



Using Traces

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Using Traces

Understanding Traces

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

- You can specify the log file parameters for each Unity 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:

- 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 (in the “Tools for Traces, Logs, and Plug-Ins” part) of the Cisco Unified Real-Time Monitoring Tool Administration Guide at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.
- Using the command line interface (CLI). For information, see the *Command Line Interface Reference Guide for Cisco Unified Communications Solutions* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.



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

Configuring Trace Log Files



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

1. In Cisco Unity Connection Serviceability, select **Trace > Configuration**. The Trace Configuration page appears.
2. In the Server drop-down box, select the applicable Unity Connection or Cisco Business Edition server, and select **Go**.
3. From the Component drop-down box, select the component for which you want to configure trace log files, and select **Go**.
The drop-down box displays all components (active and inactive).
4. In the Maximum No. of Files field, enter the maximum number of trace log files that is created for this component.
5. In the Maximum File Size field, enter the size limit (in megabytes) for the trace log files that is created for this component.
6. If you want to return to the default settings, select **Set Default**. Otherwise, skip to the next step.
7. Select **Save**.
8. If you want the new trace log files to replace the old trace log files for this component, select **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.

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- Step 1** In Cisco Unity Connection Serviceability, select **Trace > Micro Traces**.
The Micro Traces page appears.
- Step 2** In the Server drop-down box, select the applicable Unity Connection or Cisco Business Edition server, and select **Go**.
- Step 3** From the Micro Trace drop-down box, select the micro trace that you want to enable, and select **Go**.
- Step 4** Under Micro-Trace Levels, check the check boxes for the micro-trace levels that you want to enable.
- Step 5** Select **Save**.

Tip You may need to enable traces in Cisco Unity Connection Serviceability and Cisco Unified Serviceability to troubleshoot Unity Connection issues. To troubleshoot Unity 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 at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

Available Micro Traces

The [Table 1: Micro Traces](#) lists each micro trace that is available, a description of what it analyzes, and the filename of the trace log that it generates.

Table 1: Micro Traces

| Micro Trace Name | What the Trace Analyzes | Filename 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 Player 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 |
| CiscoPCA | The Cisco Personal Communications Assistant (Cisco PCA) | diag_Tomcat_*.uc |

| Micro Trace Name | What the Trace Analyzes | Filename of Trace Log |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| CML | The retrieval of messages from the Cisco Unity Connection message store; the retrieval of messages from an Exchange server (using IMAP) for using Text-to-Speech feature to read email messages | diag_CuCsMgr_*.uc diag_CuNotifier_*.uc 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 |
| CsEws | Exchange Web Services calls from Unity Connection to Exchange for single inbox, calendaring, and text-to-speech | diag_CuCsMgr_*.uc diag_CuMbxSync_*.uc |
| CsExchangeMbxLocator | Autodiscovery of Exchange mailboxes for single inbox, calendaring, and text-to-speech | diag_CuCsMgr_*.uc diag_CuMbxSync_*.uc |
| CsMalUmss | Access to the message store by the CML, Notifier, and IMAP server | diag_CuCsMgr_*.uc diag_Tomcat_*.uc |
| CsMbxSync | Single inbox synchronization | diag_CuMbxSync_*.uc |
| CsWebDav | Calendar activities in connection with Exchange | diag_CuCsMgr_*.uc diag_CuGalSvc_*.uc diag_Tomcat_*.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 |
| CuCESync | Activity related with Survival Remote Site Voicemail (SRSV) processing. | diag_CUCESync_*.uc |
| CuCcmSynchronizationTasks | Synchronization of the user data from Cisco Unified CM | diag_Tomcat_*.uc |

| Micro Trace Name | What the Trace Analyzes | Filename of Trace Log |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| CuCmDbEventListener | Detection of changes in the Cisco Unified CM database | diag_CuCmDbEventListener_*.uc |
| CuCsMgr | Main Cisco Unity Connection process; starting and stopping Unity Connection | diag_CuCsMgr_*.uc |
| CuDbProxy | Database replication for Cisco Unity Connection clusters | diag_CuDbProxy_*.uc |
| CuEncrypt | Encryption (except for messaging) and the encryption audit logs | <any> |
| CuESD | The activities of Unity Connection external service diagnostic tools | diag_Tomcat_*.uc |
| CuFileSync | File replication for Unity Connection clusters | diag_CuFileSync_*.uc |
| CuGal | The retrieval of calendar and contact information from Exchange | diag_CuGalSvc_*.uc |
| 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 |
| CuSImSvr | The activities of Cisco Smart Software Licensing Services in Cisco Unity Connection | diag_CuSImSvr_*.uc |
| CuSnmpAgt | The activities of the Connection SNMP subagent | diag_CuSnmpAgt_*.uc |
| DataSysAgentTasks | Data SysAgent tasks | diag_CuSysAgent_*.uc |
| DbEvent | Component notification of database changes | <any> |

| Micro Trace Name | What the Trace Analyzes | Filename of Trace Log |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| DPAPI | The activities of the diagnostic portal application programming interface web service | diag_Tomcat_*.uc |
| EWSNotify | Exchange EWS mailbox synchronization notifications | <date in the format yyyy_mm_dd>.stderrout.log.* |
| FailureConv | Activation of the Failure Conversation when a system error occurs | diag_CuCsMgr_*.uc |
| Feeder | In Intersite Networking, this micro trace checks the local site change-tracking database for directory changes and responds to poll requests from the remote site gateway Reader task In HTTPS Networking, this micro trace checks the change-tracking database of local subtree in Feeder for directory changes and responds to poll requests from the remote location Reader task. | diag_Tomcat_*.uc |
| FeedReader | In Intersite Networking, this microtrace periodically polls the remote site gateway for any directory changes since the last poll interval. In HTTPS Networking, this microtrace periodically polls the remote location for any directory changes since the last poll interval. | diag_Tomcat_*.uc |
| LicenseClient | Functions related to license management | diag_CuCsMgr_*.uc |
| Logger | Writing traces logs and events | <any> |
| MessageEventService | Detection of arrival or deletion of messages | diag_Tomcat_*.uc |
| 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 |

| Micro Trace Name | What the Trace Analyzes | Filename of Trace Log |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| MiuDatatbase | Media activities relating to accessing the database | diag_CuCsMgr_*.uc |
| MiuGeneral | Tracking calls through the phone 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 |
| MTA | Delivery of voice messages to the message store | diag_MTA_*.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 |

| Micro Trace Name | What the Trace Analyzes | Filename of Trace Log |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| PCUnifiedCM | 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 |
| 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 |
| RSS | RSS feeds that are used for checking voicemail from an RSS client | diag_Tomcat_*.uc |
| RulesEngine | Evaluation of personal call transfer rules for a user during a call | diag_CuCsMgr_*.uc diag_Tomcat_*.uc |
| SMTP | SMTP functions | diag_SMTP_*.uc |
| SocketPoolHelper | Socket connections to the IMAP server | <any> |
| SRM | Functions related to cluster management | diag_CuSrm_*.uc |
| SslInit | Initialization procedures for components that use OpenSSL | <any> |
| SttClient | Detects messages that need to be transcribed; attaches completed transcriptions to original messages | diag_MTA_*.uc |

| Micro Trace Name | What the Trace Analyzes | Filename of Trace Log |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| SttService | Communication between Cisco Unity Connection and the third-party external transcription service | diag_SttService_*.uc |
| SysAgent | System Agent component, which schedules system tasks that the administrator enters (such as resynchronizing MWIs) | diag_CuSysAgent_*.uc |
| TaskRequest | Functions related to the Task Management tool | diag_CuSysAgent_*.uc |
| 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 |
| TRaP | Phone Record and Playback (TRaP), which lets clients use the phone as a recording and playback device | diag_CuCsMgr_*.uc diag_Tomcat_*.uc |
| UmssSysAgentTasks | Messaging tasks for the System Agent component | diag_CuSysAgent_*.uc |
| UnityAssistant | The activities of the Messaging Assistant web tool in the Cisco Personal Communications Assistant | diag_Tomcat_*.uc |
| UnityInbox | The activities of the Messaging Inbox web tool in the Cisco Personal Communications Assistant | diag_Tomcat_*.uc |
| UnityPCTR | The activities of the Cisco Unity Connection Personal Call Transfer Rules web tool in the Cisco Personal Communications Assistant | diag_CuCsMgr_*.uc |

| Micro Trace Name | What the Trace Analyzes | Filename of Trace Log |
|------------------|------------------------------------------------------------------------------------------|-----------------------|
| Video | The activities of Video call between Unity Connection and Cisco MediaSense through APIs. | diag_CuCsMgr_*.uc |
| VirtualQueue | Call queuing | diag_CuCsMgr_*.uc |
| VMREST | Interactions with Representational State Transfer (REST) API clients | diag_Tomcat_*.uc |
| VMWS | Interactions with voice messaging web services | diag_Tomcat_*.uc |
| VUI | The voice user interface | diag_CuCsMgr_*.uc |

Enabling Macro Traces

Enable macro traces, which are preselected sets of micro traces, when you are troubleshooting general areas of Unity 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.

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

The Macro Traces page appears.

Step 2 In the Server drop-down box, select the applicable Unity Connection or Cisco Business Edition server, and select **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 Select **Save**.

Tip You may need to enable traces in Cisco Unity Connection Serviceability and Cisco Unified Serviceability to troubleshoot Unity Connection issues. To troubleshoot Unity 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 at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

Available Macro Traces

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

Table 2: Macro Traces

| Macro Trace Name | What the Trace Analyzes | Filename of Trace Log |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Call Flow Diagnostics | The flow of a call through Unity Connection | diag_CuCsMgr_*.uc |
| Message 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 | 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 |
| 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 |
| Unity 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 |

| Macro Trace Name | What the Trace Analyzes | Filename of Trace Log |
|------------------|--------------------------------------|-------------------------------------------------------------------------|
| Single Inbox | Single inbox message synchronization | <date in the format yyyy_mm_dd>.stderrout. log.* diag_CuMbxSync_*.uc |