Troubleshooting Guide for Cisco Unity Connection Release 14

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CONTENTS

CHAPTER 1 **Troubleshooting Cisco Unity Connection** 1

- Troubleshooting Cisco Unity Connection 1
  - Using Diagnostic Traces for Troubleshooting 1
  - Traces in Cisco Unity Connection Serviceability 1
    - Micro Traces for Selected Problems 2
    - Macro Traces for Selected Problems 11
    - Using Micro or Macro Traces 15
  - Traces in Cisco Unified Serviceability 16
    - Traces for Selected Problems 16
    - Using Traces to Troubleshoot Problems 17

CHAPTER 2 **Troubleshooting Utilities** 19

- Grammar Statistics Tool 19
- Cisco Unity Connection Serviceability 20
- Task Management Tool 20
  - Accessing the Task Management Tool 20
- Cisco Voice Technology Group Subscription Tool 21
- Real-Time Monitoring Tool 21
- Cisco Unified Serviceability 21
- Remote Database Administration Tools 22
- Cisco Utilities Database Link for Informix (CUDLI) 22
- Remote Port Status Monitor 22
- Application Audit Logging 22
- Network Analyzer 23
- System Restore Tool 23
  - Database Error While Creating Restore Point 23

Error in Index Validation 23

CHAPTER 3 **Troubleshooting Cisco Unity Connection Deployments** 25

Troubleshooting Installation Issues 25

Troubleshooting Upgrade Issues 26

Troubleshooting Locale Issues After Upgrade 26

Troubleshooting SELinux Issues 26

CHAPTER 4 **Troubleshooting User and Administrator Access** 29

Unity Connection Not Responding to Key Presses 29

Enabling DTMF Relay 29

Verifying DTMF settings 30

Users Do Not Hear Sign-in or Desired Prompt When Calling Unity Connection 30

Using Port Status Monitor 30

Administration Accounts Unable to Sign-In to Cisco Unity Connection Serviceability 31

User Account is Locked over TUI/VUI Interface 31

User Account is Disabled over Web Applications 31

Troubleshooting Sign-in Problems with Visual Voicemail (Pin Based Authentication) 32

Troubleshooting Sign-in Problems with Visual Voicemail (Password Based Authentication) 32

Error Message Appears While Updating the Phone PIN through Cisco Unity Connection Administration or Cisco PCA 33

User Display Name Not Get Updated after AD Synchronization 33

Not Able to Access Web Applications on Unity Connection 34

CHAPTER 5 **Troubleshooting Call Transfers and Call Forwarding** 35

Troubleshooting Call Transfers and Call Forwarding 35

Calls Not Transferred to the Correct Greeting 35

Confirm that Forward Timer in the Phone System is in Synch with the Rings to Wait For Setting in Unity Connection 36

Synchronizing the Forward Timer and the Rings to Wait For Setting 36

Confirm that Phone System Integration Enables Playing the User Personal Greeting for Callers 37

Verifying the Phone System Integration Settings 37

Confirming that Busy Greeting is Supported and Enabled 37

Confirming that Search Scope Configuration Sends Call to Intended Destination 38

Problems with Call Transfers (Cisco Unified Communications Manager Express SCCP Integrations Only) 38
Configuring the SCCP Integration for Cisco Unified Communications Manager Express 38
User Hears a Reorder Tone When Answering a Notification Call 39
Correcting the Rings to Wait For Setting 39
Troubleshooting Directory Handler Searches 39
Users Not Found in the Search Scope of Directory Handler 40
Troubleshooting Message Addressing 40
Users Unable to Address Desired Recipients 40
Users Unable to Address a System Distribution List 41
Unexpected Results Returned When a User Addresses by Extension 41
Caller is Not Getting Prompt in Expected Language 41
Using Traces to Determine the Search Space Used During a Call 42

CHAPTER 6 **Troubleshooting Messages** 43
User Hears Full Mailbox Warnings 43
Nondelivery Receipt (NDR) Not Received for Undelivered Message 44
Messages Are Delayed 44
Messages Are Not Delivered 44
User Has a Full Mailbox 45
Undeliverable Messages Not Forwarded to Recipients 46
Users Assigned to Unity Connection Entities Deleted and No Replacements Assigned 46
Unity Connection Unable to Relay Messages 46
Unable to Play Message Audio in Outlook Web Access 47
Unable to Receive Notification Emails for Quota Overflow 47

CHAPTER 7 **Troubleshooting Unified Messaging** 49
Troubleshooting Unified Messaging 49
Troubleshooting Single Inbox Issues 49
Mismatch of Date and Time for Messages in Unity Connection and Exchange 2003 49
Message Relay Not Working or is Not Working as Expected 49
Single Inbox Not Working for Anyone on Unity Connection 50
Single Inbox configuration with Exchange not working for Unified Messaging Users 50
Single Inbox configuration with Gmail Server not working for Unified Messaging Users 54

Single Inbox configuration with Exchange is not working for user or subset of users 55
Single Inbox configuration with Gmail Server not working for a user or subset of users 56
Single Inbox Synchronization from Exchange is Delayed 56
Single Inbox Synchronization from Office 365 is Delayed 57
Single Inbox Synchronization from Gmail Server is Delayed 58
Single Inbox Synchronization from Server Failed 58
Single Inbox Fails with Office 365 Using ADFS 58
Duplicate Message Issue with Single Inbox 59
Resolving SMTP Domain Name Configuration Issues 59
Troubleshooting Problems with Cisco ViewMail for Microsoft Outlook 60
Voice Messages or Receipts are Not Received in the Outlook Inbox 60
Messages Sent from a Single Inbox Outlook Client are Not Received 60
Messages Received in an Email Account Other than the Single Inbox Account 60
Messages cannot be Played in Outlook 61
Messages Moved into a .PST Folder in Outlook cannot be Played 61
Playing a Message Does Not Turn Off the Message Waiting Indicator 62
Message Waiting Indicator Turns Off Before the Message is Played 62
Deleting a Message in Outlook Does Not Delete the Corresponding Message 62
Messages Moved into a .PST Folder in Outlook are Deleted 62
Troubleshooting Problems with Invalid Passwords 63
Changing a Cisco ViewMail for Microsoft Outlook Password 63
Collecting Diagnostics from ViewMail for Outlook on the User Workstation 63
Enabling Cisco ViewMail for Microsoft Outlook Diagnostics and View the Log Files on the User Workstation 63
Collecting Diagnostics on the Unity Connection Server for Problems with Single Inbox and ViewMail for Outlook 64
Troubleshooting Access to Emails in an External Message Store 64
User on the Phone Hears “Invalid Selection” after Pressing Seven 64
Enabling User Access to Email in an External Message Store 64
User on the Phone Hears “Your Messages are Not Available” after Pressing Seven 64
Users Hear Gibberish at the End or Beginning of an Email 66
Email Deleted by Phone is Still in the Inbox Folder (Exchange 2003 Only) 66
Using Traces to Troubleshoot Access to Emails in an External Message Store 66
Troubleshooting Calendar Integrations 66

Using Unified Messaging Accounts are Used for Calendar Integrations 66
Testing the Calendar Integration 67
Obtaining Unified Messaging Account Status 67
Test Fails the Last Check 67
Test Succeeds but the Calendar Integration Still Does Not Work (Exchange 2003 Only) 69
Non-Published Meetings Do Not Appear in List of Meetings (Cisco Unified MeetingPlace Only) 69
Configuring the Unity Connection Service Account (Cisco Unified MeetingPlace Only) 69
Meetings Do Not Appear in List of Meetings 70
"Access Exchange Calendar and Contacts" Option Not Available for Unified Messaging Accounts 70
Using Traces to Troubleshoot a Calendar Integration 70
Troubleshooting Access to Calendar Information Using Personal Call Transfer Rules 71
Changing the Interval Unity Connection Waits to Update Calendar Information 71
Troubleshooting the Test Button for Unified Messaging Services and Unified Messaging Accounts 72

CHAPTER 8 **Troubleshooting IMAP Clients and ViewMail for Outlook 73**
Troubleshooting IMAP Clients and ViewMail for Outlook 73
Troubleshooting Problems with Changing Passwords 73
Troubleshooting Sign-In Problems with IMAP Email Clients (LDAP is Not Configured) 73
Troubleshooting Sign-In Problems with IMAP Email Clients (When LDAP is Configured) 74
Troubleshooting Sign-In Problems with IMAP Clients 75
Unable to Login to IMAP Client 75
Messages Sent from an IMAP Client Not Received 75
Checking the IP Address Access List 76
Messages are Received in an Email Account Instead of a Voice Mailbox 77
Voice Messages Not Received in an IMAP Account 77
Intermittent Message Corruption When Using ViewMail for Outlook 78
Recording or Playback Devices Not Appearing in ViewMail Account Settings in ViewMail for Outlook 78
Unable to Play Messages through ViewMail for Outlook 8.5 and Later 78
User Email Account Does Not Appear in ViewMail Options in ViewMail for Outlook 78
ViewMail for Outlook Form Does Not Appear 78
Collecting Diagnostics from ViewMail for Outlook on the User Workstation 79

Enabling ViewMail for Outlook Diagnostics and View the Log Files on the User Workstation 79
Collecting Diagnostics from ViewMail for Outlook on the User Workstation 79
Enabling ViewMail for Outlook Diagnostics and View the Log Files on the User Workstation 79
Collecting Diagnostics on Unity Connection for IMAP Client Problems 80
Login via IMAP Fails for LDAPS if IP Address of LDAP Server is Configured 80

CHAPTER 9 **Troubleshooting Non-Delivery Receipts 81**
Troubleshooting Non-Delivery Receipts 81
Overview 81
Non-Delivery Receipt Status Codes 81

CHAPTER 10 **Troubleshooting Transcription (SpeechView) 83**
Troubleshooting Transcription (SpeechView) 83
Task List for Troubleshooting SpeechView 83
Issues Related to Basic Configuration Settings 83
Issues with a Proxy Server 84
Issues with the Transcription Service Configuration 84
Issues Related to User Expectations 85
Issues with Transcription Notifications 85
Enabling Traces and Contacting Cisco TAC 85
Confirming that Connection SpeechView Processor and Connection SMTP Server Services are Running 85
Running SMTP Test to Verify Outgoing and Incoming SMTP Path 86
Troubleshooting Transcription Notifications 87
Messages that Cannot be Transcribed 88
Transcription Not Synchronized on User Phones 88
Transcription Issue after Upgrade 88
Using Diagnostic Traces to Troubleshoot SpeechView 88

CHAPTER 11 **Troubleshooting Transcription (SpeechView Cisco Webex in-house transcription service) 91**
Task List for Troubleshooting SpeechView 91
Issues Related to Basic Configuration Settings 91
Troubleshooting the SpeechView in Networking 92
Issues with the Transcription Service Configuration 92

Issues Related to User Expectations 93
Issues with Transcription Notifications 93
Enabling Traces and Contacting Cisco TAC 93
Confirming that Connection SpeechView Processor is Running 93
Troubleshooting Transcription Notifications 94
Messages that Cannot be Transcribed 94
Transcription Not Synchronized on User Phones 95
Transcription Issue after Upgrade 95
Troubleshooting Transcription Request Timed out 95
Using Diagnostic Traces to Troubleshoot SpeechView 96

CHAPTER 12 Troubleshooting Networking 97
Troubleshooting Networking 97
Troubleshooting Intersite Networking Setup 97
“Unable to Contact the Remote Site” Error When Manually Creating an Intersite Link on the Unity Connection Site Gateway 97
"Hostname Entered Does Not Match That on The Remote Site Certificate" Error When Manually Creating an Intersite Link on the Unity Connection Site Gateway 98
"Unable to Link to the Specified Remote Site. Cause: Failed to Assess the Current Network Size" Error When Creating an Intersite Link on the Unity Connection Site Gateway 99
"Failed to Link to This Remote Site as This Specified Location is Already Part of the Network" Error When Creating an Intersite Link on the Unity Connection Site Gateway 99
Troubleshooting HTTPS Networking Setup 99
Unable to Link to Network Location. Cause: Location is Already Part of the network.” Error When Creating an HTTPS Link on Unity Connection” 99
Unable to Link to Network Location. Cause: Publisher (IP Address/FQDN/Hostname) Entered does not Match that on Remote Location Certificate 100
Troubleshooting Directory Synchronization between Two Unity Connections in HTTPS networking 100
Troubleshooting HTTPS Networking Cases 101
Distribution Lists and the Members of the Distribution Lists Not Replicating in HTTPS network 101
How to Synchronize Selective Objects from HTTPS link 101
How to Synchronize Selective Objects, Voice Names of a Specific Location in HTTPS Networking 103
How to Swap Extensions in HTTPS Networking 104

How to Remove Orphan Objects from Unity Connection HTTPS network 105
Received RTMT NetworkLoopDetected 106
Sender Receives NDR When Sending Voice Message to Distribution List 106
Troubleshooting Message Addressing 106
Users Cannot Address Messages to Remote Users, Contacts, or System Distribution Lists 106
Cisco Unity Users Cannot Address Messages to Unity Connection Users or System Distribution Lists 108
Unity Connection Users Cannot Address Messages to Recipients at a VPIM Location 109
Unity Connection Users Cannot Blind Address Messages to a Mailbox at a VPIM Location 110
Troubleshooting Message Transport 110
Messages Sent from Users on One Unity Connection Location Not Received by Users on Another Unity Connection Location 110
Replies to Messages Sent by Remote Senders Not Delivered 111
Messages Sent from a VPIM Location Not Received by Unity Connection Users 111
Messages Sent from Unity Connection Not Received by Users at a VPIM Location 112
Troubleshooting Directory Synchronization 112
Troubleshooting Directory Synchronization Within a Unity Connection Site 112
Troubleshooting Directory Synchronization Between Two Unity Connection Sites 114
Troubleshooting Directory Synchronization Between a Unity Connection Site and a Cisco Unity Site 115
Cross-Server Sign-In and Transfers 116
Users Hear the Opening Greeting Instead of PIN Prompt When Attempting to Sign-In 117
Users Hear a Prompt Indicating that their Home Server Cannot be Reached During Cross-Server Sign-In 117
User ID and PIN Not Accepted During Cross-Server Sign-In 117
Callers Prompted to Leave a Message Instead of Being Transferred to the Remote User 118
Callers Transferred to the Wrong User at the Destination Location 118
Callers Hear a Prompt Indicating that Call Cannot be Completed When Attempting to Transfer to a Remote User 118

CHAPTER 13 **Troubleshooting Cisco Unity Connection SRSV 121**
Troubleshooting Cisco Unity Connection SRSV 121
Error Message Appears When Testing the Connectivity of Unity Connection with Branch 121
Certificate Mismatch Error Message for Appears on the Central Unity Connection Server 121
Unable to login to Cisco Unity Connection SRSV Administration 122

Branch User is Unable to Login through Telephony User Interface (TUI) 122
Status of Provisioning Remains In Progress for a Long Time 122
Provisioning from the Central Unity Connection Server to Branch Not Working 122
Status of Provisioning is Partial Success 122
Provisioning/Voicemail Upload Remains in Scheduled state for a Long Time 123
Unable to Reach a Branch User through Telephony User Interface (TUI) 123
Unable to Send a Voice Message to a Branch User During WAN Outage 123
Error Messages Appear on the Branch Sync Results Page 123
Logs are Not Created or SRSV feature Not Working Properly 123
Unable to Perform Backup/Restore Operation on the Branch 124
Central Unity Connection Server Moves to Violation State 124
Non-Delivery Receipts (NDR) on the Central Unity Connection Server 124

CHAPTER 14 **Troubleshooting Video Messaging** 125
Troubleshooting Video Messaging 125
Error Message Appears When You Test the Connectivity of Video Services 125
Error Message Appears When You Test the Connectivity of Video Service Account with Video Services 126
Unable to Establish Video Call through Telephone User Interface (TUI) 126
Unable to record Video greeting or message through Telephone User Interface (TUI) 127
Unable to playback Video greeting through Telephone User Interface (TUI) 127
Unable to Play Video Greetings When Received Unanswered Call 127
Video Call Downgrades to Audio while Recording/Playing Video Message 128
Video Playback Hangs in Between 128
Troubleshooting Video Quality of Video Greetings and Messages 128
Error Codes Send by Cisco MediaSense 129

CHAPTER 15 **Troubleshooting the Phone System Integration** 131
Troubleshooting the Phone System Integration 131
Diagnostic Tools 131
Configuring Unity Connection for the Remote Port Status Monitor 131
Using the Check Telephony Configuration Test 132
Troubleshooting Call Control 132
Unity Connection Not Answering Any Calls 132

Verifying the Phone System Settings in Cisco Unity Connection Administration 132
Unity Connection Not Answering Some Calls 133
Confirming Routing Rules 133
Confirming Voice Messaging Port Settings 133
Confirming that Voice Messaging Ports are Enabled 134
Troubleshooting an Integration of Unity Connection with Cisco Unified Communications Manager 135
Viewing or Editing IP Address of Cisco Unified Communications Manager 135
Ports Do Not Register or Repeatedly Disconnected in an SCCP Integration 135
Ports Do Not Register in an IPv6 Configuration 138
Determining the Correct Port Group Template 140
Unable to Create Secure Ports 140
Problems Faced When Unity Connection is Configured for Cisco Unified Communications Manager Authentication or Encryption 141
Troubleshooting PIN Synchronization between Unity Connection and Cisco Unified CM 148

CHAPTER 16 **Troubleshooting Message Waiting Indicators (MWIs) 151**
Troubleshooting Message Waiting Indicators (MWIs) 151
Triggers for Turning MWIs On and Off 151
MWI Problems 152
MWIs Do Not Turn On or Off 152
MWIs Turn On but Do Not Turn Off 154
Delay for MWIs to Turn On or Off 156
No Message Count Sent on Phone When MWI is On 157

CHAPTER 17 **Troubleshooting Audio Quality 159**
Troubleshooting Audio Quality 159
Troubleshoot Audio Quality Using Check Telephony Configuration Test 159
Using the Check Telephony Configuration Test to Troubleshoot Audio Quality 159
Problem with Choppy Audio 159
Problem with Garbled Recordings 160
Troubleshooting a Garbled Audio Stream in the Network 160
Troubleshooting How Unity Connection Makes Recordings 160
Problem with Garbled Prompts on Phone 161

Problem with Volume of Recordings 161
Changing the Volume for Unity Connection Recordings 162
Disabling Automatic Gain Control (AGC) for Unity Connection 162
Confirming the Advertised Codec Settings 162
Using Traces to Troubleshoot Audio Quality Issues 163

CHAPTER 18 **Troubleshooting Notification Devices 165**
Troubleshooting Notification Devices 165
Overview 165
Message Notifications through Phones is Slow for Multiple Users 165
Ports Too Busy to Make Notification Calls Promptly 165
Not Enough Ports Set for Message Notification Only 166
Confirm that Phone System Sends Calls to the Ports Set to Answer Calls 166
Message Notification Slow for a User 167
Message Notification Setup is Inadequate 167
Notification Attempts are Missed 167
Repeat Notification Option is Misunderstood 168
Message Notification Not Working at All 169
Notification Device Disabled or the Schedule Inactive 169
Only Certain Types of Messages Set to Trigger Notification 169
Notification Number Incorrect or Access Code for an External Line Missing (Phone and Pager Notification Devices Only) 170
SMS Notifications Not Working 171
SMTP Message Notification Not Working at All for Multiple Users 172
HTML Notifications Not Working 172
HTML Summary Notification Not Working 172
Message Notifications Function Intermittently 173
Notification Devices Added in Unity Connection Administration Triggered at All Hours 173
Message Notification Received When No Unread Messages 173

CHAPTER 19 **Troubleshooting Comet Notifications over SSL 175**
Troubleshooting Comet Notifications over SSL 175
Unable to Send Comet Notification over SSL 175

CHAPTER 20 **Troubleshooting a Cisco Unity Connection Cluster Configuration** 177

Troubleshooting a Cisco Unity Connection Cluster Configuration 177

One Server Stops Functioning and the Other Server is Not Handling Calls 177

Verifying the Status of the Voice Messaging Ports 178

Verifying the Voice Messaging Ports Assignments for Phone System Integration 178

Confirming that Voice Messaging Ports are Registered (SCCP Integrations Only) 178

Both Servers Attain Primary Server Status 178

Unity Connection Cluster Not Functioning Correctly 179

Confirming that Applicable Services are Running on the Server with Primary Server Status 179

Confirming that Applicable Services are Running on Both Servers 179

Server Cannot be Added to the Unity Connection Cluster 180

Cannot Access Alert Logs When the Publisher Server Stops Functioning 180

Enabling the Subscriber Server to Access the Alert Logs When the Publisher Server Stops Functioning 180

CHAPTER 21 **Troubleshooting Licensing** 183

Troubleshooting Licensing 183

Troubleshooting Cisco Smart Software Licensing 183

SpeechView Services are Not Working 184

CHAPTER 22 **Troubleshooting Voice Recognition** 185

Troubleshooting Voice Recognition 185

Users Hear the Phone Keypad Conversation Instead of Voice-Recognition Conversation 185

Error Prompt: There Are Not Enough Voice-Recognition Resources 186

Voice Commands Recognized But Names Not Recognized 186

Voice Commands Not Recognized 187

Checking the Voice Recognition Confirmation Confidence Setting 188

Diagnostic Tools for Troubleshooting Voice Recognition Problems 188

Using Diagnostic Traces for Voice Recognition 188

Using the Utterance Capture Trace to Review User Utterances 189

Using the Remote Port Status Monitor 190

CHAPTER 23 **Troubleshooting the Conversation** 191

Troubleshooting the Conversation 191
Custom Keypad Mapping Not Taking Effect 191
Changing the Conversation Style for a Single User 191
Specifying a Custom Keypad Mapping Conversation for Multiple User Accounts at Once 191
Long Pauses After Listening to Help Menu 192
Determine the WAV File Played 192
Downloading the Remote Port Status Monitor 192
Configuring Unity Connection for the Remote Port Status Monitor 192
Enabling the PhraseServerToMonitor Micro Trace and View the WAV Filename 192

CHAPTER 24 **Troubleshooting SAML SSO Access** 193
Troubleshooting SAML SSO Access 193
Redirection to IdP fails 193
IdP authentication fails 193
Redirection to Unity Connection fails 193
Run Test Fails 194
Mismatch in SAML Status on Publisher and Subscriber Servers 194
Problem in Accessing Web Application on Unity Connection 194
Encryption Error Upon User Login to Unity Connection 195
Unable to Upload Subscriber SP Metadata on ADFS in Cluster 195
SAML Exception Time Synchronization Error 196
SAML Exception Invalid Status Code 196
Incorrect status of SAML SSO on Two Servers in a Unity Connection Cluster 196
Troubleshooting Cross Origin Resource Sharing 197
Diagnostics Traces for Problems with SAML SSO Access 197

CHAPTER 25 **Troubleshooting Authorization Code Grant Flow** 199
Troubleshooting Authorization Code Grant Flow 199
Unable to Configure an Authz Server 199
Jabber User is Unable to Login 200

CHAPTER 26 **Troubleshooting Fax** 201
Troubleshooting Fax 201
Problems with Fax Delivery to Users 201

Confirming that SMTP Server Configuration is Correct 202
Confirming that POP3 Mailbox Name and Password are Correct 202
Confirming Fax is Delivered to Unity Connection 202
Problems with Fax Delivery to a Fax Machine 202
Determining the Status of a Fax Delivered to a Fax Machine 203
Confirming that POP3 Mailbox Name and Password are Correct 203
Confirming that SMTP Server Configuration is Correct 203
Confirming that Faxable File Types List is Correct 204
Problems with Fax Notifications 204
Confirming that Fax Notification is Enabled for the User 204
Problems with Fax Receipts 204
Fax Receipts Not Delivered 204
User Mailbox is Filled with Fax Notifications 206
Problems with Printing Faxes 206
Confirming that Faxable File Types List is Correct 206

CHAPTER 27 **Troubleshooting Reports 207**
Troubleshooting Reports 207
Overview 207
Confirming Connection Reports Data Harvester Service is Running 207
Adjusting Report Data Collection Cycle 208

CHAPTER 28 **Troubleshooting Cisco Personal Communications Assistant (PCA) 209**
Overview 209
Users cannot Access Cisco PCA Pages 210
Security Alert Displayed When Users Access Cisco Personal Communications Assistant Pages 210
Adding the SSL Certificate to the Trusted Root Store on User Workstations 211
Users cannot Access Unity Connection Web Tools from Cisco PCA 211
Users cannot Save Changes on Pages in Cisco PCA 211
Cisco PCA Error Messages 211
Error Message: “Sign-In Status – Account Has Been Locked.” 212
Error Message: “Apache Tomcat/<Version> – HTTP Status 500 – Internal Server Error.” 213
Error Message: “Site is Unavailable.” 213

Error Message: “Failed to <Save Message>” While Using PC Microphone in Cisco Unity Connection Administration or Cisco PCA 213

Error Message: “Application Blocked by Security Settings. Your security settings have blocked a self-signed application from running 214

Error Message “Access denied” When Trying to Play Recordings through Media Master Using Phone 214

Missing Text on the Menu Bar (Microsoft Windows Only) 214

Re-Registering DLLs Required for the Cisco Personal Communications Assistant Menu Bar 214

Verifying if Tomcat Service is Running 215

Confirming That the Tomcat Service Is Running Using Real-Time Monitoring Tool (RTMT) 215

Confirming That the Tomcat Service Is Running Using the Command Line Interface (CLI) 215

Restarting the Tomcat Service Using the Command Line Interface (CLI) 216

CHAPTER 29 **Troubleshooting Personal Call Transfer Rules** 217

Troubleshooting Personal Call Transfer Rules 217

Personal Call Transfer Rules Settings Unavailable 217

Determining the Value of the Region Unrestricted Feature Licensing Option 217

Personal Call Transfer Rules and Destinations 217

Call Screening and Call Holding Options 218

Enabling the Screen the Call Option in the Personal Call Transfer Rules Web Tool 218

Problems with the Application of Rules 218

Rules Not Applied When a User with Active Rules Receives a Call 219

Turning On Personal Call Transfer Rules for an Individual User 219

Rules Based on a Meeting Condition Not Applied Correctly 220

Problems with Transfer All Rule 221

Phone Menu Behavior Using Personal Call Transfer Rules 222

Phone Menu Option to Set or Cancel Forwarding All Calls to Unity Connection Unavailable 222

Inconsistent Behavior in Calls Placed through Unity Connection and Calls Placed Directly to a User Phone 223

Call Looping During Rule Processing 223

Using Diagnostic Traces for Personal Call Transfer Rules 224

Using Performance Counters for Personal Call Transfer Rules 224

CHAPTER 30 **Troubleshooting Web Inbox** 227

Troubleshooting Web Inbox 227
Introduction 227
Web Inbox Error Messages 228
Error Message: “Sign-In Status – Account Has Been Locked.” 228
Error Message: “Apache Tomcat/<Version> – HTTP Status 500 – Internal Server Error.” 229
Error Message: “Site Is Unavailable.” 229
Error Message: "This User Account Does Not Have a Mailbox and Cannot Sign In to the Web Inbox. To Use the Web Inbox, You Must Have an Account with a Mailbox." 229
Error Message: “Error While Uploading Message to Server” 229
Error Message: "HTML5 audio compatible browser or QuickTime Plug-in not found. Select Phone option to play the message. Install Quick time plugin or open web inbox into firefox" 230
Send Option is Disabled on MAC Operating System 230
Adobe Flash Player Settings Dialog Box Unresponsive (Mac OS X with Firefox Only) 230
Changing Global Flash Player Privacy Settings to Allow the Web Inbox to Access the Computer Microphone 231
Messages Not Displayed in Web Inbox 231
Sent Messages Not Displayed in Web Inbox 231
Verifying that Tomcat Service is Running 231
Confirming that the Tomcat Service is Running Using Real-Time Monitoring Tool (RTMT) 231
Confirming that the Tomcat Service is Running Using the Command Line Interface (CLI) 232
Restarting the Tomcat Service Using the Command Line Interface (CLI) 232
Web Inbox Not Working with Internet Explorer 9 on Windows 7 64 bit 232

CHAPTER 31 **Troubleshooting the HTML Notifications** 233
HTML Notifications Not Received By the Users 233
Images Not Displayed on Microsoft Outlook 234
Images Not Displayed on IBM Lotus Notes 235
Hyperlinks Not Visible in the Email Notification 235
Unable to Launch Mini Web Inbox 235
Unable to View the Updated Mini Web Inbox Interface in Internet Explorer 235
Unable to Play and Record Voice Messages on Computer Using Mini Web Inbox 236

CHAPTER 32 **Troubleshooting Custom Roles** 237
Troubleshooting Custom Roles 237

Unable to Configure Custom Role 237
Getting "Not Authorized" Error Message on Role Assignment or Unassignment 237
Getting "Not Authorized" Error on Cisco Unity Connection Administration Pages 238

APPENDIX A **Troubleshooting Tenant Partitioning** 239
Troubleshooting Issues while Deleting Tenant 239
Users of One Tenant are Able to Send Messages to Users of Other Tenants 240
Able to Hear the Opening Greeting Without being Asked for the PIN 240
Getting Option to Select Users from Other Partitions in Directory Result 241
Debugging Steps 241
Tenant Creation Fails with an Error Message "Non-Tenant users exist on Unity Connection" 241
Troubleshooting Problems While Integrating with Call Manager 242
Hearing the Fast Busy Tone on Dialing the Pilot Number 242
Hearing the Error Message - "The system is temporarily unable to complete your call" on Dialing the Pilot Number 242
Troubleshooting Problems with Migration 243
"Mailbox could not be loaded" Error Shows Up 243
SMTP Proxy Address Not Updated on Unity Connection for One or More Subscribers After Migration 243
Hearing a Wrong Post Greeting Recording for Users Belonging to a Tenant 244
Getting Incorrect Time for Incoming or Outgoing Messages 244
Get Incorrect Language for the Incoming or Outgoing Users 244

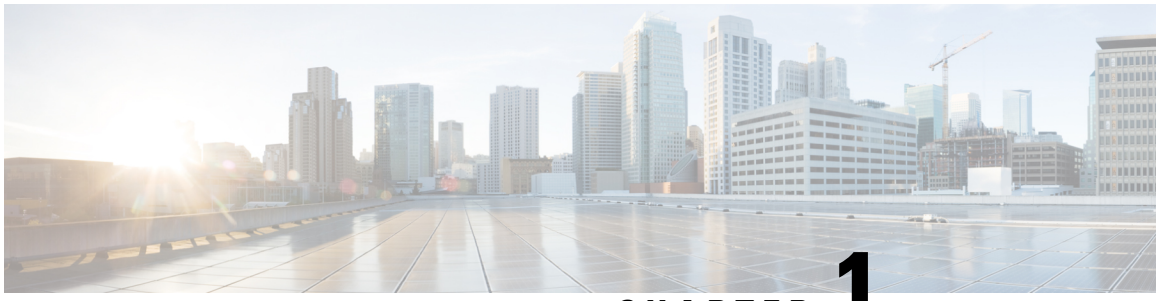
APPENDIX B **Troubleshooting Phone View** 245
Problems with Phone View 245
Application User Configured Incorrectly 245
User Phone Configuration Not Correct 246
Phone System Integration Configured Incorrectly 246
To Verify the Configuration of the Cisco Unified Communications Manager Phone System Integration 246
To Verify the Configuration of the User 247
Using Traces to Troubleshoot Phone View Issues 247

APPENDIX C **Troubleshooting Media Player** 249
Using the Phone Device for Playback and Recording in Media Player 249

Designating a Phone System to Handle TRAP Connections 250
Problem Uploading a File in the Media Player 250
Unknown Error Appears while Using Media Player with Phone 251

APPENDIX D **Troubleshooting SNMP** 253
Problems with SNMP 253
To Confirm That the SNMP Master Agent Service Is Running 253
Connection SNMP Agent Service Not Running 253
SNMP Community String Configured Incorrectly 254
Using Traces to Troubleshoot SNMP Issues 254

APPENDIX E **Troubleshooting Multi-Server Certificate** 255
Initial Debugging and Identifying Topology Details 255
Initial Debugging 255
Collecting Log Files 255
CLI commands to List and Get Log Files 255
Required Log Files 255
CLI Commands examples 256



CHAPTER 1

Troubleshooting Cisco Unity Connection

The Troubleshooting Guide for Cisco Unity Connection helps resolve problems that you might encounter with Cisco Unity Connection. If your Unity Connection system is exhibiting a symptom that is documented in this troubleshooting guide, perform the recommended troubleshooting procedures. However, if the symptom is not documented in this troubleshooting guide, or if the recommended troubleshooting does not resolve the problem, do the procedure mentioned in this chapter to determine whether the problem is caused by SELinux Security policies. (SELinux replaced Cisco Security Agent(CSA) on Unity Connection servers.) You can also use traces to troubleshoot various problems associated with Unity Connection.

For more information on the CLI commands, see the applicable Command Line Interface Reference Guide for Cisco Unified Communications Solutions at .

- Troubleshooting Cisco Unity Connection, on page 1

Troubleshooting Cisco Unity Connection

Using Diagnostic Traces for Troubleshooting

Diagnostic traces can be used as a tool to assist you in troubleshooting problems. In Cisco Unity Connection Serviceability, you enable traces to troubleshoot Cisco Unity Connection components. In Cisco Unified Serviceability, you enable traces to troubleshoot services that are supported in Cisco Unified Serviceability. After the traces are enabled, you can access the trace log files using Real-Time Monitoring Tool (RTMT) or the command line interface (CLI).

Traces in Cisco Unity Connection Serviceability

Cisco Unity Connection Serviceability provides both micro traces and macro traces that you can enable individually or in any combination.

Cisco Unity Connection Serviceability micro traces	Used to troubleshoot problems with specific Unity Connection components.
Cisco Unity Connection Serviceability macro traces	Used to troubleshoot general areas of Unity Connection functionality.

After the traces are enabled, you can access the trace log files using the Real-Time Monitoring Tool (RTMT) or the command line interface (CLI).

Micro Traces for Selected Problems

You can use Cisco Unity Connection Serviceability micro traces to troubleshoot problems with specific Unity Connection components. Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems provides information on different Cisco Unity Connection Serviceability micro traces that you need for troubleshooting selected problems and for viewing the trace logs. (For instructions on using Cisco Unity Connection Serviceability micro traces, see the "Using Traces" chapter of the Administration Guide for Cisco Unity Connection Serviceability *Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html).

Note Enabling Cisco Unity Connection Serviceability micro traces decreases system performance. Enable traces only for troubleshooting purposes.

Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
Audio Issues			
Playing an attachment via the TUI	CML (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	ConvSub (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
Calendar Integration Issues			
Calendar integration	CCL (levels 10, 11, 12, 13)	Connection Conversation Manager.	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CsWebDav (levels 10, 11, 12, 13)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
Calendar integration (event notifications)	CsWebDav (levels 10 through 13)	Connection IMAP Server	diag_CuImapSvr_*.uc
Call Issues			

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
Routing rules	Arbiter (levels 14, 15, 16)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	RoutingRules (level 11)	Connection Conversation Manager	diag_CuCsMgr_*.uc
Client Issues			
Cisco Unified Personal Communicator client (IMAP-related issues) (see also "Cisco Unified Personal Communicator client (IMAP-related issues)" in Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems)	CML (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CsMalUmss (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CuImapSvr (all levels)	Connection IMAP Server	diag_CuImapSvr_*.uc
	MTA (all levels)	Connection Message Transfer Agent	diag_MTA_*.uc
ViewMail for Outlook (sending and receiving messages) (see also "ViewMail for Outlook (sending and receiving messages)" in Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems)	CML (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CsMalUmss (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CuImapSvr (all levels)	Connection IMAP Server	diag_CuImapSvr_*.uc
	MTA (all levels)	Connection Message Transfer Agent	diag_MTA_*.uc
	SMTP (all levels)	Connection SMTP Server	diag_SMTP_*.uc
Unity Connection Cluster Issues			
Unity Connection clusters (except file replication)	SRM (all levels)	Connection Server Role Manager	diag_CuSrm_*.uc

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
Unity Connection cluster file replication	CuFileSync (all levels)	Connection File Syncer	diag_CuFileSync_*.uc
External Message Store Issues			
Accessing emails in an external message store	CML (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
Fax Issues			
File rendering	MTA (all levels)	Connection Message Transfer Agent	diag_MTA_*.uc
SMTP messages are not sent	MTA (all levels)	Connection Message Transfer Agent	diag_MTA_*.uc
SMTP server mishandles faxes	SMTP (all levels)	Connection SMTP Server	diag_SMTP_*.uc
LDAP Issues			
LDAP synchronization (see also "LDAP synchronization" in Table 3: Cisco Unified Serviceability Traces for Selected Problems)	CuCmDbEventListener	Connection CM Database Event Listener	diag_CuCmDbEventListene
Message Issues			
Dispatch messages (see also "Dispatch messages" in Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems)	MTA (all levels)	Connection Message Transfer Agent	diag_MTA_*.uc

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
IMAP messages (see also "IMAP messages"in Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems)	CML (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CsMalUmss (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CuImapSvr (all levels)	Connection IMAP Server	diag_CuImapSvr_*.uc
	MTA (all levels)	Unity Connection Message Transfer Agent	diag_MTA_*.uc
	SMTP (all levels)	Connection SMTP Server	diag_SMTP_*.uc
Message delivery and retrieval (see also "Message delivery and retrieval" in Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems)	CML (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CsMalUmss (levels 10, 14, 18, 22, 23, 26)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	MTA (all levels)	Connection Message Transfer Agent	diag_MTA_*.uc
	Notifier (all levels except 6 and 7)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
	SMTP (all levels)	Connection SMTP Server	diag_SMTP_*.uc
	UmssSysAgentTasks (all levels)	Connection System Agent	diag_CuSysAgent_*.uc
Message Relay Issues	MTA (all levels)	Connection Message Transfer Agent	diag_MTA_*.uc
	SMTP (all levels)	Connection SMTP Server	diag_SMTP_*.uc

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
NDRs (see also "NDRs" in Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems)	CML (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CuCsMgr (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
Notifications not sent (see also "Notifications not sent" in Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems)	CuCsMgr (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	Notifier (all levels except 6 and 7)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
SMTP/HTML notification/Intelligent Notification	Notifier (all levels except 6 and 7)	Connection Notifier	diag_CuNotifier_*.uc
	SMTP (all levels)	Connection SMTP Server	diag_SMTP_*.uc
Secure message aging	UmssSysAgentTasks (all levels)	Connection System Agent	diag_CuSysAgent_*.uc
SMS notifications	Notifier (all levels except 6 and 7)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
Networking Issues			
Intrasite Networking replication (see also "Intrasite Networking replication" in Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems)	CuReplicator	Connection Digital Networking Replication Agent	diag_CuReplicator_*.uc
Intersite Networking replication	Feeder (levels 00, 01, 02, 03)	Connection Tomcat Application	diag_Tomcat_*.uc
	FeedReader (levels 00, 01, 02, 03, 10, 14)	Connection System Agent	diag_CuSysAgent_*.uc
HTTP(S) Networking	FeedReader (levels 00, 01, 02, 03, 10, 14)	Connection System Agent	diag_CuSysAgent_*.uc
	Feeder (levels 00, 01, 02, 03)	Connection Tomcat Application	diag_Tomcat_*.uc

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
VPIM message delivery (see also "VPIM message delivery" in Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems)	MTA (all levels)	Connection Message Transfer Agent	diag_MTA_*.uc
	SMTP (all levels)	Connection SMTP Server	diag_SMTP_*.uc
Personal Call Transfer Rule Issues			
Accessing calendar information	CCL (levels 10, 11, 12, 13)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
	CsWebDav (levels 10, 11, 12, 13)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
Configuring personal call transfer rule settings by phone	ConvSub (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
Rule processing during calls to a rules-enabled user	ConvRoutingRules (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	RulesEngine (all levels)	Connection Tomcat Application	diag_Tomcat_*.uc
		Connection Conversation Manager	diag_CuCsMgr_*.uc
Rules-related conversations	CDE (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
Phone View Issues			
Phone View	PhoneManager (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
Report Issues			
Data collection in reports	ReportDataHarvester (all levels)	Connection Report Data Harvester	diag_CuReportDataHar
Display of reports	CuService (all levels)	Connection Tomcat Application	diag_Tomcat_*.uc
RSS Feed Issues			
Access to RSS feeds of voice messages	RSS (all levels)	Connection Tomcat Application	diag_Tomcat_*.uc

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
SNMP Issues			
SNMP	CuSnmpAgt (all levels)	Connection SNMP Agent	diag_CuSnmpAgt_*.uc
SpeechView Transcription Issues			
SpeechView transcriptions	SttClient (all levels)	Connection Message Transfer Agent	diag_MTA_*.uc
	SttService (all levels)	Connection SpeechView Processor	diag_SttService_*.uc
	SMTP (all levels)	Connection SMTP Server	diag_SMTP_*.uc
	MTA (level 10, 11, 12, 13)	Connection Message Transfer Agent	diag_MTA_*.uc
	SysAgent (level 10, 11, 12, 16)	Connection System Agent	diag_CuSysAgent_*.uc
Sending transcriptions to notification devices	Notifier (level 16, 21, 25, 30)	Connection Notifier	diag_CuNotifier_*.uc
Test Button (External Service and External Service Account) Issues			
Test button (external service diagnostic tool)	CuESD (all levels)	Connection Tomcat Application	diag_Tomcat_*.uc
Web Inbox Issues			
Interactions with Representational State Transfer (REST) API	VMREST (all levels)	Connection Tomcat Application	diag_Tomcat_*.uc
Jabber VoiceMail Issues			
Jabber VoiceMail	Not Applicable as it is enabled by default	Cisco Tomcat	localhost_access_log.txt
	Not Applicable as it is enabled by default	Connection Jetty	request.log
	Notifier (level 18 and 21)	Connection Notifier	diag_CuNotifier_*.uc
	Cuca	Connection Tomcat Application	diag_Tomcat_*.uc
	VMREST	Connection Tomcat Application	diag_Tomcat_*.uc

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
Visual VoiceMail Issues	TRAP - (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	VMREST (all levels)	Connection Tomcat Application	diag_Tomcat_*.uc
	Arbiter - (level 12 to17)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	CDE-04 - <13-17>	Connection Conversation Manager	diag_CuCsMgr_*.uc
	MiuCall - (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.ucCu
	MiuGeneral - (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	MiuIO - <11-15>	Connection Conversation Manager	diag_CuCsMgr_*.uc
	MiuMethod - (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	MiuSIP - (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	MiuSIPStack - (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	Mixer - (all levels)	Connection Mixer	diag_CuMixer_*.uc
Cisco Smart Software Licensing Issues			
Licensing	CuSlmSvr (all levels)	Connection Smart License Manager Server	diag_CuSlmSvr_*.uc
Tenant Partitioning Issues			
Tenant Partitioning	Cuca	Connection Tomcat Application	diag_Tomcat_*.uc
	VMREST (all levels)	Connection Tomcat Application	diag_Tomcat_*.uc
Video Greetings Issues			

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
Video Greetings	CDE (level 1, 10 to 17, 20, 21)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	ConvSub (level 01 to 05)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	MiuIO (level 11 to 13, 25, 27)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	Miu Sip/Miu Sip Stack (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	MiuMethods/MiuCall (all levels)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	Mixer (levels 01 to 04)	Connection Mixer	diag_CuMixer_*.uc
	Video (level 10 and 11)	Connection Conversation Manager	diag_CuCsMgr_*.uc
SAML SSO Issues			
SAML SSO	CLI Command to activate SAML SSO logs: admin: set samltrace level <trace-level> where trace-level can be BEBUG, INFO, WARNING, ERROR, or FATAL CLI Command to check trace level: admin: show samltrace level	Cisco Tomcat Cisco Tomcat Security Cisco SSO	ssosp*.log ssoApp.log
Miscellaneous Issues			
Synchronization traces between Unity Connection and Exchange	CsMbxSync	Connection Mailbox Sync	diag_CuMbxSync_*.uc
Synchronization traces between Unity Connection and Gmail Server	CuGSuiteSyncSrv	Connection GSuite Sync Service	diag_CuGSuiteSyncSrv_*.u
Exchange EWS calls in MbxSync diag	CsEws	Connection Mailbox Sync	diag_CuMbxSync_*.uc
EWS notification in Jetty web service diags	EWSNotify	Connection Jetty	

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
Exchange 2003 webdav protocol diags	CsWebDav	Connection Mailbox Sync	diag_CuMbxSync)_*.uc
Activities of Connection external service	CuEsd	Connection Tomcat Application	diag_Tomcat_*.uc
Message deposition on Connection	MTA	Connection Message Transfer Agent	diag_CuMta_*.uc
CUCA test buttons for UM service and UM user pages	Cuca	Connection Tomcat Application	diag_Tomcat_*.uc
Autodiscovery feature diags	MbxLocator	Connection Mailbox Sync	diag_CuMbxSync_*.uc
MbxSyncQ and EWSNotiftQ events	DBEvent	Connection DB Event Publisher	diag_DbEventPublisher
PIN Synchronization Issues			
PIN Synchronization Issues	AxlAccess (level 00,01)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	Bulk Administration Tool (all levels)	Tomcat Logs	diag_Tomcat_*.uc
	CiscoPCA (level 00,01,02,13)	Tomcat Logs	diag_Tomcat_*.uc
	Cuca (all levels)	Tomcat Logs	diag_Tomcat_*.uc
	CuCsMgr (level 10)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	VMREST (all levels)	Tomcat Logs	diag_Tomcat_*.uc
	CDL (level 10 and 11)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	ConvSub (level 01,03,04,05)	Connection Conversation Manager	diag_CuCsMgr_*.uc

Macro Traces for Selected Problems

Cisco Unity Connection Serviceability macro traces enable a preselected set of micro traces with which you can troubleshoot general areas of Unity Connection functionality.

Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems lists the information for Cisco Unity Connection Serviceability macro traces that you need for troubleshooting selected problems and for viewing the trace logs. (For instructions on using Cisco Unity Connection Serviceability macro traces, see the"Using Traces" chapter of the Administration Guide for Cisco Unity Connection Serviceability *Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html).

Note Enabling Cisco Unity Connection Serviceability macro traces decreases system performance. Enable traces only for troubleshooting purposes.

Table 2: Cisco Unity Connection Serviceability Macro Traces for Selected Problems

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
Audio Issues			
Audio quality	Media (Wave) Traces	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Mixer	diag_CuMixer_*.uc
Call Issues			
Call control	Call Control (Miu) Traces (expand the macro trace to select SIP or SCCP)	Connection Conversation Manager	diag_CuCsMgr_*.uc
Call flow	Call Flow Diagnostics	Connection Conversation Manager	diag_CuCsMgr_*.uc
ViewMail for Outlook (recording or playback by phone)	Call Control (Miu) Traces (expand the macro trace to select SIP or SCCP)	Connection Conversation Manager	diag_CuCsMgr_*.uc
Client Issues			
Cisco Unified Personal Communicator client (IMAP-related issues) (see also "Cisco Unified Personal Communicator client (IMAP-related issues)" in Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems)	Call Flow Diagnostics	Connection Conversation Manager	diag_CuCsMgr_*.uc

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
ViewMail for Outlook (sending and receiving messages) (see also "ViewMail for Outlook (sending and receiving messages)" in Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems)	Call Flow Diagnostics	Connection Conversation Manager	diag_CuCsMgr_*.uc
	ViewMail for Outlook	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection IMAP Server	diag_CuImapSvr_*.uc
		Connection Message Transfer Agent	diag_MTA_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
		Connection REST Service	diag_Tomcat_*.uc
		Connection Mailbox Sync	diag_CuMbxSync_*.uc
Cisco Unity Connection Serviceability Issues			
Cisco Unity Connection Serviceability	Connection Serviceability Web Service	Connection Tomcat Application	diag_Tomcat_*.uc
Conversation Issues			
Conversations	Conversation Traces	Connection Conversation Manager	diag_CuCsMgr_*.uc
Message Issues			
Dispatch messages (see also "Dispatch messages" in Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems)	Call Flow Diagnostics	Connection Conversation Manager	diag_CuCsMgr_*.uc
IMAP messages (see also "IMAP messages" in Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems)	Call Flow Diagnostics	Connection Conversation Manager	diag_CuCsMgr_*.uc

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
Message delivery and retrieval (see also "Message delivery and retrieval" in Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems)	Message Tracking Traces	Connection Message Transfer Agent	diag_MTA_*.uc
		Connection System Agent	diag_CuSysAgent_*.uc
		Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Tomcat Application	diag_Tomcat_*.uc
		Connection IMAP Server	diag_CuImapSvr_*.uc
NDRs (see also "NDRs" in Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems)	Call Flow Diagnostics	Connection Conversation Manager	diag_CuCsMgr_*.uc
Notifications not sent (see also "Notifications not sent" in Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems)	Traces for Other Notification Problems (expand the macro trace to select SIP or SCCP)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
Message not synchronized in Unified Messaging	Single Inbox Traces	Connection Mailbox Sync	diag_CuMbxSync_*.uc
MWI Issues			
MWIs	Traces for MWI problems (expand the macro trace to select SIP or SCCP)	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
Networking Issues			
Intrasite Networking replication (see also "Intrasite Networking replication" in Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems)	Digital Networking	Connection Digital Networking Replication Agent	diag_CuReplicator_*.uc
VPIM message delivery (see also "VPIM message delivery" in Table 1: Cisco Unity Connection Serviceability Micro Traces for Selected Problems)	Call Flow Diagnostics	Connection Conversation Manager	diag_CuCsMgr_*.uc

Problem Area	Traces to Set	RTMT Service to Select	Trace Log Filename
Startup Issues			
Unity Connection startup fails	Unity Startup	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Notifier	diag_CuNotifier_*.uc
Text to Speech Issues			
Text to Speech	Call Control (Miu) Traces (expand the macro trace to select SIP or SCCP)	Connection Conversation Manager	diag_CuCsMgr_*.uc
	Media (Wave) Traces	Connection Conversation Manager	diag_CuCsMgr_*.uc
		Connection Mixer	diag_CuMixer_*.uc
	Text to Speech (TTS) Traces	Connection Conversation Manager	diag_CuCsMgr_*.uc

Using Micro or Macro Traces

When you use Cisco Unity Connection Serviceability micro traces or macro traces to troubleshoot problems in Unity Connection, you must first enable the applicable traces in Cisco Unity Connection Serviceability. Then you can use the Real-Time Monitoring Tool (RTMT) or the command line interface (CLI) to collect and view the logs that are generated by the traces.

Enabling Micro or Macro Traces and View Trace Logs

Procedure

	Command or Action	Purpose
Step 1	In Cisco Unity Connection Serviceability, on the Trace menu, do either of the following:	• select **Micro Traces** to enable micro traces. • Select Macro Traces to enable macro traces.
Step 2	On the Micro Traces or Macro Traces page, in the Server field, select the name of the Unity Connection server and select **Go**.	
Step 3	Do either of the following:	• In the Micro Trace field, select the micro trace that you want to set and select **Go**. • Check the check box of the macro trace that you want to enable.
Step 4	Under Micro Traces or Macro Traces, check the check boxes for the micro-trace or macro-trace levels that you want to set and select **Save**.	

	Command or Action	Purpose
Step 5	Reproduce the problem.	
Step 6	To collect the trace log files, launch the Real-Time Monitoring Tool (RTMT). For detailed instructions, see the "Working with Trace and Log Central" chapter of the applicable *Cisco Unified Real-Time Monitoring Tool Administration Guide*, available at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.	You can access the trace log files using the command line interface (CLI). For information, see the applicable *Command Line Interface Reference Guide for Cisco Unified Solutions* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.
Step 7	In RTMT, on the System menu, select **Tools** > **Trace** > **Trace & Log Central**.	
Step 8	In the Trace & Log Central tree hierarchy, double-click **Collect Files**.	
Step 9	In the Select CUC Services/Application tab, check the check boxes for the applicable services and select **Next**.	
Step 10	In the Select System Services/Applications tab, select **Next**.	
Step 11	In the Collection Time group box, specify the time range for which you want to collect traces.	
Step 12	In the Download File option group box, specify the options you want for downloading traces.	
Step 13	Select **Finish**.	
Step 14	To view the trace files that you collected, you can use the Local Browse option of the trace collection feature.	
Step 15	In Cisco Unity Connection Serviceability, disable the traces that you enabled in Step 3 and Step 4, then select **Save**.	

Traces in Cisco Unified Serviceability

Traces for Selected Problems

You can use Cisco Unified Serviceability traces to troubleshoot certain problems. After the traces are enabled, you can access the trace log files using the Real-Time Monitoring Tool (RTMT) or the command line interface (CLI).

Table 3: Cisco Unified Serviceability Traces for Selected Problems lists the information for Cisco Unified Serviceability traces that you need for troubleshooting selected problems and for viewing the trace logs. (For detailed information on using Cisco Unified Serviceability traces, see the "Trace" chapter of the applicable *Cisco Unified Serviceability Administration Guide* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.)

Note Enabling Cisco Unified Serviceability traces decreases system performance. Enable traces only for troubleshooting purposes.

Table 3: Cisco Unified Serviceability Traces for Selected Problems

Problem Area	Traces to Set	RTMT Service to Select
Backing up and restoring	Cisco DRF Local Cisco DRF Master	Cisco DRF Local Cisco DRF Maste
LDAP synchronization	Cisco DirSync	Cisco DirSync
Web application sign-in	Cisco CCMRealm Web Service	Cisco CallManager Realm

Using Traces to Troubleshoot Problems

When you use Cisco Unified Serviceability traces to troubleshoot problems in Cisco Unity Connection, you must first enable the applicable traces in Cisco Unified Serviceability. Then you can use the Real-Time Monitoring Tool (RTMT) or the command line interface (CLI) to collect and view the logs that are generated by the traces.

Enabling Cisco Unified Serviceability Traces and View Trace Logs

Step 1 In Cisco Unified Serviceability, on the Trace menu, select **Troubleshooting Trace Settings**.

Step 2 On the Troubleshooting Trace Settings page, under Directory Services, check the check box for the trace that you want to enable and select **Save**.

Step 3 Reproduce the problem.

Step 4 To collect the trace log files, launch the Real-Time Monitoring Tool (RTMT). For detailed instructions, see the "Working with Trace and Log Central" chapter of the applicable *Cisco Unified Real-Time Monitoring Tool Administration Guide*, available at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

You can access the trace log files using the command line interface (CLI). For information, see the applicable *Command Line Interface Reference Guide for Cisco Unified Communications Solutions* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

Step 5 In RTMT, on the System menu, select **Tools** > **Trace** > **Trace & Log Central**.

Step 6 In the Trace & Log Central tree hierarchy, double-click **Collect Files**.

Step 7 In the Select CUC Services/Application tab, select **Next**.

Step 8 In the Select System Services/Applications tab, check the check boxes for the applicable service and select **Next**.

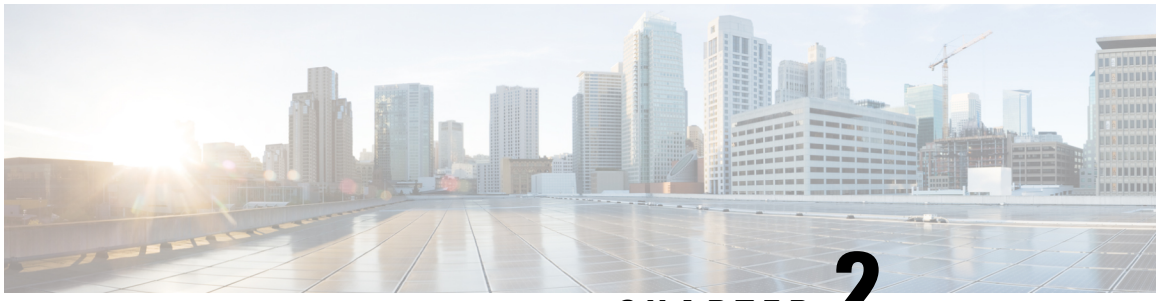
Step 9 In the Collection Time group box, specify the time range for which you want to collect traces.

Step 10 In the Download File option group box, specify the options you want for downloading traces.

Step 11 Select **Finish**.

Step 12 To view the trace files that you collected, you can use the Local Browse option of the trace collection feature.

Step 13 In Cisco Unity Connection Serviceability, disable the traces that you enabled in Step 2, and select **Save**.



CHAPTER 2

Troubleshooting Utilities

- Grammar Statistics Tool, on page 19
- Cisco Unity Connection Serviceability, on page 20
- Task Management Tool, on page 20
- Cisco Voice Technology Group Subscription Tool, on page 21
- Real-Time Monitoring Tool, on page 21
- Cisco Unified Serviceability, on page 21
- Remote Database Administration Tools, on page 22
- Cisco Utilities Database Link for Informix (CUDLI), on page 22
- Remote Port Status Monitor, on page 22
- Application Audit Logging, on page 22
- Network Analyzer, on page 23
- System Restore Tool, on page 23

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 14*, at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.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.

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.

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 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.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 .

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.

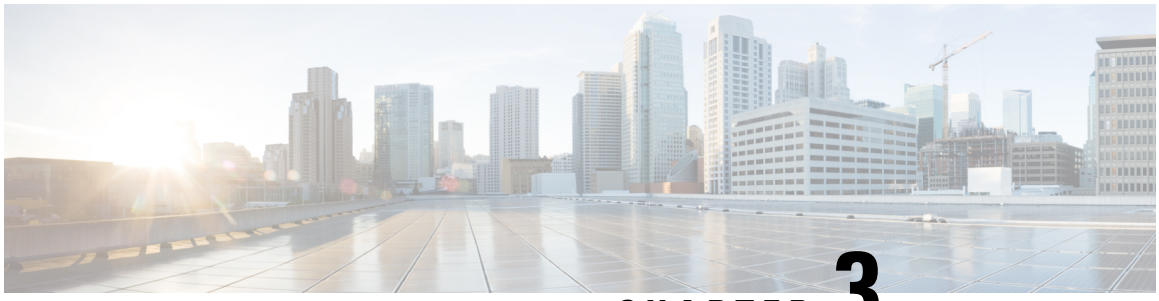
Database Error While Creating Restore Point

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.



CHAPTER 3

Troubleshooting Cisco Unity Connection Deployments

- Troubleshooting Installation Issues, on page 25
- Troubleshooting Upgrade Issues, on page 26
- Troubleshooting SELinux Issues, on page 26

Troubleshooting Installation Issues

If you receive an error during installation of Cisco Unity Connection, do the following:

- Check if you are meeting the platform requirements mentioned in Cisco Unity Connection 14 Supported Platforms List at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/supported_platforms/b_14cucspl.html.
- Make sure that you have met the software requirements mentioned in System Requirements for Cisco Unity Connection Release 14 at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/requirements/b_14cucsysreqs.html.
- Check if the problem is because of SELinux mode on publisher server during the installation of a subscriber server. See Troubleshooting SELinux Issues section.
- Review install logs to diagnose the problem. You can use CLI command or RTMT to collect installation logs. For more information on collecting logs from CLI command, see "file get" section of the "File Commands" chapter of the applicable Command Line Interface Reference Guide for Cisco Unified Communications Solutions. For information on collecting logs from RTMT, see the "Collect Installation Logs" section of the "Traces and Logs" chapter of the applicable Cisco Unified Real-Time Monitoring Tool Administration Guide. You can locate both the guide at http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

Note If you receive any error while installing the subscriber server, you can review the install logs of the subscriber server to troubleshoot the problem.

- Contact Cisco TAC if you are not able to resolve the issue.

Troubleshooting Upgrade Issues

Following are the issues that you might face while upgrading from one version of Unity Connection to another:

- Switch Version Failures: To troubleshoot the switch version failures as a part of upgrade from Unity Connection 8.6 to a later version, verify whether the problem is caused by SELinux security policies. For more information, see the Troubleshooting SELinux Issues section. You can also review install logs for upgrade failure. For more information on how to collect install logs, see applicable Command Line Interface Reference Guide for Cisco Unified Communications Solutions and Cisco Unified Real-Time Monitoring Tool Administration Guide at http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

Note Make sure to run pre upgrade CLI to verify if the system is good to upgrade.

Troubleshooting Locale Issues After Upgrade

If you face any problem related to locale after upgrade, do the following

Step 1 Check if the locale is installed or not using the show cuc locales CLI command.

Step 2 In Cisco Unity Connection Administration, navigate to Users > Users and select a user for whom locale is not displaying correctly.

Step 3 Verify that the correct language is selected from the language drop-down list.

Step 4 Click Save to apply the settings.

Troubleshooting SELinux Issues

Step 1 To check the status of SELinux on Unity Connection server, run the Command Line Interface (CLI) command **utils os secure** status.

Step 2 If SELinux is in Enforcing mode, run the CLI command utils os secure permissive to put the Unity Connection server in Permissive mode.

Step 3 Try to reproduce the symptom with SELinux in permissive mode. If the symptom is reproducible, it is not caused by SELinux.

Step 4 If the symptom is not reproducible, do the following steps to gather logs before you contact Cisco TAC:

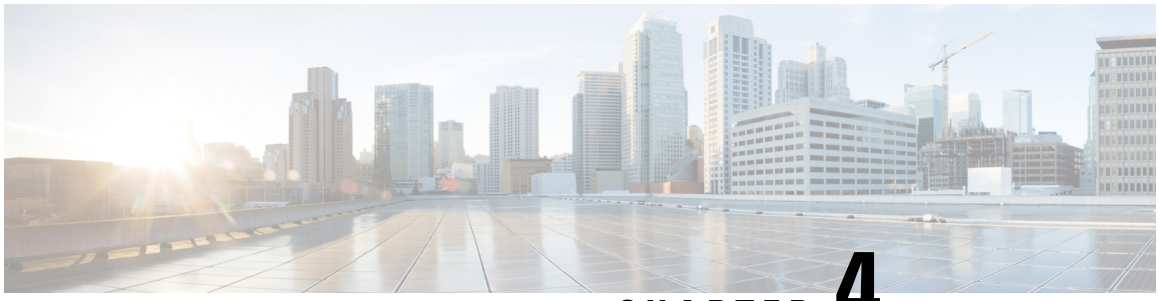
a) Create your test directory on sftp server to save the audit log diagnostic file at that location.

b) Put Unity Connection server in Enforcing mode by running the CLI command utils os secure enforce.

c) Try to create the symptom again.

d) Create the audit logs diagnostic file by running the CLI command utils create report security. This command creates a diagnostic file “security-diagnostics.tar.gz”. Copy the diagnostic file to sftp directory created in step 4(a) by running the CLI command file get activelog syslog/security-diagnostics.tar.gz.

Step 5 Contact Cisco TAC.



CHAPTER 4

Troubleshooting User and Administrator Access

- Unity Connection Not Responding to Key Presses, on page 29
- Users Do Not Hear Sign-in or Desired Prompt When Calling Unity Connection, on page 30
- Administration Accounts Unable to Sign-In to Cisco Unity Connection Serviceability, on page 31
- User Account is Locked over TUI/VUI Interface, on page 31
- User Account is Disabled over Web Applications, on page 31
- Troubleshooting Sign-in Problems with Visual Voicemail (Pin Based Authentication) , on page 32
- Troubleshooting Sign-in Problems with Visual Voicemail (Password Based Authentication), on page 32
- Error Message Appears While Updating the Phone PIN through Cisco Unity Connection Administration or Cisco PCA, on page 33
- User Display Name Not Get Updated after AD Synchronization, on page 33
- Not Able to Access Web Applications on Unity Connection, on page 34

Unity Connection Not Responding to Key Presses

When Unity Connection is integrated with Cisco Unified Communications Manager using SCCP, Unity Connection may not respond to key presses. In such situations, DTMF digits are not recognized when processed through VoIP dial-peer gateways. To avoid this problem, certain gateways must be configured to enable DTMF relay available in Cisco IOS software version 12.0(5) and later.

In Cisco IOS software-based gateways that use H.245 out-of-band signaling, you need to enable DTMF relay. However, in the Catalyst 6000 T1/PRI and FXS gateways, DTMF relay is enabled by default.

Enabling DTMF Relay

Step 1 On a VoIP dial-peer servicing Unity Connection, use the following command:

dtmf-relay h245-alphanumeric

Step 2 Create a destination pattern that matches the Cisco Unified CM voicemail port numbers. For example, if the system has voicemail ports 1001 through 1016, enter the dial-peer destination pattern 10xx.

Step 3 Repeat Step 1 and Step 2 for all remaining VoIP dial-peers servicing Unity Connection.

What to do next

Verifying DTMF settings

Step 1 In Cisco Unity Connection Administration, navigate to Telephony Integrations > Port Group.

Step 2 On the Search Port Groups page, select the port group of which you want to verify the DTMF settings.

Step 3 On the Port Group Basics page, navigate to Edit > Advanced Settings.

Step 4 On the Edit Advanced Settings page, verify that the Use DTMF KPML and Use DTMF RFC 2833 check boxes are checked.

Users Do Not Hear Sign-in or Desired Prompt When Calling Unity Connection

When a user calls Unity Connection directly and unexpectedly hears the Opening Greeting or another prompt rather than the sign-in prompt, the problem can be caused by either of the following:

- The call matched a direct call routing rule other than the Attempt Sign-In rule, and the rule directed the call to a destination other than the Attempt Sign-In conversation.
- The calling extension is not found in the search scope set by the call routing rule that sends the call to the Attempt Sign-In conversation.

Unity Connection uses the search scope of the call when it reaches the Attempt Sign-In conversation to identify which user is attempting to sign in. If the user extension is in a partition that is not a member of the search space that is assigned as the search scope of the call by the routing rule, Unity Connection routes the call to the Opening Greeting.

To resolve this problem, in Cisco Unity Connection Administration, check the direct call routing rules to determine which rule is processing the call and to check the search scope that is set by the rule. You can also enable the Arbiter micro trace (levels 14, 15, and 16 call routing), the Routing Rules micro trace (level 11 rules creation/deletion/evaluation), and the CDE micro trace (level 4 search space). (For detailed instructions on turning on traces and collecting logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.

Unity Connection also provides Port Status Monitor tool that you can use to troubleshoot call routing problems. To use Port Status Monitor tool for troubleshooting issues, do the following:

Using Port Status Monitor

Step 1 Download and install Port Status Monitor from Cisco unity tools http://ciscounitytools.com.

Step 2 Enable CDE, Routing Rules, ConvSub, PhaseServer, and PhaseServertoMonitor traces.

Step 3 In Cisco Unity Connection Administration, navigate to System Settings > Advanced > Conversations.

Step 4 On the Conversation Configuration page, make sure that the Enable Remote Port Status Monitor Output checkbox is checked and the IP address of the local machine, that is being used to connect to the server, is specified in the IP Addresses Allowed To Connect For Port Status Monitor Output (comma-separated) text box.

Step 5 Analyze the PSM output to diagnose the problem.

Administration Accounts Unable to Sign-In to Cisco Unity Connection Serviceability

If the default application administration account is locked because of password expiration or too many unsuccessful sign in attempts, you can reset the password using the **utils cuc reset password** CLI command to unlock the account.

User Account is Locked over TUI/VUI Interface

Problem statement:

When a user hears the "Your account is locked and cannot be opened. For help please contact System Administrator " prompt while accessing the voicemail account through TUI/VUI interface.

Resolution:

Do either of the following to resolve the problem:

- Navigate to **Edit User Basics** > **Password Settings** page of Cisco Unity Connection Administration and uncheck the **Locked by Administrator** check box to unlock the user account.
- Navigate to the **Edit User Basics** page of Cisco Unity Administration and update the **Voicemail Application Access** to **Active** to activate the inactive user account.

Related Diagnostic Traces:

- If the CiscoSysLog contains the event "EvtSubAccLockedMaxHack", this confirms that the user has exceeded the maximum number of Sign-in attempts and the user account has been locked.
- If the CiscoSysLog contains the event "EvtSubAccountInactive", this confirms that the user has not accessed TUI/VUI interface for more than pre-configured number of days for user inactivity timeout and the user account has been disabled.

User Account is Disabled over Web Applications

Problem statement:

When a user is getting the "Account has been disabled" error message while accessing the Cisco Unity Connection web interfaces, such as Cisco PCA, Cisco Unity Connection Administration, and Web Inbox.

Resolution:

To resolve the issue, navigate to the **Edit User Basics** page of Cisco Unity Administration and update the **Voicemail Application Access** to **Active** to activate the inactive user account.

Related Diagnostic Traces:

If the audit logs contains "User with alias <user alias> marked inactive since the user has not logged in since last <configured no. of days>", this confirms that the user has not accessed TUI/VUI interface for more than pre-configured number of days for user inactivity timeout and the user account has been disabled.

Troubleshooting Sign-in Problems with Visual Voicemail (Pin Based Authentication)

Problem statement:

When the user is getting the "Your account is locked. Contact your administrator to unlock your account" error message while logging into Visual Voicemail (VVM).

Resolution:

Do either of the following to resolve the problem:

- Navigate to **Edit User Basics** > **Password Settings** page of Cisco Unity Connection Administration and uncheck the **Locked by Administrator** check box to unlock the user account.
- Navigate to the **Edit User Basics** page of Cisco Unity Administration and update the **Voicemail Application Access** to **Active** to activate the inactive user account.

Related Diagnostic Traces:

- If the audit logs contains "Failed to Login to Cisco Unity Connection VMWS", this confirms that the user has exceeded the maximum number of Sign-in attempts and the user account has been locked.
- If the audit logs contains "User with userName <alias> is inactive due to inactivity timeout", this confirms that the user has not accessed TUI/VUI interface for more than pre-configured number of days for user inactivity timeout and the user account has been disabled.

Troubleshooting Sign-in Problems with Visual Voicemail (Password Based Authentication)

Problem statement:

When the user is getting the "Please enter a valid username and password pair" error message while logging into Visual Voicemail (VVM) with valid credentials.

Resolution:

Do either of the following to resolve the problem:

- Navigate to **Edit User Basics** > **Password Settings** page of Cisco Unity Connection Administration and uncheck the **Locked by Administrator** check box to unlock the user account.

- Navigate to the **Edit User Basics** page of Cisco Unity Administration and update the **Voicemail Application Access** to **Active** to activate the inactive user account.

Related Diagnostic Traces:

The audit log contains "Failed to Login to VMREST", this confirms that user account has been either locked or disabled due to inactivity timeout.

Error Message Appears While Updating the Phone PIN through Cisco Unity Connection Administration or Cisco PCA

If the "Bad response from CUCM. Reason: Requested resource is not available " error message appears while updating the phone PIN through Cisco Unity Connection Administration or Cisco PCA, make sure that:

- The username and password of primary AXL server entered on the Edit AXL Servers page are correct.
- The AXL server is up and running.
- The Ignore Certificate Errors check box is checked. If the check box is not checked, confirm that Unity Connection has successfully validated the certificates for AXL server.

To troubleshoot more problems related to PIN synchronization, see the traces in "Micro Traces for Selected Problems" section of the "Troubleshooting Cisco Unity Connection" chapter.

User Display Name Not Get Updated after AD Synchronization

When a user is imported from Active Directory to Unity Connection first time, Display Name of the user is formed with First Name and Last Name. If Administrator changes the First name and Last Name of the user on Active Directory, then the Display Name of the user may not be updated on Unity Connection automatically after AD synchronization.

In this case, you need to update the Display Name of the users manually either through **Edit User Basics** page of Cisco Unity Connection Administration or using Bulk Administration Tool (BAT).

To update the Display Name of the users through BAT, do the following:

- On Cisco Unity Connection Administration, navigate **Tools** > **Bulk Administration Tool**.
- Export all users into CSV file on the Bulk Administration Tool page. The CSV file contains all the user related fields such as Alias, Extension, First Name etc.
- Copy the Alias, First Name and Last Name information of all the users into a new CSV file.
- In CSV file, create a new column for Display Name of the users and fill the column for user's Display Name formed by First Name and Last Name.
- Select **Update** on Bulk Administration Tool page and upload the CSV file for updating the Display Name of all the users.

  For more information on Bulk Administration Tool, see "Bulk Administration Tool" chapter of *System Administration Guide* available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html

Not Able to Access Web Applications on Unity Connection

If you are not able to log in any web application of Unity Connection, check the status of HAProxy service and Tomcat service.

1. Do the following tasks to confirm that the HAProxy service is running and if necessary, restart the HAProxy service. Use either Real-Time Monitoring Tool (RTMT) or Command Line Interface (CLI).

   Using RTMT:

   - Launch Real-Time Monitoring Tool (RTMT).

   Note For details on using RTMT, see the applicable *Cisco Unified Real Time Monitoring Tool Administration Guide* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

   - On the System menu, select **Server** > **Critical Services**.
   - On the System tab, locate Cisco HAProxy and view its status. The status is indicated by an icon.

   Using CLI:

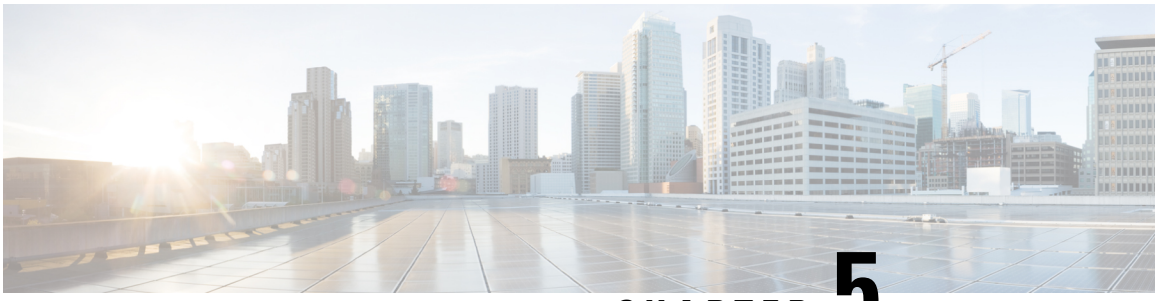
   - Use the Command Line Interface (CLI) command **utils service list** to list all of the services.

   Note For details on using CLI commands, see the applicable *Command Line Interface Reference Guide for Cisco Unified Communications Solutions* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html

   - Scan the CLI output for the Cisco HAproxy service and confirm that its status is **Started**.

2. If HAProxy service is not started, then restart the service using the CLI command **utils service restart Cisco HAProxy**.
3. If problem still persists, perform above steps for **Cisco Tomcat** service to confirm that the service is running on the system.If Tomcat service is not started, then restart the service using the CLI command **utils service restart Cisco Tomcat**.

Related Diagnostic Traces: If the CiscoSysLog contains **CiscoHAProxyServiceDown**, this confirms that the Cisco HAProxy service is not running on the system, you need to restart the service.



CHAPTER 5

Troubleshooting Call Transfers and Call Forwarding

• Troubleshooting Call Transfers and Call Forwarding, on page 35

Troubleshooting Call Transfers and Call Forwarding

Calls Not Transferred to the Correct Greeting

When calls are not transferred to the correct greeting, use the following task list to determine the cause and to resolve the problem.

Following are the tasks to troubleshoot call transfers to wrong greetings:

1. Confirm that the forward timer in the phone system is synchronized with the Rings to Wait For setting in Cisco Unity Connection. See the Confirm that Forward Timer in the Phone System is in Synch with the Rings to Wait For Setting in Unity Connection.
2. Confirm that the phone system programming enables callers to hear the personal greeting of the user. See the Confirm that Phone System Integration Enables Playing the User Personal Greeting for Callers.
3. Confirm that the busy greeting is supported and enabled. See the Confirming that Busy Greeting is Supported and Enabled.
4. Confirm that the caller reaches the intended destination based on the search scope. See the Confirming that Search Scope Configuration Sends Call to Intended Destination.
5. Make sure that * or the pattern you want to allow is not mentioned in the Default System Transfer or Default transfer restriction tables. To verify this, navigate to System Settings > Restriction Tables and select the restriction table in which you want to verify the settings.

Note For call transfer problems that occur on newly installed systems, see the applicable Integration Guide for Cisco Unity Connection , at http://www.cisco.com/en/US/products/ps6509/products_installation_and_configuration_guides_list.html.

If you encounter a call transfer problem that is not described in this chapter, contact the Cisco Technical Assistance Center (TAC).

Confirm that Forward Timer in the Phone System is in Synch with the Rings to Wait For Setting in Unity Connection

For supervised transfers, the number of rings that Cisco Unity Connection waits before routing a call to a user personal greeting (or to another extension) can be reconfigured. If the phone system is programmed to forward calls, confirm that the phone system waits longer to forward a call than Unity Connection waits before taking a message.

If the phone system is forwarding the call to another extension before Unity Connection can take a message, the following may occur:

- The caller does not hear the beginning of the user personal greeting. (For example, the user greeting is "Hi, this is Maria Ramirez. Please leave a message after the tone." But the caller hears only "...message after the tone.")
- The call is forwarded to another phone (for example, the operator) rather than to the personal greeting of the user.
- The call is forwarded to the opening greeting.
- The caller hears only ringing.

Synchronizing the Forward Timer and the Rings to Wait For Setting

Step 1 In the phone system programming, find and note the setting of the forward timer.

Step 2 In Cisco Unity Connection Administration, expand **Users** > **and** select **Users**. On the Search Users page, select the alias of the user whose calls are not being routed to the correct greeting.

Step 3 On the Edit User Basics page, on the Edit menu, select **Transfer Rules**.

Step 4 On the Transfer Rules page, select the name of the active transfer rule.

Step 5 On the Edit Transfer Rule page, under Transfer Action, confirm that the **Extension or URI** option is selected for the Transfer Calls To field and that the extension number is correct.

Step 6 In the Transfer Type list, confirm that **Supervise Transfer** is selected.

Step 7 In the Rings to Wait For field, the setting should be two rings fewer than the setting of the forward timer of the phone system, which you noted in Step 1. This setting is typically not greater than four. It specifies the number of rings that Unity Connection waits before routing the call to the personal greeting of the user.

If the settings do not meet the parameters, either reprogram the phone system so that it waits longer before forwarding unanswered calls, or change the Rings to Wait For field setting so that Unity Connection routes the call before the phone system forwards it and select Save.

Step 8 To change the default Rings to Wait For value for future users, expand **Templates** and select **User Templates**.

Note If you change settings in a user template, the settings are not changed for existing users whose accounts were created from that template. Changing the template settings affects only the users who are added after the template changes are made.

Step 9 On the Search User Templates page, select the alias of the user template that you want to change.

Note If the user template does not appear in the search results table, set the applicable parameters in the search fields at the top of the page, and select **Find**.

Step 10 On the Edit User Template Basics page, on the Edit menu, select **Transfer Rules**.

Step 11 On the Transfer Rules page, select the name of the active transfer rule.

Step 12 On the Edit Transfer Rule page, under Transfer Action, confirm that the **Extension** option is selected for the Transfer Calls To field.

Step 13 In the Transfer Type list, confirm that **Supervise Transfer** is selected.

Step 14 In the Rings to Wait For field, enter the same setting that you entered in Step 7.

Step 15 Select **Save**.

Confirm that Phone System Integration Enables Playing the User Personal Greeting for Callers

When callers hear the opening greeting rather than the user personal greeting, confirm that the phone system integration is correctly set up. If the settings are not correct, call forward to personal greeting and easy message access are not enabled.

Verifying the Phone System Integration Settings

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**.

Step 2 Confirm that the settings for the phone system, port group, and ports match those indicated in the applicable Integration Guide for Cisco Unity Connection , at http://www.cisco.com/en/US/products/ps6509/products_installation_and_configuration_guides_list.html.

Step 3 Correct any incorrect settings for the phone system integration.

Step 4 Confirm that the extension that the caller reached is the same as the primary or alternate extension of the user.

Step 5 If callers still hear the opening greeting after dialing the user extension, contact Cisco TAC.

Confirming that Busy Greeting is Supported and Enabled

When a call arrives at a busy extension and is forwarded to Unity Connection, phone systems typically send the reason for forwarding (the extension is busy) along with the call.

If Unity Connection does not play the user busy greeting for the caller, the cause may be one of the following:

- The phone system does not provide the necessary call information to support the busy greeting. See the "Integration Functionality" section in the applicable Integration Guide for Cisco Unity Connection , at http://www.cisco.com/en/US/products/ps6509/products_installation_and_configuration_guides_list.html.
- The user has not enabled the busy greeting. See the User Guide for the Cisco Unity Connection Phone Interface, *Release 14*, at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user/guide/phone/b_14cucugphone.html or the

User Guide for the Cisco Unity Connection Messaging Assistant Web Tool, *Release 14*, at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user/guide/assistant/b_14cucugasst.html.

- The alternate greeting for the user is enabled and overrides the busy greeting. See the User Guide for the Cisco Unity Connection Phone Interface *(Release 14)* at https://www.cisco.com/c/en/us/td/docs/voice_

ip_comm/connection/14/user/guide/phone/b_14cucugphone.html or the User Guide for the Cisco Unity Connection Messaging Assistant Web Tool *(Release 14)* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user/guide/assistant/b_14cucugasst.html.

Confirming that Search Scope Configuration Sends Call to Intended Destination

If a caller enters digits to transfer to an extension from the automated attendant or from a user greeting and reaches an unintended destination, check the search scope of the call at the point where the caller enters the digits. Unity Connection uses the search scope to match the extension that the caller dials to an object with this extension, such as a user, contact, or remote contact at a VPIM location. In particular, if your dial plan includes overlapping extensions, it is possible for the caller to enter an extension that matches multiple users or other Unity Connection objects and be transferred to a different object than the caller expects to reach.

To make a match by extension, Unity Connection checks the search space that is currently defined as the search scope for the call. Unity Connection searches the partitions in this search space in the order that they appear in the Assigned Partitions list in Cisco Unity Connection Administration, and returns the first result found.

The search scope of the call when the caller reaches a system call handler is defined by the Search Scope setting on the Call Handler Basics page for the handler, and may either be explicitly set to a particular search space, or may be set to inherit the search space from the call, in which case it may have been set by a previous handler or by the last call routing rule that processed the call. When a user greeting is played, the search scope of the call is defined by the Search Scope setting on the User Basics page for the user in Cisco Unity Connection Administration.

You can trace the search scope of a call by enabling the CDE micro trace (level 4 Search Space). For detailed instructions on enabling the traces and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting.

Problems with Call Transfers (Cisco Unified Communications Manager Express SCCP Integrations Only)

In Cisco Unified Communications Manager Express SCCP integrations only, call transfers may not work correctly (for example, the call may be dropped or the caller may be left on hold indefinitely). A possible cause for this problem is that the phone system integration is not correctly configured for Cisco Unified Communications Manager Express.

Configuring the SCCP Integration for Cisco Unified Communications Manager Express

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**.

Step 2 On the Search Port Groups page, select the port group name that is used by the Cisco Unified CM Express SCCP integration.

Step 3 On the Port Group Basics page, on the Edit menu, select **Servers**.

Step 4 Under Cisco Unified Communications Manager Servers, in the Server Type column, select **Cisco Unified Communications Manager Express** and select **Save**.

User Hears a Reorder Tone When Answering a Notification Call

Unity Connection requires a minimum Rings to Wait For setting of three rings to properly transfer a call or to make a message notification call. If the number of rings to wait is set to fewer than three for notification devices or call handlers, a user may hear the reorder tone instead of the Unity Connection conversation when called by Unity Connection.

Correcting the Rings to Wait For Setting

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, select the alias of the user who is hearing a reorder tone when answering a call from Unity Connection.

Step 2 On the Edit User Basics page, on the Edit menu, select **Notification Devices**.

Step 3 On the Notification Devices page, select the display name of a notification device.

Step 4 On the Edit Notification Device page, under Phone Settings, set the Rings to Wait field to three or more rings and select **Save**.

Step 5 On the User menu, select **Notification Devices**.

Step 6 Repeat Step 3 through Step 5 for each remaining notification device.

Step 7 To change the default Rings To Wait value for future users, expand **Templates** and select **User Templates**.

Note If you change settings in a user template, the settings are not changed for existing users whose accounts were created from that template. Changing the template settings affects only the users who are added after the template changes are made.

Step 8 On the Search User Templates page, select the alias of the user template that you want to change.

Step 9 On the Edit User Template Basics page, on the Edit menu, select **Notification Devices**.

Step 10 On the Notification Devices page, select the display name of a notification device.

Step 11 On the Edit Notification Device page, under Phone Settings, set the Rings to Wait field to three or more rings and select **Save**.

Step 12 On the User menu, select **Notification Devices**.

Step 13 Repeat Step 10 through Step 12 for each remaining notification device.

Step 14 Expand **Call Management**, then select **System Call Handlers**.

Step 15 On the Search Call Handlers page, select the display name of a call handler.

Step 16 On the Edit Call Handler Basics page, on the Edit menu, select **Transfer Rules**.

Step 17 View the Standard, Alternate, and Closed rules. In the Transfer Type field, if Supervise Transfer is selected for any of the rules, confirm that the Rings to Wait For field is set to three or more rings.

If Rings to Wait For is set correctly, and the user still hears a reorder tone when answering a call from Unity Connection, contact Cisco TAC.

Troubleshooting Directory Handler Searches

Use the troubleshooting information in this section if callers report that they are unable to locate one or more users in a directory handler. See the following possible causes:

- The users are not configured to be listed in the directory. Verify the List in Directory setting on the Edit User Basics page for each user in Cisco Unity Connection Administration is selected, or use Bulk Edit to configure the setting for multiple users at the same time.
- The search scope of the directory handler does not include the users. See the Users Not Found in the Search Scope of Directory Handler.
- For voice-enabled directory handlers, the voice-recognition engine does not recognize the names. See the Voice Commands Recognized But Names Not Recognized, on page 186.

Users Not Found in the Search Scope of Directory Handler

If callers are unable to find specific users in a directory handler, check the search scope of the directory handler on the Edit Directory Handler Basics page in Cisco Unity Connection Administration. The search scope of a phone directory handler can be set to the entire server; to a specific class of service, system distribution list or search space; or to the search space of the call at the point that the caller reaches the directory handler. The search scope of a voice-enabled directory handler can be set to the entire server, to a specific search space, or to the search space of the call at the point that the caller reaches the directory handler.

If the search scope is set to the entire server, the user or users must be homed on the server on which the directory handler resides in order to be reachable from the directory handler.

If the search scope is set to a specific class of service, system distribution list, or search space, you can use Connection Administration to determine whether the target users belong to the class of service or distribution list or to a partition that is a member of the search space.

If the search scope is set to inherit the search space from the call, determine which search scope is in use when callers have difficulty reaching users in the directory handler. Note that depending on how the call comes in to the system and is routed, the search scope can differ from one call to another and can change during the course of the call. See the Using Traces to Determine the Search Space Used During a Call for instructions on using traces to determine the inherited search scope.

Troubleshooting Message Addressing

Message addressing involves the ability to select a desired recipient or recipients when creating a new message. This section covers some problems that the users might experience with message addressing:

Note For additional information about troubleshooting message addressing when it involves remote recipients at VPIM locations or at other digitally networked Unity Connection locations, see the Troubleshooting Networking, on page 97 chapter.

Users Unable to Address Desired Recipients

If a user is unable to find one or more desired recipients when attempting to address a message, start by verifying that the recipient user or contact account exists and that the name spelling or extension that the user is entering is correct.

If the user is attempting to blind address a message to a VPIM location by entering a number that is made up of the VPIM location DTMF Access ID and the mailbox number of the recipient, or by saying the digits of the mailbox number and the display name of the VPIM location (for example, “five five at Seattle office”),

confirm that blind addressing is enabled for the VPIM location by checking the Allow Blind Addressing check box on the VPIM Location page in Cisco Unity Connection Administration.

If you have verified that the recipient account exists and matches the user search criteria or that blind addressing is enabled, and the user still cannot address to the desired recipient, the most likely cause is that the user search space does not include the partition of the target user, VPIM contact, or VPIM location. If the VPIM contact partition does not match the partition of the VPIM location to which the contact belongs, the search results depend on the method used to address the message as well as the partition and search space configuration. When users address messages to a VPIM mailbox by entering a VPIM location DTMF Access ID plus a remote user mailbox number, or when voice-recognition users say a name and location (for example, “John Smith in Seattle”), the action is allowed or denied based on the partition of the VPIM location. However, when users address to a VPIM contact using spell-by-name or by entering the local extension of the contact, or when voice-recognition users say the name of a contact without the location (for example, “John Smith”), the action is allowed or denied based on the partition of the VPIM contact, regardless of whether the partition of the VPIM location is out of scope for the user.

Users Unable to Address a System Distribution List

When a user cannot address messages to a system distribution list, consider the following possible causes:

- The user must be given the correct class of service rights on the Class of Service > Edit Class of Service page in Cisco Unity Connection Administration. The class of service that the user is assigned to must have the Allow Users to Send Messages to System Distribution Lists check box checked.
- The user must know how to address to the list. If the user is using the phone keypad conversation, the user can enter the display name or extension of the list. If the user is using the voice-recognition conversation, the user can say the display name or one of the alternate names defined for the list in Connection Administration.
- As with other types of addressing, in order for a user to address messages to a system distribution list, the list must belong to a partition that is a member of the search space that is defined as the user search scope. Note that the distribution list members receive the message regardless of whether they are individually addressable in the search scope of the sending user.

Unexpected Results Returned When a User Addresses by Extension

If a user addresses a message by extension and hears an unexpected match, the most common cause can be the search space configuration. To make a match by extension, Unity Connection checks the search space of the user who is addressing the message. Unity Connection searches the partitions in this search space in the order that they appear in the Assigned Partitions list in Cisco Unity Connection Administration, and returns the first result found. If your dial plan includes overlapping extensions, it is possible for the user to enter an extension that matches multiple users or other Unity Connection objects and hear a match result that is different from what the user expects.

To resolve the issue, you may need to review the order of partitions in the search space that is assigned to the user, either in Connection Administration or using the Dial Plan Report and Dial Search Scope Report in Cisco Unity Connection Serviceability. If the search space is set up correctly according to your dial plan, you can recommend that the user address messages by spelling or saying the name of the recipient; in this case, if there are multiple matches on the name, Unity Connection returns each match.

Caller is Not Getting Prompt in Expected Language

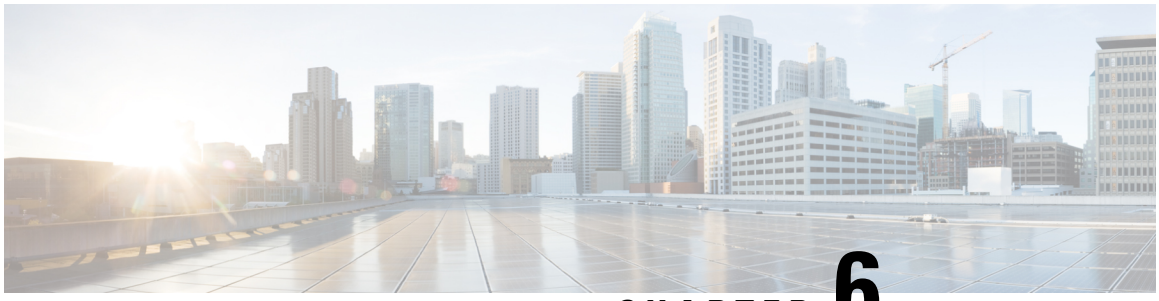
If a caller is not get prompt in expected language, check the following:

- If the locales are installed on both the servers in case of a cluster.
- If the caller is an outside caller for unity connection, then he will always listen prompts in system default language of that unity connection.
- If the call handler language settings of the caller is set to “Inherit Language from Caller”, then for an internal caller, the prompts are played in the caller set language.
- If the caller is an Unity Connection user and logs in to his/her mailbox, then the caller always listen prompts in caller set language.

Using Traces to Determine the Search Space Used During a Call

The search scope of a call is initially set to a particular search space by the call routing rule that first processes the call, although the scope may change during the course of the call.

To determine which search space is being used at each point in a call, enable the CDE micro trace (level 4 Search Space). For detailed instructions on enabling the traces and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1.



CHAPTER 6

Troubleshooting Messages

- User Hears Full Mailbox Warnings, on page 43
- Nondelivery Receipt (NDR) Not Received for Undelivered Message, on page 44
- Messages Are Delayed, on page 44
- Messages Are Not Delivered, on page 44
- Unable to Play Message Audio in Outlook Web Access, on page 47
- Unable to Receive Notification Emails for Quota Overflow, on page 47

User Hears Full Mailbox Warnings

When users hear a prompt related to a full mailbox, it means that the limit of at least one of the following mailbox quotas, which limit the size of voice mailboxes, has reached:

- Warning Quota: If a mailbox has reached the size of the warning quota, the user hears a warning that the mailbox is almost full. To resolve the issue, delete the messages until the mailbox size becomes less than the warning quota.
- Send Quota: If a mailbox has reached the size of the send quota, the user is unable to send messages and hears a warning that messages cannot be sent. If the user mailbox contains deleted messages, Cisco Unity Connection offers the option to remove all deleted messages to reduce the mailbox size.
- Send/Receive quota: If a mailbox has reached the size of the send/receive quota:
  - The user is unable to send messages.
  - The user hears a warning that messages cannot be sent.
  - Unidentified callers are not allowed to leave messages for the user.
  - Messages from other users generate nondelivery receipts to the senders.
  - If the user mailbox contains deleted messages, Unity Connection offers the option to remove all deleted messages. If necessary, the user can also remove saved or new messages individually until the mailbox size is below the quotas.

Nondelivery Receipt (NDR) Not Received for Undelivered Message

Occasionally, messages cannot be delivered to the recipient that the caller intended to reach. The system behavior in this case depends on the type of sender and the reason that the message could not be delivered.

In general, if Unity Connection cannot deliver the message because of issues that are not likely to be resolved (for example, the caller was disconnected before addressing the message or the recipient mailbox has been deleted), the message is sent to the Undeliverable Messages distribution list, and Unity Connection sends a nondelivery receipt (NDR) to the sender. However, the sender does not receive a nondelivery receipt in the following cases:

- When the sender of the original message is an unidentified caller
- When the sender is a user, but the user is configured to not accept NDRs
- While the mailstore of the user is offline (in this case, the NDR is delivered when the database becomes available).

If the original message is malformed, rather than sending the message to the Undeliverable Messages list, Unity Connection places the message in the MTA bad mail folder (UmssMtaBadMail). This folder is automatically checked nightly by the Monitor Bad Mail Folders task and if messages are found, an error is written to the application event log indicating troubleshooting steps.

Messages Are Delayed

Following are the tasks to troubleshoot the possible causes for the apparent delay of messages.

Step 1 To verify the arrival times of messages, generate a user message activity report for the user. For more information, see the "Generating and Viewing Reports" section in the "Using Reports" chapter of the Administration Guide for Cisco Unity Connection Serviceability Release 14, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

Step 2 See the applicable information in the "Orientation Task List for Unity Connection Users" section in the "User Orientation" chapter of the User Workstation Setup Guide for Cisco Unity Connection Release 14, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user_setup/guide/b_14cucuwsx.html .

Messages Are Not Delivered

See the following troubleshooting steps for investigating messages that are not being delivered to the intended recipients.

- Confirm that the users who are assigned to the Undeliverable Messages distribution list have been forwarding messages to the intended recipients. See the Undeliverable Messages Not Forwarded to Recipients, on page 46 section.

- Confirm that the user mailbox is not full. See the User Has a Full Mailbox, on page 45
- Confirm that you or another administrator did not inadvertently delete a user who was assigned to review the messages for Cisco Unity Connection entities. See the Users Assigned to Unity Connection Entities Deleted and No Replacements Assigned, on page 46 section.
- Review message aging settings. See the "Message Aging Policies" section in the "Message Storage" chapter of the System Administration Guide for Cisco Unity Connection Release 14, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.
- Verify that the message, which got removed from the mailbox, is not flagged for dispatch delivery. If the two users belongs to a distribution list that is the recipient of a call handler configured to mark messages for dispatch delivery, then a message is removed from the mailbox of the user as soon as the message is accepted by another user of the distribution list. See the "Dispatch Messages" section in the "Messaging" chapter of the System Administration Guide for Cisco Unity Connection Release 14, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.
- The user account may be configured to relay one or more message types to another SMTP address, but the message relay is failing. See the Unity Connection Unable to Relay Messages, on page 46

User Has a Full Mailbox

If a user mailbox is no longer allowed to receive messages, Unity Connection handles the message in either of the following ways:

- By default, when an unidentified caller attempts to send a message to a user whose mailbox has exceeded the send/receive quota, Unity Connection still delivers the message. For such scenarios, you can configure Unity Connection to indicate the caller that the recipient mailbox is full, and prevent the caller from recording a message for that recipient. To do this, log in to Cisco Unity Connection Administration, navigate to the Message Storage > Mailbox Quotas page, and check the Full Mailbox Check for Outside Caller Messages check box.)

  If the recipient mailbox has not yet exceeded the send/receive quota at the time an unidentified caller records a message but the quota is exceeded in the act of delivering the message, Unity Connection delivers the message regardless of the quota.

- When a user tries to leave a message for another user whose mailbox has exceeded the send/receive quota, Unity Connection allows the user to record and send the message. However, if the mailbox for the recipient is full, he or she does not receive the message. In addition, if the user account for the recipient is configured to send non-delivery receipts when message delivery fails, Unity Connection sends the message sender a non-delivery receipt.

  If the recipient mailbox has not yet exceeded the send/receive quota at the time a Unity Connection user records a message, but the quota is exceeded in the act of delivering the message, Unity Connection delivers the message regardless of the quota.

If a user whose voice mailbox has exceeded the send quota logs in to Unity Connection and attempts to send a message to another user, Unity Connection indicates that the send quota has been exceeded and does not allow the sender to record the message. If a user calls another user and the call is forwarded to a voice mailbox, the user is able to leave a message but the message is sent as an outside caller message.

Read receipts and non-delivery receipts are sent and delivered regardless of the status of the mailbox quota.

Encourage the user to dispose of messages promptly so that the Unity Connection mailbox does not fill up, and explain to users on the Undeliverable Messages distribution list the importance of regularly checking for and forwarding undeliverable messages.

Caution If the mailboxes of the users who are assigned to check the Undeliverable Messages list exceed the send/receive quota, the messages sent to the Undeliverable Messages distribution list are lost. To avoid this problem, specify a generous value for the send/receive quota for at least one user who is a member of the Undeliverable Messages list and encourage the user to dispose of messages promptly.

Undeliverable Messages Not Forwarded to Recipients

Messages returned to the Unity Messaging System mailbox are forwarded automatically to users whose names appear on the Undeliverable Messages system distribution list. The messages then must be forwarded to the intended recipients. Therefore, the users of the Undeliverable Messages distribution list should regularly check and forward undeliverable messages.

Caution If the mailboxes of the users who are assigned to check the Undeliverable Messages list exceed the send/receive quota, the messages sent to the Undeliverable Messages distribution list are lost. To avoid this problem, specify a generous value for the send/receive quota for at least one user who is a member of the Undeliverable Messages list and encourage the user to dispose of messages promptly.

Users Assigned to Unity Connection Entities Deleted and No Replacements Assigned

When you delete a user who was assigned to review the messages that are sent to any of the following Unity Connection entities, make sure that you assign another user or a distribution list to replace the deleted user; otherwise, messages may be lost:

- Undeliverable Messages distribution list (by default, the UndeliverableMessagesMailbox user account is the only member of this distribution list)
- Operator call handler
- Opening Greeting call handler
- Goodbye call handler
- Example Interview call handler

Unity Connection Unable to Relay Messages

Unity Connection uses the settings on the Message Actions page for a user in Cisco Unity Connection Administration to determine how to handle the different types of messages that it receives for the user. The relay action instructs Unity Connection to send all the messages of a certain type to a relay address on a different messaging system (such as a corporate email server) for storage and user access.

If the relay address that is configured for a user matches one of the user SMTP proxy addresses that is configured on the system, Unity Connection does not relay messages to the relay address to avoid possible delivery loops. For example, if Unity Connection needs to relay a message to a proxy address, it is possible that the proxy

address would resolve back to the same Unity Connection mailbox that relayed the original message, thus creating an infinite loop.

When configuring relay addresses for message relay, we recommend that you use the precise email address of the destination mailbox, for example, alias@mailserver. If a Unity Connection server is unable to relay message to the correct address, make sure the smarthost entered on the server is correct and reachable. However, if the problem is still not resolved, review the message relay logs mentioned in Micro Traces for Selected Problems, on page 2 section.

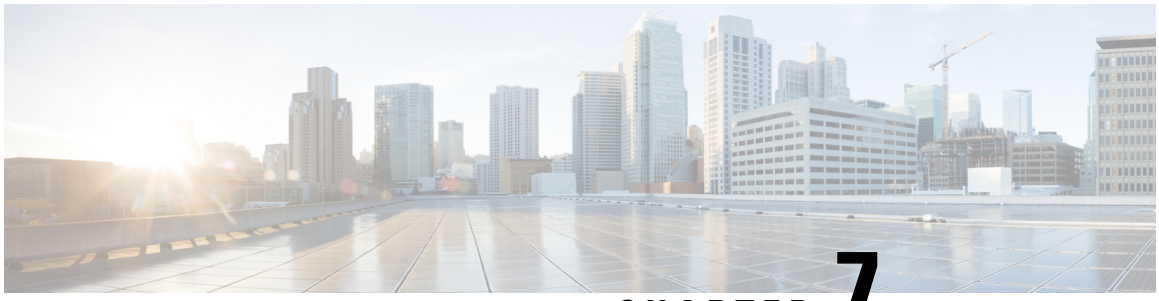
Unable to Play Message Audio in Outlook Web Access

When Unity Connection is configured to relay messages to a Microsoft Exchange server (using the Relay the Message or the Accept and Relay the Message action), users who use Outlook Web Access to access their Exchange mailboxes may not be able to play the message audio. When this occurs, the message header indicates that the audio attachment is available for the message, but the user cannot view or play the attachment when the message is opened.

Unable to Receive Notification Emails for Quota Overflow

If a user is unable to receive notification emails for quota overflow, verify the following:

- Verify that the sender (Unity Connection) is not getting an NDR in the mailbox. If the sender is getting an NDR, check the NDR code and take action accordingly. For more information on NDR codes, refer to the " Troubleshooting Non-Delivery Receipts, on page 81 "chapter of this guide.
- Verify that the corporate email address specified for the user is valid and correctly spelled.
- Verify that the corporate mailbox of the user has some free space.



CHAPTER 7

Troubleshooting Unified Messaging

• Troubleshooting Unified Messaging, on page 49

Troubleshooting Unified Messaging

Troubleshooting Single Inbox Issues

You may face some issues with single inbox that you can troubleshoot using the information provided in the sections mentioned further.

Mismatch of Date and Time for Messages in Unity Connection and Exchange 2003

Following are the circumstances when the date and time Unity Connection received a message is not synchronized with the date and time on Exchange 2003:

- A user already has voice messages when the administrator configures single inbox for the user. In Unity Connection, the messages continue to have the date and time that they were received. In Exchange 2003, the messages have the date and time that they were synchronized with Exchange.
- A administrator uses the Disaster Recovery System to restore voice messages and the backup contains messages that do not exist in Exchange 2003 because the user deleted them from Exchange after the backup. Unity Connection resynchronizes the voice message into Exchange. The date and time on the messages in Unity Connection are the original date and time that the messages were received, but the date and time on the messages in Exchange is the date and time that they were synchronized with Exchange.
- Single inbox is configured and the connectivity between Unity Connection and Exchange 2003 is interrupted and restored. In Unity Connection, messages received during the interruption in connectivity have the date and time that they were received. In Exchange, the messages have the date and time that they were synchronized after connectivity is restored.

Message Relay Not Working or is Not Working as Expected

If messages are not being relayed at all, confirm that you have specified the IP address for an SMTP smart host through which Unity Connection relays SMTP messages. (If DNS is configured, you can also specify the fully qualified domain name of the smart host.) To verify this, log in to Unity Connection Administration,

navigate to the **System Settings** > **SMTP Configuration** > **Smart Host** page and verify the IP address or hostname of smart host.

If messages are being relayed but not as you expect, check how the message actions are relaying messages for a specific user through the Message Actions page in Unity Connection Administration for that user.

If messages are disappearing, see the Unity Connection Unable to Relay Messages, on page 46.

Single Inbox Not Working for Anyone on Unity Connection

When single inbox is not working for any of the users on a Cisco Unity Connection server (for example, Unity Connection voice messages are not synchronized into Office 365 and the messages sent from ViewMail for Outlook are not delivered), do the following tasks.

1. On the primary server, in Cisco Unity Connection Serviceability, go to **Tools** > **Service Management**, and confirm that the status of the Connection Mailbox Sync (in the Critical Services section) service is Started:
2. If a firewall is configured between the Unity Connection and Exchange servers or between Unity Connection and Active Directory domain controllers, confirm that the necessary ports are opened. For more information, see the "IP Communications Required by Cisco Unity Connection" chapter in the Security Guide for Cisco Unity Connection, *Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/security/guide/b_14cucsecx.html.

When single inbox configuration with Gmail server is not working for any of the users on Cisco Unity Connection server, do the following task.

1. On primary server, in **Cisco Unity Connection Serviceability**, go to **Tools** > **Service Management** and confirm that the status of the Connection Google Workspace Sync Service (in the Critical Services section) is started.

Single Inbox configuration with Exchange not working for Unified Messaging Users

When Single Inbox configuration with Exchange is not working only for the Unity Connection users whose unified messaging accounts are associated with the same unified messaging service, do the following tasks.

When a cluster is configured, do the Unity Connection-specific tasks only on the primary (active) server.

1. Confirm that the unified messaging service is enabled and that single inbox is enabled:

   In Unity Connection Administration, expand Unified Messaging and select Unified Messaging Services.

   On the Search Unified Messaging Services page, select the unified messaging service of which you want to check the status.

   On the Edit Unified Messaging Service page, confirm that the Enabled check box is checked.

   Confirm that the Synchronize Unity Connection and Exchange Mailboxes (Single Inbox) check box is checked.
2. Test the unified messaging service:

   In Unity Connection Administration, expand Unified Messaging and select Unified Messaging Services.

   On the Search Unified Messaging Services page, select the unified messaging service that you want to test.

   On the Edit Unified Messaging Service page, select Test.

Correct any problems that are listed on the Task Execution Results page.

3. Test one of the affected unified messaging accounts:

   In Unity Connection Administration, expand Users and select Users.

   On the Search Users page, select the user for which you want to update the unified messaging account.

   On the Edit User Basics page, in the Edit menu, select Unified Messaging Accounts. On the Unified Messaging Accounts page, select Test.

   Correct any problems that are listed on the Task Execution Results page. Among the problems that the Task Execution Results page may list are the following browser errors:

   401 error: Possible causes include an incorrect password for the unified messaging services account, an incorrect username, or an invalid format for the username. (If you use the domain\user format, do not use FQDN format for the domain name.) Another possible cause is that the value of the Web-Based Authentication Mode list does not match the authentication mode configured in Exchange. All values appear on the Edit Unified Messaging Service page.

   403 error: SSL is required in Exchange or Office 365, but the public certificates from the certification authority (CA) that signed the certificates on the Exchange servers have not been uploaded to the Unity Connection server.

   404 error: (Exchange Only) One possible cause is that the unified messaging service is configured to use the HTTPS protocol to communicate with Exchange servers, but SSL is not enabled in Exchange.

4. In Cisco Unity Connection Serviceability, go to **Tools** > **Service Management**. In the Critical Services section, confirm that the service status for the Connection Mailbox Sync service is Started.

5. Check Active Directory settings on the unified messaging services account:

   - Confirm that the account is not locked.
   - Confirm that the password for the account has not expired.

6. Temporarily replace the unified messaging services account with the Active Directory account for a Unity Connection user associated with this unified messaging service:

   In Unity Connection Administration, expand Unified Messaging and select Unified Messaging Services. On the Edit Unified Messaging Service page of the select unified messaging service, in the Username and Password fields, replace the credentials for the unified messaging services account with the credentials for a Unity Connection user associated with the service.

   Send the user a Unity Connection voice message, and determine whether the voice message synchronized to Exchange or Office 365.

   If the message did not synchronize, switch the Username and Password fields back to the values for the unified messaging services account, then skip to Task 7.

   If the message did synchronize, the problem is probably with permissions on the unified messaging services account. Continue with Task 6.c.

   Switch the Username and Password fields back to the values for the unified messaging services account.

   Regrant permissions as documented in the “Configuring Unified Messaging” chapter in the Unified Messaging Guide for Cisco Unity Connection *Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/unified_messaging/guide/b_14cucumgx.html.

Send the Unity Connection user another voice message, and determine whether the voice message synchronized to Exchange or Office 365.

If the message did not synchronize, skip to Task 7.

If the message did synchronize, test with some other users who are associated with the same unified messaging service to ensure that the problem is resolved.

7. If Exchange mailboxes for the users are all homed on the same Exchange server, confirm that the required services are running on the Exchange servers:
   - If the mailboxes are all homed on Exchange 2010, confirm that the EWS virtual directory is running on that Exchange server.

8. Confirm that Exchange authentication and SSL settings are the same on all the Exchange servers and confirm that Unity Connection settings match the Exchange settings. For more information, see the "Confirming Exchange Authentication and SSL Settings for Unity Connection " section of the "Configuring Unified Messaging" chapter in the Unified Messaging Guide for Cisco Unity Connection *Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/unified_messaging/guide/b_14cucumgx.html.

9. (Office 365 Only) Confirm that Office 365 servers, which Unity Connection accesses have authentication mode set to Basic or OAuth2.

10. (Office 365 Only) If authentication mode is set to OAuth2 for Office 365 service, then verify the following:

    a. If "EvtMbxOAuthAccessTokenDBSaveSuccess" event occurs in the CiscoSysLog in every 50 minutes, this confirms that the OAuth access token is successfully updated in the database for Unified Messaging Service.

    b. If CiscoSysLog contains "EvtMbxOAuthAccessTokenRefreshThreadFailed" event, this confirms that the refresh token thread is not successfully started.

    To resolve the issue, restart the Connection Mailbox Sync service on Cisco Unity Connection Serviceability page.

    If you are not able to resolve the issue, contact to Cisco TAC.

    c. If CiscoSysLog contains "EvtMbxOAuthDBHelperFailedToSetAccessToken" event, this confirms that OAuth access token is not successfully saved in database.

    If you are not able to resolve the issue, contact to Cisco TAC.

    d. If CiscoSysLog contains "EvtMbxOAuthDecryptionFailed" event, this confirms that while fetching the token, Unified Messaging Service password is not decrypted successfully.

    To resolve the issue, go to Cisco Unity Connection Administration and navigate **Unified Messaging** > **Unified Messaging Services** > **Edit Unified Messaging Service**.

    On Edit Unified Messaging Service page, enter the password again in **Account Used to Access Exchange** field and **Save** the page.

    If you are not able to resolve the issue, contact to Cisco TAC.

    e. If CiscoSysLog contains "EvtMbxOAuthEmptyAccessTokenAfterMaxRetries" event, this confirms that empty access token has been received.

To resolve the issue, go to Edit Unified Messaging Service page on Cisco Unity Connection Administration and check all the configuration entered on the page.

If you are not able to resolve the issue, contact to Cisco TAC.

f. If CiscoSysLog contains "EvtMbxOAuthHttpStatusCode" event, this confirms that access token requset getting bad response. You may get below error code in CiscoSysLog.

- *401 error*: Possible causes include the incorrect values of Application ID, Client Secret and Client ID. Verify the values on the Edit Unified Messaging Service page.
- *0 error*: Possible causes include the incorrect values of Proxy Server and Active Directory DNS Domain Name. Verify the values on the Edit Unified Messaging Service page.

After resolving the errors, either wait for the OAuth access token to be successfully updated in the database or run the below CLI for immediate resolution.

```
admin:run cuc dbquery unitydirdb update tbl_externalservicetoken set
exchservertoken="" where externalserviceobjectid='<obejectid of corresponding unified
 messaging service>'
```

11. If you configured the unified messaging service to validate certificates for Exchange or Office 365 servers or for Active Directory domain controllers:

- Confirm that the applicable certification authority certificates have been uploaded to the Unity Connection server.
- Confirm that the certification authority certificates have not expired.

12. (Exchange Only) If all Unity Connection users associated with this unified messaging service have mailboxes homed on the same Exchange server, and if you are using HTTPS as the web-based protocol, confirm that SSL is properly configured:

Confirm that certification authority certificates have been uploaded to the Unity Connection server.

In Unity Connection Administration, confirm that the Exchange server name specified in the unified messaging service exactly matches the common name in the SSL certificate for that Exchange server.

Confirm that the SSL certificates have not expired.

13. (Exchange Only) Use Microsoft EWSEditor to access the Exchange mailbox of a Unity Connection user using the unified messaging services account. This allows you to determine whether the problem occurs even when Unity Connection is not involved.

EWSEditor software and documentation are available on the Microsoft website.

1. Confirm DNS settings:

- Confirm that the Exchange server is reachable from Unity Connection.
- If you configured the unified messaging service to search for Exchange or Office 365 servers, confirm that the Unity Connection server is configured to use DNS.
- If you configured the unified messaging service to search for Exchange or Office 365 servers, confirm that the name of the Exchange or Office 365 server is resolvable by the DNS server that Unity Connection is configured to use.

- If you configured the unified messaging service to search for Exchange or Office 365 servers, confirm that the DNS server that Unity Connection is using is configured with appropriate records for auto-discovery.

Single Inbox configuration with Gmail Server not working for Unified Messaging Users

When Single Inbox configuration with Gmail Server is not working for Unity Connection users whose unified messaging accounts are associated with same unified messaging service, do the following tasks.

Note When a cluster is configured, do Unity Connection specific tasks only on the primary(active) server.

1. Confirm that Unified Messaging service is enabled and Google Workspace is also enabled by performing below steps:
   - In Unity Connection Administration, expand Unified Messaging and select Unified Messaging Services.
   - On Search Unified Messaging Services page, select the service, of which user want to check the status.
   - On the Edit Unified Messaging Service page, confirm that the Enabled check box is checked.
   - Confirm that the Synchronize Connection and Google Workspace Mailboxes (Single Inbox) check box is checked.
2. Test Unified Messaging Service by performing below steps:
   - In Unity Connection Administration, expand Unified Messaging and select Unified Messaging Services.
   - On Search Unified Messaging Services page, select the unified messaging service, of which user want to test.
   - On Edit Unified Messaging Service page, select Test.
   - Correct any problems that are listed on Task Execution Results page.
3. Test one of the affected Unified Messaging Accounts:
   - In Unity Connection Administration, expand Users and select Users.
   - On Search Users page, select the user for which you want to update the unified messaging account.
   - On Edit User Basics page, in Edit menu, select Unified Messaging Accounts. On Unified Messaging Accounts page, select Test.
   - Correct any problems that are listed on Task Execution Results page.
4. In Cisco Unity Connection Serviceability, go to **Tools** > **Service Management**. In Critical Services section, confirm that the service status for Connection Google Workspace Service is Started.
5. Check Active Directory settings on Unified Messaging Services Account:
   - Confirm that account is not locked.

- Confirm that password for the account has not expired.

6. Confirm DNS settings
   - Confirm that Gmail server is reachable from Unity Connection. This can be confirmed by clicking Test button on Edit Unified Messaging Service page.
   - Correct any problems that are listed on Task Execution Results page.

Single Inbox configuration with Exchange is not working for user or subset of users

When single inbox configuration with Exchange is not working (for example, Unity Connection voice messages are not synchronized into Exchange, and messages sent from ViewMail for Outlook are not delivered), and when the problem is occurring for one or more Unity Connection users but not for all users associated with a unified messaging service, do the following tasks.

Note When a cluster is configured, do the Unity Connection-specific tasks only on the primary (active) server.

1. In Unity Connection Administration, expand Users and select Users. On the Edit User Basics page, in the Edit menu, select Unified Messaging Accounts. On the Unified Messaging Accounts page for the user, confirm that the user is associated with a unified messaging service on which single inbox is enabled.
2. If you created an Exchange 2010 mailbox for the unified messaging services account, and if Exchange mailboxes for the affected users were moved from one Exchange 2003 mailbox store to another, delete the Exchange 2010 mailbox.
3. In Cisco Unity Connection Administration, expand Users and select Users. On the Edit User Basics page, in the Edit menu, select Unified Messaging Accounts. On the Unified Messaging Accounts page for the user, confirm that single inbox is enabled in one of the user's unified messaging accounts.
4. In Cisco Unity Connection Administration, expand Users and select Users. On the Edit User Basics page, in the Edit menu, select Unified Messaging Accounts. On the Unified Messaging Accounts page for the user, confirm that Unity Connection is configured to use the correct Exchange email address.
5. In Cisco Unity Connection Administration, expand Users and select Users. On the Edit User Basics page, in the Edit menu, select SMTP Proxy Addresses. On the SMTP Proxy Addresses page for the user, confirm that there is an SMTP proxy address that matches the user's Exchange mail address.
6. If the user's Exchange mailbox was not moved, skip to Task 8.

If the user's Exchange mailbox was moved, and if the user is associated with a unified messaging service that specifies an Exchange server instead of allowing Unity Connection to search for Exchange servers, determine whether Unity Connection is able to automatically detect mailbox moves. See the "Configuring Unified Messaging" chapter in the Unified Messaging Guide for Cisco Unity Connection *Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/unified_messaging/guide/b_14cucumgx.html.

1. If the user's Exchange mailbox is homed on a new Exchange server, confirm that the unified messaging services account has the permissions necessary to access the server. For more information, see the "Configuring Unified Messaging" chapter in the Unified Messaging Guide for Cisco Unity Connection *Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/unified_messaging/guide/b_14cucumgx.html.

2. If single inbox is not working for all of the Unity Connection users whose mailboxes are homed on the same Exchange server, confirm that the required services are running on the Exchange servers:
   - If the mailboxes are all homed on an Exchange 2013, Exchange 2010,Unity Connection or Exchange 2007 server, confirm that the EWS service is running on that Exchange server.
   - If the mailboxes are all homed on an Exchange 2003 server, confirm that the WebDav service is running on that Exchange server.
3. If single inbox is not working for all of the Unity Connection users whose mailboxes are homed on the same Exchange server, and if you are using HTTPS as the web-based protocol, confirm that SSL is properly configured:
   - In Unity Connection Administration, uncheck the Validate Certificates for Exchange Servers check box, and determine whether single inbox is now working.
   - Confirm that SSL certificates have been uploaded to the Unity Connection server.
   - Confirm that the SSL certificates have not expired.

Single Inbox configuration with Gmail Server not working for a user or subset of users

When Single Inbox configuration with Gmail Server is not working (for example, Unity Connection voice messages are not synchronized into Gmail Server), and when problem is occurring for one or more Unity Connection users but not for all users associated with a unified messaging service, check the user settings.

Note When a cluster is configured, do Unity Connection specific tasks only on the primary (active) server.

In **Cisco Unity Connection Administration**, expand Users and select Users. On **Edit User Basics** page, in Edit menu, Select **Unified Messaging Accounts**. Check below mentioned settings on this page :

1. On Unified Messaging Accounts page for user, confirm that user is associated with unified messaging service on which Google Workspace is enabled.
2. On Unified Messaging Accounts page for user, confirm that Google Workspace is enabled in one of the user's unified messaging accounts.
3. On Unified Messaging Accounts page for user, confirm that Unity Connection is configured to use Gmail address.
4. On Edit User Basics page, in Edit menu, select SMTP Proxy Addresses.On SMTP Proxy Addresses page for user, confirm that there is an SMTP proxy address that matches the user's Gmail address.

Single Inbox Synchronization from Exchange is Delayed

If Unity Connection synchronization to Exchange is working (for example, voice messages are synchronized to users' Exchange mailboxes) but synchronization from Exchange is delayed (for example, the message waiting indicator is not turned off immediately after the last Unity Connection voice message is heard in ViewMail for Outlook), do the following tasks.

1. In Cisco Unity Connection Serviceability, go to **Tools** > **Service Management** and confirm that the service status for the Unity Connection Jetty service is Started. If not, activate and start the service, then test one of the affected users.
2. At a command line on the Exchange server, run the following command to telnet from the Exchange server to the Unity Connection server (confirm that port 7080 is open in the firewall, if applicable):

telnet <*IP address of the Unity Connection server*> **7080**

If no error message is returned, the Exchange server was able to connect to the Unity Connection server. If an error message is returned:

- In Cisco Unity Connection Serviceability, confirm that the Unity Connection Jetty service is running.
- Troubleshoot the network problem.

Press **Ctrl-K** to exit from Telnet.

1. In Cisco Unity Connection Administration, display the unified messaging account for one of the affected users and select **Reset**.

If synchronization from Exchange to Unity Connection starts working for the affected user, in Unity Connection Administration, display the unified messaging service associated with the affected user (Unified Messaging > Unified Messaging Services) and select **Reset**.

If you Reset a particular unified messaging service, the synchronization is delayed for all of the users associated with the unified messaging service as Unity Connection resynchronizes data with Exchange.

If the synchronization from Exchange is delayed, you can also check if the number of outstanding requests is consistently not exceeding 999. To check the number of outstanding request, you need to enable the CsMbxSync (level 19) traces. For more information on traces, see Traces in Cisco Unity Connection Serviceability, on page 1.

If the number of outstanding requests is consistently increasing to a value greater than 999, check the EWS latency (EWS request-response RTT time) between Unity Connection and Exchange Server. If the latency is more than the supported value, calculate the number of connections and change the number of connections to a calculated value. For information on maximum EWS latency and the method to calculate connections, see the "Calculating the Number of Connections for One Unity Connection Server" section of the "Single Inbox" chapter in *Design Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/design/guide/b_14cucdg.html.

Single Inbox Synchronization from Office 365 is Delayed

If Unity Connection synchronization to Office 365 is working (for example, voice messages are synchronized to users' Exchange mailboxes) but synchronization from Office 365 is delayed (for example, the message waiting indicator is not turned off immediately after the last Unity Connection voice message is heard in ViewMail for Outlook), do the following tasks.

1. In Cisco Unity Connection Administration, display the unified messaging account for one of the affected users, and select **Reset**.
2. If synchronization from Exchange to Unity Connection starts working for the affected user, in Unity Connection Administration, display the unified messaging service associated with the affected user (Unified Messaging > Unified Messaging Services) and select **Reset.**

Single Inbox Synchronization from Gmail Server is Delayed

If Unity Connection synchronization to Gmail Server is working but synchronization from Gmail Server is delayed, do the following tasks.

1. In Cisco Unity Connection Administration, display Unified Messaging Account for one of the affected users and select **Reset**.
2. In Unity Connection Administration, display Unified Messaging Service associated with the affected user (Unified Messaging > Unified Messaging Services) and select **Reset**.
3. Check number of outstanding requests by enabling the CuGsuiteSyncSrv (level 11) traces. For more information on traces, see "Traces in Cisco Unity Connection Serviceability" section in chapter "Troubleshooting Cisco Unity Connection" of *Troubleshooting Guide for Cisco Unity Connection Release 14* available at link https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/troubleshooting/guide/b_14cuctsg.html.

Note If a particular unified messaging service is reset, then synchronization is delayed for all of the users associated with the unified messaging service as Unity Connection resynchronizes data with Gmail Server.

Single Inbox Synchronization from Server Failed

If synchronization from Unity Connection to Exchange/Gmail server fails for set of users and Unified Messaging Account Reset button press is not resolving problem, do the following tasks:

1. Run following CLI command to get list of aliases having mailbox status field set as non-zero: run cuc dbquery unitydirdb

   ```
   select y.alias from vw_mailboxmap as x, vw_user as y where x.userobjectid=y.objectid AND
    x.status != 0
   ```

   .
2. If above CLI execution gives list of user aliases then check the reason of non-zero value of status for listed users. If required, update the status field to zero through the following CLI command: run cuc dbquery unitydirdb

   ```
   update tbl_mailboxmap set status = 0
   ```

Note Updating the value of "status" as zero is just a work around and user must investigate reason of status change in logs.

Single Inbox Fails with Office 365 Using ADFS

If you are integrating Unity Connection with Office 365 for Single Inbox where the Unity Connection Account used to access Office 365 was created on active directory and imported into Office 365, the Single Inbox may not work as Unity Connection is not equipped to handle ADFS.

To get the Single Inbox working, the account must be created locally on the Office 365 side.

Duplicate Message Issue with Single Inbox

Internet Message ID is a unique identifier for internet messages. Cisco Unity Connection assigns a unique Internet message ID to each voice message. If messages are restored with same internet message ID, the duplicate messages are created in the mailbox of a user. When mailbox synchronizes with Exchange, the duplicate messages are reflected in the Single Inbox.

To resolve the issue of duplicate messages in Single Inbox, a user or administrator must delete the duplicate messages from the mailbox.

Note COBRA is one of the interfaces that provide the option to restore the messages as duplicate messages. To avoid the duplicate message issue in Single Inbox, do not select the option to restore the messages as duplicate messages.

Resolving SMTP Domain Name Configuration Issues

Step 1 In Cisco Unity Connection Administration, expand **System Settings** > **SMTP Configuration**, then select Smart Host.

Step 2 On the Smart Host page, in the Smart Host field, enter the IP address or fully qualified domain name of the SMTP smart host server and select Save. (Enter the fully qualified domain name of the server only if DNS is configured.)

Step 3 In Cisco Unity Connection Administration, expand System Settings and select General Configuration.

Step 4 On the General Configuration page, in the When a recipient cannot be found list, select Relay message to smart host.

Step 5 Click Save.

Step 6 In Cisco Unity Connection Administration, expand Users > Message Actions and select the Accept the message option from the Voicemail drop- down list.

Step 7 Enter an SMTP Proxy Address for the relay address field.

Note Do not create any SMTP Proxy Address for the user. Make sure to select the Relay the message option from the Email, Fax, and receipt drop -down lists.

Step 8 Setup a recipient policy on Exchange Server such that the Unity Connection alias resolves to the corporate email Id.

- For Exchange 2013 or Exchange 2010, see the following link:

  http://technet.microsoft.com/en-us/library/bb232171.aspx
- For Exchange 2007, see the following link: http://technet.microsoft.com/en-us/library/bb232171(v=exchg.80).aspx
- For Exchange 2003, see the following link:

  http://support.microsoft.com/kb/822447
- For Configuring Exchange Email Policies with Unity Connection, please see the following white paper link: http://www.cisco.com/en/US/prod/collateral/voicesw/ps6788/ps12506/ps6509/guide_c07-728014.html.

Troubleshooting Problems with Cisco ViewMail for Microsoft Outlook

You may face some issues with ViewMail for Outlook that you can troubleshoot using the information provided in the sections mentioned further.

Voice Messages or Receipts are Not Received in the Outlook Inbox

If single inbox users do not receive incoming voice messages or receipts in the Outlook Inbox, note the following:

- Check the Junk E-mail folder to see whether the messages or receipts are automatically being filtered to this folder. The junk-email filter can be updated to add specific sender addresses or domain names to the safe filter list. For information on configuring the Junk E-mail folder to exclude a class of messages, refer to the Microsoft documentation.
- Check the configuration of any email anti-spam filters in your organization to see whether voice messages are being routed to a location other than the Outlook Inbox folder, .wav attachments are being removed, or the policy is otherwise interfering with the delivery of voice messages or receipts to Outlook.
- If you have Unity Connection mailbox quotas configured, and if a user has exceeded the send/receive quota, Unity Connection prevents messages from being received in the user's Unity Connection mailbox. ViewMail for Outlook does not notify a user that the send/receive threshold has been reached and that callers are therefore not allowed to leave voice messages for that user; the user would know only by checking voice messages in Unity Connection. However, when a user sends a message after reaching the send quota, ViewMail for Outlook does notify the user. The send quota is a lower threshold, so a user reaches the send/receive quota only by ignoring the earlier warning.

Messages Sent from a Single Inbox Outlook Client are Not Received

If single inbox users cannot send messages through the Unity Connection server from the Outlook client—for example, users receive non-delivery receipts (NDRs)—consider the following possibilities:

- The email address of the message sender must exactly match a primary or proxy SMTP address configured in Unity Connection.
- The email address of the message recipient must match a primary or proxy SMTP address that is configured for a Unity Connection user, or an SMTP proxy address that is configured for a VPIM contact. If no such match is found, Unity Connection relays the message to the SMTP smart host, or sends an NDR to the sender, depending on the option selected in the When a Recipient Cannot be Found setting on the System Settings > General Configuration page in Unity Connection Administration. By default, Unity Connection sends an NDR.

Messages Received in an Email Account Other than the Single Inbox Account

If users unexpectedly receive voice messages in their corporate or other email accounts rather than their Unity Connection mailboxes, consider the following possibilities:

- The email address of the message recipient must match a primary or proxy SMTP address that is configured for a Unity Connection user, or an SMTP proxy address that is configured for a VPIM contact. If no such match is found and Unity Connection is configured to relay the message to the SMTP smart host, the message is relayed to the applicable email address. Confirm that the message recipient has a proxy SMTP address configured for the applicable email address. See the "SMTP Proxy Addresses" section of the "User Settings" chapter of the *System Administration Guide for Cisco Unity Connection Release 14*,

available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.

- If message actions for the recipient are configured to relay messages of a particular type (voice, email, fax or delivery receipt) to the user at the corporate email address, the seemingly erroneous routing of messages may be expected behavior. Message actions are also configured in the unified messaging service that is specified in the recipient's unified messaging account, and the interaction of the user-level setting and the setting in the unified messaging service may produce unanticipated results. For a summary of how message actions are relaying messages for a specific user, in Unity Connection Administration, see the Message Actions page for that user.

Messages cannot be Played in Outlook

To play secure messages from Outlook, you must install Cisco Unity Connection ViewMail for Microsoft Outlook version. When you view a secure message in Outlook, the text in the message briefly explains secure messages but does not include a .wav attachment. The only copy of the .wav file remains on the Unity Connection server.

Caution If you delete a secure message from Outlook, Unity Connection moves the message to the deleted items folder in Unity Connection. If message aging is configured, the message is eventually deleted.

Messages Moved into a .PST Folder in Outlook cannot be Played

Unity Connection synchronizes voice messages in the following Outlook folders with the Unity Connection Inbox folder for the user, so the messages are still visible in the Unity Connection Inbox folder:

- Subfolders under the Outlook Inbox folder
- Subfolders under the Outlook Deleted Items folder
- The Outlook Junk Email folder

Unity Connection synchronizes voice messages in the Sent Items Outlook folder with the Unity Connection Sent Items folder for the user, so the messages are still visible in the Unity Connection Sent Items folder.

When Unity Connection replicates a secure voice message to Exchange, the replicated message contains only text that briefly explains secure messages; only the copy of the .wav file remains on the Unity Connection server. When a user plays a secure message using ViewMail for Outlook, ViewMail retrieves the message from the Unity Connection server and plays it without ever storing the message in Exchange or on the computer of the user.

If the user moves a secure message to an Outlook folder that is not synchronized with the Unity Connection Inbox folder, the only copy of the voice message is moved to the deleted items folder in Unity Connection, and the message can no longer be played in Outlook. If the user moves the message back into the Outlook Inbox folder or into an Outlook folder that is synchronized with the Unity Connection Inbox folder, and:

- If the message is still in the deleted items folder in Unity Connection, the message is synchronized back into the Unity Connection Inbox for that user, and the message becomes playable again in Outlook.
- If the message is not in the deleted items folder in Unity Connection, the message is not resynchronized into Unity Connection and can no longer be played in Outlook or Unity Connection.

For more information, see the “Synchronization with Outlook Folders” section of the "Introduction to Unified Messaging" chapter in the Unified Messaging Guide for Cisco Unity Connection *Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/unified_messaging/guide/b_14cucumgx.html.

Playing a Message Does Not Turn Off the Message Waiting Indicator

If you upgraded from Cisco Unity that was configured as unified messaging server and migrated the messages from the server, note the following:

- Two copies of migrated messages appear in the Exchange mailbox for each user: the original message and the migrated message that is synchronized into the Exchange mailbox when single inbox is configured.
- If a user uses Outlook to play the original message in Exchange (the copy that Cisco Unity put into Exchange when the message was received), the message remains unread in Unity Connection, and the message waiting indicator remains on. Playing the migrated message (the copy that was synchronized into the Exchange mailbox by the single inbox feature) or playing messages that are received after the migration turns off the message waiting indicator as appropriate.

Message Waiting Indicator Turns Off Before the Message is Played

If you have enabled the Mark Items as Read When Viewed in the Reading Pane option in Outlook, the message is marked as read as soon as you select it in the Outlook inbox. If this is the only Unity Connection voice message that you have not heard, Unity Connection turns off the message waiting indicator.

Deleting a Message in Outlook Does Not Delete the Corresponding Message

If you upgraded from Cisco Unity that was configured as unified messaging server and migrated the messages from the server, note the following:

- Two copies of migrated messages appear in the Exchange mailbox for each user: the original message and the migrated message that is synchronized into the Exchange mailbox when single inbox is configured.
- If a user uses Outlook to delete the original message in Exchange (the copy that Cisco Unity put into Exchange when the message was received), the migrated message remains in the user’s inbox in Unity Connection. Deleting the migrated message in Outlook (the copy that was synchronized into the Exchange mailbox by the single inbox feature) causes the message to be moved from the user’s inbox in Unity Connection to the user’s deleted items folder in Unity Connection.
- For more information on how the deleted messages are handled, see the Location for Deleted Messages section of the “Introduction to Unified Messaging” chapter of *Unified Messaging Guide for Cisco Unity Connection Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/unified_messaging/guide/b_14cucumgx.html.

Messages Moved into a .PST Folder in Outlook are Deleted

Unity Connection synchronizes voice messages in the following Outlook folders with the Unity Connection Inbox folder for the user, so the messages are still visible in the Unity Connection Inbox folder:

- Subfolders under the Outlook Inbox folder
- Subfolders under the Outlook Deleted Items folder
- The Outlook Junk Email folder

If a user moves voice messages into Outlook folders that are not under the Inbox folder, the messages are moved to the deleted items folder in Unity Connection.

For more information, see the "Synchronization with Outlook Folder" section of the "Introduction to Unified Messaging" chapter in the Unified Messaging Guide for Cisco Unity Connection *Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/unified_messaging/guide/b_14cucumgx.html.

Troubleshooting Problems with Invalid Passwords

When users change their Cisco Personal Communications Assistant (PCA) password in the Messaging Assistant, they must also update the password configured in ViewMail options so that the client can continue to access Unity Connection and retrieve voice messages. Likewise, when LDAP authentication is configured and the PCA password is changed in LDAP, the password configured in ViewMail options must be updated. If the PCA password has been changed but ViewMail has not been updated, users typically see a message indicating that the invalid credentials were entered for the account when they try to use ViewMail features.

Changing a Cisco ViewMail for Microsoft Outlook Password

Step 1 If you are using Outlook 2010:
a) On the user workstation, in Outlook 2010, click the **ViewMail** tab.
b) Select **Settings**.

Step 2 If you are using Outlook 2007 or Outlook 2003:
a) On the user workstation, on the Outlook Tools menu, select **Options**.
b) Select the ViewMail tab.

Step 3 From the Associated Email Account list, select the Microsoft Exchange/Single Inbox account for the user and select **Edit**.

Step 4 On the Viewmail Account Settings window, change the password for the user.

Step 5 Select **Test Settings**.

Step 6 If the test passes successfully, select **OK**. If the test fails, reenter the password and repeat

Step 7 Select **OK** to close the window, and then select **OK** again to close the Options dialog.

Collecting Diagnostics from ViewMail for Outlook on the User Workstation

To troubleshoot problems with the Cisco ViewMail for Microsoft Outlook form, you can enable diagnostics on the user workstation.

Enabling Cisco ViewMail for Microsoft Outlook Diagnostics and View the Log Files on the User Workstation

Step 1 If you are using Outlook 2010:
a) On the user workstation, in Outlook 2010, click the **ViewMail** tab.
b) Select **Settings**.

Step 2 If you are using Outlook 2007 or Outlook 2003:
a) On the user workstation, on the Outlook Tools menu, select **Options**.

b) Select the ViewMail tab.

Step 3 Check the **Turn on Diagnostic Traces** check box.

Step 4 Select **OK**.

Step 5 Reproduce the problem.

Step 6 If you are using Outlook 2010:

a) On the user workstation, in Outlook 2010, click the **ViewMail** tab.

b) Select **Email Log Files**, and send the resulting message with logs attached to an email address.

Step 7 If you are using Outlook 2007 or Outlook 2003:

a) On the **Help** menu, select **Cisco ViewMail for Outlook > Email Log Files**.

b) Send the resulting message with logs attached to an email address.

Collecting Diagnostics on the Unity Connection Server for Problems with Single Inbox and ViewMail for Outlook

You can enable the Unity Connection VMO macro trace to troubleshoot client problems from the server side.

For detailed instructions on enabling and collecting diagnostic traces, see the Using Diagnostic Traces for Troubleshooting, on page 1.

Troubleshooting Access to Emails in an External Message Store

User on the Phone Hears "Invalid Selection" after Pressing Seven

When a user has signed in by phone, presses seven on the main menu, and is told that the selection is invalid, the unified messaging service account for the user is not enabled for access to email in the external message store.

Enabling User Access to Email in an External Message Store

Step 1 In Cisco Unity Connection Administration, expand **Users** and select **Users**. On the Search Users page, select an applicable user.

Step 2 On the Edit User Basics page, in the Edit menu, select **Unified Messaging Accounts** > **.**

Step 3 On the Unified Messaging Accounts page, select the name of the unified messaging service that connects to the external message store.

Step 4 On the Edit Unified Messaging Account page, check the **Access Exchange by Using Text to Speech (TTS)** check box and select **Save**.

User on the Phone Hears "Your Messages are Not Available" after Pressing Seven

When a user has signed in by phone, presses seven on the main menu, and is told that messages are not available, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

Follow the given steps for troubleshooting a “Your Messages are Not Available” after pressing seven:

1. Test the unified messaging service that enables access to email in the external message store, and correct any errors that are reported. See the Testing the Unified Messaging Service to Access Emails in an External Message Store.
2. Test the unified messaging account of the user who is enabled to access email in the external message store, and correct any errors that are reported. See the Testing Unified Messaging Account for User to Access Email in an External Message Store.
3. In Cisco Unity Connection Administration, expand Class of Service and select Class of Service. Select the class of service applied to voicemail users. On the Edit Class of Service page, confirm that the Allow Access to Exchange Email by Using Text to Speech (TTS) check box is checked.
4. In Cisco Unity Connection Administration, expand Users and select Users. Confirm that the Allow Access to Exchange Email by Using Text to Speech (TTS) check box is checked. See the Enabling User Access to Email in an External Message Store.
5. Ping the server to which the unified messaging service connects using the value in the Server field on the Unified Messaging> Unified Messaging Services> if you select Specify an Exchange Server check box, enter the IP address or hostname of the Exchange 2003 server. If the ping fails, Unity Connection is not functional. You must restore the net work functionality to Unity Connection.
6. If the unified messaging service is configured for SSL and the Validate Certificates for Exchange Servers check box is checked, determine whether certificate validation is causing the problem. In Cisco Unity Connection Administration, go to Unified Messaging> Unified Messaging Services and uncheck the **Validate Certificates for Exchange Servers** check box and select **Save**.
7. (Exchange 2003 only) Follow the given steps for Exchange 2003 only:

   In Unity Connection Administration, on the Users > Edit Unified Messaging Accounts page for the user, confirm that the User ID field entry matches the Exchange login alias of the user. If the Login Type field is set to Use Unity Connection Alias, the user Exchange login alias must match the Unity Connection user alias.

   On the Exchange server, confirm that the Microsoft Exchange IMAP4 service is running.

   Confirm that the Exchange server is set up to support basic authentication for IMAP4.

Testing the Unified Messaging Service to Access Emails in an External Message Store

Step 1 In Cisco Unity Connection Administration, expand **Unified Messaging** and select **Unified Messaging Services**. On the Search Unified Messaging Services page, select the name of the applicable service.

Step 2 On the Edit Unified Messaging Service page, select **Test**.

Step 3 In the Task Execution Results window, refer to the list of issues and recommendations and do the applicable troubleshooting steps.

Step 4 Repeat Step 2 and Step 3 until the test succeeds.

Testing Unified Messaging Account for User to Access Email in an External Message Store

Step 1 In Cisco Unity Connection Administration, expand **Users** and select **Users**. On the Search Users page, select the alias of the user.

Step 2 On the Edit User Basics page, in the Edit menu, select **Unified Messaging Accounts**.

Step 3 On the Unified Messaging Accounts page, select the name of the applicable unified messaging account and select **Test**.

Step 4 In the Task Execution Results window, refer to the list of issues and recommendations and do the applicable troubleshooting steps.

Step 5 Repeat Step 2 and Step 4 until the test succeeds.

Enabling User Access to Email in an External Message Store

Step 1 In Cisco Unity Connection Administration, expand **Users** and select **Users**. On the Search Users page, select the alias of the user.

Step 2 On the Edit User Basics page, in the Edit menu, select **Unified Messaging Accounts**.

Step 3 On the Unified Messaging Accounts page, select the name of the unified messaging service that connects to the external message store.

Step 4 On the Edit Unified Messaging Account page, check the **Access Exchange Email by Using Text to Speech (TTS)** check box and select **Save**.

Users Hear Gibberish at the End or Beginning of an Email

When users hear gibberish at the end or beginning of an email, the gibberish is part of the email formatting that Text to Speech (TTS) plays back. Although the TTS engine is able to clean up some of the gibberish that can be found in various email formats, there are formats that cause some gibberish to be played.

Email Deleted by Phone is Still in the Inbox Folder (Exchange 2003 Only)

When accessing an email account with a MAPI client (such as Microsoft Outlook), email that was deleted by phone may still appear in the Inbox and not in the Deleted Items folder.

Unity Connection uses the IMAP protocol to interact with Exchange 2003. Exchange 2003 handles messages that are soft-deleted via IMAP differently than those that are soft-deleted using the MAPI protocol. When a message is soft-deleted through IMAP, it is marked as deleted and is left in the Inbox folder. When a message is soft-deleted through MAPI, it is moved to the Deleted Items folder.

Using Traces to Troubleshoot Access to Emails in an External Message Store

You can use traces to troubleshoot access to emails in an external message store. For detailed instructions, see the Using Diagnostic Traces for Troubleshooting, on page 1.

Troubleshooting Calendar Integrations

Using Unified Messaging Accounts are Used for Calendar Integrations

The following configuration principles apply to unified messaging accounts that are used for calendar integrations:

- A user can have only one unified messaging account for which the Access Exchange Calendar and Contacts check box is checked on the Unified Messaging Accounts page for the user.

- A user can have multiple unified messaging accounts for which the MeetingPlace Scheduling and Joining check box is checked on the Unified Messaging Services page.
- If a user has more than one unified messaging account for which the MeetingPlace Scheduling and Joining check box is checked, the Primary Meeting Service check box (on the Users > Edit Unified Messaging Account page) can be checked on only one of them.

Each user can access calendar information from only one unified messaging account. If the calendar-enabled unified messaging account connects to an Exchange server, the user has access to events only from the Exchange calendar. Similarly, if the calendar-enabled unified messaging account connects to a Cisco Unified MeetingPlace server, the user has access to events only from the Cisco Unified MeetingPlace calendar.

If a user has more than one unified messaging account for which the MeetingPlace Scheduling and Joining check box is checked, the unified messaging account for which the Primary Meeting Service check box is checked determines which Cisco Unified MeetingPlace server is used to schedule reservationless meetings.

For information on configuring a calendar integration between Cisco Unity Connection and Exchange, see the "Configuring Unified Messaging" chapter in the Unified Messaging Guide for Cisco Unity Connection *Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/unified_messaging/guide/b_14cucumgx.html.

Testing the Calendar Integration

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, select the alias of a user.

Step 2 On the Edit User Basics page, on the Edit menu, select **Unified Messaging Accounts**.

Step 3 On the Unified Messaging Accounts page, select the name of the applicable unified messaging service account.

Step 4 On the Edit Unified Messaging Account page, select **Test**.

Step 5 In the Task Execution Results window, refer to the list of issues and recommendations and do the applicable troubleshooting steps.

Step 6 Repeat Step 4 and Step 5 until the test succeeds.

Obtaining Unified Messaging Account Status

In Cisco Unity Connection Administration, browse to the Unified Messaging > Unified Messaging Accounts Status page. The status icon on the page indicates the state of the Cisco Unity Connection configuration.

The Unified Messaging Accounts page for an individual user also displays Unity Connection configuration status.

Test Fails the Last Check

When you select Test on the Edit Unified Messaging Account page to troubleshoot a calendar integration and all checks succeed except for the last check (which fails with the message "The system failed to perform a typical calendar operation"), use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved:

1. On the Exchange server, confirm that SP2 or later is installed.
2. On the Exchange server, confirm that the user is enabled for Outlook Web Access (OWA).

3. In Cisco Unity Connection Administration, on the Users > Edit Unified Messaging Account page for the user, confirm that the entry in the Email Address field matches the primary SMTP address for the user.
4. On the Exchange server, confirm that the Microsoft Exchange Outlook Web Access service is available.

   You can manually check whether the Microsoft Exchange Outlook Web Access service is available by entering one of the following URLs in a web browser:

   http://<servername>/exchange/<emailaddress>

   https://<servername>/exchange/<emailaddress>

   Note the following:

   - If the unified messaging account in which the Access Exchange Calendar and Contacts check box is checked is associated with a unified messaging service in which the value of the Web-Based Protocol list is "HTTPS," the URL must begin with "https".
   - If you chose to specify an Exchange Server on the Unified Messaging > Unified Messaging Services page, for <servername>, enter the value of the Exchange Server. Use the unified messaging service to which the unified messaging account of the user refers. If you chose to search for Exchange servers, verify that you can ping the domain, and that the protocol (LDAP or LDAPS) is correct.
   - For <emailaddress>, enter the email address that the user's unified messaging account is using. See the Account Information section of the Users > Edit Unified Messaging Account page for the user. When prompted to authenticate, enter the user's Active Directory alias and password.
5. (Exchange 2003 only) In Cisco Unified Operating System Administration, on the Services > Ping Configuration page, confirm that Unity Connection can ping the IP address or hostname of the Exchange server.
6. If the unified messaging service is configured to use HTTPS for the web-based protocol and the Validate Certificates for Exchange Servers check box is checked, determine whether certificate validation is causing the problem by doing the following sub-tasks.

   In Unity Connection Administration, browse to the Unified Messaging > Unified Messaging Services page, and select the unified messaging service associated with the unified messaging account that you are testing.

   On the Edit Unified Messaging Service page, uncheck the **Validate Server Certificate** check box and select **Save**.

   On a phone, sign in as the user who experiences the problem and access calendar information.

   If the user is able to access calendar information, confirm that the public root certificate of the Certificate Authority (CA) that issued the Exchange server certificate is installed on Unity Connection as a trusted certificate, that it is self-signed, and that it has not expired.

   In Unity Connection Administration, on the System Settings > Unified Messaging Services > Edit Unified Messaging Services page, check the **Validate Server Certificate** check box and select **Save**.
7. Confirm that the service account on Exchange that the unified messaging service uses has the Administer Information Store, Receive As, and Send As permissions allowed.
8. If the Exchange server is slow enough to respond to calendar information requests that Unity Connection times out, in Unity Connection Administration, on the System Settings > Advanced > Unified Messaging Services page, set the TTS and Calendars: Time to Wait for a Response (In Seconds) field to a value greater than 4.

Note Increasing the value of TTS and Calendars: Time to Wait for a Response (In Seconds) may result in delays when accessing calendar information.

Test Succeeds but the Calendar Integration Still Does Not Work (Exchange 2003 Only)

When you select Test on the Edit Unified Messaging Account page to troubleshoot a calendar integration and all checks succeed but the calendar integration still does not work, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

Task List for Troubleshooting a Calender Integration When the Test Succeeds

1. In Cisco Unity Connection Administration, browse to the Unified Messaging > Unified Messaging Services page, and select the unified messaging service associated with the unified messaging account that you are testing. On the Edit Unified Messaging Service page, confirm that the fully qualified DNS name (FQDN) of the Exchange server is resolvable via DNS.Even if the unified messaging service is configured with the IP address of the Exchange server, calendar information from the Exchange server is provided with URLs that contain the FQDN of the server. Unity Connection uses these URLs, which must be resolved by a DNS server so that the user can access calendar information. If the Exchange server is slow enough to respond to calendar information requests that Unity Connection times out, in Unity Connection Administration, on the System Settings > Advanced > Unified Messaging Services page, set the TTS and Calendars: Time to Wait for a Response (In Seconds) field to a value greater than 4.

Note Increasing the value of TTS and Calendars: Time to Wait for a Response (In Seconds) may result in delays when accessing calendar information.

2. Confirm that the system clocks on the Unity Connection and Exchange servers are both correct.
3. Confirm that the meetings appear on the Outlook calendar of the user.

If Cisco Unified MeetingPlace meetings are scheduled through the user web interface for these applications, the scheduled meetings do not appear on the Outlook calendar of the user. If you configure the profile for Cisco Unified MeetingPlace with an email type of "Exchange," meeting requests appear on the Outlook calendar of the user.

Non-Published Meetings Do Not Appear in List of Meetings (Cisco Unified MeetingPlace Only)

When Cisco Unity Connection has an calendar integration with Cisco Unified MeetingPlace, all applicable published and non-published meetings are listed when the user accesses meeting information.

If non-published meetings are not listed in the list of meetings, the service account that Unity Connection uses to access calendar information is not correctly configured.

Configuring the Unity Connection Service Account (Cisco Unified MeetingPlace Only)

Step 1 Sign in to the Cisco Unified MeetingPlace Administration Server as an administrator.

Step 2 Select **User Configuration** > **User Profiles**.

Step 3 Select the Unity Connection service account.

Step 4 In the Type of User field, select **System Administrator**.

Step 5 Select **Save**.

Step 6 Sign out of Cisco Unified MeetingPlace.

Meetings Do Not Appear in List of Meetings

When meetings do not appear in the list of meetings, the cause may be the interval that Cisco Unity Connection waits to update calendar information.

Changing the Interval that Cisco Unity Connection Waits to Update Calendar Information

Step 1 In Cisco Unity Connection Administration, expand **System Settings** > **Advanced**, then select Unified Messaging Services.

Step 2 On the Unified Messaging Services Configuration page, in the Calendars: Normal Calendar Caching Poll Interval (In Minutes) field, enter the length of time that Unity Connection waits between polling cycles when it caches upcoming Outlook calendar data for users who are configured for a calendar integration.

A larger number reduces the impact on the Unity Connection server while reducing the ability of the server to handle last-minute changes to the Outlook calendar data for users in a timely manner. A smaller number increases the impact on the Unity Connection server while increasing the ability of the server to handle last-minute changes to the Outlook calendar data for users in a timely manner.

In the Calendars: Short Calendar Caching Poll Interval (In Minutes) field, enter the length of time that Unity Connection waits between polling cycles when it caches upcoming Outlook calendar data for calendar users who must have their calendar caches updated more frequently.

This setting applies to users who have the Use Short Calendar Caching Poll Interval check box checked on their Edit User Basics page.

Step 3 Select **Save**.

"Access Exchange Calendar and Contacts" Option Not Available for Unified Messaging Accounts

When the Access Exchange Calendar and Contacts check box does not appear on the Unified Messaging Account page, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved:

1. In Cisco Unity Connection Administration, browse to the Unified Messaging > Unified Messaging Services page, and select the unified messaging service associated with the unified messaging account that you are testing.
2. On the Edit Unified Messaging Service page, confirm that the Access Exchange Calendar and Contacts check box is checked.

Using Traces to Troubleshoot a Calendar Integration

You can use traces to troubleshoot a calendar integration. For detailed instructions, see the Using Diagnostic Traces for Troubleshooting, on page 1.

Troubleshooting Access to Calendar Information Using Personal Call Transfer Rules

When users have problems accessing calendar information when using Personal Call Transfer Rules, the cause may be the interval that Unity Connection waits to update calendar information. Do the following procedure.

You can use traces to troubleshoot issues related to accessing calendar information when using personal call transfer rules. For detailed instructions, see the Using Diagnostic Traces for Troubleshooting, on page 1.

- See also the Troubleshooting Personal Call Transfer Rules, on page 217 chapter.

Changing the Interval Unity Connection Waits to Update Calendar Information

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **System Settings** > **Advanced** > **and** select Unified Messaging Services.
2. On the Unified Messaging Services Configuration page, in the Calendars: Normal Calendar Caching Poll Interval (In Minutes) field, enter the length of time that Unity Connection waits between polling cycles when it caches upcoming Outlook calendar data for users who are configured for a calendar integration.
3. Select **Save**.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **System Settings** > **Advanced** > **and** select Unified Messaging Services.

Step 2 On the Unified Messaging Services Configuration page, in the Calendars: Normal Calendar Caching Poll Interval (In Minutes) field, enter the length of time that Unity Connection waits between polling cycles when it caches upcoming Outlook calendar data for users who are configured for a calendar integration.

A larger number reduces the impact on the Unity Connection server while reducing the ability of the server to handle last-minute changes to the Outlook calendar data for users in a timely manner. A smaller number increases the impact on the Unity Connection server while increasing the ability of the server to handle last-minute changes to the Outlook calendar data for users in a timely manner.

In the Calendars: Short Calendar Caching Poll Interval (In Minutes) field, enter the length of time that Unity Connection waits between polling cycles when it caches upcoming Outlook calendar data for calendar users who must have their calendar caches updated more frequently.

This setting applies to users who have the Use Short Calendar Caching Poll Interval check box checked on their Edit User Basics page.

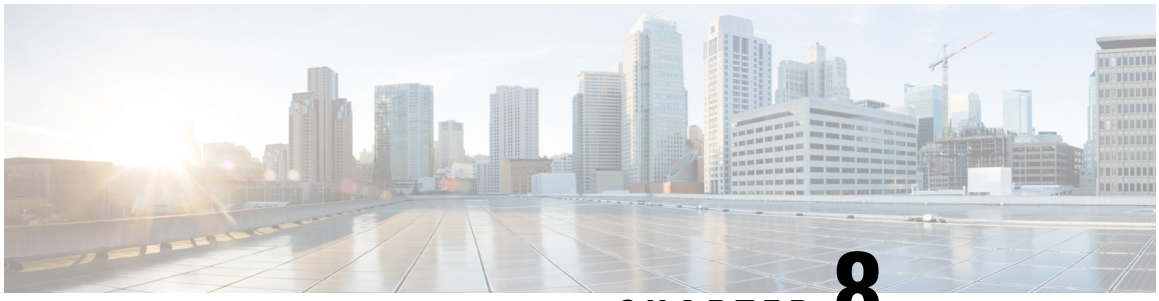
Step 3 Select **Save**.

Troubleshooting the Test Button for Unified Messaging Services and Unified Messaging Accounts

You can use traces to troubleshoot problems with the Test button (the unified messaging service diagnostic tool). This button is available on the following pages in Cisco Unity Connection Administration:

- Unified Messaging > Unified Messaging Services> select a unified messaging service on the Search Unified Messaging Services page> Edit Unified Messaging Services page.
- Users > Users > select a user on the Search Users page> Edit User Basics page> Edit> Unified Messaging Accounts> select an applicable account> Edit Unified Messaging Account page.

For information on using traces to troubleshoot problems with the Test button, see the Using Diagnostic Traces for Troubleshooting, on page 1.



CHAPTER 8

Troubleshooting IMAP Clients and ViewMail for Outlook

• Troubleshooting IMAP Clients and ViewMail for Outlook, on page 73

Troubleshooting IMAP Clients and ViewMail for Outlook

Troubleshooting Problems with Changing Passwords

When users change their Cisco Personal Communications Assistant (PCA) password in the Messaging Assistant, they also must update the password from their IMAP email client application so that the client can continue to access Unity Connection and retrieve voice messages. Likewise, when LDAP authentication is configured and the PCA password is changed in LDAP, the password configured in the IMAP email client application must be updated.

Users who use ViewMail for Outlook also must change the password in ViewMail for Outlook options when the PCA password has been changed. If the PCA password has been changed but ViewMail has not been updated, users typically see a message indicating that the invalid credentials were entered for the account when they try to use ViewMail features.

Troubleshooting Sign-In Problems with IMAP Email Clients (LDAP is Not Configured)

If users have trouble signing in to an IMAP client, or have trouble receiving voice messages in an IMAP client, consider the following possibilities:

- If the IMAP client application prompts a user for the Cisco Personal Communications Assistant (PCA) password, but does not accept it:
  - The Cisco Unity Connection user account may be locked because of too many invalid sign-in attempts.
  - The Unity Connection user account may have been locked by an administrator.
  - The Unity Connection user password may have expired.

- The Unity Connection user account may have been configured to require that the user specify a new password.
- The Unity Connection user may be entering the wrong password.

Users who belong to a class of service that allows access to the Messaging Assistant or to the Messaging Inbox can try to sign in to the Cisco PCA; the Cisco PCA displays an error message that explains why the sign-in attempt is failing. Users who cannot access the Messaging Assistant or the Messaging Inbox must contact an administrator for assistance.

- If Microsoft Outlook users are not prompted for their Cisco PCA password, confirm that the Remember Password check box on the Internet Email Settings (IMAP) page is not checked. If this option is checked and the password of the user has expired, changed, or is locked, Microsoft Outlook does not prompt the user to enter the Cisco PCA password. The result is that the user does not receive voice messages from Unity Connection and Outlook prompts for the username and password.

Troubleshooting Sign-In Problems with IMAP Email Clients (When LDAP is Configured)

If you are using LDAP authentication and using an IMAP email client to access Unity Connection voice messages, and if users who are integrated with the LDAP are unable to authenticate, consider the following possibilities:

- If you are using Active Directory, confirm that the server you are using for authentication is a global catalog server and that you are using port 3268 (if you are not using SSL to encrypt data that is transmitted between the LDAP server and the Unity Connection server) or port 3269 (if you are using SSL). Authentication settings are on the System Settings > LDAP > LDAP Authentication page in Connection Administration.

If you change any values on the LDAP Authentication page, and if IMAP clients are accessing Unity Connection, restart the Unity Connection IMAP Server service in Cisco Unity Connection Serviceability. If other web applications are accessing Unity Connection (for example, Cisco Personal Communications Assistant), restart the server.

- If the problem occurs even though you are already using a global catalog server or you are not using Active Directory, try to sign in to the Cisco PCA using an account that cannot sign in to an IMAP email client.
  - If that fails, then there are two likely causes: either the specifications on the LDAP Authentication page are incorrect, or there is a problem with user credentials on the LDAP server, for example, the password has expired or the user is specifying the wrong password.
  - If that succeeds, and if you have configured SSL to encrypt data that is transmitted between the LDAP server and the Unity Connection server, there may be a problem with the SSL certificate. To confirm, uncheck the Use SSL check box, change the port to 3268, restart the Unity Connection IMAP Server service in Cisco Unity Connection Serviceability, and try again.

Troubleshooting Sign-In Problems with IMAP Clients

If users have trouble signing into an IMAP client and recursively receive the pop-up to enter username and password, it indicates that the account has been locked, inactive, or the limit for the maximum concurrent session has reached. To troubleshoot the issue, verify if:

- User is trying to access the IMAP account with invalid credentials. This is confirmed by the presence of "authFail" instance in CiscoSysLog.

  To resolve the issue, navigate to Edit User Basics > Change Password (Web Application) page of Cisco Unity Connection Administration and reset the password for the user.

- User is trying to access inactive IMAP account. This is confirmed by the presence of "EvtSubAccountInactive" event is CiscoSysLog.

  To resolve the issue, navigate to Edit User Basic page of Cisco Unity Connection Administration and update the User Status to **Active**.

- The limit for maximum concurrent IMAP sessions has reached. This is confirmed by the presence of EvtIMAPLogonSessionLimitExceeded of CiscoSysLog. To resolve the issue, see the Unable to Login to IMAP Client section.

Unable to Login to IMAP Client

If the users have trouble signing into an IMAP client and recursively receive the pop-up to enter username and password, it can be because the limit for the maximum concurrent session has reached. This is confirmed by the presence of EvtIMAPLogonSessionLimitExceeded of CiscoSysLog. To resolve the issue, do the following:

1. Fetch the Alias of the user experiencing the problem from CiscoSysLog.
2. Run the following command to fetch the current value of imapsessioncount for the user:

   ```
   run cuc dbquery unitydirdb select * from vw_subscribertimelastcall where
   subscriberobjectid = (select objectid from vw_subscriber where alias =<Alias>')
   ```

   where imapsessioncount is the number of IMAP sessions currently open for the user.
3. Ask the user to hang up one of the IMAP sessions if the value of imapsessioncount matches the configured maximum limit for concurrent IMAP sessions.

   For multiple users, if the value of imapsessioncount is within the configured maximum limit or is not decrementing even after reducing the number of open IMAP sessions, disable the feature for immediate solution or contact Cisco TAC. For information on disabling the feature, see "Restricting the Maximum Concurrent Sessions" section of *Security Guide for Cisco Unity Connection Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/security/guide/b_14cucsecx.html.

Messages Sent from an IMAP Client Not Received

If users cannot send messages through the Unity Connection server from an IMAP client—for example, messages remain in the Outbox, an SMTP error is displayed in the client, or users receive non-delivery receipts (NDRs)—consider the following possibilities:

- If Unity Connection is not configured to allow clients to connect from untrusted IP addresses on the System Settings > SMTP Configuration > Server page in Cisco Unity Connection Administration, the

IP address of the client must appear in the IP address access list in Unity Connection. See the Checking the IP Address Access List.

- If Unity Connection is configured to allow clients to connect from untrusted IP addresses on the System Settings > SMTP Configuration > Server page in Connection Administration, two additional settings on this page can affect the ability of an IMAP client to send messages.
  - If the Require Authentication From Untrusted IP Addresses check box is checked, the client must be configured to authenticate with the outgoing SMTP server.
  - If the Transport Layer Security From Untrusted IP Addresses field is set to Required, the client must be configured to use Secure Sockets Layer (SSL) when connecting to the Unity Connection server.
- The email address of the message sender must exactly match a primary or proxy SMTP address configured in Unity Connection, as follows:
  - If the message is being sent from an IMAP client that is authenticated with the Unity Connection server, the email address must exactly match either the primary SMTP address that is displayed on the User Basics page for the user in Connection Administration or one of the SMTP proxy addresses that are configured on the SMTP Proxy Addresses page for the user.
  - If the message is being sent from an IMAP client that is not authenticated with the Unity Connection server, the email address can match a primary or proxy address that is configured for any user on the Unity Connection server.
- The email address of the message recipient must match a primary or proxy SMTP address that is configured for a Unity Connection user, or an SMTP proxy address that is configured for a VPIM contact. If no such match is found, Unity Connection relays the message to the SMTP smart host, or sends an NDR to the sender, depending on the option selected in the When a Recipient Cannot be Found setting on the System Settings > General Configuration page in Connection Administration. By default, Unity Connection sends an NDR.
- The message exceeds the maximum length or number of recipients per message that are configured on the System Settings > SMTP Server Configuration page in Connection Administration. (By default, the maximum allowed message length is 10 MB.)
- The IMAP client is unable to reach the Unity Connection SMTP server because of network connectivity issues or because access is blocked by a firewall.

In many of these error cases, the IMAP client may display an SMTP error when attempting to send a message to the Unity Connection server. This error includes an error code and a text description that can help narrow down the source of the problem. If the client application does not display SMTP errors to the user, or if you still have not identified the problem after checking the potential causes above, the SMTP and MTA micro traces (all levels) are helpful for diagnosing issues related to SMTP connectivity and message transport. When examining the logs, start with the SMTP log first, then review the MTA log. (The SMTP service authenticates the client and receives the message; the MTA service processes the message and addresses it to the correct Unity Connection user or contact.) For detailed instructions on enabling the traces and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1.

Checking the IP Address Access List

If you choose not to allow connections from untrusted IP address lists, the IP address of each client must be configured in the IP access list, and the Allow Unity Connection check box must be checked. If the access

list is not configured properly, the client may display an SMTP error code of 5.5.0, indicating that the Unity Connection was refused.

Checking the Cisco Unity Connection IP Address Access List

Step 1 In Cisco Unity Connection Administration, expand **System Settings** > **SMTP Configuration**, then select **Server**.

Step 2 On the SMTP Configuration Page, on the Edit menu, select **Search IP Address Access List**.

Step 3 Confirm that the IP address in use by the IMAP client appears as an entry in the list, and that the Allow Unity Connection check box is checked.

Step 4 To add a new IP address to the list, select **Add New**.

Step 5 On the New Access IP Address page, enter an IP address or you can enter a single ***** (asterisk) to match all possible IP addresses and select **Save**.

Step 6 On the IP Address page, check the **Allow Connection** check box to allow connections from the IP address that you entered in Step 4. To reject connections from this IP address, uncheck the check box.

Step 7 If you have made any changes on the IP Address page, select **Save**.

Messages are Received in an Email Account Instead of a Voice Mailbox

If users unexpectedly receive voice messages in their corporate or other email accounts rather than their Cisco Unity Connection mailboxes, consider the following possibilities:

- The email address of the message recipient must match a primary or proxy SMTP address that is configured for a Unity Connection user, or an SMTP proxy address that is configured for a VPIM contact. If no such match is found and Unity Connection is configured to relay the message to the SMTP smart host, the message is relayed to the applicable email address. Confirm that the message recipient has a proxy SMTP address configured for the applicable email address. See the "SMTP Proxy Addresses" section in the User Settings" appendix of the System Administration Guide for Cisco Unity Connection *Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.
- If the user email profile has an Exchange account, the Cached Exchange Mode setting in Outlook must be enabled.
- If message actions for the recipient are configured to relay messages of a particular type (voice, email, fax or delivery receipt) to the user at the corporate email address, this is the expected behavior.

Voice Messages Not Received in an IMAP Account

If users do not receive incoming voice messages in the email client inbox, check the Junk-Email or other spam folder. The mail client may automatically filter voice messages to this folder. For information on configuring spam filtering to exclude a class of messages, refer to the email client documentation.

You may also need to check the configuration of any email appliance or server-side anti-spam filters in your organization to see if voice messages are being routed to Junk mail, voice attachments are being removed, or the policy is otherwise interfering with the delivery of voice messages to user mail clients.

Intermittent Message Corruption When Using ViewMail for Outlook

In cases where user email profiles have an Exchange account and the users are using ViewMail for Outlook, they may experience the following intermittent problems:

- When using ViewMail for Outlook to reply to a voice message, the recipient receives a corrupt voice message that cannot be played.
- When using ViewMail for Outlook to forward a voice message with an introduction to another Unity Connection user, the recipient hears only the introduction; the original message is not heard.
- When using ViewMail for Outlook to forward a voice message to another Unity Connection user, the message is delivered to the Exchange mailbox of the recipient instead of to the Unity Connection mailbox of the recipient. Additionally, the message is corrupt, and cannot be played.

For each of these problems, the solution is to enable the Cached Exchange Mode setting in Outlook.

Recording or Playback Devices Not Appearing in ViewMail Account Settings in ViewMail for Outlook

If a particular recording or playback device that is connected to the computer does not appear as an option in the Audio Devices lists while composing a message or in the ViewMail Account Settings dialog, restart Outlook. ViewMail for Outlook does not recognize devices that were recently added to the computer until you restart Outlook.

Unable to Play Messages through ViewMail for Outlook 8.5 and Later

If the “Recording or Playback Messages Failed - no recording device” error message appears while recording or playing voice messages through ViewMail for Outlook 8.5 and later, make sure that the proxy is not enabled in the Internet Explorer. If you want to play or record voice messages while proxy is enabled, you need to add the hostname or IP address of Unity Connection in the proxy exception list to avoid failure in recording or playing voice messages through ViewMail.

User Email Account Does Not Appear in ViewMail Options in ViewMail for Outlook

If you have recently added an email account to Outlook but the account does not appear as an option when you try to add it as an Associated Email Account in ViewMail Options, restart Outlook. ViewMail for Outlook does not recognize email accounts that were recently added to Outlook until you restart Outlook.

ViewMail for Outlook Form Does Not Appear

If the ViewMail for Outlook form does not appear after you have installed ViewMail on a user workstation, consider the following:

- Only new messages are displayed with the form. Messages that were in the user mailbox prior to installing ViewMail do not display with the form.

- You must close and restart Outlook after installing ViewMail. If the user is running a synchronization program for a PDA device, the Outlook.exe process may not have fully exited when Outlook was shut down. If that is the case, close the synchronization program and then close and restart Outlook.
- The ViewMail form may have been disabled by Outlook. To determine if Outlook has disabled the form, select Help > About Microsoft Office Outlook > Disabled Items to see whether vmoexchangeextension.dll is in the list.

Collecting Diagnostics from ViewMail for Outlook on the User Workstation

To troubleshoot problems with the Cisco ViewMail for Microsoft Outlook form, you can enable diagnostics on the user workstation.

Enabling ViewMail for Outlook Diagnostics and View the Log Files on the User Workstation

Step 1 On the user workstation, on the Outlook Tools menu, select the ViewMail tab.

Step 2 Select Settings.

Step 3 In the **Cisco ViewMail Settings** > **dialog box, check the** > **Turn on diagnostic traces** check box and select **OK**.

Step 4 Reproduce the problem.

Step 5 Review the resulting log files by selecting the **Email Log Files** option on the ViewMail tab and sending the resulting message with logs attached to an email address.

Collecting Diagnostics from ViewMail for Outlook on the User Workstation

To troubleshoot problems with the ViewMail for Outlook form, you can enable diagnostics on the user workstation.

Enabling ViewMail for Outlook Diagnostics and View the Log Files on the User Workstation

Step 1 On the user workstation, on the Outlook Tools menu, select ViewMail for Outlook Options.

Step 2 Select the Diagnostics tab.

Step 3 Enable the following diagnostics:

- **Enable VMO Outlook Extension Diagnostics**
- **Enable VMO Multimedia Diagnostics**

1. If the problem is related to secure messages or recording and playback through the phone, enable the following diagnostics:

- **Enable VMO Telephone Record/Playback Diagnostics**
- **Enable VMO HTTP Diagnostics**

1. Select **OK**.
2. Reproduce the problem.
3. Review the resulting log files, which are stored in the C:\Documents and Settings\All Users\Application Data\Cisco Systems\VMO\1.0\Logs folder.

Collecting Diagnostics on Unity Connection for IMAP Client Problems

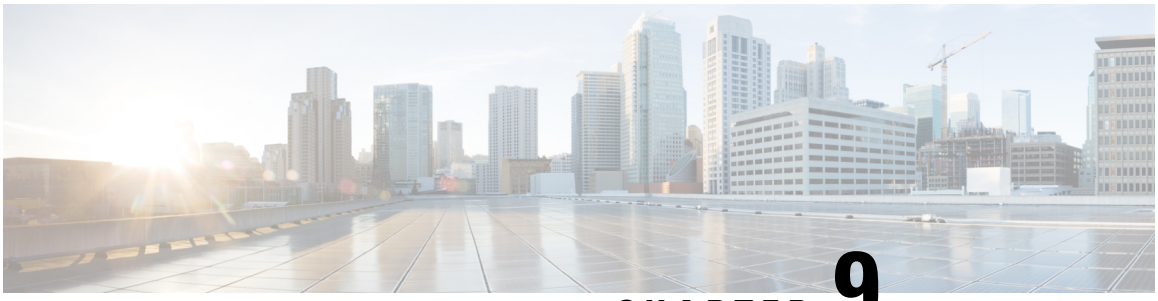
You can use Unity Connection traces to troubleshoot IMAP client problems from the server side. You need to enable the following micro traces to troubleshoot IMAP client problems:

- SMTP (all levels)
- MTA (all levels)
- CuImapSvr (all levels)
- CsMalUmss (all levels)
- CML (all levels)

For detailed instructions on enabling and collecting diagnostic traces, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.

Login via IMAP Fails for LDAPS if IP Address of LDAP Server is Configured

It has been observed that login via IMAP clients for LDAP imported users, fails for LDAP-SSL case, if IP address of LDAP server is configured under LDAP authentication on CUCA page instead of FQDN or hostname of LDAP server. This would not impact the Java applications i.e. login via Cisco PCA would work fine for all the LDAP imported users. Customers who for some reason do not enable DNS must use the following workaround to use any non Java application to authenticate using SSL (CTI, TSP, etc.) The /etc/openldap/ldap.conf file contains information necessary for the openLDAP library to function properly. An issue involving certificates and openLDAP exists where openLDAP must be able to verify the certificate in order to connect to an LDAP server. The problem is, certificates are issued with a Fully Qualified Domain Name (FQDN), and if the customer's are not making use of DNS for any reason, they are required to enter an IP Address on the LDAP Authentication web page (System->LDAP->LDAP Authentication). Part of the openLDAP verification is to match the FQDN with the server being accessed. Since the uploaded certificate uses FQDN and the web form is using IP Address, openLDAP cannot connect. The fix for this is for the customer to use DNS if possible.



CHAPTER 9

Troubleshooting Non-Delivery Receipts

• Troubleshooting Non-Delivery Receipts, on page 81

Troubleshooting Non-Delivery Receipts

Overview

Determine whether the fault lies with the sender, the recipient, or the Cisco Unity Connection server. To gather more information, send voice messages to the recipient from different users. In addition, send voice messages to different users from the original sender.

Non-Delivery Receipt Status Codes

As you examine a nondelivery receipt (NDR), look for a three-digit code (for example, 4.2.2).

Note that in general, the first decimal place refers to the class of code: 4.x.x is a transient failure and resend attempts may be successful, while 5.x.x is a permanent error.

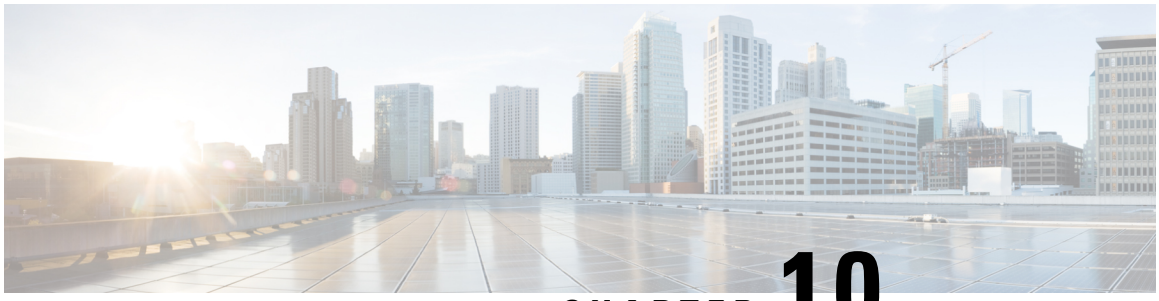
A more detailed analysis and a list of standard errors for SMTP are available in RFC 1893—Enhanced Mail System Status Codes.

Status codes in Unity Connection have the following meanings:

- 4.0.0—An unknown error (for example, connectivity problems) prevented Unity Connection from communicating with another SMTP server.
- 4.0.1—Error connecting to the SMTP server.
- 4.0.2—An unknown error (for example, connectivity problems) prevented Unity Connection from communicating with another SMTP server.
- 4.2.1—The recipient mailbox has been dismounted.
- 4.2.2—The recipient mailbox is over the allotted quota set by the administrator.
- 4.2.4 —There is no valid recipient for the message.
- 4.3.2—The message store where the recipient is located has been dismounted.

- 5.1.1—The recipient mailbox cannot be resolved, possibly because the recipient address does not exist or is not correct.
- 5.2.0—An unknown error condition exists, and Unity Connection cannot process the message.
- 5.4.4—There are errors in the VPIM configuration in Unity Connection.
- 5.5.4—There was a permanent error in connecting to the SMTP server.
- 5.6.5—The conversion of a Unity Connection message to a VPIM message failed.
- 5.7.1—A user attempted to send a private message to a contact, which is not supported.
- 5.7.2—An error occurred during expansion of a distribution list.
- 5.7.3—A user attempted to send a secure message to a contact, which is not supported.
- 5.3.10—A fax message failed.

Note Code 2.0.0 indicates success. Delivery and read receipts contain this status code; NDRs do not.



CHAPTER 10

Troubleshooting Transcription (SpeechView)

Note For Release 14 SU4 and later, refer Troubleshooting Transcription (SpeechView Cisco Webex in-house transcription service), on page 91 for information related to Troubleshooting SpeechView feature.

- Troubleshooting Transcription (SpeechView), on page 83

Troubleshooting Transcription (SpeechView)

Task List for Troubleshooting SpeechView

To troubleshoot issues related to SpeechView, do the tasks mentioned in the sub-sections.

Note For more information on configuring SpeechView, see the SpeechView chapter of the System Administration Guide for Cisco Unity Connection Release 15 at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/15/administration/guide/b_15cucsag.html.

Issues Related to Basic Configuration Settings

1. Check for warnings or errors in Cisco Unity Connection Administration:
   - On the System Settings > Licenses page. An error message on this page alerts you if you have a license violation. Confirm that your SpeechView usage is as you expect by looking at the number of SpeechView users listed under License Count. For more information about license issues, see the Troubleshooting Licensing, on page 183 chapter.
   - On the Unified Messaging > SpeechView Transcription> Service page. Make sure that on the Transcription Service for SpeechView page, the Enabled check box is checked.
   - On the System Settings > Advanced System Settings > Unified Messaging Services page> Transcriptions: Time to Wait for a Transcription Response before Timing Out (In Seconds) field.

Many of the warning and error messages on these pages also include information on how to resolve the problem.

1. Confirm that the voicemail users for which SpeechView needs to be enabled have the class of service setting enabled. In Cisco Unity Connection Administration, expand Class of Service and select Class of Service. Select the applicable class of service. On the Edit Class of Service page, check the Allow Users to Access SpeechView Transcription Service check box and select Save.

Issues with a Proxy Server

If accessing the transcription service via a proxy server, troubleshoot the proxy server:

1. In Cisco Unity Connection Serviceability, use the Voice Network Map tool to verify the health of the digital network. See the "Using the Voice Network Map Tool" chapter of the Administration Guide for Cisco Unity Connection Serviceability *Release 14*, at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.
2. Verify that the server designated as a proxy system is configured to advertise transcription services.
3. Continue with this task list on the proxy server.

Issues with the Transcription Service Configuration

1. If the transcription service registration is failing or times out, review the registration task execution results window for specific error messages.
2. If registration has succeeded, use the Test button to troubleshoot the transcription service configuration:

   In Cisco Unity Connection Administration, expand **Unified Messaging > SpeechView Transcription and select Services**.

   Select the Test button.

   View the test task execution results for specific warnings and error messages.
3. If the test you ran above fails and the transcription service was previously working successfully but has suddenly stopped working, use the Register button to reestablish the registration with the external transcription service:

   In Cisco Unity Connection Administration, expand **Unified Messaging > SpeechView Transcription and select Services**.

   Select the Register button. Another window displaying the results open. The registration process normally takes several minutes.

   View the registration task execution results for specific warnings and error messages.
4. In Unity Connection Serviceability, verify that the Unity Connection SpeechView Processor and the Unity Connection SMTP Server services are running. See the Confirming that Connection SpeechView Processor and Connection SMTP Server Services are Running.
5. Run the SMTP test to verify that messages can successfully be sent from Unity Connection to an external email account outside of your organization. This SMTP test helps you determine whether the registration problem is due to issues in the communication path to the third-party transcription service. See the Running SMTP Test to Verify Outgoing and Incoming SMTP Path.

6. Generate the SpeechView Activity Summary Report to verify that the transcriptions are arriving at the Unity Connection server. For more information, see the "Generating and Viewing Reports" section in the "Using Reports" chapter of the Administration Guide for Cisco Unity Connection Serviceability *Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

Issues Related to User Expectations

1. Confirm that the message in question is of a type that is transcribed. The following messages are never transcribed:
   - Private messages
   - Broadcast messages
   - Dispatch messages

Secure messages are transcribed only if the user belongs to a class of service for which the Allow Transcriptions of Secure Messages option is enabled.

1. Verify that the problem message was not already deleted by the user. When a transcription is received from the third-party transcription service, the transcription text is attached to the original voice message. If users delete a voice message before the transcription is received from the transcription service, the transcription text is attached to the deleted message. It is not considered a new message and is not sent to a notification device.

Note If users belong to a class of service that is configured to move deleted messages to the Deleted Items folder, users can see the transcription in the Deleted Items folder of an IMAP client.

2. If the transcription service is unable to provide a transcription of a message, the user receives a message stating that the transcription cannot be provided and to call Unity Connection to listen to the message. See the Messages that Cannot be Transcribed for details.

Issues with Transcription Notifications

Troubleshoot the notification device configuration. See the Troubleshooting Notification Devices, on page 165.

Enabling Traces and Contacting Cisco TAC

If you still have problems after following all the troubleshooting steps described in this chapter, enable traces and contact the Cisco Technical Assistance Center (TAC). See the Using Diagnostic Traces to Troubleshoot SpeechView.

Confirming that Connection SpeechView Processor and Connection SMTP Server Services are Running

The **Connection SpeechView Processor** service needs to be running only on the acting primary server of a Unity Connection cluster server pair.

The **Connection SMTP Server** service needs to be running on both servers in a Unity Connection cluster server pair.

Step 1 In Cisco Unity Connection Serviceability, on the Tools menu, select **Service Management**.

Step 2 On the Control Center – Feature Services page, under Optional Services, locate the Connection **SpeechView Processor** service.

Step 3 Confirm that the activate status for the **Connection SpeechView Processor** service is **Activated**. If the activate status is Deactivated, select **Activate**.

Step 4 Confirm that the service status for the **Connection SpeechView Processor** service is **Started**. If the service status is Stopped, select **Start**.

Step 5 Confirm that the activate status for the **Connection SMTP Server** service is **Activated**. If the activate status is Deactivated, select **Activate**.

Step 6 Confirm that the service status for the **Connection SMTP Server** service is **Started**. If the service status is Stopped, select **Start**.

Step 7 If using a Unity Connection cluster, repeat Step 5 and Step 6 on the secondary server.

Running SMTP Test to Verify Outgoing and Incoming SMTP Path

The SMTP test is a CLI command that sends a test message to a specified email address. You then access the email account and reply to the test message without changing the subject line. The test passes when the response is received by the Unity Connection server. The success or failure of parts of the test help to narrow down whether the source of the problem is in the outgoing or incoming SMTP configuration.

Step 1 On the Unity Connection server, use the CLI (Command Line Interface) command **run cuc smtptest <email address**. Use an email address that is outside of your organization.

For example, enter “run cuc smtptest johndoe@isp.com”.

Note For details on using CLI commands, see the applicable *Command Line Interface Reference Guide for Cisco Unified Communications Solutions* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

Step 2 Sign in to the email account that you used in Step 1.

Step 3 If the outgoing message is not received at the email address that you specified in Step 1, do the following sub-steps to troubleshoot the problem:

a) Verify that the SMTP smart host setting is configured in Cisco Unity Connection Administration. For details, see the “Task List for Configuring SpeechView” section in the “SpeechView” chapter of the System Administration Guide for Cisco Unity Connection *Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.

b) Verify that Unity Connection can reach the smart host using the CLI command utils network ping <smarthost>.

c) Verify that the smart host is configured to route messages from the Unity Connection server to the outside world.

d) Review the logs on the smart host server.

Step 4 Repeat Step 1 through Step 3 until the test message successfully arrives at the email address you specified in Step 1.

Step 5 Reply to the test message. Do not change the subject line.

Step 6 If the incoming reply message is not received by the CLI test, do the following sub-steps to troubleshoot the problem:

a) Verify that the email address entered in the Incoming SMTP Address field on the Unified Messaging > SpeechView Transcription > Service page in Cisco Unity Connection Administration is being routed correctly. It must be routed by your email infrastructure to the "stt-service" account on the Unity Connection server domain.

For example, if the Incoming SMTP Address is "transcriptions@example.com," the email system must be configured to route transcriptions@example.com to stt-service@connection.example.com.

b) View the Unity Connection SMTP Server component log files to see if the message reached Unity Connection. The SMTP logs are located in diag_SMTP_*.uc. If you see "untrusted client Unity Connection refused" messages in the log files, you need to configure Unity Connection to trust incoming traffic from your email system.

For details on configuring Unity Connection to trust incoming traffic from your email system, see the "Task List for Configuring SpeechView" section in the "SpeechView" chapter of the System Administration Guide for Cisco Unity Connection *Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.

c) View the log files for your email infrastructure for additional clues.

Step 7 Repeat Step 5 through Step 6 until the test message reply is received.

Step 8 If the test continues to fail, enable traces and contact Cisco TAC. See the Using Diagnostic Traces to Troubleshoot SpeechView.

Troubleshooting Transcription Notifications

The problem with transcription notifications may be solved by any of the steps in the procedure, which are arranged in order of likelihood. After each step, retest transcription notifications, and if the problem has not been resolved, continue on to the next step in the procedure.

Step 1 Confirm that messages are being transcribed by following Step 1. through Step 3. in the Task List for Troubleshooting SpeechView.

Step 2 Confirm that the Send Transcriptions of Voice Messages setting is enabled for the SMS or SMTP notification device on the Edit Notification Device page for the user account in Cisco Unity Connection Administration.

Step 3 If the message is a secure message, confirm that the user belongs to a class of service that allows transcriptions of secure messages to be sent to notification devices.

Step 4 Test to see whether the SMS or SMTP notification device receives non-transcription messages by doing the following sub-steps:

a) Verify that the device is configured to notify the user for All Voice Messages.
b) Send a voice message to the user.
c) If the device is not receiving any notifications, see the Troubleshooting Notification Devices, on page 165 chapter for further troubleshooting information.

Step 5 If these steps do not resolve the problem, enable traces and contact Cisco TAC. See the Using Diagnostic Traces to Troubleshoot SpeechView.

Messages that Cannot be Transcribed

The third-party transcription service may have problems transcribing messages if the recording is inaudible or if the sender was speaking in a language that is not supported by the transcription service. In these cases, the service returns a transcription that instructs the user to call Unity Connection to listen to the message.

Transcription Not Synchronized on User Phones

If a user does not receive transcription on the mobile device not qualified with Unity Connection, make sure that the Hold till transcription received option is enabled for the user. To enable the Hold till transcription received option, navigate to Cisco Personal Communications Assistant > Message Assistant> Personal Options.

However, if the Hold till transcription received option is enabled for a Single Inbox (SIB) user with the SpeechView transcription service, the synchronization of a new voice message between Unity Connection and Exchange mailboxes will be done only when Unity Connection receives the transcription of the voice message from the third-party external service.

Transcription Issue after Upgrade

If SpeechView services are enabled on Unity Connection 11.x or later and you are upgrading Cisco Unity Connection to 14, you may face the SpeechView transcription issues. After upgrade, you must register Unity Connection with nuance server.

Do the following to resolve the transcription issue for Unity Connection 14:

Step 1 In Cisco Unity Connection Administration, expand Unified Messaging and select SpeechView Transcription Service.

In the SpeechView Transcription Service page, uncheck the Enabled check box to disable the SpeechView services.

Step 2 In the SpeechView Transcription Service page, check the Enabled check box.

Step 3 Select Get License Data field to acquire the licenses from Cisco Smart Software Manager (CSSM) or Cisco Smart Software Manager satellite.

Step 4 Select Register button to register with the external transcription service.

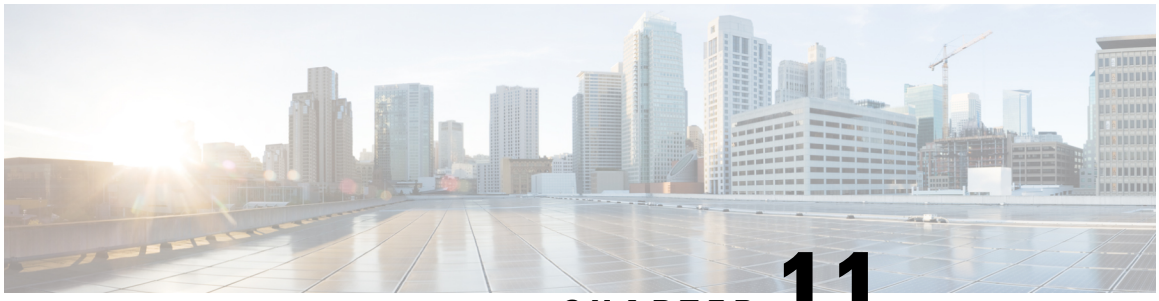
Using Diagnostic Traces to Troubleshoot SpeechView

You can use Unity Connection traces to troubleshoot problems with the SpeechView transcription feature.

Enable the following micro traces to troubleshoot SpeechView problems:

- MTA (level 10, 11, 12, 13)
- SMTP (all levels)
- SttClient (all levels)
- SttService (all levels)
- SysAgent (level 10, 11, 12, 16)
- Notifier (level 16, 21, 25, 30) —if you are troubleshooting problems with delivery to notification devices.

For detailed instructions on enabling and collecting diagnostic traces, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.



CHAPTER 11

Troubleshooting Transcription (SpeechView Cisco Webex in-house transcription service)

- Task List for Troubleshooting SpeechView, on page 91
- Confirming that Connection SpeechView Processor is Running, on page 93
- Troubleshooting Transcription Notifications, on page 94
- Messages that Cannot be Transcribed, on page 94
- Transcription Not Synchronized on User Phones, on page 95
- Transcription Issue after Upgrade, on page 95
- Troubleshooting Transcription Request Timed out, on page 95
- Using Diagnostic Traces to Troubleshoot SpeechView, on page 96

Task List for Troubleshooting SpeechView

To troubleshoot issues related to SpeechView, do the tasks mentioned in the sub-sections.

Note For more information on configuring SpeechView, see the SpeechView (Cisco Webex in-house transcription service) chapter of the System Administration Guide for Cisco Unity Connection Release 14 at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.

Issues Related to Basic Configuration Settings

1. Check for warnings or errors in Cisco Unity Connection Administration:
   - On the **System Settings** > **Licenses** page. An error message on this page alerts you if you have a license violation. Confirm that your SpeechView usage is as you expect by looking at the number of SpeechView users listed under License Count. For more information about license issues, see the Troubleshooting Licensing chapter.
   - Ensure that Unity Connection cluster is onboarded on Cisco Webex Cloud - Connected UC. For more information, see the "Set up Webex Cloud-Connected UC for on-premises devices" in webex Help Center at https://help.webex.com/en-us/article/nzt6c0b/Set-up-Webex-Cloud-Connected-UC-for-on-premises-devices.

To know about Network Requirements for Cisco Webex Cloud-Connected UC, refer https://help.webex.com/en-us/article/fg3qim/Network-Requirements-for-Webex-Cloud-Connected-UC.

- Ensure that "**Speechview Voicemail Transcript**" service is enabled on the Service Management Page of Cisco Webex Cloud-Connected UC. For more information, refer https://help.webex.com/en-us/article/oh49ck/Enable-or-Disable-Webex-Cloud-Connected-UC-Services-in-Control-Hub.
- On the **Unified Messaging > SpeechView Transcription> Service** page. Confirm that SpeechView Status is **Enabled** on the Transcription Service for SpeechView page.

2. Confirm that the voicemail users for which SpeechView needs to be enabled have the class of service setting enabled. In Cisco Unity Connection Administration, expand Class of Service and select Class of Service. Select the applicable class of service. On the Edit Class of Service page, check the **Allow Users to Access SpeechView Transcription Service** check box and select **Save**.

Many of the warning and error messages on these pages also include information on how to resolve the problem.

Troubleshooting the SpeechView in Networking

If accessing the transcription service via a proxy server, troubleshoot the proxy server:

1. In Cisco Unity Connection Serviceability, use the Voice Network Map tool to verify the health of the digital network. See the "Using the Voice Network Map Tool" chapter of the Administration Guide for Cisco Unity Connection Serviceability *Release 14*, at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.
2. Verify that the server designated as a proxy system is configured to advertise transcription services.
3. Continue with Task List for Troubleshooting SpeechView, on page 91 on the proxy server.

Issues with the Transcription Service Configuration

1. Select **Sync License Status** button and check for any warnings. If there are any resolve them.
2. Use the **Test** button to troubleshoot the transcription service configuration:

   In Cisco Unity Connection Administration, expand **Unified Messaging > SpeechView Transcription and select Services**.

   Select the Test button.

   View the test task execution results for specific warnings and error messages.

   Follow the Recommendations present on the task execution results page to resolve the warnings and error messages.
3. In Unity Connection Serviceability, verify that the Unity Connection SpeechView Processor is running. See the Confirming that Connection SpeechView Processor is Running
4. Generate the **SpeechView Activity Summary Report** to verify that the transcriptions are arriving at the Unity Connection server. For more information, see the "Generating and Viewing Reports" section in the "Using Reports" chapter of the Administration Guide for Cisco Unity Connection Serviceability *Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html

Issues Related to User Expectations

1. Confirm that the message in question is of a type that is transcribed. The following messages are never transcribed:
   - Private messages
   - Broadcast messages
   - Dispatch messages
   - Secure messages

Note Secure messages are transcribed only if the user belongs to a class of service for which the Allow Transcriptions of Secure Messages option is enabled.

2. Verify that the problem message was not already deleted by the user. When a transcription is received from the Cisco Webex in-house transcription service, the transcription text is attached to the original voice message. If users delete a voice message before the transcription is received from the transcription service, the transcription text is attached to the deleted message. It is not considered a new message and is not sent to a notification device.

Note If users belong to a class of service that is configured to move deleted messages to the Deleted Items folder, users can see the transcription in the Deleted Items folder of an IMAP client.

3. If the transcription service is unable to provide a transcription of a message, the user receives a message stating that the transcription cannot be provided and to call Unity Connection to listen to the message. See the Messages that Cannot be Transcribed for details.

Issues with Transcription Notifications

Troubleshoot the notification device configuration. See the Troubleshooting Notification Devices, on page 165.

Enabling Traces and Contacting Cisco TAC

If you still have problems after following all the troubleshooting steps described in this chapter, enable traces and contact the Cisco Technical Assistance Center (TAC). See the Using Diagnostic Traces to Troubleshoot SpeechView.

Confirming that Connection SpeechView Processor is Running

The **Connection SpeechView Processor** service needs to be running only on the acting primary server of a Unity Connection cluster server pair.

Step 1 In Cisco Unity Connection Serviceability, on the Tools menu, select **Service Management**.

Step 2 On the Control Center – Feature Services page, under Optional Services, locate the **Connection SpeechView Processor** service.

Step 3 Confirm that the activate status for the **Connection SpeechView Processor** service is **Activated**. If the activate status is Deactivated, select **Activate**.

Step 4 Confirm that the service status for the **Connection SpeechView Processor** service is **Started**. If the service status is Stopped, select **Start**.

Troubleshooting Transcription Notifications

The problem with transcription notifications may be solved by any of the steps in the procedure, which are arranged in order of likelihood. After each step, retest transcription notifications, and if the problem has not been resolved, continue on to the next step in the procedure.

Step 1 Confirm that messages are being transcribed by following the steps mentioned inTask List for Troubleshooting SpeechView.

Step 2 Confirm that the Send Transcriptions of Voice Messages setting is enabled for the SMS or SMTP notification device on the Edit Notification Device page for the user account in Cisco Unity Connection Administration.

Step 3 If the message is a secure message, confirm that the user belongs to a class of service that allows transcriptions of secure messages to be sent to notification devices.

Step 4 Test to see whether the SMS or SMTP notification device receives non-transcription messages by doing the following sub-steps:

a) Verify that the device is configured to notify the user for All Voice Messages.
b) Send a voice message to the user.
c) If the device is not receiving any notifications, see the Troubleshooting Notification Devices, on page 165 chapter for further troubleshooting information.

Step 5 If these steps do not resolve the problem, enable traces and contact Cisco TAC. See the Using Diagnostic Traces to Troubleshoot SpeechView.

Messages that Cannot be Transcribed

The Cisco Webex in-house transcription service may have problems transcribing messages if the recording is inaudible or if the sender was speaking in a language that is not supported by the transcription service. In these cases, the service returns a transcription that instructs the user to call Unity Connection to listen to the message.

Transcription Not Synchronized on User Phones

If a user does not receive transcription on the mobile device not qualified with Unity Connection, make sure that the Hold till transcription received option is enabled for the user. To enable the Hold till transcription received option, navigate to **Cisco Personal Communications Assistant > Message Assistant> Personal Options**.

However, if the Hold till transcription received option is enabled for a Single Inbox (SIB) user with the SpeechView transcription service, the synchronization of a new voice message between Unity Connection and Exchange mailboxes will be done only when Unity Connection receives the transcription of the voice message from the Cisco Webex in-house transcription service.

Transcription Issue after Upgrade

Do the following to resolve the transcription issue after Upgrade for Unity Connection 14:

Step 1 In Cisco Unity Connection Administration, expand Unified Messaging and select SpeechView Transcription Service. If the SpeechView Status is Disabled, verify if the following conditions are met.

a. Unity Connection is registered with Cisco Smart Software Manager (CSSM) or Cisco Smart Software Manager satellite. You have acquired the proper licenses from Cisco to use this feature.

b. Unity Connection cluster is onboarded on Cisco Webex Cloud-Connected UC and "Speechview Voicemail Transcript" service is enabled on the Service Management Page of Cisco Webex Cloud-Connected UC.

Step 2 Select Sync License Data field to sync the licenses from Cisco Smart Software Manager (CSSM) or Cisco Smart Software Manager satellite.

Step 3 If Unity Connection has been onboarded on Cisco Webex Cloud-Connected UC before upgrade to 14 SU4 or later, then after the upgrade Telemetry module may take up to 75 minutes to update its status online on Cisco Webex Cloud-Connected UC. To check the Telemetry module status, refer View the node status for Telemetry Module Inventory. Restart the "**Connection SpeechView Processor**" service on the Connection Serviceability page of the Pubisher sever in the Unity Connection cluster once the Telemetry module status is online on Cisco Webex Cloud-Connected UC.

Note After upgrading to 14 SU4 or later and fulfilling all the prerequisites of SpeechView configuration, if you continue to see the warning banner stating "**Cisco Unity Connection server is not onboarded on Webex Cloud-Connected UC**", you will need to restart the "Connection SpeechView Processor" service on the Connection Serviceability page of the Pubisher sever in the Unity Connection cluster.

Troubleshooting Transcription Request Timed out

If a transcription request is sent successfully to the Cisco Webex in-house transcription service but the transcription response is not received, then the transcription request from Unity Connection will be timed out in 15 minutes. "**The transcription request timed out**" will be displayed under **Message Transcription** in the Web Inbox.

To resolve this, check the Telemetry Module status on Cisco Webex Cloud-Connected UC. It should be online.

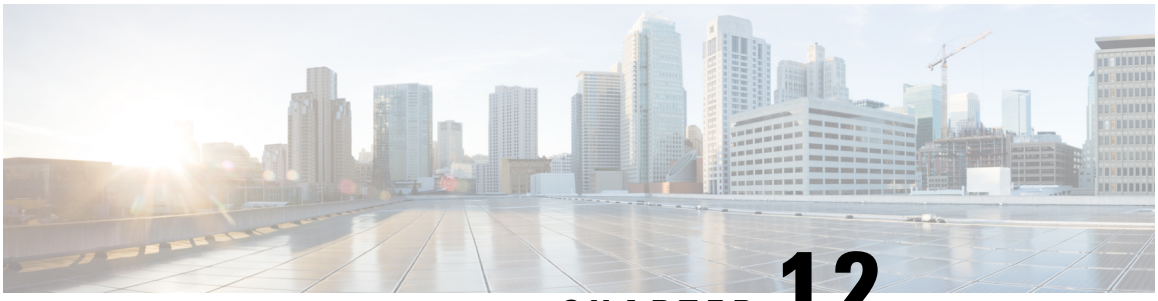
Using Diagnostic Traces to Troubleshoot SpeechView

You can use Unity Connection traces to troubleshoot problems with the SpeechView transcription feature.

Enable the following micro traces to troubleshoot SpeechView problems:

- MTA (level 10, 11, 12, 13)
- SttClient (all levels)
- SttService (all levels)
- SysAgent (level 10, 11, 12, 16)
- Notifier (level 16, 21, 25, 30) —if you are troubleshooting problems with delivery to notification devices.

For detailed instructions on enabling and collecting diagnostic traces, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.



CHAPTER 12

Troubleshooting Networking

• Troubleshooting Networking, on page 97

Troubleshooting Networking

Troubleshooting Intersite Networking Setup

Use the troubleshooting information in this section if you have difficulty creating an intersite link between two site gateways (regardless of whether you are linking two Cisco Unity Connection sites or a Unity Connection site and a Cisco Unity site). See the following sections:

"Unable to Contact the Remote Site" Error When Manually Creating an Intersite Link on the Unity Connection Site Gateway

When you create an intersite link in Cisco Unity Connection Administration using the Link to Cisco Unity Site or Unity Connection Site by Manually Exchanging Configuration Files option, the site gateway on which you are creating the link reads the fully-qualified domain name (FQDN) for the remote site gateway from the configuration file that you upload, and attempts to resolve the FQDN using DNS.

If DNS is not configured on the Unity Connection site gateway, or the remote site gateway that you are linking to cannot be resolved via DNS, Connection Administration displays the error, "Unable to contact the remote site". You may choose to go ahead and create a link to this site, but synchronization with this site does not begin until communication can be established without errors. Do you wish to continue?" (The use of DNS name resolution is optional with Unity Connection.)

When you see this error, do the following procedure to continue creating the link and to enable the synchronization tasks, which are automatically disabled when Unity Connection encounters this error condition.

Manually Creating an Intersite Link When the Remote Site Gateway Cannot Be Resolved Via DNS

Step 1 On the New Intersite Link page, with the error displayed in the Status message, select **Link**. (If you have navigated away from the page, expand **Networking**, expand **Links**, and select **Intersite Links**. Then select **Add**. Select **Link to Cisco Unity Site or Cisco Unity Connection Site by Manually Exchanging Configuration Files**, and select **Browse** to upload the Remote Site Configuration File. Configure other settings on the page as applicable, and select **Link**. Select **Link** again when the error is displayed in the Status message.)

Step 2 On the Edit Intersite Link page, change the **Hostname** value from the FQDN to the IP address of the remote site gateway.

Step 3 Select **Save**.

Step 4 Enable the directory synchronization task by doing the following sub-steps:

a) In the Related Links field in the upper right corner of the Edit Intersite Link page, select **Remote Site Directory Synchronization Task**, and then select **Go**.

Tip Alternatively, you can navigate to the task by expanding **Tools**, selecting **Task Management**, and selecting the **Synchronize Directory With Remote Networ**k task on the Task Definitions page. To edit the task schedule, on the Task Definition Basics page, select **Edit**, and then select **Task Schedules**.

b) Check the **Enabled** check box.
c) Configure the task to run on the desired schedule. (By default, the task runs every 15 minutes.)
d) Select **Save**.

Step 5 To return to the list of tasks, select **Task Definition**, and then select **Task Definitions**.

Step 6 Optionally, enable the voice name synchronization task by doing the following sub-steps:

a) On the Task Definitions page, select **Synchronize Voice Names with Remote Network**.
b) On the Task Definition Basics page, select **Edit**, and then select **Task Schedules**.
c) Check the **Enabled** check box.
d) Configure the task to run on the desired schedule. (By default, the task runs every 15 minutes.)
e) Select **Save**.

"Hostname Entered Does Not Match That on The Remote Site Certificate" Error When Manually Creating an Intersite Link on the Unity Connection Site Gateway

When you create an intersite link in Cisco Unity Connection Administration using the Link to Cisco Unity Site or Unity Connection Site by Manually Exchanging Configuration Files option, the site gateway on which you are creating the link reads the fully-qualified domain name (FQDN) for the remote site gateway from the configuration file that you upload, and, if you check the Use Secure Sockets Layer (SSL) check box, verifies whether the FQDN matches the servername on the remote site gateway web SSL certificate (the certificate for browsing to the machine over HTTPS). If the values do not match, Connection Administration displays the error, "Hostname entered does not match that on the remote site certificate."

When you see this error, you can do the following procedure to repeat the link creation process and to circumvent the error by checking the Ignore Certificate Errors check box.

Manually Creating an Intersite Link When the Remote Site Gateway Hostname Does Not Match the Name on the Certificate

Step 1 On the New Intersite Link page, select **Link to Cisco Unity Site or Cisco Unity Connection Site by Manually Exchanging Configuration Files**, and select **Browse** to upload the Remote Site Configuration File.

Step 2 For Transfer Protocol, check the **Ignore Certificate Error**s check box.

Step 3 Configure other settings on the page as applicable, and select **Link**.

"Unable to Link to the Specified Remote Site. Cause: Failed to Assess the Current Network Size" Error When Creating an Intersite Link on the Unity Connection Site Gateway

When you create an intersite link in Cisco Unity Connection Administration, the Unity Connection site gateway checks to see if the combined number of users and contacts on the gateway would exceed the actual limit after the link is created. It also checks if the combined number of system distribution lists on the gateway would exceed the system distribution list limit.

If the site gateway is unsuccessful at performing these checks, Connection Administration displays the error, "Unable to Link to the Specified Remote Site. Cause: Failed to Assess the Current Network Size." If you see this error, you can view the default traces for the Unity Connection Tomcat Application service (trace log filenames matching the pattern diag_Tomcat_*.uc) and search the file for the term "GetDirectoryCurrentSize." For detailed instructions on viewing the trace logs, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.

For more information on the directory size limits, see the "Unity Connection Directory Size Limits" section in the "Overview of Networking " chapter of the Networking Guide for Cisco Unity ConnectionRelease 12.x, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/12x/networking/guide/b_12xcucnetx.html

"Failed to Link to This Remote Site as This Specified Location is Already Part of the Network" Error When Creating an Intersite Link on the Unity Connection Site Gateway

The error "Failed to link to this remote site as this specified location is already part of the network" is displayed when you attempt to create an intersite link in Connection Administration under any of the following conditions:

- You attempt to create an intersite link from a location to the location itself.
- You attempt to create an intersite link from one location to another location that is a member of the same Unity Connection site.
- You attempt to create an intersite link from a location on one site to a location on another site, and the sites are already linked.

If you see this error, check the hostname information or the configuration file that you are using to create the link. Verify that you are linking to the correct remote site gateway and that a link does not already exist between sites, then retry the linking process.

Troubleshooting HTTPS Networking Setup

Unable to Link to Network Location. Cause: Location is Already Part of the network." Error When Creating an HTTPS Link on Unity Connection"

The error "Unable to link to network location.

Cause: Location is already part of the network" is displayed when you attempt to create an HTTPS link in Cisco Unity Connection Administration under any of the following conditions:

- You attempt to create an HTTPS link from a location to the location itself.
- You attempt to create an HTTPS link from one location L1 to another location L2, and L1 and L2 are already linked to each other in HTTPS network.

- You attempt to create a HTPS link from a location L1 to another location L2, and L2 already exists in the subtree of the L1.

If you see this error, check the hostname information that you are using to create

the link. Verify that you are linking to the correct location and then retry the linking process.

Unable to Link to Network Location. Cause: Publisher (IP Address/FQDN/Hostname) Entered does not Match that on Remote Location Certificate

When you create a HTTPS link from Cisco Unity Connection, and, if you check the Use Secure Sockets Layer (SSL) check box, it verifies whether the entered IPAddress/FQDN/Hostname matches that on the remote location web SSL certificate (the certificate for browsing to the machine over HTTPS). If the values do not match, Cisco Unity Connection Administration displays the error, “Hostname entered does not match that on the remote site certificate.”

When you see this error, you must enter the correct IP/FQDN/Hostname which must matches that on the remote location web SSL certificate or you can use the following procedure and repeat the link creation process to circumvent the error by checking the Ignore Certificate Errors check box.

Creating The HTTPS Link When the Remote Site Gateway Hostname Does Not Match the Name on the Certificate

You can also view the default traces for the Connection Tomcat Application service (trace log filenames matching the pattern diag_Tomcat_*.uc) for further debugging.

Step 1 On the New HTTPS Link page, select Add.

Step 2 For Transfer Protocol, check the Ignore Certificate Errors check box.

Step 3 Configure other settings on the page as applicable, and select Link.

Troubleshooting Directory Synchronization between Two Unity Connections in HTTPS networking

Replication between HTTPS links is accomplished by means of a Feeder service and a Reader service (also referred to as the FeedReader) running on each location. The Reader service periodically polls the remote Feeder service for any directory changes since the last poll interval. The Feeder service checks the change tracking database for directory changes and responds to poll requests with the necessary information. The Feeder service is implemented as a web site that returns directory information in XML format when it receives a request from the remote Reader. Because directory information includes names and extensions, it is treated as confidential, and authentication is required to access the feed. We also recommend that you configure SSL on each location in order to encrypt the directory information.

The synchronization that occurs within a HTTPS link joined recently can take anywhere from a few minutes to a few hours depending on the directory size. Later updates are only synchronize changes since the last cycle, unless you manually request a full resynchronization.

On a Unity Connection location, you can configure the schedule on which the Reader polls the remote Feeder for directory data, and the schedule on which it polls for recorded names. You can access the schedules in Cisco Unity Connection Administration on the Tools > Task Management page by selecting either the Synchronize Directory With Local Network task or the Synchronize Voice Names With Local Network task.

Table 11-1lists some of the tools you can use to collect information about the operation of the Feeder and Reader applications for HTTPS networking.

Troubleshooting Tools for HTTPS Network

Application	Troubleshooting Tool(s)
Reader	The Networking > Links > HTTPS Links page displays statistics about the number of HTTPS links and their display names. Each link displays the number of replicated objects and object changes, the time of last synchronization, and the last time an error occurred during synchronization. • Enable FeedReader micro trace levels 00, 01, 02, 03, 10, and 14. See the Using Diagnostic Traces for Troubleshooting, on page 1 section for instructions.
Feeder	• Enable Feeder micro trace levels 00, 01, 02, and 03. See the Using Diagnostic Traces for Troubleshooting, on page 1 section for instructions.

If you want to manually start an incremental update of the directory on either location, you can do so using the Sync button on the Networking > Links > HTTPS Links in Cisco Unity Connection Administration. To initiate a full resynchronization of the entire directory, use the Resync All button on the same page.

You can also collect Cisco Syslogs for RTMT, which help in analyzing the alerts for HTTP(s) Networking. The path to access Cisco Syslogs is /var/log/active/syslog/CiscoSyslog.

Troubleshooting HTTPS Networking Cases

Distribution Lists and the Members of the Distribution Lists Not Replicating in HTTPS network

When you create a HTTPS link from Cisco Unity Connection Administration, by default the distribution list and its membership is not synced across the HTTPS network. If you want to enable the synchronization of distribution list and its membership info, enable the "Include distribution lists and membership when synchronizing directory data" check box on the edit page of HTTPS Link.

Note If this settings is enabled on one location, then it is required to enable this settings on all the locations which are in HTTPS Network.

When you enable system distribution list synchronization, you cannot disable it after the link is created except by removing and recreating the HTTPS link.

How to Synchronize Selective Objects from HTTPS link

There are instances when remote objects could not get synced from a linked HTTPS location and administrator wants to synchronize some specific objects which are reported in the Networking Sync Error Report. There

is a CLI available on command prompt "utils cuc networking synchttps link" which can be used to synchronize these selective objects.

For more information on Networking Sync Error Report generation, see the "Generating and Viewing Reports" section of the "Using Reports" chapter of the *Administration Guide for Cisco Unified Serviceability Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html

Syntax:utils cuc networking synchttps link [usns | objecttypes] link_display_name usns_list [object_types]

Usage 1: utils cuc networking synchttps link usns link_display_name usn_list

Usage 2: utils cuc networking synchttps link objecttypes link_displayname [object_types]

Parameter Description :

[usns] - option - allows to sync specified USN(s) from the given remote link. Both the parameters link_display_name and usn_list are mandatory.

[objecttypes] - option - allows to sync specified object type(s). Parameter link_displayname is mandatory and object_type is optional.

link_display_name - mandatory parameter - display name of the https link.

usns_list - mandatory parameter to sync USN(s). Maximum of 10 USNs can be specified at once separated by comma (,).

[object_types] - optional parameter for [objecttypes] sync. If no object type is specified then CLI sync all the object types from the specified network link. To synchronization a particular ObjectType such as list or User provide object type with comma (,) separated.

The valid object types are:

1. user
2. list
3. partition
4. searchspace
5. listmember
6. contact.

Note If link_display_name contains white space(s), it should be included in double quotes.

Example 1:

To synchronize a list of USN's from a https network link.

This example shows the selective synchronization of usn number:167, 171 from https-link-1.

Steps to perform the Selective synchronization

Generate the "HTTPS Networking Sync Error Report", for report generation steps, see the "Generating and Viewing Reports" section of the "Using Reports" chapter of the *Administration Guide for Cisco Unified Serviceability Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

Get the list of USN's values from the USN column of the generated report.

Get the “link_display_name” from HTTP (Link) column of the generated report.

1. Run the following CLI command

admin:utils cuc networking synchttps link usns https-link-1 167, 171

Example 2:

Synchronize a particular object type from a HTTPS network link.

This example shows the selective synchronization of user object type from link https-link-1.

Steps to perform the Selective sync

Generate the 'HTTPS Networking Sync Error Report', for generation steps see the “Generating and Viewing Reports” section of the “Using Reports” chapter of the *Administration Guide for Cisco Unified Serviceability Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

Get the objectType from ObjectType column of the generated report.

Get the "link_display_name" from HTTP(Link) column of the generated report.

Run the following CLI command

admin: utils cuc networking synchttps link objecttypes https-link-1 user

How to Synchronize Selective Objects, Voice Names of a Specific Location in HTTPS Networking

There are instances when remote objects could not get synced from a linked HTTPS node of a particular location and admin wants to synchronize some specific objects which are reported in the Networking Sync Error Report. There is a CLI available on command prompt "utils cuc networking synchttps location" which can be used to synchronize these selective objects.

For more information on Networking Sync Error Report generation, see the see the “Generating and Viewing Reports” section of the “Using Reports” chapter of the *Administration Guide for Cisco Unified Serviceability Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

Syntax: utils cuc networking synchttps location [objecttypes | voicename] location_displayname object_alias

Usage 1: utils cuc networking synchttps location objecttypes location_displayname [object_types]

Usage 2: utils cuc networking synchttps location voicename location_displayname object_alias

[objecttypes] - option : allows to sync specified object type(s) for a particular location in http(s) network. Parameter location_displayname is mandatory and object_types is optional.

[voicename] - option : allows to sync voicename of a particular object using its alias. Both location_displayname and object_alias are mandatory parameters.

location_displayname - mandatory parameter : display name of location joined in http(s) networking.

object_alias - mandatory parameter to sync voice name : Alias of particular object (user/distibution list/ contact) whose voicename needs to be synced.

[object_types] - optional parameter for [objecttypes] sync : Comma (,) separated list of object types.

The valid object types are: a) user b) list c) partition d) searchspace e) listmember f) contact.

Note If location_displayname or object_alias contains white space(s), it should be included in double quotes.

If we don't specify any object types, then all the objects of the specified location is synced.

Example 1:

Synchronize an object type from a HTTPS location.

This example shows the selective sync of user object type from location https-location-1

Steps to perform the Selective synchronization

Generate the 'HTTPS Networking Sync Error Report', for generation steps see the "Generating and Viewing Reports" section of the "Using Reports" chapter of the *Administration Guide for Cisco Unified Serviceability Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

Get the object type from ObjectType column of the generated report.

Get the "location_displayname" from "Location Display Name" column of the generated report.

Run the following CLI command

admin:utils cuc networking synchttps location objecttypes https-location-1 user.

Example 2:

Synchronize voicename of a user with alias u1 from HTTPS location.

Performing the Selective Synchronization for Voicename

Step 1 Identify the home-location of the user u1.

Search for the user u1 on location https-locatio-l1, and fetch the home location of the user u1. For reference let's name it as home-location.abc.com.

Step 2 Use the following CLI command on command prompt to fetch the voice name.

admin: utils cuc networking synchttps location voicename home-location.abc.com u1.

How to Swap Extensions in HTTPS Networking

When you create an HTTPS link from Cisco Unity Connection Administration, the users are synchronized across the HTTPS network. There are instances when user extensions are inter changed at one node and administrator wants to synchronize the extensions across HTTPS remote nodes.

Use case 1:

1. Create two users on node A, UserA with Extension 1000, UserB with Extension 1001.
2. Perform sync across HTTPS network.
3. Change the extension of UserA to 1002 and UserB with Extension 1000 on local node.
4. Change the extension of User A to 1001.

5. After performing steps 3 and 4, the extension of UserA and UserB are inter changed.
6. Again, perform sync across HTTPS network.

When the HTTPS sync is performed and UserA try to update the extension to 1001, which is already assigned to UserB on remote node. The operation to update extension at remote node fails.

However, to inter change extensions across HTTPS network it is recommended to perform following steps:

1. Create two users on node A, UserA with Extension 1000, UserB with Extension 1001.
2. Perform sync across HTTPS network.
3. Change the extension of UserA to 1002 and UserB to 1000 on local node.
4. Perform sync across HTTPS network.
5. Change the extension of User A to 1001.
6. Perform sync across HTTPS network.
7. After performing step 3 to step 6, the extension of UserA and UserB are inter changed across HTTPS network.

How to Remove Orphan Objects from Unity Connection HTTPS network

Orphan objects: If the replication objects such as users, contacts and distribution list gets removed from the home location, but it does not get removed from the HTTPS linked location after completion of synchronization task, then the object is termed as orphan object on the HTTPS linked location.

Administrator can use the following steps to remove the Orphan objects of linked HTTPS location 'HTTPS-Location-2' from location 'HTTPS-Location-1'.

Following are the steps to remove Orphan objects from Unity connection

1. Enable the orphan object removal configuration by running following CLI from command prompt on location Https-Location-1.

   First fetch the object id of the configuration parameter "IsOrphanObjectDeletionEnable" from tbl_configuration.

admin:run cuc dbquery unitydirdb select objectid, fullname, value from vw_configuration where fullname='System.LocalNetwork.IsOrphanObjectDeletionEnable'

Using the objectId fetched in step 1.a and execute the following procedure to enable the orphan object removal configuration.

admin:run cuc dbquery unitydirdb execute procedure csp_configurationmodify(pobjectid='ObjectId', pvaluebool=1)

1. Perform Re-sync operation on HTTPS-Location-1 using Re-sync All buttons on the Networking > HTTPS Links > Search HTTPS Links page in Cisco Unity Connection Administration for the HTTPS-Location-2.
2. It is required to disable this configuration once the re-sync operation gets completed. To disable the configuration use the following command with the same objectId used in 1)a.

admin: run cuc dbquery unitydirdb execute procedure csp_configurationmodify(pobjectid='ObjectId', pvaluebool=0)

Received RTMT NetworkLoopDetected

If admin receives the RTMT alert NetworkLoopDetected then you can do below steps to rectify this scenario.

1. Configure Network Analyzer Tool for Https network. For more information on network analyzer, see the http://www.ciscounitytools.com/Applications/General/NetworkAnalyzer/NetworkAnalyzer.html.
2. Analyze the graphical view of the network to find the locations which are creating the loop.
3. Unjoin and join the concerned locations from the network in an appropriate topology to resolve the loop.

Sender Receives NDR When Sending Voice Message to Distribution List

When the membership information of the concerned distribution list has been updated recently and this membership information has not been replicated to the entire network, the receiving node may send NDR as it does not have the updated membership info.

Make sure that the updated membership information should be replicated to the entire network before sending voice-messages to this DL.

Troubleshooting Message Addressing

Message addressing involves the ability to select recipients when creating a new message. Use the troubleshooting information in this section if users report that they are unable to address messages to recipients on another voice messaging system.

If a message is successfully created and sent to a remote recipient but is not received by the recipient, see the Troubleshooting Message Transport.

Users Cannot Address Messages to Remote Users, Contacts, or System Distribution Lists

If Unity Connection users are unable to address messages to remote objects within a Unity Connection site or on a linked Unity Connection or Cisco Unity site, do the following tasks in the order presented:

1. Check for the presence of the remote object in Unity Connection on the location on which users are experiencing the problem. This indicates whether the remote object has been replicated. If the object is not found, see the Troubleshooting Directory Synchronization for further troubleshooting steps.
2. Check the partition and search space configuration. The remote object to which the message is being addressed must belong to a partition that is a member of the search space configured as the search scope for the user. See the Checking the Partition and Search Space Configuration for Addressing to Remote Objects.
3. Turn on the CDE micro trace (level 12 CDL Access). For detailed instructions on enabling the traces and viewing the trace logs, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.

Checking the Partition and Search Space Configuration for Addressing to Remote Objects

If you have only a single Unity Connection site, when you initially set up the site between locations, users who are homed on one location are not able to address messages to users at other locations, because the users on each location are in separate partitions and use search spaces that do not contain the partitions of users on the other locations. After initial replication completes between the locations, you can reconfigure your search spaces to include partitions that are homed on other servers, and you can change the search scope of users, routing rules, call handlers, directory handlers, and VPIM locations to use a search space that is homed on a

remote location. (Note that while both partitions and search spaces are replicated between locations, you cannot assign users or other objects to a partition that is homed on another location.)

If you have linked one Unity Connection site to another Unity Connection site, partitions and search spaces are replicated between the sites. However, when you initially set up the link between sites, the users are in separate partitions and use search spaces that do not contain the partitions of users on the locations in the other site. After initial replication completes between the sites, you can reconfigure your search spaces to include partitions that are homed on the remote site, and you can change the search scope of users, routing rules, call handlers, directory handlers, and VPIM locations to use a search space that is homed on a location in the remote site.

When you link a Unity Connection site and a Cisco Unity site, a partition is automatically created in the Unity Connection directory for each Cisco Unity server, and all Cisco Unity users and replicated system distribution lists that are homed on the server are placed in the partition. However, the partition is not automatically added to search spaces on the Unity Connection locations. In order for Unity Connection users to have permission to address messages to Cisco Unity users or replicated distribution lists, you must add the partition to the search spaces used by those Unity Connection users. Note that the order a partition appears in a search space is important if users address messages by extension. If, for example, Unity Connection and Cisco Unity users have overlapping 4-digit extensions and you want Unity Connection users to be able to reach other Unity Connection users by their 4-digit primary extension and reach Cisco Unity users by a unique 7-digit alternate extension, make sure that the Cisco Unity partition appears after any Unity Connection partitions that contain the overlapping 4-digit extensions.

At a minimum, when a Unity Connection user is unable to address to a remote user or other object, you can do the following procedure to check whether the partition of the remote object is in the search space of the user that is attempting to address to the object.

Checking Whether the Partition of a Remote Object Belongs to the Search Space of a Cisco Unity Connection User

Step 1 In Cisco Unity Connection Administration on the location on which the Unity Connection user who is having the addressing problem is homed, browse to the Edit page for the object the user is trying to address to:

- For a remote user, select **Users**. On the Search Users page, use the Search Limits fields and the search criteria to find the remote user. Select the user alias of the remote user to display the Edit User Basics page.
- For a remote contact, select **Contacts**. On the Search Contacts page, use the Search Limits fields and the search criteria to find the remote contact. Select the alias of the remote contact to display the Edit Contact Basics page. (Note that contacts are only replicated within a single site.)
- For a remote system distribution list, expand **Distribution Lists**, then select **System Distribution Lists**. On the Search Distribution Lists page, use the Search Limits fields and the search criteria to find the remote system distribution list. Select the alias of the remote list to display the Edit Distribution List Basics page. (Note that, depending on the intersite link and distribution list configuration, distribution lists may not be replicated across an intersite link.)

Step 2 On the Edit page for the object, note the value in the Partition field.

Step 3 Note the search space of the Unity Connection user who is having the addressing problem:

a) Select **Users**.
b) On the Search Users page, use the Search Limits fields and the search criteria to find the user who is having the addressing problem.
c) Select the alias of the user to display the Edit User Basics page.
d) On the Edit User Basics page, note the value of the Search Scope field.

Step 4 Check the configuration of the search space that you noted in Step 3:

a) Expand **Dial Plan**, and select **Search Spaces**.
b) On the Search Search Spaces page, use the Search Limits fields and the search criteria to find the search space that you noted in Step 3.
c) Select the name of the search space.
d) On the Edit Search Space page, if the partition that you noted in Step 2 is not in the Assigned Partitions list, find it in the Unassigned Partitions list, select it, and click the up arrow to move it to the Assigned Partitions list. Then click **Save**.

Note If the search space is homed on another location, select the link in the Status message at the top of the page to edit the search space from the remote location. A new window opens to Connection Administration on the remote location.

Cisco Unity Users Cannot Address Messages to Unity Connection Users or System Distribution Lists

If Cisco Unity users are unable to address messages to users on a Unity Connection site to which Cisco Unity is linked via an intersite link (also known as Unity Connection Networking), do the following tasks in the order presented:

1. Check for the presence of the Unity Connection user object as a Unity Connection Networking subscriber in the Cisco Unity Administrator. This indicates whether the Unity Connection user object has been replicated. If the object is not found, see the Troubleshooting Directory Synchronization for further troubleshooting steps.
2. If the problem involves addressing by extension, check to see if the Unity Connection user object has an extension in Cisco Unity, and if so, check whether the extension matches the format that Cisco Unity users are expecting. See the Troubleshooting Unity Connection User Extension Creation in Cisco Unity.

Troubleshooting Unity Connection User Extension Creation in Cisco Unity

When you link a Unity Connection site and a Cisco Unity site, the Unity Connection user and system distribution list objects that are created in the Cisco Unity directory belong to the dialing domain that is configured on the Cisco Unity site gateway. Because the Unity Connection search space and partition design accommodates overlapping extensions and may include users who have a primary extension and alternate extensions in different partitions, you must choose how to map Unity Connection extensions to the Cisco Unity Dialing Domain. To do so, for each Unity Connection location, you specify a single partition that Cisco Unity pulls extensions from. (In Cisco Unity Connection Administration, you configure the Local Partition That Cisco Unity Users Can Address to By Extension field on the Edit Location page for the local location.)

When users from a particular Unity Connection location are replicated to Cisco Unity, only extensions belonging to Local Partition That Cisco Unity Users Can Address to By Extension are replicated to Cisco Unity. Because extensions within a dialing domain must be unique, the collection of all partitions chosen across the Unity Connection site should not contain duplicates of any extension. When the collection includes duplicate extensions, or extensions that already exist in the Cisco Unity site gateway Dialing Domain, one or more extensions are omitted from the Cisco Unity directory. When this occurs, warnings appear in the Cisco Unity application event log indicating the owner of each omitted extension. After remedying any conflicts, you may need to do a manual resynchronization on the Cisco Unity site gateway (by selecting Total Sync on the Network > Unity Connection Networking Profile page in Cisco Unity Administrator) in order to update the extensions.

It is also possible for a Unity Connection user to not have any extensions belonging to the Local Partition That Cisco Unity Users Can Address To By Extension configured on the server on which the user is homed. In this case, as in other cases where the Unity Connection user object is created without an extension, Cisco Unity users are not able to address to the user by extension.

If the problem involves many user extensions on the same Unity Connection location, you may need to change the partition chosen as the Local Partition That Cisco Unity Users Can Address to By Extension for the location.

Configuring the Partition that Cisco Unity Users Can Address To for a Cisco Unity Connection Location

Step 1 In Cisco Unity Connection Administration on the Unity Connection location, expand **Networking**, then select **Locations**.

Step 2 Expand **Local Site** and select the display name of the local location (the location on which you are accessing Connection Administration).

Step 3 Under Local Partition That Cisco Unity Users Can Address To By Extension, for Partition, select the name of the partition to use and select **Save**.

Unity Connection Users Cannot Address Messages to Recipients at a VPIM Location

Addressing to a particular recipient at a VPIM location can fail for one of the following reasons:

- Blind addressing is disabled for the VPIM location, and no VPIM contact exists for the recipient. If you are relying on automatic VPIM contact creation to populate VPIM contacts based on incoming messages, it is possible that contact creation is not set up properly for this location, or that no messages have been received from the remote user. Check the settings on the Contact Creation page for the VPIM location in Cisco Unity Connection Administration.
- A VPIM contact exists, but users are unable to locate it because the extension is incorrect or the contact name does not match user searches. Check the VPIM contact configuration in Connection Administration.
- Users are attempting to blind address to VPIM recipients, but the DTMF Access ID of the VPIM location is incorrect or does not match the pattern users are attempting to enter when addressing. Check the value of the DTMF Access ID setting on the Edit VPIM Location page in Connection Administration, and confirm that users are aware of the correct value.
- The user search scope does not include the partition of the VPIM contact or VPIM location. If the VPIM contact partition does not match the partition of the VPIM location to which the contact belongs, the search results depend on the method used to address the message as well as the partition and search space configuration. When users address messages to a VPIM mailbox by entering a VPIM location DTMF Access ID plus a remote user mailbox number, or when voice-recognition users say a name and location (for example, “John Smith in Seattle”), the action is allowed or denied based on the partition of the VPIM location. However, when users address to a VPIM contact using spell-by-name or by entering the local extension of the contact, or when voice-recognition users say the name of a contact without the location (for example, “John Smith”), the action is allowed or denied based on the partition of the VPIM contact, regardless of whether the partition of the VPIM location is out of scope for the user. In Connection Administration, on the Edit User Basics page for the user, check which search space is configured as the search scope. Then check which partition is configured for the VPIM contact (on the Edit Contact Basics page) or for the VPIM location (on the Edit VPIM Location page), as applicable. Finally, check the Edit Search Space page for the user search space to determine whether the partition appears in the Assigned Partitions list.

Unity Connection Users Cannot Blind Address Messages to a Mailbox at a VPIM Location

Blind addressing allows users to send messages to recipients at the VPIM location even if the recipients are not defined as contacts in the Unity Connection directory. If blind addressing is not working, confirm that you have enabled it for an individual VPIM location by checking the Allow Blind Addressing check box on the VPIM Location page in Cisco Unity Connection Administration. When this check box is checked for a location, users can address messages to recipients at this location by entering a number that is made up of the VPIM location DTMF Access ID and the mailbox number of the recipient, or by saying the digits of the mailbox number and the display name of the VPIM location (for example, “five five at Seattle office”).

Troubleshooting Message Transport

Unity Connection uses SMTP to exchange voice messages with other systems. This includes VPIM messages, messages between users within a Unity Connection site, messages to users on a different Unity Connection site or on a Cisco Unity site, and messages sent to Unity Connection by IMAP clients or forwarded by Unity Connection to the relay address configured on the Message Actions page for a user.

In order for a Unity Connection system to exchange SMTP messages with other voice messaging systems or Unity Connection locations, the system must either be able to directly access TCP/IP port 25 on the remote system, or be configured to deliver messages to an SMTP smart host that can relay messages to the system. When VPIM Networking is in use within a Unity Connection networking site, typically you create each VPIM location on only one Unity Connection server in the site; the other locations in the site then forward messages that are addressed to users at the VPIM location to the Unity Connection server that homes the VPIM location for delivery. In this case, only this Unity Connection server needs SMTP connectivity (either directly or through a smart host) with the remote messaging system.

When a message is recorded by a Unity Connection user for delivery to a remote system, the message is first processed by the Message Transfer Agent (MTA). This service formats the message. For example, for a VPIM message, the MTA formats the To: and From: fields on the message, sets the content-type of the message to multipart/Voice-Message, and sets other header properties. It then places the message in a pickup folder on the Unity Connection server. The SMTP service periodically checks the pickup folder for messages, removes a message from the folder, determines the destination server from the message header, establishes an SMTP Unity Connection to the correct server, and sends the message. The process is reversed when Unity Connection receives an incoming message via SMTP—the message is first processed by the SMTP service, then the MTA service.

Use the troubleshooting information in this section if you are experiencing difficulties with message transport.

Messages Sent from Users on One Unity Connection Location Not Received by Users on Another Unity Connection Location

In general, messages that are successfully addressed to a remote user using the phone interface should be delivered as long as SMTP connectivity is established between the locations. A notable exception occurs when a user replies to all recipients of a received message, and some of those recipients are not in the search scope of the replying user. In this case, the replying user receives a non-delivery receipt for any recipient who is not in the search scope.

Messages sent using an IMAP client to a remote user can fail if the profile information for the remote user (specifically, the SMTP proxy address information of the remote user) has not fully replicated to the Unity Connection location of the sending user. To diagnose and correct this condition, see the Troubleshooting Directory Synchronization.

If the issue does not appear to be related to the partition and search space configuration or directory replication, you may be able to further diagnose the problem by turning on the Message Tracking Traces macro trace. For detailed instructions on enabling the traces and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.

Replies to Messages Sent by Remote Senders Not Delivered

In cases where you have recently added a location to a site or linked sites, it is possible for messages to be received from remote senders whose user object has not yet replicated to a location. If a user attempts to reply to a message that was sent by a sender whose user object has not yet replicated, the reply is not delivered, and the sender receives a non-delivery receipt (NDR). When this happens, the user who attempted the reply can resend the reply after the user object of the original message sender has replicated, and the reply is successfully delivered.

Messages Sent from a VPIM Location Not Received by Unity Connection Users

In order for incoming VPIM messages to be received and processed correctly, the following are required:

- SMTP connectivity must be available between the originating voice messaging system and Unity Connection.
- If messages from the originating voice messaging server are routed through a smart host that is different from the one that is configured on the System Settings > SMTP Configuration > Smart Host page in Cisco Unity Connection Administration, the IP address of this smart host must be added to the IP Address Access List as an allowed Unity Connection. (On the System Settings > SMTP Configuration > Server page, select Edit > Search IP Address Access List to view or modify the access list.)
- The domain name in the incoming message “From” field must match the Remote VPIM Domain Name value that is defined for the VPIM location in Connection Administration.
- If a Remote Phone Prefix value is defined for the VPIM location, the mailbox number in the incoming message “From” field must begin with the prefix digits.
- If a Cisco Unity Connection Phone Prefix is defined for the VPIM location, the mailbox number in the incoming message “To” field must begin with the prefix digits.
- The Unity Connection users receiving the message must be in a partition that is a member of the search space that is defined as the search scope of the VPIM location on the receiving server.
- If intersite networking is in use, the VPIM location must be configured on a Unity Connection location within the Unity Connection site on which the recipient is homed. VPIM locations and contacts are replicated within a site but are not replicated across intersite links, and site gateways do not relay VPIM messages to other sites.

You can verify SMTP connectivity and check the format of the “From” and “To” fields by turning on all levels of SMTP micro traces. (“MAIL FROM” and “RCPT TO” appear in the SMTP trace logs.) In addition, when you turn on all levels of MTA micro traces, the MTA log contains information about the processing of the message, including messages describing prefix processing errors. You can use the message ID listed at the end of the output file path name in the SMTP logs (for example, csUnitySmtp-30-1223425087697), to locate a message in the MTA log, or search by the recipient address (for example, 5551212@receiving-server-domain.com). For detailed instructions on enabling the traces and viewing the trace logs, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.

Messages Sent from Unity Connection Not Received by Users at a VPIM Location

In order for outgoing VPIM messages to be received and processed correctly, the following are required:

- SMTP connectivity must be available between Unity Connection and the receiving voice messaging system, either through direct TCP/IP connectivity to port 25, or through an SMTP smart host. (You can configure the SMTP smart host on the System Settings > SMTP Configuration > Smart Host page in Cisco Unity Connection Administration.)
- The audio attachment on the VPIM message must be in a format that is playable on the remote system. If the remote voice messaging system is not Unity Connection or Cisco Unity, you may need to configure the Outbound Messages setting for the VPIM location in Cisco Unity Connection Administration to use the G.726 codec to transcode the audio format.

As with incoming VPIM messages, when troubleshooting outgoing messages, we recommend that you start by turning on all MTA and SMTP micro traces. When examining the logs for outgoing message issues, start with the MTA log first, then review the SMTP log. For detailed instructions on enabling the traces and viewing the trace logs, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.

Troubleshooting Directory Synchronization

Use the troubleshooting information in this section if you are experiencing difficulties with directory synchronization either within a Unity Connection site (intrasite networking) or between sites (intersite networking).

Troubleshooting Directory Synchronization Within a Unity Connection Site

Within a site, each location uses SMTP to exchange directory synchronization information and messages directly with every other location. Use the troubleshooting information in this section if you are experiencing difficulties with directory synchronization within a single Unity Connection site.

Unique Sequence Numbers (USNs) Mismatched Between Locations

The Unity Connection Locations pages in Cisco Unity Connection Administration provide information about the status of replication between locations. On the Edit Unity Connection Location page for a remote location, the Last USN Sent, Last USN Received, and Last USN Acknowledged fields indicate the sequence numbers of replication messages sent to and from the remote location. When two locations are fully synchronized, the Last USN Sent and Last USN Acknowledged values on the location that is sending replication updates should equal the Last USN Received on the location that is receiving updates.

During replication, it is normal for the Last USN Acknowledged value to lag behind the Last USN Sent value.

During a push synchronization, the Last USN Sent may display a very large value while the Last USN Acknowledged shows a much smaller value. This is normal. Monitor the Last USN Acknowledged to make sure it continues increasing toward the Last USN Sent value. If it does not, see the Manual Directory Replication is Stalled.

You can also use the Voice Network Map tool in Cisco Unity Connection Serviceability to check replication status within a site. The tool is particularly useful because it allows you to view replication status for all locations in the network from one place, so that you can quickly locate replication problems within a site. For more details, select Help > This Page from within the tool, or see the "Using the Voice Network Map Tool" chapter of the Administration Guide for Cisco Unity Connection Serviceability *Release 14* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

Automatic Directory Replication is Stalled

Directory changes on one Unity Connection server are automatically propagated to other locations in the site. If either the Last USN Acknowledged value that is displayed on the sending location or the Last USN Received value that is displayed on the receiving location stops incrementing toward the Last USN Sent value that is displayed on the sending location, replication may be stalled. This can happen when a Unity Connection location receives an update to an object that depends on another object about which it has not received information. For example, the addition of a member to a distribution list depends on the presence of a user record for the member being added. If the location has not received the information about the user record, it waits for a default of five minutes to see if the directory message containing the user record information arrives to satisfy the dependency.

In most cases, the problem should resolve itself after the five minute time-out, at which point the receiving Unity Connection system requests that the record be re-sent. If the problem is not resolved, use the Real-Time Monitoring Tool (RTMT) or the command line interface (CLI) to check the Application System log to see if any errors have been reported by the CuReplicator application. For information on using RTMT to view system logs, see the Cisco Unified Real-Time Monitoring Tool Administration Guide at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

You may also want to turn on Digital Networking macro traces to diagnose a replication issue. For detailed instructions on enabling intrasite networking replication traces and viewing the trace logs, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.

Manual Directory Replication is Stalled

When an administrator initiates a manual push or pull of the directory between two Unity Connection locations, the Push Directory or Pull Directory status displayed on the Networking > Unity Connection Locations page for the remote location in Cisco Unity Connection Administration may indicate that replication is in progress, but the Last USN Acknowledged or Last USN Received values on the Edit Unity Connection Location page may not be changing. If this problem occurs, try stopping the push or pull operation by checking the check box next to the display name of the remote location on the Unity Connection Locations page and selecting Stop Push (if the Push Directory status for that location indicates a push is in progress) or Stop Pull (if the Pull Directory status for that location indicates a pull is in progress). You can then restart the manual replication.

Push and Pull Status Mismatched Between Locations

When an administrator initiates a manual push or pull of the directory between two Unity Connection locations, the Push Directory status displayed on the Networking > Links > Intrasite Links page in Cisco Unity Connection Administration on the sending location should match the Pull Directory status displayed in Connection Administration on the receiving location (for example, both should display In Progress during replication).

If the status does not match, wait at least five minutes. If it still does not match, you may be able to correct the mismatch by doing the following procedure.

Resynchronizing Push and Pull Status Between Locations

Step 1 In Cisco Unity Connection Administration on the location that displays Idle status for the push or pull, check the check box next to the display name of the mismatched location, and select **Push Directory To** or **Pull Directory From** to start the operation that should display In Progress.

For example, if location one shows a push is in progress and location two shows a pull is idle, on location two, check the check box next to the location one display name and select Pull Directory From.

Step 2 When the operation status displays as In Progress, wait a minute, then recheck the check box for the remote location and stop the operation by selecting either **Stop Push** or **Stop Pull**, as applicable.

Troubleshooting Directory Synchronization Between Two Unity Connection Sites

Replication between sites is accomplished by means of a Feeder service and a Reader service (also referred to as the FeedReader) running on each site gateway. The Reader service periodically polls the remote site gateway for any directory changes since the last poll interval. The Feeder service checks the change tracking database for directory changes and responds to poll requests with the necessary information. The Feeder service is implemented as a web site that returns directory information in XML format when it receives a request from the remote Reader. Because directory information includes names and extensions, it is treated as confidential, and authentication is required to access the feed. We also recommend that you configure SSL on each site gateway in order to encrypt the directory information.

The synchronization that occurs after two sites are first joined can take anywhere from a few minutes to a few hours depending on the directory size. Later updates only synchronize changes since the last cycle, unless you manually request a full re-synchronization.

On a Unity Connection site gateway, you can configure the schedule on which the Reader polls the remote Feeder for directory data, and the schedule on which it polls for recorded names. You can access the schedules in Cisco Unity Connection Administration on the Tools > Task Management page by selecting either the Synchronize Directory With Remote Network task or the Synchronize Voice Names With Remote Network task.

Table 4: Troubleshooting Tools for Intersite Replication Between Unity Connection Sites lists some of the tools you can use to collect information about the operation of the Feeder and Reader applications for intersite networking.

Table 4: Troubleshooting Tools for Intersite Replication Between Unity Connection Sites

Networking	Application	Troubleshooting Tool(s)
HTTPS	Reader	• The Networking > Links > Intersite Links > Edit Intersite Link page displays statistics about the number of replicated objects and object changes, the time of last synchronization, and the last time an error occurred during synchronization. • Enable FeedReader micro trace levels 00, 01, 02, 03, 10, and 14. See the Using Diagnostic Traces for Troubleshooting, on page 1 section for instructions.
	Feeder	• Enable Feeder micro trace levels 00, 01, 02, and 03. See the Using Diagnostic Traces for Troubleshooting, on page 1 section for instructions.
Digital Networking	CuReplicator	• Enable all levels of CuReplicator.
	SMTP	• Enable all levels of SMTP.

If you want to manually start an incremental update of the directory on either site, you can do so using the Sync button on the Networking > Links > Intersite Links page in Cisco Unity Connection Administration on

the Unity Connection site gateway. To initiate a full resynchronization of the entire directory, use the Resync All button on the same page.

Troubleshooting Directory Synchronization Between a Unity Connection Site and a Cisco Unity Site

Replication between sites is accomplished by means of a Feeder service and a Reader service running on each site gateway. The Reader service periodically polls the remote site gateway for any directory changes since the last poll interval. The Feeder service checks the change tracking database for directory changes and responds to poll requests with the necessary information. The Feeder service is implemented as a web site that returns directory information in XML format when it receives a request from the remote Reader. Because directory information includes names and extensions, it is treated as confidential, and authentication is required to access the feed. We also recommend that you configure SSL on each site gateway in order to encrypt the directory information.

The synchronization that occurs after two sites are first joined can take anywhere from a few minutes to a few hours depending on the directory size. Later updates only synchronize changes since the last cycle, unless you manually request a full resynchronization.

On the Unity Connection site gateway, you can configure the schedule on which the Reader (also referred to as the FeedReader in Unity Connection) polls the remote Feeder for directory data, and the schedule on which it polls for recorded names. In Cisco Unity Connection Administration on the site gateway, you can access the schedules on the Tools > Task Management page by selecting either the Synchronize Directory With Remote Network task or the Synchronize Voice Names With Remote Network task.

On the Cisco Unity site gateway, you can enable or disable synchronization of recorded names, and configure the interval at which the Reader polls the Unity Connection Feeder for directory updates and recorded names. In the Cisco Unity Administrator on the site gateway, you can access both settings (Synchronize Voice Names and Feeder Interval) on the Networking > Unity Connection Networking page. Note that unlike the Unity Connection Reader, which has separate configurable schedules for polling directory data and recorded names, the Cisco Unity Reader polls for both (if recorded name synchronization is enabled) during each cycle.

Table 5: Troubleshooting Tools for Intersite Replication Between Cisco Unity Connection and Cisco Unity lists the tools and details you can use to collect information about the operation of the Feeder and Reader applications for both Cisco Unity Connection and Cisco Unity.

Table 5: Troubleshooting Tools for Intersite Replication Between Cisco Unity Connection and Cisco Unity

Application	Troubleshooting Tool(s)
Connection Reader	• The Networking > Links > Intersite Links > Edit Intersite Link page displays statistics about the number of replicated objects and object changes, the time of last synchronization, and the last time an error occurred during synchronization. • Enable FeedReader micro trace levels 00, 01, 02, 03, 10, and 14. See the Troubleshooting Cisco Unity Connection, on page 1 chapter for instructions.
Connection Feeder	• Enable Feeder micro trace levels 00, 01, 02, and 03. See the Troubleshooting Cisco Unity Connection, on page 1 chapter for instructions.

Application	Troubleshooting Tool(s)
Cisco Unity Reader	• The Networking > Unity Connection Networking page in the Cisco Unity Administrator on the site gateway displays statistics about the number of replicated objects and object changes, the time of last synchronization, and the last time an error occurred during synchronization. • The Cisco Unity Reader logs operational and error messages to the Windows Application Event Log. • For additional troubleshooting information, use the Cisco Unity Diagnostic Tool to configure the CuDirReader micro traces (all levels except level 2). Note that there are several threads involved in reading objects from Unity Connection and writing them to SQL and to Active Directory. To follow an object through the log file, search by its Unique Sequence Number (USN), the ID of the object, or the alias. For instructions, see the Troubleshooting Cisco Unity Connection, on page 1 chapter. The log file may grow very large if you have Reader traces turned on while the initial synchronization or a full resynchronization is in progress between sites.
Cisco Unity Feeder	• Use the Cisco Unity Diagnostic Tool to configure the CuFeeder micro traces. The trace logs can be found in diag_w3wp. For instructions, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.

If you want to manually start an incremental update of the directory on either site, you can do so using the Sync button on the Networking > Links > Intersite Links page in Cisco Unity Connection Administration on the Unity Connection site gateway or using the Sync Now button on the Network > Unity Connection Networking page in the Cisco Unity Administrator on the Cisco Unity site gateway. To initiate a full resynchronization of the entire directory, use the Resync All button on the Networking > Links > Intersite Links page in Cisco Unity Connection Administration on the Unity Connection site gateway or the Total Sync button on the Network > Unity Connection Networking page in the Cisco Unity Administrator on the Cisco Unity site gateway.

Cross-Server Sign-In and Transfers

When a Unity Connection servers is networked with other Unity Connection or Cisco Unity locations, cross-server features can be configured such that:

- Calls are transferred to users who are not associated with the local server, according to the call transfer and screening settings of the user who is receiving the transfer. (This includes calls that are transferred from the automated attendant or the corporate directory, and live reply calls that are transferred when a user listens to a message and chooses to reply by calling the sender.) This functionality is referred to as a cross-server transfer.
- When calling from outside the organization to sign in, users—no matter which is their home server—can call the same number and are transferred to the applicable home server to sign in. This functionality is referred to as a cross-server sign-in.

Use the troubleshooting information in this section if you are experiencing difficulties with cross-server sign-in or transfers.

Users Hear the Opening Greeting Instead of PIN Prompt When Attempting to Sign-In

If a user attempts a cross-server sign-in and hears the opening greeting, the problem may be caused by one of the following:

- The originating location is not configured for cross-server sign-in hand-offs to the destination location. In Cisco Unity Connection Administration on the originating location, confirm that the Allow Cross-Server Sign-In to this Remote Location check box is checked on the Edit Unity Connection Location page for the destination location.
- The user is not found in the search scope on the originating location. Unity Connection uses the search scope of the call when it reaches the Attempt Sign-In conversation to identify which user is trying to sign in. In Cisco Unity Connection Administration on the originating location, check the direct call routing rules to determine which search space is set by the rule that sends calls to the Attempt Sign-In conversation. If the partitions that contain remote users are not a part of this search space, cross-server sign-in does not work, even if it is enabled.

Users Hear a Prompt Indicating that their Home Server Cannot be Reached During Cross-Server Sign-In

When a cross-server sign-in hand-off fails to complete successfully, users hear a prompt indicating that their home server cannot be reached at this time. This may happen for one of the following reasons:

- The destination location is not configured to accept cross-server hand-offs. In Cisco Unity Connection Administration on the destination location, confirm that the Respond to Cross-Server Handoff Requests check box is checked on the System Settings > Advanced > Conversations page.
- The Cross-Server Dial String that is defined for the destination location on the originating location is incorrect, or the originating location is unable to place a call to this string using the phone system integration that is used to dial out. In Connection Administration on the originating location, check the Cross-Server Dial String value on the Edit Unity Connection Location page.
- No ports are available to dial out on the originating location or to answer the call on the destination location. You can use the Unity Connection Port Usage Analyzer to help determine if port usage is becoming a problem for cross-server transfers.

User ID and PIN Not Accepted During Cross-Server Sign-In

If a user attempts a cross-server sign-in and the call appears to be handed off correctly to the destination location but the user cannot sign in, the most likely cause is that the user is not found in the search scope on the destination location, or another user with an overlapping extension is found first in the search scope.

Unity Connection uses the search scope of the call when it reaches the Attempt Sign-In conversation to identify which user is trying to sign in, both on the originating and destination locations. In general, we recommend that the same search scope be used by the routing rules that handle cross-server sign-in on both the originating and destination locations. If necessary, you can add a routing rule on the destination location that specifically handles cross-server calls (for example, based on the calling number matching the extension of a port at the originating location).

To determine which search space is in use as the search scope during the call, turn on the CDE micro trace (level 4 Search Space). For detailed instructions on enabling the traces and viewing the trace logs, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.

For information on configuring call routing rules and managing partitions and search spaces, see the "Dial Plan" section of the "Call Management" chapter of the *System Administration Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.

Callers Prompted to Leave a Message Instead of Being Transferred to the Remote User

If callers are prompted to leave a message for a user at the destination location even though the active transfer rule for that user is configured to transfer calls to an extension, this is may be a sign that the cross-server transfer hand-off has failed. This can happen for one of the following reasons:

- The originating location is not configured to perform cross-server transfers to the destination location. In Cisco Unity Connection Administration on the originating location, confirm that the Allow Cross-Server Transfer to this Remote Location check box is checked on the Edit Unity Connection Location page for the destination location.
- The destination location is not configured to accept cross-server hand-offs. In Connection Administration on the destination location, confirm that the Respond to Cross-Server Handoff Requests check box is checked on the System Settings > Advanced > Conversations page.
- The Cross-Server Dial String that is defined for the destination location on the originating location is incorrect, or the originating location is unable to place a call to this string using the phone system integration that is used to dial out. In Connection Administration on the originating location, check the Cross-Server Dial String value on the Edit Unity Connection Location page.
- No ports are available to dial out on the originating location or to answer the call on the destination location. You can use the Unity Connection Port Usage Analyzer to help determine if port usage is becoming a problem for cross-server transfers. You can download the tool and view the Port Usage Analyzer Help at http://www.ciscounitytools.com/Applications/CxN/PortUsageAnalyzer/PortUsageAnalyzer.html.

Note that if the currently active transfer extension for the user is configured to perform a supervised transfer to an extension that is busy, callers are transferred to voicemail to leave a message when the If Extension Is Busy field is configured to do so, even if the cross-server transfer was successful.

Callers Transferred to the Wrong User at the Destination Location

If a caller attempts a cross-server transfer and the call appears to be handed off correctly to the destination location but the caller reaches the wrong user at the destination, the most likely cause is that another user with an overlapping extension is found first in the search scope when the call is passed to the destination.

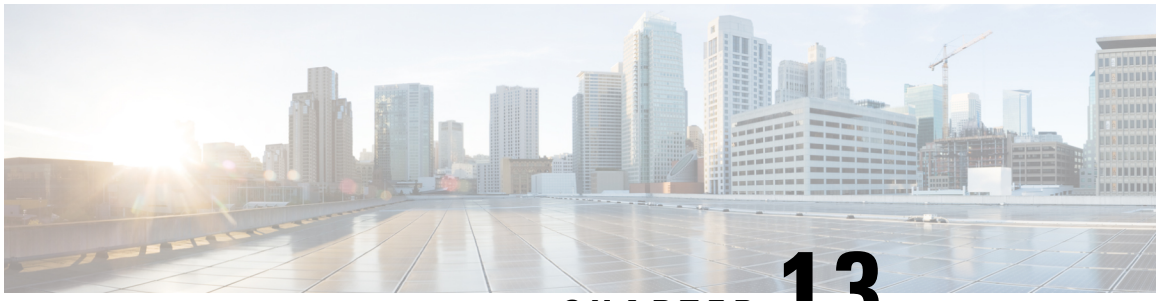
To determine which search space is in use as the search scope during the call, turn on the CDE micro trace (level 4 Search Space). For detailed instructions on enabling the traces and viewing the trace logs, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.

Callers Hear a Prompt Indicating that Call Cannot be Completed When Attempting to Transfer to a Remote User

If a caller attempts a cross-server transfer and the call appears to be handed off correctly to the destination location, but the caller hears a prompt indicating that the call cannot be completed and Unity Connection

hangs up, the most likely cause is that the remote user is not found in the search scope when the call is passed to the destination.

To determine which search space is in use as the search scope during the call, turn on the CDE micro trace (level 4 Search Space). For detailed instructions on enabling the traces and viewing the trace logs, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.



CHAPTER 13

Troubleshooting Cisco Unity Connection SRSV

• Troubleshooting Cisco Unity Connection SRSV, on page 121

Troubleshooting Cisco Unity Connection SRSV

Error Message Appears When Testing the Connectivity of Unity Connection with Branch

You may receive the following error messages on the Edit Branch page of Cisco Unity Connection Administration when you test the connectivity of Unity Connection with the branch:

- "Authentication failed. Incorrect Username and Password": If you receive the "Authentication failed. Incorrect Username and Password." error message on the Edit Branch page when you test the connectivity of the central Unity Connection server with the branch, make sure that the username and password of the branch entered on the Edit Branch page are correct.
- "Branch is unreachable": If you receive the "Branch is unreachable" error message on the Edit Branch page when you test the connectivity of the central Unity Connection server with the branch, make sure that the PAT port number specified on the Edit Branch page is correct.
- "Server Address is Invalid": If you receive the "Server Address is Invalid" error on the Edit Branch page, make sure that the FQDN/IP address of the branch entered on the Edit Branch page is correct. In case DNS is configured, make sure that the IP address of the branch is added to it.

Certificate Mismatch Error Message for Appears on the Central Unity Connection Server

If you are getting the "Unable to start provisioning." error on the Edit Branch page of Connection Administration page, make sure that the hostname of the branch mentioned in the certificate installed on the central Unity Connection server is correct.

Unable to login to Cisco Unity Connection SRSV Administration

Connection SRSV Administration gets locked if you enter incorrect administrator username and password of the branch three times on the Edit Branch page of Connection Administration. To unlock the Connection SRSV Administration interface, you need to reset the administrator credentials for the branch using the utilsreset_application_ui_administrator_password CLI command. For more information on this command, see "Utils Commands" chapter of the *Command Line Interface Reference Guide for Cisco Unified Communications Solutions*, available at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

Branch User is Unable to Login through Telephony User Interface (TUI)

If a branch user is unable to login through the TUI, check the following:

- Make sure that the PIN entered on the central Unity Connection server is synchronized with the branch through provisioning.
- If the branch user is logging in for the first time through the TUI, make sure that the user has set the PIN at the central Unity Connection server and provisioning is done successfully.

Status of Provisioning Remains In Progress for a Long Time

If the status of provisioning on Connection Administration remains "In Progress" for a long time, consider the following:

- Check the network connectivity of the central Unity Connection server with the branch.
- Check whether the central Unity Connection server details are entered correctly on the branch.
- Check whether the Unity Connection Branch Sync Service is active on both central Unity Connection server and branch. For more information on the services required for Connection SRSV, see the "Managing Cisco Unity Connection Services" chapter of the Cisco Unified Serviceability Administration Guide, Release 14 available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.
- Check whether the REST services are active on central Unity Connection server and branch.

Provisioning from the Central Unity Connection Server to Branch Not Working

If the provisioning of the users from the central Unity Connection server to the branch does not work, make sure that the license status at central Unity Connection server is not "Expire". If the license status at central Unity Connection server is "Expire", you need to install the required licenses for the central Unity Connection server to make the license status as "Compliance" and start provisioning. For more information on licensing requirements, see the "Managing Licenses" chapter of the *Install, Upgrade, and Maintenance Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/install_upgrade/guide/b_14cuciumg.html.

Status of Provisioning is Partial Success

If the status of the provisioning on the Branch Sync Results page is "Partial Success", consider the following:

- Make sure that the name of an administrator on the branch is not same as the name of a subscriber on the central Unity Connection server associated with the branch.
- Make sure that the extension of a call handler at the branch is not used as the extension of a branch user at the central Unity Connection server.
- Make sure that the deleted user on the central Unity Connection server is not used on the branch. For example, if a branch user on Unity Connection is used as operator on Connection SRSV, make sure to change the operator at branch before deleting the user at central Unity Connection server.
- Make sure that the deleted distribution list on the central Unity Connection server is not used on the branch. For example, if a distribution list is used in a call handler template on the branch, make sure to change the distribution list in the template before deleting the distribution list.

Provisioning/Voicemail Upload Remains in Scheduled state for a Long Time

If the provisioning of the users or voicemail upload remains in the Scheduled state for a long time, make sure that the Unity Connection Branch Sync Service is active on the central Unity Connection server.

Unable to Reach a Branch User through Telephony User Interface (TUI)

If you are not able to reach a branch user through TUI, make sure that the associated partition is added in the Search Space of the central Unity Connection server.

Unable to Send a Voice Message to a Branch User During WAN Outage

If you are unable to send a voice message to a branch user during WAN outage, make sure that Visual VoiceMail (VVM) is not installed on your phone. For more information, contact your phone service provider.

Error Messages Appear on the Branch Sync Results Page

If the username and password of the branch is not entered correctly on the Edit Branch page, the provisioning of the users and the voicemail upload does not work and you receive the following error messages or status in the Description field of the Branch Sync Results page of Cisco Unity Connection Administration:

- Unable to start Provisioning of the branch:: Message = Authentication failed.
- Unable to fetch voice mail summary of the branch:: Message = Authentication failed.

If you receive the “Unable to start provisioning of the branch:: Message=Central Server is not Configured on CUCE” error message on the Branch Sync Results page of Cisco Unity Connection Administration when you start provisioning of the branch, enter the correct FQDN/ IP address of the central Unity Connection server on Cisco Unity Connection SRSV Administration to resolve the problem.

Logs are Not Created or SRSV feature Not Working Properly

If the logs for the branch are not generated or the SRSV feature is not working properly, you may restart the Unity Connection Branch Sync Service and the REST APIs on both the branch and Unity Connection sites to resolve this issue.

Unable to Perform Backup/Restore Operation on the Branch

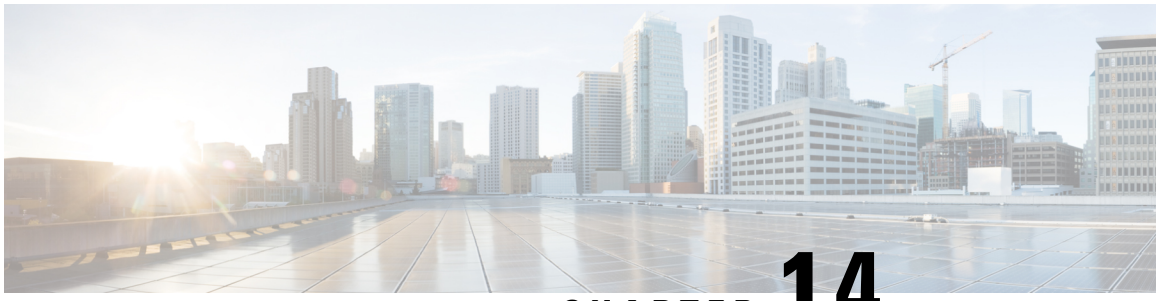
If you are unable to perform the backup/restore operation on the branch, make sure that the backup server is configured correctly on the branch.

Central Unity Connection Server Moves to Violation State

If the central Unity Connection server moves to the Violation state, make sure that the number of licenses for the Unity Connection features, such as SpeechView and Connection SRSV, does not exceed its maximum limit. For more information on licensing, see the "Managing Licenses" chapter of the *Install, Upgrade, and Maintenance Guide for Cisco Unity Connection, Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/install_upgrade/guide/b_14cuciumg.html.

Non-Delivery Receipts (NDR) on the Central Unity Connection Server

If you are getting NDR on the central Unity Connection server but the same email is delivered on the branch, check the NDR code and take action accordingly. For example, if user A sends email to user B from the branch, the email gets successfully delivered to user B on the branch. However, on the central Unity Connection server, user A receives "4.2.2" NDR code stating that the mailbox quota of user B has exceeded its maximum limit. In this case, user B needs to take appropriate action, such as delete existing emails or get the mailbax quota increased to receive further emails. For more information on NDR codes, refer to the Troubleshooting Non-Delivery Receipts, on page 81 chapter of this guide.



CHAPTER 14

Troubleshooting Video Messaging

- Troubleshooting Video Messaging, on page 125

Troubleshooting Video Messaging

Error Message Appears When You Test the Connectivity of Video Services

You may receive the following error messages on the Edit Video Service page of Cisco Unity Connection Administration when you test the connectivity of Unity Connection with the video server:

- "Video Server cannot be contacted by pinging."

If you receive the "Video Server cannot be contacted by pinging." error message on the Tasks Execution Results page while testing connectivity of Unity Connection with the video server, make sure:

- The DNS server is up and running.
- The FQDN, IP address, or hostname of the video server entered on the Edit Video Service page is correct.

Note If the DNS server is not available, make sure that you enter only the IP address in the Video Server Field and the Allow Self Signed Certificate for Video Servers check box is checked.

- The state of video server is active and running.
- The system firewall is not blocking ICMP protocol.
- "Video server is not responding on the port <port number>.":

If you receive the "Video server is not responding on the port <port number>." error message on the Tasks Execution Results page when you test the connectivity of the Unity Connection with video server, make sure that the port number entered on the Edit Video Service page is correct.

- "Username or password is incorrect.":

If you receive the "Username or password is incorrect." error message on the Tasks Execution Results page when you test the connectivity of the Unity Connection with video server, make sure that the username and password of video server entered on the Edit Video Service page are correct.

- "Failure in validating the video server certificates.":

If you receive the "Failure in validating the video server certificates." error message on the Tasks Execution Results page when you test the connectivity of the Unity Connection with video server, make sure:

- The DNS server is up and running.
- The valid video server certificates are uploaded on Unity Connection. If the valid video server certificates are not uploaded, make sure that the third-party video server certificates are uploaded and the Allow Self Signed Certificate for Video Server check box is not checked on the New Video Service page.

Note If the DNS server is not available, make sure that you enter only the IP address in the Video Server field and the Allow Self Signed Certificate for Video Server check box is checked.

Error Message Appears When You Test the Connectivity of Video Service Account with Video Services

You may receive the following error messages on the Video Service Accounts Status page of Cisco Unity Connection Administration when you test the connectivity of the video service account (of a user) with video services:

- "The Enable Video settings are disabled for this user in the Edit Class of Service page."

If you receive the "The Enable Video settings are disabled for this user in the Edit Class of Service page." error message on the Tasks Execution Results page when you test the configuration of video service account with video services, make sure that you have selected the Enable Video settings in the Edit Class of Service page for that user.

- "Video service is disabled."

If you receive the "Video service is disabled." error message on the Tasks Execution Results page when you test the configuration of the video service account with video services, make sure that you have selected the Enabled option in the Edit Video Service page.

- You may receive the same error messages that appeared when testing the connectivity of Unity Connection with video server. For more information on error messages, see Error Message Appears When You Test the Connectivity of Video Services.

Unable to Establish Video Call through Telephone User Interface (TUI)

If a user login via direct sign-in using telephone user interface and is unable to establish a video call, check the following:

- The DNS server is up and running. If the DNS server is not available, make sure that you enter only the IP address in the Video Server field and the Allow Self Signed Certificate for Video Server check box is checked.
- Make sure that the Cisco Camera and Video Capabilities options are enabled for the device in Cisco Unified Communications Manager.
- Make sure that the state of video server is up and running using the Test button on the Edit Video Service page.
- Make sure that you have restarted the Connection Conversation Manager service after updating the video service.
- Check the connectivity of video service account (of a user) with video server.
- Check whether the Map Video Service option is enabled in video service account for the user.
- Check whether the H.264 video format (or codec) is advertised for integrating with video endpoint.
- Make sure that you integrate Unity Connection with Cisco Unified Communications Manager over SIP.
- Make sure that the root certificate of video server is uploaded in Tomcat-trust of Unity Connection.
- Make sure that each server in a Unity Connection cluster does not exceed the maximum of 25 concurrent video calls.

Unable to record Video greeting or message through Telephone User Interface (TUI)

If a user is unable to record video greetings or messages using telephone user interface, check whether the state of video server using the Test button on the **Edit Video Service** page.

Unable to playback Video greeting through Telephone User Interface (TUI)

If a user login via direct sign-in using telephone user interface and is unable to playback video greetings, consider the following:

- Check whether the state of video server is active and running using the Test button on the Edit Video Service page.
- Check whether the My Personal Recording option is enabled for video greetings in the Callers See section for the user.
- If the video file on video server is corrupted, re-record the video greeting. A video file is considered corrupted when the video greeting gets downgraded to audio during playback.
- If the response time from DNS is slow, the playback of two subsequent video greetings is delayed.

Unable to Play Video Greetings When Received Unanswered Call

In case of an unanswered call (“ring-no-answer”), if the called user is unable to play video greeting to the calling user, check the following:

- Whether the state of video server is active and running using the Test button on the Edit Video Service page.
- Check whether the video service account is created for a user.
- Check the connectivity of video service account (of a user) with video server.
- Check whether the My Personal Recording option is enabled for video greetings in the Callers See section for the user.
- Check whether the Outside Caller option is enabled in the Edit Class of Service page for the called user if the calling user is an unidentified caller.

Video Call Downgrades to Audio while Recording/Playing Video Message

If the video call downgrades to audio with the“video services are not available, using audio for the duration of call” prompt while playing or recording the video message, check the following:

- Whether the state of video server is active and running using the Test button on the **Edit Video Service** page.
- Check the error codes sent by the video server.

Video Playback Hangs in Between

If the video recording hangs while playback, do the following:

- Press # button on TUI to end the playback and continue with the call.
- Check the conversation logs to diagnose the issue.

Troubleshooting Video Quality of Video Greetings and Messages

If the video quality is poor during the playback of video greeting or video message, check the following:

- Check and reduce the KeyFrame Requests interval mentioned in the **Interval in Seconds for sending KeyFrame Requests to End Point during recording** option. To do this, login to Cisco Unity Connection Administration, navigate to **Advanced** > **Telephony** and select **Interval in Seconds for sending KeyFrame Requests to End Point during recording**.
- Check and update the value of the session bit rate for video calls in the **Maximum Session Bit Rate for Video Calls in Cisco Unified Communications Manager** option depending on the video resolution settings the administrator have selected in Cisco Unity Connection Administration. To check and update the session bit rate, login to Cisco Unified Communications Manager, navigate to **System** > **Region Information** > **Region**, and update the value of **Maximum Session Bit Rate for Video Calls** field. To configure video resolution, login to Unity Connection Administration, navigate to **Port Group** > **Port Group Basics** > **Change Advertising** and update the value in the **Video Resolution** field.

Error Codes Send by Cisco MediaSense

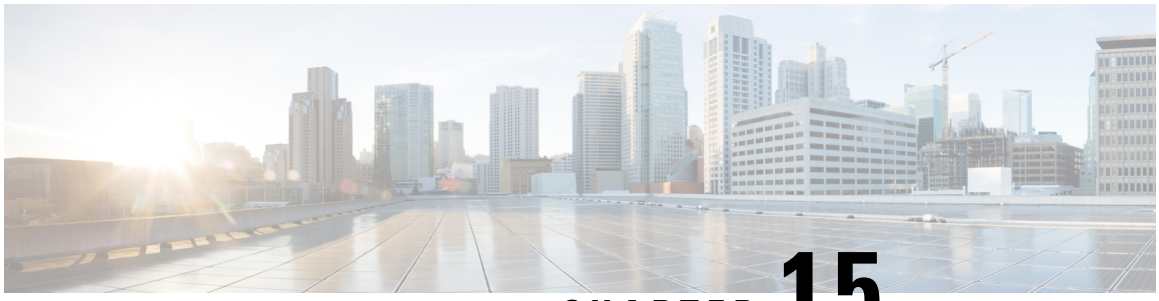
Unity Connection integrates with Cisco MediaSense video server. You may receive the following error codes at RTMT tool from Cisco MediaSense.

Error Codes Received by Cisco MediaSense

Error Code	Description	Applicable to
E_MIU_MS_CONNECTOR_FALIURE	If there is no response or error in HTTP response from Cisco MediaSense.	At the time: • Establishing a video call • Recording a video greeting • Playback of video greeting.
E_MIU_MS_AUTHENICATION_FAILURE	Username or password is incorrect	At the time of establishing a video call using telephone user interface.
E_MIU_MS_REDIRECT_FAIL	If the redirect IP address or hostname is missing in the response, Cisco MediaSense sends response 3000.	At the time of establishing a video call using telephone user interface.
E_MIU_MS_SESSION_ID_NOT_FOUND	If the requested session ID is not available at Cisco Media Sense.	During playback of video greetings
E_MIU_MS_INTERNAL_FAILURE	If the unknown server error is occurred, Cisco MediaSense sends response 5000.	At the time of establishing a video call
E_MIU_MS_ERROR_UNKNOWN	If any request to Cisco MediaSense fails.	At the time of establishing a video call
E_MIU_MS_RESPONSE_CODE_UNKNOWN	If there is no response code or the response code field is completely missing in the response from Cisco MediaSense.	At the time of establishing a video call

For troubleshooting the scenarios received at the time of establishing a video call, see the Unable to Establish Video Call through Telephone User Interface (TUI).

For more information on the error codes received from Cisco MediaSense, see the Cisco MediaSense Developer Guide.



CHAPTER 15

Troubleshooting the Phone System Integration

• Troubleshooting the Phone System Integration, on page 131

Troubleshooting the Phone System Integration

Diagnostic Tools

There are diagnostic tools available to help you troubleshoot phone system integrations. For more information, see the sections below.

Configuring Unity Connection for the Remote Port Status Monitor

You can use the Remote Port Status Monitor for viewing the real-time activity of each voice messaging port on Cisco Unity Connection. This information assists you in troubleshooting conversation flow and other problems.

After installing the Remote Port Status Monitor on your workstation, do the following procedure to configure Unity Connection.

Note For detailed information on using the Remote Port Status Monitor, see the training and Help information available at http://www.ciscounitytools.com/Applications/CxN/PortStatusMonitorCUC7x/PortStatusMonitorCUC7x.html.

Configuring Unity Connection for the Remote Port Status Monitor

Step 1 In Cisco Unity Connection Administration, expand **System Settings**> **Advanced** > **and select** > **Conversations**. On the Conversation Configuration page, check the **Enable Remote Port Status Monitor Output** check box.

Step 2 In the IP Addresses Allowed to Connect for Remote Port Status Monitor Output field, enter the IP addresses of your workstations and select Save.

Note You can enter up to 70 IP addresses. Each IP address must be separated from the following IP address by a comma.

Using the Check Telephony Configuration Test

You can use the Check Telephony Configuration test to troubleshoot the phone system integration.

For example, use this test if the following conditions exist:

- Calls to Unity Connection are failing.
- Ports are failing to register.

Using the Check Telephony Configuration Test

Step 1 In Cisco Unity Connection Administration, in the Related Links box in the upper right corner of any Telephony Integrations page, select **Check Telephony Configuration** and select **Go**.

If the test is not successful, the Task Execution Results displays one or more messages with troubleshooting steps. After correcting the problems, run the test again.

Step 2 In the Task Execution Results window, select **Close**.

Troubleshooting Call Control

Use the following troubleshooting information if the phone system integration has problems related to call control. Do the following tasks, as applicable:

- Use the Check Telephony Configuration test. See the Using the Check Telephony Configuration Test.
- Use traces to troubleshoot call control issues. For detailed instructions on enabling the applicable traces and viewing the trace logs, see the Traces in Cisco Unity Connection Serviceability, on page 1.
- *(Cisco Unified Communications Manager integrations only)* If you hear a fast busy tone when you call Cisco Unity Connection, verify the configuration for the phone system integration. See the applicable Integration Guide for Cisco Unity Connection at http://www.cisco.com/en/US/products/ps6509/products_installation_and_configuration_guides_list.html.

Unity Connection Not Answering Any Calls

When the phone system settings in Connection Administration do not match the type of phone system that Unity Connection is connected to, Unity Connection may not answer calls.

Verifying the Phone System Settings in Cisco Unity Connection Administration

If the test is not successful, the Task Execution Results displays one or more messages with troubleshooting steps. After correcting the problems, run the test again.

1. In the Task Execution Results window, select **Close**.

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**.

2. On the applicable pages, confirm that the settings for the phone system, port groups, and ports match those indicated in the integration guide for your phone system.
3. Correct any incorrect values in Cisco Unity Connection Administration. If you change any values, select **Save** before leaving the page.
4. If prompted to reset a port group, on the applicable Port Group Basics page, select **Reset**. Otherwise, continue to Step 5.
5. In the Related Links list, select **Check Telephony Configuration** and select **Go** to verify the phone system integration settings.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**.

Step 2 On the applicable pages, confirm that the settings for the phone system, port groups, and ports match those indicated in the integration guide for your phone system.

Step 3 Correct any incorrect values in Cisco Unity Connection Administration. If you change any values, select **Save** before leaving the page.

Step 4 If prompted to reset a port group, on the applicable Port Group Basics page, select **Reset**. Otherwise, continue to Step 5.

Step 5 In the Related Links list, select **Check Telephony Configuration** and select **Go** to verify the phone system integration settings.

Unity Connection Not Answering Some Calls

When Unity Connection is not answering some calls, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

Following are the tasks to troubleshoot sporadic answers on incoming calls:

1. Confirm that the routing rules are working correctly. See the Confirming Routing Rules.
2. Confirm that calls are sent to the correct voice messaging ports and that the ports are enabled. See the Confirming Voice Messaging Port Settings.

Confirming Routing Rules

By default, Unity Connection does not reject any calls. If routing rules have been changed, Unity Connection may have been unintentionally programmed to reject some internal or external calls.

Use traces to troubleshoot issues with routing rules. For detailed instructions on enabling the applicable traces and viewing the trace logs, see the Traces in Cisco Unity Connection Serviceability, on page 1.

Confirming Voice Messaging Port Settings

If the phone system is programmed to send calls to a voice messaging port on Unity Connection that is not configured to answer calls, Unity Connection does not answer the call.

Confirming that Calls are Sent to the Correct Voice Messaging Ports on Cisco Unity Connection

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.
2. On the Search Ports page, note which ports are designated to answer calls.
3. On the phone system, in the phone system programming, confirm that calls are being sent only to those voice messaging ports that are designated to answer calls. Change the phone system programming if necessary.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.

Step 2 On the Search Ports page, note which ports are designated to answer calls.

Step 3 On the phone system, in the phone system programming, confirm that calls are being sent only to those voice messaging ports that are designated to answer calls. Change the phone system programming if necessary.

Confirming that Voice Messaging Ports are Enabled

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.
2. On the Search Ports page, review the Enabled column.
3. If a voice messaging port is not enabled and should be in use, select the display name of port.
4. On the Port Basics page for the port, check the **Enabled** check box to enable the port.
5. On the Port menu, select **Search Ports**.
6. Repeat Step 3 through Step 5 for all remaining ports that should be in use.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.

Step 2 On the Search Ports page, review the Enabled column.

Step 3 If a voice messaging port is not enabled and should be in use, select the display name of port.

Step 4 On the Port Basics page for the port, check the **Enabled** check box to enable the port.

Step 5 On the Port menu, select **Search Ports**.

Step 6 Repeat Step 3 through Step 5 for all remaining ports that should be in use.

Troubleshooting an Integration of Unity Connection with Cisco Unified Communications Manager

Viewing or Editing IP Address of Cisco Unified Communications Manager

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations** > **and** select **Port Group**.
2. On the Search Port Groups page, select the display name of the port group for which you want to change Cisco Unified CM server settings.
3. On the Port Group Basics page, on the Edit menu, select **Servers**.
4. On the Edit Servers page, under Cisco Unified Communications Manager Servers, change the applicable settings and select **Save**.
5. If no status message appears, skip the remaining steps in this procedure. If a status message appears prompting you to reset the port group, on the Edit menu, select **Port Group Basics**.
6. On the Port Group Basics page, under Port Group, select **Reset**.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations** > **and** select **Port Group**.

Step 2 On the Search Port Groups page, select the display name of the port group for which you want to change Cisco Unified CM server settings.

Step 3 On the Port Group Basics page, on the Edit menu, select **Servers**.

Step 4 On the Edit Servers page, under Cisco Unified Communications Manager Servers, change the applicable settings and select **Save**.

Step 5 If no status message appears, skip the remaining steps in this procedure. If a status message appears prompting you to reset the port group, on the Edit menu, select **Port Group Basics**.

Step 6 On the Port Group Basics page, under Port Group, select **Reset**.

Ports Do Not Register or Repeatedly Disconnected in an SCCP Integration

When the Unity Connection voice messaging ports do not register with Cisco Unified CM in an SCCP integration, or if the Unity Connection ports repeatedly disconnect from Cisco Unified CM in an SCCP integration, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

Following are the tasks to troubleshoot port registration problems:

1. Test the port group. See the Testing the Port Group.
2. Confirm that another port group on the Unity Connection server does not use the same device name prefix to connect ports to the Cisco Unified CM server. See the Confirming that Another Port Group Not Using the Same Device Name Prefix.
3. Confirm that another Unity Connection server does not use the same device name prefix to connect its ports to the Cisco Unified CM server. See the Confirming that Another Unity Connection Server Not Using the Same Device Name Prefix.

Note In addition to the tasks mentioned above, make sure that the order of the Cisco Unified CM servers in Unity Connection port group is same as the order of the Cisco Unified CM servers in the Cisco Unified CM Group.

Testing the Port Group

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**.
2. On the Search Port Groups page, select the name of a port group for which the integration method is SCCP (Skinny).
3. On the Port Group Basics page, in the Related Links list, select **Test Port Group** and select **Go**.
4. When prompted that the test terminate all calls in progress, select **OK**.
5. Follow the steps for correcting the problems.
6. Repeat Step 3 through Step 5 until the Task Execution Results displays no problems.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**.

Step 2 On the Search Port Groups page, select the name of a port group for which the integration method is SCCP (Skinny).

Step 3 On the Port Group Basics page, in the Related Links list, select **Test Port Group** and select **Go**.

Note The Test Port and Test Port Group utilities do not test IPv6 connectivity. Even when Unity Connection is configured to use IPv6 for a SCCP integration, the tests confirm that Unity Connection can communicate with the phone system using IPv4 addressing.

Step 4 When prompted that the test terminate all calls in progress, select **OK**.

The Task Execution Results displays one or more messages with troubleshooting steps.

Step 5 Follow the steps for correcting the problems.

If Cisco Unified CM is configured to block pings or if pings are disabled for the system, portions of the test fails. You must configure Cisco Unified CM and the system to enable pings so that the test can accurately test the port registration.

Step 6 Repeat Step 3 through Step 5 until the Task Execution Results displays no problems.

Confirming that Another Port Group Not Using the Same Device Name Prefix

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**. On the Search Port Groups page, select the name of a port group for which the integration method is SCCP (Skinny).
2. On the Port Group Basics page, note the value of the Device Name Prefix field.
3. Select **Next** to view the next port group for which the integration method is SCCP (Skinny).

4. If the value of the Device Name Prefix field is different from the value that you noted in Step 2, skip to Step 7. If the value of the Device Name Prefix field matches the value for another port group, enter the device name prefix for ports on the Cisco Unified CM server that have a different device name prefix.
5. Select **Save**.
6. Select **Reset**.
7. Repeat Step 3 through Step 6 for all remaining port groups for which the integration method is SCCP (Skinny).

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**. On the Search Port Groups page, select the name of a port group for which the integration method is SCCP (Skinny).

Step 2 On the Port Group Basics page, note the value of the Device Name Prefix field.

This value of the Device Name Prefix field must be unique for each port group. Otherwise, more than one port may attempt to connect to an SCCP device, causing the ports to repeatedly disconnect from Cisco Unified CM and to disconnect calls that the ports are handling.

Step 3 Select **Next** to view the next port group for which the integration method is SCCP (Skinny).

Step 4 If the value of the Device Name Prefix field is different from the value that you noted in Step 2, skip to Step 7. If the value of the Device Name Prefix field matches the value for another port group, enter the device name prefix for ports on the Cisco Unified CM server that have a different device name prefix.

Step 5 Select **Save**.

Step 6 Select **Reset**.

Step 7 Repeat Step 3 through Step 6 for all remaining port groups for which the integration method is SCCP (Skinny).

Confirming that Another Unity Connection Server Not Using the Same Device Name Prefix

SUMMARY STEPS

1. In Cisco Unity Connection Administration on the first Unity Connection server, expand **Telephony Integrations**, then select **Port Group**. On the Search Port Groups page, select the name of a port group for which the integration method is SCCP (Skinny).
2. On the Port Group Basics page, note the value of the Device Name Prefix field.
3. In Cisco Unity Connection Administration on the second Unity Connection server, expand **Telephony Integrations**, then select **Port Group**. On the Search Port Groups page, select the name of a port group for which the integration method is SCCP (Skinny).
4. On the Port Group Basics page, note the value of the Device Name Prefix field.
5. If the value of the Device Name Prefix field is different from the value you noted on the first Unity Connection server in Step 2, skip to Step 8. If the value of the Device Name Prefix field matches the value for another port group, enter the device name prefix for ports on the Cisco Unified CM server that have a different device name prefix.
6. Select **Save**.
7. Select **Reset**.
8. Select **Next**.
9. Repeat Step 5 through Step 8 for all remaining port groups for which the integration method is SCCP (Skinny).

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration on the first Unity Connection server, expand **Telephony Integrations**, then select **Port Group**. On the Search Port Groups page, select the name of a port group for which the integration method is SCCP (Skinny).

Step 2 On the Port Group Basics page, note the value of the Device Name Prefix field.

Step 3 In Cisco Unity Connection Administration on the second Unity Connection server, expand **Telephony Integrations**, then select **Port Group**. On the Search Port Groups page, select the name of a port group for which the integration method is SCCP (Skinny).

Step 4 On the Port Group Basics page, note the value of the Device Name Prefix field.

The value of the Device Name Prefix field must be unique for each port group. Otherwise, more than one port may attempt to connect to an SCCP device, causing the ports to repeatedly disconnect from Cisco Unified CM and to disconnect calls that the ports are handling.

Step 5 If the value of the Device Name Prefix field is different from the value you noted on the first Unity Connection server in Step 2, skip to Step 8. If the value of the Device Name Prefix field matches the value for another port group, enter the device name prefix for ports on the Cisco Unified CM server that have a different device name prefix.

Step 6 Select **Save**.

Step 7 Select **Reset**.

Step 8 Select **Next**.

Step 9 Repeat Step 5 through Step 8 for all remaining port groups for which the integration method is SCCP (Skinny).

Ports Do Not Register in an IPv6 Configuration

When the Cisco Unity Connection voice messaging ports do not register with Cisco Unified CM in an integration that is configured to use IPv6 addressing, and the CsMgr logs errors in the application syslog during startup, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

Task List for Troubleshooting Port Registration Problems in an IPv6 Configuration

1. Confirm that IPv6 is enabled.
   - To check using the command-line interface (CLI), enter **show network ipv6 settings**.
   - To check using Cisco Unified Operating System Administration, see the Confirming that IPv6 is Enabled Using Cisco Unified Operating System Administration.
2. Confirm that Unity Connection is configured to use the appropriate addressing mode and preferences. See the Confirming the IPv6 Addressing Mode and Preferences Settings
3. If you have configured an IPv6 host name for the Unity Connection and/or Cisco Unified CM servers rather than configuring by IPv6 address, confirm that the DNS server can resolve the host name properly. To check using the CLI, enter **utils network ipv6 ping** <IPv6 host name>.
4. If you have configured the port group(s) in Unity Connection with an IPv6 host name for the Cisco Unified CM server(s) rather than with an IPv6 address, confirm that the DNS server can resolve the Cisco Unified CM host name correctly. Likewise, if you have configured Cisco Unified CM to contact the Unity

Connection server by IPv6 host name (for example, on a SIP trunk, for the Destination Address IPv6 field), confirm that the DNS server can resolve the Unity Connection host name correctly.

5. Confirm that the Cisco Unified CM server is configured correctly for IPv6, and has the correct settings for signalling and media preferences. See the "Internet Protocol Version 6 (IPv6)" chapter of the applicable *Cisco Unified Communications Manager Features and Services Guide* for your release of Cisco Unified CM, available at http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html.

Confirming that IPv6 is Enabled Using Cisco Unified Operating System Administration

SUMMARY STEPS

1. In Cisco Unified Operating System Administration, Settings > **IP** and select **Ethernet IPv6**.
2. On the Ethernet IPv6 Configuration page, review the **Enable IPv6** check box, and check it if it is not already checked.
3. If you checked the Enable IPv6 check box in Step 2, configure the Address Source for the Unity Connection server. To apply the change, check Update with Reboot, and select **Save**. The Unity Connection server reboots in order for the change to take effect.

DETAILED STEPS

Step 1 In Cisco Unified Operating System Administration, Settings > **IP** and select **Ethernet IPv6**.

Step 2 On the Ethernet IPv6 Configuration page, review the **Enable IPv6** check box, and check it if it is not already checked.

Step 3 If you checked the Enable IPv6 check box in Step 2, configure the Address Source for the Unity Connection server. To apply the change, check Update with Reboot, and select **Save**. The Unity Connection server reboots in order for the change to take effect.

Confirming the IPv6 Addressing Mode and Preferences Settings

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **System Settings**, then select **General Configuration**.
2. On the Edit General Configuration page, review the option selected for **IP Addressing Mode**, which controls where Unity Connection listens for incoming traffic:
3. If you change any values on the page, select **Save** to save the changes. When you change the IP Addressing Mode, you must stop and restart the Conversation Manager service on the Tools > Service Management page in Cisco Unity Connection Serviceability in order for the change to take effect.
4. If the IP addressing mode was configured for IPv4 and IPv6 in Step 2, do the following substeps to review the call control signalling and/or media addressing mode settings for the Cisco Unified Communications Manager integration:

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **System Settings**, then select **General Configuration**.

Step 2 On the Edit General Configuration page, review the option selected for **IP Addressing Mode**, which controls where Unity Connection listens for incoming traffic:

- IPv4
- IPv6
- IPv4 and IPv6

Step 3 If you change any values on the page, select **Save** to save the changes. When you change the IP Addressing Mode, you must stop and restart the Conversation Manager service on the Tools > Service Management page in Cisco Unity Connection Serviceability in order for the change to take effect.

Step 4 If the IP addressing mode was configured for IPv4 and IPv6 in Step 2, do the following substeps to review the call control signalling and/or media addressing mode settings for the Cisco Unified Communications Manager integration:

a) Expand Telephony Integrations, then select Port Group.
b) On the Search Port Groups page, select the display name of the port group that you want to verify.
c) On the Port Group Basics page, on the Edit menu, select **Servers**.
d) In the IPv6 Addressing Mode section, verify the option selected for the applicable setting(s):

- **Preference for Signaling**—*(Applicable to both SCCP integrations and SIP integrations)* This setting determines the call control signaling preference when registering with Cisco Unified CM via SCCP or when initiating SIP requests.
- **Preference for Media**—*(Applicable only to SIP integrations)* This setting determines the preferred addressing mode for media events when communicating with dual-stack (IPv4 and IPv6) devices.

1. If you made any changes to the page, select **Save**.

Determining the Correct Port Group Template

When adding a phone system integration for Cisco Unified CM, there are two valid options for the Port Group Template field: SCCP or SIP. The SIP port group template is valid only for integrations with Cisco Unified CM 5.0(1) and later.

To integrate Unity Connection with a phone system through PIMG or TIMG units, in the Port Group Template field, you must select SIP to DMG/PIMG/TIMG.

Unable to Create Secure Ports

While using encryption on Cisco Unity Connection, you may face the following issues:

- Appearance of " Encrypted security mode is not supported on this version of Connection. Reconfigure the port group to use Authenticated mode." and " Secure RTP is not supported on this version of Connection. Reconfigure the port group to disable Secure RTP." error message.

  If you get the above error messages on Port Group Basics page while configuring the security ports, verify the following:

  - You must deploy the Restricted version of Cisco Unity Connection.
  - Unity Connection must be registered with CSSM or satellite through Export Controlled Functionality enabled Register Token.

- Check the status of encryption on Unity Connection using "utils cuc encryption status" CLI command. If the encryption status is disabled for Unity Connection. You must run the "utils cuc encryption enable" CLI command to enable the encryption on Unity Connection.

Problems Faced When Unity Connection is Configured for Cisco Unified Communications Manager Authentication or Encryption

If problems occur when Unity Connection is configured for Cisco Unified Communications Manager authentication and encryption for the voice messaging ports, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

Note For information on integrating Unity Connection with Cisco Unified CM, see the applicable Cisco Unified CM integration guide at http://www.cisco.com/en/US/products/ps6509/products_installation_and_configuration_guides_list.html.

Follow the tasks to troubleshoot problems when Cisco Unified CM authentication or encryption is configured:

1. Confirm that the Cisco Unified CM CTL client is configured for mixed mode. See the Confirming that Cisco Unified Communications Manager CTL Client is Configured for Mixed Mode.
2. Test the port group configuration. See the Testing the Port Group Configuration.
3. For SCCP integrations, confirm that the security mode setting for the ports in Unity Connection matches the security mode setting for the ports in Cisco Unified CM. See the Matching the Security Mode Setting for Ports in Unity Connection and Cisco Unified Communications Manager (SCCP Integrations Only).
4. For a SIP trunk integration, confirm that the security mode setting for the Unity Connection port group matches the security mode setting for the Cisco Unified CM SIP trunk security profile. See the Matching the Security Mode Setting for Unity Connection Port Group and Cisco Unified Communications Manager SIP Trunk Security Profile (SIP Trunk Integrations Only), on page 143 section.
5. For SIP trunk integrations, confirm that the Subject Name field of the Unity Connection SIP certificate matches the X.509 Subject Name field of the Cisco Unified CM SIP trunk security profile. See the Matching the Subject Name Fields of Unity Connection SIP Certificate and Cisco Unified Communications Manager SIP Trunk Security Profile (SIP Trunk Integrations Only), on page 144 section.
6. For SIP trunk integrations, confirm that Unity Connection and the SIP trunk use the same port. See the Matching the Port Used by Unity Connection SIP Security Profile and Cisco Unified Communications Manager SIP Trunk Security Profile (SIP Trunk Integrations Only), on page 144 section.
7. Copy the Unity Connection root certificate to the Cisco Unified CM servers. See the Copying the Unity Connection Root Certificate to Cisco Unified Communications Manager.
8. For secure SIP integration, confirm the certificate expiration of Cisco Unified CM. See the CTL File with Expired Cisco Unified CM Certificate (Secure SIP Integration Only)

Confirming that Cisco Unified Communications Manager CTL Client is Configured for Mixed Mode

SUMMARY STEPS

1. In Cisco Unified Communications Manager Administration, on the System menu, select **Enterprise Parameters**.

2. On the Enterprise Parameters Configuration page, under Security Parameters, locate the **Cluster Security Mode** field.
3. Confirm that the setting is **1**, which means that the CTL client is configured for mixed mode.

DETAILED STEPS

Step 1 In Cisco Unified Communications Manager Administration, on the System menu, select **Enterprise Parameters**.

Step 2 On the Enterprise Parameters Configuration page, under Security Parameters, locate the **Cluster Security Mode** field.

Step 3 Confirm that the setting is **1**, which means that the CTL client is configured for mixed mode.

Testing the Port Group Configuration

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**.
2. On the Search Port Groups page, select the name of a port group.
3. On the Port Group Basics page, in the Related Links list, select **Test Port Group** and select **Go**.
4. When prompted that the test terminates all calls in progress, select **OK**.
5. Follow the steps for correcting the problems.
6. Repeat Step 3 through Step 5 until the Task Execution Results displays no problems.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**.

Step 2 On the Search Port Groups page, select the name of a port group.

Step 3 On the Port Group Basics page, in the Related Links list, select **Test Port Group** and select **Go**.

Note The Test Port and Test Port Group utilities do not test IPv6 connectivity. Even when Unity Connection is configured to use IPv6 for a SCCP integration, the tests confirm that Unity Connection can communicate with the phone system using IPv4 addressing.

Step 4 When prompted that the test terminates all calls in progress, select **OK**.

The Task Execution Results displays one or more messages with troubleshooting steps.

Step 5 Follow the steps for correcting the problems.

If Cisco Unified CM is configured to block pings or if pings are disabled for the system, portions of the test fails. You must configure Cisco Unified CM and the system to enable pings so that the test can accurately test the port registration.

Step 6 Repeat Step 3 through Step 5 until the Task Execution Results displays no problems.

Matching the Security Mode Setting for Ports in Unity Connection and Cisco Unified Communications Manager (SCCP Integrations Only)

SUMMARY STEPS

1. In Cisco Unified Communications Manager Administration, on the Voice Mail menu, select **Cisco Voice Mail Port**. On the Find and List Voice Mail Ports page, select **Find**.
2. In the Device Security Mode column, note the security mode setting for the ports.
3. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.
4. On the Search Ports page, select the name of the first port.
5. On the Port Basics page, in the Security Mode field, select the setting that you noted in Step 2 and select **Save**.
6. Select **Next**.
7. Repeat Step 5 and Step 6 for all remaining ports.

DETAILED STEPS

Step 1 In Cisco Unified Communications Manager Administration, on the Voice Mail menu, select **Cisco Voice Mail Port**. On the Find and List Voice Mail Ports page, select **Find**.

Step 2 In the Device Security Mode column, note the security mode setting for the ports.

Step 3 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.

Step 4 On the Search Ports page, select the name of the first port.

Step 5 On the Port Basics page, in the Security Mode field, select the setting that you noted in Step 2 and select **Save**.

Step 6 Select **Next**.

Step 7 Repeat Step 5 and Step 6 for all remaining ports.

Matching the Security Mode Setting for Unity Connection Port Group and Cisco Unified Communications Manager SIP Trunk Security Profile (SIP Trunk Integrations Only)

Step 1 In Cisco Unified Communications Manager Administration, on the System menu, select **SIP Profile** > **SIP Trunk Security Profile**.

Step 2 On the Find and List SIP Trunk Security Profiles page, select **Find**.

Step 3 Select the name of the SIP trunk security profile.

Step 4 On the SIP Trunk Security Profile Configuration page, note the setting of the Device Security Mode field.

Step 5 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**.

Step 6 On the Search Port Groups, select the name of the applicable port group.

Step 7 On the Port Group Basics page, in the Security Mode field, select the setting that you noted in Step 4 and select **Save**.

Matching the Subject Name Fields of Unity Connection SIP Certificate and Cisco Unified Communications Manager SIP Trunk Security Profile (SIP Trunk Integrations Only)

Step 1 In Cisco Unified Communications Manager Administration, on the System menu, select **SIP Profile > SIP Trunk Security Profile**.

Step 2 On the Find and List SIP Trunk Security Profiles page, select **Find**.

Step 3 Select the name of the SIP trunk security profile.

Step 4 On the SIP Trunk Security Profile Configuration page, note the setting of the X.509 Subject Name field.

Step 5 In Cisco Unity Connection Administration, expand **Telephony Integrations > Security**, then select **SIP Certificates**.

Step 6 On the Search SIP Certificates page, select the name of the SIP certificate.

Step 7 On the Edit SIP Certificate page, in the Subject Name field, enter the setting that you noted in Step 4 and select **Save**.

Matching the Port Used by Unity Connection SIP Security Profile and Cisco Unified Communications Manager SIP Trunk Security Profile (SIP Trunk Integrations Only)

Step 1 In Cisco Unified Communications Manager Administration, on the System menu, select **SIP Profile > SIP Trunk Security Profile**.

Step 2 On the Find and List SIP Trunk Security Profiles page, select **Find**.

Step 3 Select the name of the SIP trunk security profile.

Step 4 On the SIP Trunk Security Profile Configuration page, note the setting of the Incoming Port field.

Step 5 In Cisco Unity Connection Administration, expand **Telephony Integrations > Security**, then select **SIP Security Profile**.

Step 6 On the Search SIP Security Profiles page, select the name of the SIP security profile with "TLS."

Step 7 On the Edit SIP Security Profile page, in the Port field, enter the setting that you noted in Step 4 and select **Save**.

Copying the Unity Connection Root Certificate to Cisco Unified Communications Manager

Copying the Root Certificate for Cisco Unified Communications Manager 4.x

Procedure

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Security** > **Root Certificate**.
2. On the View Root Certificate page, right-click the **Right-Click to Save the Certificate as a File** link, and select **Save Target As**.
3. In the Save As dialog box, browse to the location on the Unity Connection server where you want to save the Unity Connection root certificate as a file.
4. In the Filename field, confirm that the extension is **.0** (rather than .htm), and select **Save**.
5. In the Download Complete dialog box, select **Close**.
6. Copy the Unity Connection root certificate file to the C:\Program Files\Cisco\Certificates folder on all Cisco Unified CM servers in this Cisco Unified CM phone system integration.
7. In Cisco Unity Connection Administration, in the Related Links list, select **Check Telephony Configuration** and select **Go** to verify the Unity Connection to the Cisco Unified CM servers.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Security** > **Root Certificate**.

Step 2 On the View Root Certificate page, right-click the **Right-Click to Save the Certificate as a File** link, and select **Save Target As**.

Step 3 In the Save As dialog box, browse to the location on the Unity Connection server where you want to save the Unity Connection root certificate as a file.

Step 4 In the Filename field, confirm that the extension is **.0** (rather than .htm), and select **Save**.

The certificate must be saved as a file with the extension .0 (rather than .htm) or Cisco Unified CM does not recognize the certificate.

Step 5 In the Download Complete dialog box, select **Close**.

Step 6 Copy the Unity Connection root certificate file to the C:\Program Files\Cisco\Certificates folder on all Cisco Unified CM servers in this Cisco Unified CM phone system integration.

Step 7 In Cisco Unity Connection Administration, in the Related Links list, select **Check Telephony Configuration** and select **Go** to verify the Unity Connection to the Cisco Unified CM servers.

Copying the Root Certificate for Cisco Unified Communications Manager 5.x

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Security** > **Root Certificate**.
2. On the View Root Certificate page, right-click the **Right-Click to Save the Certificate as a File** link, and select **Save Target As**.
3. In the Save As dialog box, browse to the location on the Unity Connection server where you want to save the Unity Connection root certificate as a file.
4. In the Filename field, confirm that the extension is **.pem** (rather than .htm), and select **Save**.
5. In the Download Complete dialog box, select **Close**.
6. Copy the Unity Connection root certificate to all Cisco Unified CM servers in this Cisco Unified CM phone system integration by doing the following substeps.
7. If prompted, restart the Unity Connection software.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Security** > **Root Certificate**.

Step 2 On the View Root Certificate page, right-click the **Right-Click to Save the Certificate as a File** link, and select **Save Target As**.

Step 3 In the Save As dialog box, browse to the location on the Unity Connection server where you want to save the Unity Connection root certificate as a file.

Step 4 In the Filename field, confirm that the extension is **.pem** (rather than .htm), and select **Save**.

The certificate must be saved as a file with the extension .pem (rather than .htm) or Cisco Unified CM does not recognize the certificate.

When Unity Connection is integrated with both Cisco Unified CM 4.x and Cisco Unified CM 5.x servers, you must copy the .pem file to the Cisco Unified CM 5.x server and the .0 file to the Cisco Unified CM 4.x server. Otherwise, authentication and encryption do not function correctly.

Step 5 In the Download Complete dialog box, select **Close**.

Step 6 Copy the Unity Connection root certificate to all Cisco Unified CM servers in this Cisco Unified CM phone system integration by doing the following substeps.

The Unity Connection system clock must be synchronized with the Cisco Unified CM system clock for Cisco Unified CM authentication to function immediately. Otherwise, Cisco Unified CM does not let the Unity Connection voice messaging ports register until the Cisco Unified CM system clock has passed the time stamp in the Unity Connection device certificates.

a) On the Cisco Unified CM server, in Cisco Unified Operating System Administration, on the Security menu, select **Certificate Management > Upload Certificate/CTL**.
b) On the Cisco IPT Platform Administration page, select **Upload Trust Certificate** and **CallManager – Trust**, then select **OK**.
c) Browse to the Unity Connection root certificate that you saved in Step 4.
d) Follow the on-screen instructions.
e) Repeat Step 6a. through Step 6d. on all remaining Cisco Unified CM servers in the cluster.
f) In Cisco Unity Connection Administration, in the Related Links list, select **Check Telephony Configuration** and select **Go** to verify the Unity Connection to the Cisco Unified CM servers.

   If the test is not successful, the Task Results list displays one or more messages with troubleshooting steps. After correcting the problems, run the test again.

g) In the Task Results window, select **Close**.

Step 7 If prompted, restart the Unity Connection software.

Copying the Root Certificate for Cisco Unified Communications Manager 6.x, 7.x, and Later

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Security** > **Root Certificate**.
2. On the View Root Certificate page, right-click the **Right-Click to Save the Certificate as a File** link, and select **Save Target As**.
3. In the Save As dialog box, browse to the location on the Unity Connection server where you want to save the Unity Connection root certificate as a file.
4. In the Filename field, confirm that the extension is **.pem** (rather than .htm), and select **Save**.
5. In the Download Complete dialog box, select **Close**.
6. Copy the Unity Connection root certificate to all Cisco Unified CM servers in this Cisco Unified CM phone system integration by doing the following substeps.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Security** > **Root Certificate**.

Step 2 On the View Root Certificate page, right-click the **Right-Click to Save the Certificate as a File** link, and select **Save Target As**.

Step 3 In the Save As dialog box, browse to the location on the Unity Connection server where you want to save the Unity Connection root certificate as a file.

Step 4 In the Filename field, confirm that the extension is **.pem** (rather than .htm), and select **Save**.

The certificate must be saved as a file with the extension .pem (rather than .htm) or Cisco Unified CM does not recognize the certificate.

When Unity Connection is integrated with both Cisco Unified CM 4.x and Cisco Unified CM 5.x and later servers, you must copy the .pem file to the Cisco Unified CM 5.x and later server and the .0 file to the Cisco Unified CM 4.x server. Otherwise, authentication and encryption do not function correctly.

Step 5 In the Download Complete dialog box, select **Close**.

Step 6 Copy the Unity Connection root certificate to all Cisco Unified CM servers in this Cisco Unified CM phone system integration by doing the following substeps.

The Unity Connection system clock must be synchronized with the Cisco Unified CM system clock for Cisco Unified CM authentication to function immediately. Otherwise, Cisco Unified CM does not let the Unity Connection voice messaging ports register until the Cisco Unified CM system clock has passed the time stamp in the Unity Connection device certificates.

a) On the Cisco Unified CM server, sign in to Cisco Unified Operating System Administration.
b) In Cisco Unified Operating System Administration, on the Security menu, select **Certificate Management**.
c) On the Certificate List page, select **Upload Certificate**.
d) On the Upload Certificate page, in the Certificate Name field, select **CallManager-Trust**.
e) In the Root Certificate field, enter **Cisco Unity Connection Root Certificate**.
f) To the right of the Upload File field, select **Browse**.
g) In the Choose File dialog box, browse to the Unity Connection root certificate that you saved in Step 4.
h) Select **Open**.
i) On the Upload Certificate page, select **Upload File**.
j) Select **Close**.
k) Restart the Cisco Unified CM server.
l) Repeat Step 6a. through Step 6k. on all remaining Cisco Unified CM servers in the cluster.
m) In Cisco Unity Connection Administration, in the Related Links list, select **Check Telephony Configuration** and select **Go** to verify the Unity Connection to the Cisco Unified CM servers.

   If the test is not successful, the Task Results list displays one or more messages with troubleshooting steps. After correcting the problems, run the test again.

n) In the Task Results window, select **Close**.

CTL File with Expired Cisco Unified CM Certificate (Secure SIP Integration Only)

If secure SIP integration of Cisco Unity Connection failed, confirm the expiration of Cisco Unified CM Certificate by performing the following steps:

Step 1 In Cisco Unified Operating System Administration, navigate to **Security** > **Certificate Management**. On Certificate Management page, check the Expiration date for CallManager certificate in the certificate list. If CallManager certificates are expired, you must regenerate the certificates for Cisco Unified CM.

To generate the RSA based certificate of Cisco Unified CM, see "Generate and Upload Certificates" section of "Setting Up a Cisco Unified Communications Manager SIP Trunk Integration" chapter of *Cisco Unified Communications Manager SIP Integration Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/support/unified-communications/unity-connection/products-installation-and-configuration-guides-list.html.

Step 2 After successful generating the certificates of Cisco Unified CM, generate the CTL files for the new certificates of Cisco Unified CM. For this, run **utils ctl update CTLFile** CLI command on the publisher node of Cisco Unified CM.

Step 3 Restart the TFTP and CallManager services on all of the nodes in the cluster that run these services.

Step 4 In Cisco Unity Connection Administration, navigate to **Telephony Integration** > **Port Group**. On Search Port Groups page, select the associated Port Group. On the Port Group Basics page, Select **Reset** under Reset Status field.

If you are still facing the issue for secure voice messaging ports, contact Cisco TAC.

Troubleshooting PIN Synchronization between Unity Connection and Cisco Unified CM

This chapter explains various problems that may occur while using PIN Synchronization feature along with the resolution.

Unable to Update PIN through Cisco Unity Connection Administration or Cisco PCA

While updating the voicemail PIN through Cisco Unity Connection Administration and Cisco Personal Communications Assistant (CPCA) with PIN Synchronization feature enabled, you may receive any of the following error messages:

- "Failed to update PIN on CUCM. Reason: Trivial credential"
- "Failed to update PIN on CUCM: Invalid credential length"
- "Failed to update PIN on CUCM. Reason: Duplicate credential found in history"

If you receive the above error messages, make sure that you entered a valid PIN as per the Credential Policy Configuration on Cisco Unified CM.

- "Bad response from CUCM. Reason: Requested resource is not available" or

  "Failed to connect to remote AXL server. Check IP address, port number, credentials, Call Manager version, and network status for any errors."

  If you receive any of the above error message, verify that:

  - The username and password of primary AXL server entered on the Edit AXL Servers page are correct.
  - The AXL server is up and running.

    To verify this, in Cisco Unity Connection Administration, navigate to **Telephony Integration** > **Phone System** and select the Phone System associated with the user. On the Phone System Basics page, navigate to **Edit** > **Cisco Unified Communication Manager AXL Servers**. On the Edit AXL Server page, select Test under section AXL Servers.
  - Proper tomcat certificates are uploaded for the AXL server.

    To verify this, on the Edit AXL Server page, select Test under section AXL Servers. To ignore the certificate validation errors, check the **Ignore Certificate Errors** check box on the Edit AXL Servers page.

- "Failed to update PIN on CUCM. Reason: Error getting the pin"

If you receive the "Failed to update PIN on CUCM. Reason: Error getting the pin" error message, make sure that the publisher server of Cisco Unified CM is up and running.

Unable to Update PIN through Telephone User Interface (TUI)

With PIN Synchronization feature enabled, if a user hears the "Your PIN has not been changed, for help press 0 or contact to your system administrator" error prompt while updating the phone PIN through TUI, you must verify the following:

- The username and password of primary AXL server entered on the Edit AXL Servers page are correct.
- The AXL server is up and running. To verify this, select Test on the Edit AXL Server page.
- Either Unity Connection has successfully validated the certificates for AXL server or **Ignore Certificate Errors** check box is checked on the Edit AXL Servers page.
- Authentication Rules on Cisco Unity Connection Administration are same as the Credential Policy Configuration on Cisco Unified CM and.
- A user has entered the valid PIN as per the credential policies.
- The publisher server of Cisco Unified CM is up and running.

Using Diagnostic Traces for PIN Synchronization

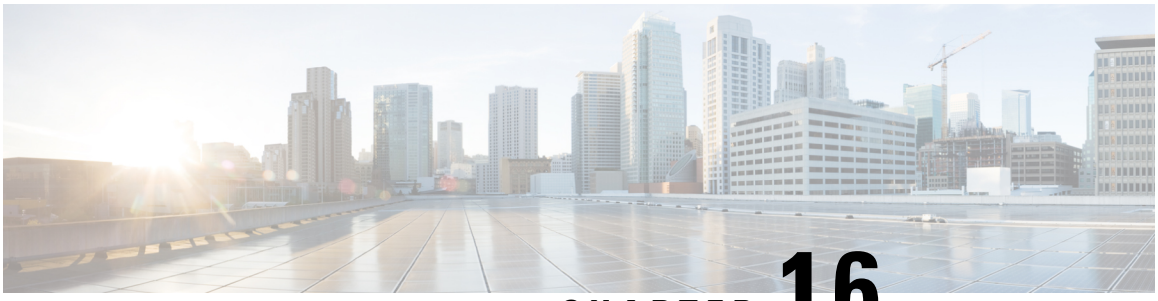
Related Diagnostic Traces:

If the CiscoSysLog contains the event "EvtAXLServerConnectionFailed", this confirms that Unity Connection is not able to connect with the AXL server.

You can also use Unity Connection traces to troubleshoot PIN Synchronization problems. You need to enable the following micro traces to troubleshoot the problems:

Error Scenario	Traces to set
PIN synchronization is failed on Cisco Unity Connection Administration	Cuca (all levels)
PIN synchronization is failed on Cisco PCA	CiscoPCA (level 00,01,02,13)
PIN synchronization is failed through Telephone User Interface	CDL (level 10 and 11) and ConvSub (level 01,03,04,05)
PIN synchronization is failed through API	VMREST (all levels)
PIN synchronization is failed through Bulk Administration Tool	Bulk Administration Tool (all levels)
AXL server issues	AxlAccess (level 00,01)
Certificate validation issues	Cuca (all levels)

For detail instructions on enabling and collecting diagnostic traces, see the Using Diagnostic Traces for Troubleshooting section.



CHAPTER 16

Troubleshooting Message Waiting Indicators (MWIs)

• Troubleshooting Message Waiting Indicators (MWIs), on page 151

Troubleshooting Message Waiting Indicators (MWIs)

Triggers for Turning MWIs On and Off

An MWI is a lamp, flashing LCD panel, or special dial tone on user phones that lets users know a voice message is waiting. The type of indicator depends on the phone system and the user phones. Phone systems that support message counts may also display the number of messages that the user has.

MWIs are not the same as message notification, which is the feature that notifies a user of new voice messages by calling a phone, pager, or other device, or by sending an email message.

The following events trigger Unity Connection to turn MWIs on and off:

- When a message for a user arrives on the Unity Connection message store, Unity Connection notifies the phone system to turn on an MWI on the phone for that user.

Any message that arrives on the Unity Connection message store (for example, voice messages, emails, and faxes) trigger turning MWIs on and off.

- When the user saves or deletes a read message, Unity Connection notifies the phone system to turn off the MWI on the phone.
- When a user deletes a new message without listening to it, Unity Connection notifies the phone system to turn off the MWI on the phone.
- When MWIs are synchronized, Unity Connection queries the message store to determine the status of MWIs on all phones, and resets the applicable MWIs.

However, an MWI remains on under the following conditions:

- More messages are waiting to be heard. When all new messages are listened to, the MWI is turned off.
- A new message arrives while the user is listening to the original message. When all new messages are listened to, the MWI is turned off.

- The user listens on the phone to only part of the message, then either hangs up or skips to the next message before hearing the entire message.
- The user listens the entire message. You can perform either of the following to turn off the MWI:
  - Save or Delete the message after listening it.
  - In Cisco Unity Connection Administration, Select **Users**. On the Search Users page, Select the alias of the user. On the Edit User Basics page of the user, navigate Edit > Playback Message Settings. On the Playback Message Settings page, Select **Saved** under **When Disconnected or User Hangs Up During Message Playback** field.
- In an email application, in the Web Inbox, or Messaging Inbox , the user marks a listened-to message as unread.

Messages in an external message store do not trigger Unity Connection to turn MWIs on and off.

MWI Problems

See the following sections for information on troubleshooting problems with MWIs.

MWIs Do Not Turn On or Off

When MWIs do not turn on or off, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

Following are the tasks to troubleshoot when MWIs do not turn on or off:

1. Run the Check Telephony Configuration test. See the Running the Check Telephony Configuration Test.
2. Confirm that there are voice messaging ports for the phone system integration that are assigned to send MWI requests. To view the settings, in Cisco Unity Connection Administration, select **Telephony Integrations** > **Ports**.

Note PIMG/TIMG serial integrations do not send MWI requests through voice messaging ports.

3. Confirm that the voice messaging ports that are assigned to send MWI requests are enabled. To view the settings, in Cisco Unity Connection Administration, select **Telephony Integrations** > **Ports**.
4. Confirm that an adequate number of voice messaging ports for the phone system integration are assigned to send MWI requests. Otherwise, the ports may be too busy to dial out immediately to turn MWIs on and off. To view the ports, in Cisco Unity Connection Administration, select **Telephony Integrations** > **Ports**.
5. Confirm that the port groups for the phone system integration enable MWIs. To view the Enable Message Waiting Indicators check box, in Cisco Unity Connection Administration, select **Telephony Integrations** > **Port Group** > **Port Group Basics**.
6. *(Cisco Unified CM SCCP integrations only)* Confirm that the settings are correct for the MWI On Extension field and the MWI Off Extension field. To view the Cisco Unified CM settings, in Cisco Unified Communications Manager Administration, select **Voice Mail** > **Message Waiting**. To view

the Unity Connection settings, in Cisco Unity Connection Administration, select **Telephony Integrations** > **Port Group** > **Port Group Basics**.

7. *(PIMG/TIMG serial integrations only)* Confirm that a separate port group exists to send MWI requests to the master PIMG/TIMG unit. To view the port groups, in Connection Administration, select **Telephony Integrations** > **Port Group**. For details on the MWI port group, see the applicable Integration Guide for Cisco Unity Connection at http://www.cisco.com/en/US/products/ps6509/products_installation_and_configuration_guides_list.html.
8. Confirm that MWIs for the phone system are not forced off. To view the Force All MWIs Off for This Phone System check box, in Cisco Unity Connection Administration, select **Telephony Integrations** > **Phone System** > **Phone System Basics**.
9. Confirm that the MWI is enabled for the user. To view the Enabled check box, in Cisco Unity Connection Administration, select **Users** > **Users** > **Messaging Waiting Indicators**.
10. Confirm that the correct phone system is assigned to the MWI for the user. To view the Phone System field, in Cisco Unity Connection Administration, select **Users** > **Users** > **Messaging Waiting Indicators**.
11. *(Cisco Unified CM SCCP integrations only)* Confirm that the extensions that turn MWIs on and off are in the same calling search space that contains the phones and voicemail ports. From a phone, dial the extension that turns on the MWI. If you hear the reorder tone, the extension for turning on MWIs is not assigned to the correct calling search space in Cisco Unified CM Administration. If you do not hear the reorder tone, but the MWI is not turned on or off, a route plan may be causing the problem.

    To view the calling search space for the MWI extensions, in Cisco Unified CM Administration, select **Voice Mail > Message Waiting**.
12. *(Cisco Unified CM SCCP integrations only)* Confirm that the dial plan does not overlap with the MWI extensions. MWI extensions must be unique. To view the dial plan, in Cisco Unified CM Administration, select **Call Routing** > **Dial Plan Installer**.
13. *(PIMG/TIMG serial integrations only)* Confirm that the RS-232 serial cable is firmly seated in the serial port of the master PIMG/TIMG unit and in the serial port of the phone system.
14. Verify whether the Unity Connection server was upgraded, restored using the Disaster Recovery System, or experienced an event that disrupted MWI synchronization. See the Synchronizing MWIs.
15. If the preceding tasks did not resolve the MWI problem, enable macro traces for MWIs. For detailed instructions on enabling the applicable traces and viewing the trace logs, see the Troubleshooting Cisco Unity Connection, on page 1 chapter.

Running the Check Telephony Configuration Test

Note The Check Telephony Configuration test does not test IPv6 connectivity. (IPv6 is supported in Unity Connection for Cisco Unified Communications Manager integrations.) The test confirms that Unity Connection can communicate with the phone system using IPv4 addressing.

Procedure

Step 1 In Cisco Unity Connection Administration, in the Related Links list in the upper right corner of any Telephony Integrations page, select **Check Telephony Configuration** and select **Go**.

If the test is not successful, the Task Execution Results displays one or more messages with troubleshooting steps. After correcting the problems, run the test again.

Step 2 In the Task Execution Results window, select **Close**.

Synchronizing MWIs

We recommend resynchronizing MWIs for the system in the following circumstances:

- After a server is restored using the Disaster Recovery System.
- After upgrading a system.
- After a WAN outage in a system that has distributed voice messaging through Cisco Unified Survivable Remote Site Telephony (SRST) routers or Cisco Unified Communications Manager Express routers in SRST mode.

Synchronizing MWIs for a Phone System Integration

Procedure

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations** and select **Phone System**. On the Search Phone Systems page, select the name of the phone system for which you want to synchronize all MWIs.

Step 2 On the Phone System Basics page, under Message Waiting Indicators, select **Run**.

Note Synchronizing MWIs for the phone system may affect system performance. We recommend that you do this task when phone traffic is light.

MWIs Turn On but Do Not Turn Off

Use the troubleshooting information in this section if MWIs turn on but do not turn off. See the following possible causes:

- For PIMG/TIMG integrations, certain phone systems require that Unity Connection use port memory to turn off MWIs so that the same port is used for turning off an MWI that was used for turning on the MWI. See the Confirm that Unity Connection Uses Port Memory (PIMG/TIMG Integrations).
- For PIMG/TIMG integrations, if the phone system requires port memory, one or more of the ports used to set MWIs were deleted or were reconfigured not to set MWIs. You must have the phone system turn off all MWIs, then have Unity Connection resynchronize all MWIs.

To avoid this problem when deleting or reconfiguring MWI ports not to set MWIs, see the Deleting or Reconfiguring MWI Ports When Port Memory is Used (PIMG/TIMG Integrations).

Confirm that Unity Connection Uses Port Memory (PIMG/TIMG Integrations)

When MWIs turn on but do not turn off, the cause may be port memory. For Avaya, Rolm, and Siemens Hicom phone system integrations, Cisco Unity Connection must use the same port for turning off an MWI that was used for turning on the MWI. When Unity Connection is integrated with one of these phone systems and uses a different port for turning off an MWI, the MWI request for turning off the MWI fails.

Note This problem does not apply to PIMG/TIMG serial integrations.

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations** > **and** select **Phone System**.

Step 2 On the Search Phone Systems page, select the name of the phone system.

Step 3 On the Phone System Basics page, under Message Waiting Indicators, confirm that the **Use Same Port for Enabling and Disabling MWIs** check box is checked and select **Save**.

Deleting or Reconfiguring MWI Ports When Port Memory is Used (PIMG/TIMG Integrations)

If Unity Connection must use the same port for turning off an MWI that was used for turning on the MWI, and you want to delete an MWI port or reconfigure an MWI port not to set MWIs, do the applicable procedure.

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations** and select **Phone System**. On the Search Phone Systems page, select the name of the phone system.

Step 2 On the Phone System Basics page, under Message Waiting Indicators, check the **Force All MWIs Off for This Phone System** check box and select **Save**. All MWIs for the phone system are turned off.

Step 3 In the left pane, select **Port**.

Step 4 On the Search Ports page, check the check boxes of the MWI ports that you want to delete and select **Delete Selected**.

Step 5 In the left pane, select **Phone System**. On the Search Phone Systems page, select the name of the phone system.

Step 6 On the Phone System Basics page, under Message Waiting Indicators, uncheck the **Force All MWIs Off for This Phone System** check box and select **Save**.

Step 7 To the right of Synchronize All MWIs on This Phone System, select **Run**. All MWIs for the phone system are synchronized.

Reconfiguring MWI Ports When Port Memory is Used (PIMG/TIMG Integrations)

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations** > **and** select **Phone System**. On the Search Phone Systems page, select the name of the phone system.

Step 2 On the Phone System Basics page, under Message Waiting Indicators, check the **Force All MWIs Off for This Phone System** check box and select **Save**. All MWIs for the phone system are turned off.

Step 3 In the left pane, select **Port**. On the Search Ports page, select the display name of the first MWI port that you want to reconfigure not to set MWIs.

Step 4 On the Port Basics page, under Port Behavior, enter the applicable settings and select **Save**.

Step 5 If there are more MWI ports that you want to reconfigure not to set MWIs, select **Next**. Otherwise, skip to Step 7.

Step 6 Repeat Step 4 and Step 5 for all remaining MWI ports that you want to configure not to set MWIs.

Step 7 In the left pane, select **Phone System**.

Step 8 On the Search Phone Systems page, select the name of the phone system.

Step 9 On the Phone System Basics page, under Message Waiting Indicators, uncheck the **Force All MWIs Off for This Phone System** check box and select **Save**.

Step 10 To the right of Synchronize All MWIs on This Phone System, select **Run**. All MWIs for the phone system are synchronized.

Delay for MWIs to Turn On or Off

Use the troubleshooting information in this section if there is a delay for MWIs to turn on or off. See the following possible causes:

- If MWIs are being synchronized for a phone system integration, this may result in delayed MWIs for messages. This is due to the additional MWI requests that are being processed.
- The number of ports assigned to handle MWI requests is insufficient. To evaluate the current MWI port activity, see the Determining the MWI Port Activity.

For systems that handle a large volume of calls, you may need to install additional ports.

- *(Cisco Unified CM SCCP integrations only)* If there are two or more port groups in the phone system integration, the port groups may not all be configured correctly for MWIs. See the Configuring the MWI On and Off Extensions for Port Groups (SCCP Integrations Only).

Determining the MWI Port Activity

Step 1 In Cisco Unity Connection Serviceability, on the Tools menu, select **Reports**.

Step 2 On the Serviceability Reports page, select **Port Activity Report**.

Step 3 On the Port Activity Report page, select the applicable options for the report.

Step 4 Select **Generate Report**.

Configuring the MWI On and Off Extensions for Port Groups (SCCP Integrations Only)

For Cisco Unified CM SCCP integrations, the phone system integration may have two or more port groups, one of which might be missing the MWI on and off extension settings.

1. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port Group**. On the Search Port Groups page, select the name of the first port group for the SCCP integration.
2. On the Port Group Basics page, under Message Waiting Indicator Settings, in the MWI On Extension field, confirm that the extension for turning on MWIs is entered. If the field is blank, enter the MWI On extension.
3. In the MWI Off Extension field, confirm that the extension for turning off MWIs is entered. If the field is blank, enter the MWI Off extension and select **Save**.
4. Select **Next**.
5. Repeat Step 2 through Step 3 for the remaining port groups in the SCCP integration.

No Message Count Sent on Phone When MWI is On

For Cisco Unified CM integrations, Unity Connection typically provides a message count when the user signs in by phone. If the message count is not given, message counts have not been enabled for new messages or for the type of new message that is in the user voice mailbox. For example, if message counts are enabled only for voice messages, no message count is given when a new email or fax message arrives, even if the MWI is on.

Enabling Message Counts for the Applicable New Messages

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Users** > **and** select **Users**. On the Search Users page, select the alias of the applicable user.
2. On the Edit User Basics page, on the Edit menu, select **Playback Message Settings**.
3. On the Playback Message Settings page, under For New Messages, Play, check the applicable check boxes:
4. Select **Save**.

DETAILED STEPS

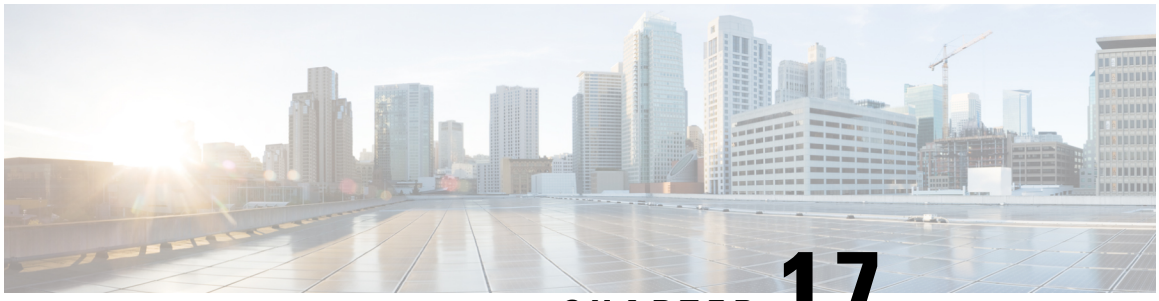
Step 1 In Cisco Unity Connection Administration, expand **Users** > **and** select **Users**. On the Search Users page, select the alias of the applicable user.

Step 2 On the Edit User Basics page, on the Edit menu, select **Playback Message Settings**.

Step 3 On the Playback Message Settings page, under For New Messages, Play, check the applicable check boxes:

- **Message Count Totals**—Unity Connection announces the total number of messages that are marked new, including voice, email, and fax messages.
- **Voice Message Counts**—Unity Connection announces the total number of voice messages that are marked new.
- **Email Message Counts**—Unity Connection announces the total number of email messages that are marked new.
- **Fax Message Counts**—Unity Connection announces the total number of fax messages that are marked new.
- **Receipt Message Counts**—Unity Connection announces the total number of receipts that are marked new.

Step 4 Select **Save**.



CHAPTER 17

Troubleshooting Audio Quality

- Troubleshooting Audio Quality, on page 159

Troubleshooting Audio Quality

Troubleshoot Audio Quality Using Check Telephony Configuration Test

Note The Check Telephony Configuration test does not test IPv6 connectivity. (IPv6 is supported in Cisco Unity Connection for Cisco Unified Communications Manager integrations.) The test confirms that Unity Connection can communicate with the phone system using IPv4 addressing.

Using the Check Telephony Configuration Test to Troubleshoot Audio Quality

Step 1 In Cisco Unity Connection Administration, in the Related Links box in the upper right corner of any Telephony Integrations page, select **Check Telephony Configuration** and select **Go**.

If the test is not successful, the Task Execution Results displays one or more messages with troubleshooting steps. After correcting the problems, run the test again.

Step 2 In the Task Execution Results window, select **Close**.

Problem with Choppy Audio

Use the troubleshooting information in this section if the audio you hear from Unity Connection is choppy. Consider the following possible causes:

- The hard disk from which Unity Connection is playing a recording is full. To resolve the situation, eliminate unnecessary files from the hard disk.
- The network Unity Connection to the Unity Connection server is not adequate. To resolve the situation, improve the network Unity Connection.

- The Unity Connection platform has a malfunctioning component. To resolve the situation, identify the malfunctioning hardware component, then repair or replace it.
- Another process is using too much CPU time. To resolve the situation, stop the process and run it when phone traffic is lighter.
- You can check if there are any VMware snapshots. If yes, remove the snapshots.
- Stratum of NTP should be less than 5. You can check the stratum using the utils ntp status command.
- Toggle the settings for Audio Normalization for Recordings and Messages and Noise Reduction Settings on port group > Advanced Settings page.

Problem with Garbled Recordings

Use the troubleshooting information in this section if recordings sound garbled. See the following possible scenarios:

- The audio stream sounded garbled when Unity Connection created the recording. See the Troubleshooting a Garbled Audio Stream in the Network.
- The audio stream did not sound garbled when Unity Connection created the recording, but became garbled later. See the Troubleshooting How Unity Connection Makes Recordings.

Troubleshooting a Garbled Audio Stream in the Network

When the audio stream is garbled when Unity Connection created the recording, use the following task list to determine the cause and to resolve the problem.

Follow the tasks to troubleshoot a garbled audio stream in the network:

1. Confirm that the Unity Connection to the caller is clear. Calls that have bad PSTN connections or calls from mobile phones may sometimes have garbled audio streams. Unity Connection cannot correct for a garbled audio stream.
2. Determine whether the garbled audio stream is caused by problems with the network. Use network analysis tools to do the following:
   - Check for latency, packet loss, and so on.
   - Search for devices on the network that are causing garbled audio streams. Some examples are routers, gateways, transcoders, and gateways that are configured for one packet size (such as G.711 30ms) while Unity Connection is configured for another packet size (such as G.711 20ms).
3. Determine whether the audio stream is garbled at the closest point to the Unity Connection server by obtaining a sniffer capture at that point. If the audio stream from the sniffer capture is not garbled, Unity Connection may not be handling the audio stream correctly. See the Troubleshooting How Unity Connection Makes Recordings.

Troubleshooting How Unity Connection Makes Recordings

When the audio stream did not sound garbled when Unity Connection created the recording, but became garbled later, use the following task list to determine the cause and to resolve the problem.

Follow the tasks to troubleshoot how Unity Connection makes recordings:

1. Enable the Media (Wave) Traces macro traces in Cisco Unity Connection Serviceability. For detailed instructions on enabling the macro trace and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1.
2. Obtain a snapshot of CPU usage on the Unity Connection server using the CPU and Memory display in the Real-Time Monitoring Tool (RTMT). For detailed information on using RTMT, see the applicable *Cisco Unified Real-Time Monitoring Tool Administration Guide* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.
3. Contact Cisco TAC.

Problem with Garbled Prompts on Phone

When Unity Connection prompts sound garbled or jittery when heard on the phone, use the following task list to determine the cause and to resolve the problem.

Follow the tasks to troubleshoot garbled prompts on the phone:

1. Determine whether the audio stream is garbled at the closest point to the phone by obtaining a sniffer capture at that point. If the audio stream from the sniffer capture is not garbled, the cause may be in the network or with Unity Connection.
2. Determine whether the garbled audio stream is caused by problems with the network. Use network analysis tools to do the following:
   - Check for latency, packet loss, and so on.
   - Search for devices on the network that are causing garbled audio streams. Some examples are routers, gateways, transcoders, and gateways that are configured for one packet size (such as G.711 30ms) while Unity Connection is configured for another packet size (such as G.711 20ms).
3. Determine whether the audio stream is garbled at the closest point to the Unity Connection server by obtaining a sniffer capture at that point. If the audio stream from the sniffer capture is not garbled, Unity Connection may not be handling the audio stream correctly.
4. Enable the Media (Wave) Traces macro traces in Cisco Unity Connection Serviceability. For detailed instructions on enabling the macro trace and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1.
5. Obtain a snapshot of CPU usage on the Unity Connection server using the CPU and Memory display in the Real-Time Monitoring Tool (RTMT). For detailed information on using RTMT, see the applicable *Cisco Unified Real-Time Monitoring Tool Administration Guide* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.
6. Contact Cisco TAC.

Problem with Volume of Recordings

Use the troubleshooting information in this section if the volume of recordings is too loud or too soft, or if the recordings do not have any sound. Consider the following:

- Verify the audio level at each hardware point in the network by obtaining a sniffer capture at each point.

- If the audio level from the sniffer capture at one point is too soft or too loud, the cause may be the configuration of the hardware (such as routers, gateways, transcoders) at that point. Check the automatic gain control (AGC) settings for the applicable hardware.
- If the audio level from the sniffer capture at all points is too loud or too soft, see the Changing the Volume for Unity Connection Recordings.

- Disable automatic gain control (AGC) for Unity Connection so that Unity Connection does not automatically adjust the volume of recordings. See the Disabling Automatic Gain Control (AGC) for Unity Connection.
- If the recordings do not have any sound, confirm that the advertised codec settings are correct. See the Confirming the Advertised Codec Settings, on page 162.

Changing the Volume for Unity Connection Recordings

Step 1 In Cisco Unity Connection Administration, expand **System Settings** > **and** select **General Configuration**.

Step 2 On the Edit General Configuration page, in the Automatic Gain Control (AGC) Target Decibels field, enter the applicable number and select Save.

Note AGC decibel levels are set in negative numbers. For example, –26 db is louder than –45 db.

Disabling Automatic Gain Control (AGC) for Unity Connection

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations** > **and** select **Port Group**. On the Search Port Groups page, select the name of the applicable port group.

Step 2 On the Port Group Basics page, in the Edit menu, select **Advanced Settings**.

Step 3 On the Edit Advanced Settings page, under Automatic Gain Control (AGC) Settings, uncheck the **Enable AGC** check box and select **Save**.

Confirming the Advanced Codec Settings

Verifying the Advertised Codec Settings

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations** and select **Port Group**. On the Search Port Groups page, select the name of the applicable port group.

Step 2 On the Port Group Basics page, under Advertised Codec Settings, determine whether the list of codecs is correct.

Step 3 If the list is correct, skip to Step 7. Otherwise, select **Change Advertising**.

Step 4 Select the **Up** and **Down** arrows to change the order of the codecs or to move codecs between the Advertised Codec box and the Unadvertised Codecs box.

If only one codec is in the Advertised Codecs box, Unity Connection sends the audio stream in that audio format. If the phone system does not use this audio format, the phone system drops the call.

If two or more codecs are in the Advertised Codecs box, Unity Connection advertises its preference for the first codec in the list but sends the audio stream in the audio format from the list that the phone system selects.

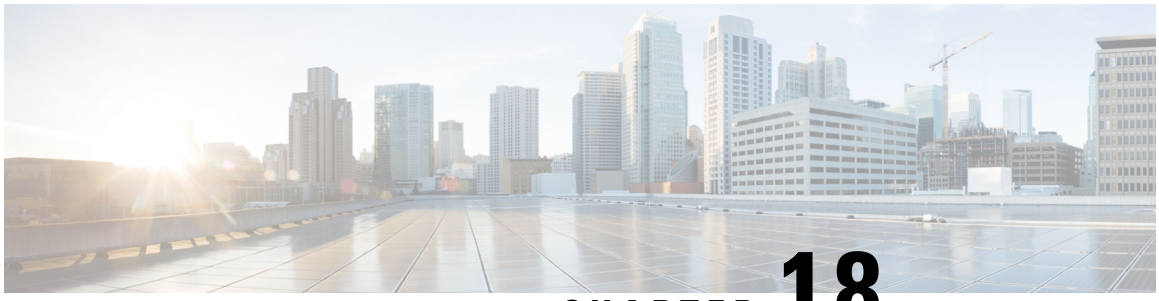
Step 5 Select **Save**.

Step 6 On the Edit menu, select **Port Group Basics**.

Step 7 On the Search Port Groups page, if you want to change the packet size that is used by the advertised codecs, under Advertised Codec Settings, select the applicable packet setting for each codec and select **Save**.

Using Traces to Troubleshoot Audio Quality Issues

You can use traces to troubleshoot audio quality issues. For detailed instructions on enabling the applicable traces and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1.



CHAPTER 18

Troubleshooting Notification Devices

• Troubleshooting Notification Devices, on page 165

Troubleshooting Notification Devices

Overview

Cisco Unity Connection can be configured to call a phone or pager or send text or SMS messages to notify users of new messages and calendar events. See the following sections for information on troubleshooting problems with notification devices:

Message Notifications through Phones is Slow for Multiple Users

When message notification through phones is slow for multiple users, use the following task list to determine the cause and to resolve the problem.

Following are the tasks to troubleshoot slow message notifications through phones for multiple users:

1. Confirm that ports are not too busy to handle message notification. See the Ports Too Busy to Make Notification Calls Promptly.
2. Confirm that there are enough ports assigned to message notification. See the Not Enough Ports Set for Message Notification Only.
3. Confirm that the phone system sends calls to ports that are set to answer calls. See the Confirm that Phone System Sends Calls to the Ports Set to Answer Calls.

Ports Too Busy to Make Notification Calls Promptly

When the ports that make notification calls are also set to perform other operations, they may be too busy to make notification calls promptly. You can improve notification performance by dedicating a small number of ports to exclusively make notification calls.

Systems that handle a large volume of calls may require additional ports to improve notification performance.

Reviewing Port Configuration for Message Notification

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.

Step 2 On the Search Ports page, review the existing port configuration and determine whether one or more ports can be set to dial out for message notification only.

Not Enough Ports Set for Message Notification Only

When a small number of ports are set to make notification calls and Unity Connection takes a lot of messages, the notification ports may not always be able to dial out promptly.

If the percentage of ports used for dialing out for message notification exceeds 70 percent usage during peak periods, review the existing port configuration and determine whether more ports can be set to dial out for message notification only.

If the percentage of ports used for dialing out for message notification does not exceed 70 percent usage during peak periods, the number of notification ports is adequate. Contact Cisco TAC to resolve the problem.

Determining if Number of Message Notification Ports is Adequate

Step 1 In Cisco Unity Connection Serviceability, expand Tools and select **Reports**.

Step 2 On the Serviceability Reports page, select **Port Activity Report**.

Step 3 On the Port Activity Report page, select the applicable file format for the report output.

Step 4 Set a date range by selecting the beginning and ending month, day, year, and time.

Step 5 Select **Generate Report**.

Step 6 View the report output, depending on the file format that you chose in Step 3.

Step 7 If the port usage during peak periods does not exceed 70 percent, the number of message waiting indication ports is adequate. Skip the remaining steps in this procedure.

If the port usage during peak periods exceeds 70 percent, in Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.

Step 8 On the Search Ports page, review the existing port configuration and determine whether more ports can be set to dial out for message notification only.

Confirm that Phone System Sends Calls to the Ports Set to Answer Calls

If the phone system is programmed to send calls to a port on Unity Connection that is not configured to answer calls, it is possible for a call collision to occur, which can freeze the port.

Confirming That Calls Are Being Sent to the Correct Cisco Unity Connection Ports

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations** > **and** select **Port**.

Step 2 In the phone system programming, confirm that calls are only being sent to ports set to answer calls. Change the phone system programming if necessary.

Step 3 If you make a change to the phone system programming, in Cisco Unity Connection Administration, select the display name of the port that you changed in Step 2.

Step 4 On the Port Basics page, under Phone System Port, select **Restart**.

Step 5 When prompted that restarting the port terminates any call that the port is currently handling, select **OK**.

Step 6 Repeat Step 3 through Step 5 for all remaining ports that you changed in Step 2.

Message Notification Slow for a User

There are several possible reasons that message notification may appear to be slow for a user. Use the following task list to troubleshoot the possible causes:

1. The user settings may not be adequate for the needs of the user. See the Message Notification Setup is Inadequate.
2. The user settings may need adjustment to more correctly map to the work schedule of the user. See the Notification Attempts are Missed.
3. The user may not clearly understand how repeat notifications are handled by Cisco Unity Connection. See the Repeat Notification Option is Misunderstood.

Message Notification Setup is Inadequate

When a user complains that notification calls are not being received when expected, the problem may be with the notification settings.

Determining Whether Notification Setup is Adequate

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.

Step 2 On the Edit User Basics page, on the Edit menu, select **Notification Devices**.

Step 3 On the Notification Devices page, select the display name of the correct notification device.

Step 4 On the Edit Notification Device page, confirm that the notification device is configured to meet the needs of the user. If the user has selected a very busy phone for Unity Connection to call, ask the user if there is an alternate device to use for message notification.

Step 5 In the Related Links list, select **Edit Notification Device Details**, and select **Go**. Verify with the user that the notification schedule that is specified on the Cisco Personal Communications Assistant page is consistent with the days and times that the user is available to receive notification calls.

Notification Attempts are Missed

A user who is frequently away from or busy using a notification device (especially when the device is a phone) may repeatedly miss notification attempts. To the user, it appears that Cisco Unity Connection has delayed message notification.

Resolving Missed Notification Attempts

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.

Step 2 On the Edit User Basics page, on the Edit menu, select **Notification Devices**.

Step 3 On the Notification Devices page, select the display name of the correct notification device.

Step 4 On the Edit Notification Device page, check the **Repeat Notification If There Are Still New Messages** check box.

Step 5 If the user has another notification device available, for On Notification Failure, select **Send To**, and select the device.

Note Because Unity Connection does not detect notification failure for SMTP devices, the On Notification Failure field is not available for notification devices of this type.

Step 6 For phone or pager notification devices, in the Busy Retry Limit and RNA Retry Limit fields, increase the numbers so that Unity Connection makes more notification calls when the device does not answer or is busy.

Step 7 For phone or pager notification devices, in the Busy Retry Interval and RNA Retry Interval fields, decrease the numbers so that Unity Connection makes notification calls more often when the device does not answer or is busy.

Step 8 Select **Save**.

Step 9 If you chose another device in Step 5, do the following sub-steps:

a) On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
b) On the Notification Devices page, select the display name of the correct notification device.
c) On the Edit Notification Device page, enter settings for the additional device and select **Save**.

Step 10 For phone notification devices, suggest that the user set up an answering machine for the notification phone, so that notification calls are received even when the user is unavailable.

When Unity Connection is set to call a phone that has an answering machine, verify with the user that the answering machine greeting is short enough so that the machine starts recording before the notification message is repeated.

Repeat Notification Option is Misunderstood

Setting Unity Connection to repeat notification at a particular interval when there are still new messages can be useful for users who receive a lot of messages but who do not need immediate notification. However, when a user chooses not to have Unity Connection restart notification each time a new message arrives, setting a long interval between repeat notification calls may lead the user to believe that Unity Connection is delaying notification.

Resolving a Repeat Notification Problem

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.

Step 2 On the Edit User Basics page, on the Edit menu, select **Notification Devices**.

Step 3 On the Notification Devices page, select the display name of the correct notification device.

Step 4 On the Edit Notification Device page, in the Notification Repeat Interval box, set a shorter interval, such as 15 minutes and select **Save**.

Message Notification Not Working at All

There are several possible reasons that message notification may not work at all for a user or group of users. Use the following task list to troubleshoot the possible causes:

- **For all types of notification device:** Confirm that the notification device is enabled and that the notification schedule is set correctly. See the Notification Device Disabled or the Schedule Inactive.

Confirm that message notification is enabled for the correct types of messages. See the Only Certain Types of Messages Set to Trigger Notification.

- **For phone or pager notification devices:** Confirm that the message notification phone number is correct and that it includes the access code for an external line if notification is to an external phone. See the Notification Number Incorrect or Access Code for an External Line Missing (Phone and Pager Notification Devices Only).

Confirm that the notification device is assigned to the correct phone system. See the Message Notification Not Working at All, on page 169 section.

- **For SMS notification devices:** See the SMS Notifications Not Working for additional troubleshooting steps.
- **For SMTP notification devices:** See the SMTP Message Notification Not Working at All for Multiple Users for additional troubleshooting steps.

Notification Device Disabled or the Schedule Inactive

When you are troubleshooting message notifications, start by confirming that the device is enabled, and that the notification schedule for the device is currently active.

Verifying a Device Status and Schedule

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.

Step 2 On the Edit User Basics page, on the Edit menu, select **Notification Devices**.

Step 3 On the Notification Devices page, select the display name of the correct notification device.

Step 4 On the Edit Notification Device page, confirm that the **Enabled** check box is checked.

Step 5 In the Related Links list, select **Edit Notification Device Details**, and select **Go**. Verify with the user that the notification schedule that is specified on the Cisco Personal Communications Assistant page is consistent with the days and times that the user is available to receive notification calls.

Only Certain Types of Messages Set to Trigger Notification

Unity Connection can be set so that a user is notified only of certain types of messages. For example, if user notification is set up only for urgent voice messages, regular voice messages do not trigger the notification device.

Changing the Message Types That Trigger a Notification Device

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.

Step 2 On the Edit User Basics page, on the Edit menu, select **Notification Devices**.

Step 3 On the Notification Devices page, select the display name of the correct notification device.

Step 4 On the Edit Notification Device page, under Notification Rule Events, verify the selected message types with the user.

Notification Number Incorrect or Access Code for an External Line Missing (Phone and Pager Notification Devices Only)

If notifications to a phone or pager are not working at all, the user may have entered a wrong phone number for Unity Connection to call.

To place an external call, a user usually must dial an access code (for example, 9) to get an external line. When the phone system requires an access code, an external message notification phone number set in Unity Connection must include the access code.

In addition, some phone systems may require a brief pause between dialing the access code and being connected to an external line.

Verifying the Device Phone Number and Access Code for a Phone or Pager Notification Device

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.

Step 2 On the Edit User Basics page, on the Edit menu, select **Notification Devices**.

Step 3 On the Notification Devices page, select the display name of the correct notification device.

Step 4 On the Edit Notification Device page, under Phone Settings, confirm that the correct access code and phone number are entered in the Phone Number field for the device.

If the phone system requires a pause, enter two commas between the access code and the phone number (for example, 9,,5551234).

Testing a Phone or Pager Notification Device

If the notification device is a home phone or another phone away from the office, ask the user to have someone available to answer the phone during the test.

1. Confirm that the notification device is on.
2. Set up a test phone (Phone 1) for single-line testing. Use a line connected to a port that is set to dial out for message notification.
3. On Phone 1, dial the notification number set in Unity Connection for the device.

If the pager is activated or the phone rings, you have confirmed that Unity Connection can call the device.

If the pager is not activated or the phone does not ring, there may be a problem with the device. Consult the documentation from the device manufacturer, or ask the user to obtain a different notification device and repeat the test.

If the notification device is a mobile phone or pager, ask the user to have it available for the test.

Notification Device Phone System Assignment Incorrect (Phone and Pager Notification Devices Only)

Verifying Notification Device Phone System Assignment

SUMMARY STEPS

1. In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.
2. On the Edit User Basics page, on the Edit menu, select **Notification Devices**.
3. On the Notification Devices page, select the display name of the correct notification device.
4. On the Edit Notification Device page, under Phone Settings, note the phone system that is specified in the Phone System field.
5. In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.
6. On the Search Ports page, confirm that the phone system assigned to the notification device has at least one port designated for message notification. Correct the port settings if necessary.

DETAILED STEPS

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, in the Search Results table, select the alias of the applicable user.

Step 2 On the Edit User Basics page, on the Edit menu, select **Notification Devices**.

Step 3 On the Notification Devices page, select the display name of the correct notification device.

Step 4 On the Edit Notification Device page, under Phone Settings, note the phone system that is specified in the Phone System field.

Step 5 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Port**.

Step 6 On the Search Ports page, confirm that the phone system assigned to the notification device has at least one port designated for message notification. Correct the port settings if necessary.

SMS Notifications Not Working

If SMS notifications are not working, in Cisco Unity Connection Administration, check the settings on the System Settings > Advanced > SMPP Providers > Edit SMPP Provider page to confirm that the settings match the settings specified by the provider.

If settings on the Edit SMPP Provider page are correct, enable the SMS Device (level 30) micro trace to collect trace information that helps you troubleshoot the problem. For detailed instructions on enabling and collecting diagnostic traces, see the "Diagnostic Traces" chapter.

Common error codes and explanations for SMS problems are listed in the following table:

SmppConnect failed	Unity Connection was unable to connect to the SMPP provider.
SmppBindTransmitter failed	Unity Connection was unable to sign in to the SMPP provider.
SmppSubmitSm failed	Unity Connection was unable to submit the SMS message to the SMPP provider.

SMTP Message Notification Not Working at All for Multiple Users

If SMTP notifications are not working, in Cisco Unity Connection Administration, check the System Settings > SMTP Configuration > Smart Host page to confirm that a smart host is configured. To enable Unity Connection to send text message notifications using SMTP, your Unity Connection server must be configured to relay messages through a smart host.

If a smart host is already configured on the Smart Host page, note the IP address or host name of the smart host and check to make sure that this smart host is configured to accept messages from the Unity Connection server.

If the smart host settings are configured correctly, you can use traces to track whether the SMTP notification messages are being sent by the Unity Connection server. The default SMTP micro traces (levels 10, 11, 12 and 13) indicate if there is a permanent problem with delivery of a notification message to the smart host. The SMTP micro trace level 18 (Network Messages) shows the details if the notification message is delivered to the smart host. For detailed instructions on enabling and collecting diagnostic traces, see the "Diagnostic Traces" chapter.

HTML Notifications Not Working

If HTML notifications are not working, in Cisco Unity Connection Administration, check the HTML notification device under User > Edit > Notification Devices page is enabled and valid email address is added.

Also, verify that SMTP smart host is configured on Unity Connection Administration page and the Connection SMTP Server and Connection Notifier services are up and running.

Cisco Unity Connection supports create, update and export of maximum 3 Custom Notification Devices with Device Type as HTML using CSV file in Bulk Administration Tool (BAT).

For updation of other than 3 Custom Notification Devices which are not in CSV file follow below mentioned steps:

1. Retreive record from database for Custom Type Notification with HTML Device Type and the respective user.

```
run cuc dbquery unitydirdb SELECT objectid ,PhoneNumber, Active, DisplayName,
AfterDialDigits, SmtpAddress, DeviceName, NotificationTemplateID, CallbackNumber,
DisableMobileNumberFromPCA, DisableTemplateSelectionFromPCA, AllowVoiceMailAsAttachment,
 Type FROM vw_NotificationDevice where Devicename ="Other" and Type ="8" and
SubscriberObjectId =(SELECT objectid FROM tbl_user where displayname ="abcd")
```

2. Manually update the fields of notification device in database as per requirement.

HTML Summary Notification Not Working

If HTML Summary notifications are not working, verify that the correct template for Summary Notification is used under User > Edit > Notification Devices page on Connection Administration page. If the correct

template is used, verify that valid <VOICE_MESSAGE_SUMMARY> tags are present inside the notification template with valid replaceable parameters are used inside the <VOICE_MESSAGE_SUMMARY> tags. For more information on missed call notification templates, see the Notifications chapter of *System Administration Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html

Message Notifications Function Intermittently

A possible cause for notification devices (such as phones, pagers, SMTP, and SMS) to function intermittently is that the schedule for the notification device for the user is not active during the time in question.

To correct the problem, edit the schedules of the notification devices for the user so that the notification devices are active when the user wants message notifications delivered. You must sign in to the user account in the Cisco Personal Communications Assistant (PCA) to modify the schedule for notification devices.

Cisco Unity Connection Administration does not expose schedules for notification devices. From the Notification Device page for the user in Unity Connection Administration, you can navigate to the Cisco PCA page for the user by selecting the Edit Notification Device Details link in the Related Links list.

For details on using the Cisco PCA, see the User Guide for the Cisco Unity Connection Messaging Assistant Web Tool *(Release 14)* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user/guide/assistant/b_14cucugasst.html.

Notification Devices Added in Unity Connection Administration Triggered at All Hours

When a notification device is added for a user in Cisco Unity Connection Administration, by default, the device is active at all times. If a user is receiving notifications at unexpected times, you can modify the notification device schedule to prevent this. You must sign in to the user account in the Cisco Personal Communications Assistant (PCA) to modify the schedule for notification devices.

Unity Connection Administration does not expose schedules for notification devices. From the Notification Device page for the user in Unity Connection Administration, you can navigate to the Cisco PCA page for the user by selecting the Edit Notification Device Details link in the Related Links list.

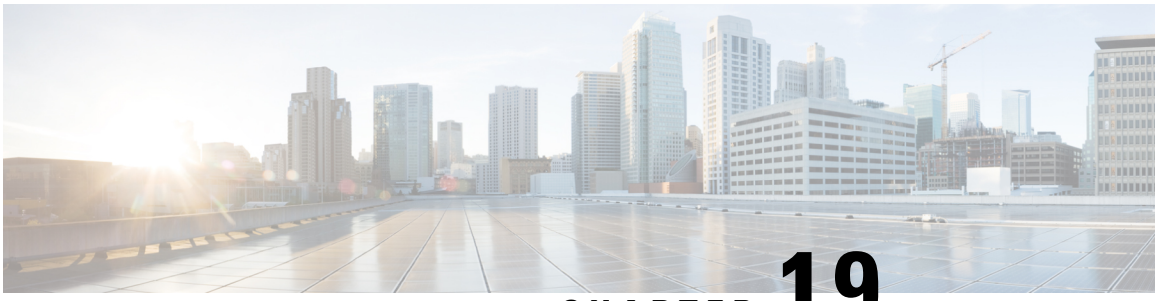
For details on using the Cisco PCA, see the User Guide for the Cisco Unity Connection Messaging Assistant Web Tool *(Release 14)* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user/guide/assistant/b_14cucugasst.html.

Message Notification Received When No Unread Messages

When users are members of a distribution list that is the recipient of a call handler that is configured to mark messages for dispatch delivery, it is possible for a user to receive a message notification for a message that no longer appears in the user inbox when he or she attempts to access it. This can happen because another member of the distribution list has accepted the message between the time that the notification was sent and the time that the user tries to listen to the message.

When configuring message notification rules to include dispatch messages, make users aware that by the time they receive the notification and call in to retrieve the message, it may be gone from their mailboxes because another user has already accepted the message.

For more information on dispatch messages, see the "Dispatch Messages" section in the "Messaging" chapter of the System Administration Guide for Cisco Unity Connection *Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.



CHAPTER 19

Troubleshooting Comet Notifications over SSL

- Troubleshooting Comet Notifications over SSL, on page 175

Troubleshooting Comet Notifications over SSL

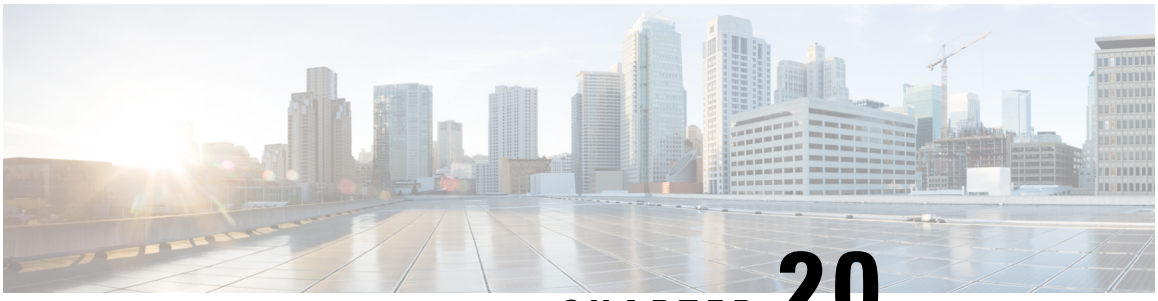
Unable to Send Comet Notification over SSL

Make sure of the following if Unity Connection is unable to send comet notifications over SSL:

- User workstations are establishing connection on 7443 port.
- Firewall is not blocking the traffic on 7443 port.
- The show cuc jetty ssl status command is executed on both the primary and secondary nodes and the SSL mode is enabled.
- Connection Jetty service is restarted on both the primary and secondary servers.

For more information, see:

- The "Service Ports" section of the "IP Communications Required by Cisco Unity Connection" in the *Security Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/security/guide/b_14cucsecx.html.
- The *Command Line Interface Guide for Cisco Unified Communications Solutions*, available at https://www.cisco.com/c/en/us/support/unified-communications/unity-connection/products-maintenance-guides-list.html.



CHAPTER 20

Troubleshooting a Cisco Unity Connection Cluster Configuration

• Troubleshooting a Cisco Unity Connection Cluster Configuration, on page 177

Troubleshooting a Cisco Unity Connection Cluster Configuration

One Server Stops Functioning and the Other Server is Not Handling Calls

When one Unity Connection server in a Unity Connection cluster is not functioning (for example, when the subscriber server is undergoing maintenance) and the remaining server does not answer calls or send MWI requests, use the following task list to determine the cause and to resolve the problem.

Following are the tasks to troubleshoot when one server stops functioning and the other server is not handling calls:

1. Verify the status of the voice messaging ports in Cisco Unity Connection Serviceability. See the Verifying the Status of the Voice Messaging Ports.
2. Verify the voice messaging port assignments for the phone system integration. See the Verifying the Voice Messaging Ports Assignments for Phone System Integration.
3. For SCCP integrations, confirm that the voice messaging ports are registered with the Cisco Unified CM server. See the Confirming that Voice Messaging Ports are Registered (SCCP Integrations Only).
4. Enable the SRM micro trace (all levels) in Cisco Unity Connection Serviceability. For detailed instructions on enabling the micro trace and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1section.

Note The Cisco Unity Connection cluster feature is not supported for use with Cisco Business Edition. Requirements for the Unity Connection cluster feature are available in the "Requirements for a Unity Connection Cluster" section in the *System Requirements Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/requirements/b_14cucsysreqs.html.

Verifying the Status of the Voice Messaging Ports

Step 1 In Cisco Unity Connection Serviceability, on the Tools menu, select **Cluster Management**.

Step 2 On the Cluster Management page under Port Manager, verify the following for the server that should be handling calls:

- In the Total Ports column, the number of ports that is listed is correct.
- In the Change Port Status column, the Stop Taking Calls button appears. If the Take Calls button appears, select **Take Calls**.

Verifying the Voice Messaging Ports Assignments for Phone System Integration

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations**, then select **Phone System**.

Step 2 In the Related Links list, select **Check Telephony Integration** and select **Go**.

The Task Execution Results displays one or more messages with troubleshooting steps.

Step 3 Follow the steps for correcting the problems.

Step 4 Repeat Step 2 through Step 3 until the Task Execution Results displays no problems.

Confirming that Voice Messaging Ports are Registered (SCCP Integrations Only)

Step 1 In Cisco Unified CM Administration, on the Voice Mail menu, select **Voice Mail Port**.

Step 2 On the Find and List Voice Mail Ports page, select **Find**.

Step 3 In the Status column, confirm that all ports show the status of "**Registered with <server name**."

Both Servers Attain Primary Server Status

Use the troubleshooting information in this section if both servers in the Unity Connection cluster have Primary server status (a "split brain" condition). See the following possible causes:

- The network is not functioning or is preventing the publisher and subscriber servers from communicating with each other.

The solution is to restore the network Unity Connection so that the publisher and subscriber servers can communicate.

- The host name for the subscriber server was changed and is not entered correctly on the System Settings > Cluster page of the publisher server.

The solution is to enter the correct host name of the subscriber server on the System Settings > Cluster page of the publisher server.

Unity Connection Cluster Not Functioning Correctly

When a Unity Connection cluster is not functioning correctly (for example, server status does not change when expected), use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved:

1. Confirm that the applicable services are running on the server with primary server status. See the Confirming that Applicable Services are Running on the Server with Primary Server Status.
2. Confirm that the applicable services are running on both servers. See the Confirming that Applicable Services are Running on Both Servers.
3. Use traces to troubleshoot the Unity Connection cluster. For detailed instructions on enabling the applicable traces and viewing the trace logs, see the Traces in Cisco Unity Connection Serviceability, on page 1.

Confirming that Applicable Services are Running on the Server with Primary Server Status

Step 1 In Cisco Unity Connection Serviceability, on the Tools menu, select **Service Management**.

Step 2 On the Control Center - Feature Services page, under Critical Services, confirm that the following services have the **Started** service status:

- Connection Message Transfer Agent
- Connection Notifier

Step 3 If the services have the **Stopped** service status, select **Start**.

Confirming that Applicable Services are Running on Both Servers

Step 1 In Cisco Unity Connection Serviceability, on the Tools menu, select **Service Management**.

Step 2 On the Control Center - Feature Services page, under Status Only Services, confirm that the Unity Connection Server Role Manager service has the **Started** service status.

The services in the Status Only Services section cannot be started in Cisco Unity Connection Serviceability. You must use the command line interface (CLI) to start or stop these services. For information on the CLI, see the *Command Line Interface Reference Guide for Cisco Unified Communications Solutions* at https://www.cisco.com/c/en/us/support/unified-communications/unity-connection/products-maintenance-guides-list.html.

Step 3 Under Critical Services, check the service status for the following services:

- Connection Conversation Manager
- Connection Mixer

If the services have the **Started** service status, skip to Step 4. If the services have the **Stopped** service status, select **Start**.

Step 4 Under Base Services, check the service status for the Unity Connection DB Event Publisher service.

If the service has the **Started** service status, skip to Step 5. If the service has the **Stopped** service status, select **Start**.

Step 5 Under Optional Services, check the service status for the following services:

- Connection File Syncer
- Connection IMAP Server
- Connection SMTP Server

If the service has the **Stopped** service status, select **Start**.

Server Cannot be Added to the Unity Connection Cluster

Use the troubleshooting information in this section if the Add New button is disabled on the System Settings > Cluster page so that you cannot add a server to the Unity Connection cluster. See the following possible reasons why the Unity Connection cluster feature is not available:

- Unity Connection is installed as Cisco Business Edition, which does not support the Unity Connection cluster feature. See the "Requirements for a Unity Connection Cluster" section in the *System Requirements for Cisco Unity Connection Guide Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/requirements/b_14cucsysreqs.html.
- The size of the hard disc on the publisher server is inadequate for supporting the Unity Connection cluster feature. Both servers in a Unity Connection cluster must meet the specifications in the *Cisco Unity Connection Supported Platforms List* Release 14, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/supported_platforms/b_14cucspl.html.
- The number of servers in the Unity Connection cluster is the maximum that is supported. No more servers can be added to the Unity Connection cluster. For information on replacing Unity Connection servers in a Unity Connection cluster, see the "Replacing the Non Functional Server" section of "Maintaining Cisco Unity Connection Server" chapter of the *Install, Upgrade, and Maintenance Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/install_upgrade/guide/b_14cuciumg.html.

Cannot Access Alert Logs When the Publisher Server Stops Functioning

When the publisher server is not functioning and you cannot access the alert logs from the subscriber server, you must specify the subscriber server as the failover collector.

Enabling the Subscriber Server to Access the Alert Logs When the Publisher Server Stops Functioning

Step 1 On the publisher server, in Cisco Unity Connection Administration, expand **System Settings**, then select **Service Parameters**.

Step 2 On the Service Parameters page, in the Server field, select the publisher server.

Step 3 In the Service field, select **Cisco AMC Service**.

Step 4 In the Failover Collector field, select the subscriber server.

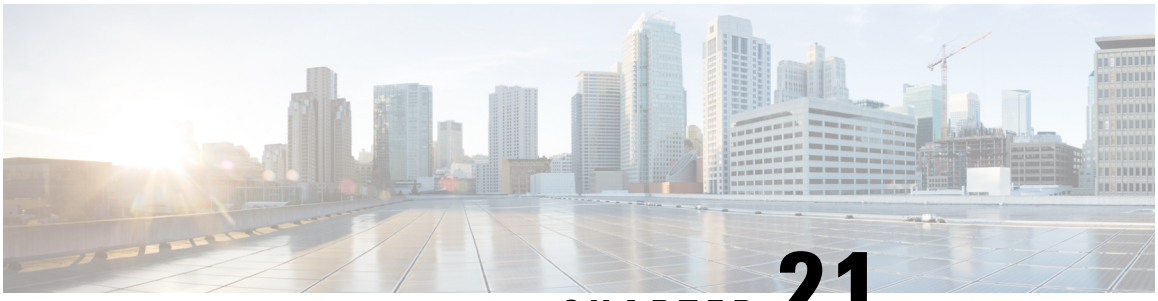
Step 5 Select **Save**.

Step 6 In Cisco Unified Serviceability, in the Tools menu, select **Control Center - Network Services**.

Step 7 In the Server field, select the subscriber server and select **Go**.

Step 8 Under Performance and Monitoring, select **Cisco AMC Service** and select **Restart**.

Step 9 When prompted to confirm that you want to restart the service, select **OK**.



CHAPTER 21

Troubleshooting Licensing

- Troubleshooting Licensing, on page 183

Troubleshooting Licensing

Troubleshooting Cisco Smart Software Licensing

This chapter explains various problems that may occur while using Cisco Smart Software Licensing in Unity connection with the resolution. To use Smart Licensing in Cisco Unity Connection, you must register the product with Cisco Smart Software Manager (CSSM) or Cisco Smart Software Manager satellite.

Following issues may occur while configuring or using Cisco Smart Software Licensing in Unity Connection:

- **Registration, Reregistration, Renew Authorization, Renew Registration or Deregistration Failed with "Communication Timeout - Will Reattempt Automatically" error message.**

  If you get the "Communication Timeout - Will Reattempt Automatically" error message while performing the Registration, Reregistration, Renew Authorization, Renew Registration or Deregistration, verify the following:

  - Make sure you have entered a valid URL or proxy server on Transport Settings window to communicate with CSSM or satellite.
  - Make sure "Connection Smart License Manager Server" service is up and running.
  - Make sure the CSSM server is reachable.

- **Registration or Reregistration Failed with "The Product Instance Registration Token you entered is invalid or has expired. Ensure that you have pasted the entire token and that the token has not expired." error message.**

  If you get the "The Product Instance Registration Token you entered is invalid or has expired. Ensure that you have pasted the entire token and that the token has not expired." error message while registering or reregistering the Unity Connection with CSSM or satellite, verify the following:

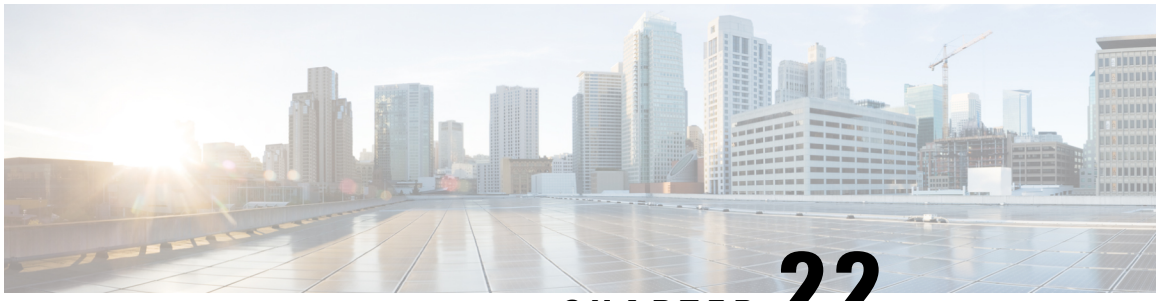
  - Make sure you have entered a valid token to register the product with CSSM or satellite.
  - When you reregister the Unity Connection with CSSM or satellite using wrong or expired token, the reregistration failed and the previous state of the product is changed. In this case, a warning sign with "The last attempt to renew Smart Software Licensing registration failed for the following reason: The Product Instance Registration Token you entered is invalid or has expired. Ensure that you have pasted the entire token and that the token has not expired." error message appears in the

Registration Status and License Authorization Status field on the Licenses page of Cisco Unity Connection Administration.

To resolve this issue, you must perform the **Renew Registration Now** and **Renew Authorization Now** actions on the Licenses page to get back the Unity Connection in the previous state.

SpeechView Services are Not Working

If the SpeechView services are not working on Unity Connection, confirm whether the Unity Connection is registered with CSSM or satellite and the required licenses for SpeechView are obtained on Unity Connection.



CHAPTER 22

Troubleshooting Voice Recognition

• Troubleshooting Voice Recognition, on page 185

Troubleshooting Voice Recognition

Users Hear the Phone Keypad Conversation Instead of Voice-Recognition Conversation

Use the following questions to determine the source of the problem and to correct it:

1. Does this problem occur for all users whose accounts are configured for voice recognition? If yes, do the following:

   Confirm that the class of service (COS) is configured to enable voice recognition. On the Edit Class of Service page, under Licensed Features, check the Allow Access to Advanced Features check box and then check the Allow Users to Use Voice Recognition check box.

   Confirm that the affected users are associated with the correct COS.

2. Does this problem occur only for a single user whose account is configured for voice recognition? If yes, do the following:

   Confirm that the affected user is associated with the correct class of service.

   Confirm that the phone menu input style is set to voice recognition. The input style can be set either in the Messaging Assistant web tool or in Cisco Unity Connection Administration.

3. Do users hear a prompt indicating that voice-recognition services are not available when they first sign in?

If so, see the Error Prompt: There Are Not Enough Voice-Recognition Resources, on page 186 .

1. Is the correct codec being used?

Voice recognition does not work if the Unity Connection server or the phone system is using G.729a, if the G.729a prompts are installed, or if greetings and names were recorded in an audio format other than G.711 Mu-Law.

Error Prompt: There Are Not Enough Voice-Recognition Resources

When a user hears the error prompt "There are not enough voice-recognition resources at this time. You need to use the standard touchtones for the duration of this call," do the following:

1. Confirm that the Connection Voice Recognizer service is running on the Tools > Service Management page in Cisco Unity Connection Serviceability.

Note For information on Cisco Unity Connection Serviceability, see the *Administration Guide for Cisco Unity Connection Serviceability Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

2. Check the Unity Connection license on the System Settings > Licenses page in Cisco Unity Connection Administration. It may be that all licensed voice-recognition sessions are being used. If users report that the error occurs frequently, it is likely that voice-recognition usage has outgrown current licensing capacity on your Unity Connection server.
3. Check for errors generated by the Unity Connection Voice Recognizer service. You can use the Real-Time Monitoring Tool (RTMT) to view errors in the diagnostic logs that are generated with the default traces turned on. The trace log filenames are in the format diag_NSSserver_*.uc.

Note For information on RTMT, see the applicable *Cisco Unified Real-Time Monitoring Tool Administration Guide* at https://www.cisco.com/c/en/us/support/unified-communications/unity-connection/products-maintenance-guides-list.html.

Voice Commands Recognized But Names Not Recognized

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. The timing of the grammar compilation can therefore affect name recognition. In other cases, there may be a search scope problem, or the names may not be pronounced the way they are spelled. Use the following troubleshooting steps to determine the source of problem and to correct it:

- Check to make sure that the name is found in the search scope of the user or directory handler, depending on where the recognition problem occurs. The search scope of a user who has signed in is defined on the User Basics page in Cisco Unity Connection Administration. The search scope of a directory handler is defined on the Edit Directory Handler Basics page.
- Check the Voice Recognition Update schedule on the System Settings > Schedules page in Connection Administration; if names have been added during inactive periods in this schedule, they are not recognized until the schedule is active, at which time Unity Connection automatically updates the name grammars.
- Make sure the Unity Connection Voice Recognition Transport service is running on the Tools > Service Management page in Cisco Unity Connection Serviceability.

Note For information on Cisco Unity Connection Serviceability, see the *Administration Guide for Cisco Unity Connection Serviceability Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

- Check the Tools > Grammar Statistics page in Cisco Unity Connection Administration to see if a grammar has updates pending. To force an update when a grammar says that updates are pending but does not say it is rebuilding, select the Rebuild Grammars button.
- If the problem occurs in a voice-enabled directory handler, try adjusting the Speech Confidence Threshold setting for the directory handler. A lower speech confidence threshold level results in more matches when callers say names, but when callers say digits, extraneous extension matches are returned. A higher speech confidence threshold level results in more precise extension matching, but fewer name matches.
- If the voice-recognition system is having trouble understanding how a particular name is pronounced, consider adding nicknames or alternate names. You can use both of these features to add different pronunciations for names that are not pronounced the way they look. (For example, if a username is Janet but is pronounced Jah-nay, you could add the pronunciation "Jahnay" as an alternate name or nickname.)

Voice Commands Not Recognized

When users encounter issues with poor recognition of voice commands, the problem may stem from many sources—the wrong command being used, issues with pronunciation or foreign accent recognition, a poor phone Unity Connection, jitter in the network, and so on. Use the following troubleshooting steps to narrow down the source of the problem and to correct it:

1. Determine the nature of the problem.

   If the user is having a problem with a single command, see the "Voice Commands" section in the "Phone Menus and Voice Commands" chapter of the *User Guide for the Cisco Unity Connection Phone Interface Release 14)* for a table of preferred voice commands. (The guide is available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user/guide/phone/b_14cucugphone.html.) Although the voice-recognition grammar files contain many synonyms for the preferred commands, it is not possible for them to contain every word or phrase a user might say. For the best performance, encourage users to use the preferred commands.

   If the user is having a problem with Unity Connection taking unintended actions without prompting for confirmation, or if Unity Connection is prompting for confirmation too frequently, check the Voice Recognition Confirmation Confidence Threshold setting. See the Checking the Voice Recognition Confirmation Confidence Setting.

2. Try to reproduce the problem while running the Remote Port Status Monitor to determine which voice commands as per Unity Connection are being uttered. See the Using the Remote Port Status Monitor.

3. Capture and listen to user utterance files to determine if the problem is related to audio quality or accent recognition. See the Using the Utterance Capture Trace to Review User Utterances.

4. Enable diagnostic traces and try to reproduce the problem. See the Using Diagnostic Traces for Voice Recognition.

Checking the Voice Recognition Confirmation Confidence Setting

You can use the Voice Recognition Confirmation Confidence Threshold setting to specify how frequently Unity Connection should prompt the voice recognition user to verify certain user intentions. For example, if users complain that the system mistakenly hears them say “cancel” or “hang up,” you can try increasing the value of this setting to prevent users from accidentally committing actions they did not intend. Alternatively, if users complain that the system prompts for confirmation too frequently, try adjusting this setting to a lower value.

Voice Recognition Confirmation Confidence Threshold is set on a systemwide basis on the System Settings > Advanced > Conversations page in Cisco Unity Connection Administration. The setting also can be changed on a per-user basis on the Phone Menu page for an individual user.

A realistic range of values for this setting is 30 to 90. The default value of 60 should reliably filter out most errors and provide confirmation when necessary for most systems.

Diagnostic Tools for Troubleshooting Voice Recognition Problems

This section covers the diagnostic tools that help you troubleshoot voice-recognition problems.

Using Diagnostic Traces for Voice Recognition

Cisco Unity Connection Serviceability offers diagnostic micro traces and macro traces for help in troubleshooting voice-recognition issues. For detailed instructions on enabling the traces and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.

Micro Traces

- Conversation Development Environment (CDE)
  - 10 State Machine Trace
  - 22 Speech Recognition Grammar
- Media: Input/Output (MiuIO)
  - 25 ASR and MRCP
- Subscriber Conversation (ConvSub)
  - 03 Named Properties Access
  - 05 Call Progress
- Phrase Server
  - 10 Speech Recognition

Macro Traces

Set the Voice User Interface/Speech Recognition Traces.

Note Use this macro trace only if you have first tried to diagnose the problem using the recommended micro traces. The macro trace generates a large amount of diagnostic information which can be difficult to sort through.

Using the Utterance Capture Trace to Review User Utterances

When you enable the VUI micro trace level 05 (Capture Utterances), Unity Connection saves user utterances as WAV files in CCITT (u-law) 8-kHz mono format. The files are stored on the file system, with one folder created for each MRCP session. (You can view MRCP session information for a call in the diagnostic logs by enabling the MiuIO level 25 micro trace for ASR and MRCP.)

You can access the utterance files using the Real-Time Monitoring Tool (RTMT).

Caution Enabling the utterance capture micro trace can affect system performance. Consider doing so only when the system is not under heavy load, and be sure to disable the trace when you are done collecting the desired utterances.

Enabling and Viewing Utterance Capture Traces Using RTMT

Step 1 In Cisco Unity Connection Serviceability, on the Trace menu, select **Micro Traces**.

Step 2 On the Micro Traces page, in the Server field, select the name of the Unity Connection server and select **Go**.

Step 3 In the Micro Trace field, select **VUI** and select **Go**.

Step 4 Check the **Capture Utterances** check box (level 05) and select **Save**.

Step 5 Reproduce the problem.

Step 6 To access the utterance files, launch Real-Time Monitoring Tool (RTMT). For details, see the "**Traces and Logs**" chapter of the *Cisco Unified Real-Time Monitoring Tool Administration Guide*, available at http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

Step 7 In RTMT, on the System menu, select **Tools** > **Trace** > **Trace & Log Central**.

Step 8 In the Trace & Log Central tree hierarchy, double-click **Remote Browse**.

Step 9 In the Remote Browse window, select **Trace Files** and select **Next**.

Step 10 In the Select CUC Services/Application tab, check the check box next to the IP address of the server and select **Next**.

Step 11 In the Select System Services/Applications tab, select **Finish**.

Step 12 When the Result pop-up displays, indicating that the Remote Browse is ready, select **Close**.

Step 13 On the Remote Browse tab, browse to the **Nodes** > **Server Name** > **CUC** > **Unity Connection Voice Recognition Transport** folder.

Step 14 In the Unity Connection Voice Recognition Transport folder, double-click the name of a folder to view the audio files that were captured for that MRCP session. (One folder is created for each MRCP session.)

Step 15 In the files pane, double-click the name of an audio file to play it.

Step 16 In the Open With window, select the application you want to use to play the audio file.

If an appropriate audio player is not available in the list, select the **Other** tab at the bottom of the window, browse to the location of an audio player, double-click the name of the audio player executable, and select **Open**. Then select the name of the application you just added.

Step 17 Select **OK**.

Step 18 In Cisco Unity Connection Serviceability, disable the trace that you enabled in Step 3, then select **Save**.

Using the Remote Port Status Monitor

The Remote Port Status Monitor tool is useful for troubleshooting voice-recognition problems because it displays the conversation flow for a call in real time, including speech input and confidence scores, system interpretations of utterances, and changes to the search scope that can affect name and digit interpretation during the course of the call. To use the tool, do the following procedures in order.

To Download the Remote Port Status Monitor

Step 1 In a web browser, go to the Cisco Unity Tools website at http://www.ciscounitytools.com.

Step 2 In the Tool Update Log section, select **Port Status Monitor**.

Step 3 On the Cisco Unified Communication Tools page for the Port Status Monitor, select **Download Now**.

Step 4 Follow the on-screen instructions to download the Remote Port Status Monitor tool.

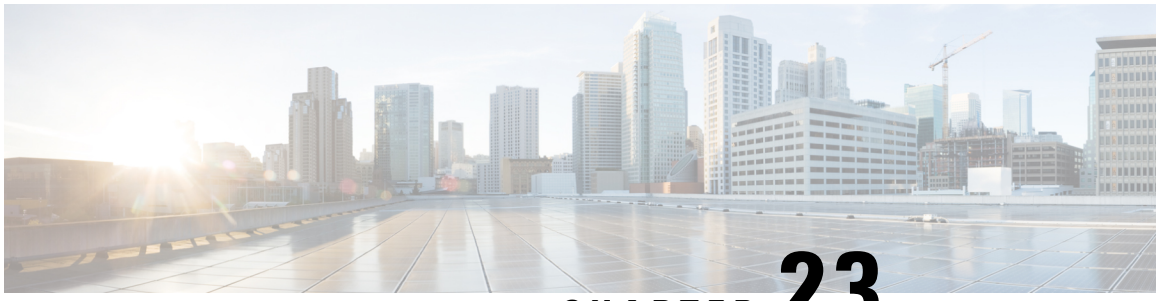
To Configure Unity Connection for the Remote Port Status Monitor

Step 1 In Cisco Unity Connection Administration, expand **System Settings**, then select **Advanced** > **Conversations**.

Step 2 On the Conversation Configuration page, check the **Enable Remote Port Status Monitor Output** check box.

Step 3 In the IP Addresses Allowed to Connect for Remote Port Status Monitor Output field, enter the IP addresses of your workstations and select Save.

Note You can enter up to 70 IP addresses. Each IP address must be separated from the following IP address by a comma.



CHAPTER 23

Troubleshooting the Conversation

• Troubleshooting the Conversation, on page 191

Troubleshooting the Conversation

Custom Keypad Mapping Not Taking Effect

When you use the Custom Key Map tool to customize the key mappings for the Cisco Unity Connection conversation, you must also assign the Custom Keypad Mapping conversation to a user or group of users.

Changing the Conversation Style for a Single User

Step 1 In Cisco Unity Connection Administration, expand **Users** and then select **Users**. On the Search Users page, select the alias of the user.

Step 2 On the Edit menu, select **Phone Menu**.

Step 3 In the Touchtone Conversation Menu Style list, select the applicable Custom Keypad Mapping and select **Save**.

Specifying a Custom Keypad Mapping Conversation for Multiple User Accounts at Once

Step 1 In Cisco Unity Connection Administration, on the Search Users page, check the applicable user check boxes, and select **Bulk Edit**.

If the users that you want to edit in bulk do not all appear on one Search page, check all applicable check boxes on the first page, then go to the next page and check all applicable check boxes, and so on, until you have selected all applicable users. Then select **Bulk Edit**.

Step 2 On the Edit menu, select **Phone Menu**.

Step 3 In the Touchtone Conversation Menu Style list, select the applicable Custom Keypad Mapping.

Step 4 If applicable, set the Bulk Edit Task Scheduling fields to schedule the Bulk Edit operation for a later date and/or time and select **Submit**.

Long Pauses After Listening to Help Menu

After playing a Help menu, Unity Connection waits for a key press. Users can press a key for the command they want, or press 0 to hear the Help menu of command options again.

Determine the WAV File Played

To determine which WAV file is being played off from the hard disk, do the following procedures in the order given.

Downloading the Remote Port Status Monitor

Step 1 In a web browser, go to the Cisco Unity Tools website at http://www.ciscounitytools.com.

Step 2 In the Tool Update Log section, select **Port Status Monitor**.

Step 3 On the Cisco Unified Communication Tools page for the Port Status Monitor, select **Download Now**.

Step 4 Follow the on-screen instructions to download the Remote Port Status Monitor tool.

Configuring Unity Connection for the Remote Port Status Monitor

Step 1 In Cisco Unity Connection Administration, expand **System Settings** > **and** then select **Advanced** > **Conversations**.

Step 2 On the Conversation Configuration page, check the **Enable Remote Port Status Monitor Output** check box.

Step 3 In the IP Addresses Allowed To Connect For Port Status Monitor Output field, enter the IP addresses of your workstations and select Save.

Note You can enter up to 70 IP addresses, separated by commas.

Enabling the PhraseServerToMonitor Micro Trace and View the WAV Filename

Step 1 In Cisco Unity Connection Serviceability, on the Trace menu, select **Micro Traces**.

Step 2 On the Micro Traces page, in the Server field, select the name of the Unity Connection server and select **Go**.

Step 3 In the Micro Trace field, select **PhraseServerToMonitor** and select **Go**.

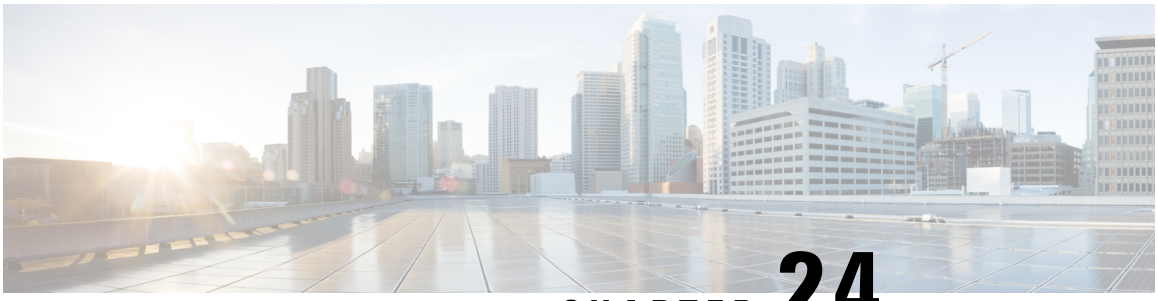
Step 4 Check the check boxes for all levels and select **Save**.

Step 5 On your workstation, start Remote Port Status Monitor.

Step 6 Make a call to Unity Connection so that the WAV file is played.

The full path of the WAV files being played appears in the Remote Port Status Monitor window.

Step 7 In Cisco Unity Connection Serviceability, disable the traces that you enabled in Step 3 and Step 4, then select **Save**.



CHAPTER 24

Troubleshooting SAML SSO Access

- Troubleshooting SAML SSO Access, on page 193

Troubleshooting SAML SSO Access

Redirection to IdP fails

When the end users attempt to log into a SAML-enabled web application using a Cisco Unity Connection supported web browser, they are not redirected to their configured Identity Provider (IdP) to enter the authentication details. Check if the following conditions are met:

- The Identity Provider (IdP) is up and running.
- The correct IdP metadata file (idp.xml) is uploaded to Unity Connection.
- Verify if the server and the IdP are part of the same circle of trust.

IdP authentication fails

If the end user is not getting authenticated by the IdP, check if the following conditions are met:

- The LDAP directory is mapped to the IdP.
- The user is added to the LDAP directory.If the problem still exists, then check the NTP servers associated with Unity Connection and Identity Provider. Make sure that the time on NTP servers associated to both these servers are in synchronization.
- The LDAP account is active.
- The User Id and password are correct.

Redirection to Unity Connection fails

Even after getting authenticated by the IdP, if the user is not redirected to SAML SSO enabled web applications, check the following:

- The clocks of the Unity Connection and the IdP are synchronized. See the "NTP Servers" section of "Settings" chapter in *Cisco Unified Communications Operating System Administration Guide for Cisco Unity Connection, Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/os_administration/guide/b_14cucosagx.html
- The mandatory attribute uid is configured on the IdP.
- The correct Unity Connection server metadata file is uploaded to the IdP.
- The user has the required privileges.

Run Test Fails

When the Run Test fails on Unity Connection, refer the corrective actions that are outlined in Redirection to IdP fails, IdP authentication fails and Redirection to Unity Connection fails.

Mismatch in SAML Status on Publisher and Subscriber Servers

When there is a mismatch of SAML status on publisher and subscriber servers in Unity Connection, do the following:

- Check if IdP metadata is correct on Subscriber server, if not then select the option Re-import Meta Data from SAML Single Sign-On web page.
- If problem still exists, then select the option Fix All Disabled Servers.

Note There is no option to re-import meta data for Publisher server in case of Unity Connection cluster.

Problem in Accessing Web Application on Unity Connection

When a user is not able to access the web applications on Unity Connection using SAML SSO feature and encounters the given error:

Error

<ADFS server>

There was a problem accessing the site. Try to browse to the site again. If the problem persists, contact the administrator of this stie and provide the reference number to identify the problem.

Use the following task list to determine the source of the problem and correct it:

1. Confirm that the Service Provider metadata (SPMetadata<hostname of Unity Connection>.xml) is not missing on Identity Provider. Try uploading the Service Provider metadata of the Unity Connection via Import or URL option.
2. After importing the sp.xml successfully, add the following two claim rules:
   - Send LDAP Attributes as Claims: Select LDAP attribute as SAM-Account-Name and add Outgoing Claim type corresponding to this as uid.
   - Send Claims using a Custom Rule: Under the Custom Rule description, write the following claim:

```
c:[Type == "http://schemas.microsoft.com/ws/2008/06/identity/claims/windowsaccountname"]
 => issue(Type = "http://schemas.xmlsoap.org/ws/2005/05/identity/claims/nameidentifier",
Issuer = c.Issuer, OriginalIssuer = c.OriginalIssuer, Value = c.Value, ValueType =
c.ValueType,
Properties["http://schemas.xmlsoap.org/ws/2005/05/identity/claimproperties/format"] =
"urn:oasis:names:tc:SAML:2.0:nameid-format:transient",
Properties["http://schemas.xmlsoap.org/ws/2005/05/identity/claimproperties/namequalifier"]
 = "http://<ADFS_FQDN>/adfs/com/adfs/service/trust",
Properties["http://schemas.xmlsoap.org/ws/2005/05/identity/claimproperties/spnamequalifier"]
 = "<UC_Node_FQDN>");
```

Save these two claim rules successfully to ensure that Identity Provider used in SAML SSO feature is configured well. (In the above problem description, we have considered ADFS as Identity Provider for

SAML SSO. You may choose any of the supported Identity Provider instead.)

1. The Unity Connection server entry on Identity Provider server must not be disabled.
2. There should be any errors upon accessing the Service Provider metadata (SPMetadata<hostname of Unity Connection>.xml) as a corrupted SP metadata file never allows a user to gain single sign-on access to web applications.

Encryption Error Upon User Login to Unity Connection

When a user tries to login to a web application on Unity Connection and encounters the following

exception error:

Error 500 with Exception

Unable to decrypt secret key

Use the following task list to determine the source of the problem and correct it:

1. Confirm that the SAML SSO feature is enabled on Unity Connection.
2. Under the Identity Provider server Relying party trust page, select Edit Claim Rule and then select

Encryption tab. Remove the encryption from that location and the issue gets fixed.

Unable to Upload Subscriber SP Metadata on ADFS in Cluster

When a user tries to upload the subscriber' SP metadata on ADFS server in a cluster and it fails, the user must try the following steps:

1. Update roll 3 on ADFS 2.0 with hotfix. (http://support.microsoft.com/kb/2790338).
2. Start Windows powershell and run the command:

cd "$env:programfiles\active directory federation services 2.0\sql"

Add-PSSnapin microsoft.adfs.powershell

.\PostReleaseSchemaChanges.ps1

Note: If you get following error at powershell

script cannot be loaded because the execution of scripts is disabled on this system

execute: Set-ExecutionPolicy RemoteSigned with yes on Windows powershell.

SAML Exception Time Synchronization Error

When a user tries to configure SAML SSO feature on Unity Connection and encounters the following error related to time mismatch:

SAML Exception issue: SAML2Exception

The time in SubjectConfirationData is invalid

Use the following task list to determine the source of the problem and correct it:

1. Make sure that the clocks of Identity Provider (like ADFS) and Unity Connection are in synchronization with each other.
2. If the problem still exists, then check the NTP servers associated with Unity Connection and Identity Provider. Make sure that the time on NTP servers associated to both these servers are in synchronization.

SAML Exception Invalid Status Code

Whenever user tries to configure SAML SSO feature on Cisco Unity Connection, in **FIPS mode** with signing algorithm as **SHA1** then below problems will appear:

Error: Invalid status code in response.

SAML Exception issue: ServletException.

Configuration Error in IdP. Please check IdP logs and configuration.

Use the following task list to correct this problem:

1. Change the signing algorithm from SHA1 to SHA256 by executing Unity Connection admin cli command: utils sso set signing-algorithm sha256
2. Configure the SMAL SSO feature on Unity Connection.

Incorrect status of SAML SSO on Two Servers in a Unity Connection Cluster

When the status of SAML SSO feature is different on the two servers in a Unity Connection cluster, do the following:

- If SAML SSO status is disabled on subscriber server and enabled on publisher server, login to Cisco Unity Connection Administration on subscriber server, and select the option “Fix All disabled servers”.
- If we disable the SAML SSO feature on subscriber server when the publisher server is not reachable, a user needs to explicitly disable the SAML SSO feature from publisher server and vice versa. You may also be required to reboot the server if the issue still persists.
- In case of publisher rebuild, administrator needs to explicitly update the IdP metadata file on the publisher server of cluster.

Troubleshooting Cross Origin Resource Sharing

When a third party browser application makes CORS request from a different origin to get the status of SAML Single Sign On by calling the http://<hostname>/ssosp/ws/public/singleSignOn API, the user may get the “Domain not Allowed” error message. To resolve this issue:

- Verify if the domain name is configured properly into the trace file.
- Check if the API method type is configured correctly.
- Verify if the <Hostname> is mentioned correctly in the API.

Diagnostics Traces for Problems with SAML SSO Access

You can enable the Unity Connection trace levels to detect and study any issues related to SAML SSO feature. The traces are turned on from command line access(CLI) to the system server.

The given command turn on the traces for SAML SSO:

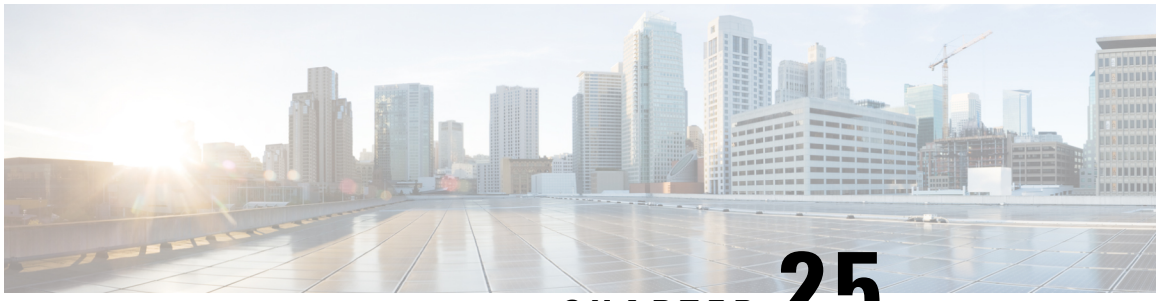
admin: set samltrace level <trace-level>

The traces defined are:

- Debug
- Info
- Warning
- Error
- Fatal

The traces are collected in the following location on Unity Connection :

/var/log/active/tomcat/logs/ssosp



CHAPTER 25

Troubleshooting Authorization Code Grant Flow

This section explains various problems that may occur while using Authorization Code Grant Flow along with the resolution. For Authorization Code Grant Flow, Unity Connection uses an Authz server that provides the authorization keys to validate the Jabber user.

- Troubleshooting Authorization Code Grant Flow, on page 199

Troubleshooting Authorization Code Grant Flow

This section explains various problems that may occur while using Authorization Code Grant Flow along with the resolution. For Authorization Code Grant Flow, Unity Connection uses an Authz server that provides the authorization keys to validate the Jabber user.

Unable to Configure an Authz Server

While configuring an Authz server in Unity Connection or synchronizing the keys between Authz server and Unity connection, you may receive any of the following error message on the New Authz Server page, Edit Authz Server page or Search Authz Server page of Cisco Unity Connection Administration:

- "Failed to connect to Authz Server. Check network connectivity with Authz Server. For more details, check error log" or
- "Failed to connect to Authz Server"

If you receive the "Failed to connect to Authz Server. Check network connectivity with Authz Server. For more details, check error log" or "Failed to connect to Authz Server" error message, verify the following:

- The Cisco Unified CM must be up and running
- The version of Cisco Unified CM must be 11.5(1) SU3 or later
- You entered a valid port number.
- You entered a valid Hostname, IP address or Fully-Qualified Domain Name (FQDN) for the Authz server
- "Not authorized - Invalid Username or Password"

If you receive the "Not authorized - Invalid Username or Password" error message, make sure that the username or password entered for the Authz server are correct.

- "Failed to validate certificates. Make sure proper tomcat certificates are uploaded for the Authz Server" or
- "Failed to validate certificates. Tomcat certificates uploaded for the Authz Server are not yet valid" or

- "Failed to validate certificates. Tomcat certificates uploaded for the Authz Server have expired"

If you receive any of the above error message, make sure proper tomcat certificates are uploaded for the Authz server or check the **Ignore Certificate Errors** check box to ignore the certificate validation errors.

To upload the certificate, log in to the Cisco Unified OS Administration, go to Security > Certificate Management. On the Find and List Certificates page, select Upload Certificate\Certificate Chain. On the Upload Certificate\Certificate Chain page upload a valid certificate for the Cisco Unified CM to the Cisco Unity Connection tomcat-trust.

Jabber User is Unable to Login

If Jabber user is not able to login, verify the following:

- Jabber user must enter a valid username and password.
- The Tomcat services of Cisco Unified CM are up and running.
- The Authz server is properly configured in Unity Connection.
- OAuth Authorization Code Grant Flow feature is enabled on both Cisco Unified CM and Cisco Unity Connection

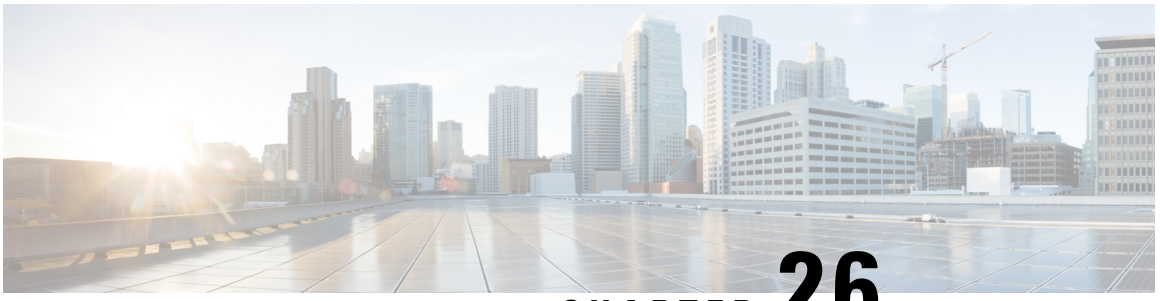
You can also collect Cisco Syslogs for RTMT, which help in analyzing the alerts for Authz server. The path to access Cisco Syslogs is /var/log/active/syslog/CiscoSyslog.

Occurrence of "EvtAuthzKeyRotation" alert in Cisco SysLog indicates that the authorization keys are changed on Cisco Unified CM. Due to which Unity Connection is not able to validate the token of a Jabber user. Hence Jabber user is not able to login.

To resolve the issue, you must synchronize the authorization keys between Authz server and Unity Connection. To synchronize the keys, in Cisco Unity Connection Administration, navigate to System Settings > Authz Servers. On the Search Authz Servers page, select Sync Keys.

To synchronize the authorization keys through REST API, see "TBD".

To troubleshoot more problems related to Authz server, you can collect diagnostic traces for the Authz server. For detail instructions on enabling and collecting diagnostic traces, see the "Traces in Cisco Unity Connection Serviceability" section.



CHAPTER 26

Troubleshooting Fax

• Troubleshooting Fax, on page 201

Troubleshooting Fax

Problems with Fax Delivery to Users

When faxes are not delivered to users, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

Following are the tasks to troubleshoot fax delivery to users:

1. Determine whether the fax is being sent by enabling the MTA micro trace (all levels). For detailed instructions on enabling the micro trace and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.
2. If the trace logs show that the fax was sent, investigate how the SMTP server handles faxes by enabling the SMTP micro trace (all levels). For detailed instructions on enabling the micro trace and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.
3. Confirm that the SMTP server configuration lists the IP address of the Cisco Fax Server and allows a Unity Connection. See the Confirming that SMTP Server Configuration is Correct.
4. Check for the fax in the POP3 mailbox by connecting an email client to the POP3 mailbox.

Note The email client must be configured to leave messages in the POP3 mailbox.

5. In the RightFax Email Gateway, confirm that the POP3 mailbox name and password are correct. See the Confirming that POP3 Mailbox Name and Password are Correct.
6. On the network, confirm that the account for the POP3 mailbox is set to never expire the password. An expired password prevents faxes from being routed.
7. Confirm that faxes are delivered to Unity Connection. See the Confirming Fax is Delivered to Unity Connection.

Confirming that SMTP Server Configuration is Correct

Step 1 In Cisco Unity Connection Administration, expand **System Settings** > **and** select **SMTP Configuration** > **Server**.

Step 2 On the SMTP Server Configuration page, on the Edit menu, select **Search IP Address Access List**.

Step 3 On the Search IP Address Access List page, confirm that the IP address of the Cisco Fax Server appears in the list. If not, select **Add New** to add the IP address.

Step 4 Check the **Allow** Connections check box for the IP address of the Cisco Fax Server, if it is not already checked and select **Save**.

Confirming that POP3 Mailbox Name and Password are Correct

Step 1 On the Windows Start menu, select **Control Panel** > **RightFax Email Gateway**.

Step 2 In the Email Configuration window, select the **General** tab.

Step 3 In the POP3 Mailbox Name field, confirm that the entry matches the SMTP address for the Cisco Fax Server on the System Settings > Fax Server > Edit Fax Server Configuration page in Cisco Unity Connection Administration.

Step 4 In the Mailbox Password field, confirm that the password is correct.

Step 5 In the Email Deliver Direction field, confirm that **Both** is selected and select **OK**.

Confirming Fax is Delivered to Unity Connection

Step 1 On the Windows Start menu, select **All Programs** > **RightFax FaxUtil**.

Step 2 In the RightFax FaxUtil window, in the left pane, select the user who sends the test fax.

Step 3 On the Fax menu, select **New**.

Step 4 In the Fax Information dialog box, select the **Main** tab.

Step 5 Under the Name field, select the drop-down arrow and select **Email Address**.

Step 6 In the Email Address field, enter the email address of the user who has the fax delivery problem.

Step 7 Select **Save**.

Step 8 In the right pane, note the status of the test fax as it is being sent.

Note To refresh the status display of the fax progress, press **F5**.

Problems with Fax Delivery to a Fax Machine

When faxes are not delivered to a fax machine, use the following task list to determine the cause and to resolve the problem. Do the tasks in the order presented until the problem is resolved.

Following are the tasks to troubleshoot fax delivery issues in a fax machine:

1. Determine the status of the fax that was sent to a fax machine. See the Determining the Status of a Fax Delivered to a Fax Machine.
2. Confirm that the fax is in the POP3 mailbox by connecting an email client to the POP3 mailbox.

   Note that the email client must be configured to leave messages in the POP3 mailbox.
3. In the RightFax Email Gateway, confirm that the POP3 mailbox name and password are correct. See the Confirming that POP3 Mailbox Name and Password are Correct.
4. On the network, confirm that the account for the POP3 mailbox is set to never expire the password. An expired password prevents faxes from being routed.
5. Confirm that the SMTP server configuration lists the IP address of the Cisco Fax Server and allows a Unity Connection. See the Confirming that SMTP Server Configuration is Correct.
6. Troubleshoot how the SMTP server handles faxes by enabling the SMTP micro trace (all levels). For detailed instructions on enabling the micro trace and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.
7. If the trace logs show that the SMTP message was not sent, investigate how the fax is sent by enabling the MTA micro trace (all levels). For detailed instructions on enabling the micro trace and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.
8. Confirm that the file extension of the file that the user attempted to fax is included in the list of faxable file types. See the Confirming that Faxable File Types List is Correct.

Determining the Status of a Fax Delivered to a Fax Machine

Step 1 On the Windows Start menu, select **All Programs** > **RightFax FaxUtil**.

Step 2 In the RightFax FaxUtil window, in the left pane, select the user who sent the fax to the fax machine, then select **All**.

Step 3 In the right pane, note the status of the fax and any problems that are reported.

Confirming that POP3 Mailbox Name and Password are Correct

Step 1 On the Windows Start menu, select **Control Panel** > **RightFax Email Gateway**.

Step 2 In the Email Configuration window, select the **General** tab.

Step 3 In the POP3 Mailbox Name field, confirm that the entry matches the SMTP address for the Cisco Fax Server on the System Settings > Fax Server > Edit Fax Server Configuration page in Cisco Unity Connection Administration.

Step 4 In the Mailbox Password field, confirm that the password is correct.

Step 5 In the Email Deliver Direction field, confirm that **Both** is selected and select **OK**.

Confirming that SMTP Server Configuration is Correct

Step 1 In Cisco Unity Connection Administration, expand **System Settings** and select **SMTP Configuration** > **Server**.

Step 2 On the SMTP Server Configuration page, on the Edit menu, select **Search IP Address Access List**.

Step 3 On the Search IP Address Access List page, confirm that the IP address of the Cisco Fax Server appears in the list. If not, select **Add New** to add the IP address.

Step 4 Check the **Allow** Unity Connection check box for the IP address of the Cisco Fax Server, if it is not already checked and select **Save**.

Confirming that Faxable File Types List is Correct

Step 1 In Cisco Unity Connection Administration, expand **System Settings**, then select **Advanced** > **Fax**.

Step 2 On the Fax Configuration page, in the Faxable File Types field, note the file extensions that are listed.

Step 3 If the file extension of the file that the user attempted to fax is not in the list, enter a comma followed by the file extension and select **Save**.

Problems with Fax Notifications

Confirm that fax notification from Unity Connection is enabled for the user.

Confirming that Fax Notification is Enabled for the User

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, select the alias of the user.

Step 2 On the Edit menu, select **Notification Devices**.

Step 3 On the Notification Devices page, select the name of the applicable notification device.

Step 4 On the Edit Notification Device page, under Notification Rule Events, check the **Fax Messages** check box and select **Save**.

Problems with Fax Receipts

This section covers the troubleshooting steps of some fax receipt related problems.

Fax Receipts Not Delivered

Verifying Prefixes for Delivery Receipts and Nondelivery Receipts on the Cisco Fax Server

Step 1 On the Windows Start menu, select **Control Panel** > **RightFax Enterprise Fax Manager**.

Step 2 In the Email Configuration window, select the **General** tab.

Step 3 In the left pane of the RightFax Enterprise Fax Manager window, select the name of the Cisco Fax Server.

Step 4 In the right pane, under Service Name, scroll down to **RightFax eTransport Module**.

Step 5 Right-click **RightFax eTransport Module** and select **Configure Services**.

Step 6 Select the **Custom Messages** tab.

Step 7 In the applicable fields, verify the fax failure prefix at the beginning of the text (the default fax failure prefix is [Fax Failure]). We recommend that the fax failure prefix appear at the beginning of the following fields:

- Imaging Error
- Bad Form Type
- Bad Fax Phone Number
- Too Many Retries
- Sending Error
- Incomplete Fax
- Invalid Billing Code
- Fax Needs Approval
- Fax Number Blocked
- Human Answered Fax
- Fax Block by Do Not Dial

When the text at the beginning of the field matches the value for the Subject Prefix for Notification of a Failed Fax field on the System Settings > Advanced > Fax page of Cisco Unity Connection Administration, Unity Connection notifies the user of the failed fax.

Step 8 In the Successful Send field, verify the fax success prefix at the beginning of the text (the default fax success prefix is [Fax Success]).

When the text at the beginning of the field matches the value for the Subject Prefix for Notification of a Successful Fax field on the System Settings > Advanced > Fax page of Connection Administration, Unity Connection notifies the user of the successful fax.

Step 9 Select **OK**.

Verifying Prefixes for Delivery Receipts and Nondelivery Receipts on Cisco Unity Connection

Step 1 In Cisco Unity Connection Administration, expand **System Settings**, then select **Advanced** > **Fax**.

Step 2 On the Fax Configuration page, in the Subject Prefix for Notification of a Successful Fax field, confirm that the setting matches the prefix for the Successful Send field that is described in Step 8 of the Verifying Prefixes for Delivery Receipts and Nondelivery Receipts on the Cisco Fax Server.

Step 3 In the Subject Prefix for Notification of a Failed Fax field, confirm that the setting matches the prefix for the fields that are described in Step 7 of the Verifying Prefixes for Delivery Receipts and Nondelivery Receipts on the Cisco Fax Server.

Step 4 Select **Save**.

User Mailbox is Filled with Fax Notifications

Disabling Fax Notifications

Step 1 In the RightFax Enterprise Fax Manager window, in the right pane, expand **Users**, right-click the user for whom you want to disable fax notifications, and select **Edit**.

Step 2 In the User Edit dialog box, select the **Notifications** tab.

Step 3 Under Notification About Received Faxes, uncheck the **When Initially Received** check box.

Step 4 Select **OK**.

Step 5 Repeat Step 1 through Step 4 for all remaining users for whom you want to disable fax notifications.

Step 6 Close the RightFax Enterprise Fax Manager window.

Problems with Printing Faxes

When you send a fax to a fax machine for printing but portions of the document are not printed, do the following:

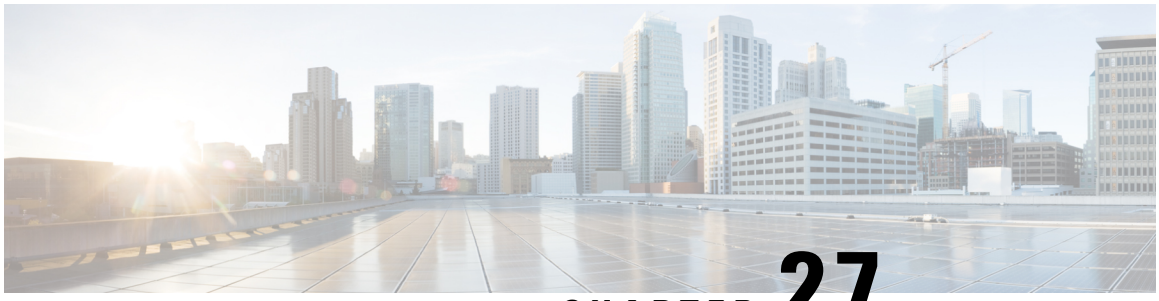
- Use the MTA micro trace to determine which files are not rendered into the fax. Then note the file types. For instructions for enabling the micro trace and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.
- Confirm that the faxable file types include the file types that you sent to the fax machine for printing. See the Confirming that Faxable File Types List is Correct.

Confirming that Faxable File Types List is Correct

Step 1 In Cisco Unity Connection Administration, expand **System Settings**, then select **Advanced** > **Fax**.

Step 2 On the Fax Configuration page, in the Faxable File Types field, note the file extensions that are listed.

Step 3 If the file extension of the file that the user attempted to fax is not in the list, enter a comma followed by the file extension and select **Save**.



CHAPTER 27

Troubleshooting Reports

- Troubleshooting Reports, on page 207

Troubleshooting Reports

Overview

When no data appears in the reports that you generate, use the following task list to determine the cause and to resolve the problem:

1. Confirm that the Unity Connection Reports Data Harvester service is running. See the Confirming Connection Reports Data Harvester Service is Running.
2. Adjust the report data collection cycle. See the Adjusting Report Data Collection Cycle.
3. Use traces to troubleshoot reports. For detailed instructions on enabling the applicable traces and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.

For information about the available reports and how to generate reports, see the "Using Reports" chapter of the *Administration Guide for Cisco Unity Connection Serviceability Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/serv_administration/guide/b_14cucservag.html.

Confirming Connection Reports Data Harvester Service is Running

Step 1 In Cisco Unity Connection Serviceability, expand Tools menu, select **Service Management**.

Step 2 On the Control Center – Feature Services page, under Optional Services, locate the **Connection Reports Data Harvester** service.

Step 3 Confirm that the activate status for the Connection Reports Data Harvester service is **Activated**. If the activate status is Deactivated, select **Activate**.

Step 4 Confirm that the service status for the Connection Reports Data Harvester service is **Started**. If the service status is Stopped, select **Start**.

Step 5 Confirm that the running time for the Connection Reports Data Harvester service is greater than 00:00:00. If the running time is 00:00:00, turn off the Connection Reports Data Harvester service, then repeat Step 3 and Step 4.

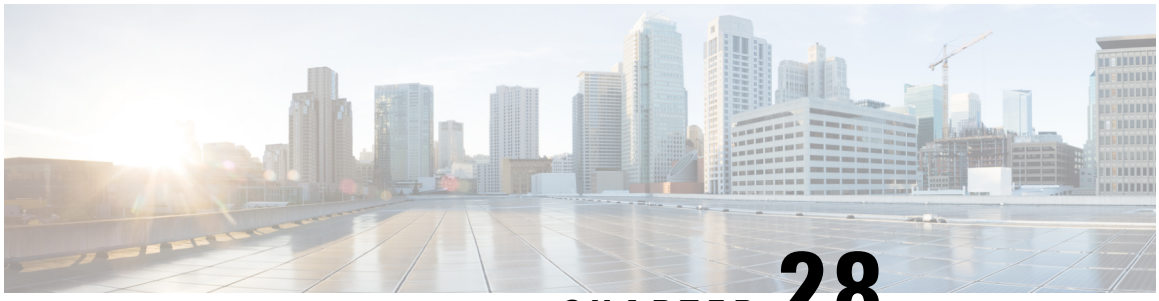
Adjusting Report Data Collection Cycle

Step 1 If the value of the Data Collection Cycle field is too high, the data may not have been collected yet for the report because the time between each cycle of collecting data is too long.

Step 2 In Cisco Unity Connection Administration, expand **System Settings**, then select **Advanced** > **Reports**.

Step 3 On the Report Configuration page, in the Minutes Between Data Collection Cycles field, enter the time (in minutes) that you want between each cycle of collecting data for the reports. The default is 30 minutes.

Step 4 Select **Save**.



CHAPTER 28

Troubleshooting Cisco Personal Communications Assistant (PCA)

- Overview, on page 209
- Users cannot Access Cisco PCA Pages, on page 210
- Security Alert Displayed When Users Access Cisco Personal Communications Assistant Pages, on page 210
- Users cannot Access Unity Connection Web Tools from Cisco PCA, on page 211
- Users cannot Save Changes on Pages in Cisco PCA, on page 211
- Cisco PCA Error Messages, on page 211
- Missing Text on the Menu Bar (Microsoft Windows Only), on page 214
- Verifying if Tomcat Service is Running, on page 215

Overview

The Cisco Personal Communications Assistant (PCA) is a portal that provides access to the Cisco Unity Connection web tools for users to manage messages and personal preferences in Unity Connection. The Unity Connection web tools include the Messaging Assistant, the Messaging Inbox, and the Cisco Unity Connection Personal Call Transfer Rules. The Cisco PCA is installed on the Unity Connection server during installation.

Following are the tasks to troubleshoot problems with Cisco Personal Communications Assistant:

- If there is an error message associated with the problem, review the Cisco PCA Error Messages.
- Review the Users cannot Access Cisco PCA Pages to consider the most common reasons why users cannot access the Cisco PCA pages, including use of an incorrect URL, incorrect browser settings, or the presence of unsupported software installed on the workstation.
- If users cannot browse to the Cisco PCA website at all or have trouble accessing the Cisco PCA applications, see the Troubleshooting User and Administrator Access, on page 29 chapter for the applicable troubleshooting procedures.
- If the problem is that Media Player does not show up correctly or at all, see the Troubleshooting Media Player chapter.
- If the problem is that the menu bar does not display any text, see the Missing Text on the Menu Bar (Microsoft Windows Only).
- Confirm that the Tomcat service is running. See the Verifying if Tomcat Service is Running.

- Confirm whether appropriate changes have been made in the browser settings to support the locales.

If you cannot resolve the problem and plan to report the problem to Cisco TAC, you are asked to provide information about your system and about the problem.

Users cannot Access Cisco PCA Pages

Users use the Cisco Personal Communications Assistant (PCA) website to access the Messaging Assistant, and the Personal Call Transfer Rules pages.

When a user cannot access the Cisco PCA pages, consider the following possible causes.

- **The Cisco PCA URL is case-sensitive**—Users can access the Cisco PCA at the following URL: http://<Cisco Unity Connection server>/ciscopca. Note, however, that the URL is case-sensitive.
- **The browser or client configuration is not configured properly**—When a user cannot access any of the Cisco PCA pages, it may be that the user browser or client workstation is not configured properly. Make sure that the browser and client workstation are configured as specified in the *User Workstation Setup Guide for Cisco Unity Connection Release 14*. The guide is available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user_setup/guide/b_14cucuwsx.html.
- **Unsupported software is installed on the client workstation**—Confirm that the user does not have an unsupported combination of software or an unsupported third-party application installed on the workstation. See the Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations, available at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.

Also note that the users can access the Web Inbox URL, and link to the Messaging Assistant and Personal Call Transfer Rules pages from there. The Web Inbox URL is http://<Unity Connection server>/inbox.

Security Alert Displayed When Users Access Cisco Personal Communications Assistant Pages

If you use the self-signed certificate generated during installation to provide an SSL Unity Connection to the Cisco PCA, the web browser of the user displays a message to alert the user that the authenticity of the site cannot be verified, and therefore its content cannot be trusted. Similarly, if you use a self-signed SSL certificate to secure IMAP email client access to Unity Connection, some email clients supported for use with Unity Connection display SSL security messages.

Although users can still access Unity Connection despite the alerts, consider one of the following options to manage or eliminate security alerts when users browse to Cisco PCA and/or access their messages from an IMAP email client:

- Add the SSL certificate to the Trusted Root Store on each user workstation. In this way, you can ensure that users never see the security alert. See the following Adding the SSL Certificate to the Trusted Root Store on User Workstations procedure.
- Tell users to select the "Accept Permanently" (or similar) option when the browser or email client displays the alert and asks them how to proceed. After instructing the browser and/or email client to always accept the certificate, the user does not see the alert again.

Adding the SSL Certificate to the Trusted Root Store on User Workstations

Step 1 From the OS Administration application on the Unity Connection server, right-click to download the certificate and save it as a file.

Step 2 Copy the certificate to each user workstation, and then import it using tools in the browser or IMAP client, as applicable.

Users cannot Access Unity Connection Web Tools from Cisco PCA

When users can access the Cisco Personal Communications Assistant (PCA), but cannot access the Messaging Assistant, or the Personal Call Transfer Rules, consider the following possible causes:

- In order to access the Messaging Assistant, users must be given the proper class of service rights on the Class of Service > Edit Class of Service page or the Class of Service > New Class of Service page in Cisco Unity Connection Administration. The class of service that the user is assigned to must have the "Allow Users to Use the Messaging Assistant" setting enabled.

Note Web Inbox has replaced the Messaging Inbox. See the Troubleshooting Cisco Personal Communications Assistant (PCA) chapter for Web Inbox troubleshooting information.

- In order to access the Personal Call Transfer Rules, users must be given the proper class of service rights on the Class of Service > Edit Class of Service page or the Class of Service > New Class of Service page in Cisco Unity Connection Administration. The class of service that the user is assigned to must have the "Allow Users to Use Personal Call Transfer Rules" setting enabled.

Users cannot Save Changes on Pages in Cisco PCA

When user browser settings are set to cache temporary Internet pages automatically, users can create a bookmark or favorite to access a Messaging Assistant, or Personal Call Transfer Rules web page. However, the page is read-only. Explain to users that they should bookmark the Cisco PCA home page rather than individual pages. Also note that users should not change their browser settings as a workaround; when the browser is not set to automatically check for newer versions of temporary Internet files, the Media Master control is not displayed correctly.

Cisco PCA Error Messages

In addition to browser error messages (such as "File not found" or "Unauthorized access"), users may see Cisco PCA-specific error messages, Java plugin error messages, and Tomcat error messages when signing in

to the Cisco PCA, or when using the Messaging Assistant, the Messaging Inbox, or Cisco Unity Connection Personal Call Transfer Rules.

The four types of error messages that users may encounter are described in the following table:

Browser error messages	Browser error messages may indicate that the Cisco PCA failed to install, the user does not have network access to the Unity Connection server, the browser is not configured correctly, or the user does not have the required security certificate installed (if the Cisco PCA uses SSL connections).
Cisco PCA-specific error messages	Cisco PCA-specific error messages are displayed on the Sign-In page or another Cisco PCA page, and typically indicate problems with user credentials or actions within the Cisco PCA.
Java Plugin error messages	Java Plugin-specific error or warning messages are pop-up alerts that occur on pages that load the Java plugin to integrate the Media Master in a web page. These messages typically appear the first time that the Java plugin is loaded when you navigate to a page that contains the Media Master.
Tomcat error messages	Tomcat errors occur when there is a system error, such as file corruption or insufficient memory on the Unity Connection server. A Tomcat error message usually lists the sequence of application errors. Each exception is followed by a description of what the Tomcat service was attempting to do when the error occurred, and for some exceptions, a message explaining the error is also offered. The "Exception" and "Root Cause" sections in the error message may offer additional information about the problem.

Error Message: "Sign-In Status – Account Has Been Locked."

When users encounter the error message "Sign-in status – account has been locked," it is possible that the user exceeded the number of failed sign-in attempts that is allowed. (This limit is set on the System Settings > Authentication Rules page in Cisco Unity Connection Administration.) It may also be possible that the user forgot his or her credentials, or an unauthorized user attempted to gain access.

Use the following task list to determine the source of the problem and correct it.

1. To confirm that the account is locked, in Cisco Unity Connection Administration, go to the Users > Edit Password Settings page for the individual user, and select Web Application from the Choose Password menu. Under Web Applications Password Settings, you can verify the status of the user credentials to determine whether the password was locked by an administrator, there were failed sign-in attempts, or the password was locked after an excessive number of failed sign-in attempts.
2. To unlock the user account, in Cisco Unity Connection Administration, go to the Users > Edit Password Settings page for the individual user, and select Web Application from the Choose Password menu. Under Web Applications Password Settings, select Unlock Password.

Note When the default application administration account is locked, for example, because the password has expired or because of too many unsuccessful sign in attempts, no application administration account is allowed to sign in to Cisco Unified Serviceability. (You specify the account name and password for the default application administration account during installation, and you create and administer additional application administration accounts in Cisco Unity Connection Administration.) To unlock the account, change the password using the utils cuc reset password CLI command. Changing the password also unlocks the account. (If an account has been hacked, you do not want to unlock it without also changing the password.)

Error Message: "Apache Tomcat/<Version> – HTTP Status 500 – Internal Server Error."

File corruption at the time of installation or a Tomcat memory corruption can cause users to encounter the error message "Apache Tomcat/<version> – HTTP status 500 – internal server error." To confirm that this is the cause of the problem, check the Tomcat error page for the indicated root cause for the exception. If an exception message similar to the one below exists, there is a file or memory corruption:

java.lang.ClassFormatError: <classpath>/<classname> (Illegal constant pool index)

Contact Cisco TAC.

Error Message: "Site is Unavailable."

If users encounter the error message "Site is unavailable," confirm that the Apache Tomcat service is running. See the Verifying if Tomcat Service is Running.

Error Message: "Failed to <Save Message>" While Using PC Microphone in Cisco Unity Connection Administration or Cisco PCA

While uploading an existing .wav file, or saving a new recorded message as a voice name or greeting using the PC microphone, the user receives an error message for failed operation. For example, if a user is saving a new greeting using PC microphone, the user receives "Failed to Save Greeting" error message. This error message appears if the user is using either the Cisco Unity Connection Administration (CUCA) or the Cisco Personal Communications Assistant (CPCA) web application of Cisco Unity Connection. The following exception also appears in the client side Java Console logs:

Exception in thread "Timeout guard" java.security.AccessControlException: access denied (java.net.SocketPermission 10.93.231.234:8443 connect,resolve)

To send the recorded message successfully, add the below entry in the client side JRE security profile file, that is commonly named as **java.policy** using the IP address of the Unity Connection server. For a cluster, you may need to add an entry for each of publisher and subscriber.

permission java.net.SocketPermission "10.93.237.101:8443", "connect,resolve";

If you get a permission error while trying to modify the java.policy security profile file, you may need to set the permissions of the file to not inherent permissions from its parent and not be read-only.

Error Message: "Application Blocked by Security Settings. Your security settings have blocked a self-signed application from running

The users receive an error message: "Application Blocked by Security Settings. Your security settings have blocked a self-signed application from running", under the following conditions:

- While uploading an existing .wav file or saving a new recorded message as a voice name or
- While uploading an existing .wav file or saving a new recorded message as a greeting.

Using Media Master bar with Java version 7 latest update on IE as the web browser.

To correct the problem, follow the given steps:

1. Select Security tab of Java Control panel.
2. Select Add in the Exception Site List window.
3. Type the URL into the empty field that is provided under Location.
4. Continue to select Add and enter URLs until your list is complete. Select OK to save the URLs that you entered.
5. If you select Cancel, the URLs are not saved.

Error Message "Access denied" When Trying to Play Recordings through Media Master Using Phone

If a user opens Cisco Personal Communications Assistant (CPCA) through Web Inbox and try to play recordings, the user receives the error "Access Denied". To correct the problem, open Cisco PCA directly in a new window instead of opening through Web Inbox and play the recordings

Missing Text on the Menu Bar (Microsoft Windows Only)

If the menu bar of the Cisco Personal Communications Assistant web tool is missing text and only displays down arrows to signify the menu items, do the following procedure.

Re-Registering DLLs Required for the Cisco Personal Communications Assistant Menu Bar

Step 1 On the user workstation, select Start and select Run.

Step 2 In Run window, enter **regsvr32 msscript.ocx** and select OK.

Step 3 In the dialog box that indicates that the DLL registration succeeded, select OK.

Step 4 Select Start and select Run.

Step 5 In Run window, enter regsvr32 dispex.dll and select OK.

Step 6 In the dialog box that indicates that the DLL registration succeeded, select OK.

Step 7 Select Start and select Run.

Step 8 In Run window, enter regsvr32 vbscript.dll and select OK.

Step 9 In the dialog box that indicates that the DLL registration succeeded, select OK.

Verifying if Tomcat Service is Running

Do the following tasks to confirm that the Tomcat service is running and if necessary, to restart the Tomcat service:

1. Confirm that the Tomcat service is running using either Real-Time Monitoring Tool (RTMT) or the Command Line Interface (CLI). Do the applicable procedure:
   - Confirming That the Tomcat Service Is Running Using Real-Time Monitoring Tool (RTMT)
   - Confirming That the Tomcat Service Is Running Using the Command Line Interface (CLI)
2. If necessary, restart the Tomcat service using the Command Line Interface (CLI). See the Restarting the Tomcat Service Using the Command Line Interface (CLI).

Confirming That the Tomcat Service Is Running Using Real-Time Monitoring Tool (RTMT)

Step 1 Launch Real-Time Monitoring Tool (RTMT).

Note For details on using RTMT, see the applicable *Cisco Unified Real Time Monitoring Tool Administration Guide* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

Step 2 On the System menu, select **Server** > **Critical Services**.

Step 3 On the System tab, locate Cisco Tomcat and view its status. The status is indicated by an icon.

Confirming That the Tomcat Service Is Running Using the Command Line Interface (CLI)

Step 1 Use the Command Line Interface (CLI) command **utils service list** to list all of the services.

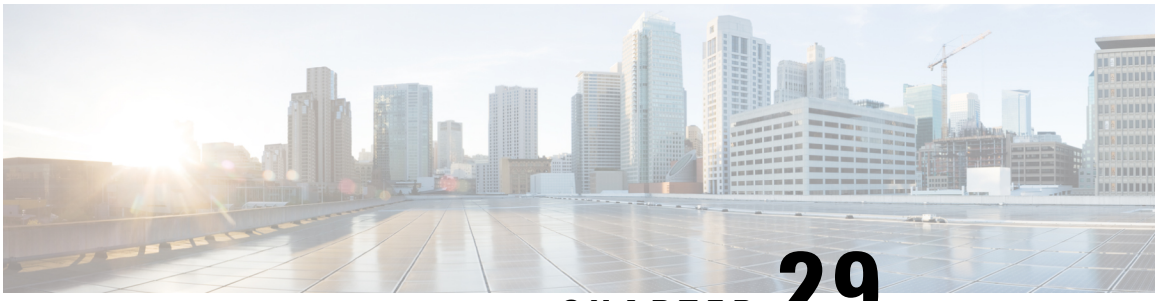
Note For details on using CLI commands, see the applicable *Command Line Interface Reference Guide for Cisco Unified Communications Solutions* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.

Step 2 Scan the CLI output for the Cisco Tomcat service and confirm that its status is **Started**.

Restarting the Tomcat Service Using the Command Line Interface (CLI)

To restart the Cisco Tomcat service, use the CLI command **utils service restart Cisco Tomcat**.

Note For details on using CLI commands, see the applicable *Command Line Interface Reference Guide for Cisco Unified Communications Solutions* at http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html.



CHAPTER 29

Troubleshooting Personal Call Transfer Rules

• Troubleshooting Personal Call Transfer Rules, on page 217

Troubleshooting Personal Call Transfer Rules

Personal Call Transfer Rules Settings Unavailable

If a user does not hear the Personal Call Transfer Rules Settings menu in the phone interface or if a user cannot see the Cisco Unity Connection Personal Call Transfer Rules web tool link in the Cisco Personal Communications Assistant, confirm that the user is assigned to a class of service that is enabled for access to the Personal Call Transfer Rules web tool.

In addition, do the following procedure to confirm that the value of the Region Unrestricted Feature licensing option is set to Yes. If the value is set to No, you cannot use personal call transfer rules, and you cannot use English-United States language. To resolve the problem, install a license in which the feature is enabled, and restart Cisco Unity Connection. (An additional fee might be required to enable the feature. Contact your Cisco account team to obtain the updated license file.) For details, see the "Managing Licenses" chapter of the *Install, Upgrade, and Maintenance Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/install_upgrade/guide/b_14cuciumg.html.

Determining the Value of the Region Unrestricted Feature Licensing Option

Step 1 In Cisco Unity Connection Administration, expand **System Settings**, then select **Licenses**.

Step 2 Below the License Count table, confirm that the value of US English Usage and Personal Call Routing Rules Allowed (LicRegionIsUnrestricted) is set to Yes.

Personal Call Transfer Rules and Destinations

Personal call transfer rules can forward calls to a phone destination, a destination group, or to voicemail. The destination group must contain at least one phone destination, and can also contain SMS and SMTP devices. The destinations in a destination group are tried serially in the priority order in which they are listed until a destination phone is answered or the caller hangs up.

When a user has entered phone numbers for notification devices in the Messaging Assistant web tool, the numbers are displayed on the View Destinations page and can be used as destinations for rules. The notification devices do not need to be enabled. These prepopulated destinations cannot be edited or deleted in the Personal Call Transfer Rules web tool. They can be edited only on the Notification Devices page in the Messaging Assistant.

Note that pager destinations are not supported destinations for rules, and thus are not displayed on the View Destinations page.

Call Screening and Call Holding Options

If call screening and call holding options are not available in the Personal Call Transfer Rules web tool, use the following information to troubleshoot the possible causes:

- Confirm that the user belongs to a class of service that allows access to the call screening and/or call holding options.

Note Call holding applies only to calls to primary extensions.

- In the Personal Call Transfer Rules web tool, the Screen the Call check box may be grayed out even when the user belongs to a class of service that allows access to call screening options. If the option is grayed out, do the following procedure to correct the problem.

Enabling the Screen the Call Option in the Personal Call Transfer Rules Web Tool

Step 1 In the Personal Call Transfer Rules web tool, on the Preferences menu, select **Call Holding and Screening**.

Step 2 On the Call Holding and Call Screening Options page, confirm that at least one option under the Screen Calls section is enabled.

Problems with the Application of Rules

When rules are not applied as expected, consider the following possible issues:

- **An active rule set has been created but it fails when the user receives a call**—See the Rules Not Applied When a User with Active Rules Receives a Call.
- **A rule applies to all incoming calls when the user expected it to be applied only to calls from a specific caller**—Personal call transfer rules can be created without a “From” condition (set up either as “from” or “not from”). When set up this way, the rules are applied to all incoming calls.
- **Rules associated with meetings or calendar entries are not working as expected**—See the Rules Based on a Meeting Condition Not Applied Correctly.
- **Rules based on a caller or caller group are not applied correctly**—Phone numbers that have been set for the primary extension, home phone, work phone, or mobile device of a user, or for administrator-defined or user-defined contacts must match the incoming caller ID or ANI. Confirm that

the phone number of the caller that is specified in Unity Connection matches the incoming caller ID or ANI.

- **Rules based on a time condition are not applied correctly**—Confirm that the correct time zone has been selected for the user. In Cisco Unity Connection Administration, on the Edit User Basics page for the user, change the selected time zone if necessary.

Rules Not Applied When a User with Active Rules Receives a Call

There are several reasons that a rule set can fail:

- Personal call transfer rules are used only when the active basic rule—the standard, alternate or closed transfer rule—is set to apply personal call transfer rules instead of the basic settings.
- If the rule set is specified for a day of the week, but another rule set is enabled for a date range that includes the current date, the date range rule set takes precedence.
- Transfers to a destination without a complete dialable phone number may fail. If there is no other destination to try, the caller is transferred to voicemail.

Use the following troubleshooting steps to resolve the problem:

- Confirm that the active basic transfer rule is configured to use personal call transfer rules. See the Configuring Basic Transfer Rules to Use Personal Call Transfer Rules.
- Use the Call Transfer Rule Tester to check the validity of the rule. The test tells you which rule is currently being invoked. Based on the results, you may want to reprioritize the rules within the rule set.

Note The rule set that contains the rule that you are testing must be enabled or active in order for the Call Transfer Rule Tester to work.

- Confirm that the destinations for the rule set contain dialable phone numbers, including any outdial access codes required by the phone system.
- On the Rules Settings page, confirm that the Disable All Processing of Personal Call Transfer Rules check box is not checked. When the check box is checked, all rule processing is disabled.

Configuring Basic Transfer Rules to Use Personal Call Transfer Rules

Personal call transfer rules are used only when the active basic rule—the standard, alternate or closed transfer rule—is set to apply personal call transfer rules instead of the basic settings.

To turn on personal call transfer rules for a user, do the following procedure.

Users can also use the Messaging Assistant to configure their basic transfer rules to apply personal call transfer rules.

Turning On Personal Call Transfer Rules for an Individual User

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, select the alias of the user for whom you want to turn on personal call transfer rules.

Step 2 On the Edit menu, select **Transfer Rules**.

Step 3 In the Transfer Rules table, select the transfer rule that you want to use with personal call transfer rules.

Step 4 On the Edit Transfer Rule page, in the When This Basic Rule Is Active field, select Apply Personal Call Transfer Rules and select Save.

Step 5 Repeat Step 2 through Step 4 for each additional transfer rule that you want to use.

Rules Based on a Meeting Condition Not Applied Correctly

When a personal call transfer rule has a condition that is based on a Microsoft Exchange calendar appointment, the rule might not be applied as expected. Calendar information is cached every 30 minutes, so a newly created appointment may not yet be cached.

Try the following troubleshooting steps:

- Confirm that the Exchange external service is configured properly. In Cisco Unity Connection Administration, expand Unified Messaging > Unified Messaging Services, confirm that all settings are correct.
- Confirm that the applicable service is configured as an Unified Messaging Account for the user. In Cisco Unity Connection Administration, select Users and search for the user. On the Edit User Basics page, on the Edit menu, select Unified Messaging Accounts and verify settings.

Note See the "Calendar and Contact Integration" section of the "Introduction to Unified Messaging" chapter of the *Unified Messaging Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/install_upgrade/guide/b_14cuciumg.html for detailed information on setting up external service accounts.

- Confirm that the Exchange-server and Unity Connection-server clocks are synchronized to the same time source.
- If you believe that the problem is due to newly created calendar appointments, you can get around the 30-minute lag for caching appointments by forcing an immediate caching. See the Forcinging an Immediate Caching of Calendar Appointments.
- To permanently change the interval at which Unity Connection caches calendar information, see the Changing the Interval at Which Unity Connection Caches Calendar Information.

Forcinging an Immediate Caching of Calendar Appointments

Do the following procedure to force Cisco Unity Connection to immediately cache calendar information.

Step 1 In Cisco Unity Connection Serviceability, on the Tools menu, select Service Management.

Step 2 Under Optional Services, for the Connection Groupware Caching Service, select Stop.

Step 3 After the screen refreshes, for the Connection Groupware Caching Service, select Start.

Changing the Interval at Which Unity Connection Caches Calendar Information

This setting applies to users who have the Use Short Calendar Caching Poll Interval check box checked on the Edit User Basics page and select Save.

Step 1 In Cisco Unity Connection Administration, expand **System Settings** > **Advanced**, then select Unified Messaging Services.

Step 2 On the Unified Messaging Services Configuration page, in the Calendars: Normal Calendar Caching Poll Interval (In Minutes) field, enter the length of time that Unity Connection waits between polling cycles when it caches upcoming Outlook calendar data for users who are configured for a calendar integration.

A larger number reduces the impact on the Unity Connection server while reducing the ability of the server to handle last-minute changes to the Outlook calendar data for users in a timely manner. A smaller number increases the impact on the Unity Connection server while increasing the ability of the server to handle last-minute changes to the Outlook calendar data for users in a timely manner.

Step 3 In the Calendars: Short Calendar Caching Poll Interval (In Minutes) field, enter the length of time that Unity Connection waits between polling cycles when it caches upcoming Outlook calendar data for calendar users who must have their calendar caches updated more frequently.

Changing the Interval at Which Unity Connection Caches Calendar Information

This setting applies to users who have the Use Short Calendar Caching Poll Interval check box checked on the Edit User Basics page and select Save.

Step 1 In Cisco Unity Connection Administration, expand **System Settings** > **Advanced**, then select External Services.

Step 2 On the External Services Configuration page, in the Normal Calendar Caching Poll Interval field, enter the length of time in minutes that Unity Connection waits between polling cycles when it caches upcoming Outlook calendar data for users who are configured for a calendar integration.

A larger number reduces the impact on the Unity Connection server while reducing the ability of the server to handle last-minute changes to the Outlook calendar data for users in a timely manner. A smaller number increases the impact on the Unity Connection server while increasing the ability of the server to handle last-minute changes to the Outlook calendar data for users in a timely manner.

Step 3 In the Short Calendar Caching Poll Interval field, enter the length of time (in minutes) that Unity Connection waits between polling cycles when it caches upcoming Outlook calendar data for calendar users who must have their calendar caches updated more frequently.

Problems with Transfer All Rule

The following issues can occur when using the Transfer All rule:

- **You are unable to create a Transfer All rule**—You cannot create a Transfer All rule in the Personal Call Transfer Rules web tool. The Transfer All rule can be created only by phone. After the rule has been added by phone, it can be edited in the Personal Call Transfer Rules web tools. Both the destination and duration can be changed in the web tool.

- **The Transfer All rule is not applied as expected**—If the Transfer All rule is not being applied as expected, confirm that the destination number includes any outdial access codes required by the phone system.

Phone Menu Behavior Using Personal Call Transfer Rules

When phone menus do not behave as expected when using personal call transfer rules, consider the following possible issues:

- **Users cannot change personal call transfer rules using voice commands—**The voice-recognition feature does not yet support the Personal Call Transfer Rules phone menu options. If users want to use personal call transfer rules, they must temporarily switch to using the phone keypad. They can temporarily switch to using the phone keypad by saying "Touchtone conversation," or by pressing 9 at the Main menu.
- **Phone menu options for personal call transfer rules vary**—Users may notice variations in the phone menus for personal call transfer rules that they hear. Personal Call Transfer Rules phone menu options are built dynamically, and they depend on the existing rule sets and which sets are enabled and active.
- **The phone menu for setting or cancelling call forwarding is unavailable**—See the Phone Menu Option to Set or Cancel Forwarding All Calls to Unity Connection Unavailable.
- **Users notice inconsistencies in how calls are placed through Cisco Unity Connection or dialed directly**—See the Inconsistent Behavior in Calls Placed through Unity Connection and Calls Placed Directly to a User Phone.
- **Calls loop during rule processing**—See the Call Looping During Rule Processing.

Phone Menu Option to Set or Cancel Forwarding All Calls to Unity Connection Unavailable

Note The information in this section is not applicable to Cisco Business Edition.

If the phone menu option that sets or cancels forwarding all calls to Cisco Unity Connection is unavailable, try the following troubleshooting steps:

1. Confirm that the AXL server settings for the phone system are correct. In Cisco Unity Connection Administration, expand Telephony Integrations > Phone System. On the Phone System Basics page, on the Edit menu, select Cisco Unified CM AXL Servers, and verify settings.

Note See the "Phone System" section of the "Telephony Integrations" chapter of the *System Administration Guide for Cisco Unity Connection Release 14* for detailed information about AXL server settings. The guide is available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.

2. Check to see if the publisher Cisco Unified CM server is shut down or if there are network connectivity issues between Unity Connection and the publisher Cisco Unified CM servers. Use the Test button on the Edit AXL Server page to test the connection. If the Cisco Unified CM publisher database is down, Unity Connection cannot change the Call Forward All (CFA) setting for the phone.

The option to forward all calls to Unity Connection is available only in integrations with Cisco Unified CM versions 4.0 and later. The option is not available with earlier versions of Cisco Unified CM or with Cisco Unified CM Express.

Inconsistent Behavior in Calls Placed through Unity Connection and Calls Placed Directly to a User Phone

Callers may notice inconsistent behavior when calling a user through the Unity Connection automated attendant and when dialing the user phone directly. Rules are typically applied immediately to calls placed through the automated attendant, while direct calls must wait until the Call Forward No Answer timer for the phone expires before the call is forwarded to Unity Connection. Rules are then applied.

Use the following steps to provide a consistent caller experience regardless of how a call is placed:

1. To set a user phone to always ring first before rules are applied, turn off the Forward All Calls to Cisco Unity Connection feature by phone. Then, in the Personal Call Transfer Rules web tool, on the Preferences menu, select Rules Settings. On the Rules Settings page, check the Always Ring Primary Extension Before Applying Call Transfer Rules check box.
2. To set user rules for immediate processing, turn on the Forward All Calls to Cisco Unity Connection feature by phone. Then, in the Personal Call Transfer Rules web tool, on the Preferences menu, select Rules Settings. On the Rules Settings page, uncheck the Always Ring Primary Extension Before Applying Call Transfer Rules check box.

Call Looping During Rule Processing

Call looping can occur when calls that are forwarded by Unity Connection are forwarded back to Unity Connection and rules are applied again. Callers may experience inconsistent behavior, such as repeated instances of the opening greeting or continuous attempts to reach the same destination.

The following settings can be used to prevent call looping conditions:

- In Cisco Unity Connection Administration, expand Telephony Integrations > Phone System and select the applicable phone system. On the Phone System Basics page, check the Enable for Supervised Transfers check box. The Enable for Supervised Transfers setting causes Unity Connection to detect and terminate call looping conditions so that calls proceed correctly.
- In the Personal Call Transfer Rules web tool, on the Destinations > View Destinations page, check the Loop Detection Enabled check box for any phone-type destinations to help eliminate call-looping problems with Unity Connection forwarding calls to the mobile phone of the user, and the mobile phone forwarding the calls back to Unity Connection. When the Loop Detection setting is enabled, Unity Connection either transfers the call to the next assigned device (if the user has created a destination group) or transfers the call to voicemail if there are no additional destinations defined.
- Allow Unity Connection to maintain control of calls by setting the value in the Rings to Wait field for rule destinations to be less than the value in the Cisco Unified Communications Manager Forward No Answer Timer field. The Cisco Unified CM Forward No Answer Timer value defaults to 12 seconds. A ring occurs approximately every 3 seconds. Therefore, setting the Rings to Wait value for Unity Connection destinations to 3 rings allows Unity Connection to maintain control of the call. The supervised transfer initiated by Unity Connection pulls the call back before the loop begins, and attempts to transfer the call to the next destination or to voicemail, as applicable.

Using Diagnostic Traces for Personal Call Transfer Rules

You can use traces to troubleshoot problems with personal call transfer rules. For detailed instructions on enabling and collecting diagnostic traces, see the Using Diagnostic Traces for Troubleshooting, on page 1 chapter.

Enable the following micro traces to troubleshoot personal call transfer rules:

- CCL (levels 10, 11, 12, 13)—Used when accessing calendar information.
- CDE (all levels)—Used in rules-related conversations.
- ConvSub (all levels)—Used when configuring personal call transfer rules settings by phone.
- ConvRoutingRules (all levels)—Used when a rules-enabled user receives a call and while transferring calls between destinations.
- CsWebDav (levels 10, 11, 12, 13)—Used when accessing calendar information.
- RulesEngine (all levels)—Used in rule processing during calls to a rules-enabled user to determine the applicable rule. Also used in determining the applicable rule when using the Rules Tester.

If necessary, enable the following micro traces for the supporting components:

- CDL—Used in rules-related conversations.
- CuGAL—Used in rule processing with a meeting condition and for importing contacts from Exchange.
- MiuCall MiuGeneral—Used in rule processing during calls to a rules-enabled user.
- PhraseServer—Used in rules-related conversations to play prompts.
- Notifier—Used in rule processing when sending SMTP and SMS messages.
- TextToSpeech—Used in rule-settings conversation.

Using Performance Counters for Personal Call Transfer Rules

SUMMARY STEPS

1. Launch Real-Time Monitoring Tool (RTMT).
2. In RTMT, on the System menu, select **Performance** > **Open Performance Monitoring**.
3. Expand the Unity Connection server.
4. Expand **CUC Personal Call Transfer Rules**.
5. Select the applicable counters:

DETAILED STEPS

Step 1 Launch Real-Time Monitoring Tool (RTMT).

Note For details on using RTMT, see the Cisco Unified Real-Time Monitoring Tool Administration Guide, available at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

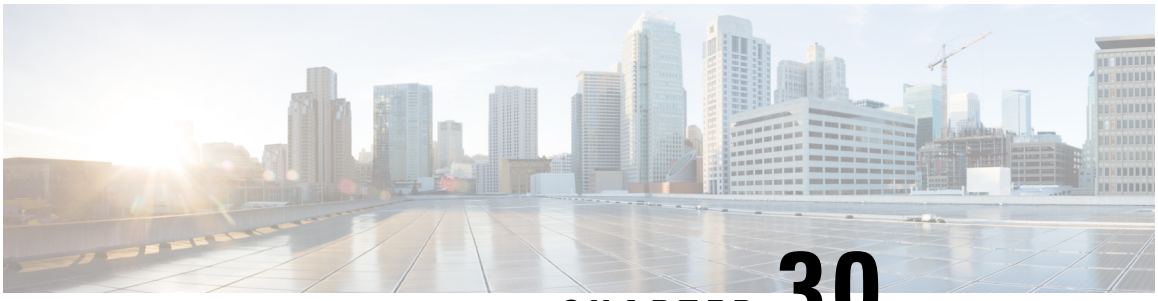
Step 2 In RTMT, on the System menu, select **Performance** > **Open Performance Monitoring**.

Step 3 Expand the Unity Connection server.

Step 4 Expand **CUC Personal Call Transfer Rules**.

Step 5 Select the applicable counters:

- Applicable Rule Found—Call resulted in rule processing, and an applicable rule was found.
- Destinations Tried—Number of destinations tried while applying personal call transfer rules.
- PCTR Calls—Call is subject to personal call transfer rules processing: user is assigned to a class of service that has the Personal Call Transfer Rules feature enabled; user is associated with a Cisco Unified CM phone system; and user has enabled personal call transfer rules.
- Rules Evaluated—Number of rules evaluated during rule processing in a call.
- Subscriber Reached—Number of times a user was reached while applying personal call transfer rules.
- Transfer Failed—Number of times a transfer to a destination failed while applying personal call transfer rules.
- Voice Mail Reached—Number of times voicemail was reached while applying personal call transfer rules.



CHAPTER 30

Troubleshooting Web Inbox

- Troubleshooting Web Inbox, on page 227

Troubleshooting Web Inbox

Introduction

The Web Inbox application provides access to voice messages and receipts stored on the Cisco Unity Connection server. The Web Inbox enables users to play, compose, reply to or forward, and manage Unity Connection voice messages using a web browser. It is installed on the Unity Connection server during installation.

Following are the tasks to troubleshoot problems with Web Inbox:

- If there is an error message associated with the problem, review the Web Inbox Error Messages.
- Review the Adobe Flash Player Settings Dialog Box Unresponsive (Mac OS X with Firefox Only) to consider the most common reasons why users cannot access the Web Inbox pages, including use of an incorrect URL, incorrect browser settings, or the presence of unsupported software installed on the workstation.
- If the problem is that the Adobe Flash Player Settings dialog box appears but no options on the dialog box can be selected, see the Adobe Flash Player Settings Dialog Box Unresponsive (Mac OS X with Firefox Only).
- If the problem is that no messages are displayed in the Web Inbox, see the Messages Not Displayed in Web Inbox.
- If the problem is that users do not see any sent items in the Sent Folder, see the Sent Messages Not Displayed in Web Inbox.
- Confirm that the Tomcat service is running. See the Verifying that Tomcat Service is Running.
- If the problem is that the Web Inbox does not get open in Internet Explorer 9 with Windows 7 64 bit, see the Web Inbox Not Working with Internet Explorer 9 on Windows 7 64 bit.

If you cannot resolve the problem and plan to report the problem to Cisco TAC, you are asked to provide information about your system and about the problem.

Note Cisco Unity Connection uses Flash Player for recording voice messages through Web Inbox. However, Adobe has announced end of life for Flash Player. Hence Cisco Unity Connection Release 14 and later, replaces Flash Player with **Web Real-Time Communication(Web RTC)** to record voice messages using **HTML5** in Web Inbox.

For more information on updates of the Flash Player refer https://www.adobe.com/products/flashplayer/end-of-life.html

Web Inbox Error Messages

In addition to browser error messages (such as "File not found" or "Unauthorized access"), users may see Web Inbox-specific error messages, Flash plugin error messages, Quicktime plugin error messages, and Tomcat error messages when signing in to or using the Web Inbox.

The four types of error messages that users may encounter are described in the following table:

Browser error messages	Browser error messages may indicate that the Web Inbox failed to install, the user does not have network access to the Unity Connection server, the browser is not configured correctly, or the user does not have the required security certificate installed (if the Web Inbox uses SSL connections).
Web Inbox-specific error messages	Web Inbox-specific error messages are displayed on the Sign-In page or another Web Inbox page, and typically indicate problems with user credentials or actions within the Web Inbox.
Quicktime Plugin error messages	Quicktime Plugin-specific error or warning messages are pop-up alerts that occur on pages that load the Quicktime plugin recording and playback controls. These messages typically appear the first time that the Quicktime plugin is loaded when you navigate to a page that contains the controls.
Tomcat error messages	Tomcat errors occur when there is a system error, such as file corruption or insufficient memory on the Unity Connection server. A Tomcat error message usually lists the sequence of application errors. Each exception is followed by a description of what the Tomcat service was attempting to do when the error occurred, and for some exceptions, a message explaining the error is also offered. The "Exception" and "Root Cause" sections in the error message may offer additional information about the problem.

See the following sections for information about these specific error messages.

Error Message: "Sign-In Status – Account Has Been Locked."

When users encounter the error message "Sign-in status – account has been locked," it is possible that the user exceeded the number of failed sign-in attempts that is allowed. (This limit is set on the System Settings > Authentication Rules page in Cisco Unity Connection Administration.) It may also be possible that the user forgot his or her credentials, or an unauthorized user attempted to gain access.

Use the following task list to determine the source of the problem and correct it.

1. To confirm that the account is locked, in Cisco Unity Connection Administration, go to the Users > Edit Password Settings page for the individual user, and select Web Application from the Choose Password

menu. Under Web Applications Password Settings, you can verify the status of the user credentials to determine whether the password was locked by an administrator, there were failed sign-in attempts, or the password was locked after an excessive number of failed sign-in attempts.

2. To unlock the user account, in Cisco Unity Connection Administration, go to the Users > Edit Password Settings page for the individual user, and select Web Application from the Choose Password menu. Under Web Applications Password Settings, select Unlock Password.

Error Message: “Apache Tomcat/<Version> – HTTP Status 500 – Internal Server Error.”

File corruption at the time of installation or a Tomcat memory corruption can cause users to encounter the error message “Apache Tomcat/<version> – HTTP status 500 – internal server error.” To confirm that this is the cause of the problem, check the Tomcat error page for the indicated root cause for the exception. If an exception message similar to the one below exists, there is a file or memory corruption:

java.lang.ClassFormatError: <classpath>/<classname> (Illegal constant pool index)

Contact Cisco TAC.

Error Message: “Site Is Unavailable.”

If users encounter the error message “Site is unavailable,” confirm that the Apache Tomcat service is running. See the Verifying that Tomcat Service is Running.

Error Message: "This User Account Does Not Have a Mailbox and Cannot Sign In to the Web Inbox. To Use the Web Inbox, You Must Have an Account with a Mailbox."

If a user with valid credentials but who does not have an associated Unity Connection mailbox attempts to sign in to the Web Inbox, the user receives the error "This user account does not have a mailbox and cannot sign in to the Web Inbox. To use the Web Inbox, you must have an account with a mailbox."

To correct the problem, create an account with a mailbox for the user. As a best practice, we recommend that Unity Connection administrators do not use the same user account to sign in to Cisco Unity Connection Administration that they use to sign in to the Web Inbox to manage their own Unity Connection account.

Error Message: “Error While Uploading Message to Server”

If a user sign in to a Web Inbox using Mozilla Firefox and sends a voice message by uploading the .wav file, an error message “Error while uploading message to server” gets displayed on the Web Inbox, However, the recipient still receives the voice message.

Removing the Error Message Displayed on the Web Inbox

SUMMARY STEPS

1. Uninstall the Mozilla Firefox browser.
2. Clear your data from Mozilla Firefox:
3. Reinstall the Mozilla Firefox browser again.

DETAILED STEPS

Step 1 Uninstall the Mozilla Firefox browser.

Note Uninstalling the Firefox does not remove any user data, such as cache or history. To completely remove the user data, you must manually delete the Firefox folder that contains the user profile.

Step 2 Clear your data from Mozilla Firefox:

a) Select the Windows Start button and enter %APPDATA% in the search field.
b) Press Enter to open the hidden Roaming folder. The Mozilla folder gets displayed.
c) Open the Mozilla folder and delete the Firefox folder to manually delete the user profile.

Step 3 Reinstall the Mozilla Firefox browser again.

Error Message: "HTML5 audio compatible browser or QuickTime Plug-in not found. Select Phone option to play the message. Install Quick time plugin or open web inbox into firefox"

If a user sign in to a Web Inbox using Internet Explorer 11 Mozilla Firefox and sends a voice message by uploading the.wav file, an error message "Error while uploading message to server" gets displayed on the Web Inbox, However, the recipient still receives the voice message.

Send Option is Disabled on MAC Operating System

On MAC operating system, if the Send option on Safari is not working after uploading voice message, make sure that the most recent version of Flash Player is installed on your machine. If the latest version of Flash Player is installed on your system but still the Send option is not working, do the following to resolve the issue:

Step 1 Navigate to **Safari** > **Preferences** and select Security tab.
Step 2 Check the Allow Plug-ins check box on the Security tab.
Step 3 Click Website Settings.
Step 4 In Configured Websites, select Allow Always for the Unity Connection server.

Adobe Flash Player Settings Dialog Box Unresponsive (Mac OS X with Firefox Only)

When a user presses the record button to compose a message for the first time in the Web Inbox, an Adobe Flash Player Settings dialog box is displayed, asking the user whether to allow the Web Inbox to access the microphone. In some cases, users who see this dialog box are unable to select any of the options in the dialog box, and are therefore unable to record audio for the message. To change the global Flash Player privacy settings so that the dialog box does not appear, do the following procedure.

Note In order to perform this procedure, the user must have access to the Internet to reach the Adobe Macromedia web site.

Changing Global Flash Player Privacy Settings to Allow the Web Inbox to Access the Computer Microphone

Step 1 In the web browser that you use to access the Web Inbox, navigate to the Website Privacy Settings panel of the Adobe Flash Player Settings Manager at http://www.macromedia.com/support/documentation/en/flashplayer/help/settings_manager06.html.

Step 2 In the Adobe Flash Player Settings Manager Website Privacy Settings panel, in the Visited Websites table, locate and select the website corresponding to the Web Inbox.

Step 3 While the Web Inbox site is selected, select **Always Allow** as the privacy setting. When this change is made, Web Inbox can access the computer microphone without prompting the user for permission.

Messages Not Displayed in Web Inbox

If the Web Inbox does not display any messages for a user even though the user has messages in the folder being displayed, clear the browser cache. (Refer to the browser documentation for instructions on how to clear the cache.)

Sent Messages Not Displayed in Web Inbox

In order for sent messages to be available to users in the Sent folder in the Web Inbox, the Sent Messages feature must be enabled. By default, the feature is not enabled. To enable the feature, change the Sent Messages: Retention Period (in Days) setting on the System Settings > Advanced > Messaging page in Cisco Unity Connection Administration to a value greater than zero. Note that because sent messages count toward user mailbox quotas, configuring a high value for this setting can cause user mailboxes to fill with sent messages if users do not regularly manage them from the Web Inbox.

Verifying that Tomcat Service is Running

Do the following tasks to confirm that the Tomcat service is running in Unity Connection and if necessary, to restart the Tomcat service:

1. Confirm that the Tomcat service is running using either Real-Time Monitoring Tool (RTMT) or the Command Line Interface (CLI). Do the applicable procedure:
   - Confirming that the Tomcat Service is Running Using Real-Time Monitoring Tool (RTMT)
   - Confirming that the Tomcat Service is Running Using the Command Line Interface (CLI)
2. If necessary, restart the Tomcat service using the Command Line Interface (CLI). See the Restarting the Tomcat Service Using the Command Line Interface (CLI).

Confirming that the Tomcat Service is Running Using Real-Time Monitoring Tool (RTMT)

Step 1 Launch Real-Time Monitoring Tool (RTMT).

Note For details on using RTMT, see the applicable *Cisco Unified Real Time Monitoring Tool Administration Guide* available at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

Step 2 On the System menu, select **Server** > **Critical Services**.

Step 3 On the System tab, locate Cisco Tomcat and view its status. The status is indicated by an icon.

Confirming that the Tomcat Service is Running Using the Command Line Interface (CLI)

Step 1 Use the Command Line Interface (CLI) command **utils service list** to list all of the services.

Note For details on using CLI commands, see the applicable *Command Line Interface Reference Guide for Cisco Unified Communications Solutions*, available at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

Step 2 Scan the CLI output for the Cisco Tomcat service and confirm that its status is **Started**.

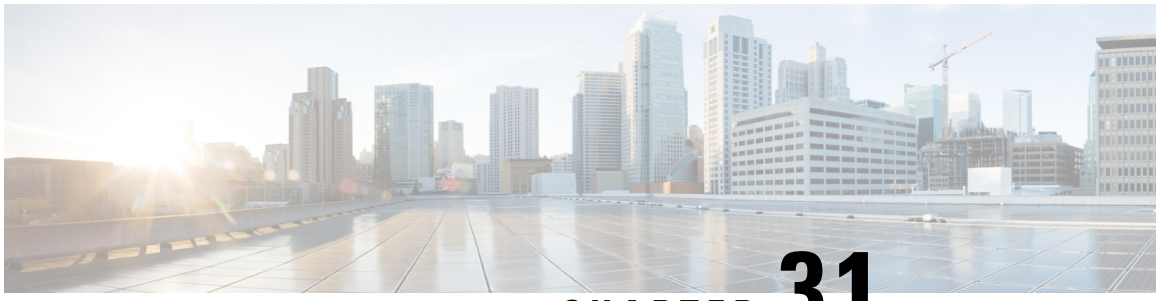
Restarting the Tomcat Service Using the Command Line Interface (CLI)

To restart the Cisco Tomcat service, use the CLI command **utils service restart Cisco Tomcat**.

Note For details on using CLI commands, see the applicable *Command Line Interface Reference Guide for Cisco Unified Communications Solutions*, available at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

Web Inbox Not Working with Internet Explorer 9 on Windows 7 64 bit

If the Web Inbox is not working with Internet Explorer 9 on Windows 7 64 bit, make sure that the Media Feature Pack is installed in your system.



CHAPTER 31

Troubleshooting the HTML Notifications

Cisco Unity Connection allows you to deliver the SMTP-based HTML notifications for a new voice message to the end users. These notifications can be sent as an HTML format embedded in the email via SMTP. The users get the flexibility to receive the HTML notifications that can include customized icons, header, and footer along with the link to access Mini Web Inbox. Mini Web Inbox is a player that allows user to play the voice messages over computer or mobile devices.

Ensure that you have taken care of all the requirements and checklist while creating the HTML templates. For more information on the checklist while creating and rendering a template, see the "Configuring User Templates" section of the "User Attributes" chapter of the *System Administration Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html

For more information on 'Must Haves' for Mini Web Inbox, refer to the *Quick Start Guide for the Cisco Unity Connection Mini Web Inbox (Release 14)*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/quick_start/guide/b_14cucqsginbox.html.

Note It is recommended, that the Mini Web Inbox must always be opened from the notification email as it requires certain URL parameters.

- HTML Notifications Not Received By the Users, on page 233
- Images Not Displayed on Microsoft Outlook, on page 234
- Images Not Displayed on IBM Lotus Notes, on page 235
- Hyperlinks Not Visible in the Email Notification, on page 235
- Unable to Launch Mini Web Inbox, on page 235
- Unable to View the Updated Mini Web Inbox Interface in Internet Explorer, on page 235
- Unable to Play and Record Voice Messages on Computer Using Mini Web Inbox, on page 236

HTML Notifications Not Received By the Users

If the users are not receiving the HTML notifications, ensure the following steps:

- Confirm that the smart host hostname is configured from Cisco Unity Connection Administration. For more information, see the "Integrated Messaging" section of the "Messaging" chapter of the *System Administration Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.

- Ping the smart host from Unity Connection server. If the ping fails, there is a possibility that network Unity Connection is not functional and you must restore the network Unity Connection.
- Confirm that the 'Unity Connection Notifier' service is up and running.
- Confirm that the HTML notification device is enabled. For more information on how to setup the HTML notification device, see the "Notifications" chapter of the *System Administration Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.
- Confirm that a valid email address is specified while configuring HTML notifications for a user. For more information on how to setup the HTML notification device, see the "Notifications" chapter of the *System Administration Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.

Images Not Displayed on Microsoft Outlook

If the user is using Microsoft Outlook client for checking the email notifications and is unable to view the images in the notification, do the following steps:

- If the images are not displayed, right click the image and select the Show Images options.
- Make sure the minimum requirements for images to be displayed on Microsoft Outlook are met. To check the settings for Microsoft Outlook, see the "Configuring Microsoft Outlook to Display Images in an HTML Message Notification" section of the "Configuring an Email Account to Access Unity Connection Voice Messages" chapter of the *User Workstation Setup Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user_setup/guide/b_14cucuwsx.html
- If the authentication mode is selected, then make sure you are giving the correct credentials.
- If the user enters wrong password thrice continuously then Unity Connection does not prompt the user again and the user must restart the Outlook. To enter the credentials and display the images in the notification you must restart the Outlook.
- When prompted for credentials at the first instance, if the user clicks on the Cancel button and does not enter Unity Connection credentials then no image is displayed in the email notification. You must restart the Outlook to enter the Unity Connection credential and view the images.
- If the images are not getting displayed in the email notification even after installing the required hotfix and Outlook has been restarted, then follow the below mentioned steps:

  1. Check the version of MSO.DLL from the path C:\Program Files\Common Files\Microsoft Shared\MSORUN on the Windows machine. Ensure that the version of MSO must include the fix. For more information on version, see the Outlook 2007 and Outlook 2010hotfix.

  2. After restarting Outlook, you must ensure that it is no longer running by ending any running process of Outlook.exe from the Task Manager window. The changes to MSO.DLL take affect only after proper shutdown and restart of the Outlook.

- Make sure that the registry entry for AllowImageProxyAuth was made for DWORD only.
- If the user is not able to see any images even after all the recommended settings, check the network connectivity of the Unity Connection Server with Internet Explorer by copying the link of the images and manually opening it over the browser. You can check the connectivity via wireshark captures and filtering over SSL packet flow over 443 or 8443 port for the communication.

Images Not Displayed on IBM Lotus Notes

If the user is using IBM Lotus Notes for checking the email notification and unable to view the images, do the following steps

- If the images are not displayed, right click the image and select show images options.
- If the authentication mode is selected, then make sure you are giving the correct credentials. For more information on how to select the authentication mode, see the "Configuring the Authentication Mode" section of the "Configuring an Email Account to Access Cisco Unity Connection Voice Messages" chapter of the *User Workstation Setup Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/user_setup/guide/b_14cucuwsx.html

Hyperlinks Not Visible in the Email Notification

If the hyperlinks given in the notification template are not visible in the notification, then you need to make sure that the HTML notification template in Cisco Unity Connection Administration has the valid HTML tags and all items (static, action, and status items) are given correctly.

For more information on how to define the tags and the items, see the "Configuring Notification Templates" section of the "Notifications" chapter of the *System Administration Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.

Unable to Launch Mini Web Inbox

If the user is unable to launch the Mini Web Inbox, ensure the following settings:

- Confirm that under COS assigned to the user, Web Inbox is enabled.
- Confirm that the message for which you are opening the Unity Connection Mini Web Inbox is not deleted.
- Confirm that the user is logged in with the valid user name.

Unable to View the Updated Mini Web Inbox Interface in Internet Explorer

To View the Updated Interface of Unity Connection Mini Web Inbox

Step 1 Open Internet Explorer and then go to Tools.

Step 2 In the Internet Options window under the Browsing History section, click Settings.

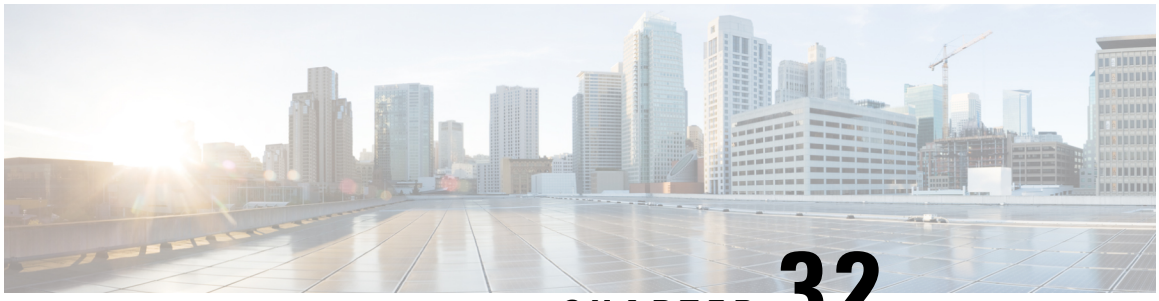
Step 3 In the Temporary Internet Files and History Settings window, select the Every time I visit the webpage option to check the newer version of stored pages option.

Step 4 Click Ok.

Unable to Play and Record Voice Messages on Computer Using Mini Web Inbox

If the user is unable to play and record voice messages on computer using Unity Connection Mini Web Inbox, confirm the following:

- Confirm that the outdial number is configured. For more information on how to setup the outdial number and other fields for the HTML notification device, see the "Configuring Notification Devices" section of the "Notifications" chapter of the *System Administration Guide for Cisco Unity Connection Release 14*, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html.
- Confirm that the callback number is configured.
- Confirm that the end user answers the phone.



CHAPTER 32

Troubleshooting Custom Roles

This section covers the problems that you might face while creating, updating, deleting or assigning custom roles to users.

- Troubleshooting Custom Roles, on page 237

Troubleshooting Custom Roles

This section covers the problems that you might face while creating, updating, deleting or assigning custom roles to users.

Unable to Configure Custom Role

While creating, updating or deleting a custom role, If you receive the "Not Authorised" error message, confirm that you are logged in as a system administrator. Only a user with system administrator role can create, update or delete custom roles.

Getting "Not Authorized" Error Message on Role Assignment or Unassignment

If you are not able to assign or unassign a custom role to any user, check te following:

1. Confirm that you are not trying to assign any of the system roles to the user. A system role can be assigned to users only by the system administrator.
2. confirm that you have a role with **Manage Users: Assign/Unassign Roles** privilege. Do the following steps to confirm the same:

Step 1 In Cisco Unity Connection Administration page, go to **Users** and select your user name.

Step 2 Go to **Edit** > **Roles** and note the role in the **Assigned Role** field.

Step 3 Go to **System Settings** > **Roles** > **Custom Roles** page and on the **Search Custom Role** page select the role assigned to you.

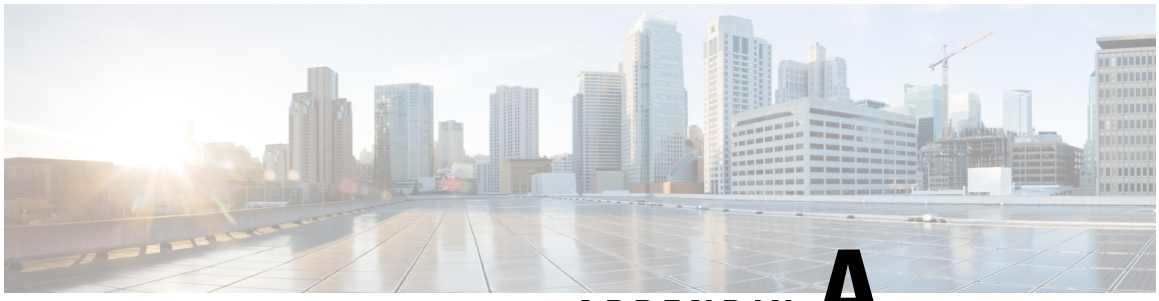
Step 4 On the Edit Custom Role page check if the check box for the "Manage Users: Assign/Unassign Roles" privilege is checked. If the checkbox is not checked that means you do not have the privilege to assign or unassign roles.

Step 5 Contact the system administrator to assign the privilege to the role assigned to you.

Getting "Not Authorized" Error on Cisco Unity Connection Administration Pages

After logging in to Cisco Unity Connection Administration page, if you are getting "Not Authorized" error on every page, contact the system administrator to check that you have a role with "Read Access To System Configuration Data - Read Access " privilege.

For information about custom roles and its configurations, see the Custom Roles section in the "User Attributes" chapter of the System Administration Guide for Cisco Unity Connection Release 14, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/administration/guide/b_14cucsag.html



APPENDIX A

Troubleshooting Tenant Partitioning

Troubleshooting Problems While Configuring Tenant Partitioning

This section covers the problems that you might face while configuring tenant partitioning.

Getting Error Message "COS is referenced by at least one user or user template" while Deleting a Tenant

While deleting a tenant you may get this error message "COS is referenced by at least one user or user template". This error may occur for any other objects that are associated with the tenant. This error occurs if the objects mapped to a tenant like class of service are associated with users belonging to other tenants.

- Troubleshooting Issues while Deleting Tenant , on page 239
- Users of One Tenant are Able to Send Messages to Users of Other Tenants, on page 240
- Able to Hear the Opening Greeting Without being Asked for the PIN, on page 240
- Getting Option to Select Users from Other Partitions in Directory Result, on page 241
- Tenant Creation Fails with an Error Message "Non-Tenant users exist on Unity Connection", on page 241
- Troubleshooting Problems While Integrating with Call Manager, on page 242
- Troubleshooting Problems with Migration, on page 243

Troubleshooting Issues while Deleting Tenant

Step 1 Get object IDs of the class of service objects associated with the tenant using the URI:
https://<connection-server>/vmrest/tenants/<TenantObjectId>/coses

Get the list of user templates associated with the class of service object ID using the URI:
https://<connection-server>/vmrest/usertemplates?query=(CosObjectId%20is%20<CosObjectId>)

Here, replace <CosObjectId> with the COS Object Id that belongs to the tenant.

To get the list of user templates that belongs to the tenant, use the URI below:

https://<connection-server>/vmrest/usertemplates?query=(CosObjectId%20is%20<CosObjectId>%26PartitionObjectId%20is%20<PartitionObjectId>)

Step 2 Comparing results of the GET operations would provide list of user templates that are associated with the tenant's class of service but are not a part of tenant's partition. You can correct this by changing the class of service association for these user templates.

Step 3 Get the list of users associated with the class of service Object ID using the URI:

https://<connection-server/vmrest/users?query=(CosObjectId%20is%20<CosObjectId>)

Here, replace <CosObjectId> with the class of service Object ID that belongs to the tenant. Now, to get the list of users that belongs to the tenant, use the URI below:

https://<connection-server>/vmrest/users?query=(CosObjectId%20is%20<CosObjectId>%26PartitionObjectId%20is%20<PartitionObjectId>)

Step 4 Comparing results of both the GET operations provide with the list of users that are associated with the tenant's class of service objects but are not a part of tenant's partition. You can correct this by changing the class of service association for these users.

Step 5 Repeat Step 2 to Step 3 for all the class of service object IDs.

Step 6 Repeat Step 1 to Step 3 for other objects associated with a tenant.

Users of One Tenant are Able to Send Messages to Users of Other Tenants

If the users of one tenant are able to send messages to users of other tenants through the Web Inbox, touchtone, or voice recognition conversation, do the following:

1. Check the tenant's search space as it may contain partition(s) belonging to other tenants.
2. Run an HTTP GET request on the URI below to get Search Space Object ID for the tenant:
   https://<connection-server>/vmrest/searchspacesmembers?query=(PartitionObjectId%20is%20<TenantPartitionObjectId>)
3. Run an HTTP GET request on the URI below to get the object ID for partitions belonging to the tenant's search space:

   https://<connection-server>/vmrest/searchspacesmembers?query=(SearchSpaceObjectId%20is%20<TenantSearchSpaceObjectId>)

4. Correct this by changing the association.

Able to Hear the Opening Greeting Without being Asked for the PIN

If you are able to hear the opening greeting without being asked for the PIN, do the following;

1. Open Port Status Monitor and dial the pilot number.
2. On Port Status Monitor and check if the calls are going directly to the opening greeting.
3. To check this, get the list of routing rules for the tenant by sending a GET request to the URI and check the value for the Rule Index field:

   GET
   https://<connection-server>/vmrest/routingrules?query=(SearchSpaceObjectId%20is%20<TenantSearchSpaceObjectId>)

To correct the routing rule order, see the CUPI APIs documentation for Routing Rules API.

http://docwiki.cisco.com/wiki/Cisco_Unity_Connection_Provisioning_Interface_%28CUPI%29_API_--_Routing_Rules

Getting Option to Select Users from Other Partitions in Directory Result

1. Check Search Scope for the directory handler that belongs to the tenant.
2. If the value of SearchScope field is set to zero then it means that the Search Scope is set to entire server. Set the search scope value to 6 to resolve the issue.
3. There is a possibility that the SearchScope field is set to search-space of some other tenant. Set the search scope to search space of respective tenant to resolve the issue.

Debugging Steps

1. Check Search Scope for the directory handler that belongs to the tenant. To do this, run the following HTTP GET request:

   https://<connection server>/vmrest/handlers/directoryhandlers?query=(PartitionObjectId%20is%20<TenantPartitionObjectId>)

   If the value of SearchScope field is set to zero then it means that the Search Scope is set to entire server. Set the search scope value to 6 to resolve the issue.

2. Enable Micro Traces for General Method returns and Parameter values(01), Data access(02), Named property access(03) level ConvSub logs and Named props access(11), CDL Access(12), MIU Access(13) and Search Space(04) level CDE logs from Cisco Unity Connection Serviceability.
3. For all the aliases that you hear over the call, there may be an entry in the diag_ CuCsMgr_*.uc log files.
4. Search space can contain multiple partitions. To check if there are multiple partitions in search space, you can run the following HTTP GET request:

   a. o get the search space: GET https://<connection-server>/vmrest/searchspaces/<searchspace-objectid>/searchspacemembers?query=(PartitionObjectId%20is%20<TenantPartitionObjectId>)

      From the above URI search space object ID of a tenant is obtained and it can be used to find the associated partitions with the URI below.

   b. To get the search space: GET https://<connection-server>/vmrest/searchspaces/<searchspace-objectid>/searchspacemembers?query=(SearchSpaceObjectId%20is%20<SearchSpaceObjectId>

5. Check if the search space selected in search scope of directory handler belongs to the same tenant or not. To do this, run the following HTTP GET request:

   https://<connection server>/vmrest/handlers/directoryhandlers/<directoryhandler-objectid>

   Check the search scope object ID, it should be same as that of the tenant.

Tenant Creation Fails with an Error Message "Non-Tenant users exist on Unity Connection"

When a tenant creation API fails on a freshly installed system, do the following:

Try to create tenant in Unity Connection that is having users of any other partition, the following error displays:

"Invalid parameter. Parameter = [Non-Tenant users exists on Unity Connection.Cannot proceed with Tenant creation.], Value = [tbl_user]"

Troubleshooting Problems While Integrating with Call Manager

See the following sections:

Hearing the Fast Busy Tone on Dialing the Pilot Number

You may hear the fast busy tone while dialing the pilot number in the following two cases:

- Ports are busy or locked
- Ports required reset

Do the following:

1. Check on Cisco Unity Connection Administration if any ports require a reset.
2. In case you find any port group that requires a reset then login to Cisco Unity Connection Administration and go to the Port Groups page.
3. If for any port group, value for the Needs Reset field is Yes, then reset the port group.
4. To investigate if ports are busy:
    - Check if ports are busy or number of incoming calls is significantly high in peak hours only or all the time. Based on the tenant's requirement there might be a need to add additional ports.
    - Check Unity Connection phone system: Check ports in Use Counter using the Real-Time Monitoring Tool (RTMT) to see if ports are busy.
    - The ports may be marked busy even if the ports are locked.
    - To verify, check using the RTMT if the port frees up after a call ends and it answers other incoming calls.
    - Check the CUC Phone System: Check the Ports Locked counter for any locked ports. You can reset the port to resolve the port lock issue.

The Ports locked counter in RTMT can be checked in the CUC Phone System counter.

Hearing the Error Message - "The system is temporarily unable to complete your call" on Dialing the Pilot Number

To Resolve Issues When there are No Appropriate Routing Rules in Unity Connection

Step 1 Enable Threads(11) and Ports(13) level Micro Traces for Arbiter on Cisco Unity Connection Serviceability. Check the diag_CuCsMgr_*.uc log file for the phone system:

'Failed to find routing rule=<PhoneSystem_1>'

where "PhoneSystem_1" is the name of the phone system

Step 2 For details on how to view diagnostic traces, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.

Step 3 In case, no routing rules exist for the tenant, you can add them using the POST operation on the routing rules API. To identify that which type of routing rules (direct or forward) need to be added, you can use the Port Status Monitor.

If the Port Status Monitor displays that the call does not contain a redirecting ID and value for the Reason field is direct, then Direct Routing Rule is added else add the Forward Routing Rule.

Step 4 If routing rule condition has been removed or is missing from a routing rule on Unity Connection then the routing rule that comes later in the list, is never reached. To check or to investigate the issue:

a. Check if tenant's phone system is added as a routing rule condition in the routing rules for that tenant. For more information refer to the Routing Rule Condition APIs available at http://docwiki.cisco.com/wiki/Cisco_Unity_Connection_APIs.

b. Enable the Micro Traces for Routing Rules and "Thread (11) and Ports(13)" for Arbiter on Cisco Unity Connection Serviceability and check the logs for any errors or issues.

c. Check the phone system configuration like phone system, port groups, ports and SIP security profile for Unity Connection. You can check the following:

- Verify that the port number specified in SIP Trunk profile on Cisco Unified Communications Manager and the Port Group on Unity Connection are same.
- Verify that SIP Trunk Security Profile on Cisco Unified Communications Manager has the correct incoming port number.
- Verify the Cisco Unified Communications Manager IP address or hostname specified in port group on Unity Connection.

Troubleshooting Problems with Migration

See the following sections:

"Mailbox could not be loaded" Error Shows Up

If the error "Mailbox could not be loaded" shows up for one or more subscribers on Web Inbox after migrating data from a multi-tenant Unity Connection to another multi-tenant Unity Connection, do the following:

Check if the setting required for mailbox access may be lost during migration. To enable it back, do the following:

1. You need the object ID of the class of service for each subscriber and run the following GET request to get the class of service object ID:

   https://<connection-server>/vmrest/users?query=(Alias%20is%20<UserAlias>

2. Send a PUT request to the URI below to enable the setting:

   https://<connection-server>/vmrest/coses/<CosObjectId>

SMTP Proxy Address Not Updated on Unity Connection for One or More Subscribers After Migration

1. Look for the errors or warnings in the log files after migration at the following location: <COBRASInstallationDirectory>/logs
2. Check whether any subscriber has the same SMTP proxy address by sending a GET request to the URI:

https://<connection-server>/vmrest/smtpproxyaddresses?query=(SmtpAddress%20is%20<SmtpProxyAddress>)

Here, <SmtpProxyAddress> is the field for which the update failed.

3. Run the HTTP GET request below to get the SMTP Proxy addresses URI for the subscriber(s):

   https://<connection-server>/vmrest/users?query=(ObjectId%20is%20<UserObjectId>)

4. Perform an HTTP POST operation on the URI to create the SMTP proxy address and associate it with the object ID of the user:

   https://<connection-server>/vmrest/smtpproxyaddresses

Hearing a Wrong Post Greeting Recording for Users Belonging to a Tenant

If you are hearing a wrong post greeting recording for users belonging to a tenant, do the following:

1. Check if the post greeting recording with the same name already exists in the Unity Connection.
2. Look for the errors or warnings in the log files after migration at the following location: <COBRASInstallationDirectory>/logs
3. Administrator can pick the missing recording from the backup of the destination Unity Connection, or else re-recording needs to be done.

Getting Incorrect Time for Incoming or Outgoing Messages

In COBRAS migration, for any subscriber if timezone in the source Unity Connection is set to system default timezone then after migration in the destination Unity Connection, it would be set to the timezone that the tenant was created with.

To set it right, do the following:

1. Get the list of users belonging to the tenant using the URI:

   https://<connection-server>/vmrest/users?query=(Alias%20is%20<UserAlias>)

2. Send an HTTP PUT request to the following URI in order to set the time zone for the user to system default time zone:

   https://<connection-server>/vmrest/users/<UserObjectId>

Get Incorrect Language for the Incoming or Outgoing Users

In COBRAS migration, for any subscriber if language in the source Unity Connection is set to system default language then after migration, in the destination Unity Connection, it would be set to the language that the tenant was created with.

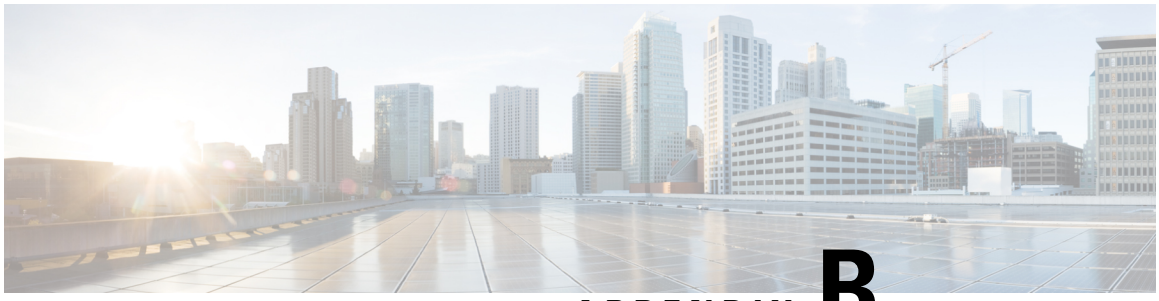
To set it right, do the following:

1. Get the list of users belonging to the tenant using the URI:

   https://<connection-server>/vmrest/users?query=(Alias%20is%20<UserAlias>)

2. Send an HTTP PUT request to the following URI in order to set the timezone for the user to system default timezone:

   https://<connection-server>/vmrest/users/<UserObjectId>



APPENDIX B

Troubleshooting Phone View

- Problems with Phone View, on page 245
- Using Traces to Troubleshoot Phone View Issues, on page 247

Problems with Phone View

Use the troubleshooting information in this section if an error message appears when the user attempts to use Phone View. Consider the following possible causes:

- The application user is configured incorrectly. See the Application User Configured Incorrectly, on page 245 section.
- The user phone configuration is not correct. See the User Phone Configuration Not Correct, on page 246
- The phone system integration is configured incorrectly. See the Phone System Integration Configured Incorrectly, on page 246

The Phone View feature is supported only with Cisco Unified Communications Manager phone system integrations.

The Phone View feature may not function correctly outside a firewall or through a VPN router. Requirements for Phone View are available in the "Requirements for Phone View" section of the System Requirements for Cisco Unity Connection Release 14, available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/requirements/b_14cucsysreqs.html .

Application User Configured Incorrectly

The problem may be caused by the incorrect configuration of the application user on the Cisco Unified Communications Manager server.

To Verify the Configuration of the Application User

Step 1 In Cisco Unified Communications Manager Administration, on the User Management menu, select **Application User** .

Step 2 On the Find and List Application Users page, select **Find** .

Step 3 Select the user ID of the application user that is used by Phone View.

Step 4 On the Application User Configuration page, under Application User Information, select **Edit Credential** .

Step 5 On the Credential Configuration page, confirm that the following check boxes are checked:

- **User Must Change at Next Login**
- **Does Not Expire**

Step 6 Select **Save** .

Step 7 In the Related Links box, select **Back to User** and select **Go** .

Step 8 On the Application User Configuration page, under Application User Information, in the Password field, reenter the password.

Step 9 In the Confirm Password field, reenter the password.

Step 10 Under Device Information, in the Controlled Devices field, confirm that the devices that are associated with the application user account are correct and select **Save** .

Step 11 On the System menu, select **Enterprise Parameters** .

Step 12 On the Enterprise Parameters Configuration page, under Phone URL Parameters, in the URL Authentication field, confirm that the URL is correct.

Step 13 If you made any changes, select **Save** .

User Phone Configuration Not Correct

One possible cause may be that the configuration on the user phone is not current. You can reboot the phone so that it reloads the configuration from the Cisco Unified CM server.

Another possible cause is that the user phone is not supported.

Phone System Integration Configured Incorrectly

The problem may be caused by the incorrect configuration of the Cisco Unified CM phone system integration in Cisco Unity Connection Administration.

To Verify the Configuration of the Cisco Unified Communications Manager Phone System Integration

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integration**, then select**Phone Systems** .

Step 2 On the Search Phone Systems page, select the name of the phone system.

Step 3 On the Phone System Basics page, under Phone View Settings, confirm that the **Enable Phone View** check box is checked.

Step 4 In the CTI Phone Access Username field, confirm that the name of the application user in Cisco Unified CM Administration is correct.

Note The name of the application user is case-sensitive.

Step 5 In the CTI Phone Access Password field, reenter the password of the application user in Cisco Unified CM Administration and select **Save** .

To Verify the Configuration of the User

Step 1 In Cisco Unity Connection Administration, expand **Users**, then select **Users**. On the Search Users page, select the name of the user.

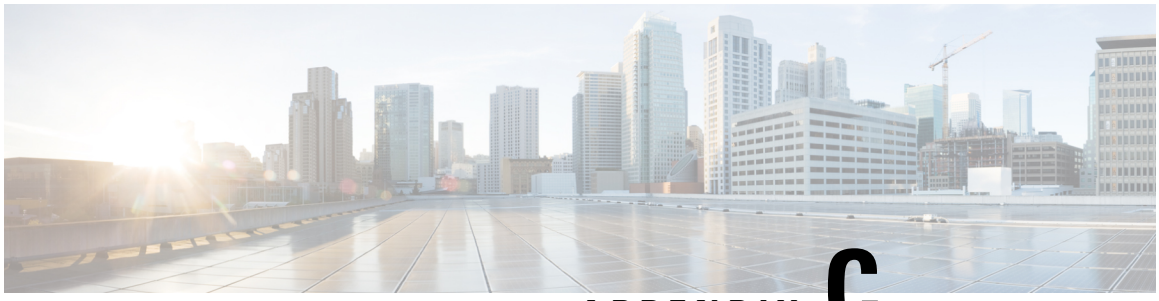
Step 2 On the Edit User Basics page, on the Edit menu, select **Phone Menu**..

Step 3 On the Phone Menu page, under Finding Messages with Message Locator, confirm that the **Enable** check box is checked.

Step 4 Confirm that the **Enable Phone View** check box is checked and select **Save** .

Using Traces to Troubleshoot Phone View Issues

You can use traces to troubleshoot phone view issues. For detailed instructions on enabling the applicable traces and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1 section.



APPENDIX C

Troubleshooting Media Player

This chapter contains the troubleshooting scenarios of Media Player with resolution.

- Using the Phone Device for Playback and Recording in Media Player , on page 249
- Problem Uploading a File in the Media Player, on page 250
- Unknown Error Appears while Using Media Player with Phone, on page 251

Using the Phone Device for Playback and Recording in Media Player

The Media Player supports the phone as a playback and recording device. The phone device is always available to users. Using Number or URI field, users can configure the active phone number for the phone device (the default value is the primary Unity Connection extension of the user).

The phone device sends requests over the network to the Unity Connection server to call the active phone number. When the phone answers, the phone device proceeds with either playing back or recording the voice recording. The call can fail for these reasons:

- Either no active phone number value is defined, or it is defined incorrectly.
- The phone system to which the user is assigned does not have any TRAP ports enabled.
- All TRAP-capable ports on the phone system are busy.
- No phone system is designated to handle TRAP connections.

Problems with the Phone Device Ringing the Phone for Playback or Recording of a Voice Message

Use the troubleshooting information in this section if the phone device either does not ring the phone, or rings the phone only once for playback or recording of voice messages:

- **Phone numbers of different lengths are configured on the phone system, causing the phone system to wait for additional digits-** If your site uses phone numbers that vary in length (for example, some users have five-digit numbers and others have four-digit numbers) this can cause a slight delay of approximately two seconds before the call is connected.

Note The reason for the delay is that the phone system waits to determine that the entire phone number has been dialed before it connects the call.

- **The phone number dialed by the Media Player is not the expected number** -Confirm that the active phone number specified in the Media Player is correct. To do this, check the Active Phone Number value for the Primary Extension or Other Number in the Number or URI field on the Media Player.
- **No phone system is designated to handle TRAP connections** -By default, the first phone system that is integrated with Unity Connection is designated to handle TRAP connections for the Media Player. If this phone system is replaced by another integration, the new phone system might not be designated to handle TRAP connections.

  When a phone system is not designated to handle TRAP connections, the following error appears.

  Could not establish a phone conversation.

  The server reports the following:

  Code: 26

  Description: Cannot find a switch to route the call

Follow the steps in the Designating a Phone System to Handle TRAP Connections section.

Designating a Phone System to Handle TRAP Connections

Step 1 In Cisco Unity Connection Administration, expand **Telephony Integrations** , then select **Phone System** .

Step 2 On the Search Phone Systems page, select the name of the phone system that you want to handle TRAP connections.

Step 3 On the Phone System Basics page, check the **Default TRAP Switch** check box and select **Save** .

Problem Uploading a File in the Media Player

When you attempt to use a previously recorded WAV file (for example, an announcement that was recorded earlier) rather than making a new recording using a phone or computer, the Media Player may display the following error message while saving the page:

"Audio format not supported"

To resolve this problem, do one of the following:

- Convert the WAV file to another audio format (for example, convert it to the G.711 audio format).
- Use a WAV file that is recorded in a supported audio format.
- Make the recording using a phone.

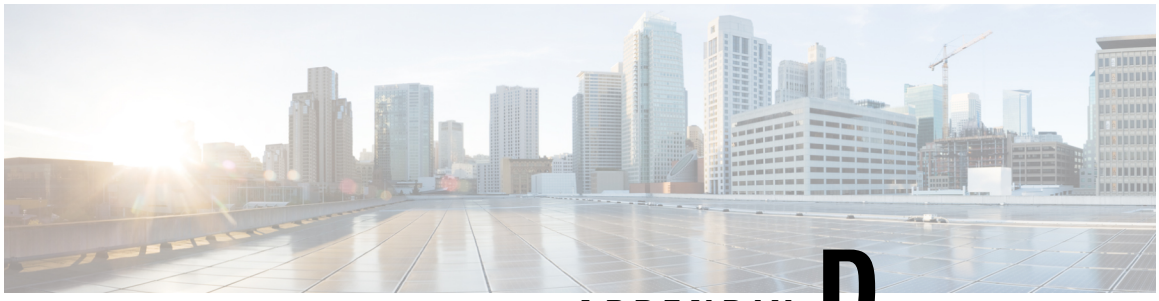
Note You must **Save** the page after uploading the WAV file on the Media Player.

Unknown Error Appears while Using Media Player with Phone

While using Media Player for record, play, upload and download, the Media Player may display the following error message when phone is used as a playback and recording device:

"Unknown error. Please contact to System Administrator"

If you receive the above error message, you need to enable the VMREST (all levels) traces and see the **diag_Tomcat_*.uc** log file to troubleshoot the problem.



APPENDIX D

Troubleshooting SNMP

Cisco Unity Connection supports Simple Network Management Protocol (SNMP) to provide standard network management. Unity Connection SNMP uses the SNMP Master Agent service in Cisco Unified Serviceability and the Unity Connection SNMP Agent service in Cisco Unity Connection Serviceability.

Note Unity Connection SNMP supports CISCO-UNITY-MIB from Cisco Unity.

- Problems with SNMP, on page 253
- Using Traces to Troubleshoot SNMP Issues, on page 254

Problems with SNMP

Use the troubleshooting information in this section if you experience problems with SNMP.

SNMP Master Agent Service Not Running

The SNMP Master Agent service in Cisco Unified Serviceability runs as the master agent. Do the following procedure to confirm that the service is running.

To Confirm That the SNMP Master Agent Service Is Running

Step 1 In Cisco Unified Serviceability, on the Tools menu, select **Control Center - Network Services** .

Step 2 On the Control Center - Network Services page, under Platform Services, confirm that the status of the SNMP Master Agent service is **Started** .

Step 3 If the status is not Started, select **SNMP Master Agent** and select **Restart** .

Connection SNMP Agent Service Not Running

The Connection SNMP Agent service in Cisco Unity Connection Serviceability runs as a subagent. Do the following procedure to confirm that the service is running.

To Confirm That the Unity Connection SNMP Agent Service Is Running

Step 1 In Cisco Unity Connection Serviceability, on the Tools menu, select **Service Management** .

Step 2 On the Control Center - Feature Services page, under Base Services, confirm that the Connection SNMP Agent service status is **Started**. If the service status is Stopped, select **Start**.

SNMP Community String Configured Incorrectly

The SNMP community string must be configured for SNMP to function correctly. Do the following procedure to confirm that the SNMP community string is configured correctly.

To Confirm That the SNMP Community String Is Configured Correctly

Step 1 In Cisco Unified Serviceability, on the SNMP menu, select **V1/V2 > Community String** .

Step 2 On the SNMP Community String Configuration page, select **Find** .

Step 3 If an SNMP community string appears, select the name. If there is no SNMP community string, select **Add New** .

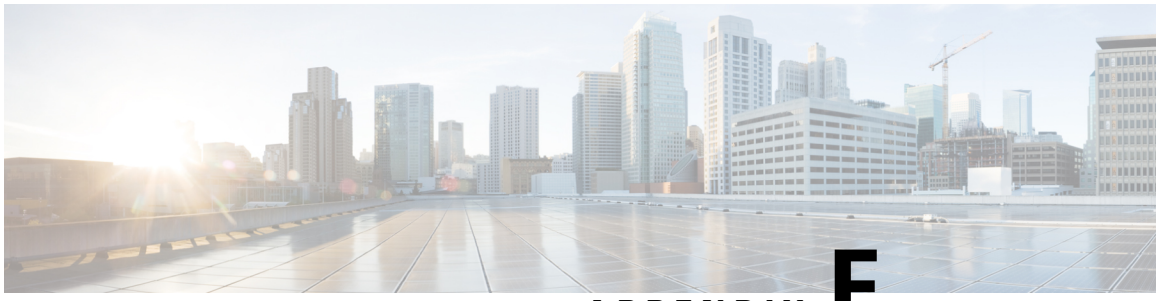
Step 4 Enter any applicable settings and verify the settings.

Step 5 Select **Save** .

Step 6 When prompted that the SNMP Master Agent service is restarted, select **OK** .

Using Traces to Troubleshoot SNMP Issues

You can use traces to troubleshoot SNMP issues. For detailed instructions on enabling the applicable traces and viewing the trace logs, see the Using Diagnostic Traces for Troubleshooting, on page 1



APPENDIX E

Troubleshooting Multi-Server Certificate

Cisco Unity Connection supports Multi-server Subject Alternate Name (SAN). See the following sections for information on troubleshooting problems with Multi-server certificates.

- Initial Debugging and Identifying Topology Details, on page 255

Initial Debugging and Identifying Topology Details

Initial Debugging

- Identify the hostname of both the publisher and subscriber nodes in the Unity Connection cluster.
- Identify the node from which the CSR was generated and pushed.
- Identify the node from which the certificate was uploaded.
- Ensure that the Cisco Tomcat and Platform Administrative Web Service (PAWS) are running.

Note You can use the utils service list CLI command to list the running services.

Collecting Log Files

The logs can be collected by the Real-Time Monitoring Tool (RTMT) or the Command Line Interface. For detailed instructions, see the "Traces and Logs" chapter of the *Cisco Unified Real-Time Monitoring Tool Administration Guide*, available at https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html.

CLI commands to List and Get Log Files

- CLI command to list the log file is file list<file name>
- CLI command to get the log file is file get<file name>

Required Log Files

There are two log files that needs to be collected for analyzing issues with Multi-server Certificate.

- Cisco Tomcat.
- Connection Branch Sync Service.

CLI Commands examples

Below are the CLI command examples to list and collect the log files.

- CLI command to list the log files:
  - file list activelog cuc/diag_Tomcat*
  - file list activelog cuc/diag_CUCE_Sync*
- CLI command to collect the log file:
  - file get activelog cuc/diag_Tomcat_00000001.uc
  - file get activelog cuc/diag_CUCE_Sync00000001.uc

After analyzing the log files, if you cannot resolve the problem, contact Cisco TAC.

INDEX

A

addressing 40, 106, 108–110
  intersite networking problems with Cisco Unity 108
  intrasite or intersite networking problems 106
  networked messages 106
  to local recipients 40
  VPIM messages and blind addressing, problems 110
  VPIM messages to specific recipients, problems 109
Apache Tomcat 213, 215, 229, 231
  and CPCA errors 213
  and Web Inbox errors 229
  service, verifying 215, 231
audio quality 159–161, 163
  choppy audio 159
  garbled prompts 161
  garbled recordings 160
  low volume of recordings 161
  prompts with jitter 161
  traces 163
authentication, troubleshooting when Cisco Unified CM authentication is configured for ports 141

B

blind addressing, VPIM 110
busy greeting, does not play 37

C

call control 132
Call Transfer Rule Tester 219
changing passwords, effect on IMAP email client access to Connection 73
Cisco PCA 210–213, 215
  access problems 210–211
  Apache Tomcat errors 213
  error messages 211
  locked user account 212
  managing security alerts when using SSL connections 210
  saving changes, problems 211
  Tomcat service, verifying 215
Cisco Unified Real-Time Monitoring Tool (RTMT) 21
Cisco Unified Serviceability 21
Cisco Unity Diagnostic Tool 188
  voice-recognition macro trace logs 188
Cisco Utilities Database Link for Informix 22
Cisco Voice Technology Group Subscription tool 21
Connection cluster 177–180
  Add New button disabled 180
  both servers have Primary status 178
  cannot access alert logs when publisher server is not functioning 180
  cluster does not function correctly 179
  server does not handle calls 177
Connection Serviceability 20
cross-server sign-in 116–117
  about 116
  home server cannot be reached 117
  user ID and PIN not accepted 117
  users do not hear PIN prompt 117
cross-server transfers 116, 118
  about 116
  call cannot be completed 118
  callers prompted to leave a message 118
  callers transferred to wrong user 118
CUDLI 22
Custom Key Map tool 191

D

Database Proxy 22
diagnostics 64, 80, 88, 96
  IMAP client problems 64, 80
  SpeechView transcriptions 88, 96
directory handler 39

E

emails, accessing in an external message store 64
encryption, troubleshooting when Cisco Unified CM encryption is configured for ports 141
error messages for Cisco PCA 211
error messages for Web Inbox 228
external message store, access to emails 64
external services 64, 71–72
  access to emails in an external message store 64
  diagnostic tool 72
  personal call transfer rules (PCTRs) 71

external services *(continued)*
Test button, diagnostic tool 72

F

fax 201–202, 204, 206
delivery to fax machine 202
delivery to users 201
notifications by Connection 204
quality 206

G

Grammar Statistics tool, accessing 19
greetings, busy greeting does not play 37

H

Help menu, long pauses when listening to 192

I

IMAP client, messages not received 75
IMAP email access to Connection 73–74
overview 73
with LDAP configured 74
without LDAP configured 73
integration 35, 131–133, 135, 138, 140–141, 144
call control 132
calls not answered 144
calls not transferred to the correct greeting 35
calls to Cisco Unity Connection fail 132
Check Telephony Configuration test 131
Cisco Unified CM authentication or encryption 141
Cisco Unified CM through SCCP or SIP trunk 140
not answering calls 132
not answering some calls 133
port do not register 135, 138
ports repeatedly disconnect 135, 138
Remote Port Status Monitor 131
intersite networking, linking sites 97, 122, 127

K

key mapping problems 191
key presses (touchtones) 29

M

message delivery problems 60, 77
message notifications 165, 167–169, 171–173
devices added are triggered at all hours 173
intermittent failure 173
missed attempts 167
nonfunctional 169
message notifications *(continued)*
port configuration 165
repeat notifications 168
slow for a user 167
slow for multiple users 165
SMS 171
SMTP 172
messages 40, 60, 77, 110–112
addressing 40
intrasite or intersite networking, not received 110
intrasite or intersite networking, replies not delivered 111
networked message transport 110
received in email account 60, 77
VPIM, incoming not received 111
VPIM, outgoing not received 112
Messaging Assistant 211
access problems 211
saving changes, problems 211
Messaging Inbox 211
access problems 211
saving changes, problems 211
MWIs 151–152, 154–157
causes for turning on and off 151
configuring port memory 155
delay turning on or off 156
deleting MWI ports when port memory is used 155
do not turn on or off 152
message count not given on the phone 157
synchronizing 154
turn on but not off 154
when to synchronize 154

N

networking, intersite 97, 108, 114–115, 122, 127
Cisco Unity users unable to address messages 108
directory synchronization problems between a Connection site and a Cisco Unity site 115
directory synchronization problems between two Connection sites 114
linking sites 97, 122, 127
unable to contact the remote site 97
networking, intrasite 112–113
automatic replication stalled 113
directory synchronization problems 112
manual replication stalled 113
push and pull replication status mismatch 113
USN mismatch 112
networking, intrasite or intersite 106, 110–111, 116
addressing messages 106
Connection users unable to address messages 106
cross-server sign-in and transfer problems 116
message transport 110
message transport problems 110
replies to messages sent by remote senders not delivered 111
nondelivery receipts 81

P

passwords, effect that changing has on IMAP email client access to Connection 73
personal call transfer rules 71, 211, 217–220, 222–223
  access problems 211
  access to calendar information 71
  call behavior, inconsistent 223
  call holding unavailable 218
  call looping during rule processing 223
  call screening unavailable 218
  Call Transfer Rule Tester, using 219
  conditions related to meetings 220
  destinations 217
  destinations, editing prepopulated 218
  rule set failure 219
  rules without a "from" condition, creating 218
  saving changes, problems 211
  settings unavailable 217
  voice-recognition conversation problems 222
phone system integration 35, 131–133, 135, 138, 140–141, 144
  call control 132
  calls not answered 144
  calls not transferred to the correct greeting 35
  calls to Cisco Unity Connection fail 132
  Check Telephony Configuration test 131
  Cisco Unified CM authentication or encryption 141
  Cisco Unified CM through SCCP or SIP trunk 140
  not answering calls 132
  not answering some calls 133
  ports do not register 135, 138
  ports repeatedly disconnect 135, 138
  Remote Port Status Monitor 131
ports, troubleshooting when Cisco Unified CM authentication or encryption is configured 141
prompts, garbled or jitter 161

R

reconfiguring MWI ports when port memory is used 155
recordings 160–161
  garbled audio stream 160
  low volume 161
Remote Administration Tools 22
Remote Port Status Monitor 22
reorder tone, user hears when answering call from Connection 39
reports 207–208
  Connection Reports Harvester Service, confirming 207
  data collection cycle, adjusting 208
  no data appears 207

S

security alerts, managing when using SSL connections 210
SMS notifications 171
SMTP notifications 172
SpeechView 83–86, 91–93
  basic configuration settings 83, 91
  confirming services 85, 93
  proxy server issues 84, 92
  SMTP configuration, verifying 86
  transcription notifications 85, 93
  transcription service configuration 84, 92
  user expectation issues 85, 93

T

Task Management tool, accessing 20
Tomcat, verifying service started 215, 231
traces 2–4, 6–8, 10–17, 71–72, 163, 192
  accessing emails in an external message store 4
  audio 2, 12
  audio quality 163
  backing up and restoring 17
  calendar integration 2
  call issues 12
  call issues (micro traces) 2
  Cisco Unified Serviceability traces for selected problems 16
  Cisco Unity Connection Serviceability 13
  Cisco Unity Connection Serviceability macro traces for selected problems 11
  client issues 12
  client issues (micro traces) 3
  Connection cluster 3
  conversations 13
  digital networking 14
  enabling 15, 17
  external services 2, 4, 7–8
  fax 4
  LDAP 4, 17
  messages 4, 13
  MWIs 14
  networking 6, 14
  personal call transfer rules 7
  personal call transfer rules, access to calendar information 71
  Phone View 7
  reports 7
  restoring and backing up 17
  RSS feeds 7
  SNMP 8
  SpeechView, Transcriptions 8
  startup issues 15
  Test button (external service diagnostic tool) 72
  Test button (external services and external service accounts) 8
  Text to Speech 15
  use for viewing WAV filenames 192
  viewing trace logs 15, 17
  VMREST 8, 10
  VPIM 6, 14
  web application sign-in 17
  Web Inbox 8, 10

U

unable to contact the remote site 97
unified messaging 49
users, locating 39–40
during message addressing 40
in a directory handler 39
utilities and tools 19–22
Cisco Unified Serviceability 21
Cisco Voice Technology Group Subscription Tool 21
Connection Serviceability 20
Grammar Statistics 19
Remote Port Status Monitor 22
RTMT 21
Task Management 20
utterance captures, using to diagnose voice-recognition problems 189

V

ViewMail for Outlook 78
form does not appear 78
voice messaging ports, troubleshooting when Cisco Unified CM
authentication or encryption is configured 141
voice-recognition conversation 19, 185–190
confirmation confidence setting 188
Grammar Statistics tool 19
voice-recognition conversation *(continued)*
service not available 186
usernames not recognized 186
users hear phone keypad (touchtone) conversation 185
using diagnostic traces 188
using the Remote Port Status Monitor 190
using utterance captures 189
voice commands not recognized 187
VPIM 109–112
incoming messages not received 111
outgoing messages not received 112
users unable to address messages to specific recipients 109
users unable to blind address messages 110

W

WAV file, determining which is played 192
Web Inbox 228–232
Apache Tomcat errors 229
error messages 228
locked user account 228
No messages displayed 231–232
Sent messages not displayed 231
Tomcat service, verifying 231
Unresponsive Flash Player dialog box 230