Troubleshooting Utilities

Grammar Statistics Tool

The Grammar Statistics tool shows information about the dynamic name grammars that are used by the Unity Connection voice-recognition conversation to match caller utterances to the names of objects on the system (for example, usernames and alternate names, distribution list names, and so on). When administrators add or change names on the Unity Connection system, the names are not recognized by the voice-recognition conversation until they are compiled in the grammars.

For each name grammar, the tool displays information such as the finish time of the last grammar recompilation, the total number of unique items in the grammar, whether there are updates pending to the grammar, and whether the grammar is currently in the process of being recompiled.

By default, Unity Connection recompiles grammars when administrators add named objects or change object names on the system (unless a bulk operation is in progress, in which case Unity Connection waits ten minutes for the operation to complete before recompiling the grammars), or when there are more than five changes requested in the space of a minute. If the grammars have grown to the point where the name grammar recompilation process is affecting the performance of your Unity Connection server during busy periods, you can modify the default Voice Recognition Update Schedule (under System Settings > Schedules in Cisco Unity Connection Administration) to limit the times and days when the Unity Connection voice-recognition transport utility can automatically rebuild the voice-recognition name grammars. By default, all days and times are active for this schedule; if you modify the schedule but want to override the schedule while it is inactive and force an immediate recompilation of all grammars, or if you want to force recompilation during the ten minute

wait period after a bulk operation has been initiated, you can select the Rebuild Grammars button on the Grammar Statistics tool.

Cisco Unity Connection Serviceability

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

- Displaying Unity Connection alarm definitions, which you can use for troubleshooting.

- Enabling Unity Connection traces. You can collect and view trace information in the Real-Time Monitoring Tool (RTMT).

- Configuring the logs to which Unity Connection trace information is saved.

- Viewing and changing the server status of the Unity Connection servers when a Unity Connection cluster is configured.

- Viewing the status of the Unity Connection feature services.

- Activating, deactivating, starting, and stopping the Unity Connection services.

- Generating reports that can be viewed in different file formats.

Depending on the service and component involved, you may complete 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.

For more information, see the Administration Guide for Cisco Unity Connection Serviceability *Release 15*, at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/15/serv_administration/guide/b_15cucservag.html.

Task Management Tool

The Task Management pages list a variety of system maintenance and troubleshooting tasks that Unity Connection automatically runs on a regular schedule. Tasks can be run at the same time as backups and anti-virus scans.

The default settings and schedules for each task are optimized for functionality and performance. We recommend that you not change the default settings and schedules.

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Caution   Some tasks are critical to Unity Connection functionality. Disabling or changing the frequency of critical tasks may adversely affect performance or cause Unity Connection to stop functioning.

Accessing the Task Management Tool

Step 1   In Cisco Unity Connection Administration, expand **Tools**.

Step 2   Select **Task Management**.

Cisco Voice Technology Group Subscription Tool

You can use the Cisco Voice Technology Group Subscription tool to be notified by email of any Unity Connection software updates. To subscribe, go to the Cisco Voice Technology Group Subscription Tool page at http://www.cisco.com/cgi-bin/Software/Newsbuilder/Builder/VOICE.cgi.

Real-Time Monitoring Tool

The Real-Time Monitoring Tool (RTMT), which runs as a client-side application, uses HTTPS and TCP to monitor system performance, device status, device discovery, and CTI applications for Unity Connection. RTMT can connect directly to devices via HTTPS to troubleshoot system problems. RTMT can also monitor the voice messaging ports on Unity Connection.

RTMT allows you to perform the following tasks:

- Monitoring a set of predefined management objects that focus on the health of the system.
- Generating various alerts, in the form of emails, for objects when values go over or below user-configured thresholds.
- Collecting and viewing traces in various default viewers that exist in RTMT.
- Viewing syslog messages and alarm definitions in SysLog Viewer.
- Working with performance-monitoring counters.
- Monitoring the voice messaging ports on Unity Connection. When a Unity Connection cluster is configured, you can open multiple instances of RTMT to monitor voice messaging ports on each server in the Unity Connection cluster.

For more information, see the Cisco Unified Real-Time Monitoring Tool Administration Guide at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

Cisco Unified Serviceability

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

- Saving alarms and events for troubleshooting and providing alarm message definitions.
- Saving trace information to various log files for troubleshooting.
- Providing feature services that you can turn on, turn off, and view through the Service Activation window.
- Providing an interface for starting and stopping feature and network services.
- Generating and archiving daily reports; for example, alert summary or server statistic reports.
- Monitoring the number of threads and processes in the system; uses cache to enhance the performance.

Depending on the service and component involved, you may complete 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.

Remote Database Administration Tools

A database proxy can be enabled to allow the use of some Windows-based remote database administration tools that are available on the Cisco Unity Tools website (http://ciscounitytools.com), where updates to utilities are frequently posted between Unity Connection releases.

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Note   You can sign up to be notified when the utilities posted on the Cisco Unity Tools website are updated. Go to http://ciscounitytools.com and select Sign Up Here.

For details on enabling remote database access, see the "Enabling Database Access for Remote Administration Tools" section in the "Tools" chapter of the System Administration Guide for Cisco Unity Connection *Release 15*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/15/administration/guide/b_15cucsag.html.

Cisco Utilities Database Link for Informix (CUDLI)

The Cisco Utilities Database Link for Informix (CUDLI) tool allows you to navigate the Unity Connection database, learn about the purpose of data in a particular table or column, and jump between referenced objects in the database. It also shows stored procedures and includes a custom query builder.

Download the tool and view training videos and Help at http://www.ciscounitytools.com/Applications/CxN/CUDLI/CUDLI.html.

Remote Port Status Monitor

The Remote Port Status Monitor (rPSM) provides a real-time view of the activity of each voice messaging port on Unity Connection to assist in troubleshooting conversation flow and other problems.

Download the tool and view training videos and Help at http://www.ciscounitytools.com/Applications/CxN/PortStatusMonitorCUC7x/PortStatusMonitorCUC7x.html.

Application Audit Logging

Application audit logging reports configuration and administrative changes for Cisco Unity Connection Administration, Cisco Personal Communications Assistant, Cisco Unity Connection Serviceability, Cisco Unified Serviceability, Real-Time Monitoring Tool (RTMT), and the command-line interface (CLI). It also reports user authentication events for Unity Connection clients that use the Representational State Transfer (REST) APIs, and reports API calls for clients that use the Cisco Unity Connection Provisioning Interface (CUPI) or the Diagnostic Portal API (used by Analysis Manager in RTMT).

Application audit logging is enabled by default. Users with the Audit Administrator role can configure auditing on the Tools > Audit Log Configuration page in Cisco Unified Serviceability. (By default, the application administration account that is created during installation is assigned the Audit Administrator role.) For Cisco Business Edition, the Audit Log Configuration page settings also control auditing for Cisco Unified Communications Manager components.

To access the audit logs, users with the Audit Administrator role can use the Real-Time Monitoring Tool. In Trace and Log Central, go to System > Audit Logs > Nodes. After you select the node, another window displays System > Cisco Audit Logs. The application audit logs are stored in the AuditApp folder. In a Unity Connection cluster, the publisher and subscriber each have separate application audit logs which you can reach by selecting the appropriate node.

Database and operating system audit logging are also available in Unity Connection, although they are disabled by default. For more information on audit logging, see the "Configuring the Audit Log" chapter of the applicable *Cisco Unified Serviceability Administration Guide* at
http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

Network Analyzer

The Network Analyzer is a tool that allows administrators to analyze the state of the network and monitor every node through visual representation of the network topology. It also enables administrators to synchronize the data in HTTP(S) networking through tool itself.

For more information on network analyzer, see the network analyzer documentation available at
http://www.ciscounitytools.com/Applications/General/NetworkAnalyzer/Help/ConnectionNetworkAnalyzer.htm
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System Restore Tool

To diagnose the issues related to System Restore Tool, you can view the ERRORS.log file created at path /common/RestorePoints/recent. You can also use the diag_CuSysAgent.uc logs to troubleshoot issues corresponding to System Restore sysagent task. This section further covers the errors that you might get while using System Restore Tool.

Database Error While Creating Restore Point

If you are getting the "Database is not online" error while creating a restore point through CLI, reboot the system to get the database up.

Error in Index Validation

If you are getting any or all of the following errors related to index validation in ERROR.log file, drop and recreate the corrupted indexes.

   • ERROR: Bad key information in TBLspace description.

   • ERROR: Index ix_tbl_message_messageobjectidtypepriority for unitymbxdb1:informix.tbl_message is bad.