



Installation and Setup Guide for Campus Manager on Solaris

Software Release 4.0.6
CiscoWorks

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Preface

This manual describes Campus Manager 4.0.6 and provides instructions for installing and configuring it.

Audience

This document is for anyone who installs, configures, verifies, and uses Campus Manager 4.0.6 software. Network administrators or operators should have the following skills:

- Basic Solaris system administrator skills
- Basic network management skills
- Basic Internet browser skills

Conventions

This document uses the following conventions:

Item	Convention
Commands and keywords	boldface font
Variables for which you supply values	<i>italic font</i>
Displayed session and system information	screen font
Information you enter	boldface screen font
Variables you enter	<i>italic screen font</i>
Menu items and button names	boldface font
Selecting a menu item in paragraphs	Option > Network Preferences
Selecting 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 also review the documentation on Cisco.com for any updates.

Table 1 describes the product documentation that is available.

Table 1 **Product Documentation**

Document Title	Available Formats
<i>Release Notes for Campus Manager 4.0.6 on Solaris</i>	<ul style="list-style-type: none"> Printed document that was included with the product. PDF on the product CD-ROM On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps563/prod_release_notes_list.html
<i>Release Notes for Campus Manager 4.0.6 on Windows</i>	<ul style="list-style-type: none"> Printed document that was included with the product. PDF on the product CD-ROM On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps563/prod_release_notes_list.html
<i>Installation and Setup Guide for Campus Manager 4.0.6 on Solaris</i> (This document.)	<ul style="list-style-type: none"> Printed document that was included with the product. PDF on the product CD-ROM. On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps563/prod_installation_guides_list.html Printed document available by order (part number DOC-7817187=).¹
<i>Installation and Setup Guide for Campus Manager 4.0.6 on Windows</i>	<ul style="list-style-type: none"> Printed document that was included with the product. PDF on the product CD-ROM. On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps563/prod_installation_guides_list.html Printed document available by order (part number DOC-7817188=).¹
<i>User Guide for Campus Manager 4.0.6</i>	<ul style="list-style-type: none"> PDF on the product CD-ROM. On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps563/products_user_guide_list.html Printed document available by order (part number DOC-7817186=).¹

Table 1 **Product Documentation (continued)**

Document Title	Available Formats
<i>Supported Devices Table for Campus Manager 4.0.6</i>	On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps563/products_device_support_tables_list.html
Context-sensitive online help	<ul style="list-style-type: none"> Select an option from the navigation tree, then click Help. Click the Help button in the dialog box.

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

Related Documentation



Note

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

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

Table 2 **Related Documentation**

Document Title	Available Formats
<i>Release Notes for CiscoWorks Common Services 3.0.5 (Includes CiscoView 6.1.5) on Solaris</i>	<ul style="list-style-type: none"> Printed document that was included with the product. PDF on the product CD-ROM. On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps3996/prod_release_notes_list.html
<i>Release Notes for CiscoWorks Common Services 3.0.5 (Includes CiscoView 6.1.5) on Windows</i>	<ul style="list-style-type: none"> Printed document that was included with the product. PDF on the product CD-ROM. On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps3996/prod_release_notes_list.html
<i>Installation and Setup Guide for CiscoWorks Common Services 3.0.5 (Includes CiscoView 6.1.5) on Solaris</i>	<ul style="list-style-type: none"> Printed document that was included with the product. PDF on the product CD-ROM. On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps3996/prod_installation_guides_list.html Printed document available by order (part number DOC-7817183=).

Table 2 **Related Documentation (continued)**

Document Title	Available Formats
<i>Installation and Setup Guide for CiscoWorks Common Services 3.0.5 (Includes CiscoView 6.1.5) on Windows</i>	<ul style="list-style-type: none"> Printed document that was included with the product. PDF on the product CD-ROM. On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps3996/prod_installation_guides_list.html Printed document available by order (part number DOC-7817184=).
<i>User Guide for CiscoWorks Common Services 3.0.5</i>	<ul style="list-style-type: none"> PDF on the product CD-ROM. On Cisco.com at this URL: http://cisco.com/en/US/products/sw/cscowork/ps3996/products_user_guide_list.html Printed document available by order (part number DOC-7817182=).

Additional Information Online

Service Packs (SP) contain updated files necessary for the latest device support and fixes to known problems that are not available in Campus Manager. If you are a registered user, you can download the Service Packs for Campus Manager from:

<http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus>

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. This section explains the product documentation resources that Cisco offers.

Cisco.com

You can access the most current Cisco documentation at this URL:

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

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

Product Documentation DVD

The Product Documentation DVD is a library of technical product documentation on a portable medium. The DVD enables you to access installation, configuration, and command guides for Cisco hardware and software products. With the DVD, you have access to the HTML documentation and some of the PDF files found on the Cisco website at this URL:

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

The Product Documentation DVD is created monthly and is released in the middle of the month. DVDs are available singly or by subscription. Registered Cisco.com users can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

Ordering Documentation

You must be a registered Cisco.com user to access Cisco Marketplace. Registered users may order Cisco documentation at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

If you do not have a user ID or password, you can register at this URL:

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

Documentation Feedback

You can provide feedback about Cisco technical documentation on the Cisco Technical Support & Documentation site area by entering your comments in the feedback form available in every online document.

Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

From this site, you will find information about how to do the following:

- Report security vulnerabilities in Cisco products
- Obtain assistance with security incidents that involve Cisco products
- Register to receive security information from Cisco

A current list of security advisories, security notices, and security responses for Cisco products is available at this URL:

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

To see security advisories, security notices, and security responses as they are updated in real time, you can subscribe to the Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed. Information about how to subscribe to the PSIRT RSS feed is found at this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you have identified a vulnerability in a Cisco product, contact PSIRT:

- For emergencies only — security-alert@cisco.com

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- For nonemergencies — psirt@cisco.com

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

**Tip**

We encourage you to use Pretty Good Privacy (PGP) or a compatible product (for example, GnuPG) to encrypt any sensitive information that you send to Cisco. PSIRT can work with information that has been encrypted with PGP versions 2.x through 9.x.

Never use a revoked encryption key or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

The link on this page has the current PGP key ID in use.

If you do not have or use PGP, contact PSIRT to find other means of encrypting the data before sending any sensitive material.

Product Alerts and Field Notices

Modifications to or updates about Cisco products are announced in Cisco Product Alerts and Cisco Field Notices. You can receive Cisco Product Alerts and Cisco Field Notices by using the Product Alert Tool on Cisco.com. This tool enables you to create a profile and choose those products for which you want to receive information.

To access the Product Alert Tool, you must be a registered Cisco.com user. (To register as a Cisco.com user, go to this URL: <http://tools.cisco.com/RPF/register/register.do>) Registered users can access the tool at this URL: <http://tools.cisco.com/Support/PAT/do/ViewMyProfiles.do?local=en>

Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day at this URL:

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

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

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



Note

Use the **Cisco Product Identification Tool** to locate your product serial number before submitting a request for service online or by phone. You can access this tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link, clicking the **All Tools (A-Z)** tab, and then choosing **Cisco Product Identification Tool** from the alphabetical list. This tool offers three search options: by product ID or model name; by tree view; or, for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.



Tip

Displaying and Searching on Cisco.com

If you suspect that the browser is not refreshing a web page, force the browser to update the web page by holding down the Ctrl key while pressing F5.

To find technical information, narrow your search to look in technical documentation, not the entire Cisco.com website. On the Cisco.com home page, click the **Advanced Search** link under the Search box

and then click the **Technical Support & Documentation** radio button.

To provide feedback about the Cisco.com website or a particular technical document, click **Contacts & Feedback** at the top of any Cisco.com web page.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests, or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411

Australia: 1 800 805 227

EMEA: +32 2 704 55 55

USA: 1 800 553 2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—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.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of the network is impaired while most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

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

- The *Cisco Product Quick Reference Guide* is a handy, compact reference tool that includes brief product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through channel partners. It is updated twice a year and includes the latest Cisco channel product offerings. To order and find out more about the *Cisco Product Quick Reference Guide*, go to this URL:

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

- Cisco Marketplace provides a variety of Cisco books, reference guides, documentation, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

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

- Cisco Press publishes a wide range of general networking, training, and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the magazine for Cisco networking professionals. Each quarter, *Packet* delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can subscribe to *Packet* magazine at this URL:

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

- *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/ipj>

- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

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

- Networking Professionals Connection is an interactive website where networking professionals share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

<http://www.cisco.com/discuss/networking>

- “What’s New in Cisco Documentation” is an online publication that provides information about the latest documentation releases for Cisco products. Updated monthly, this online publication is organized by product category to direct you quickly to the documentation for your products. You can view the latest release of “What’s New in Cisco Documentation” at this URL:

<http://www.cisco.com/univercd/cc/td/doc/abtnicd/136957.htm>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

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



Prerequisites

This chapter describes the factors that you should consider before installing Campus Manager 4.0.6 on a Solaris system.

This chapter contains:

- [Product Overview](#)
- [Campus Manager Upgrade Paths](#)
- [Server Requirements](#)
- [Client Requirements](#)
- [Supported Devices](#)

Product Overview

Campus Manager, a member of the CiscoWorks family of products, is a suite of web-based network management tools that enable administrators to obtain various types of graphical views of their network topology and end-user information. Campus Manager is based on a client-server architecture that connects multiple web-based clients to a server on the network.

Campus Manager server discovers information about network devices and saves it in the Campus Manager database so that the applications can access it. For more information, see *User Guide for Campus Manager 4.0.6*.

The Campus Manager applications and what they allow you to do are as follows:

- Path Analysis—View the path that packets take between end nodes/devices on your network.
- User Tracking—Locate and display data about users, IP Phones, hosts, and wireless clients in your network.
- Topology Services—Discover, view, and monitor the physical and logical services on your network. View detailed network information about all devices, links, and ports in your network.
- VLAN Port Assignment—View port information, create trunk, configure VLANs on a trunk, and move ports between VLANs on your network.
- Discrepancy Reports—Discover and view physical and logical discrepancies in your network.

Campus Manager Upgrade Paths

You can upgrade to Campus Manager 4.0.6 using LAN Management Solution 2.6 Update CD-ROM. You must install the following applications before installing the LAN Management Solution 2.6 Update:

- Common Services 3.0.3 or higher
- Campus Manager 4.0.3 or higher

You can upgrade to Campus Manager 4.0.6 by either:

- Using the Campus Manager 4.0.6 CD-ROM.

For more details, see [Installing Campus Manager 4.0.6, page 2-2](#).

Or

- Using LAN Management Solution 2.6 Update on Solaris. You can download this from:

<http://www.cisco.com/kobayashi/sw-center/cw2000/lan-planner.shtml>

For more details see, Readme for LAN Management Solution 2.6 Update on Solaris that can be downloaded from the same location.

Server Requirements

The server requirements for Campus Manager 4.0.6 are the same as that of LMS 2.6.

The minimum system requirements for CiscoWorks Common Services 3.0.5 and Campus Manager 4.0.6 are shown in [Table 1-1](#).

Table 1-1 Server System Requirements Summary

Requirement Type	Minimum Requirement ¹
System hardware	<ul style="list-style-type: none"> • Sun UltraSPARC IIIi • CD-ROM drive
Memory (RAM)	512 MB
Available drive space ²	2 GB on the partition on which you install the product. The default is /opt
Swap space	Swap space equal to double the amount of memory (RAM). For example, if your system has 512 MB of RAM, you need 1024 MB of swap space.
/tmp directory	Must be on a swap partition
System software	Solaris 8 (Solaris 2.8) or Solaris 9 (Solaris 2.9) ³ Campus Manager supports 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	Netscape 7.0, if you are using the CiscoWorks Home page on the server system

1. If other applications are installed, or the number of devices on your network exceeds 500, the requirements might be greater.
2. For information about verifying disk space, see the “[Checking Required Disk Space](#)” section on page 1-3.
3. Patch 106292-05 must not be installed.

Checking Required Disk Space

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 1-2 lists the required and recommended patches for Solaris 8 (Solaris 2.8) and Solaris 9 (Solaris 2.9).

Table 1-2 Required and Recommended Patches for Solaris

Operating System	Required		Recommended	
	Server	Client	Server	Client
Solaris 8 (Solaris 2.8)	111327-05	111626-03	110951-01	110951-05
	110945-08	108652-81	110662-02	110662-12
	110934-16	108921-21	110615-01	110615-11
	110898-09	108940-62	110286-02	108964-06
	109326-14			
	108827-40			
	108528-29			
Solaris 9 (Solaris 2.9)	114224-01	112771-14	113326-01	112808-06
	113580-01	112661-06	112998-03	
	112839-04	113244-05	113713-14	
	112233-12		112964-07	
	114006-01		113575-05	
		112970-07		

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

Maximum Recommended Load

The maximum recommended load on servers configured with the minimum server requirements shown in Table 1-1 is 500 Cisco devices and one client at a time.

If other network management applications are installed on your server, you may need additional resources.

Server Recommendations

To select or configure a server system that best meets your needs, consider the number of managed devices.

Table 1-3 shows the recommendations for a server running Common Services and Campus Manager. These recommendations produce optimal response time while running user reports.

Table 1-3 Server System Recommendations

Minimum System Configuration	No. of Managed Devices
Ultra 10 Memory: 512 MB Swap space: 1 GB Available disk space: 40 GB	0–1000 managed devices
Ultra 10 Memory: 2 GB Swap space: 2 GB Available disk space: 80 GB	1000–2500 managed devices
Ultra 60 (dual processor) Memory: 2 GB Swap space: 4 GB Available disk space: 80 GB	2,500–5,000 managed devices

Client Requirements

The minimum client system requirements for CiscoWorks Common Services 3.0.5 and Campus Manager 4.0.6 are shown in [Table 1-4](#). The maximum recommended load on clients configured with the minimum requirements shown in [Table 1-4](#) is 2000 Cisco devices.

Table 1-4 Client System Requirements Summary

Requirement Type	Minimum Requirement
System Software and Hardware	<ul style="list-style-type: none"> • Client system: <ul style="list-style-type: none"> – IBM system with at least a 300 MHz Pentium processor running Windows (Professional and Server), or Windows XP SP1 Or <ul style="list-style-type: none"> – Solaris SPARC station Solaris 8 (Solaris 2.8) or Solaris 9 (Solaris 2.9) – Color monitor with video card set to 24 bits color depth
Memory (RAM)	512 MB
Browser	Any one of these browsers: <ul style="list-style-type: none"> • On Windows 2000 and Windows XP clients: <ul style="list-style-type: none"> – Microsoft Internet Explorer 6.0.26 and Microsoft Internet Explorer 6.0.28 – Netscape Navigator 7.1 and Netscape Navigator 7.2 – Mozilla 1.7 and 1.7.5 • On Solaris clients: <ul style="list-style-type: none"> – Netscape Navigator 7.0 – Mozilla 1.7 and Mozilla 1.7.5

Supported Devices

For information about supported devices, access the Supported Devices table at the following location on cisco.com:

http://cisco.com/en/US/products/sw/cscowork/ps563/products_device_support_tables_list.html



Installing Campus Manager

This chapter describes how to install, uninstall, and reinstall Campus Manager 4.0.6.

This chapter contains:

- [Installation Overview](#)
- [Installing Campus Manager 4.0.6](#)
- [Reinstalling Campus Manager](#)
- [Backing Up and Restoring Data After Installation](#)
- [Uninstalling Campus Manager](#)

Installation Overview

Table 2-1 is an overview of the Campus Manager 4.0.6 installation tasks. It contains references to more detailed information about each task.

Table 2-1 **Installation Tasks**

Task	Steps	References
1. Prepare to install Campus Manager.	Verify that server requirements are met.	“Server Requirements” section on page 1-3
2. Install Campus Manager.	Run the installation program.	“Installing Campus Manager 4.0.6” section on page 2-2
3. Verify and troubleshoot installation.	<ol style="list-style-type: none"> a. Verify the correct files and directories are installed. b. Analyze installation error messages. 	“Understanding Installation Messages” section on page A-2
4. Set up Campus Manager	Prepare the system for Campus Manager applications and set up the applications.	Setting Up Campus Manager Applications, page 3-3

Installing Campus Manager 4.0.6

Campus Manager gets installed in the same directory where you have installed CiscoWorks Common Services 3.0.5.

The Campus Manager 4.0.6 installer automatically updates program files and data from previous versions of Campus Manager .

All device updates up to Campus Manager 4.0 SP 5 have been incorporated in Campus Manager 4.0.6. This section contains the following topics:

- [Licensing in Campus Manager 4.0.6, page 2-2](#)
- [Running the Installation Program, page 2-3](#)

Licensing in Campus Manager 4.0.6

Campus Manager 4.0.6 uses the license of Campus Manager 4.0. If you have a licensed version of Campus Manager 4.0, you can install Campus Manager 4.0.6.

Campus Manager 4.0.6 emulates the licensing behavior of Campus Manager 4.0. For example, if the Campus Manager 4.0 license is restricted, Campus Manager 4.0.6 is also restricted.

For information on the licensing mechanism in Campus Manager 4.0, see *Installation and Setup Guide for Campus Manager 4.0 on Solaris*.

Running the Installation Program

Before installing Campus Manager 4.0.6, you must install Campus Manager 4.0.3 from the LMS 2.5.1 CD, and then proceed with installing Campus Manager 4.0.6 from the LMS 2.6 Update CD-ROM.

To install Campus Manager 4.0.3:

-
- Step 1** Install the required patches as described in the [“Solaris Patches” section on page 1-4](#).
- Step 2** Mount the Campus Manager 4.0.3 CD-ROM as root. Either:
- Mount the CD-ROM on the Campus Manager server system.
- Or
- Mount the CD-ROM on a remote Solaris system, then access the CD-ROM from the Campus Manager server system.
- See Appendix B, [“Mounting and Unmounting the CD-ROM, page B-1”](#) for mounting instructions.
- Step 3** Run the installation program.
- Enter:
- ```
./setup.sh
```
- A message appears:
- Press Enter to read/browse the following license agreement:
- Step 4** 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 proceeding License Agreement? (y/n) [n]
```
- If you are upgrading from Campus Manager 4.0, you will not see the license agreement.
- Step 5** Enter **y** to accept the license and proceed with the installation.
- Or
- Enter **n** to deny and stop the installation.
- If you select **y**, the following message appears:
- ```
For security reasons, Cisco recommends that you change the default password for ANI
database.
Do you want to change it now, no is the default option.
```
- Step 6** Enter **y** to change your default Campus Manager database password.
- The following message appears:
- ```
Enter ANI database password:
Confirm password:
```
- Step 7** Enter the password, and re-enter to confirm it.
- The following message appears:
- ```
Exiting installation beyond this point might result in system instability.
Do you want to continue the installation? (y/n) [y]:
```
- Step 8** Enter **y** to continue the installation.
- The installation program displays messages about the various packages being installed and the services being started.

The packages include application software and device adapter packages for all devices that can be managed with Campus Manager applications. The following message appears:

```
To ensure that you retain the latest device support and bug fixes, please install the
latest Service Pack (SP) for Campus Manager 4.0.3
```

```
You can download the latest SP from
http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus.
```

```
Please refer to the Installation and Setup Guide for details.
```

```
User Tracking Utility 1.0 is not compatible with Campus Manager 4.0.3
```

```
User Tracking Utility 1.1.1 is available for Campus Manager 4.0.3.
```

```
You can download the latest UTU from
http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus-crypto.
```

Your Solaris machine has Campus Manager 4.0.3 installed successfully. Now, from the LMS 2.6 Update CD-ROM, you need to install Campus Manager 4.0.6 by following the steps as below.

To install Campus Manager 4.0.6:

**Step 9** Mount the LMS 2.6 Update CD-ROM as root. Either:

- Mount the CD-ROM on the Campus Manager server system.

Or

- Mount the CD-ROM on a remote Solaris system, then access the CD-ROM from the Campus Manager server system.

See Appendix B, "[Mounting and Unmounting the CD-ROM, page B-1](#)" for mounting instructions.

**Step 10** Run the installation program.

Enter:

```
./setup.sh
```

A message appears:

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

**Step 11** 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 proceeding License Agreement? (y/n) [n]
```

If you are upgrading from Campus Manager 4.0, you will not see the license agreement.

**Step 12** Enter **y** to accept the license and proceed with the installation.

Or

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

If you select **y**, the following message appears:

```
New Updates to be installed :
```

```
CiscoWorks Common Services 3.0.5 update
```

```
Campus Manager 4.0.6 update
```

```
Do you want to continue the installation:?(y/n) [y]:
```



**Note**

In a bundle environment, all the applications that are installed on the NMS Server will be listed.

**Step 13** Enter **y** to continue the installation.

We recommend you download and install the latest required and recommended patches from [www.sunsolve.sun.com](http://www.sunsolve.sun.com), before you run Common Services.

If any of the required Server patches is missing, the following message appears:

```
Installation can proceed without the required Server patches. However, you must install the
```

```
required patches listed above before running CiscoWorks.
```

```
Do you want to continue the installation? (y/n) [y]:
```

**Step 14** Enter **y** to continue the installation.

```
If no other CiscoWorks application installations are pending, you can choose to start CiscoWorks Daemons.
```

```
Do you want to restart CiscoWorks Daemons at the end of this installation? (y/n) [n]:
```

**Step 15** Enter **y** to restart the CiscoWorks daemons after installation.

The following message appears:

```
WARNING: Exiting installation beyond this point might result in system instability.
```

```
Do you want to continue the installation? (y/n) [y]:
```

**Step 16** Enter **y** to continue the installation.

The installation program displays messages about the various packages being installed and the services being started.

The packages include application software and device adapter packages for all devices that can be managed with Campus Manager applications.

After installation is complete, the following messages appear:

```
Software Installation Tool Completed
```

```
Possible Warnings/Errors Encountered
```

Warning and error messages that had appeared during installation will now appear as a list after these messages.

**Step 17** Unmount the CD-ROM.

---

After installing Campus Manager 4.0.6, you can verify the process status by running `NMSROOT/bin/pdshow`

If errors occurred during installation, check the installation log file `/var/tmp/ciscoinstall.log`. For information about troubleshooting, see [Appendix A, "Troubleshooting the Installation."](#)

After the installation completes, do either of the following:

- If you have data from the earlier version of Campus Manager to import into Campus Manager 4.0.6, see the ["Backing Up and Restoring Data After Installation"](#) section on page 2-7.
- If you do not have data to import, continue to [Chapter 3, "Preparing to Use Campus Manager."](#)

After Campus Manager 4.0.6 is installed, Topology Services allows you to either convert the saved view layouts in the new Campus Manager 4.0.6 format or directly use the default view layouts generated by Campus Manager 4.0.3. See the ["Upgrading Saved View Layouts From Topology Services"](#) section for more information.

# Reinstalling Campus Manager

If you had any problems with previous installation, you can reinstall Campus Manager.

For detailed steps to install Campus Manager 4.0.6, see [Installing Campus Manager 4.0.6, page 2-2](#).

The installation program can detect whether you have already installed Campus Manager 4.0.6.

Reinstalling Campus Manager does not affect your existing database. However, we recommend that you back up the database before reinstallation to prevent any possible loss of data. Your CiscoWorks Server configuration is also preserved.

## Upgrading Saved View Layouts From Topology Services

Use the following procedure to upgrade saved topology view layouts generated by the previous version of Campus Manager to the new Campus Manager 4.0.6 format. The following view layouts are upgraded:

- Layer 2 View
- Unconnected Device View
- LAN Edge View

To upgrade saved view layouts:

---

**Step 1** Start Topology Services. (**Campus Manager > Topology Services**)

**Step 2** Select **File > Upgrade View Layouts**.

**Step 3** Select the view layout you want to upgrade.

**Step 4** Click **Upgrade** to upgrade the selected view layout.

Topology Services upgrades the selected view layout to the Campus Manager 4.0.6 format.

**Step 5** Select the corresponding view layout from the side panel in Topology Services to display this layout.

The upgraded view layout might not be formatted in exactly the same manner as the previous version of the view layout.

---

# Backing Up and Restoring Data After Installation

This section describes how to back up and restore data from previous versions of Campus Manager. You can back up and restore data from:

- Campus Manager 3.2.x
- Campus Manager 3.3.x
- Campus Manager 4.0
- Campus Manager 4.0 Service Pack 1
- Campus Manager 4.0 Service Pack 2
- Campus Manager 4.0 Service Pack 3
- Campus Manager 4.0 Service Pack 4
- Campus Manager 4.0 Service Pack 5

where .x refers to the IDU upgrades.

This section consists of:

- [Backing Up Data Using GUI](#)
- [Backing Up Data Manually From Campus Manager](#)
- [Restoring Data Manually From Campus Manager](#)

## Backing Up Data Using GUI

You can schedule immediate, daily, weekly, or monthly automatic database backups.

To back up data:

- 
- Step 1** Go to the CiscoWorks Homepage and select **Common Services > Server > Admin > Backup**. The Backup page appears.
- Step 2** Enter the appropriate information in the fields explained in [Table 2-2](#):

**Table 2-2**      **Backing Up Data**

| Field            | Description                                                                                                                                     |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Backup Directory | Location of the backup directory. We recommend that your target location be on a different partition than the CiscoWorks installation location. |
| Runtype          | Select the desired check box. You have options to schedule immediate, daily, weekly, or monthly backups.                                        |

**Table 2-2** *Backing Up Data (continued)*

|             |                                                                                                                                                                                                                                                                                            |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Time        | From the drop-down lists, select the time and date. <ul style="list-style-type: none"> <li>If you schedule a weekly backup, select the day of the week from the drop-down list.</li> <li>If you schedule a monthly backup, select the day of the month from the drop-down list.</li> </ul> |
| Generations | Maximum number of backups to be stored in the backup directory.                                                                                                                                                                                                                            |

**Step 3** Click **Apply**.

---

## Backing Up Data Manually From Campus Manager

To manually back up saved data in earlier versions of Campus Manager:

---

**Step 1** Stop the daemon manager on the local machine on which the previous version of Campus Manager is installed. Enter:

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

**Step 2** Export CiscoWorks data by entering:

```
NMSROOT/bin/perl NMSROOT/bin/backup.pl -d /backup dir
```

You should enter the path where you want to export CiscoWorks Common Services data. The script command will back up the CiscoWorks data.

**Step 3** Start the daemon manager by entering:

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

**Step 4** Copy the backed up directory to the remote machine.

---

## Restoring Data Manually From Campus Manager

To restore data manually:

- 
- Step 1** Stop the daemon manager on the local machine on which the previous version of Campus Manager is installed by entering:
- ```
/etc/init.d/dmgttd stop
```
- Step 2** Restore CiscoWorks data by entering:
- ```
NMSROOT/opt/CSCOpX/bin/perl /opt/CSCOpX/bin/restorebackup.pl -d /backup dir
```
- You should enter the path where you want the data to be restored.
- Step 3** Start the daemon manager by entering:
- ```
NMSROOT /etc/init.d/dmgttd start
```
-

Uninstalling Campus Manager

The uninstallation program removes Campus Manager 4.0.6 files and settings. The `uninstall` option enables you to remove only Campus Manager 4.0.6 or remove CiscoWorks Common Services 3.0.5 as well.

You must use the Campus Manager 4.0.6 uninstallation program to remove the product. You could damage your system, if you attempt to remove Campus Manager 4.0.6 or its components manually.



Caution

Uninstalling Campus Manager deletes the Campus Manager database.

To remove Campus Manager 4.0.6 or other major components:

-
- Step 1** Enter the following commands as root to start the uninstall program:

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

where `/opt/CSCOpX` is the default installation directory. If you have specified a different directory while installing CiscoWorks Common Services, substitute the name of the directory.

A prompt similar to the following appears:

- ```
1) Cisco View 6.1.2
2) Integration Utility 1.6
3) CiscoWorks Common Services 3.0.5
4) Campus Manager 4.0.6
5) All of the above
```

```
Select one or more of the items using its number separated by comma or enter q to quit [q]
```

- Step 2** Enter the number that corresponds to it (in this case, 4).
- You can select one or more of the items using its number separated by comma or enter **q** to quit.
  - To remove Campus Manager, CiscoWorks Common Services, CiscoView and Integration Utility, enter the number that corresponds to all of the above (in this case, 5).

A prompt appears, where the default selection is indicated in brackets:

```
Are you sure you want to uninstall: Campus Manager 4.0.6 (y/n)? [n]
```

- Step 3** Enter **y** to continue to uninstall or **n** to cancel.

If any other prompts appear, respond appropriately.

The uninstallation program displays a series of messages. Ignore any additional messages that ask if you want to remove packages.

The uninstall messages are written to the `/var/tmp/ciscouninstall.log` file.

After the uninstallation script successfully completes, the following message appears:

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

---



## Preparing to Use Campus Manager

---

This chapter describes the various administrator and application setup tasks that you must perform after installing Campus Manager 4.0.6.

This chapter contains:

- [Overview of Campus Manager Setup Tasks](#)
- [Accessing the CiscoWorks Server](#)
- [Performing Administrator Tasks](#)
- [Setting Up Campus Manager Applications](#)
- [Logging Out as Administrator](#)

# Overview of Campus Manager Setup Tasks

Table 3-1 provides an overview of the Campus Manager 4.0.6 setup tasks and gives references to detailed information about each task.

**Table 3-1 Overview of Campus Manager Setup Tasks**

| Tasks                                 | References                                                                   |
|---------------------------------------|------------------------------------------------------------------------------|
| 1. Access the CiscoWorks Server.      | <a href="#">“Accessing the CiscoWorks Server” section on page 3-2</a>        |
| 2. Perform administrator setup tasks. | <a href="#">“Logging In as Administrator” section on page 3-3</a>            |
| 3. Start and configure applications.  | <a href="#">“Setting Up Campus Manager Applications” section on page 3-3</a> |
| 4. Log out of the Server.             | <a href="#">“Logging Out as Administrator” section on page 3-7</a>           |

## Accessing the CiscoWorks Server

You must set up the client before using Campus Manager. See *Installation and Setup Guide for CiscoWorks Common Services 3.0 (Includes Ciscoview) on Solaris* for configuring browser and client systems.

To access Campus Manager, enter the URL of the CiscoWorks Server in your web browser:

`http://server_name:1741`

`https://server_name:443` (for SSL mode)

where *server\_name* is the name of the CiscoWorks Server. If you were prompted to supply a port number for the CiscoWorks Server during the installation, use that port number in the URL. The default port number is 1741 (443 if SSL is enabled).

If you cannot access the CiscoWorks Server or if the CiscoWorks Homepage is not displayed correctly, refer to [Appendix A, “Troubleshooting the Installation.”](#)

After you access the CiscoWorks Server, see the [“Performing Administrator Tasks” section on page 3-2.](#)

## Performing Administrator Tasks

After accessing the CiscoWorks Server, you must log in as the administrator and set up the server for other users.

## Logging In as Administrator

To log in as administrator:

- 
- Step 1** Enter the system administrator username and password in the Login page.
- Step 2** Click **Login**.
- The CiscoWorks Homepage appears.
- 

After you log in as the administrator, continue to the [“Setting Up Campus Manager Applications” section on page 3-3](#).

To log out the CiscoWorks Server, see the [“Logging Out as Administrator” section on page 3-7](#) for information.

## Setting Up Campus Manager Applications

This section describes the tasks that you must perform to set up the Campus Manager 4.0.6 applications. Some of these tasks require the administrator login.

This section contains:

- [Setting Up Your Network](#)
- [Configuring Device Discovery](#)
- [Setting Up Topology Services](#)
- [Setting Up Path Analysis](#)

## Setting Up Your Network

To ensure that the Campus Manager Server successfully discovers the devices in your network, you must set up your network correctly. [Table 3-2](#) lists the required tasks for each application, marked by x.

See the *User Guide for Campus Manager 4.0.3* for more information.

**Table 3-2** Network Setup Tasks

| Network Setup Requirement                                          | Topology Services | User Tracking | Path Analysis | VLAN Port Assignment | Discrepancy Reports |
|--------------------------------------------------------------------|-------------------|---------------|---------------|----------------------|---------------------|
| Connect to seed device                                             | x                 | x             | x             | x                    | x                   |
| Enable Simple Network Management Protocol (SNMP)                   | x                 | x             | x             | x                    | x                   |
| Enable Cisco Discovery Protocol (CDP)                              | x                 | x             | x             | x                    | x                   |
| Enable Call Detail Record (CDR)                                    | —                 | —             | x             | —                    | —                   |
| Set a unique sysName variable on devices                           | x                 | x             | x             | x                    | —                   |
| Enable Integrated Local Management Interface (ILMI) on ATM devices | x                 | x             | x             | x                    | x                   |

Table 3-2 Network Setup Tasks (continued)

| Network Setup Requirement                                            | Topology Services | User Tracking | Path Analysis | VLAN Port Assignment | Discrepancy Reports |
|----------------------------------------------------------------------|-------------------|---------------|---------------|----------------------|---------------------|
| Configure DNS                                                        | x                 | x             | x             | x                    | x                   |
| Configure VLAN Trunk Protocol (VTP)                                  | x                 | x             | x             | x                    | x                   |
| Configure VLAN trunks on Fast Ethernet and Gigabit Ethernet          | x                 | x             | x             | x                    | x                   |
| Create the default configuration server for ATM LAN Emulation (LANE) | x                 | x             | x             | x                    | x                   |
| Enable source routing                                                | —                 | —             | x             | —                    | —                   |

After you set up your network, continue to the [“Configuring Device Discovery”](#) section on page 3-4.

## Configuring Device Discovery

You can modify SNMPv2 and SNMPv3 credentials using the **Discovery > SNMP Settings** option from the Admin tab in the Campus Manager Administration window.

To configure Device Discovery Settings:

- 
- Step 1** Go to **Campus Manager > Administration > Device Discovery > Discovery Settings**.  
The Device Discovery Settings dialog box appears.
  - Step 2** Specify the seed device and IP address range.
  - Step 3** Click **Apply** to save the changes.
  - Step 4** Click **OK** to start Device Discovery.
- 

If you do not specify the IP address range, Device Discovery tries to discover as many devices as it can based on the community strings and connectivity.

For more information, see [Specifying Seed Device Online help](#).

After you set up your network, you must configure data collection. See the [“Configuring Data Collection”](#) section on page 3-5.

## Verifying Device Discovery

To verify the status of Device Discovery, go to **Campus Manager > Administration**. In the Campus Manager Administration dashboard that appears, you can view the status of Device Discovery.

## Configuring Data Collection

You should have run Device Discovery at least once before starting Data Collection, or the devices should be available in Device and Credential Repository (DCR).

To configure Data Collection, go to **Campus Manager > Administration > Campus Data Collection > Data Collection Filters**. The Data Collection Filter Settings dialog box appears.

### Specifying VTP Domain

---

- Step 1** In the Data Collection Filter Settings dialog box, select VTP Domain and click **Configure**. The VTP Domain Filter dialog box appears.
- Step 2** From the drop-down list, select either of these options:
- Manage devices in specified VTP domains.
  - Do not manage devices in specified VTP domains.
- Step 3** Enter the VTP domains that are to be used to limit data collection and click **Apply**. You will be prompted to click **OK** to start Data Collection or to click **Cancel** to apply only the settings.
- 

### Specifying IP Address Range

---

- Step 1** In the Data Collection Filter Settings dialog box, select IP Address Range and click **Configure**. The IP Range Filter dialog box appears.
- Step 2** From the drop-down list, select either of these options:
- **Manage devices in specified IP Address Range**
  - **Do not manage devices in specified IP Address Range**
- Step 3** Specify the IP Address Range and click **Apply**. A confirmation dialog box appears.
- Step 4** Click **OK** to start Data Collection.
- 

**Note**

You can apply either the VTP domain or the IP Address Range, but not both.

---

If you do not specify the IP address range or VTP domain, Campus Manager takes all devices from the DCR. The number of devices for which data can be collected depends upon your licence limit.

## Verifying Data Collection

To verify the status of Data Collection, go to **Campus Manager > Administration**. In the Campus Manager Administration dashboard that appears, you can view the status of Data Collection.

## Setting Up Topology Services

To set up Topology Services:

- 
- Step 1** Verify that the Campus Manager Server is running.
- Step 2** Make sure the Campus Manager Server has managed the devices.  
To verify this, go to the Data Collection Metrics page. (**Campus Manager > Administration > Reports > Data Collection Metrics**)
- Step 3** Select **Campus Manager > Topology Services** from CiscoWorks Homepage.  
For more information, see the Topology Services Online help.
- 

## Verifying Topology Services

To verify that Topology Services is working correctly, do the following:

- Verify that all devices and interfaces are discovered.  
Correctly discovered devices and interfaces appear in green in the Topology Services window.
- Verify that devices displayed in red are SNMP reachable and have correct community strings.
- Verify that all VLANs and ELANs are discovered and that their port assignments are correct.

The devices are displayed in Topology services only after data collection.

For more information, see the Topology Services Online help.

## Setting Up Path Analysis

To set up Path Analysis:

- 
- Step 1** Install and configure a DNS server on your network.  
A DNS server is required for Campus Manager. For devices with multiple IP addresses, there should be a single DNS entry that includes all IP addresses.
- Step 2** Specify correct read community strings on all devices.
- Step 3** Specify correct write community strings for multi-layer switching shortcut path determination on Catalyst 5000 devices.
- Step 4** Edit the VLAN/ELAN Mapping Table.  
This table provides mapping of VLANs and ELANs to subnets.  
These mappings are auto-discovered based on information gathered by Topology Services and User Tracking.

In some cases, the information might be incomplete. In these cases, you can edit a VLAN/ELAN mapping table to supplement the Topology Services and User Tracking information. If subnet mappings are not correct, Layer 2 traces on those subnets might fail.

**Step 5** Enable Cisco Discovery Protocol (CDP) on all Cisco devices.

If CDP is not enabled, these devices will not appear on Layer 2 path traces.

**Step 6** Enable source routing on your network.

This is required if you plan to run path traces outside of the domain known to Topology Services.

For more information, see the Path Analysis Online help.

---

## Verifying Path Analysis

To verify that Path Analysis is working correctly, do the following:

- Start Topology Services and make sure that all devices, interfaces, and links are managed correctly. Correctly managed devices appear in green in the Topology Services window.
- Verify that all VLANs and ELANs are managed with correct port assignments.
- Start User Tracking and run User Tracking major acquisition with the Ping Sweep option enabled to verify that all end-user stations are managed.
- Run **nslookup** on several known devices in the command shell.
- Verify that DNS lookup works and takes one second or less.
- Verify the Subnet Mapping table entries.

Each VLAN and ELAN entry should have any corresponding subnets listed. Any subnets that do not correspond to a VLAN or ELAN should be in a Subnet row.

- Run a few traces between endpoints known to User Tracking or Topology Services and verify that the trace completed successfully.

For troubleshooting information, see the Path Analysis Online help.

---

## Logging Out as Administrator

To end your administrator tasks, you must log out of Campus Manager.

---

**Step 1** Close all secondary browser windows.

You should have only one browser window opened displaying the Campus Manager interface.

**Step 2** Click **Logout**.

The Login page replaces the navigation tree.

---





## Troubleshooting the Installation

---

This appendix provides troubleshooting information for Campus Manager 4.0.6 installation and setup.

This appendix contains:

- [Logging In After Upgrading](#)
- [Understanding Installation Messages](#)
- [Failing to Delete a Package During Uninstallation](#)
- [Accessing the CiscoWorks Server](#)
- [FAQs on Service Packs](#)

## Logging In After Upgrading

If the Login window on the CiscoWorks Home page does not appear correctly when you attempt to log in for the first time after upgrading, clear your browser cache then re-enter the server URL in your browser.

To clear the browser cache in Microsoft Internet Explorer:

- 
- Step 1** Select **Tools > Internet Options**.  
The Internet Options dialog box opens.
- Step 2** Click the General tab.
- Step 3** Click **Delete Files** and click **OK** in the Delete Files dialog box.
- 

To clear the browser cache in Netscape Navigator:

- 
- Step 1** Select **Edit > Preferences**.  
The Preferences dialog box opens.
- Step 2** Select **Advanced > Cache**.
- Step 3** Click **Clear Cache** and click **OK**.
- 

## Understanding Installation Messages

After verifying that the correct files are installed, check the `/var/tmp/ciscoinstall.log` file for installation errors.

The following types of installation messages might appear:

- Information messages—Display important details
- Warning messages—Inform you that something might be wrong with a particular process, but the process will complete
- Error messages—Inform you that a particular process could not complete

[Table A-1](#) shows error messages that might occur during installation and describes the reasons for the errors.

**Table A-1** Installation Error Messages

| Message                                | Reason for Message                                                                      | User Action                                               |
|----------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Access problem with <i>directory</i> . | The installation program cannot access the product <i>directory</i> that you specified. | Check the 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.             |

Table A-1 Installation Error Messages (continued)

| Message                                                     | Reason for Message                                                                                               | User Action                                                                                   |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Base package did not install. Exiting.                      | The installation program cannot install a package that is required for the product.                              | Contact your technical support representative.                                                |
| Cannot backup /etc/services, no change will be made.        | The installation program could not make a copy of /etc/services before modifying it.                             | Make sure that there is enough space in /tmp.                                                 |
| Cannot become owner of file in directory <i>directory</i> . | You cannot become the owner of a file in the directory that you specified as the product root.                   | Check the permissions on the directory that you specified.                                    |
| Cannot change ownership of library. Exiting.                | The installation program could not write to the product root directory.                                          | Check the permissions on the directory that you specified.                                    |
| Cannot create <i>directory</i> .                            | The installation program could not write to the directory that you specified.                                    | Check the permissions on the directory that you specified.                                    |
| Cannot create symlink: ln -s <i>root</i> /opt/CSCOpX.       | The installation program cannot create a link from /opt/CSCOpX to the product root directory that you specified. | Contact your technical support representative.                                                |
| Cannot determine the CiscoWorks Common Services version.    | The installation disk is corrupted.                                                                              | Contact your technical support representative.                                                |
| Cannot determine the version of <i>product</i> .            | The installation program was could not determine the product version.                                            | Contact your technical support representative.                                                |
| Cannot make list of packages for installation.              | The installation failed.                                                                                         | Contact your technical support representative.                                                |
| Cannot upgrade.                                             | Upgrade failed.                                                                                                  | Contact your technical support representative.                                                |
| Copy <i>setupdir</i> to \$NMSROOT failed.                   | The installation program could not write to product root directory.                                              | Check the permissions on the root.                                                            |
| Installation in progress.                                   | You are already running an installation on this machine.                                                         | Run only one installation program at a time.                                                  |
| Missing file <i>file</i> .                                  | The installation program could not find the <i>file</i> file.                                                    | Contact your technical support representative.                                                |
| No syslog facility is available.                            | There are no available Syslog facilities.                                                                        | Make one of the facilities available.                                                         |
| Not enough disk space: <i>root</i> .                        | You have picked a product root in a file system that does not have sufficient space to load the product.         | Make at least 2 GB of disk space available on the partition on which you install the product. |
| Package verification failed: <i>pkg</i> aborting.           | While attempting to load our packages on the machine, one of the packages loaded incorrectly.                    | Contact your technical support representative.                                                |
| Syslog is not running.                                      | The installation program was could not start syslogd on this machine.                                            | Restart syslogd.                                                                              |
| The components have dependency errors.                      | The installation failed.                                                                                         | Contact your technical support representative.                                                |

Table A-1 Installation Error Messages (continued)

| Message            | Reason for Message                                                          | User Action                                                |
|--------------------|-----------------------------------------------------------------------------|------------------------------------------------------------|
| User must be root. | You must be logged in as root to install the product.                       | Log in as root and enter the correct password.             |
| Wrong OS.          | This operating system is not Solaris or not a supported version of Solaris. | Make sure that you are running Solaris 2.8 or Solaris 2.9. |

## Failing to Delete a Package During Uninstallation

If you try to remove Campus Manager 4.0.6 but the uninstallation program fails to delete a package, try running the uninstallation program again. There may be several reasons why a package could not uninstall successfully. Running the uninstallation program again will usually remove it.

## Accessing the CiscoWorks Server

The CiscoWorks server uses port 1741 by default (443 if SSL is enabled). This port is normally used by web servers. If you see an error message that an existing web server is already configured to run on port 1741, and the alternative port 1744 is used instead, verify that you entered the correct URL for the server:

```
http://server_name:1744
```

where *server\_name* is the name of the machine on which CiscoWorks was installed and 1744 is the alternative port on which CiscoWorks is installed if port 1741 is in use.

If you still cannot access the server, enter the following command to make sure your server is running:

```
ping server_name
```

If you get a message that the server is alive, and get a proxy error when you try to connect to the server, make sure the proxy is set up correctly. If your server is configured to use a proxy server outside the firewall, you will get proxy errors if you have configured the proxy to ignore requests to a certain machine, set of machines, or domain.

You can specify a proxy server in Netscape Navigator under **Edit > Preferences > Advanced > Proxies** and in Internet Explorer under **Tools > Internet Options > Connections > LAN Settings**.

Your proxy is set up incorrectly if:

- You receive an error message informing you that you are using a proxy outside the firewall.
- The proxy server recognizes www-int as an internal server, so it does not send proxy requests to that server.
- You set up a new internal server, www-nms, but when you make a request to the proxy server, it does not recognize www-nms as an internal server and proxies the request.
- The proxy server outside the firewall tries to request data from a server inside the firewall, and the request is blocked.
- You get a `Connection Refused` error from the proxy server.

## FAQs on Service Packs

The following are the Frequently Asked Questions (FAQs) on Service Packs.

- Q.** What is an SP? Why should I install the latest SP?
- A.** SP (Service Pack) for Campus Manager is a downloadable package containing a collection of updated files to provide you with support for new devices. In addition, the SP contains fixes to certain known problems, as well as fixes to newly discovered problems. SPs are available for downloading from Cisco.com.
  
- Q.** From where can I download a Service Pack?
- A.** To retain support for new devices, we recommend that you download and install the latest SP for Campus Manager from:  
<http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus>
  
- Q.** How do I know which version of SP I have installed?
- A.** To check the version of SP installed on your system, from the CiscoWorks Homepage, go to **Software Center > Software Update > Campus Manager**.





## Mounting and Unmounting the CD-ROM

---

This appendix describes how to mount and unmount the LMS 2.6 CD-ROM on a Solaris system and provides general information only. For more detailed instructions, see your Sun documentation.

You can install Campus Manager 4.0.6 from a CD-ROM mounted on the Campus Manager server system or from a CD-ROM mounted on a remote Solaris system. After you complete the Campus Manager 4.0.6 installation, you must unmount the CD-ROM drive.

This appendix contains:

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

# Mounting a Local CD-ROM Drive

To mount a local CD-ROM drive:

---

**Step 1** Insert the LMS 2.6 CD-ROM.

**Step 2** 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 3** Mount the CD-ROM drive.

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.
- 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 -e | 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 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 encounter problems using the `vold` daemon, enter the following command to mount the CD-ROM:

```
mount -F hsfs -r ro /dev/dsk/cxytyd0sz /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 [Chapter 2, “Installing Campus Manager”](#) for instructions on installation.

---

# Mounting a Remote CD-ROM Drive

To mount a remote CD-ROM drive:

- 
- Step 1** Insert the LMS 2.6 CD-ROM into the CD-ROM drive of the remote machine.
- Step 2** Become the superuser on the remote machine 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:
- ```
# mkdir /cdrom
```
- Step 3** Mount the CD-ROM drive.
- 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.
 - 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 -e | 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 the following command:
- ```
kill -15 process_ID_number
```
- Step 5** Restart the `vold` process by entering the following command:
- ```
# /usr/sbin/vold &
```
- If you encounter problems using the `vold` daemon, enter the following to mount the CD-ROM:
- ```
mount -F hfs -o ro /dev/dsk/cxydydz /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 machine is enabled as an NFS server by entering:
- ```
ps -ef | grep nfs | grep -v grep
```
- The output of this command indicates whether the `/usr/lib/nfs/nfsd` and `/usr/lib/nfs/mountd` daemons are running. If they are not running, enable your machine as an NFS server by entering:
- ```
# /etc/init.d/nfs.server start
```

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

```
# share
```

or

```
# shareall
```

Step 9 Log in to the machine on which you want to install Campus as superuser by entering the command `su` and the root password, or log in as root.

Step 10 Create a `/cdrom` directory, if one does not already exist, by entering:

```
# mkdir -p /cdrom/cm403
```

Step 11 Mount the CD-ROM drive by entering:

```
# /usr/sbin/mount -r remote_machine_name:/cdrom/cdrom0 /cdrom/cm403
```

You have now mounted the CD-ROM drive. See [Chapter 2, “Installing Campus Manager”](#) for installation instructions.

Unmounting a Local CD-ROM Drive

To unmount a local CD-ROM drive:

Step 1 As root, enter:

```
# cd
```

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

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 machine:

```
# umount /cdrom/cm403
```

Step 2 As root, enter the following on the remote machine:

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

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



User Tracking Utility

CiscoWorks User Tracking Utility 1.1.1 (UTU) is a desktop utility that provides quick access to useful information about users or hosts discovered by the Campus Manager User Tracking application.

This chapter contains:

- [Understanding UTU](#)
- [Hardware and Software Requirements for UTU](#)
- [Downloading UTU](#)
- [Installing UTU](#)
- [Accessing UTU](#)
- [Configuring UTU](#)
- [Uninstalling UTU](#)
- [Upgrading to UTU 1.1.1](#)
- [Reinstalling UTU](#)

Understanding UTU

User Tracking Utility allows users with Help Desk access to search for users or hosts discovered by Campus Manager User Tracking application. UTU comprises a server-side component and a client utility.

To use UTU, Campus Manager must be installed and accessible through the network.

Definitions

Table C-1 explains certain terms and definitions used in User Tracking Utility.

Table C-1 **Definitions**

Term	Definition
Host	Any UNIX or Windows system discovered by User Tracking.
Host Name	Name of the discovered host.
Campus Manager Server	Host name or IP address of CiscoWorks server on which you have installed Campus Manager.
Port	<ul style="list-style-type: none"> • Port number to which the host is connected • Port number on which Campus Manager is running on the CiscoWorks server
Subnet	Subnet to which the host belongs.
User Name	Name of the user who has logged into the host.

Hardware and Software Requirements for UTU

Table C-2 lists the minimum system requirements for UTU 1.1.1.

Table C-2 **System Requirements**

Requirement Type	Minimum Requirements
System hardware	IBM PC-compatible computer with Intel Pentium processor.
System software	Windows 2000 (Professional or Server) with Service Pack 3 or higher, Windows XP with Service Pack 2 or higher.
Memory (RAM)	128 MB
Additional required software	Campus Manager 4.0.6
Network Connectivity	Campus Manager 4.0.6 must be running and accessible through the network

Downloading UTU

UTU requires CiscoWorksUserTrackingUtility1.1.1.exe file to be downloaded and installed. To download:

-
- Step 1** Locate the file CiscoWorksUserTrackingUtility1.1.1-k9.zip at:
<http://www.cisco.com/cgi-bin/tablebuild.pl/cw2000-campus-crypto>
This zip file contains CiscoWorksUserTrackingUtility1.1.1.exe and setup.iss file (required for silent installation).
- Step 2** Extract the file using any file extractor such as WinZip.
-

Installing UTU

To install UTU in normal installation mode:

-
- Step 1** Log into the system with local system administrator privileges.
- Step 2** Navigate to the directory that contains CiscoWorksUserTrackingUtility1.1.1.exe.
- Step 3** Double-click CiscoWorksUserTrackingUtility1.1.1.exe to begin installation.
The User Tracking Utility Welcome screen appears.
- Step 4** Click **Next**.
The Choose Destination Location dialog box appears. By default, UTU is installed in the directory C:\Program Files\CSCOutu.
- Step 5** Click **Next** to install UTU in the default directory.
Or
- Click **Browse** to choose a different directory and click **OK**.
 - Click **Next** to continue with the installation.
- The Configure CiscoWorks LMS Server Details dialog box appears.
- Step 6** Enter the name or IP address of the server on which Campus Manager is installed.
- Step 7** Enter the port number of the Campus Manager server. The default port number is 1741.
- Step 8** Click **Next**.
The following message appears:
- ```
Is CiscoWorks LMS Server SSL Enabled?
```
- Step 9** Click **Yes** if the Campus Manager server is SSL enabled, otherwise, click **No**.  
The Configure LMS Server Authentication dialog box appears. You can also configure these server details after installation.
- Step 10** Enter a valid CiscoWorks Campus Manager server user name and password.  
This is used to verify the validity of the user when searching for users or hosts.

**Step 11** Confirm the password and click **Next**.

The Setup Complete dialog box appears.

**Step 12** Click **Finish** to complete the installation.

User Tracking Utility is installed at the destination location you specified in [Step 5](#) above. However, it does not create a program group under **Start > Programs**.

You cannot re-install UTU on a system that already has this application installed on it. You must check for existing installations of UTU before beginning a fresh installation.

To install UTU in silent mode, enter the following at the command prompt:

```
exe-location\CiscoWorksUserTrackingUtility1.1.1.exe -a -s -f1file-location\setup.iss
```

where

- *exe-location* is the directory where you have CiscoWorksUserTrackingUtility1.1.1.exe
- *file-location* is the directory where you have the setup.iss file.

Do not use space after the **-f1** option. Use the complete path for *file-location*.

For example:

If the install directory for UTU is c:\utu, enter the following at the command prompt:

```
c:\utu\CiscoWorksUserTrackingUtility1.1.1.exe -a -s -f1c:\utu\setup.iss
```

To configure the server information, modify the setup.iss file before running the silent install. Edit the following fields:

```
[SdShowDlgEdit2-0]
szEdit1= <hostname>
szEdit2= <server-port>
Result=1
[AskYesNo-0]
Result=1 <1- SSL Enabled, 0 - SSL Disabled>
[SdShowDlgEdit3-0]
szEdit1=<username>
szEdit2=<password>
szEdit3=<password>
```

You cannot re-install UTU on a system that already has this application installed on it. You must check for existing installations of UTU before beginning a fresh installation.

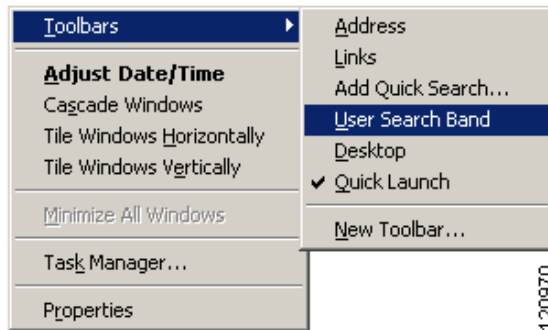
To confirm UTU installation on your system, right-click the taskbar and select the **Toolbar** option in your machine. You can find the User Search Band option in the popup menu.

# Accessing UTU

To display the UTU desktop band on the taskbar:

- Step 1** Right-click the taskbar of the machine on which you installed UTU.
- Step 2** Select **Toolbars > User Search Band**, as shown in [Figure C-1](#).

**Figure C-1** Selecting the Toolbar



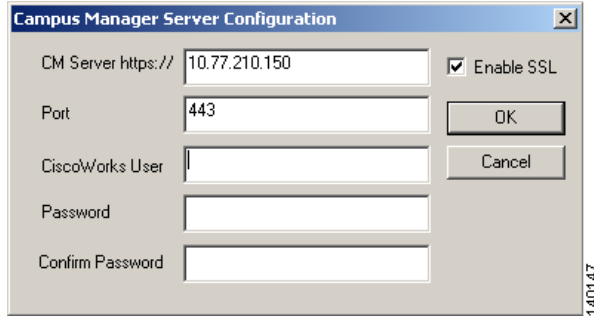
The UTU desktop band appears on the taskbar with the title User Information.

# Configuring UTU

You must configure UTU only if you want to change the Campus Manager server configurations that you entered while installing UTU.

To configure UTU:

- Step 1** Right-click the User Information search area on the taskbar of the machine on which you installed UTU. A popup menu appears.
- Step 2** Select **Configure**. The Campus Manager Server Configuration dialog box appears.
- Step 3** Modify the settings as required.
- Step 4** Click **Enable SSL** for communicating with an SSL enabled server. The port is changed to 443, which is the default port for SSL. See [Figure C-2](#).

**Figure C-2 Enabling SSL**

**Step 5** Click **OK** to configure or **Cancel** to quit.

---

## Uninstalling UTU

Before you uninstall UTU 1.1.1, you must hide the UTU desktop band. To do that, right-click the taskbar of the machine on which you installed UTU, and deselect **User Search Band** in the Toolbars popup menu.

To uninstall UTU:

---

**Step 1** Go to the Windows taskbar and select **Start > Settings > Control Panel > Add/Remove Programs**.

The Add/Remove Programs dialog box appears.

**Step 2** Select **CiscoWorks User Tracking Utility**.

**Step 3** Click **Change/Remove**.

The system prompts you to confirm uninstallation.

**Step 4** Click **Yes**.

The Remove Programs From Your Computer dialog box appears.

**Step 5** Click **Yes** to remove the shared DLL, UTBand.dll, and click **OK**.

Or

Click **No**.

The uninstallation proceeds, but it does not completely uninstall UTU.

To complete the uninstallation process:

- a. Go to the directory where you have installed UTU. The default directory is C:\Program Files\CSCOutu.
  - Enter `regsvr32 /u UTBand.dll`

The following message appears:

```
DLLUnregisterServer in UTBand.dll failed
```
  - Click **OK**.
  - Enter `del UTBand.dll`

This removes the UTU installation completely from the machine.

**Step 6** Restart your system.

---

## Upgrading to UTU 1.1.1

You can upgrade User Tracking Utility from UTU 1.1 to UTU 1.1.1.

When you install UTU 1.1.1 above UTU 1.1, UTU prompts you to uninstall the previous version. A message appears:

```
WARNING: The setup program has detected a previous version of CiscoWorks
User Tracking Utility. To install CiscoWorks User Tracking Utility 1.1.1, previous
version of the product must be uninstalled. Do you want to uninstall CiscoWorks
User Tracking Utility 1.1.1 now?
```

Yes/No

Click **Yes** to upgrade, or **No** to quit.

## Reinstalling UTU

You must not install UTU 1.1.1 on a system that already has this application installed on it. You must check for existing installations of UTU 1.1.1 before attempting to reinstall it.

To check for an existing installation of UTU 1.1.1:

---

**Step 1** Right-click on the Taskbar of the machine.

**Step 2** Select **Toolbars**.

If you see the User Search Band option, it means you have UTU 1.1.1 already installed on the system. You must first uninstall the current installation of UTU 1.1.1, and only then reinstall it.

---





# Changes and Enhancements in Campus Manager 4.0.6

---

Campus Manager 4.0.6 provides management support for Layer 2 technologies. It is built on CiscoWorks Common Services 3.0.5 and is an integral component of CiscoWorks LAN Management Solution 2.6 (LMS 2.6).

In this release, the Campus Manager Admin Dashboard, Setup Center, and the Device Selector, have been improved with advanced search features. These improvements have been explained in the following sections:

- [Improved Homepage](#)
- [Setup Center](#)
- [Improved Device Selector](#)

## Improved Homepage

The Campus Manager Homepage provides information on status of Device Discovery, Data Collection, and User Tracking Acquisition. It also provides information on the physical and logical discrepancies and also the details of the jobs that have been completed recently. You can easily access frequently used features in the application from the homepage.

For more details, see *User Guide for Campus Manager 4.0.6*

## Setup Center

Setup Center enables the grouping of different categories of configurations. This helps the user configure and check all necessary server settings at a single place.

For more details, see *User Guide for Common Services 3.0.5*.

## Improved Device Selector

The new Device Selector supports search and advanced search capabilities. For more details, see *User Guide for Common Services 3.0.5*

■ Improved Device Selector



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