



# **Installation and Setup Guide for CiscoWorks Common Services (Includes CiscoView 5.5) on Solaris**

Software Release 2.2  
CiscoWorks

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## Preface

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This guide describes the system and client requirements, installation procedures, and troubleshooting suggestions for the CiscoWorks Common Services software.

## Audience

This guide is for anyone who installs, configures, verifies, and uses CiscoWorks Common Services software. Network administrators or operators should have the following skills:

- Basic Solaris system administrator skills
- Basic network management skills

## Conventions

This document uses the following conventions:

Item	Convention
Commands and keywords	<b>boldface font</b>
Variables for which you supply values	<i>italic font</i>
Displayed session and system information	screen font
Information you enter	<b>boldface screen font</b>

Item	Convention
Variables you enter	<i>italic screen font</i>
Menu items and button names	<b>boldface font</b>
Selecting a menu item in paragraphs	<b>Option &gt; Network Preferences</b>
Seleting a menu item in tables	Option > Network Preferences

**Note**

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.

**Caution**

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

# Product Documentation


**Note**

We sometimes update the printed and electronic documentation after original publication. Therefore, you should review the documentation on Cisco.com for the latest updates.

[Table 1](#) describes the product documentation that is available.

**Table 1**    **Product Documentation**

Document Title	Available Formats
<i>Release Notes for CiscoWorks Common Services 2.2 (Includes CiscoView 5.5) on Solaris</i>	<ul style="list-style-type: none"> <li>Printed document that was included with the product.</li> <li>On Cisco.com at: <a href="http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000_d/comser22/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000_d/comser22/index.htm</a></li> </ul>
<i>Installation and Setup Guide for Common Services (Includes CiscoView) on Solaris</i>	<ul style="list-style-type: none"> <li>PDF on the product CD-ROM.</li> <li>On Cisco.com at: <a href="http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000_d/comser22/ig_solcv/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000_d/comser22/ig_solcv/index.htm</a></li> <li>Printed document available by order (part number DOC-7815431=).<sup>1</sup></li> </ul>
<i>User Guide for CiscoWorks Common Services</i>	<ul style="list-style-type: none"> <li>PDF on the product CD-ROM.</li> <li>On Cisco.com at: <a href="http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000_d/comser22/usrguide/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000_d/comser22/usrguide/index.htm</a></li> <li>Printed document available by order (part number DOC-7815301=).<sup>1</sup></li> </ul>
Context-sensitive online help	<ul style="list-style-type: none"> <li>Select an option from the navigation tree, then click <b>Help</b>.</li> <li>Click the Help button in the dialog box.</li> </ul>

1. See the “[Obtaining Documentation](#)” section on page xi.

# Related Documentation


**Note**

We sometimes update the printed and electronic documentation after original publication. Therefore, you should review the documentation on Cisco.com for the latest updates.

[Table 2](#) describes the additional documentation that is available.

**Table 2** *Related Documentation*

Document Title	Available Formats
<i>User Guide for CiscoView 5.5</i>	<ul style="list-style-type: none"> <li>On Cisco.com at:  <a href="http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000_d/comser22/use_view/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/cw2000_d/comser22/use_view/index.htm</a> </li> <li>Printed document available by order (part number DOC-7815219=).<sup>1</sup></li> </ul>

# 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 websites 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 regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

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[http://www.cisco.com/en/US/partner/ordering/ordering\\_place\\_order\\_ordering\\_tool\\_launch.html](http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html)

All users can order monthly or quarterly subscriptions 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>

- 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

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

You can submit comments by using the response card (if present) 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

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

## Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available: the Cisco TAC website and the Cisco TAC Escalation Center. The type 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. There is little or no impact to your business operations.
- Priority level 3 (P3)—Operational performance of the network is impaired, but most business operations remain functional. You and Cisco are willing to commit resources during normal business hours to restore service to satisfactory levels.
- Priority level 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively impacted by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.
- Priority level 1 (P1)—An existing network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

## Cisco TAC Website

The Cisco TAC website provides online documents and tools to help troubleshoot and resolve technical issues with Cisco products and technologies. 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/tac/caseopen>

If you have Internet access, we recommend that you open P3 and P4 cases online so that you can fully describe the situation 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 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 quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access *Packet* magazine at this URL:

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

- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

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

- Internet Protocol Journal is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating 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. Current offerings in network training are listed at this URL:

[http://www.cisco.com/en/US/learning/le31/learning\\_recommended\\_training\\_list.html](http://www.cisco.com/en/US/learning/le31/learning_recommended_training_list.html)



# Prerequisites

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This chapter describes the factors that you should consider before installing CiscoWorks Common Services on a Solaris system. It contains:

- [Product Overview](#)
- [Server Requirements](#)
- [Client Requirements](#)
- [Supported Devices](#)
- [Supported Network Management System Environments](#)

## Product Overview

CiscoWorks Common Services software, the foundation for the CiscoWorks family of products and other Cisco product families, enables the deployment, monitoring, and troubleshooting of devices across your network. CiscoWorks Common Services includes:

- CiscoWorks Common Services 2.2—A set of shared application services.
- CiscoView 5.5—A graphical device management tool.
- Integration Utility 1.5—An integration module that supports third-party network management systems (NMS).

## CiscoWorks Common Services Upgrade

Table 1-1 describes the different local upgrade paths and results. See the “Installing CiscoWorks Common Services” chapter for installation instructions.

**Table 1-1 Upgrade Paths**

Existing Software	Results
Clean machine	CiscoWorks Common Services is installed in the specified directory.
CiscoWorks Common Services 2.2	Reinstallation of CiscoWorks Common Services 2.2 overwrites the previously installed CiscoWorks Common Services components. All data is preserved.
CD One, 5th Edition	CiscoWorks Common Services 2.2 overwrites the previously installed CiscoWorks Common Services components. All data is preserved.
CD One, 4th Edition	CiscoWorks Common Services 2.2 overwrites the previously installed CiscoWorks Common Services components. All data is preserved.


## Server Requirements

The minimum system requirements for installing CiscoWorks Common Services are shown in Table 1-2.

**Table 1-2 Server System Requirements <sup>1</sup>**

Requirement Type	Minimum Requirements
System hardware	<ul style="list-style-type: none"> <li>• Sun Sparc Ultra 10<sup>2</sup>.</li> <li>• 17-inch color monitor.</li> <li>• CD-ROM drive.</li> </ul>
Memory (RAM)	512 MB (to install all CiscoWorks Common Services components).
Available drive space	<ul style="list-style-type: none"> <li>• 2 GB on the partition on which you install the product (the default is /opt).</li> <li>• Swap space equal to double the amount of memory (RAM). For example, if your system has 256 MB of RAM, you need 512 MB of swap space.</li> </ul>

Table 1-2 Server System Requirements (continued)<sup>1</sup>

Requirement Type	Minimum Requirements
System software	Solaris 2.7 and Solaris 2.8  <b>Note</b> CiscoWorks Common Services 2.2 supports only US-English and Japanese versions of Solaris Operating Systems. It does not support any other language version. Set the default locale to US-English for US-English version and Japanese for Japanese version.
Additional software (Optional)	Netscape Navigator 4.76 (if you are using the desktop on the server system).   <b>Caution</b> For Solaris, use Netscape Navigator downloaded from Sun site only.

- Minimum requirements vary, depending on which components you choose to install:  
 Integration Utility alone requires 128 MB RAM and 50 MB disk space.  
 CiscoView alone requires 128 MB RAM and 96 MB disk space.
- CiscoWorks Common Services supports Ultra SPARC III machines such as Sun-Fire-280R, Netra-T4, Sun Blade 1000 too.

**Caution**

Do not use non standard java options through `_JAVA_OPTIONS` environment variable.

To verify the amount of available disk space in each of the specified partitions and directories, enter:

```
# df -k directory
```

where *directory* is the partition or directory for which you want to check the available disk space.

## Solaris Patches

Table 1-3 lists the required and recommended patches for Solaris 2.7 and 2.8.

**Table 1-3** *Solaris Patches*


Operating System	Required	Recommended
<b>Solaris 2.7</b>	106980-10	108376-03
	106327-05	112300-01
	107081-11	108301-02
	107636-03	108482-02
<b>Solaris 2.8</b>	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	

Use the **showrev -p** command to verify that these patches have been applied.

# Client Requirements

The minimum system requirements for the client are shown in [Table 1-4](#). For information about configuring client systems, see the “[Preparing to Use CiscoWorks Common Services](#)” chapter.

**Table 1-4 Client System Requirements**

Requirement Type	Minimum Requirements
System hardware and software	<ul style="list-style-type: none"> <li>• Client system:               <ul style="list-style-type: none"> <li>– IBM system with at least a 300 MHz Pentium processor running Windows (Professional and Server), or Windows XP SP1.</li> <li>– Sun SPARC Ultra 10 running Solaris 2.7, Solaris 2.8.</li> </ul> </li> <li>• Color monitor with video card set to 24 bits color depth.</li> </ul>
Memory (RAM)	256 MB.
Browser	<p>One of these browsers:</p> <p>On Windows and Windows XP clients:</p> <ul style="list-style-type: none"> <li>• Microsoft Internet Explorer 6.0 (version 6.0.2600.0000) or Internet Explorer 6.0 with Service Pack 1 (version 6.0.2800.1106),</li> <li>• Java Virtual Machine (JVM) 5.0.0.3802 and later, and Java Plug-in version 1.3.1.</li> </ul> <p>To verify the JVM:            From Internet Explorer, select <b>View &gt; Java Console</b>.            From Netscape Navigator, select <b>Tools &gt; Server &gt; Java Console</b>.</p> <ul style="list-style-type: none"> <li>• Netscape Navigator 4.78 and 4.79 for Windows.</li> </ul> <p>On Solaris clients:</p> <ul style="list-style-type: none"> <li>• Netscape Navigator 4.76 for Solaris 2.7 and 2.8.</li> </ul> <p> <b>Caution</b> For Solaris, use Netscape Navigator downloaded from Sun site only.</p>



**Note**

If Java Console is not listed in View, you must enable it.

## Enabling Java Console

To enable Java console in Microsoft Internet Explorer:

- 
- Step 1** Select **Tools > Internet Options > Advanced**.
  - Step 2** In the Microsoft VM section, select the Java Console enabled.
  - Step 3** Restart Internet Explorer.
- 

## Supported Devices

CiscoView manages and configures different types of Cisco devices. See *Using CiscoView 5.5* for supported device information.

## Supported Network Management System Environments

The network management system (NMS) supported for importing device information into the CiscoView application is HP OpenView Network Node Manager. See *Using CiscoView 5.5* and the online help for information about importing devices.



# Installing CiscoWorks Common Services

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This chapter consists of:

- [Installation Overview](#)
- [Preparing to Install CiscoWorks Common Services](#)
- [Performing a New Installation](#)
- [Performing an Upgrade Installation](#)
- [Uninstalling CiscoWorks Common Services](#)

## Installation Overview

This section provides overview of CiscoWorks Common Services installation task. [Table 2-1](#) contains references to more detailed information about each task.

**Table 2-1** *Installing CiscoWorks Common Services Task Overview*

Task	Steps	References
Prepare to install CiscoWorks Common Services.	1. Verify server requirements are met.	<a href="#">“Prerequisites” chapter, “Server Requirements” section on page 1-2</a>
	2. Verify client requirements are met.	<a href="#">“Prerequisites” chapter, “Client Requirements” section on page 1-5</a>
	3. Verify TCP ports that CiscoWorks uses and check for conflicts with existing applications.	<a href="#">“TCP and UDP Ports Used” section on page 2-3</a>
Install server software.	Run installation program.	<a href="#">“Performing a New Installation” section on page 2-5</a> <a href="#">“Performing an Upgrade Installation” section on page 2-17</a>
Verify and troubleshoot installation.	Analyze installation error messages.	<a href="#">“Troubleshooting the Installation” appendix, “Understanding Installation Messages” section on page A-4</a>

## Preparing to Install CiscoWorks Common Services

Before you install CiscoWorks Common Services, make sure your server and client environments meet the hardware and software requirements described in the [“Prerequisites”](#) chapter.

You must have administrative privilege to install CiscoWorks Common Services.

## Using the Server IP Address

CiscoWorks uses the IP address of the server when it interacts with web browsers. By using the server IP address, CiscoWorks eliminates name lookup failures between the server and the client systems that run web browsers.

## TCP and UDP Ports Used

CiscoWorks Common Services uses the following TCP and UDP ports.

### Incoming Ports

The following ports are used for incoming traffic:

- 42343/tcp (JRun)
- 57860/tcp (JRun Server Manager ControlServer - Used for Jrun Administration)
- 514/udp (Standard port for Syslog)
- 1741/tcp (port used for the CiscoWorks HTTP server)
- 1742/tcp (used when the webserver is running on SSL mode)

See the [“Preparing to Use CiscoWorks Common Services”](#) chapter for information on accessing the server.

- Database ports: 43441- 43449 (The ports used by different apps are different. For example, CiscoWorks Common Services uses 43441 and Essentials uses 43442)
- 443/tcp (port used for Core Apache Web server in SSL mode)
- 9007/tcp (Ajp12 connector used by Tomcat)
- 9009/tcp (Ajp13 connector used by Tomcat)
- 1751/tcp (port used for the Core Apache Web server).

### Outgoing Ports

The following ports are used for outgoing traffic:

- 161/udp (Standard port for SNMP Polling)
- 162/udp (Standard port for SNMP Traps)
- 23/tcp (Standard port for Telnet)
- 22/tcp (Standard port for SSH)
- 80/tcp (Default HTTP for device navigator).

## Incoming and Outgoing Ports

The following ports are used for incoming and outgoing traffic:

- 42340/tcp (CiscoWorks Daemon Manager, the tool that manages server processes)
- 42342/udp (Osagent)
- 7580/tcp (default port; alternate port: 42352/tcp) (ESS HTTP port)
- 69/udp (Standard port for TFTP)
- 1683 (IIOP port for CWCS gatekeeper)
- 8088 (HIOP port for CWCS gatekeeper)
- 514/tcp (RCP port)
- 42351/tcp (default port; alternate port: 44351/tcp) (ESS Listening port)
- 42353/tcp (default port; alternate port: 44353/tcp) (ESS Routing port)
- 42350/udp (default port; alternate port: 44350/udp) (ESS Service port)
- 10033 (licensing database port)
- 1684/tcp (IIOP gatekeeper port).

## System Files Modified During Installation

The system files modified during CiscoWorks Common Services installation are:

- /etc/services
- /etc/inetd.conf
- /etc/syslog.conf
- /etc/passwd
- /etc/group
- /var/sadm/install/admin/default
- /var/sadm/install/contents
- /etc/shadow

# Performing a New Installation

The CiscoWorks Common Services installation program takes approximately 20 minutes to complete on a Solaris system with the minimum required hardware. This can extend to one hour if you perform network management integration during the installation process.

For information on setting up multi-homed systems, see the *Release Notes for CiscoWorks Common Services 2.2 (includes 5.5) on Solaris*.

## Running the Installation Program—New Installation

To run the installation program:

- 
- Step 1** As root, mount the CiscoWorks Common Services CD-ROM using either of the following methods:
- Mount the CD-ROM on the CiscoWorks Common Services server system.  
or
  - Mount the CD-ROM on a remote Solaris system, then access the CD-ROM from the CiscoWorks Common Services server system.



**Caution**

Network inconsistencies may cause installation errors while installing from a remote mount point.

---

See the “[Mounting and Unmounting on Solaris](#)” appendix for detailed mounting instructions.

- Step 2** Run the installation program.
- For a local installation, enter:

```
# cd /cdrom/cdrom0/
# ./setup.sh
```
  - For a remote installation, enter:

```
# cd remotedir
# ./setup.sh
```

where *remotedir* is the remote location where the CD-ROM is mounted.

A message appears:

```
Press Enter to read/browse the following license agreement:
```

**Step 3** Press **Enter** to read the license agreement.

The following message appears at the end of the license agreement:

```
You must accept this License agreement for the installation to proceed.
```

```
If you enter N/n, the installation will exit.
```

```
Do you accept all the terms of the preceeding License Agreement ?
```

```
(y/n) [y]
```

**Step 4** Enter **y** to accept the license and proceed with the installation.

or

Enter **n** to deny and stop the installation.

**Step 5** Select one of the following:

- **Express** to install all CiscoWorks Common Services components in the default location with default settings. (See the “[New Installation—Express](#)” section.)
- **Typical** to select CiscoWorks Common Services components, and install the selected components in a specific location. (See the “[New Installation—Typical](#)” section.) This is the default installation mode.
- **Custom** to select optional components, customize the settings, and to specify the location. (See the “[New Installation—Custom](#)” section.)

The installation program performs several preinstallation and dependency checks on your system, such as TCP/IP address resolution, TCP/IP port use, disk space, and RAM.



### Caution

Installation of CiscoWorks Common Services might fail on Solaris 2.8, if Sun patch version 110934-20 or higher is installed. For more information, see the known problem CSCsa34490 in the *Release Notes for CiscoWorks Common Services 2.2 (Includes CiscoView 5.5) on Solaris*.

## New Installation—Express

If you select the Express option:

---

**Step 1** Press **Enter** to start installation.

The installation program installs CiscoWorks Common Services in the default directory `/opt/CSCOPx`

The installation program checks dependencies and system requirements.

If the drive does not have enough space, the following error message appears and the installation exits:

```
ERROR: Not enough disk space: location you selected for installation.
```

**Step 2** Enter the CiscoWorks Admin Password and confirm it.

The installation proceeds.

After the installation has completed, a message appears:

```
Do you want to see the passwords that were entered/randomly generated?  
If yes, please remember that passwords are security sensitive data and  
hence make sure they are kept secure ? (y/n) [y]
```

Select **y**, to see randomly generated passwords.

**Step 3** Unmount the CD-ROM. See the “[Mounting and Unmounting on Solaris](#)” appendix for details.

---



**Note**

Error messages or warning messages appear if the required and recommended Solaris patches are not present on your system. Before running CiscoWorks Common Services, download and install the latest recommended patches from [www.sunsolve.sun.com](http://www.sunsolve.sun.com).

---

If errors occurred during installation, check the installation log file `/var/tmp/ciscoininstall.log`. Each installation appends to this file. For troubleshooting information, See the [“Troubleshooting the Installation”](#) appendix.

To prepare the client system for use. See the [“Preparing to Use CiscoWorks Common Services”](#) chapter.

## New Installation—Typical

If you select the Typical option:

---

**Step 1** Press **Enter** to start installation.

A message appears:

```
Enter the location where the product will be installed or q to quit.  
Default location (PKGROOT)? [/opt/CSCOpX]
```

CiscoWorks Common Services requires a directory named `/opt/CSCOpX`. If you select a different installation directory, the `/opt/CSCOpX` directory will be created and will be a link to the directory you selected.



---

**Caution** **Do not remove the link after installation. The product will not work without this link.**

---

**Step 2** Press **Enter** to accept the default directory for product installation, or enter a different directory.

- Step 3** Select one or more of the following:
1. **CiscoWorks Common Services 2.2 (CWCS)** to install the CiscoWorks Common Services.  
(Select this option *only* if you do not want CiscoView 5.5 or Integration Utility 1.5 installed.)
  2. **CiscoView 5.5** to install both CiscoView and CiscoWorks Common Services.
  3. **Integration Utility 1.5.**  
(For information about the Integration Utility and third-party NMS integration, see *Using CiscoView*.)
  4. **All of the Above** to install all CiscoWorks Common Services components (recommended for most systems.)

You can select more than one component using the corresponding numbers separated by comma. For example, enter 1, 3 to select CiscoWorks Common Services and Integration Utility.

**Step 4** Enter the number corresponding to the option you have chosen or **q** to quit.

**Step 5** Enter the CiscoWorks Admin Password and confirm it.

For more information on passwords see [“Password Information”](#).

**Step 6** Press **Enter**.

If the casuser exists, a message appears:

```
Warning: User casuser already exists, the installation process will
overwrite its previlage.
Do you want to proceed with the installation ? [y/n]
```

Casuser is the user who administers and maintains CiscoWorks Server without having administrative privileges.

Press **Enter** if you receive the casuser message. The installation program adds the new casuser and the new group casusers to the system.

The installation proceeds.

After installation is complete, a message appears:

```
Do you want to see the passwords that were entered/randomly generated?  
If yes, please remember that passwords are security sensitive data and  
hence make sure they are kept secure ? (y/n) [y]
```

Select **y** to see randomly generated and manually entered passwords.

**Step 7** Unmount the CD-ROM. See the [“Mounting and Unmounting on Solaris”](#) appendix for details.

---

**Note**

Error messages or warning messages appear if the required and recommended Solaris patches are not present on your system. Before running CiscoWorks Common Services, download and install the latest recommended patches from [www.sunsolve.sun.com](http://www.sunsolve.sun.com).

---

If errors occurred during installation, check the installation log file `/var/tmp/ciscoininstall.log`. Each installation appends to this file. For troubleshooting information, See the [“Troubleshooting the Installation”](#) appendix.

To prepare the client system for use. See the [“Preparing to Use CiscoWorks Common Services”](#) chapter.

## New Installation—Custom

If you select the Custom option:

---

**Step 1** Press **Enter** to start installation.

A message appears:

```
Enter the location where the product will be installed or q to quit.  
Default location (PKGROOT)? [/opt/CSCOpX]
```

CiscoWorks Common Services requires a directory named /opt/CSCOpX. If you select a different installation directory, the /opt/CSCOpX directory will be created and will be a link to the directory you selected.



**Caution**

---

**Do not remove the link after installation. The product will not work without this link.**

---

**Step 2** Press **Enter** to accept the default directory for product installation, or enter a different directory.

The installation program displays:

```
Select one or more items using its number separated by comma or enter  
q to quit.
```

**Step 3** Select one or more of the following:

1. **CiscoWorks Common Services 2.2 (CWCS)** to install CiscoWorks Common Services.  
(Select this option *only* if you do not want CiscoView 5.5 or Integration Utility 1.5 installed.)
2. **CiscoView 5.5** to install CiscoView 5.5 and CiscoWorks Common Services 2.2.
3. **Integration Utility 1.5.**  
(For information about the Integration Utility and third-party NMS integration, see *Using CiscoView 5.5*.)
4. **All of the Above** to install all CiscoWorks Common Services components (recommended for most systems.)

You can select more than one component using the corresponding numbers separated by comma. For example, enter 1, 3 to select CiscoWorks Common Services and Integration Utility.

**Step 4** Enter the number corresponding to the option you have chosen or **q** to quit.

**Step 5** Enter the CiscoWorks Admin Password and confirm it.

For more information on passwords, see [“Password Information”](#).

**Step 6** Enter Guest Password and confirm it.

For more information on passwords, see [“Password Information”](#).

**Step 7** Press **Enter**.

If the casuser exists, a message appears:

```
Warning: User casuser already exists, the installation process will
overwrite its previlage.
```

```
Do you want to proceed with the installation? [y/n]
```

Press Enter if you receive the casuser message. The installation program adds the new casuser and the new group casusers to the system.

**Step 8** Enter the CiscoWorks Common Services Database Password and confirm it.

For more information on passwords, see [“Password Information”](#).

A message appears.

```
Should Access Control Server (ACS) be used for user authentication ?
(y/n) [n]
```

**Step 9** If you choose to use ACS for user authentication, enter the following:

- ACS name
- ACS administrator's account
- ACS administrator's password
- ACS secret key

**Step 10** Enter the following Apache Certificate information:

- SMTP server
- Host name
- Administrator's e-mail address
- Country
- State
- City
- Company
- Organization

Host name is mandatory.

**Step 11** Enter and confirm the Licensing Database Password.

For more information on passwords, see [“Password Information”](#).

If you have selected Integration Utility, the following message appears:

```
The integration utility will be installed now. The integration utility
integrates Cisco device packages and Cisco applications into
third-party SNMP management platforms. You can choose to integrate
with a third-party SNMP management platform during this installation
or later.
```

```
Do you want to integrate with a third-party product now (y/n) [n]
```

**Step 12** Select one of the following:

- **n** to integrate with a third-party NMS after installation. This completes the installation faster and avoids installation failure caused by errors in the third party integration.
- **y** to integrate with a third-party NMS during installation.  
If you choose to integrate now, follow steps a to d.
  - a. Select the adapter from the list of available adapters, or select **other** to choose an adapter that is not listed (you will be prompted to enter the path name of the adapter), or select **none** to integrate after the installation is complete.  
If you select **none**, skip to [Step 13](#).




---

**Note** If you are installing only the Integration Utility, enter the CiscoWorks Server name, protocol type (HTTP, HTTPS) and port number.

---

- b. Enter the HTTP browser location, or press **Enter** to accept the default location, /opt/netscape/netscape.

A message appears asking if you want to enable download options from the Cisco Web page (Cisco.com).

- c. Select one of the following:
- **n** to disallow future upgrades from the Cisco Web page.
  - **y** to enable future upgrades from the Cisco Web page.
- d. Enter your Cisco.com user ID and password.




---

**Note** You must have Cisco.com login privileges. If you do not have a user account and password on Cisco.com, contact your channel partner or enter a request on the standard Cisco.com web site.

---

The installation proceeds.

After installation is complete, a message appears:

```
Do you want to see the passwords that were entered/randomly generated?
If yes, please remember that passwords are security sensitive data and
hence make sure they are kept secure ? (y/n) [y]
```

Select **y** to see randomly generated and manually entered passwords.

- Step 13** Unmount the CD-ROM. See the [“Mounting and Unmounting on Solaris”](#) appendix for details.
- 




---

**Note** Error messages or warning messages appear if the required and recommended Solaris patches are not present on your system. Before running CiscoWorks Common Services, download and install the latest recommended patches from [www.sunsolve.sun.com](http://www.sunsolve.sun.com).

---

If errors occurred during installation, check the installation log file `/var/tmp/ciscoininstall.log`. Each installation appends to this file. For troubleshooting information, See the [“Troubleshooting the Installation”](#) appendix.

To prepare the client system for use. See the [“Preparing to Use CiscoWorks Common Services”](#) chapter.

## Installing CiscoWorks from a mounted directory

To install CiscoWorks Common Services from a mounted directory:

---

- Step 1** Log in to the remote system.
- Step 2** Enter:
- ```
cd /etc/dfs/dfstab
```
- Step 3** Enter:
- ```
share -F nfs -o root=r /the directory where you have the installable image
```
- Step 4** Stop and start the NFS server using the following commands:
- ```
/etc/init.d/nfs.server stop  
/etc/init.d/nfs.server start
```
- Step 5** Log in to the local system.
- Step 6** Enter :
- ```
mount remote system:/the directory where you have the installable image /the local directory where you want to mount the remote system
```
- Step 7** Enter :
- ```
cd /the local directory where you mounted the remote system
```
- Step 8** Enter:
- ```
./setup.sh
```
- 

See the “[Mounting and Unmounting on Solaris](#)” appendix for detailed mounting instructions.

# Performing an Upgrade Installation

CiscoWorks Common Services 2.2 supports upgrade from:

- CD One, 5th edition
- CD One, 4th edition

The data is preserved when you perform an upgrade.

For a description of the different upgrade paths and their results, see the [“Upgrade Paths” section on page 1-2](#).

To perform a local upgrade, see the [“Upgrading CiscoWorks Common Services—Local Upgrade” section on page 2-17](#).

To perform a remote upgrade, see the [“Upgrading CiscoWorks Common Services—Remote Upgrade” section on page 2-26](#).

## Upgrading CiscoWorks Common Services—Local Upgrade

You can upgrade from:

- CD One, 5th Edition
- CD One, 4th Edition

We recommend that you save your data to a backup file before you perform the local upgrade. If your installation fails, you can retrieve this saved data.

### Backing Up Your Data

To backup your data:

- 
- Step 1** Access the CiscoWorks desktop and log in. For information, see *Accessing the Server* and *Logging* sections in the *User Guide for CiscoWorks Common Services*.
- Step 2** Select **Server Configuration > Administration > Database Management > Back Up Data Now**.

The Back Up Data Now dialog box appears.

- Step 3** Enter the path name of the target directory.
- It is recommended that you use a different directory from the directory where CiscoWorks is located, for example, /cw/backups.
- Step 4** To begin the backup, click **Finish**.
- This process may take some time to complete.
- For more information, see the online help.
- 

## Running the Installation Program

To run the installation program:

---

- Step 1** Install the required patches as described in the [“Solaris Patches” section on page 1-4](#).
- Step 2** As root, mount the CiscoWorks Common Services CD-ROM using either of the following methods:
- Mount the CD-ROM on the CiscoWorks Common Services server system.  
or
  - Mount the CD-ROM on a remote Solaris system, then access the CD-ROM from the CiscoWorks Common Services server system.



### Caution

Network inconsistencies may cause installation errors while installing from a remote mount point.

---

See the [“Mounting and Unmounting on Solaris”](#) appendix for detailed mounting instructions.

**Step 3** Run the installation program.

- For a local installation, enter:

```
# cd /cdrom/cdrom0/  
# ./setup.sh
```

- For a remote installation, enter:

```
# cd remotedir  
# ./setup.sh
```

where *remotedir* is the remote location where the CD-ROM is mounted.

The license agreement appears.

**Step 4** Enter **y** to accept the license and proceed with the installation.

or

Enter **n** to deny and stop the installation.

**Step 5** Select one of the following:

- **Express** to install all CiscoWorks Common Services components in the default location with default settings (See the “[Upgrade Installation—Express](#)” section.)
- **Typical** to select CiscoWorks Common Services components, and install the selected components in a specific location (See the “[Upgrade Installation—Typical](#)” section.) This is the default installation mode.
- **Custom** to select optional components, customize the settings, and to specify the location (See the “[Upgrade Installation—Custom](#)” section.)

The installation program performs several preinstallation and dependency checks on your system, such as TCP/IP address resolution, TCP/IP port use, disk space, and RAM.

## Upgrade Installation—Express

If you select the Express option:

---

**Step 1** Press **Enter** to start installation.

The installation program installs CiscoWorks Common Services in the directory where the earlier version is installed.

The installation program checks dependencies and system requirements.

If the drive does not have enough space, an error message appears and the installation of CiscoWorks Common Services exits:

```
ERROR: Not enough disk space: location you selected for installation.
```

If you have not entered a password for CiscoWorks admin or guest user during the previous installation, a warning appears:

```
The password for the cwuser user is empty. For security reasons you must change the password as soon as you can from CiscoWorks Desktop.
```

Where *cwuser* is either CiscoWorks admin or guest.

The installation proceeds.

After the installation is complete, a message appears:

```
Do you want to see the passwords that were entered/randomly generated?  
If yes, please remember that passwords are security sensitive data and  
hence make sure they are kept secure ? (y/n) [y]
```

Select **y** to see randomly generated and manually entered passwords.

**Step 2** Unmount the CD-ROM. See the [“Mounting and Unmounting on Solaris”](#) appendix for details.

---



**Note**

Error messages or warning messages appear if the required and recommended Solaris patches are not present on your system. Before running CiscoWorks Common Services, download and install the latest recommended patches from [www.sunsolve.sun.com](http://www.sunsolve.sun.com).

---

If errors occurred during installation, check the installation log file `/var/tmp/ciscoininstall.log`. Each installation appends to this file. For troubleshooting information, See the [“Troubleshooting the Installation”](#) appendix.

To prepare the client system for use. See the [“Preparing to Use CiscoWorks Common Services”](#) chapter.

## Upgrade Installation—Typical

If you select the Typical option:

---

**Step 1** Press **Enter** to start installation.

The installation program installs CiscoWorks Common Services in the directory where the earlier version is installed.

The installation program checks dependencies and system requirements.

If the drive does not have enough space, an error message appears and the installation of Common Services exits:

```
ERROR: Not enough disk space: location you selected for installation.
```

If you have not entered a password for CiscoWorks admin or guest user during the previous installation, a warning appears:

```
The password for the cwuser user is empty. For security reasons you must change the password as soon as you can from CiscoWorks Desktop.
```

Where `cwuser` is either CiscoWorks admin or guest.

The installation proceeds.

After installation is complete, a message appears:

```
Do you want to see the passwords that were entered/randomly generated?
If yes, please remember that passwords are security sensitive data and
hence make sure they are kept secure ? (y/n) [y]
```

Select `y` to see randomly generated and manually entered passwords.

**Step 2** Unmount the CD-ROM. See the [“Mounting and Unmounting on Solaris”](#) appendix for details.

---

**Note**

---

Error messages or warning messages appear if the required and recommended Solaris patches are not present on your system. Before running CiscoWorks Common Services, download and install the latest recommended patches from [www.sunsolve.sun.com](http://www.sunsolve.sun.com).

---

If errors occurred during installation, check the installation log file `/var/tmp/ciscoinstall.log`. Each installation appends to this file. For troubleshooting information, See the [“Troubleshooting the Installation”](#) appendix.

To prepare the client system for use. See the [“Preparing to Use CiscoWorks Common Services”](#) chapter.

## Upgrade Installation—Custom

If you select the Custom option:

---

**Step 1** Press **Enter** to start installation.

The installation program installs CiscoWorks Common Services in the directory where the earlier version is installed.

The installation program checks dependencies and system requirements.

If the drive does not have enough space, an error message appears and the installation of Common Services exits:

```
ERROR: Not enough disk space: location you selected for installation.
```

**Step 2** Enter the CiscoWorks Admin Password and confirm it.

See “[Password Information](#)” appendix for detailed instructions on the usage of passwords.

**Step 3** Enter Guest Password and confirm it.

See the “[Password Information](#)” appendix for detailed instructions on the usage of passwords.

**Step 4** Press **Enter**.

If the casuser exists, a message appears:

```
Warning: User casuser already exists, the installation process will  
overwrite its previlage.  
Do you want to proceed with the installation? [y/n]
```

Press **Enter** if you receive the casuser message. The installation program adds the new casuser and the new group casusers to the system.

Casuser is the user who administers and maintains CiscoWorks Server without having administrative privileges.

**Step 5** Enter the CiscoWorks Common Services Database Password and confirm it.

The following message appears:

```
Do you want to preserve the existing Apache Certificate? (y/n) [y]
```

**Step 6** Enter the following Apache certificate information:

- SMTP server
- Host name
- Administrator's e-mail address
- Country
- State
- City
- Company
- Organization

**Step 7** Enter Licensing database Password.

See the “[Password Information](#)” appendix for detailed instructions on the usage of passwords.

If you have selected Integration Utility, the following message appears:

```
The integration utility will be installed now. The integration utility
integrates Cisco device packages and Cisco applications into
third-party SNMP management platforms. You can choose to integrate
with a third-party SNMP management platform during this installation
or later.
```

Do you want to integrate with a third-party product now (y/n) [n]

**Step 8** Select one of the following:

- **n** to integrate with a third-party NMS after installation This complete the installation faster and avoids installation failure caused by errors in the third party integration.
- **y** to integrate with a third-party NMS during installation  
If you choose to integrate now, follow steps a to d.
  - a. Select the adapter from the list of available adapters, or select **other** to choose an adapter that is not listed (you will be prompted to enter the path name of the adapter), or select **none** to integrate after the installation is complete.  
If you select **none**, go to [Step 9](#).



---

**Note** If you are installing only the Integration Utility, enter the CiscoWorks Server name, protocol type (HTTP, HTTPS) and port number.

---

- b. Enter the HTTP browser location, or press **Enter** to accept the default location, /opt/netscape/netscape.

A message appears, asking if you want to enable download options from the Cisco Web page (Cisco.com).

- c. Select one of the following:
- **n** to disallow future upgrades from the Cisco Web page.
  - **y** to enable future upgrades from the Cisco Web page.
- d. Enter your Cisco.com user ID and password.

You must have Cisco.com login privileges. If you do not have a user account and password on Cisco.com, contact your channel partner or enter a request on the standard Cisco.com web site.

The installation proceeds.

After installation is complete, a message appears:

```
Do you want to see the passwords that were entered/randomly generated?  
If yes, please remember that passwords are security sensitive data and  
hence make sure they are kept secure ? (y/n) [y]
```

Select **y** to see randomly generated and manually entered passwords.

- Step 9** Unmount the CD-ROM. See the “[Mounting and Unmounting on Solaris](#)” appendix for details.
- 



---

**Note** Error messages or warning messages appear if the required and recommended Solaris patches are not present on your system. Before running CiscoWorks Common Services, download and install the latest recommended patches from [www.sunsolve.sun.com](http://www.sunsolve.sun.com).

---

If errors occurred during installation, check the installation log file `/var/tmp/ciscoininstall.log`. Each installation appends to this file. For troubleshooting information, See the [“Troubleshooting the Installation”](#) appendix.

Prepare the client system for use. See the [“Preparing to Use CiscoWorks Common Services”](#) chapter.

## Upgrading CiscoWorks Common Services—Remote Upgrade

If you do not want to overwrite your current application you can perform a remote upgrade. During a remote upgrade you install CiscoWorks Common Services on a new system and export essential data to the new system from the system running the previous version.

- 
- Step 1** Install CiscoWorks Common Services on the new system. See the [“Performing a New Installation”](#) section on page 2-5.
  - Step 2** Remove the CiscoWorks Common Services CD-ROM from the new system.
  - Step 3** Export essential data to the new system. The default location is `/opt/CSCOpX/rigel`

**Note**

---

If you are upgrading from a previous edition of CiscoWorks Common Services, data from the system running the previous version must be exported to the new system.

---

## Exporting the Data

To export the data:

---

**Step 1** The CiscoWorks Common Services CD-ROM should be in the CD-ROM drive of the system running the old version of CiscoWorks Common Services. Go to the Root directory on the CiscoWorks Common Services CD-ROM.

**Step 2** From the Root directory, run the script `export_cdone.pl`.

```
$NMSROOT /bin/perl export_cdone.pl
```

`$NMSROOT` is the directory in which CiscoWorks Common Services is installed. The default `NMSROOT` directory is `/opt/CSCOpX`.

The script prompts you for the location where you want to store the data to be exported.

**Step 3** Press **Enter** to accept the default location for storing the exported data.

The default location is `/opt/CSCOpX/rigel`.

If you do not want to use the default location enter an alternate location and press **Enter**.

The remote upgrade tool exports the data, and creates the directories `cmf` and `manifest/cmf` at the location specified for backing up the data. For example, if you choose `/opt/backup` as the back up location, the remote upgrade tool creates the directories `/opt/backup/cmf` and `/opt/backup/manifest/cmf` to store the exported data.

**Step 4** Copy the directories `cmf` and `manifest` from the system running the old version of CiscoWorks Common Services into `/opt/CSCOpX/rigel` on the system running the new version of CiscoWorks Common Services.

**Step 5** On the new system, go to the directory `$NMSROOT/rigel/scripts`, and run the script `import_cdone.pl`.

**Step 6** Run the data import script:

```
$NMSROOT/bin/perl import_cdone.pl
```

The remote upgrade tool imports the exported data from the remote system.

The upgrade is now complete and all necessary data from the previous version of CiscoWorks Common Services has been exported.

**Note**

---

During the remote upgrade the user information from the source is merged with the new user information.

---

## Reinstalling CiscoWorks Common Services

To reinstall CiscoWorks Common Services, follow the steps under [Performing an Upgrade Installation, page 2-17](#)

You can change the installation mode during reinstallation. For Express and Typical installation, the passwords from the earlier installation are retained. For Custom mode, you need to provide new passwords.

**Note**

---

If CiscoWorks Common Services has previously been installed on this system, the product will automatically be installed in the same location CiscoWorks Common Services was previously installed.

---

After you select the components, the following message displays:

```
CiscoWorks Common Services 2.2 has been detected on your system. Are
you sure you want to reinstall (y/n)? [n]
```

Enter **y** to continue with the installation.

If you are installing in Express or Typical mode and if you have not entered a password for the CiscoWorks admin or guest user during the previous installation, a warning appears:

```
The password for the cwuser user is empty. For security reasons you
must change the password as soon as you can from CiscoWorks Desktop.
```

Where *cwuser* is either CiscoWorks admin or guest.

# Uninstalling CiscoWorks Common Services

Use the **uninstall** script to remove CiscoWorks Common Services files and settings.

You cannot uninstall CiscoWorks Common Services when you have CiscoView and Integration Utility installed. Before uninstalling CiscoWorks Common Services, select CiscoView and CiscoWorks Common Services to uninstall CiscoWorks Common Services.

If you select CiscoWorks Common Services with out selecting CiscoView, the following message appears:

```
Cannot uninstall CiscoWorks Common Services.  
It is required for CiscoView.
```

Uninstall all applications dependent on CiscoWorks Common Services before uninstalling CiscoWorks Common Services.



## Caution

---

You must use the **uninstall** script to remove the product. If you try to remove CiscoWorks Common Services or its components manually, you may damage your system.

---

To uninstall CiscoWorks Common Services:

## Step 1

As root, enter the following commands to start the uninstall script:

```
# cd /  
# /opt/CSCOpX/bin/uninstall.sh
```

where */opt/CSCOpX* is the default installation directory.

A list of CiscoWorks components appears. Enter the number corresponding to the option you have chosen or **q** to quit. You can select more than one component. Enter the number corresponding to the components separated by comma.



## Note

---

When you remove CiscoWorks Common Services, the **uninstall** script removes changes made to the */etc/services* file. The */etc* directory still contains all system file changes. The uninstall messages are written to the */var/tmp/ciscouninstall.log* file.

---

After the uninstall is complete, a message appears:

```
All files were deleted successfully.
```

**Step 2** Check the following files:

- /etc/syslog.conf for syslog changes.
  - /etc/services to ensure that port assignments for the CiscoWorks applications have been removed.
  - /etc/inetd.conf to ensure that CiscoWorks tftp entry is removed.
-

# Preparing to Use CiscoWorks Common Services

---

Now that you have installed CiscoWorks Common Services , you must configure the client system for CiscoWorks Common Services.

This chapter consists of:

- [Configuring Server Systems](#)
- [Configuring Client Systems](#)
- [Accessing the Server](#)
- [Using CiscoView](#)

**Note**

---

The system that has CiscoWorks Common Services installed on it can be used as both the client and server. If you are using the system as client, you must configure the web browser.

---

## Configuring Server Systems

Set the following environment variables for CiscoWorks system administrators. These variables are not required for tasks performed by users other than those with administrator privileges.

Add `/opt/CSCOPx/bin`, and `/opt/CSCOPx/MDC/bin` to the *PATH* variable in the `.cshrc` or `.profile` files of CiscoWorks Common Services users who have administrator privileges.

To set *PATH* variable:

In C shell:

```
Enter:
$ set path=( /opt/CSCOpX/bin /opt/CSCOpX/MDC/bin $path)
```

In Bourne shell:

```
Enter:
# PATH=/opt/CSCOpX/bin:/opt/CSCOpX/MDC/bin:$PATH
export PATH
```

Add /opt/CSCOpX/man to the *MANPATH* variable.

To set *MANPATH* variable:

In C Shell:

```
Enter:
setenv MANPATH ${MANPATH}:/opt/CSCOpX/man
```

In Bourne Shell:

```
Enter:
MANPATH=$MANPATH:/opt/CSCOpX/man
export MANPATH
```

## Configuring Client Systems

Configure your client system to use CiscoWorks Common Services.

### Set Display Fonts

For Windows set the display to use small fonts:

---

**Step 1** Select **Start > Settings > Control Panel**.

The Control Panel window appears.

**Step 2** Double-click the **Display** icon.

The Display Properties dialog box appears.

**Step 3** Click the **Settings** tab.

- If **Small Fonts** is selected in the Font Size list, your display font is set correctly.
- If **Small Fonts** is not selected, select it from the Font Size drop-down list, then click **OK**.

The System Settings Change dialog box appears.

**Step 4** If you changed the font size, click **Yes** to restart your system.

---

## Configure Web Browser

To configure your web browser:

---

**Step 1** Enable Java and JavaScript:

- Netscape Navigator—Select **Edit > Preferences > Advanced**. Select the **Enable Java** and **Enable JavaScript** check boxes and click **OK**.
- Internet Explorer—Select **Tools > Internet Options > Advanced**. Under the Microsoft VM heading, select **Java console enabled**, **JIT compiler for virtual machine enabled**, and **Java logging enabled** and click **OK**.




### Caution

Do not enable Java Plug-in in Netscape Navigator. Disable the Enable Java Plug-in option from **Edit > Preferences > Advanced > Enable Java Plugin**

---

**Step 2** Set your browser cache to at least 6 MB:

- Netscape Navigator—Select **Edit > Preferences > Advanced > Cache**. Set both the memory cache and the disk cache to at least 6144 KB and click **OK**.
- Internet Explorer—Select **Tools > Internet Options > General**, then click **Settings**. Set the cache to at least 6 MB using the **Amount of disk space to use** slide bar. Click **OK** to close the Settings dialog box and return to the Internet Options dialog box and click **OK** again.

- Step 3** Configure your browser to accept all cookies:
- Netscape Navigator—Select **Edit > Preferences > Advanced**. Select the **Accept all cookies** radio button and click **OK**.
  - Internet Explorer—Select **Tools > Internet Options > Privacy**. Scroll the settings bar down to select **Accept all Cookies**. Click **OK**.
- Step 4** Configure your browser to compare each page with its cached version every time it loads a page:
- Netscape Navigator—Select **Edit > Preferences > Advanced > Cache**. Select the **Every Time** radio button and click **OK**.
  - Internet Explorer—Select **Tools > Internet Options > General**, then click **Settings** under Temporary Internet files group. Select the **Every visit to the page** radio button and click **OK** twice.
-  **Note** This option must be set to prevent Internet Explorer from using the cached information for help links. If it is not set, the first help link is displayed properly. However, the second time you click a link, the first page is displayed again.
- 
- Step 5** Change the default timeout to 20 minutes. For more information on changing the timeout in Internet Explorer, see the instructions on the Microsoft Support Web site.
- Step 6** Enable style sheets:
- Netscape Navigator—Select **Edit > Preferences > Advanced**. Select the **Enable Style Sheets** check box and click **OK**.
  - Internet Explorer—Select **Tools > Internet Options > General**, then click **Accessibility**. Make sure that the **Format documents using my style sheet** check box is not selected, then click **OK** to close the Accessibility dialog box, then click **OK** again to close the Internet Options dialog box.

- Step 7** Change the default font to sans-serif for improved readability:
- Netscape Navigator—Select **Edit > Preferences > Appearance > Fonts**. Select a sans-serif font (for example, Arial) and a font size in the **Variable Width Font** and **Fixed Width Font** selection areas and click **OK**. The text in the browser window is redrawn using the new fonts.
  - Internet Explorer—Select **Tools > Internet Options > General** and click **Fonts**. Select a sans-serif font (for example, Arial) from the **Web page font** and **Plain text font** lists, then click **OK**. Click **OK** to close the dialog box. The text in the browser window is redrawn using the new fonts.
- 

If you have browser problems after configuring your browser, increase your disk cache settings.

After the web browser is installed on the client system, there are no additional disk space requirements. However, because the browser uses the local disk to store cached information, ensure that you have enough disk space for the amount of cached information you want to store. All CiscoWorks Common Services information is stored on the CiscoWorks Server.

## Configure the Integration Utility

The Integration Utility allows you to launch CiscoView from an SNMP platform even when CiscoView is running on a different system than the NMS. It also allows you to integrate other applications into NMS menu.

See *Using CiscoView 5.5* for information about configuring the Integration Utility.

## Accessing the Server

CiscoWorks Common Services uses port 1741 for the HTTP server and port 1742 for HTTPS server (SSL).

To access the server from a client system, enter any one of these URLs in your web browser:

- If SSL is disabled and if you have installed CiscoWorks Common Services on the default port, and enter:

`http://server_name:1741`

- If SSL is enabled, and if you have installed CiscoWorks Common Services on the default port, enter:

`https://server_name:1742`

where *server\_name* is the hostname of the server on which you installed CiscoWorks Common Services.

In addition, refer to the “[TCP and UDP Ports Used](#)” section.

In the main CiscoWorks desktop, the Login Manager appears. See *User Guide for CiscoWorks Common Services* for information on logging in.

## Using CiscoView

CiscoView is a graphical SNMP-based device management tool that provides real-time views of networked Cisco Systems devices.

See *Using CiscoView 5.5* for information about launching and using CiscoView.



# Troubleshooting the Installation

---

This appendix provides troubleshooting information for CiscoWorks Common Services installation. It contains:

- [Checking Processes After Installation](#)
- [Viewing and Changing Process Status](#)
- [Calling the Technical Assistance Center \(TAC\)](#)
- [Understanding Installation Messages](#)
- [Setting Up the Browser](#)

## Checking Processes After Installation

You can run a self test or view process failures from the CiscoWorks Server. To run a self test, select **Server Configuration > Diagnostics > Self Test** from the navigation tree.

To view process failures, select **Server Configuration > Diagnostics > Process Failures** from the navigation tree.

# Viewing and Changing Process Status

This section explains how to view process status through menu or command line options.

Any CiscoWorks user can view the status of any process by selecting **Server Configuration > Administration > Process Management > Process Status** from the CiscoWorks navigation tree.



## Note

From the browser, only users with administrative privileges can start and stop processes.

From the server, only users with local administrative privileges can start and stop processes.

To stop processes from the browser:

**Step 1** Select **Server Configuration > Administration > Process Management > Stop Process**. The Stop Process dialog box appears.

**Step 2** From the dialog box, select **System**, to stop all processes, or select only the processes that you want to stop.

If you select specific processes, the process dependencies will also be stopped. If you select System, all processes except WebServer and JRunProxy Server will be stopped.

To start processes from the browser:

**Step 1** Select **Server Configuration > Administration > Process Management > Start Process**. The Start Process dialog box appears.

**Step 2** From the dialog box, select **System**, to start all processes, or select only the processes that you want to start.

If you select specific processes, the process dependencies will not be started automatically.

To stop all processes from the server, enter:

```
/etc/init.d/dmgttd stop
```

To all start processes from the server, enter:

```
/etc/init.d/dmgttd start
```

**Caution**

---

Do not start the daemon manager immediately after you stop it. The ports used by daemon manager will be in use for some more time even after the daemon manager is stopped.

---

## Calling the Technical Assistance Center (TAC)

If you had problems while installing CiscoWorks Common Services, before calling TAC:

- Make sure the system hardware and software requirements are met.
- Make sure the disk space is not full (/ (root), /opt, and /var partitions).
- Make sure the CD-ROM drive is not defective: mount the CD-ROM remotely on a different system and retry installation.

If the above conditions are met, and you still have problems, contact the Technical Assistance Center.

**Tip**

---

Create a report and email the generated report to TAC.

From the CiscoWorks Server navigation tree, select **Server Configuration > Diagnostics > Collect Server Info**.

---

TAC representatives may ask you to send them the installation log file, /var/tmp/ciscoinstall.log.

# Understanding Installation Messages

Table A-1 shows messages that might occur during installation and describes the reasons.

**Table A-1** *Installation Messages*

Message	Reason for Message	User Action
Access problem with <i>directory</i> .	The installation program cannot access product <i>directory</i> that you specified.	Check permissions on the directory <i>directory</i> .
Bad installation root dir.	You are trying to install the product in an unusable directory.	Install the product on a different directory.
Base package did not install. Exiting.	The installation program cannot install a required package.	Contact your technical support representative.
Cannot backup /etc/services, no change will be made.	The installation program could not copy /etc/services before modifying it.	Make sure there is enough space in /tmp.
Cannot become owner of file in directory <i>directory</i> .	You cannot become file owner in directory you specified as product root.	Check permissions on specified directory.
Cannot change ownership of library. Exiting.	The installation program could not write to the product root directory.	Check permissions on specified directory.
Cannot create <i>directory</i> .	The installation program could not write to directory you specified.	Check permissions on specified directory.
Cannot create symlink: ln -s root /opt/CSCOpX.	The installation program cannot create link from /opt/CSCOpX to product root directory you specified.	Contact your technical support representative.
Cannot determine the CiscoWorks Common Services version.	Installation disk is corrupted.	Contact your technical support representative.
Cannot determine the version of <i>product</i> .	The installation program was unable to determine product version.	Contact your technical support representative.

Table A-1 Installation Messages (continued)

Message	Reason for Message	User Action
Cannot make list of packages for installation.	The installation program suffered a major failure.	Contact your technical support representative.
Cannot make root dir.	You do not have permission to make product directory you gave the program.	Check the permissions on the root or select another directory with enough permissions.
Cannot upgrade.	Upgrade failed.	Contact your technical support representative.
Copy <i>setupdir</i> to <i>nmsroot</i> failed.	Installation program could not write to product root directory.	Check permissions on root.
Daemon Manager could not start. The port is in use.	The operating system has not reallocated the port.	Make sure all CiscoWorks processes are terminated ( <code>/usr/ucb/ps -ef   grep CSCO</code> ). Wait five to ten minutes, then try to restart the daemon manager.
Installation in progress.	You are already running an installation on this system.	Run only one installation program at a time.
Missing file <i>file</i> .	Installation program could not find <i>file</i> file.	Contact your technical support representative.
<code>mkdir -p root</code> failed. Exiting.	Installation program was not able to create root specified.	Check permissions on root.
No syslog facility is available.	No available Syslog facilities for CiscoWorks Common Services.	Make one of the facilities available.
Not enough disk space: <i>root</i> .	You picked a product root in a file system with insufficient space to load our product.	Make at least 2 GB of disk space available on partition on which you install product.
OS version less than recommended or supported.	The operating system is not a supported version of Solaris.	Make sure you are running Solaris 2.7 or Solaris 2.8.

Table A-1 Installation Messages (continued)

Message	Reason for Message	User Action
Package verification failed: <i>pkg</i> aborting.	One of the packages loaded incorrectly.	Make sure the package in CD is correct. Use the command <code>pkgchk -d disk/packages packagename</code> or There may be a network problem, if you are installing over the network using a remotely mounted CD.
Required JRE patches are unavailable on the system <i>patch</i> . Product will fail without these patches.	The installation program could not find required JRE patches.	Continue installation and install patches after the CiscoWorks Common Services product is installed. or Stop product installation and install required patches before installing CiscoWorks Common Services.
Some files cannot get backed up, datafile missing.	During product upgrade, some key files were not found and cannot be restored.	Check other directories for the missing files.
Syslog is not running.	The installation program was unable to start syslogd on this system.	Restart syslogd.
The components have dependency errors.	The installation suffered a major failure.	Contact your technical support representative.
There is no table of contents file.	Installation disk is corrupted.	Contact your technical support representative.
You must be logged in as root to install or uninstall this product.	You are not logged in as root.	Log in as root and enter correct password.

**Table A-1** *Installation Messages (continued)*

Message	Reason for Message	User Action
Current administration requires that a unique instance of the <i>CSCOpkg</i> package be created. However, the maximum number of instances of the package that may be supported at one time on the same system has already been met.	You are upgrading from previous CD One editions.	If this happens, change the property pair to <code>instance=overwrite</code> in the following file: <code>/var/sadm/install/admin/default</code> .
The installer has discovered a problem with the DNS resolution. The DNS must resolve within 10 seconds for the CiscoWorks Common Services to work properly.	The DNS is not being resolved or is not resolving properly.	Continue the installation as usual, then correct the DNS resolution problem.
<code>/etc/hosts</code> should be readable by all.	<code>/etc/hosts</code> should have read permission for all.	Continue with the installation. Correct the permissions of <code>/etc/hosts</code> after install.
<code>/tmp</code> permission should be <code>777</code> .	<code>/tmp</code> should have read/write permission for all.	Install will quit. Change <code>/tmp</code> permission and restart installation.
This is not a supported architecture. The product cannot be installed on this server.	The server architecture should be 32-bit compatible.	The user has to install the product on a 32-bit compatible server.
Setup has detected the following product on the destination server. CWCS Integration Utility - Standalone.	CiscoWorks and SNMIM cannot co-exist.	Uninstall SNMIM from this system and restart Setup.
Permission of <code>/usr/bin/at</code> is <i>\$PERMS</i> The minimum permission required is <code>4755</code> .	Jobs cannot be scheduled if you do not have <code>4755</code> permissions for <code>/usr/bin/at</code> .	The minimum permission required is <code>4755</code> . Change it after installation is complete.

# Setting Up the Browser

If you have problems using the desktop, make sure the browser is configured correctly:

- The desktop buttons are active only if, Java and JavaScript are enabled. Make sure you enable Java and JavaScript as described in the “[Preparing to Use CiscoWorks Common Services](#)” chapter, “[Configuring Server Systems](#)” section on page 3-1.



---

**Note**

---

If you are using Netscape Navigator, install it first and then install Java Plug-in.

---



---

**Caution**

---

Uncheck **Edit > Preferences > Advanced > Enable Java Plugin** for Netscape Navigator 4.78 and 4.79.

---

- Make sure your cache is *not* set to zero. If you have browser problems, increase your cache settings as explained in the “[Preparing to Use CiscoWorks Common Services](#)” chapter, “[Configuring Server Systems](#)” section on page 3-1.
- Do not resize the browser window while the desktop or main page is still loading. This can cause a Java error.



# Mounting and Unmounting on Solaris

---

This appendix describes how to mount the CiscoWorks Common Services CD-ROM on a Solaris system. It includes general information only. For more information, consult your Sun documentation.

You can install CiscoWorks Common Services from a CD-ROM mounted on the CiscoWorks Common Services server system or from a CD-ROM mounted on a remote Solaris system.

This appendix contains:

- [Mounting a Local CD-ROM Drive](#)
- [Mounting a Remote CD-ROM Drive](#)
- [Unmounting the CD-ROM Drive](#)

## Mounting a Local CD-ROM Drive

Insert the CiscoWorks Common Services CD-ROM into the CD-ROM drive and do the following:

- Step 1** Become the superuser by entering the command `su` and the root password at the command prompt, or log in as root. The command prompt changes to the pound sign (#).

If the `/cdrom` directory does not already exist, enter the following command to create it:

```
# mkdir /cdrom
```

**Step 2** Mount the CD-ROM drive.



---

**Note** The vold process manages the CD-ROM device and performs the mounting. The CD-ROM might automatically mount onto the /cdrom/cdrom0 directory.

---

If you are running File Manager, a separate File Manager window displays the contents of the CD-ROM. From the File Manager, double click on setup.sh file. The Action: Run box appears. Click **OK** to continue installation.

If the /cdrom/cdrom0 directory is empty because the CD-ROM was not mounted, or if File Manager did not open a window displaying the contents of the CD-ROM, verify the vold daemon is running by entering:

```
# ps -ef | grep vold | grep -v grep
```

If vold is running, the system displays the process identification number of vold. If the system does not display anything, restart the daemon by entering:

```
# /usr/sbin/vold &
```

If the vold daemon is running but did not mount the CD-ROM, stop the vold daemon and then restart it. To stop the vold process, you must know the process identification number. If you do not know the process identification number, you can get it by entering:

```
# ps -ef | grep vold | grep -v grep
```

**Step 3** Stop the vold process by entering:

```
# kill -15 process_ID_number
```

**Step 4** Restart the vold process by entering:

```
# /usr/sbin/vold &
```

If you have problems using the vold daemon, enter the following command to mount the CD-ROM:

```
# mount -F hsfs -r ro /dev/dsk/cxydz /cdrom/cdrom0
```

where  $x$  is the CD-ROM drive controller number,  $y$  is the CD-ROM drive SCSI ID number, and  $z$  is the slice of the partition on which the CD-ROM is located.

---

You have now mounted the CD-ROM drive. See the [“Installing CiscoWorks Common Services”](#) chapter for instructions on installation.

## Mounting a Remote CD-ROM Drive

Insert the CD One CD-ROM into the CD-ROM drive of the remote system and perform Steps 1 through 12 only on the remote system.

---

**Step 1** Log in as root. The command prompt changes to the pound sign (#).

**Step 2** If the /cdrom directory does not already exist, enter:

```
# mkdir /cdrom
```

**Step 3** Mount the CD-ROM drive.



**Note** The vold daemon process manages the CD-ROM device and performs the mounting. The CD-ROM might automatically mount onto the /cdrom/cdrom0 directory.

---

If you are running File Manager, a separate File Manager window displays the contents of the CD-ROM. From the File Manager, double click on setup.sh file. The Action: Run box appears. Click **OK** to continue installation.

If the `/cdrom/cdrom0` directory is empty because the CD-ROM was not mounted, or if File Manager did not open a window displaying the contents of the CD-ROM, verify that the `vold` daemon is running by entering:

```
# ps -ef | grep vold | grep -v grep
```

If `vold` is running, the system displays `/usr/sbin/vold`. If the system does not display anything, restart the daemon by entering:

```
# /usr/sbin/vold &
```

If the `vold` daemon is running but did not mount the CD-ROM, stop the `vold` daemon and then restart it. To stop the `vold` process, you must know the process identification number. If you do not know the process identification number, you can get it by entering:

```
# ps -ef | grep vold | grep -v grep
```

**Step 4** Stop the `vold` process by entering:

```
# kill -15 process_ID_number
```

**Step 5** Restart the `vold` process by entering:

```
# /usr/sbin/vold &
```

If you have problems using the `vold` daemon, enter the following to mount the CD-ROM:

```
# mount -F hfs -r ro /dev/dsk/ctyd0sz /cdrom/cdrom0
```

where  $x$  is the CD-ROM drive controller number,  $y$  is the CD-ROM drive SCSI ID number, and  $z$  is the slice of the partition on which the CD-ROM is located.

**Step 6** Use a text editor to create an `/etc/dfs/dfstab` file, if one does not exist.

**Step 7** Add the following line to the `/etc/dfs/dfstab` file:

```
share -F nfs -o ro /cdrom/cdrom0
```

**Step 8** Make sure your remote system is enabled as an NFS server by entering:

```
# ps -ef | grep nfs | grep -v grep
```

The output of this command shows whether the `/usr/lib/nfs/nfsd` and `/usr/lib/nfs/mountd` daemons are running. If they are not running, enable your system as an NFS server by entering:

```
# /etc/init.d/nfs.server start
```

If your system is enabled as an NFS server, enter one of the following:

```
# share
```

or

```
# shareall
```

**Step 9** Go to the system where you want to install CiscoWorks Common Services.

**Step 10** Log on as superuser by entering the command `su` and the root password, or log in as root.

**Step 11** Create a `/cdrom` directory, if one does not already exist, by entering:

```
# mkdir -p /cdrom/cwcs
```

**Step 12** To mount the CD-ROM drive, enter:

```
# /usr/sbin/mount -r remote_system_name:/cdrom/cdrom0 /cdrom/cwcs
```

---

You have now mounted the CD-ROM drive. See the [“Installing CiscoWorks Common Services”](#) chapter for installation instructions.

# Unmounting the CD-ROM Drive

After you complete the CiscoWorks Common Services installation, you must unmount the CD-ROM drive.

## Unmounting a Local CD-ROM Drive

To unmount a local CD-ROM drive:

---

**Step 1** As root, enter:

```
# cd
# umount /cdrom/cdrom0
# eject
```

**Step 2** Remove the CD-ROM and store it in a safe place.

---

## Unmounting a Remote CD-ROM Drive

To unmount a remote CD-ROM drive:

---

**Step 1** As root, enter the following on the local system:

```
# umount /cdrom/cwcs
```

**Step 2** As root, enter the following on the remote system:

```
# umount /cdrom/cdrom0
```

**Step 3** Remove the CD-ROM and store it in a safe place.

---



## Password Information

---

This appendix provides information on the usage of passwords in CiscoWorks Common Services installation. It contains:

- [CiscoWorks Admin Password](#)
- [CiscoWorks Guest Password](#)
- [CiscoWorks Common Services Database Password](#)
- [Licensing Database Password](#)

### CiscoWorks Admin Password

While entering the CiscoWorks Admin passwords:

- Use a minimum of 5 characters.
- Do not insert spaces between characters.
- Do not leave the password field blank.

### CiscoWorks Guest Password

While entering the CiscoWorks Guest passwords:

- Use a minimum of 5 characters.
- Do not insert spaces between characters.
- Do not leave the password field blank.

## CiscoWorks Common Services Database Password

While entering the CiscoWorks Common Services Database passwords:

- Use a minimum of 5 and a maximum of 15 characters.
- Enter only valid characters. These are: a-z, A-Z, and 0-9.
- Do not start the password with a number.
- Do not insert spaces between characters.
- Do not leave the password field blank.

## Licensing Database Password

While entering the Licensing Database passwords:

- Use a minimum of 5 and a maximum of 15 characters.
- Enter only valid characters. These are: a-z, A-Z, and 0-9.
- Do not start the password with a number.
- Do not insert spaces between characters.
- Do not leave the password field blank.

## New Installation

The following rules apply for a new installation:

- In Express and Typical mode, if you do not enter the passwords, the installation generates random passwords.
- In Custom mode, you need to provide passwords.

## Upgrade Installation and Reinstallation

The following rules apply for upgrade and reinstallation:

- In Express and Typical mode, passwords from the earlier installation are retained.

If you have not entered a password for CiscoWorks admin or guest user during the previous installation, a warning appears:

```
The password for the cwuser user is empty. For security reasons
you must change the password as soon as you can from CiscoWorks
Desktop.
```

Where *cwuser* is either CiscoWorks admin or guest.

- In Custom mode, you need to provide passwords.





## User Inputs for the Installation

---

This appendix provides information on the user inputs for CiscoWorks Common Services installation. It contains:

- [User Inputs for Express Installation](#)
- [User Inputs for Typical Installation](#)
- [User Inputs for Custom Installation](#)

### User Inputs for Express Installation

CiscoWorks Common Services and the dependent applications are installed in `/opt/CSCOpX/`. In Express mode, you must provide the following information during installation:

**Table D-1** *User Inputs for Express Installation*

Settings	Value
Password for <i>admin</i> user	No default values. Enter the admin password. For more information on passwords see <a href="#">“Password Information”</a>

## User Inputs for Typical Installation

Enter the following information during installation in Typical mode:

**Table D-2** *User Inputs for Typical Installation*

Settings	Value
Destination folder	The default location is /opt/CSCOpX. Select another location if you want to install in a specific location.
Components to install	Select the components you want to install.
Password for <i>admin</i> user	No default values. Enter the admin password. For more information on passwords see “ <a href="#">Password Information</a> ”

## User Inputs for Custom Installation

Enter the following information during installation in Custom mode:

**Table D-3** *User Inputs for Custom Installation*

Settings	Value
Destination folder	The default location is /opt/CSCOpX. Select another location if you want to install in a specific location.
Components to install	Select the components you want to install.
Password for users <i>admin</i> and <i>guest</i>	No default values. Enter the admin and guest password. For more information on passwords see “ <a href="#">Password Information</a> ”

**Table D-3 User Inputs for Custom Installation (continued)**

Settings	Value
Password for the CiscoWorks Common Services database	By default, the value is generated randomly. For more information on passwords see <a href="#">“Password Information”</a>
Select one of the User Management modes: <ul style="list-style-type: none"> <li>• Manage locally by CiscoWorks Common Services.</li> <li>or</li> <li>• Manage by Access Control Server (ACS).</li> </ul> If ACS mode is selected, enter the following server data: <ul style="list-style-type: none"> <li>• ACS Name</li> <li>• ACS Port</li> <li>• Admin User Name and Password</li> <li>• Shared device key</li> </ul>	By default, the User Management mode is set to local, and ACS server data is empty.  If ACS mode is selected and if you leave the fields blank, the server name is set to <i>tacacs.company.com</i> and port is set to 49.

**Table D-3** *User Inputs for Custom Installation (continued)*

<b>Settings</b>	<b>Value</b>
Apache certificate settings: <ul style="list-style-type: none"> <li>• SMTP server</li> <li>• Host name</li> <li>• Administrator's e-mail address</li> <li>• Country</li> <li>• State</li> <li>• City</li> <li>• Company</li> <li>• Organization</li> </ul>	Host name is mandatory.
Password for the Licensing database	By default, the value is randomly generated. For more information on passwords, see <a href="#">“Password Information”</a>



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