Administration Guide for Cisco Unity Connection Serviceability

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CONTENTS

Preface

This preface contains the following sections:

Audience and Use

The *Administration Guide for Cisco Unity Connection Serviceability* provides descriptions and procedures for configuring alarms, traces, clusters, and services through Cisco Unity Connection Serviceability. It is intended for administrators who configure, troubleshoot, and support a Cisco Unity Connection or a Cisco Unified Communications Manager Business Edition system. This guide requires knowledge of IP networking technology.

Tip For Cisco Unity Connection, you must perform serviceability-related tasks in both Cisco Unified Serviceability and Cisco Unity Connection Serviceability; for example, you may need to start and stop services, view alarms, and configure traces in both applications to troubleshoot a problem.

Cisco Unified Serviceability supports the functionality described in the *Cisco Unified Serviceability Administration Guide*; for tasks that are specific to Cisco Unity Connection Serviceability, use this guide, the *Administration Guide for Cisco Unity Connection Serviceability*.

Documentation Conventions

Table 1 Conventions in the Administration Guide for Cisco Unity Connection Serviceability

Convention	Description
boldfaced text	Boldfaced text is used for: • Key and button names. (Example: Click **OK**.) • Information that you enter. (Example: Enter **Administrator** in the User Name box.)
< > (angle brackets)	Angle brackets are used around parameters for which you supply a value. (Example: In your browser, go to https://<Cisco Unity Connection server IP address>/cuadmin.)
- (hyphen)	Hyphens separate keys that must be pressed simultaneously. (Example: Press **Ctrl-Alt-Delete**.)
> (right angle bracket)	A right angle bracket is used to separate selections that you make in the navigation bar of Cisco Unity Connection Administration. (Example: In Cisco Unity Connection Administration, go to **Contacts > System Contacts**.)

The *Administration Guide for Cisco Unity Connection Serviceability* also uses the following conventions:

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

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

Related Documentation

For descriptions and URLs of Cisco Unity Connection documentation on Cisco.com, see the *Documentation Guide for Cisco Unity Connection Release 7.x*. The document is shipped with Cisco Unity Connection and is available at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/7x/roadmap/7xcucdg.html.

For descriptions and URLs of Cisco Unified Communications Manager Business Edition documentation on Cisco.com, see the *Cisco Unified Communications Manager Business Edition Documentation Guide*. The document is shipped with Cisco Unified CMBE and is available at http://www.cisco.com/en/US/products/ps7273/products_documentation_roadmaps_list.html.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

Cisco Product Security Overview

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

Further information regarding U.S. export regulations may be found at http://www.access.gpo.gov/bis/ear/ear_data.html.

CHAPTER 1

Introduction to Cisco Unity Connection Serviceability

This chapter provides basic information on Cisco Unity Connection Serviceability and contains the following sections:

Understanding Cisco Unity Connection Serviceability

Cisco Unity Connection Serviceability, a web-based troubleshooting tool for Cisco Unity Connection, provides the following functionality:

- Displaying Connection alarm definitions, which you can use for troubleshooting.
- Enabling Connection traces. You can collect and view trace information in the Real-Time Monitoring Tool (RTMT).
- Configuring the logs to which Connection trace information will be saved.
- Managing a cluster and the servers, if a Connection cluster is configured.

Note The Connection cluster feature is not supported for use with Cisco Unified Communications Manager Business Edition.

- Viewing the status of the Connection feature services.
- Activating, deactivating, starting, and stopping the Connection services.
- Generating reports that can be viewed in different file formats.

Depending on the service and component involved, you may perform serviceability-related tasks in both Cisco Unity Connection Serviceability and Cisco Unified Serviceability. For example, you may need to start and stop services, view alarms, and configure traces in both applications to troubleshoot a problem.

Cisco Unity Connection Serviceability supports the functionality that is described in the *Administration Guide for Cisco Unity Connection Serviceability*. For information on using Cisco Unified Serviceability, see the *Cisco Unified Serviceability Administration Guide*.

Configuring Browsers on Administrator Workstations

To access Cisco Unity Connection Serviceability, Cisco Unity Connection Administration, Cisco Unified Serviceability, Disaster Recovery System, and other web applications on the Connection or Cisco Unified CMBE server, the browser(s) must be set up correctly on an administrator workstation.

See the applicable section, depending on the browser(s) installed on the computer:

- Firefox, page 1-2
- Microsoft Internet Explorer, page 1-2

Firefox

Do the following tasks to set up Firefox for accessing the Connection web applications.

1. Confirm that the software required for correct browser configuration is installed. See the "Software Requirements—Administrator Workstations" section of the applicable requirements document:
   - *System Requirements for Cisco Unity Connection* at http://www.cisco.com/en/US/products/ps6509/prod_installation_guides_list.html.
   - *System Requirements for Cisco Unity Connection in Cisco Unified CMBE* at http://www.cisco.com/en/US/products/ps7273/prod_installation_guides_list.html.
2. Configure Firefox:
   a. Enable Java.
   b. Enable Java Script > Enable Change Images in Java Script Advanced.
   c. Allow sites to set cookies. (For security purposes, we recommend that you set this to Allow Sites to Set Cookies for the Originating Web Site Only.)

Microsoft Internet Explorer

Do the following tasks to set up Internet Explorer for accessing the Connection web applications.

1. Confirm that the software required for correct browser configuration is installed. See the "Software Requirements—Administrator Workstations" section of the applicable requirements document:
   - *System Requirements for Cisco Unity Connection* at http://www.cisco.com/en/US/products/ps6509/prod_installation_guides_list.html.
   - *System Requirements for Cisco Unity Connection in Cisco Unified CMBE* at http://www.cisco.com/en/US/products/ps7273/prod_installation_guides_list.html.
2. Configure Internet Explorer:
   a. Enable Active scripting.
   b. Download and run ActiveX controls.
   c. Enable Java scripting.
   d. Accept all cookies.
   e. Automatically check for newer versions of temporary Internet files.
   f. Enable Medium-High privacy.

g. If you are running Microsoft Windows Server 2003 and using Internet Explorer version 6.0 to access the Cisco Personal Communications Assistant, add the Connection server to the Trusted Sites list by doing the following procedure, "To Add the Connection or Cisco Unified CMBE Server to the List of Trusted Sites (Windows Server 2003 with Internet Explorer 6.0 Only)."

To Add the Connection or Cisco Unified CMBE Server to the List of Trusted Sites (Windows Server 2003 with Internet Explorer 6.0 Only)

Step 1 Open the Cisco Personal Communications Assistant Login page. It is not necessary to log in to the Cisco PCA.

Step 2 On the Internet Explorer File menu, click **Add This Site To > Trusted Sites Zone**.

Step 3 In the Trusted Sites dialog box, click **Add**.

Step 4 Click **Close** to close the Trusted Sites dialog box.

Step 5 Restart Internet Explorer.

Accessing Cisco Unity Connection Serviceability

The first time that you log on to Cisco Unity Connection Serviceability, you use the username and password for the default administrator account that the installer specified for the account during installation. Later, you can use the username and password for any additional administrator accounts that you create.

To Access Cisco Unity Connection Serviceability

Step 1 By using a supported web browser, open a browser session.

Step 2 Go to **https://<Cisco Unity Connection server IP address>/cuservice**.

Step 3 Enter an applicable username and password, and click **Login**.

After you have logged on to Cisco Unity Connection Serviceability, you can access all applications that appear in the Navigation drop-down box except for Cisco Unified Operating System Administration and Disaster Recovery System without having to log on to each application.

You cannot access Cisco Unified Operating System Administration or Disaster Recovery System by using the Cisco Unity Connection Serviceability username and password. To access these applications from Cisco Unity Connection Serviceability, you must click the Logout link in the upper-right corner of Cisco Unity Connection Serviceability, then click the application from the Navigation drop-down box and click Go.

If you have already logged on to one of the applications that display in the Navigation drop-down box (not Cisco Unified Operating System Administration or Disaster Recovery System), you can access Cisco Unity Connection Serviceability without logging in. From the Navigation drop-down box, click Cisco Unity Connection Serviceability and click Go.

Using the Cisco Unity Connection Serviceability Interface

In addition to troubleshooting, generating reports, and doing service-related tasks in Cisco Unity Connection Serviceability, you can do the following tasks:

- To display documentation for a single window, click Help > This Page.
- To display a list of documents that are available with this release of Connection or Cisco Unified CMBE (or to access the Help index), click Help > Contents.
- To verify the version of Cisco Unity Connection Serviceability running on the server, click Help > About or click the About link in the upper-right corner of the window.
- To go directly to the home page in Cisco Unity Connection Serviceability from a configuration window, click Cisco Unity Connection Serviceability from the Navigation drop-down box.
- To access Cisco Unity Connection Administration or other applications, click the applicable application from the Navigation drop-down box and click Go.
- To log out of Cisco Unity Connection Serviceability, click the Logout link in the upper-right corner of the window.
- On each Cisco Unity Connection Serviceability configuration page, configuration icons appear that correspond to the configuration buttons at the bottom of the page. (For example, you can click either the Save icon or the Save button to complete the task.)

CHAPTER 2

Using Alarms

This chapter provides information on using alarms in Cisco Unity Connection Serviceability and contains the following sections:

Understanding Alarms

Cisco Unity Connection Serviceability alarms provide information on runtime status and the state of the system, so you can troubleshoot problems that are associated with the system. For example, you can use alarms to determine whether there are any ports enabled to set MWIs. Alarm information includes the catalog, name, severity, explanation, recommended action, routing list, and parameters.

You use the trace and log central option in the Real-Time Monitoring Tool (RTMT) to collect alarms. You use the SysLog Viewer in RTMT to view alarms.

Alarm Definitions

Alarm definitions describe alarm messages—what they mean and how to recover from them.

You search the Alarm Message Definitions page for alarm information. When you click an alarm, a description of the alarm information and a recommended action appears on the Alarm Information page. To help with troubleshooting, the definitions include the alarm name, description, severity, explanation, recommended action, routing list, and parameters.

Viewing Alarm Definitions

This section describes how to search for and view alarm definitions.

To View Alarm Definitions

Step 1 In Cisco Unity Connection Serviceability, click **Alarm > Definitions**.

Step 2 In the Alarm Message Definitions window, enter search criteria for the definitions that you want to view, then click **Find**.

Tip To display all alarm definitions, leave the search criteria blank and click Find.

The definition list displays. Multiple pages of alarm definitions may exist. To choose another page, click the applicable navigation button at the bottom of the Alarm Message Definitions window. To change the number of alarms that display in the window, choose a different value from the Rows per Page drop-down list box.

Step 3 In the list, click the hyperlink alarm definition for which you want alarm details.

The Alarm Information window displays.

Step 4 To return to the Alarm Message Definitions window, click **Back to Find/List Alarms** from the Related Links drop-down list box and click **Go**.

CHAPTER 3

Using Traces

This chapter provides information on using traces in Cisco Unity Connection Serviceability and contains the following sections:

Understanding Traces

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Cisco Unity Connection Serviceability traces help troubleshoot problems in the following ways:

- You can specify the log file parameters for each Connection component, including the maximum number of log files and the maximum file size that can be created when you run traces for a component.
- You can enable micro traces and the level of micro-trace information that you want.
- You can enable macro traces (preselected groups of micro traces) and the level of macro-trace information that you want.

After you have configured the log files and enabled the traces, you collect trace log files in one of the following ways:

- By using the trace and log central option in the Real-Time Monitoring Tool (RTMT). For information, see the "Working with Trace and Log Central" chapter (of the "Tools for Traces, Logs, and Plug-Ins" part) of the *Cisco Unified Real-Time Monitoring Tool Administration Guide*.
- By using the command line interface (CLI). For information, see the *Command Line Interface Reference Guide for Cisco Unified Communications Solutions*.

Note Enabling macro or micro traces decreases system performance. Enable traces only for troubleshooting purposes.

Configuring Trace Log Files

Do the procedure in this section to configure trace log files for Cisco Unity Connection services.

Note Before trace information can be written to the log files, you must enable micro traces or macro traces that will provide the troubleshooting information in the areas that you select.

To Configure Trace Log Files

Step 1 In Cisco Unity Connection Serviceability, click **Trace > Configuration**.

The Trace Configuration page appears.

Step 2 In the Server drop-down box, click the applicable Connection or Cisco Unified CMBE server, and click **Go**.

Step 3 From the Component drop-down box, choose the component for which you want to configure trace log files, and click **Go**.

Note The drop-down box displays all components (active and inactive).

Step 4 In the Maximum No. of Files field, enter the maximum number of trace log files that will be created for this component.

Step 5 In the Maximum File Size field, enter the size limit (in megabytes) for the trace log files that will be created for this component.

Step 6 If you want to return to the default settlings, click **Set Default**. Otherwise, skip to the next step.

Step 7 Click **Save**.

Step 8 If you want the new trace log files to replace the old trace log files for this component, click **Restart Log Files**.

Enabling Micro Traces

Enable micro traces when you are troubleshooting problems with specific Cisco Unity Connection components. For example, if the Alert Central tool in Real-Time Monitoring Tool (RTMT) has notification errors, enable the Notifier trace. However, keep in mind that running traces can affect system performance and hard-disk space.

Note Enabling micro traces decreases system performance. Enable traces only for troubleshooting purposes.

To Enable Micro Traces

Step 1 In Cisco Unity Connection Serviceability, choose **Trace > Micro Traces**.

The Micro Traces page appears.

Step 2 In the Server drop-down box, click the applicable Connection or Cisco Unified CMBE server, and click **Go**.

Step 3 From the Micro Trace drop-down box, click the micro trace that you want to enable, and click **Go**.

Step 4 Under Micro-Trace Levels, check the check boxes for the micro-trace levels that you want to enable.

Step 5 Click **Save**.

Tip You may need to enable traces in Cisco Unity Connection Serviceability and Cisco Unified Serviceability to troubleshoot Connection issues. To troubleshoot Connection components, enable traces in Cisco Unity Connection Serviceability. Similarly, to troubleshoot services that are supported in Cisco Unified Serviceability, enable traces in Cisco Unified Serviceability. For information on how to enable traces in Cisco Unified Serviceability, see the *Cisco Unified Serviceability Administration Guide*.

Available Micro Traces

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Table 3-1 lists each micro trace that is available, a description of what it analyzes, and the filename of the trace log that it generates.

Table 3-1 Micro Traces

Micro Trace Name	What the Trace Analyzes	File Name of Trace Log
Arbiter	Conversations, ports, and call routing rules that are used for calls	diag_CuCsMgr_*.uc
AudioStore	The audio recording service used by web-based applications that use Media Master to playback or record audio streams	diag_Tomcat_*.uc
AxlAccess	Interaction with the AXL server to get and set phone-related properties	diag_Tomcat_*.uc
BulkAdministrationTool	Bulk Administration Tool that is used for creating, updating, and deleting multiple users or system contacts	diag_Tomcat_*.uc
CCL	The retrieval of meeting information for the calendaring feature	diag_CuCsMgr_*.uc diag_CuGalSvc_*.uc diag_Tomcat_*.uc
CDE	Conversation engine and conversation events	diag_CuCsMgr_*.uc
CDL	Information retrieval from the database	diag_CuCsMgr_*.uc diag_Tomcat_*.uc

Table 3-1 Micro Traces (continued)

Micro Trace Name	What the Trace Analyzes	File Name of Trace Log
CML	The retrieval of messages from the Cisco Unity Connection message store; the retrieval of messages from an Exchange server (by using IMAP) for using Text-to-Speech feature to read e-mail messages	diag_CuCsMgr_*.uc diag_CuNotifier_*.uc diag_Tomcat_*.uc
CiscoPCA	The Cisco Personal Communications Assistant (Cisco PCA)	diag_Tomcat_*.uc
Common	Low-level activities for components that are shared by Cisco Unity Connection services	<any>
ConfigData	Detection that configuration data has been updated in the database	<any>
ConvRoutingRules	The conversation to which the Arbiter routes calls	diag_CuCsMgr_*.uc
ConvSub	User activities and usage	diag_CuCsMgr_*.uc
CsLicense	Functions related to license processing	diag_CuLicSvr_*.uc
CsMalUmss	Access to the message store by the CML, Notifier, and IMAP server	diag_CuCsMgr_*.uc diag_Tomcat_*.uc
CsWebDav	Calendar activities in connection with Exchange	diag_CuCsMgr_*.uc diag_CuGalSvc_*.uc diag_Tomcat_*.uc
CuCcmSynchronization Tasks	Synchronization of the user data from Cisco Unified CM	diag_Tomcat_*.uc
CuCmDbEventListener	Detection of changes in the Cisco Unified CM database	diag_CuCmDbEventListener_*.uc
CuCsMgr	Main Cisco Unity Connection process; starting and stopping Connection	diag_CuCsMgr_*.uc
CuDbProxy	Database replication for Cisco Unity Connection clusters	diag_CuDbProxy_*.uc
CuESD	The activities of Cisco Unity Connection external service diagnostic tools	diag_Tomcat_*.uc
CuEncrypt	Encryption (except for messaging) and the encryption audit logs	<any>
CuFileSync	File replication for Cisco Unity Connection clusters	diag_CuFileSync_*.uc
CuGal	The retrieval of calendar and contact information from Exchange	diag_CuGalSvc_*.uc

Table 3-1 Micro Traces (continued)

Micro Trace Name	What the Trace Analyzes	File Name of Trace Log
CuImapSvr	Access to voice messages by IMAP clients	diag_CuImapSvr_*.uc
CuReplicator	Replication for digital networking **Note** We recommend that the Debug Traces and Debug Statistics micro-trace levels be enabled for no more than one hour because they can produce a large number of log entries.	diag_CuReplicator_*.uc
CuService	The activities of Cisco Unity Connection Serviceability	diag_Tomcat_*.uc
CuSnmpAgt	The activities of the Cisco Unity Connection SNMP subagent	diag_CuSnmpAgt_*.uc
Cuals	The activities of the web services to add users	diag_Tomcat_*.uc
Cuca	The activities of Cisco Unity Connection Administration	diag_Tomcat_*.uc
DataSysAgentTasks	Data SysAgent tasks	diag_CuSysAgent_*.uc
DbEvent	Component notification of database changes	<any>
FailureConv	Activation of the Failure Conversation when a system error occurs	diag_CuCsMgr_*.uc
LicenseClient	Functions related to license management	diag_CuCsMgr_*.uc
Logger	Writing traces logs and events	<any>
MTA	Delivery of voice messages to the message store	diag_MTA_*.uc
MediaMasterControl	The Media Master on the client workstation	diag_Tomcat_*.uc
MediaMasterUMS	The UMS service, which handles streams audio recordings between the Media Master and the AudioStore	diag_Tomcat_*.uc
MediaMasterWeb	The web page rendering module that is used in web-based applications that have the Media Master	diag_Tomcat_*.uc
MessageEventService	Detection of arrival or deletion of messages	diag_Tomcat_*.uc

Table 3-1 Micro Traces (continued)

Micro Trace Name	What the Trace Analyzes	File Name of Trace Log
MiuAdm	Functions in Cisco Unity Connection Administration relating to testing voice messaging ports and generating certificates	diag_Tomcat_*.uc
MiuCall	The process between the Miu and conversations	diag_CuCsMgr_*.uc
MiuDatatbase	Media activities relating to accessing the database	diag_CuCsMgr_*.uc
MiuGeneral	Tracking calls through the telephone user interface (TUI); call control functions; turning message waiting indicators (MWIs) on and off; notification and outdial functions; basic media or WAV file usage	diag_CuCsMgr_*.uc
MiuIO	Media or WAV file usage with TAPI (circuit-switched or Cisco Unified CallManager) integrations	diag_CuCsMgr_*.uc
MiuMethods	Handing of incoming calls; call control; turning messaging waiting indicators (MWIs) on and off; notification and outdial functions; media or WAV file usage	diag_CuCsMgr_*.uc
MiuSIP	SIP call control	diag_CuCsMgr_*.uc
MiuSIPStack	Low-level SIP interactions for call control	diag_CuCsMgr_*.uc
MiuSkinny	SCCP call control	diag_CuCsMgr_*.uc
MiuTranscode	Low-level media functions relating to transcoding	diag_CuCsMgr_*.uc
Mixer	Low-level activities relating to media and the Text-to-Speech feature	diag_CuMixer_*.uc
Monitor	Monitoring the status of voice messaging ports and call processing during a call; the server-side functions for displaying port status in Real-Time Monitoring Tool	diag_CuCsMgr_*.uc
Notifier	Notification of messages and selected events; turning message waiting indicators (MWIs) on and off	diag_CuCsMgr_*.uc diag_CuNotifier_*.uc
PCAMeetingPlace	Activities of the Cisco Personal Communications Assistant relating to MeetingPlace for the calendar feature	diag_Tomcat_*.u

Table 3-1 Micro Traces (continued)

Micro Trace Name	What the Trace Analyzes	File Name of Trace Log
PCAUnifiedCM	Activities of the Cisco Personal Communications Assistant relating to the Cisco Unified Communications Manager integration	diag_Tomcat_*.uc
PhoneManager	The management of IP phone applications	diag_CuCsMgr_*.uc
PhraseServer	The prompts that play and the user DTMF input; the logs are written to a file	diag_CuCsMgr_*.uc
PhraseServerToMonitor	The prompts that play and the user DTMF input; the logs are written to the monitor	diag_CuCsMgr_*.uc
RSS	RSS feeds that are used for checking voice mail from an RSS client	diag_Tomcat_*.uc
ReportDataHarvester	Conversion of the content in the data log files to entries in the reports database	diag_CuReportDataHarvester_*.uc
ResourceLoader	Using the selected language in the GUI; filling strings with product or message information	<any>
ResourceManager	Monitoring and providing available resources to the Arbiter as needed	diag_CuCsMgr_*.uc
RoutingRules	Call routing decisions	diag_CuCsMgr_*.uc
RulesEngine	Evaluation of personal call transfer rules for a subscriber during a call	diag_CuCsMgr_*.uc diag_Tomcat_*.uc
SMTP	SMTP functions	diag_SMTP_*.uc
SRM	Functions related to cluster management	diag_CuSrm_*.uc
SocketPoolHelper	Socket connections to the IMAP server	<any>
SslInit	Initialization procedures for components that use OpenSSL	<any>
SysAgent	System Agent component, which schedules system tasks that the administrator enters (such as resynchronizing MWIs)	diag_CuSysAgent_*.uc
TRaP	Telephone Record and Playback (TRaP), which lets clients use the phone as a recording and playback device	diag_CuCsMgr_*.uc diag_Tomcat_*.uc
TaskRequest	Functions related to the Task Management tool	diag_CuSysAgent_*.uc

Table 3-1 Micro Traces (continued)

Micro Trace Name	What the Trace Analyzes	File Name of Trace Log
TextToSpeech	The activities of the Text to Speech feature	diag_CuCsMgr_*.uc
ThreadPool	The use of threads by the processor	<any>
TimerHelper	The timer used by the Conversation Manager component	<any>
TranscodeWeb	The web server audio format transcoding utilities that transcode the incoming audio streams into the audio format that Cisco Unity Connection uses	diag_Tomcat_*.uc
UmssSysAgentTasks	Messaging tasks for the System Agent component	diag_CuSysAgent_*.uc
UnityAssistant	The activities of the Cisco Unity Assistant web tool in the Cisco Personal Communications Assistant	diag_Tomcat_*.uc
UnityInbox	The activities of the Cisco Unity Inbox web tool in the Cisco Personal Communications Assistant	diag_Tomcat_*.uc
UnityPCTR	The activities of the Cisco Unity Personal Call Transfer Rules web tool in the Cisco Personal Communications Assistant	diag_CuCsMgr_*.uc
VMWS	Interactions with voice messaging web services	diag_Tomcat_*.uc
VUI	The voice user interface	diag_CuCsMgr_*.uc
VirtualQueue	Call queuing	diag_CuCsMgr_*.uc

Enabling Macro Traces

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Enable macro traces, which are preselected sets of micro traces, when you are troubleshooting general areas of Connection functionality. For example, if there are MWI problems, enable the Traces for MWI Problems macro trace. However, keep in mind that running traces can affect system performance and hard-disk space.

Caution Enabling macro traces decreases system performance. Enable traces only for troubleshooting purposes.

To Enable Macro Traces

Step 1 In Cisco Unity Connection Serviceability, click **Trace > Macro Traces**.

The Macro Traces page appears.

Step 2 In the Server drop-down box, click the applicable Connection or Cisco Unified CMBE server, and click **Go**.

Step 3 Check the check box of the macro trace that you want to enable.

Step 4 Expand the macro trace, and check the check boxes for the levels that you want to enable.

Step 5 Click **Save**.

Tip You may need to enable traces in Cisco Unity Connection Serviceability and Cisco Unified Serviceability to troubleshoot Connection issues. To troubleshoot Connection components, enable traces in Cisco Unity Connection Serviceability. Similarly, to troubleshoot services that are supported in Cisco Unified Serviceability, enable traces in Cisco Unified Serviceability. For information on how to enable traces in Cisco Unified Serviceability, see the *Cisco Unified Serviceability Administration Guide*.

Available Macro Traces

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Table 3-2 lists each macro trace that is available, a description of what it analyzes, and the filename of the trace log that it generates.

Table 3-2 Macro Traces

Macro Trace Name	What the Trace Analyzes	File Name of Trace Log
Call Flow Diagnostics	The flow of a call through Cisco Unity Connection	diag_CuCsMgr_*.uc
Message Objectid Tracking Traces	Message handing; the objects that handle messages from delivery to deletion	diag_CuSysAgent_*.uc diag_MTA_*.uc diag_CuCsMgr_*.uc diag_CuImapSvr_*.uc diag_Tomcat_*.uc
Call Control (Miu) Traces	Call control functions	diag_CuCsMgr_*.uc
Traces for MWI Problems	Turning message waiting indicators (MWIs) on and off	diag_CuCsMgr_*.uc diag_CuNotifier_*.uc
Traces for Other Notification Problems	Notification and outdial functions	diag_CuCsMgr_*.uc diag_CuNotifier_*.uc
Unity Startup	Cisco Unity Connection startup functions	diag_CuCsMgr_*.uc diag_CuNotifier_*.uc
Conversation Traces	Conversation usage	diag_CuCsMgr_*.uc
Voice User Interface/Speech Recognition Traces	Voice user interface (VUI)	diag_CuCsMgr_*.uc
Media (Wave) Traces	Media and WAV file usage	diag_CuCsMgr_*.uc diag_CuMixer_*.uc

Table 3-2 Macro Traces (continued)

Macro Trace Name	What the Trace Analyzes	File Name of Trace Log
Text to Speech (TTS) Traces	The Text to Speech (TTS) feature; also can log traces on other Cisco Unity Connection components that interact with TTS	diag_CuCsMgr_*.uc
Connection Serviceability Web Service	The activity of Cisco Unified Serviceability	diag_Tomcat_*.uc
ViewMail for Outlook	The activity of Cisco Unity Connection ViewMail for Microsoft Outlook clients	diag_CuCsMgr_*.uc diag_CuImapSvr_*.uc diag_MTA_*.uc diag_Tomcat_*.uc
Digital Networking	Digital networking functions	diag_CuReplicator_*.uc

CHAPTER 4

Managing Server Status and Ports in a Cisco Unity Connection Cluster

The Cluster Management page in Cisco Unity Connection Serviceability lets you change the status of servers in a Connection cluster, stop all ports on a server from taking new calls, and restart all ports on a server to take calls.

For the applicable procedures, see the "Administering a Cisco Unity Connection Cluster" chapter of the *Cluster Configuration and Administration Guide for Cisco Unity Connection Release 7.x* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/7x/cluster_administration/guide/7xcuccagx.html.

Note The Connection cluster feature is not supported for use with Cisco Unified Communications Manager Business Edition.

CHAPTER 5

Managing Cisco Unity Connection Services

This chapter provides information on managing services in Cisco Unity Connection Serviceability and contains the following sections:

Cisco Unity Connection Services

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Cisco Unity Connection has the following services:

Status Only Services

- Connection DB
- Connection Server Role Manager
- Connection Serviceability

Critical Services

- Connection Conversation Manager
- Connection Message Transfer Agent
- Connection Mixer
- Connection Notifier

Base Services

- Connection Administration
- Connection DB Event Publisher
- Connection IMAP Server
- Connection License Server
- Connection SNMP Agent

Optional Services

- Connection Access Layer
- Connection CM Database Event Listener

- Connection Database Proxy
- Connection Digital Networking Replication Agent
- Connection File Syncer
- Connection Groupware Caching Service
- Connection Inbox RSS Feed
- Connection Integrated Mailbox Configuration
- Connection Message Event Service
- Connection Personal Communication Assistant
- Connection Realtime Monitoring APIs
- Connection Reports Data Harvester
- Connection SMTP Server
- Connection System Agent
- Connection Voice Mail Web Service
- Connection Voice Recognition Transport
- Connection Voice Recognizer

Managing Services in Control Center

Control Center in Cisco Unity Connection Serviceability lets you do the following tasks:

- Activate and deactivate Connection services in the Optional Services section.
- Start and stop all Connection services except the services in the Status Only Services section.

  Stopping Connection services in the Critical Services section may cause calls in progress to be dropped and degrades the normal function of the Connection or Cisco Unified CMBE server.

  When a Cisco Unity Connection cluster is configured, stopping a service in the Critical Services section for the server with Primary status causes the status for the servers in the cluster to change.
- View the status the status of Connection services.
- Refresh the status of Connection services.

Tip You may need to manage services in both Cisco Unity Connection Serviceability and Cisco Unified Serviceability to troubleshoot a problem.

The Cisco Unified Serviceability services are described in the *Cisco Unified Serviceability Administration Guide*.

This section contains five procedures; do the applicable procedure to activate, deactivate, start, or stop Connection services, or to refresh the status of services. You can activate, deactivate, start, and stop only one service at a time.

To Activate a Service in Control Center

Step 1 In Cisco Unity Connection Serviceability, choose **Tools > Service Management**.

Step 2 From the Server drop-down box, choose the applicable Connection or Cisco Unified CMBE server, and click **Go**.

Step 3 Under Optional Services, locate the service that you want to activate.

Step 4 In the Change Activate Status column, click **Activate**.

To Deactivate a Service in Control Center

Step 1 In Cisco Unity Connection Serviceability, choose **Tools > Service Management**.

Step 2 From the Server drop-down box, choose the applicable Connection or Cisco Unified CMBE server, and click **Go**.

Step 3 Under Optional Services, locate the service that you want to deactivate.

Step 4 In the Change Activate Status column, click **Deactivate**.

To Start a Service in Control Center

Step 1 In Cisco Unity Connection Serviceability, choose **Tools > Service Management**.

Step 2 From the Server drop-down box, choose the applicable Connection or Cisco Unified CMBE server, and click **Go**.

Step 3 Under Optional Services, locate the service that you want to start.

Note Services that are deactivated must be activated before they can be started.

Step 4 In the Change Service Status column, click **Start**.

To Stop a Service in Control Center

Step 1 In Cisco Unity Connection Serviceability, choose **Tools > Service Management**.

Step 2 From the Server drop-down box, choose the applicable Connection or Cisco Unified CMBE server, and click **Go**.

Step 3 Locate the service that you want to stop.

Note Services in the Status Only Services section cannot be started or stopped in Cisco Unity Connection Serviceability. You must use the command line interface (CLI) to start or stop these services.

When a Connection cluster is configured, stopping a service in the Critical Services section for the server with Primary status will cause the status for the servers in the cluster to change. To prevent the status change when the service is stopped, in Cisco Unity Connection Administration, you must uncheck the Automatically Change Server Status When the Publisher Server Fails check box on the System Settings > Advanced > Cluster Configuration page.

Step 4 In the Change Service Status column, click **Stop**.

Note Stopping Connection services in the Critical Services section may cause calls in progress to be dropped and degrades the normal function of the Connection or Cisco Unified CMBE server.

A service that is not activated cannot be started or stopped.

Step 5 If you are prompted that the cluster server status will change, click **OK**.

To Refresh Service Status in Control Center

Step 1 In Cisco Unity Connection Serviceability, choose **Tools > Service Management**.

Step 2 From the Server drop-down box, choose the applicable Connection or Cisco Unified CMBE server, and click **Go**.

Step 3 Click **Refresh**.

The status information is updated to reflect the current status.

CHAPTER 6

Using Reports

This chapter provides information on using reports in Cisco Unity Connection Serviceability and contains the following sections:

Understanding Reports

Revised May 2009

Cisco Unity Connection Serviceability lets you gather information about system configuration and call handlers into reports.

Table 6-1 describes the reports that you can generate in Cisco Unity Connection Serviceability.

Table 6-1 Reports Available in Cisco Unity Connection Serviceability

Report Name	Description of Output
Phone Interface Failed Logon	Includes the following information for every failed attempt to log on to Connection by phone: • Username, alias, caller ID, and extension of user who failed to log on. • Date and time the failed logon occurred. • Whether the maximum number of failed logons has been reached for the user.
Users	Includes the following information for each user: • Last name, first name, and alias. • Information that identifies the Connection or Cisco Unified CMBE server associated with the user. • Billing ID, class of service, and extension. • Whether the account is locked. • Whether the user has enabled personal call transfer rules.

Table 6-1 Reports Available in Cisco Unity Connection Serviceability (continued)

Report Name	Description of Output
Message Traffic	Includes totals for the following traffic categories: • Voice. • Fax. • E-mail. • NDR. • Delivery. • Read receipt. • Hourly totals.
Port Activity	Includes the following information for voice messaging ports: • Name. • Number of inbound calls handled. • Number of outbound MWI calls handled. • Number of outbound AMIS calls handled. • Number of outbound notification calls handled. • Number of outbound TRaP calls handled. • Total number of calls handled.
Mailbox Store	Includes the following information about the specified mailbox stores: • Mail database name. • Display name. • Server name. • Whether access is enabled. • Mailbox store size. • Last error. • Status. • Whether the mail database can be deleted.
Dial Plan	Includes a list of the search spaces configured on the Connection or Cisco Unified CMBE server, with an ordered list of partitions assigned to each search space. If the server is part of a Digital Network, also lists the search spaces and associated partition membership on every other Connection location on the network.
Dial Search Scope	Includes a list of all users and their extensions in the specified partition that is configured in the Connection directory. If a partition is not specified, lists all users and their extensions for all partitions that are configured in the directory.

Table 6-1 Reports Available in Cisco Unity Connection Serviceability (continued)

Report Name	Description of Output
Subscriber Message Activity	Includes the following information about messages sent and received, per user: • Name, extension, and class of service. • Date and time for each message. • Information on the source of each message. • Action completed (for example, new message, message saved, MWI On requested, and so on). • Information on the number of new messages received for a user, and on the message sender. • Dial out number and results.
Distribution Lists	Includes the following information: • Name and display name of the list. • Date and time the list was created. (Date and time are given in Greenwich Mean Time.) • A count of the number of users included in the list. • If the Include List Members check box is checked, a listing of the alias of each user who is a member of the list.
User Lockout	Includes user alias, the number of failed logon attempts for the user, credential type (a result of "4" indicates a logon attempt from the Connection conversation; a result of "3" indicates a logon attempt from a web application), and the date and time that the account was locked. (Date and time are given in Greenwich Mean Time.)
Unused Voice Mail Accounts	Includes user alias and display name, and the date and time that the user account was created. (Date and time are given in Greenwich Mean Time.)
Transfer Call Billing	Includes the following information for each call: • Name, extension, and billing ID of the user. • Date and time that the call occurred. • The phone number dialed. • The result of the transfer (connected, ring-no-answer (RNA), busy, or unknown).
Outcall Billing Detail	Includes the following information, arranged by day and by the extension of the user who placed the call: • Name, extension, and billing ID. • Date and time the call was placed. • The phone number called. • The result of the call (connected, ring-no-answer (RNA), busy, or unknown). • The duration of the call in seconds.

Table 6-1 Reports Available in Cisco Unity Connection Serviceability (continued)

Report Name	Description of Output
Outcall Billing Summary	Arranged by date and according to the name, extension, and billing ID of the user who placed the call, and is a listing of the 24 hours of the day, with a dialout time in seconds specified for each hour span.
Call Handler Traffic	Includes the following information for each call handler, in rows for each hour of a day: • Total number of calls. • Number of times each key on the phone keypad was pressed. • Extension. • Invalid extension. • Number of times the after greeting action occurred. • Number of times the caller hung up.
System Configuration	Includes detailed information about all aspects of the configuration of the Connection system.

Setting Report Configuration Parameters

Cisco Unity Connection is automatically set to gather and store data from which you can generate reports. The parameters listed in this section can be adjusted, depending on the report output that you want to generate. All report parameter settings are found on the System Settings > Advanced > Reports page in Cisco Unity Connection Administration.

Reports data is gradually written over, depending on the parameters you set for retention of data. We recommend that if you want to keep reports for historical purposes, you develop a schedule for regularly generating reports, and save them in a location separate from the Connection or Cisco Unified CMBE server.

Milliseconds Between Data Collection Cycles—Set by default to 30 minutes (1,800,000 milliseconds). This setting controls the amount of time Connection waits between cycles of gathering report data.

Days to Keep Data in Reports Database—Set by default to 180 days. Note that even if you specify more than this number of days in the time range for the report you are generating, the number of days of data is limited by what you set here.

Maximum Records in Report Output—Set by default to 25,000 records. The maximum value allowed for this field is 30,000 records. If the report you want to generate exceeds the maximum number of records allowed, you can generate the report in pieces (for example by reducing the date range or number of user accounts included in each iteration).

Note The Maximum Records in Report Output setting for the User Message Activity Report has been restricted to 15,000 records—rather than the default of 25,000 records—because of the size of the report.

Minimum Records Needed to Display Progress Indicator—Set by default to 2,500 records. The maximum value allowed for this field is 10,000 records. The purpose of the progress indicator is to warn you if the report you request is large and likely to take a long time to complete. In Connection, reports are generated from within a browser, and the browser session must be kept open while the report is being

generated. Depending on the size of the database, and the type of report being generated, a report can take a long time to generate; meanwhile, you will be unable to use the browser, and must keep the Connection Administration session open.

Generating and Viewing Reports

When you generate a report, you can specify some or all of the following:

- The objects (for example, user accounts or call handlers) to include in the report.
- The date and time range to include.
- The sort order for the data in the report.

You can choose one of the following file formats for the report:

Web page	HTML file. Report output appears in your web browser. Select this format to quickly view a small report. For archiving purposes, we recommend that you generate PDF reports.
Comma-delimited file	Text file (also known as a comma-separated, or CSV, file). Report output appears as a string of data, separated by commas. Select this format if you want to view or print the information in another application, for example, a spreadsheet program.
PDF file	Report output appears as a PDF that can be printed and saved. We recommend that you choose this format if you plan to archive reports.

The best time to generate reports is when the system is not busy: after regular business hours when Connection is not processing many calls, or when there are no other processes running (for example, before or after a full backup). Requests to generate reports are queued. If multiple reports are generated at one time (from separate browsers), the reports wait in line and only one is processed at a time.

Caution Generating large reports when the system is busy will use system resources and could potentially result in slower response time for system users.

Note that reports cannot be scheduled in advance. If you shut down the Connection or Cisco Unified CMBE server, or close the Connection Administration browser session while reports are being generated, the report generation will be canceled.

To Generate and View a Report

Step 1 In Cisco Unity Connection Serviceability, choose **Tools > Reports**.

Step 2 On the Serviceability Reports page, click the name of the report that you want to generate.

Step 3 Select the applicable file format for the report output.

Step 4 If the fields are available, set a date range by clicking the beginning and ending month, day, year, and time.

Step 5 Set other parameters, as applicable.

Step 6 Click **Generate Report**.

Step 7 View the report output, depending on the file format you chose in Step 3:

Web Page	Output appears in your browser window.
Comma-delimited File	File download dialog box opens, asking whether you want to open or save the file.
PDF File	File download dialog box opens, asking whether you want to open or save the file.

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