly by:

- a. Configuring the CiscoWorks server.
- b. Configuring your client.
- c. Accessing the CiscoWorks navigation tree.

To perform these tasks, follow the steps in Chapter 3, “Preparing to Use CiscoWorks”.

If you receive error messages during the installation, or cannot access the desktop, see Appendix A, “Troubleshooting the Installation”.

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## Installing CiscoWorks Common Services 2.2 on Windows

Before you begin:

- If you are using Windows 2000, do not use a cloned version of the Administrator account.
- On Windows, when prompted to replace a newer file with an older file, you should always keep the newer file.
- On Windows, do not select an encrypted directory for installation. CiscoWorks Common Services 2.2 does not support directory encryption.

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**Step 1** Locate *Installation and Setup Guide for Common Services 2.2 (includes CiscoView 5.5) on Windows*. You can find this document:

- On the installation CD, in Adobe Acrobat PDF form.

From the CD's root directory, look for

\\Documentation\InstallSetupGuideForComSerCVWin.pdf.

- On Cisco.com, in both HTML and PDF form.

From your www.cisco.com home page, select **Products and Services > Network Management CiscoWorks > CiscoWorks Common Services > Technical Documentation > Installation and Setup Guide for Common Services 2.2 (includes CiscoView 5.5) on Windows**.

- Step 2** In Chapter 2, “Installing CiscoWorks Common Services”, read the section “Preparing to Install CiscoWorks Common Services”. As explained in that section, be sure you have:
- Verified that the server on which you plan to install CiscoWorks Common Services is not configured as a domain controller, does not use the FAT file system, and does not have Windows XP installed.
  - Installed all of the correct Windows software on the server.
  - Verified that the ports CiscoWorks Common Services uses will not create conflicts with existing applications (see Table 7 on page 10).

**Step 3** Determine the password that you want the CiscoWorks Common Services administrator to use. For rules to follow when forming passwords, see the section “Admin Password” in Appendix B, “Password Information”.

**Step 4** Follow the steps in the section “Performing a New Installation”, in Chapter 2, “Installing CiscoWorks Common Services”.

We recommend that you select an Express install. Select another install option only if you want to specify a destination directory other than //Program Files/CSCOpX. If you select a Custom install, you must install all products. Otherwise, RWAN will not function correctly.

**Step 5** After you complete installing, verify that CiscoWorks Common Services was installed correctly by:

- a. Configuring your client.
- b. Accessing the CiscoWorks navigation tree.

To perform these tasks, follow the steps in Chapter 3, “Preparing to Use CiscoWorks Common Services”.

If you receive error messages during the installation, or cannot access the desktop, see Appendix A, “Troubleshooting the Installation”.

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## 8 Installing Resource Manager Essentials 3.5

Installing Resource Manager Essentials takes approximately 30 minutes.



### Caution

Before installing Resource Manager Essentials, be sure you have installed Common Services. See the “Installing CiscoWorks Common Services 2.2” section on page 18.

## Installing Resource Manager Essentials 3.5 on Solaris

**Step 1** Locate *Installation and Setup Guide for Resource Manager Essentials on Solaris, Software Release 3.5*. You can find this document:

- On the product CD, in Adobe Acrobat PDF form.

From the CD's root directory, look for  
/Documentation/InstallSetupGuideForEssentialsSol.pdf.

- On Cisco.com, in both HTML and PDF form.

From your [www.cisco.com](http://www.cisco.com) home page, select **Products and Services > Network Management CiscoWorks > CiscoWorks Resource Manager Essentials > Technical Documentation > Installation and Setup Guide for Resource Manager Essentials on Solaris, Software Release 3.5**.

**Step 2** Follow the steps in the section “Performing a New Installation”, in Chapter 1, “Installing Essentials”.

We recommend that you change the Resource Manager Essentials database password when prompted to do so.

**Step 3** After you complete installing, verify that Resource Manager Essentials was installed correctly, as follows:

- a. Access the CiscoWorks desktop.
- b. Select **System Configuration > About the Server > Applications and Versions**. The CiscoWorks About the Server page appears.
- c. Check the Applications Installed table. Resource Manager Essentials should be listed as installed and enabled on your system.

If you receive error messages during the installation, or cannot access the desktop, see Appendix A, “Troubleshooting the Installation”.

To ensure that you retain the latest device support and bug fixes, you must install the latest Incremental Device Update (IDU) for Resource Manager Essentials 3.5. You can download the latest IDU from <http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-rme>. For details, see the *Installation and Setup Guide for Resource Manager Essentials on Solaris, Software Release 3.5*.

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## Installing Resource Manager Essentials 3.5 on Windows

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**Step 1** Locate *Installation and Setup Guide for Resource Manager Essentials on Windows, Software Release 3.5*. You can find this document:

- On the product CD, in Adobe Acrobat PDF form.  
From the CD's root directory, look for  
\\Documentation\InstallSetupGuideForEssentialsWin.pdf.
- On Cisco.com, in both HTML and PDF form.

From your [www.cisco.com](http://www.cisco.com) home page, select **Products and Services > Network Management CiscoWorks > CiscoWorks Resource Manager Essentials > Technical Documentation > Installation and Setup Guide for Resource Manager Essentials on Windows, Software Release 3.5**.

**Step 2** Follow the steps in the section “Performing a New Installation”, in Chapter 1, “Installing Essentials”.

We recommend that you change the Resource Manager Essentials database password when prompted to do so.

**Step 3** After you complete installing, verify that Resource Manager Essentials was installed correctly, as follows:

- a. Access the CiscoWorks desktop.
- b. Select **System Configuration > About the Server > Applications and Versions**. The CiscoWorks About the Server page appears.
- c. Check the Applications Installed table. Resource Manager Essentials should be listed as installed and enabled on your system.

If you receive error messages during the installation, or cannot access the server, see Appendix A, “Troubleshooting the Installation”.

To ensure that you retain the latest device support and bug fixes, you must install the latest Incremental Device Update (IDU) for Resource Manager Essentials 3.5. You can download the latest IDU from <http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-rme>. For details, see the *Installation and Setup Guide for Resource Manager Essentials on Windows, Software Release 3.5*.

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## 9 Installing Access Control List Manager 1.5

Installing Access Control List Manager takes approximately seven minutes.



### Caution

Before installing Access Control List Manager, be sure you have installed Common Services. See the “Installing CiscoWorks Common Services 2.2” section on page 18.

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## Installing Access Control List Manager 1.5 on Solaris

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**Step 1** Locate *Installation Guide for ACL Manager 1.5*. You can find this document:

- On the product CD, in Adobe Acrobat PDF form.  
From the CD's root directory, look for /Documentation/InstallGuideforACLManager.pdf.
- On Cisco.com, in both HTML and PDF form.  
From your [www.cisco.com](http://www.cisco.com) home page, select **Products and Services > Network Management CiscoWorks > CiscoWorks Access Control List Manager > Technical Documentation > Installation Guide for ACL Manager 1.5**.

**Step 2** In Chapter 1, “Installing ACL Manager”, read the section “System Requirements for ACL Manager”. As explained in that section, be sure that:

- You have superuser access to the server on which you plan to install ACL Manager.
- The server has Java Plug-in version 1.3.1 installed.
- You have verified that the ports ACL Manager uses will not create conflicts with existing applications (see Table 7 on page 10).

If the server has multiple Network Interface Cards with different IP addresses, you must modify the CiscoWorks gatekeeper file. To perform this task, follow the instructions in the section “ACL Manager on Multi-homed Machines” in Chapter 1.

**Step 3** Follow the steps in the section “Installing ACL Manager on Solaris”, in Chapter 1.

- Step 4** After you complete installing, verify that ACL Manager was installed correctly, as follows:
- a. Access the CiscoWorks desktop.
  - b. Select **System Configuration > About the Server > Applications and Versions**. The CiscoWorks About the Server page appears.
  - c. Check the Applications Installed table. ACL Manager should be listed as installed and enabled on your system.

If you receive error messages during the installation, or cannot access the desktop, examine the installation log file in `/var/tmp/ciscoinstall.log`.

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## Installing Access Control List Manager 1.5 on Windows

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**Step 1** Locate *Installation Guide for ACL Manager 1.5*. You can find this document:

- On the product CD, in Adobe Acrobat PDF form.  
From the CD's root directory, look for  
`\\Documentation\InstallGuideforACLManager.pdf`.
- On Cisco.com, in both HTML and PDF form.  
From your `www.cisco.com` home page, select **Products and Services > Network Management CiscoWorks > CiscoWorks Access Control List Manager > Technical Documentation > Installation Guide for ACL Manager 1.5**.

**Step 2** In Chapter 1, “Installing ACL Manager”, read the section “System Requirements for ACL Manager”. As explained in that section, be sure that:

- You have administrator access to the server on which you plan to install ACL Manager.
- The server has Java Plug-in version 1.3.1 installed.
- You have verified that the ports that ACL Manager uses will not create conflicts with existing applications (see Table 7 on page 10).

If the server has multiple Network Interface Cards with different IP addresses, you must modify the CiscoWorks gatekeeper file. To perform this task, follow the instructions in the section “ACL Manager on Multi-homed Machines” in Chapter 1.

- Step 3** Follow the steps in the section “Installing ACL Manager on Windows”, in Chapter 1.
- Step 4** After you complete installing, verify that ACL Manager was installed correctly, as follows:
- a. Access the CiscoWorks desktop.
  - b. Select **System Configuration > About the Server > Applications and Versions**. The CiscoWorks About the Server page appears.
  - c. Check the Applications Installed table. ACL Manager should be listed as installed and enabled on your system.

If you receive error messages during the installation, or cannot access the desktop, examine the installation log file in `\var\tmp\ciscoininstall.log`.

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## 10 Installing Internetwork Performance Monitor 2.5

Installing Internetwork Performance Monitor takes approximately 20 minutes. The installation script installs Internetwork Performance Monitor in the following default locations:

- On Solaris: `/opt/CSCOipm`, `/opt/CSCOcwbS`, and `/opt/CSCOipmClient`
- On Windows: `\\Program Files\Internetwork Performance Monitor`.



### Caution

Before installing Internetwork Performance Monitor, be sure you have installed Common Services. See the “Installing CiscoWorks Common Services 2.2” section on page 18.

---

## Installing Internetwork Performance Monitor 2.5 on Solaris

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- Step 1** Locate *Installation Guide for Internetwork Performance Monitor, Software Release 2.5*. You can find this document:
- On the product CD, in Adobe Acrobat PDF form.  
From the CD's root directory, look for `/docs/ipmig.pdf`.
  - On Cisco.com, in both HTML and PDF form.  
From your `www.cisco.com` home page, select **Products and Services > Network Management CiscoWorks > CiscoWorks Internetwork Performance Monitor > Technical Documentation > Installation Guide for Internetwork Performance Monitor, Software Release 2.5**.

- Step 2** Read Chapter 2, “Preparing to Install IPM”. As explained in that chapter, be sure that:
- Your routers are running Cisco IOS software Release 11.2(18) or later, including the SA Agent feature. For help, see the section “Cisco IOS Software Requirements” in Chapter 2.
  - Your routers support SNMP and can send SA Agent traps. For help, see the section “Configuring Routers to Support SNMP and Send SA Agent-Related Traps” in Chapter 2.
  - You have root access to the server on which you plan to install Internetwork Performance Monitor.
  - You have verified that the ports that Internetwork Performance Monitor uses will not create conflicts with existing applications (see Table 7 on page 10).
  - You know the location of the Netscape Communicator executable (if it is not in the default location). You will be prompted for this during installation.
- Step 3** Follow the steps in Chapter 4, “Installing IPM on Solaris”, in the section “Quick Start for Solaris”.
- We recommend that you select an Express install. Select another install option only if you want to specify a destination other than /opt/CSCOipm.
- Step 4** After you complete installing, verify that Internetwork Performance Monitor was correctly installed.
- To perform this task, follow the steps in the section “Verifying IPM Installation on Solaris” in Chapter 4.
- 

## Installing Internetwork Performance Monitor 2.5 on Windows

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- Step 1** Locate *Installation Guide for Internetwork Performance Monitor, Software Release 2.5*. You can find this document:
- On the product CD, in Adobe Acrobat PDF form.  
From the CD's root directory, look for \\docs\ipmig.pdf.
  - On Cisco.com, in both HTML and PDF form.

From your [www.cisco.com](http://www.cisco.com) home page, select **Products and Services > Network Management CiscoWorks > CiscoWorks Internetwork Performance Monitor > Technical Documentation > Installation Guides Books > Installation Guide for Internetwork Performance Monitor, Software Release 2.5**.

- Step 2** Read Chapter 2, “Preparing to Install IPM”. As explained in that chapter, be sure that:
- Your routers are running Cisco IOS software Release 11.2(18) or later, including the SA Agent feature. For help, see the section “Cisco IOS Software Requirements” in Chapter 2.
  - Your routers support SNMP and can send SA Agent traps. For help, see the section “Configuring Routers to Support SNMP and Send SA Agent-Related Traps” in Chapter 2.
  - You have administrator access to the server on which you plan to install Internetwork Performance Monitor.
  - You have verified that the ports that Internetwork Performance Monitor uses will not create conflicts with existing applications (see Table 7 on page 10).
- Step 3** Follow the steps in Chapter 4, “Installing IPM on Windows”, in the section “Quick Start for Windows”.
- Step 4** After you complete installing, verify that Internetwork Performance Monitor was correctly installed.
- To perform this task, follow the steps in the section “Verifying IPM Installation on Windows” in Chapter 4.
- 

## 11 Post-Installation Tasks

After you have installed the required products and verified the installations, you must:

- Get updated device support and defect fixes by installing the latest Incremental Device Update (IDU) for Resource Manager Essentials 3.5. You can download this IDU from <http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-rme>.
- Add or update the devices in the inventory (see the “Adding or Updating Devices in Inventory” section on page 28).

You can uninstall RWAN using the instructions in the application installation guides. Uninstall each application in the reverse order of its installation. Do *not* uninstall Common Services 2.2 before uninstalling applications dependent on it.

## Adding or Updating Devices in Inventory

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**Step 1** Verify that the devices you want to monitor have the correct Cisco IOS version.

**Step 2** Log in to your CiscoWorks Common Services server.

The CiscoWorks Common Services Server desktop appears.

**Step 3** To add or update a device, select one of the following:

- **Resource Manager Essentials>Administration>Inventory>Add Devices**
- **Resource Manager Essentials>Administration>Inventory>Update Inventory.**

The Add a Single Device or the Update Device dialog box appears.

**Step 4** Enter the access information and annotations for at least one device.

You must fill in the Device Name field with the device name or IP address. All other fields are optional. For more information, see the Inventory online help.

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## 12 Where to Go Next

After you have installed the required products, you are ready to manage your routed WAN environment. For more information, see the following User Guides for the RWAN component applications:

- *Using CiscoView 5.5*
- *User Guide for CiscoWorks Common Services 2.2 (Includes CiscoView 5.5)*
- *User Guide for Resource Manager Essentials, Software Release 3.5*
- *User Guide for ACL Manager, Software Release 1.5*
- *User Guide for Internetwork Performance Monitor, Software Release 2.5*

You can access these documents:

- In PDF in the Documentation directory on the RWAN product CD.
- In HTML and PDF on Cisco.com:
  - a. Log in to Cisco.com.
  - b. Select **Products and Services>Network Management CiscoWorks >CiscoWorks Routed WAN Management Solution.**
  - c. Select the appropriate RWAN application.
  - d. Select **Technical Documentation > User Guides Books.**
- From the online help integrated into each RWAN application.

# 13 Related Documentation

For information about installing, troubleshooting, and using the products within the Routed WAN Management Solution, see the sources of information described in Table 10.

- To view documents in Adobe Portable Document Format (PDF), Adobe Acrobat 4.0 or later is required.
- To view documents on Cisco.com, log on to your Cisco.com home page, then select **Products and Services > Network Management CiscoWorks > CiscoWorks Routed WAN Management Solution > Versions and Options > CiscoWorks Routed WAN Management Solution 1.3.**

**Table 10**    *Related Documentation*

<b>To learn more about...</b>	<b>See this document</b>	<b>In the product package?</b>	<b>On the product CD?¹</b>	<b>On Cisco.com?</b>	<b>On the Cisco Doc. CD?</b>	<b>In the online help?</b>
The known product bugs (DDTs)	<i>Release Notes for Common Services 2.2 (Includes CiscoView 5.5) on Solaris</i>  <i>Release Notes for Common Services 2.2 (Includes CiscoView 5.5) on Windows 2000</i>  <i>Release Notes for Resource Manager Essentials on Solaris, Software Release 3.5</i>  <i>Release Notes for Resource Manager Essentials on Windows, Software Release 3.5</i>  <i>Release Notes for ACL Manager 1.5 on Solaris and Windows</i>  <i>Release Notes for Internetwork Performance Monitor, Software Release 2.5</i>	Yes	No	Yes	Yes (PDF, HTML)	No

**Table 10 Related Documentation (continued)**

<b>To learn more about...</b>	<b>See this document</b>	<b>In the product package?</b>	<b>On the product CD?<sup>1</sup></b>	<b>On Cisco.com?</b>	<b>On the Cisco Doc. CD?</b>	<b>In the online help?</b>
Performing a custom installation	<p><i>Installation and Setup Guide for Common Services 2.2 (Includes CiscoView 5.5) on Solaris</i></p> <p><i>Installation and Setup Guide for Common Services 2.2 (Includes CiscoView 5.5) on Windows 2000</i></p> <p><i>Installation and Setup Guide for Resource Manager Essentials on Solaris, Software Release 3.5</i></p> <p><i>Installation and Setup Guide for Resource Manager Essentials on Windows, Software Release 3.5</i></p> <p><i>Installation Guide for ACL Manager 1.5</i></p> <p><i>Installation Guide for Internetwork Performance Monitor, Software Release 2.5</i></p>	No	Yes	Yes	Yes (PDF, HTML)	No

**Table 10 Related Documentation (continued)**

<b>To learn more about...</b>	<b>See this document</b>	<b>In the product package?</b>	<b>On the product CD?<sup>1</sup></b>	<b>On Cisco.com?</b>	<b>On the Cisco Doc. CD?</b>	<b>In the online help?</b>
Features, tasks, and troubleshooting	<i>Using CiscoView 5.5</i> (DOC-7815219=) <i>User Guide for Common Services 2.2</i> (DOC-7815301=) <i>User Guide for Resource Manager Essentials, Software Release 3.5</i> (DOC-7814810=) <i>User Guide for ACL Manager, Software Release 1.5</i> (DOC-7815202=) <i>User Guide for Internetwork Performance Monitor, Software Release 2.5</i> (DOC-7815208=)	No	Yes	Yes	Yes	Yes <sup>2</sup>
Device Support	<i>Supported Devices Table for Resource Manager Essentials 3.5<sup>3</sup></i>	No	No	Yes	No	No

1. Provided as PDF in the Documentation directory (for Internetwork Performance Monitor, check the docs directory).
2. From the CiscoWorks desktop, click Help.
3. To view the document on Cisco.com, log on to your Cisco.com home page, then select **Products and Services > Network Management CiscoWorks > CiscoWorks Resource Manager Essentials > Technical Documentation > Device Support Tables**.



**Note**

Although every effort has been made to validate the accuracy of the information in the printed and electronic documentation, you should also review the documentation on Cisco.com for any updates.

## Obtaining Documentation

Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco web sites can be accessed from this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

Registered Cisco.com users can order the Documentation CD-ROM (product number DOC-CONDOCCD=) through the online Subscription Store:

<http://www.cisco.com/go/subscription>

## Ordering Documentation

You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:

<http://www.cisco.com/en/US/partner/ordering/index.shtml>

- Registered Cisco.com users can order the Documentation CD-ROM (Customer Order Number DOC-CONDOCCD=) through the online Subscription Store:

<http://www.cisco.com/go/subscription>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, U.S.A.) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

## Documentation Feedback

You can submit comments electronically on Cisco.com. On the Cisco Documentation home page, click **Feedback** at the top of the page.

You can email your comments to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit your comments by mail by using the response card behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Obtaining Technical Assistance

Cisco provides Cisco.com, which includes the Cisco Technical Assistance Center (TAC) Website, as a starting point for all technical assistance. Customers and partners can obtain online documentation, troubleshooting tips, and sample configurations from the Cisco TAC website. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC website, including TAC tools and utilities.

### Cisco.com

Cisco.com offers a suite of interactive, networked services that let you access Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

- Cisco.com provides a broad range of features and services to help you with these tasks:
- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

To obtain customized information and service, you can self-register on Cisco.com at this URL:

<http://www.cisco.com>

## Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two levels of support are available: the Cisco TAC website and the Cisco TAC Escalation Center. The avenue of support that you choose depends on the priority of the problem and the conditions stated in service contracts, when applicable.

We categorize Cisco TAC inquiries according to urgency:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

### Cisco TAC Website

You can use the Cisco TAC website to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC website, go to this URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC website. Some services on the Cisco TAC website require a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

<http://tools.cisco.com/RPF/register/register.do>

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC website, you can open a case online at this URL:

<http://www.cisco.com/en/US/support/index.html>

If you have Internet access, we recommend that you open P3 and P4 cases through the Cisco TAC website so that you can describe the situation in your own words and attach any necessary files.

### Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:  
<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems as well as ordering and customer support services. Access the *Cisco Product Catalog* at this URL:  
[http://www.cisco.com/en/US/products/products\\_catalog\\_links\\_launch.html](http://www.cisco.com/en/US/products/products_catalog_links_launch.html)
- Cisco Press publishes a wide range of networking publications. Cisco suggests these titles for new and experienced users: *Internetworking Terms and Acronyms Dictionary*, *Internetworking Technology Handbook*, *Internetworking Troubleshooting Guide*, and the *Internetworking Design Guide*. For current Cisco Press titles and other information, go to Cisco Press online at this URL:  
<http://www.ciscopress.com>
- *Packet* magazine is the Cisco monthly periodical that provides industry professionals with the latest information about the field of networking. You can access *Packet* magazine at this URL:  
[http://www.cisco.com/en/US/about/ac123/ac114/about\\_cisco\\_packet\\_magazine.html](http://www.cisco.com/en/US/about/ac123/ac114/about_cisco_packet_magazine.html)
- *iQ Magazine* is the Cisco monthly periodical that provides business leaders and decision makers with the latest information about the networking industry. You can access *iQ Magazine* at this URL:  
[http://business.cisco.com/prod/tree.taf%3fasset\\_id=44699&public\\_view=true&kbns=1.html](http://business.cisco.com/prod/tree.taf%3fasset_id=44699&public_view=true&kbns=1.html)
- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in the design, development, and operation of public and private internets and intranets. You can access the *Internet Protocol Journal* at this URL:  
[http://www.cisco.com/en/US/about/ac123/ac147/about\\_cisco\\_the\\_internet\\_protocol\\_journal.html](http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html)
- Training—Cisco offers world-class networking training, with current offerings in network training listed at this URL:  
[http://www.cisco.com/en/US/learning/l31/learning\\_recommended\\_training\\_list.html](http://www.cisco.com/en/US/learning/l31/learning_recommended_training_list.html)

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