



Installation and Setup Guide for Campus Manager on Windows

Software Release 4.0.3
CiscoWorks

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Preface vii

Audience vii

Conventions vii

Product Documentation viii

Related Documentation xi

Additional Information Online xii

Obtaining Documentation xii

 Cisco.com xiii

 Product Documentation DVD xiii

 Ordering Documentation xiv

Documentation Feedback xiv

Cisco Product Security Overview xv

 Reporting Security Problems in Cisco Products xv

Obtaining Technical Assistance xvi

 Cisco Technical Support & Documentation Website xvi

 Submitting a Service Request xvii

 Definitions of Service Request Severity xviii

Obtaining Additional Publications and Information xviii

CHAPTER 1

Prerequisites 1-1

Product Overview 1-2

Campus Manager Upgrade Paths 1-3

Server Requirements 1-4

 Maximum Recommended Load 1-6

Server Recommendations 1-6
 Client Requirements 1-7
 Supported Devices 1-8

CHAPTER 2

Installing Campus Manager 2-1

Installation Overview 2-2
 Installing Campus Manager 4.0.3 2-3
 Licensing in Campus Manager 4.0.3 2-3
 Installation Notes 2-3
 Running the Installation Program 2-4
 Reinstalling Campus Manager 2-8
 Upgrading Saved View Layouts From Topology Services 2-10
 Backing Up and Restoring Data After Installation 2-10
 Backing Up Data Using GUI 2-11
 Backing Up Data Manually From Campus Manager 2-12
 Restoring Data Manually From Campus Manager 2-13
 Uninstalling Campus Manager 2-13

CHAPTER 3

Preparing to Use Campus Manager 3-1

Overview of Campus Manager Setup Tasks 3-2
 Accessing the CiscoWorks Server 3-2
 Performing Administrator Tasks 3-3
 Logging In as Administrator 3-3
 Setting Up Campus Manager Applications 3-3
 Setting Up Your Network 3-4
 Configuring Device Discovery 3-5
 Verifying Device Discovery 3-5
 Configuring Data Collection 3-6
 Verifying Data Collection 3-7

Setting Up Topology Services	3-7
Verifying Topology Services	3-8
Setting Up Path Analysis	3-8
Verifying Path Analysis	3-9
Logging Out as Administrator	3-10

APPENDIX A**Troubleshooting the Installation** A-1

Logging In After Upgrading	A-2
Understanding Installation Messages	A-2
Accessing the CiscoWorks Server	A-6
FAQs On Service Packs	A-7

APPENDIX B**User Tracking Utility** B-1

Understanding UTU	B-1
Definitions	B-2
Hardware and Software Requirements for UTU	B-2
Downloading UTU	B-3
Installing UTU	B-3
Accessing UTU	B-5
Configuring UTU	B-6
Uninstalling UTU	B-7
Upgrading to UTU 1.1.1	B-8
Reinstalling UTU	B-9

APPENDIX C**Changes and Enhancements in Campus Manager 4.0.3** 11

Re-Factoring of Campus Manager Server Process	12
Improved Network Discovery	12
Improved Data Collection	13
Support for SNMPv3	13

- Support for IPv6 13
- Support for VLAN and VTP 13
- Support for Spanning Tree Protocols 14
 - Support for Configuration of Ether Channel and Inter-VLAN Routing 14
 - Support for Trunking 15
 - Support for TDR 15
 - HTML Based User Interface 15
 - Integration with Common Services 3.0.3 Components 15

INDEX



Preface

This manual describes Campus Manager 4.0.3 and provides instructions for installing and configuring it.

Audience

This document is for anyone who installs, configures, verifies, and uses Campus Manager 4.0.3 software. Network administrators or operators should have the following skills:

- Basic Windows 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

Item	Convention
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 4.0.3 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 4.0.3 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 4.0.3 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_installation_guides_list.html • Printed document available by order (part number DOC-7817187=).¹
<i>Installation and Setup Guide for Campus Manager 4.0.3 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

Table 1 **Product Documentation (continued)**

Document Title	Available Formats
<i>User Guide for Campus Manager 4.0.3</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
<i>Supported Devices Table for Campus Manager 4.0.3</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 xii.

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 3.0.3 (Includes CiscoView 6.1.2) 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 3.0.3 (Includes CiscoView 6.1.2) 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 3.0.3 (Includes CiscoView 6.1.2) 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 3.0.3 (Includes CiscoView 6.1.2) 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 3.0.3</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 Pack (SP) contains 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 SP 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. Cisco also provides several ways to obtain 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 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

Cisco documentation and additional literature are available in the Product Documentation DVD package, which may have shipped with your product. The Product Documentation DVD is updated regularly and may be more current than printed documentation.

The Product Documentation DVD is a comprehensive library of technical product documentation on portable media. The DVD enables you to access multiple versions of hardware and software installation, configuration, and command guides for Cisco products and to view technical documentation in HTML. With the DVD, you have access to the same documentation that is found on the Cisco website without being connected to the Internet. Certain products also have .pdf versions of the documentation available.

The Product Documentation DVD is available as a single unit or as a subscription. Registered Cisco.com users (Cisco direct customers) can order a Product Documentation DVD (product number DOC-DOCDVD=) from the Ordering tool or Cisco Marketplace.

Cisco Ordering tool:

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

Cisco Marketplace:

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

Ordering Documentation

Beginning June 30, 2005, registered Cisco.com users may order Cisco documentation at the Product Documentation Store in the Cisco Marketplace at this URL:

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

Cisco will continue to support documentation orders using the Ordering tool:

- Registered Cisco.com users (Cisco direct customers) can order documentation from the Ordering tool:

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

- Instructions for ordering documentation using the Ordering tool are at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

Documentation Feedback

You can rate and provide feedback about Cisco technical documents by completing the online feedback form that appears with the technical documents on Cisco.com.

You can send comments about Cisco documentation to 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.

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 can perform these tasks:

- 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 and notices for Cisco products is available at this URL:

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

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from 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 might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—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.

- 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 to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked 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.htm

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

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 (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI 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.

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)—Your 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 operation 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 your network is impaired, but 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.

- 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 Cisco Systems technical user magazine for maximizing Internet and networking investments. 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 access Packet magazine at this URL:

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

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

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

or view the digital edition at this URL:

<http://ciscoiq.texterity.com/ciscoiq/sample/>

- *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 for networking professionals to 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>

- 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 4.0.3 on a Windows 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 4.0.3*.

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 4.0.3 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

where .x refers to the IDU upgrades.

You must install Common Services 3.0.3, before upgrading to Campus Manager 4.0.3.

You can upgrade to Campus Manger 4.0.3 by either:

- Using the Campus Manager 4.0.3 CD-ROM.

For more details, see [Installing Campus Manager 4.0.3, page 2-3](#).

Or

- Using LAN Management Solution 2.5 December 2005 Update on Windows. 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 2.5 December 2005 Update on Windows that can be downloaded from the same location.

When you install Campus Manager 4.0.3, certain data from the previous versions of Campus Manager is converted to Campus Manager 4.0.3 format. This data includes:

- Seed devices
- Data Collection schedule
- Data Collection filters
- Data Collection debugging options
- User Tracking queries and layouts
- User Tracking jobs and archives
- User Tracking administration preferences

- User Tracking usernames, notes, and entries
- SNMP community strings
- Discovery schedule
- Discovery filters
- Discovery debugging options
- Path preferences
- Job schedule
- Job archives
- Topology groups
- Topology map preferences
- Discrepancies settings
- Syslog settings

Server Requirements

The server requirements for Campus Manager 4.0.3 are the same as that of LMS 2.5.1.

The minimum system requirements for CiscoWorks Common Services 3.0.3 and Campus Manager 4.0.3 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"> • IBM PC-compatible computer with 500 MHz Intel Pentium processor • CD-ROM drive
Memory (RAM)	512 MB

Table 1-1 Server System Requirements Summary (continued)

Requirement Type	Minimum Requirement ¹
Available drive space ²	<ul style="list-style-type: none"> • 2 GB • Virtual memory equal to double the amount of memory (RAM). For example, if your system has 1 GB of RAM, you need 2 GB of virtual memory • NTFS file system required for secure operation • At least 16 MB in Windows temporary directory (<i>TEMP</i>)
System software	<ul style="list-style-type: none"> • ODBC Driver Manager 3.5.10 or later • Windows 2000 Professional or Server with Service Pack 1 or later, Windows 2003 Server Standard and Enterprise Edition • Windows Advanced Server without enabling terminal Services <p>Campus Manager supports only the US-English and Japanese versions of the Windows Operating System. It does not support any other language version. Set the default locale to US-English for US-English version and Japanese for Japanese version.</p>
Additional software (Optional)	<p>Any one of these browsers:</p> <ul style="list-style-type: none"> • Microsoft Internet Explorer 6.0 (version 6.0.2600.0000), and Internet Explorer 6.0 with Service Pack 1 (version 6.0.2800.1106) <p>Java Virtual Machine (JVM) 5.0.0.3802 and above. To verify JVM:</p> <ul style="list-style-type: none"> – From Internet Explorer, select Tools > Sun Java Console – From Netscape Navigator, select Tools > Web Development > Java Console – From Mozilla, Help > About Plug-ins <ul style="list-style-type: none"> • Java plug-in version 1.4.2_08 • Netscape 7.2 • Mozilla 1.7 and Mozilla 1.7.5

1. If other applications are installed, or the number of devices on your network exceeds 500, the requirements might be greater.
2. Do not install CiscoWorks on a FAT file system.

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, additional resources might be required.

Server Recommendations

To select or configure a server system that best meets your needs, consider the number of managed devices. These factors affect server performance and user report response time.

[Table 1-2](#) shows the recommendations for a server running Common Services and Campus Manager. These recommendations produce optimal response time when running user reports.

Table 1-2 *Server System Recommendations*

Minimum System Configuration	No. of Managed Devices
Pentium III, 450 MHz Memory: 512 MB Virtual memory: 1 GB Available disk space: 40 GB	0–500 managed devices
Pentium III, 450 MHz Memory: 1 GB Virtual memory: 2 GB Available disk space: 80 GB	500–2,500 managed devices
Dual Pentium III, 550 MHz Memory: 2 GB Virtual memory: 4 GB Available disk space: 80 GB	2,500–5,000 managed devices

Client Requirements

The minimum client system requirements for CiscoWorks Common Services 3.0.3 and Campus Manager 4.0.3 are shown in [Table 1-3](#). The maximum recommended load on clients configured with the minimum requirements shown in [Table 1-3](#) is 1000 Cisco devices.

Table 1-3 *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 PC-compatible computer with 300 MHz Intel Pentium processor running on Windows 2000 with SP1 or later (Professional and Server), Windows XP with SP1 or Windows 2003 Or <ul style="list-style-type: none"> – Solaris SPARC station or Sun Ultra 10 running Solaris 2.8 or 2.9. • Color monitor with video card set to 256 colors
Memory (RAM)	512 MB
Browser	<p>One of these browsers:</p> <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://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/cw2000/camp_mgr/camp_4x/cmgr_4_0_3/rel_note/index.htm



Installing Campus Manager

This chapter describes how to install, uninstall, and reinstall Campus Manager 4.0.3.

This chapter contains:

- [Installation Overview, page 2-2](#)
- [Installing Campus Manager 4.0.3, page 2-3](#)
- [Reinstalling Campus Manager, page 2-8](#)
- [Backing Up and Restoring Data After Installation, page 2-10](#)
- [Uninstalling Campus Manager, page 2-13](#)

Installation Overview

Table 2-1 is an overview of the Campus Manager 4.0.3 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.	Verify that server requirements are met.	“Server Requirements” section on page 1-4
2. Install Campus Manager.	Run the installation program.	“Installing Campus Manager 4.0.3” section on page 2-3
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.	Chapter 3, “Preparing to Use Campus Manager”

Installing Campus Manager 4.0.3

This section describes how to install Campus Manager 4.0.3. You must install CiscoWorks Common Services 3.0.3 before installing Campus Manager 4.0.3.

For information on installing CiscoWorks Common Services 3.0.3, see the *Installation and Setup Guide for CiscoWorks Common Services 3.0.3 (Includes CiscoView) on Windows*.

Campus gets installed in the same directory where you have installed CiscoWorks Common Services 3.0.3.

The Campus Manager 4.0.3 installer automatically updates program files and data from previous versions of Campus Manager.

All device updates up to Campus Manager 4.0 SP 2 have been incorporated into Campus Manager 4.0.3.

Licensing in Campus Manager 4.0.3

Campus Manager 4.0.3 uses the license of Campus Manager 4.0. If you have a licensed version of Campus Manager 4.0, you can install Campus Manager 4.0.3.

Campus Manager 4.0.3 emulates the licensing behavior of Campus Manager 4.0. For example, if the Campus Manager 4.0 license is restricted, Campus Manager 4.0.3 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 Windows*.

Installation Notes

If you have configured Common Services in ACS mode (**Common Services > Server > Security > AAA Mode Setup**), while installing RME 4.0.3, a Warning window appears with this message during installation:

The application that you are installing requires new tasks to be registered with ACS. If you have already registered this application with ACS from another server, you do not need to register it again. However if you re-register the application, you will lose any custom roles that you had created earlier for this application in ACS.

- If you click **Yes**, Campus Manager 4.0.3 gets registered with ACS server.
- If you click **No**, Campus Manager 4.0.3 does not get registered with ACS server.

After the installation, you can register Campus Manager 4.0.3 with ACS server, using the script, `AcsRegCli.pl`:

```
NMSROOT\bin\perl NMSROOT\bin\AcsRegCli.pl -register rme
```

For example:

```
C:\Program Files\CSCOpX\bin\perl
C:\Program Files\CSCOpX\bin\AcsRegCli.pl -register rme
```

Running the Installation Program

To install Campus Manager 4.0.3:

Step 1 Insert the Campus Manager 4.0.3 CD-ROM into a CD-ROM drive.

The Installer window opens.

If the Installer window does not open:

- Select **Start > Run**.

The Run dialog box opens.

- In the Open field, enter `drive:\autorun.exe`

where drive is the CD-ROM drive letter.

The Installer window opens.



Note

Campus Manger 4.0.3 is installed in the same location as CiscoWorks Common Services. The default is `C:\Program Files\CSCOpX`.

Step 2 Click **Install**.

The Welcome window appears.

Step 3 Click **Next** to continue.

The Software License Agreement window opens. To install Campus Manager 4.0.3, you must accept this agreement.

If you are upgrading from Campus Manager 4.0, the license agreement does not appear.

Step 4 Click **Accept** to continue.

The Licensing Information dialog box appears.

Step 5 Do either of the following:

- If you have a license file for CiscoWorks Common Services 3.0.3, click on the radio button to browse for the file and select it.
- If you do not have a license, enter the serial number and the Permanent Index Number (PIN) from the product packaging.

You can also proceed with the installation without a PIN number for an evaluation copy of Campus Manager 4.0.3.

Step 6 Click **Next**.

A window appears prompting you to enter your Campus database password.

Step 7 Enter your Campus database password.

If you do not enter a password, the existing password is retained.

Step 8 Click **Next** to continue.

The System Requirements Window opens.

Step 9 Verify whether you have the minimum system requirements to install Campus Manager 4.0.3.

Step 10 Click **Next** to continue.

The following message appears:

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?

If you want to start CiscoWorks daemons, click Yes.

If you do not want to start CiscoWorks daemons, click No.

Step 11 Click **Yes** or **No** depending on whether you want to restart CiscoWorks daemons after installation.

The Summary dialog box opens, displaying the target directory and program folder. The target directory is the directory in which you installed CiscoWorks Common Services 3.0.3.



Note Click **Show Details** in the Summary dialog box to view the Campus Manager database password. Store the password in a secure location. You may need it for debugging.

The following message appears:

```
Exiting installation beyond this point (after clicking the Next
button) may result in system instability.
```

Step 12 Click **Next** to continue installation.

After installation is complete 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.
```

Step 13 Click **OK**.

The following message about UTU appears:

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

Step 14 Click **OK**.

The final screen in the installer appears.

Step 15 Click **Finish**.

The installation completes.

**Note**

After installing Campus Manager 4.0.3, you can verify the process status by running `NMSROOT/bin pdshow`

If errors occurred during installation, check the installation log file in the root directory on the drive where the operating system is installed. The default is `C:\Ciscoverks_setup00x.log`. Each installation creates a new installation log that is saved as a different file.

For other troubleshooting information, see [Appendix A, “Troubleshooting the Installation.”](#)

After the installation completes, do either of the following:

- If you have to import data from the earlier version of Campus Manager, see [“Backing Up and Restoring Data After Installation”](#) section on page 2-10.
- If you do not have data to import, continue to [Chapter 3, “Preparing to Use Campus Manager.”](#)

After Campus Manager 4.0.3 is installed, Topology Services allows you to either convert the saved views into the new Campus Manager 4.0.3 format or directly use the default views generated by Campus Manager 4.0.3. See [“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.

To run the reinstallation program:

Step 1 Insert the Campus Manager 4.0.3 CD-ROM into a CD-ROM drive.

The Campus Manager Installer window opens.

If the Installer window does not open:

- Select **Start > Run**.
The Run dialog box opens.
- In the Open field, enter: *drive:\autorun.exe*
where drive is the CD-ROM drive letter.

The Installer window opens.



Note

Campus Manager 4.0.3 is installed in the same location as CiscoWorks Common Services 3.0.3. The default is C:\Program Files\CSCOpX.

Step 2 Click **Install** to continue or **Cancel** to stop.

If you click **Install**, you are prompted to confirm whether you want to reinstall Campus Manager.

Step 3 Click **Yes** to continue to install or **No** to cancel.

If you click **Yes**, you are prompted to enter the Campus Manager database password.

Step 4 Enter your Campus Manager database password.

If you do not enter a new password, your default password is retained.

Step 5 Click **Next** to continue.

The Summary dialog box opens, displaying the target directory and program folder. The target directory is the directory in which you installed CiscoWorks Common Services 3.0.3.

Step 6 Click **Next** to continue installation.

After installation is complete 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.

Step 7 Click **OK**.

The following message about UTU appears:

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

Step 8 Click **OK**.

The final screen in the installer appears.

Step 9 Click **Finish** to complete installation.

The reinstallation is completed.

After installing Campus Manager 4.0.3, you can verify the process status by running `NMSROOT/bin pdshow`

After the installation completes, you can do either of the following:

- If you installed Campus Manager 4.0.3 on a different system and have data to import, you can import the database remotely. See the [“Backing Up and Restoring Data After Installation”](#) section on page 2-10 section for more information.
- If your data is already converted or you do not want to import the old data, continue to [Chapter 3, “Preparing to Use Campus Manager.”](#)

After Campus Manager 4.0.3 is installed, Topology Services allows you to either convert the saved view layouts into the new Campus Manager 4.0.3 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.

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 4.0.3 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 4.0.3 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 exactly the same manner as the previous version of the view layout.

Backing Up and Restoring Data After Installation

This section describes how to manually 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

where *.x* refers to the IDU upgrades.

This section contains:

- [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 In the CiscoWorks Homepage, select **Common Services > Server > Admin > Backup**.

The Backup page appears.

Step 2 Enter the appropriate information in the following fields:

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.
Runtime	Select the desired check box. You have options to schedule immediate, daily, weekly, or monthly backups.

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

Time	<p>From the drop-down lists, select the time and date.</p> <ul style="list-style-type: none"> • If you schedule a weekly backup, select the day of the week from the drop-down list. • If you schedule a monthly backup, select the day of the month from the drop-down list.
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 `net stop crmdmgt`

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 the data. The script command will back up the CiscoWorks data.

Step 3 Start the daemon manager by entering `net start crmdmgt`

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. Enter `net stop crmdmgtd`
- Step 2** Restore CiscoWorks data by entering:
- ```
NMSROOT\bin\perl NMSROOT\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 `net start crmdmgtd`
- 

## Uninstalling Campus Manager

The uninstallation program removes Campus Manager files and settings. Uninstallation allows you to remove only Campus Manager or remove CiscoWorks Common Services as well.

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



### Caution

---

Uninstalling Campus Manager deletes its database.

---

To remove Campus Manager or other major components:

- 
- Step 1** Select **Start > Programs > CiscoWorks > Uninstall CiscoWorks**.
- The Uninstallation dialog box appears, displaying all the installed components.
- Step 2** Uncheck the components you do not want to remove or click **Uninstall All**.

- Step 3** Click **Next** to begin uninstalling Campus Manager.  
A dialog box opens, listing the components selected for uninstallation.
- Step 4** Click **Next** after verifying the components to uninstall.  
Messages about the uninstall process appear and uninstallation completes.
-



## Preparing to Use Campus Manager

---

This chapter describes the various administrator and application setup tasks that you must perform after installing Campus Manager 4.0.3.

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 Campus Manager setup tasks, with references to more 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 3-10</a>          |

## Accessing the CiscoWorks Server

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 and 443 is the port on which it was installed. If you were prompted to supply a different port number for the CiscoWorks Server during the installation, use that port number in the URL.

If you cannot access the CiscoWorks Server or the CiscoWorks Home page is not displayed correctly, see Appendix A, [“Troubleshooting the Installation”](#).

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

# Performing Administrator Tasks

To perform administrator tasks, you must log in as 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 of the CiscoWorks Server, see the [“Logging Out as Administrator” section on page 3-10](#) for information.

## Setting Up Campus Manager Applications

This section describes the tasks that you must perform to set up the Campus Manager 4.0.3 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                   |
| 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 3-5](#).

## 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, continue to the [“Configuring Data Collection” section on page 3-6](#).

## 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 atleast 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 Device and Credential Repository. 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 > Campus Data Collection > 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.

To logout as administrator:

- 
- 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 4.0.3 installation and setup.

This appendix contains:

- [Logging In After Upgrading](#)
- [Understanding Installation Messages](#)
- [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 try to log in for the first time after upgrading, clear your browser cache and reenter 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 appears.

**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 C:\Ciscoverks\_setup002.log file (or the log file with the highest number, for example Ciscoverks\_setup003.log) 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                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CiscoWorks installation cannot proceed because you are not logged in as an administrator.                           | You are not logged in to Windows with administrator privileges.                                    | Log in with local administrator privileges and try installing again.                                                                                                                                                                                                                   |
| Decompression failed on <i>file</i> . The error was for <i>error code per CompressGet</i> .                         | If Campus Manager was downloaded, a transmission error occurred, or installation media is damaged. | Retry the download. If you still have errors, contact your technical support representative.                                                                                                                                                                                           |
| General file transmission error. Please check your target location and try again. Error number: <i>error code</i> . | If Campus Manager was downloaded, a transmission error might have occurred.                        | Retry the download. If you still have errors, contact your technical support representative.                                                                                                                                                                                           |
| Unable to write <i>infoFile</i> or Unable to create <i>infoFile</i> .                                               | A file write operation failed.                                                                     | <ol style="list-style-type: none"> <li>1. Run the file system checking utility.</li> <li>2. Repeat the installation.</li> </ol>                                                                                                                                                        |
| Cannot stop service <i>servicename</i> .                                                                            | The installation (or reinstallation) tried to stop service <i>servicename</i> unsuccessfully.      | <ol style="list-style-type: none"> <li>1. Select <b>Control Panel &gt; Services</b> and try to stop service <i>servicename</i> manually,</li> <li>2. Continue installing or uninstalling.</li> </ol>                                                                                   |
| UseDLL failed for <i>dll</i> .                                                                                      | <i>dll</i> is supposed to be available at any time for any process, but Windows failed to load it. | <ul style="list-style-type: none"> <li>• Check permissions on Windows System32. If the <i>dll</i> is <i>secure.dll</i> or <i>r_inst.dll</i>, check product installation medium for errors.</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>• Reinstall Windows.</li> </ul> |
| OpenFile failed: <i>pathname</i>                                                                                    | A File Open operation failed.                                                                      | Run the files system checking utility, then repeat installation.                                                                                                                                                                                                                       |

■ Understanding Installation Messages

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

| Message                                                                                                                                                                                                                                                                                                          | Reason for Message                                                                                                                                    | User Action                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| ProtectFile failed: <i>file</i> : error. WWW admin security may be incomplete.                                                                                                                                                                                                                                   | Setting file permissions failed because you may not be allowed to change them.                                                                        | Log in as administrator.                                                                                                          |
| Launch of isql script failed.                                                                                                                                                                                                                                                                                    | The existing database file is broken, or the previous version of Campus Manager is destroyed.<br><br>This message might appear during reinstallation. | Contact your support representative.                                                                                              |
| You have less than 1M free space on <i>drive name</i> . Free up some space and try again.                                                                                                                                                                                                                        | Insufficient drive space for temporary installation files.                                                                                            | <ol style="list-style-type: none"> <li>1. Make more drive space available.</li> <li>2. Rerun the installation program.</li> </ol> |
| This program requires to run on Windows.                                                                                                                                                                                                                                                                         | You attempted to install on a system that does not have Windows with Service Pack 3 installed.                                                        | Install Campus on a Windows Professional system that is not configured as a PDC or BDC.                                           |
| Unable to determine the type of operating system. Campus Manager can be installed only on Windows with SP3.                                                                                                                                                                                                      | Installation program could not determine which operating system is running.                                                                           | Install on a Windows Professional system that is not configured as a PDC or BDC.                                                  |
| Physical memory is <...>M<br>Paging File Size is: File Size is: <...>M(initial), <...>M(maximum).<br><br>We recommend that initial paging file size is bigger than physical memory and maximum paging file size is at least twice as big as physical memory.<br><br>(Maximum paging file size might not appear.) | The paging file size is smaller than recommended.                                                                                                     | Finish installation, then increase paging file size.                                                                              |

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

| Message                                                                                                                                                                                                                                                                                                                                                                                                                  | Reason for Message                                                                                                                                                                                                                                                                                                | User Action                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>There is not enough space available on the disk <i>drive</i>: This drive has &lt;...&gt; bytes in a cluster. Total required &lt;...&gt; clusters (&lt;...&gt; bytes), only &lt;...&gt; clusters (&lt;...&gt; bytes) available. Please free up some space or change the target location to a different disk.</p> <p>(The second sentence might also appear as “Please free up some space and rerun installation.”)</p> | Insufficient disk space available on <i>drive</i> to install the product.                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>• Create additional free space on the drive.</li> </ul> <p>Or</p> <ul style="list-style-type: none"> <li>• Install on a different drive.</li> </ul> |
| Cannot determine the local Administrators group.                                                                                                                                                                                                                                                                                                                                                                         | Installation program cannot find one of the built-in Windows user groups. This prevents setup of Campus Manager security.                                                                                                                                                                                         | <ol style="list-style-type: none"> <li>1. Check the Windows operating system. Reinstall Windows if necessary.</li> <li>2. Rerun installation.</li> </ol>                                   |
| Cannot determine the local Everyone group.                                                                                                                                                                                                                                                                                                                                                                               | The installation program cannot find one of the built-in Windows user groups.                                                                                                                                                                                                                                     | <ol style="list-style-type: none"> <li>1. Check the Windows operating system. Reinstall Windows if necessary.</li> <li>2. Rerun installation.</li> </ol>                                   |
| Failed to set file permissions.                                                                                                                                                                                                                                                                                                                                                                                          | <p>The installation program is unable to set file permissions. The most likely causes are:</p> <ul style="list-style-type: none"> <li>• The account you used to log in to the system has insufficient permissions.</li> <li>• The drive on which you are installing the product has a FAT file system.</li> </ul> | <ol style="list-style-type: none"> <li>1. Fix problem.</li> <li>2. Rerun installation.</li> </ol>                                                                                          |
| <...> is already running! Wait for it to finish and press the OK button.                                                                                                                                                                                                                                                                                                                                                 | One of the installation subtasks is still running.                                                                                                                                                                                                                                                                | <ol style="list-style-type: none"> <li>1. Wait for subtask to finish running.</li> <li>2. Click <b>OK</b> to proceed.</li> </ol>                                                           |

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

| Message                                                                                     | Reason for Message                                                                                                                                                                                                                                      | User Action                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unable to create/open log file.                                                             | The installation program could not create or open installation log file (in the root directory of the drive on which you are installing) named <code>Ciscoworks_setupxxx.log</code> , where <code>xxx</code> is a sequential number starting from 001). | This may have occurred because of lack of disk space or write protection on the file. <ol style="list-style-type: none"> <li>1. Determine why file could not be created or opened and correct the problem.</li> <li>2. Rerun installation.</li> </ol> |
| Error creating user bin <... more info here> See troubleshooting section in the User Manual | The installation program could not create the user account bin.                                                                                                                                                                                         | <ol style="list-style-type: none"> <li>1. Fix problem.</li> <li>2. Rerun installation.</li> </ol>                                                                                                                                                     |
| Cannot find script to upgrade database                                                      | There was a problem with the database upgrade.                                                                                                                                                                                                          | Contact your technical support representative.                                                                                                                                                                                                        |
| Database upgrade failed                                                                     | There was a problem with the database upgrade.                                                                                                                                                                                                          | Contact your technical support representative.                                                                                                                                                                                                        |
| Database upgrade result unknown                                                             | There was a problem with the database upgrade.                                                                                                                                                                                                          | Contact your technical support representative.                                                                                                                                                                                                        |

## Accessing the CiscoWorks Server

The CiscoWorks server uses port 1741 by default (443 if SSL is enabled). If you receive an error message that an alternative port is used instead, verify that you entered the correct URL for the server:

```
http://server_name:port
```

where *server\_name* is the name of the machine on which CiscoWorks was installed and *port* is the port number 1741 or the number supplied during installation.

If you still cannot access the server, enter the following command at a DOS prompt 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 configured the proxy to ignore requests to a certain machine, set of machines, or domain.

You 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?
- Q.** To check the version of SP installed on your system, from the CiscoWorks Homepage, go to **Software Center > Software Update > Campus Manager**.



# User Tracking Utility

---

CiscoWorks User Tracking Utility 1.1.1 (UTU) is a Windows 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, page B-1](#)
- [Hardware and Software Requirements for UTU, page B-2](#)
- [Downloading UTU, page B-3](#)
- [Installing UTU, page B-3](#)
- [Accessing UTU, page B-5](#)
- [Configuring UTU, page B-6](#)
- [Uninstalling UTU, page B-7](#)
- [Upgrading to UTU 1.1.1, page B-8](#)
- [Reinstalling UTU, page B-9](#)

## 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 B-1 explains certain terms and definitions used in User Tracking Utility.

**Table B-1**      **Definitions**

| <b>Term</b>           | <b>Definition</b>                                                                                                                                                                 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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"> <li>• Port number to which the host is connected</li> <li>• Port number on which Campus Manager is running on the CiscoWorks server</li> </ul> |
| 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 B-2 lists the minimum system requirements for UTU 1.1.1.

**Table B-2**      **System Requirements**

| <b>Requirement Type</b>      | <b>Minimum Requirements</b>                                                                                    |
|------------------------------|----------------------------------------------------------------------------------------------------------------|
| 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 4.0.3                                                                                           |
| Network Connectivity         | Campus Manager 4.0.3 must be running and accessible through the network                                        |

## Downloading UTU

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

- 
- 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
-ffile-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>
```

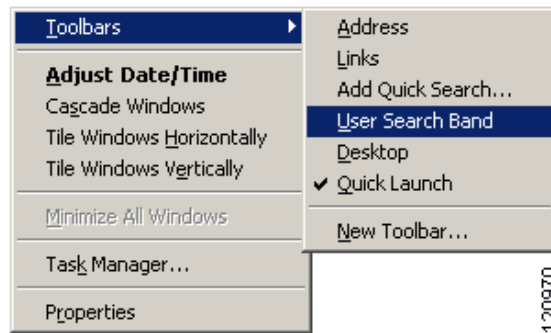
You cannot re-install UTU on a system that already has this application installed on it. You must check for existing installations of UTU before beginning a fresh installation.

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 B-1](#).

**Figure B-1**      **Selecting the Toolbar**

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

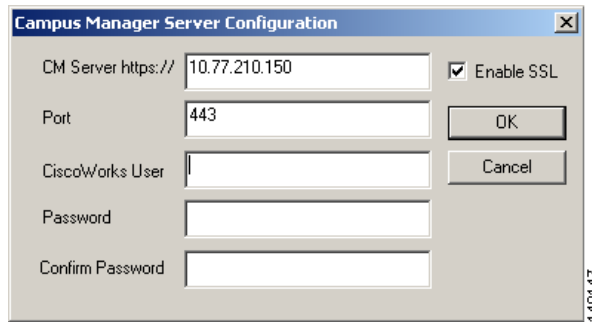
## Configuring UTU

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 B-2](#).

**Figure B-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** From the Windows taskbar, 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 4.0.3

---

Campus Manager 4.0.3 provides management support for Layer 2 technologies. It is built on CiscoWorks Common Services 3.0.3 and is an integral component of CiscoWorks LAN Management Solution 2.5.1 (LMS 2.5.1).

In this release, the major change on the server side architecture is the refactoring of Campus Manager server. On the client side, the User Tracking application has been redesigned and now appears with a new look and feel.

This appendix contains the changes and enhancements in Campus Manager 4.0.3:

- [Re-Factoring of Campus Manager Server Process, page C-12](#)
- [Improved Network Discovery, page C-12](#)
- [Improved Data Collection, page C-13](#)
- [Support for SNMPv3, page C-13](#)
- [Support for IPv6, page C-13](#)
- [Support for VLAN and VTP, page C-13](#)
- [Support for Spanning Tree Protocols, page C-14](#)

# Re-Factoring of Campus Manager Server Process

The Campus Manager server has been refactored to improve the performance and scalability of the application.

Prior to Campus Manager 4.0, the Campus Manager server process was a single process to perform Device Discovery, user tracking, servicing query and configuration from clients.

To improve the server performance and to handle larger networks, Campus Manager server process has been separated into transient processes for device discovery and User Tracking Major Acquisition.

Campus Manager 4.0.3 contains:

- Campus Manager server process as a daemon
- Transient Device Discovery process
- Transient User Tracking Major acquisition process

Campus Manager server process performs Data collection, query and configuration services.

## Improved Network Discovery

With Campus Manager 4.0.3, you can:

- Provide seed devices.
- Set the SNMP credentials.
- Run device discovery.

Device Discovery process discovers devices and updates the Device Credential Repository (DCR) with the credentials of the devices.



---

**Note**

Campus Manager cannot manage the devices until you run the Data collection process.

---

## Improved Data Collection

You can choose devices to be managed by Campus Manager from the devices in DCR, or through data collection filters (IP subnets or VTP domains).

## Support for SNMPv3

Campus Manager discovers devices configured with SNMPv3 credentials.

## Support for IPv6

Campus Manager can discover IPv6, manage IPv4, and dual stack IPv6 devices.

## Support for VLAN and VTP

With Campus Manager 4.0.3, you can:

- Create a primary VLAN, secondary VLANs of different types and associate them to the primary VLAN
- Assign or move ports to secondary VLANs
- Configure Promiscuous ports.
- Verify the VTPv2 or VTPv3 related information for the devices in your network that are managed by Campus Manager.
- Apply VTP server filter, transparent filter, or client filter for VTPv2 or VTPv3 domains in Topology Maps.

## Support for Spanning Tree Protocols

Campus Manager 4.0.3 provides support for Spanning Tree Protocol. Along with support for different types of Spanning Tree Protocol (STP)—PVST, PVST+, MST, MISTP, it allows you to:

- View STP parameters for each switch-cloud, VLAN or instance, or for each port.
- Configure STP parameters on each port and each device.
- View and change the instance-to-VLAN mapping (for MST and MISTP).
- Configure preferred VLANs on trunk ports.
- Find the recommended optimal root for a switch cloud and highlights the computed Optimal Root (switch) on topology map.
- Find the recommendation for setting up the number of STP instances on a switch cloud. Highlights the recommended instances on the Map.
- Find the recommendation for reduction of number of STP instances.
- Highlight the instance to which the other instances can be merged.
- Map a new VLAN to recommended instance.
- Highlight the instance on the Map.
- Change certain STP parameters and view the result before applying the changes in the network.

## Support for Configuration of Ether Channel and Inter-VLAN Routing

Campus Manager 4.0.3 provides the following support for EtherChannels:

- Configuring multiple links between switches as EtherChannel.
- Configuring EtherChannel load balancing parameters.

## Support for Trunking

Campus Manager 4.0.3 supports the following trunking features:

- Configuring a link between two switches as a trunk.
- Configuring the allowed and disallowed VLANs on a trunk.

## Support for TDR

Campus Manager 4.0.3 provides support for Cable Diagnostic Test using Time Domain Reflectometry (TDR).

## HTML Based User Interface

Campus Manager 4.0.3 has a non-Java based user interface for User Tracking application and Campus Manager Administration.

## Integration with Common Services 3.0.3 Components

Campus Manager 4.0.3 integrates with Common Services 3.0.3 modules like OGS, UII, Security and ACS, DCR, PSU, and CiscoWorks Homepage.

■ Support for Spanning Tree Protocols



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## A

administrator

tasks, in preparing to use Campus  
Manager **3-3**

logging in **3-3**

logging out **3-10**

applications

about **1-2**

setting up **3-3**

Data Collection **3-6**

Device Discovery **3-5**

network **3-4**

Path Analysis **3-8**

Topology Services **3-7**

audience for this document **vii**

---

## B

backing up data **2-12**

browser requirements for client systems **1-7**

---

## C

cautions

on uninstallations, and the Campus Manager  
server database **2-13**

significance of **viii**

CiscoWorks Server

accessing **3-2**

troubleshooting access to **A-6**

client requirements **1-7**

browser **1-7**

hardware **1-7**

memory (RAM) **1-7**

configuring

User Tracking Utility **B-6**

configuring (see preparing to use Campus  
Manager **3-1**)

---

## D

data, restoring after installation **2-10**

backed up data, using **2-12**

saved Topology Services view layouts,  
upgrading **2-10**

Data Collection, configuring **3-6**

---

device discovery, configuring [3-5](#)  
devices supported by Campus Manager [1-8](#)  
Discrepancy Reports  
    about [1-2](#)  
    verifying setup [3-10](#)  
documentation [viii](#)  
    additional online [xii](#)  
    audience for this [vii](#)  
    related to this product [xi](#)  
    typographical conventions in [vii](#)  
drive space requirements on server [1-5](#)

---

## G

getting started (see preparing to use Campus Manager) [3-1](#)

---

## H

hardware requirements  
    client [1-7](#)  
    server [1-4](#)  
help  
    online documentation [xii](#)

---

## I

importing data (see restoring data) [2-10](#)  
installing Campus Manager [2-1](#)

data, restoring after upgrades [2-10](#)  
    backed up data, using [2-12](#)  
    conversion, about [2-11](#)  
    saved Topology Services view layouts, upgrading [2-10](#)  
licensing issues [2-3](#)  
new installations  
    licensing [2-3](#)  
    process [2-4](#)  
reinstallations [2-8](#)  
task overview [2-2](#)  
troubleshooting [A-1](#)  
    CiscoWorks Server access [A-6](#)  
    installation error messages [A-2](#)  
    SP, FAQs on [A-7](#)  
uninstallations [2-13](#)  
upgrades  
    about [2-7](#)  
Internet Explorer version to use [1-5](#)

---

## J

Java Virtual Machine, version to use [1-5](#)

---

**L**

## licensing

- issues during installation [2-3](#)

## logging in

- after upgrading [A-2](#)

- as administrator [3-3](#)

logging out as administrator [3-10](#)

---

**M**maximum recommended load on servers [1-6](#)

## memory (RAM) requirements

- client [1-7](#)

- server [1-4](#)

Mozilla version to use [1-5](#)

---

**N**

## Netscape Navigator

- version to use [1-5](#)

network, setting up [3-4](#)

---

**O**

## overviews of

- Campus Manager [1-2](#)

- configuration tasks [3-2](#)

- installation tasks [2-2](#)

---

**P**

## Path Analysis

- about [1-2](#)

- setting up [3-8](#)

- verifying setup [3-9](#)

preparing to use Campus Manager [3-1](#)

- administrator tasks [3-3](#)

- CiscoWorks Server, accessing [3-2](#)

- logging in as administrator [3-3](#)

- logging out [3-10](#)

- setting up Campus Manager applications [3-3](#)

  - Data Collection [3-6](#)

  - Device Discovery [3-5](#)

  - network [3-4](#)

  - Path Analysis [3-8](#)

  - Topology Services [3-7](#)

- task overview [3-2](#)

prerequisites for installing Campus  
Manager [1-1](#)

- client requirements [1-7](#)

  - browser [1-7](#)

  - hardware [1-7](#)

  - memory (RAM) [1-7](#)

- server requirements [1-4](#)

  - drive space [1-5](#)

  - hardware [1-4](#)

  - maximum recommended load [1-6](#)

  - memory (RAM) [1-4](#)

  - recommendations [1-6](#)

software, additional [1-5](#)  
 software, basic [1-5](#)  
 upgrade paths [1-3](#)

additional [1-5](#)  
 basic [1-5](#)  
 supported devices [1-8](#)

## R

reinstalling Campus Manager [2-8](#)  
 restoring data after upgrades [2-10, 2-11](#)  
     backed up data, using [2-12](#)  
     saved Topology Services view layouts,  
     upgrading [2-10](#)

## S

saved view layouts, upgrading from Topology  
 Services [2-10](#)  
 server requirements [1-4](#)  
     drive space [1-5](#)  
     hardware [1-4](#)  
     maximum recommended load [1-6](#)  
     memory (RAM) [1-4](#)  
     recommendations [1-6](#)  
     software  
         additional [1-5](#)  
         basic [1-5](#)  
 Service Packs (SP) (see under  
     troubleshooting) [A-7](#)  
 software requirements  
     client [1-7](#)  
     server

## T

Topology Services  
     about [1-2](#)  
     setting up [3-7](#)  
         verifying Topology Services [3-8](#)  
     upgrading saved view layouts from [2-10](#)  
 troubleshooting  
     installation [A-1](#)  
         CiscoWorks Server, troubleshooting  
         access [A-6](#)  
     installation error messages [A-2](#)  
     logging in after upgrading [A-2](#)  
     SP, FAQs on [A-7](#)  
 typographical conventions in this document [vii](#)

## U

uninstalling Campus Manager [2-13](#)  
     Campus Manager server database, caution  
     regarding [2-13](#)  
     process [2-13](#)  
 upgrading Campus Manager [2-7](#)  
     logging in after [A-2](#)  
     saved Topology Services view layouts,  
     upgrading [2-10](#)

troubleshooting [A-1](#)

    CiscoWorks Server access [A-6](#)

    installation error messages [A-2](#)

    logging in after upgrading [A-2](#)

    SP, FAQs on [A-7](#)

upgrade paths [1-3](#)

User Tracking

    about [1-2](#)

User Tracking Utility

    accessing [B-5](#)

    configuring [B-6](#)

    downloading [B-3](#)

    installing [B-3](#)

        hardware requirements [B-2](#)

        reinstalling [B-9](#)

        software requirements [B-2](#)

        uninstalling [B-7](#)

    key terms in [B-2](#)

    using [B-7](#)

---

## V

view layouts in Topology Services, and  
    upgrades [2-10](#)

VLAN Port Assignment

    about [1-2](#)

