CHAPTER 1

Using Cisco TelePresence Manager

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Overview of the CTS-Manager Administration Guide

Table 1-1 give a brief description of the contents of each chapter in the Administration Guide.

Table 1-1 Administration Guide Chapter Descriptions

Chapter Title	Description
Chapter 1 Using Cisco TelePresence Manager	This chapter is divided into the following sections: **Introduction to the Cisco TelePresence System** This section provides a general description of hardware and software components used to make Cisco TelePresence calls. It includes overviews of Point-to-Point calls, meeting scheduling, multipoint calls, Interoperability with legacy endpoints, and Intercompany Cisco TelePresence calls. **Introduction to the CTS-Manager Administration Software** This section provides overviews of the following concepts: • Logging into CTS-Manager • CTS-Manager Administration window components • The System Information page • The Preferences window
Chapter 2 Supporting CTS-Manager	Describes the support features available when you log into CTS-Manager using a Concierge role.
Chapter 3 Configuring CTS-Manager	Describes the configuration features available when you log into CTS-Manager using an Administrator role.
Chapter 4 Using Meeting Manager	Describes the different email notifications and meeting details window available to Meeting Organizers.
Chapter 5 Troubleshooting	Provides troubleshooting information for CTS-Manager Administrators.
Chapter 6 Installing CTS-Manager	Describes the pre-setup and installation features for CTS-Manager.
Appendix A CTS-Manager Pre-qualifying Tool	The CTS-Manager Prequalifying tool enables network administrators to determine any changes needed to their network to support a CTS-Manager installation.
CTS-Manager CLI Command Set (formerly Chapter 7)	This chapter has been removed and is now a separate CLI book set.

Terminology

The following terms are used in this guide:

- **Endpoint**: An endpoint, or 'CTS endpoint' refers to the combination of hardware and software that comprise a Cisco TelePresence System. The hardware for an endpoint includes a CTS IP 7900 series telephone, one or more large-screen plasma meeting displays, presentation devices, microphones, speakers, and in some models, lighting systems. Examples of a CTS endpoint are the CTS-3200 and the CTS-500. CTS endpoints are also referred to as Cisco TelePresence rooms, in the case of a CTS-3000 or CTS-3200 endpoint.
- **Cisco TelePresence call**: A Cisco TelePresence call is placed between two or more CTS endpoints.
- **Cisco TelePresence meeting**: A Cisco TelePresence meeting refers to two or more endpoints connected by a Cisco TelePresence call.
- **Audio call**: An audio call refers to a call placed to or from an audio-only telephone for the purpose of conferencing the audio call into a Cisco TelePresence meeting.

Note Audio calls are placed or answered with the CTS phone's handset on-hook.

- **Conference**: A conference refers to a Cisco TelePresence meeting that includes an audio call.

Introduction to the Cisco TelePresence System

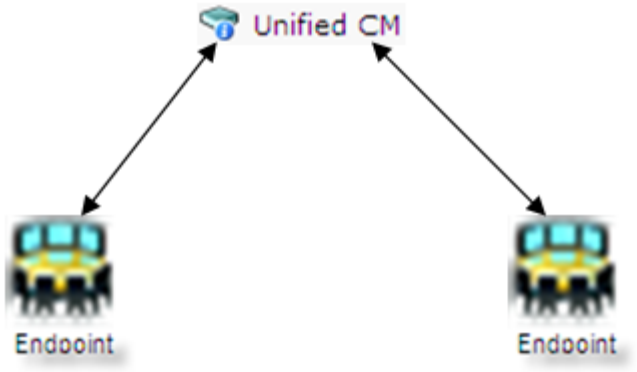
The Cisco TelePresence System is composed of several hardware and software components. The Cisco TelePresence System also shares information and services with peripheral components such as Cisco Unified Communications Manager (Unified CM), and calendar services such as Microsoft Exchange or IBM Domino. Together all the peripheral and CTS components offer the features and services needed to schedule, place, and manage Cisco TelePresence calls and maintain all the Cisco TelePresence System components.

The following sections provide a general overview of the components that make up the Cisco TelePresence System.

Taking Point-to-Point Cisco TelePresence calls

Placing a call between two CTS endpoints is similar to making a simple audio call. If you know the phone number of the endpoint you can dial it directly using the CTS IP phone.

Figure 1-1 A simple point-to-point Cisco TelePresence call



CTS endpoints must be configured and registered with Cisco Unified CM. Once the configuration is complete the two endpoints can direct dial each other. The call is routed through Cisco Unified CM. Cisco Unified CM is configured for each endpoint and connects the call.

For more information about configuring Cisco Unified CM for Cisco TelePresence refer to the *Cisco Unified Communications Manager for Cisco TelePresence Systems*.

CTS Endpoints

There are four CTS endpoint models supported by Cisco Unified CM.

- **CTS-500** - For data sheets and other product literature refer to the product page. For hardware installation information refer to the Cisco TelePresence System 500 Assembly, Use & Care, and Field-replaceable Unit Guide.
- **CTS-1000** - For data sheets and other product literature refer to the product page. For hardware installation information refer to the Cisco TelePresence System 1000 Assembly, Use & Care, and Field-replaceable Unit Guide.
- **CTS-3000** - For data sheets and other product literature refer to the product page. For hardware installation information refer to the Cisco TelePresence System 3000 Assembly, Use & Care, and Field-replaceable Unit Guide.
- **CTS-3200** - For data sheets and other product literature refer to the product page. For hardware installation information refer to the Cisco TelePresence System 3200 Assembly, Use & Care, and Field-replaceable Unit Guide.

Each endpoint is configured and maintained through Unified CM and the CTS Administration software. The CTS Administration software is installed on each endpoint and is accessible by browser. All Cisco TelePresence Administration software supports Internet Explorer 6.0. For information about installing, configuring, and maintaining CTS endpoints refer to the CTS Administrator's Guide.

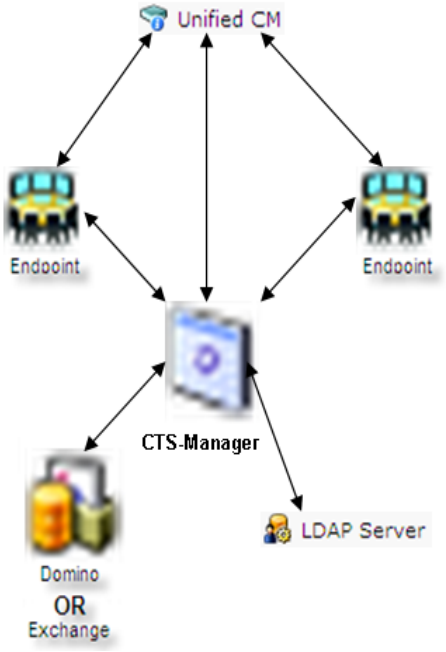
Scheduling, Automating, and Maintaining Cisco TelePresence Meetings

In order to schedule meetings in advance you need to include CTS-Manager in your Cisco TelePresence system. CTS-Manager communicates with the following components:

- **CTS endpoints** - CTS-Manager polls endpoints and reports errors to your CTS-Manager Administrator. CTS-Manager also pushes an endpoint's meeting schedule to the endpoint's IP phone.

- **Cisco Unified CM** - CTS-Manager works with Cisco Unified CM to maintain current configurations for each endpoint, and to discover new endpoints as they are added to your Cisco TelePresence system.
- **Calendar server (Exchange or Domino)** - Each CTS endpoint has a corresponding mailbox on a calendar server to support scheduling through Outlook or Lotus Notes. CTS-Manager monitors endpoint calendars and reports errors. CTS-Manager also uses the scheduling information to push meeting schedules to each CTS endpoint IP phone.
- **Active Directory** - Each CTS endpoint's phone number is stored in Active Directory. CTS-Manager is the conduit between Active Directory and an endpoint's IP phone.
- **Cisco TelePresence Multipoint Switch (CTMS)** - A CTMS provides the resources for multipoint (three or more endpoints) calls. CTS-Manager reports errors with a CTMS and specifies which CTMS is used for each Cisco TelePresence meeting. See the Enabling Multipoint Cisco TelePresence Calls section below for more information about multipoint support.

Figure 1-2 Scheduling, Automating, and Maintaining Cisco TelePresence Meetings



The Cisco TelePresence meeting solution combines audio, video, and interactive elements to create the feeling of being "in person" with participants in remote locations. Key to this experience is Cisco TelePresence Manager, which makes it easy to set up and launch calls. The Cisco TelePresence Manager software application enables this simplicity by intelligently automating many scheduling and conferencing tasks, so users can focus on the meeting, not the technology, and communicate as naturally and effectively as they would face to face.

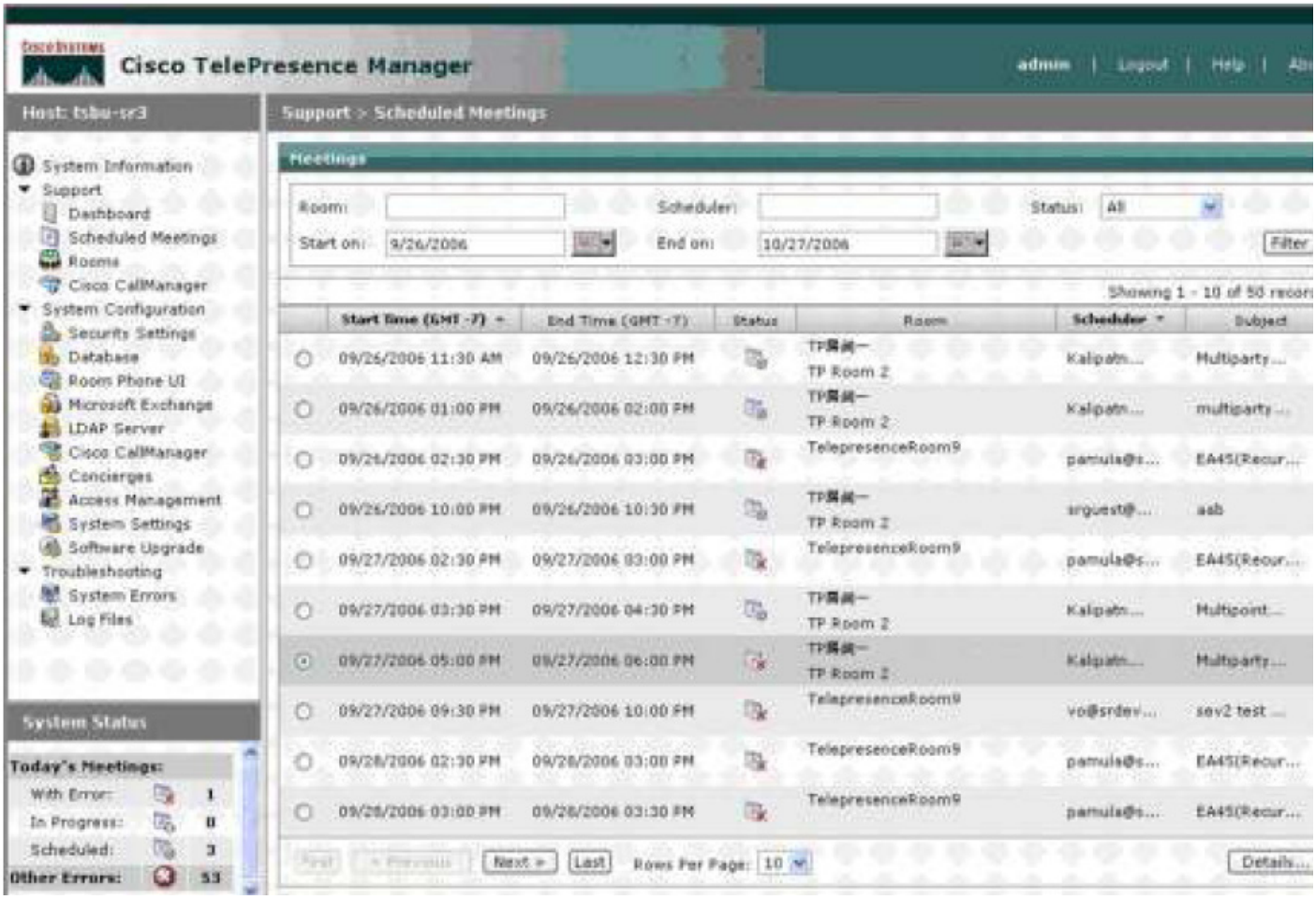
Administrators can use Cisco TelePresence Manager to monitor meetings and get reports on meetings and system usage. The application also helps IT managers by offering data to justify the investment and reduce total cost of ownership (TCO) by integrating with existing infrastructure.

Cisco TelePresence Manager is essential for delivering the full value of a Cisco TelePresence meeting solution. It collects information about Cisco TelePresence systems from Cisco Unified Communications Manager and associates those systems to their physical location as defined in Microsoft Active Directory and enterprise groupware. It also automatically collects information about multipoint capabilities, and allocates those resources when needed, allowing you to schedule both point-to-point and multipoint Cisco TelePresence meetings from your Microsoft Outlook or IBM Notes calendar. That schedule is automatically sent to the Cisco TelePresence systems involved in the call. You can launch your Cisco TelePresence meeting with the push of a button, by simply selecting your meeting from the list of meetings shown on the Cisco Unified IP Phone in the meeting room.

Applications

The Cisco TelePresence meeting solution is useful for large group meetings as well as small groups or one-on-one conversations. By integrating with both enterprise groupware and Cisco Unified Communications Manager, Cisco TelePresence Manager delivers ease of use, both in scheduling and in launching calls with just the push of a button on the phone.

Figure 1-3 Cisco TelePresence Manager Scheduled Meetings Screen



Features and Benefits

Cisco TelePresence Manager offers the following key features and benefits:

- Web-based user interface: The user interface provides easy administration without a desktop-loaded client. Simple views allow you to monitor Cisco TelePresence rooms, scheduled meetings, and system-level information.
- Easy scheduling: You can schedule meetings using your enterprise groupware (Microsoft Outlook or IBM Notes) and have that meeting posted to the display of the Cisco Unified IP Phone 7970G in the meeting room, minimizing user training and support.
- "One button to push" to launch calls: You select your scheduled call, whether point-to-point or multipoint, from the display on the phone in the meeting room to launch calls.
- Enterprise groupware compatibility: Cisco TelePresence Manager synchronizes with Microsoft Exchange and IBM Domino to collect information for Cisco TelePresence meetings.
- Multipoint support and resource allocation: Cisco TelePresence Manager, when used in conjunction with the Cisco TelePresence Multipoint Switch, automatically schedules the necessary multipoint resources to support the scheduled request.
- Intelligent multipoint selection: Cisco TelePresence Manager searches through all the available Cisco TelePresence Multipoint Switches and selects the one that will provide the best TelePresence experience for you based on your geographical location.
- Automatic schedule synchronization: Cisco TelePresence Manager automatically synchronizes all meetings when new TelePresence rooms come online. It also resynchronizes with groupware whenever it loses connectivity because of a network or hardware problem.
- Intercompany scheduling: Cisco TelePresence Manager provides process to schedule intercompany meetings using your existing groupware integration for one-button-to-push call launch.
- Transparent scheduling interface: Cisco TelePresence Manager requires no client software or plug-ins in order to schedule and automatically launch calls. Instead it acts as a room-scheduling proxy and receives and processes all meeting invitations sent and received in Cisco TelePresence rooms.
- Conference correction process: Cisco TelePresence Manager supports an automated email notification process to get clarification if any is needed to launch the call or to confirm the TelePresence meeting. A link is provided to log into the Cisco TelePresence Manager web interface to update information.
- Device discovery: Cisco TelePresence Manager connects with Cisco Unified Communications Manager to discover information about the Cisco TelePresence systems installed. This information includes device name, MAC address, IP address, directory number, room name, and IP phone associated with the Cisco TelePresence system. Cisco TelePresence Manager also receives the current registration state of both the Cisco TelePresence endpoint and its associated IP phone for diagnostics.
- Reporting: Cisco TelePresence Manager provides a view of scheduled meetings by date, status, room, and scheduler. It also allows exporting of TelePresence data from the administrative interface.
- Modular architecture: Cisco TelePresence Manager simplifies future extensions and support for additional devices and other groupware scheduling applications.

Product Architecture

Cisco TelePresence Manager uses the same platform infrastructure as Cisco Unified Communications Manager, following its appliance model principles. Its administrative user interface is a single software entity that provides access to a web-based GUI for initial setup and installation. Information retrieval takes place through standard interfaces such as XML, Simple Object Access Protocol (SOAP), computer telephony integration (CTI), and Web-based Distributed Authoring and Versioning (WebDAV).

Cisco TelePresence Manager 1.5 is a software application loaded on a Cisco MCS 7845 Media Convergence Server and runs as a standalone application. It cannot be deployed as a co-resident with any other Cisco application on that hardware.

Product Specifications

Table 1 gives specifications and Table 2 gives system requirements of the Cisco TelePresence Manager.

Table 1-2 Product Specifications

Specifications	Description
Product compatibility	Cisco MCS 7845-H2 and MCS 7845-I2 Media Convergence Servers
Software compatibility	Microsoft Internet Explorer 6.0 **Note** CTS Manager Release 1.5 does not support Microsoft Internet Explorer 7.x.
Protocols	HTTP, HTTPS, Administrative XML (AXL)/SOAP, Simple Network Management Protocol (SNMP), and CTI
Connectivity	IP
Reliability and availability	High availability through Cisco 7845 Media Convergence Server platform

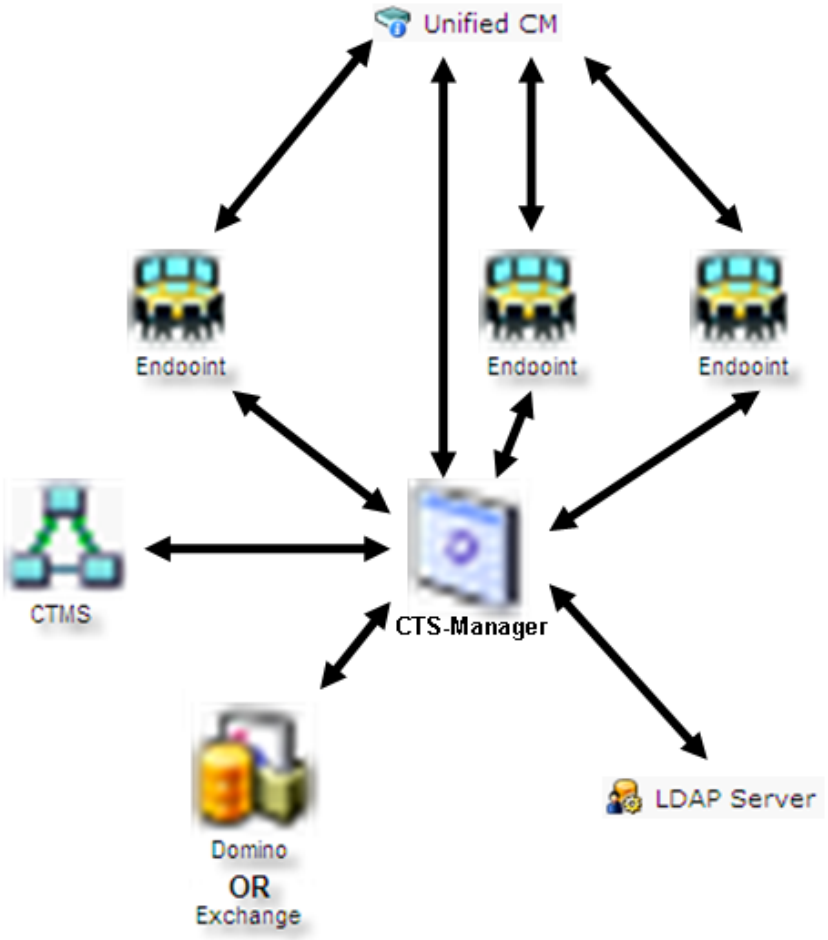
Table 1-3 System Requirements

Specifications	Description
Groupware connectivity	• Microsoft Exchange Server: 2003 (\Windows Server 2003 Enterprise Edition) and 2007 (on Windows 2003 Enterprise Edition SP2 [64 bit]) • Microsoft Outlook Client: 2003 and 2007 • IBM Domino Server: 8.0 and 7.0.0 (Windows Server 2003 Enterprise Edition) • IBM Notes Client: 8.0, 7.0.0, and 6.5.0
Cisco Unified Communications Manager version	Cisco Unified CM 6.1.3 or later
Lightweight Directory Access Protocol (LDAP) connectivity	Active Directory 2003, running on Windows 2003 Server
Web browser supported	Microsoft Internet Explorer 6.0

Enabling Multipoint Cisco TelePresence Calls

The Cisco TelePresence Multipoint Switch provides the resources needed to include three or more CTS endpoints in a scheduled meeting. A bridge phone number and a conference id are two of the resources provided by a CTMS. CTS-Manager, using One-Button-to-Push enables all the endpoints in a scheduled meeting to meet using the CTMS resources. For data sheets and other product literature refer to the product page. For hardware installation and CTMS maintenance refer to the Cisco TelePresence Multipoint Switch administration guide.

Figure 1-4 Adding a CTMS to Enable Multipoint Calling



Enabling Interoperability Between CTS Endpoints and Legacy Endpoints

Cisco TelePresence supports the ability to conference existing standards-based video conference sessions into a Cisco TelePresence meeting by integrating the Cisco TelePresence Multipoint Switch (CTMS) with Cisco Unified Video conferencing Systems (CUVC). This provides interoperability with virtually all standards-based video conferencing systems installed today.

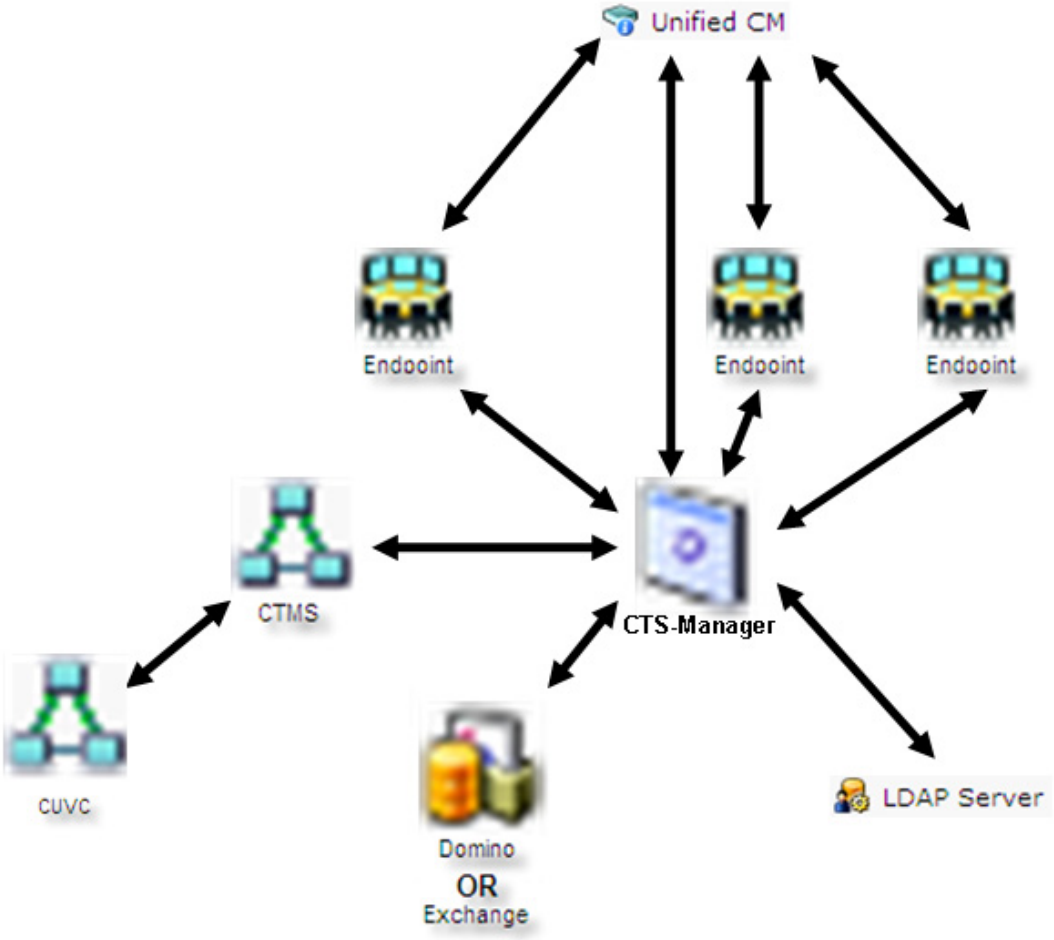
Cisco TelePresence Manager (CTS-Manager) works with Microsoft Exchange or IBM Domino servers to schedule Cisco TelePresence meeting rooms and enable One -Button -To -Push meeting access.

CTS-Manager is a web-based application and requires login using one of two password types, one for a concierge, and one for an administrator.

CTS-Manager provides the following functionality:

- A conduit to coordinate information between
  - Cisco TelePresence System meeting rooms and IP phones
  - Cisco TelePresence Multipoint Switches, also referred to as Multipoint Conference Units (MCUs)
  - Microsoft Exchange/Directory Servers or IBM Domino/Directory Servers
- Reports and links to assist a concierge in identifying scheduled meetings, conference room names, telephone numbers, system status, and to provide information to an administrator who will troubleshoot problems.
- Ability for an administrator to perform remotely such tasks as monitoring the servers, updating system settings, maintaining the database, and troubleshooting call connection problems.

Figure 1-5 Enabling Interoperability Between CTS Endpoints and Legacy Endpoints



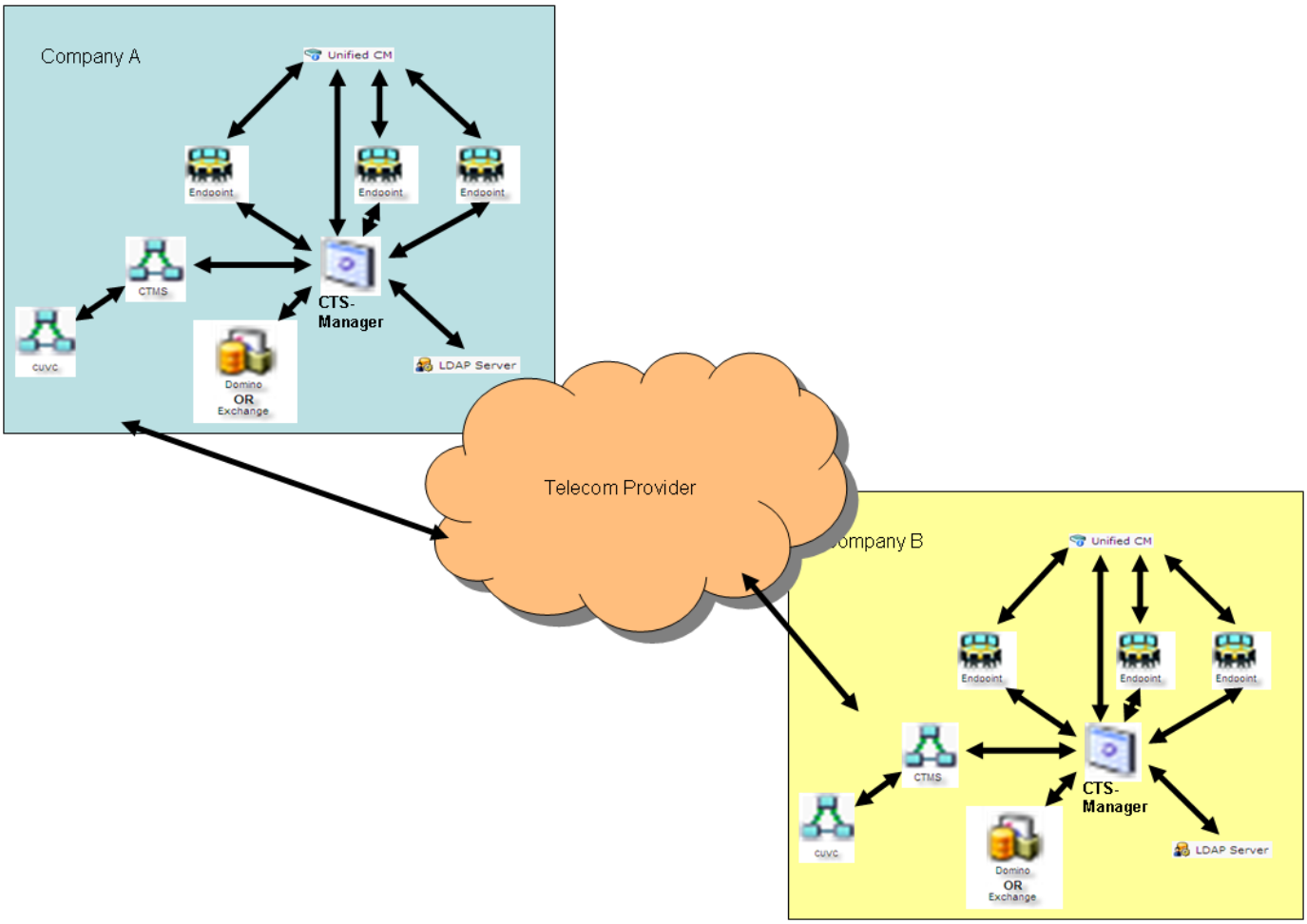
Enabling Intercompany Cisco TelePresence Calls

With intercompany capabilities for Cisco TelePresence, you can now use your existing network to easily have a virtual meeting with anyone you want, any time you want. Intercompany Cisco TelePresence provides the following benefits:

- Uses your existing network and service provider connection to extend Cisco TelePresence meetings beyond your enterprise boundary to enable you to meet with customers, suppliers, and partners.
- Eliminates additional costs. You do not need to build and manage a separate overlay network at additional cost or deploy an outside connection that may not meet your security requirements.
- Maintains the simplicity and “in person” experience of Cisco TelePresence: life-size images, spatial audio, and “one button to push” meeting initiation.

Uses services in the network to guarantee quality of service (QoS) and bandwidth for a quality Cisco TelePresence experience, one that can securely and reliably span different enterprise and service provider networks using standards, encryption, and your existing firewalls.

Figure 1-6 Enabling Intercompany Cisco TelePresence Calls



Introduction to the CTS-Manager Administration Software

CTS-Manager Administration software is accessed through your browser. All Cisco TelePresence administration software supports Internet Explorer 6.0. CTS-Manager Administration software is accessed through the server's host name or ip address.

Logging Into CTS-Manager

You use your Windows logon account to access the CTS-Manager functions. The features available to you are determined by the CTS-Manager role assigned to your Windows account. There are three levels of functionality when logging into CTS-Manager.

Concierge Role

When a concierge logs into CTS-Manager, the following selections and information are available:

- System Information
- System Status
- Support
- Troubleshooting

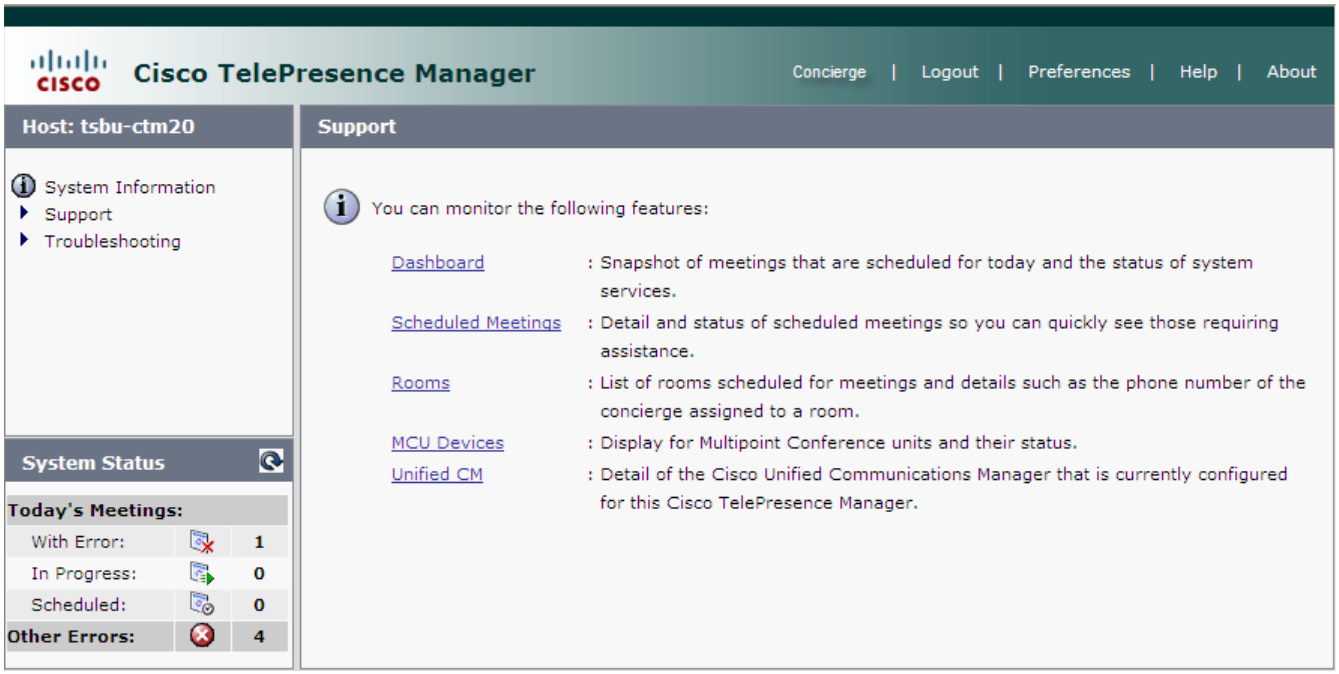
The concierge is the first person contacted when there are questions or problems pertaining to connecting meeting participants. The concierge understands how to perform the following tasks:

- Scheduling meetings
- Using the Cisco IP phone in a Cisco TelePresence-enabled meeting room
- Using the tools supplied by the CTS-Manager to monitor the system and the schedule of upcoming meetings and to update meeting requests
- Gathering data to supply to the administrator when a problem cannot be easily solved

Concierges can be assigned rooms to monitor in the CTS-Manager application. Assigned concierges are easily reached by dialing the Help soft key on the Cisco IP phone in a Cisco TelePresence-enabled meeting room.

Figure 1-7 shows the window when the concierge logs in.

Figure 1-7 Cisco TelePresence Manager Concierge Window



Administrator Role

When an administrator logs into the CTS-Manager, the following selections and information are available:

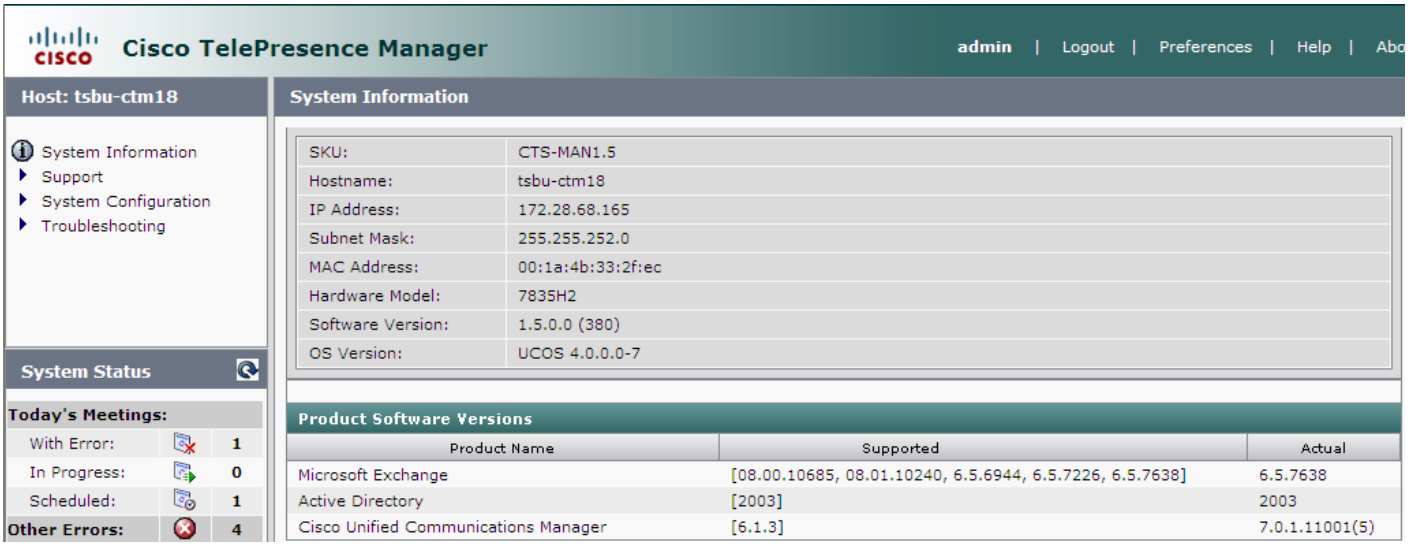
- System Information
- System Status
- Support
- System Configuration
- Troubleshooting

The administrator performs the same tasks performed by a concierge, but has an additional system configuration task available. The administrator has a different login name and password from that of the concierge. The administrator's access privileges allow access to the internal workings of the system where the administrator can modify system settings such as passwords, IP addresses, and security settings. The administrator is also responsible for defining schedules to back up the database and for assigning a concierge to a meeting room.

In day-to-day operations, the administrator assists the concierge with monitoring system status and, when problems occur, takes action to correct them by analyzing system error messages and debugging log files.

Figure 1-8 shows the windows when the administrator logs in.

Figure 1-8 Cisco TelePresence Manager Administrator's Window



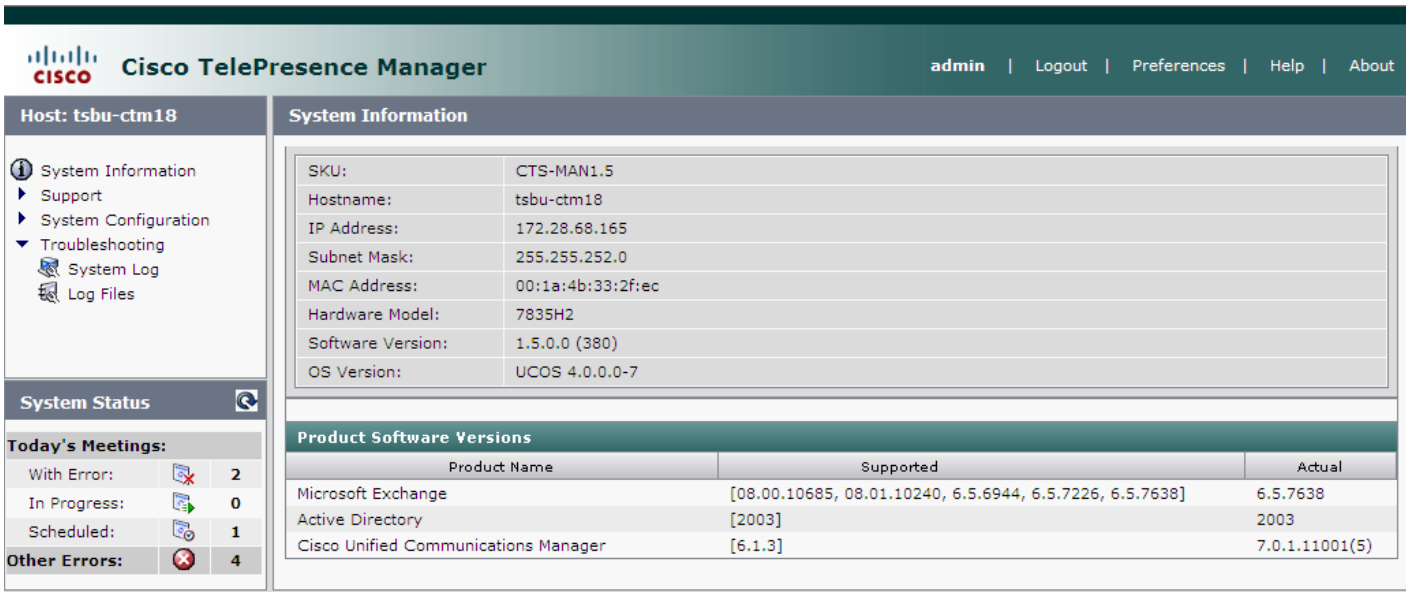
Superuser Role

The system superuser has a special login account that allows access to two additional administrative tasks. These tasks are only visible by logging in using the superuser password.

- System Settings
- Software Upgrade

Figure 1-9 shows the configuration tasks available to an administrator with the superuser password.

Figure 1-9 System Configuration Tasks with the Superuser Password



Cisco TelePresence Manager Window

The Cisco TelePresence Manager window is divided into several panes with different functionality.

Header Pane

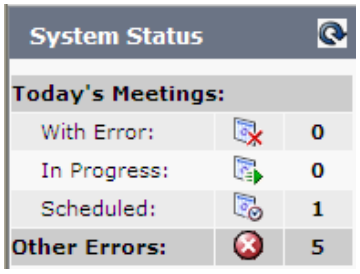
Figure 1-10 Cisco TelePresence Manager Header Pane

A header at the top of all CTS-Manager windows shows either “admin” or the login name of the concierge currently logged in and provides four links:

- **Logout**—Click to log out of the system.
- **Preferences**—Click to display the Preferences window. For more information see Preferences, page 1-20.
- **Help**—Click to display online help for using the CTS-Manager.
- **About**—Click to display licensing information.

System Status Pane

Figure 1-11 System Status Pane



System Status is always in view in the lower left corner of the CTS-Manager window. Both the concierge and the administrator must closely monitor this area for notification of system errors and changes in the status of today's meetings.

The icons and numbers are links. They will take you to a window in the CTS-Manager that helps you identify problems for the With Error state or see more information about meetings in the In Progress and Scheduled states.

The following meeting states are displayed for Today's Meetings:

- With Error
- In Progress
- Scheduled

The Other Errors area displays a cumulative number of errors listed in the Dashboard.

Navigation Pane

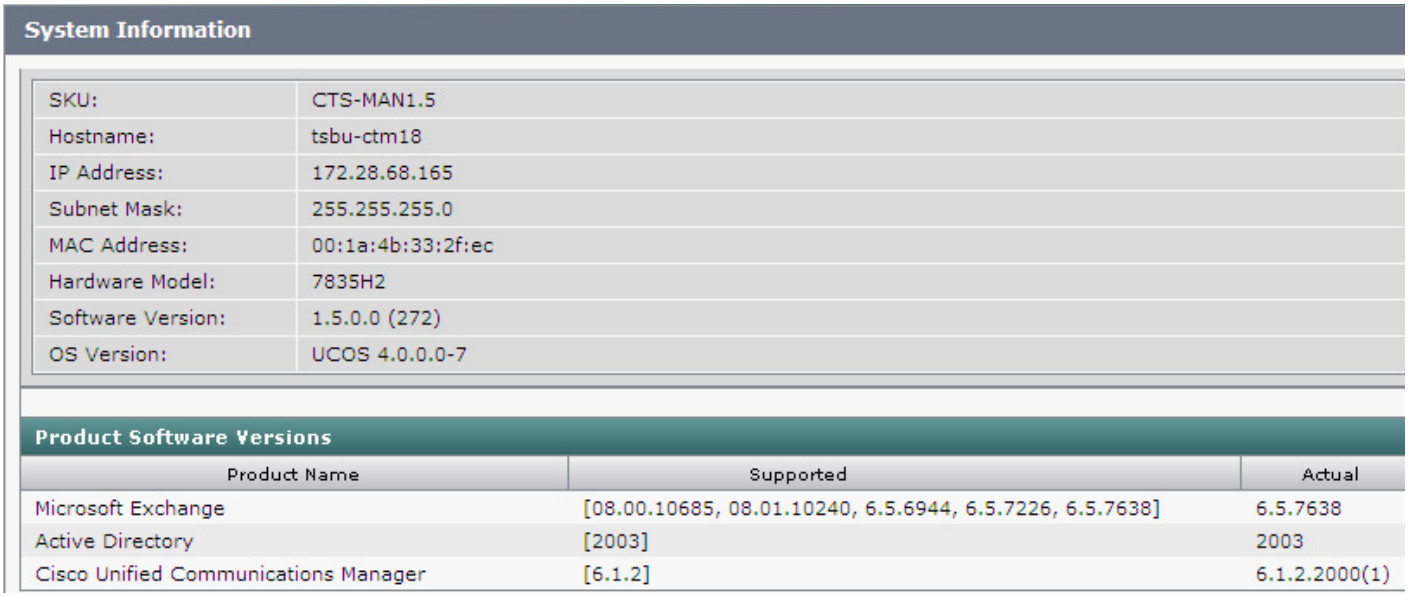
Figure 1-12 Navigation Pane

The navigation pane contains the list of commands you can run within Cisco TelePresence Manager. The commands are divided into three drop-down lists:

- **Support** — This drop-down list contains commands available to a Concierge, Administrator, or Superuser.
- **System Configuration** — This drop-down list contains commands available to an Administrator or Superuser. If you log in as a Superuser the System Settings and Software Upgrade commands are included in the list.
- **Troubleshooting** — This drop-down list contains commands available to an Administrator or Superuser.

Work Pane

Figure 1-13 Work Pane



The frame to the right of the Navigation pane is the content area. The gray bar above the content area shows the navigational path so you can see where you are at any time.

The following sections describe objects, functions, and information displayed in the Work pane associated with a specific command.

Tabs

Some windows have tabs that you click to display additional functionality related to a command.

Filtering Information

Some windows provide fields where you can enter criteria to filter the information contained is a report. Click the Filter button to display the reports using the criteria you specify. The settings are temporary; when you exit the page, the criteria are removed.

Obtaining Additional Information and Help

To access additional information or relevant windows, click a highlighted link.

Navigating Long Lists

When there is a long list of data in a window, you can navigate through it using Next, Last, First, and Previous buttons at the bottom of the window. The Rows Per Page drop-down list also found at the bottom of the window can be used to change the number of rows displayed. Choose 10, 20, 50, 100, or 500 rows per page. The setting is temporary, and when you exit the page the default setting is restored.

Copying and Pasting Information

You can place information displayed by the CTS-Manager in a file using standard copy-and-paste functions.

Typing Information in Fields

For information provided in fields, use the mouse to highlight and delete existing information. Type in new information.

New or modified information is applied using the Apply button.

To back out of changes and return to original settings, use the Reset button.

Typing Telephone Numbers

Telephone numbers must be entered into CTS-Manager fields exactly as they will be dialed by the IP phone. For example, if you need to dial 9 to get an outside telephone line and you are calling a different area code or international dialing code, you must provide all the required numbers to the CTS-Manager in the exact sequence in which they should be dialed. The following is an example: **`915105550100`**.

Typing Meeting Room Names

The names of meeting rooms must be typed into CTS-Manager fields exactly as they are stored in your Microsoft Exchange, or IBM Domino database. If a room is listed as **`M-Room 1/3 at Main`** in the Microsoft Outlook or Lotus Notes list of resources, that name must be typed exactly the same way in the CTS-Manager. Otherwise, the system will not be able to match records and an error occurs.

Viewing All Information

Sometimes only a portion of text is visible and is completed by ellipses. You can see the full text in a tooltip by slowly passing the mouse pointer over the partial text. You can do this in any field in the user interface where text is cut off.

System Information

Use the System Information window to see a quick summary of information about your Cisco TelePresence System. The window is divided into two areas:

- System Information lists model numbers, hostname, addresses, and hardware and software version information.
- Product Software Versions lists software currently configured in the system. It includes product names and version numbers.

Table 1-4 System Information

SKU	CTS-MAN1.5
Hostname	The name of the Cisco TelePresence Manager server (e.g. tsbu-ctm16).
IP Address	The IP address of the Cisco TelePresence Manager server.
Subnet Mask	The subnet mask of the Cisco TelePresence Manager server (e.g. 255.255.255.0).
MAC Address	The MAC address of the Cisco TelePresence Manager server (e.g. 00:18:fe:73:58:14).
Hardware Model	The hardware model of the Cisco TelePresence Manager server (e.g. 7835H2).

Table 1-4 System Information

Software Version	The version of Cisco TelePresence Manager software running on the server (e.g. 1.5.0.0).
OS Version	The software version of the Cisco Unified Communications OS running on the Cisco TelePresence Manager server (e.g. CUCOS 3.0.0.0-44).

Table 1-5 Product Software Versions

Product Name	Supported	Actual
Domino LDAP Server	[Release 7.0]	Release 7.0
Domino Server Microsoft Exchange **Note** Only one Calendar server is displayed, depending on which server is deployed in your network.	[7.0, 8.0] [08.00.10685, 6.5.6944, 6.5.7638	8.0 6.5.7638
Domino LDAP Server Active Directory **Note** Only one Directory Server is displayed, depending on which Calendar server is deployed in your network.	[Release 7.0] [2003]	Release 8.0 2003
Cisco Unified Communications Manager	[6.1.3]	7.0.1.11001(5)

Preferences

Clicking Preferences in the header pane displays the Preferences window.

Figure 1-14 Preferences Link in the Header Pane

The first time you login you need to specify the timezone you are in. This localizes Cisco TelePresence Manager's meeting times to your location. You can use the Preferences window to change the timezone.

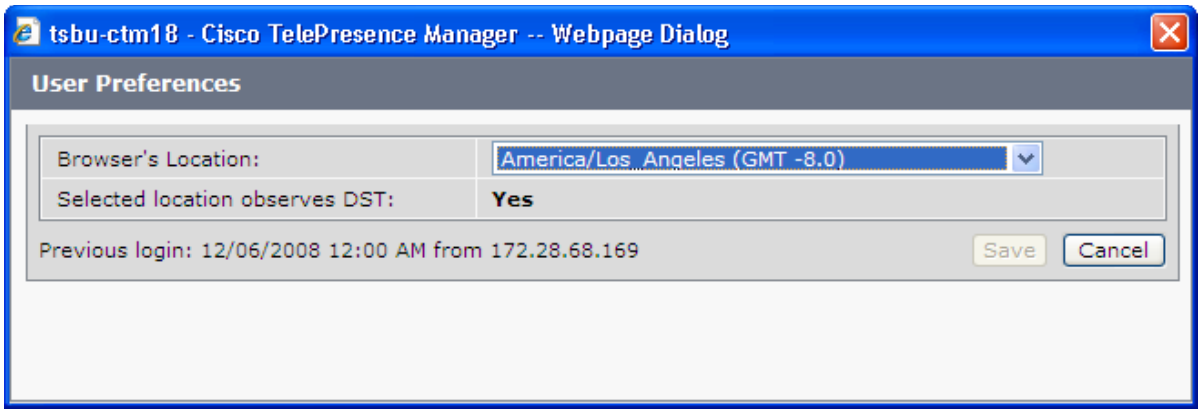



Figure 1-15 Preferences window