Preface

This preface describes the purpose, audience, organization, and conventions of this guide and provides information on how to obtain related documentation.

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Purpose

The *Troubleshooting Guide for Cisco Unified Communications Manager* provides troubleshooting procedures for this release of Unified Communications Manager.

Note The information in this version of the *Troubleshooting Guide for Unified Communications Manager* may not apply to earlier releases of the Unified Communications Manager software.

This document does not cover every possible trouble event that might occur on a Unified Communications Manager system but instead focuses on those events that are frequently seen by the Cisco Technical Assistance Center (TAC) or frequently asked questions from newsgroups.

Audience

The *Troubleshooting Guide for Unified Communications Manager* provides guidance for network administrators who are responsible for managing the Unified Communications Manager system, for enterprise managers, and for employees. This guide requires knowledge of telephony and IP networking technology.

Organization

The following table shows how this guide is organized.

Table 1: How This Document Is Organized

Chapter and Title	Description
Troubleshooting Overview	Provides an overview of the tools and resources that are available for troubleshooting the Unified Communications Manager.
Troubleshooting Tools	Addresses the tools and utilities that you can use to configure, monitor, and troubleshoot Unified Communications Manager and provides general guidelines for collecting information to avoid repetitive testing and re-collection of identical data.
Cisco Unified Communications Manager System Issues	Describes solutions for the most common issues that relate to a Unified Communications Manager system.
Device Issues	Describes solutions for the most common issues that relate to IP phones and gateways.
Dial Plans and Routing Issues	Describes solutions for the most common issues that relate to dial plans, route partitions, and calling search spaces.
Cisco Unified Communications Manager Services Issues	Describes solutions for the most common issues related to services, such as conference bridges and media termination points.
Voice Messaging Issues	Describes solutions for the most common voice-messaging issues.
Troubleshooting Features and Services	Provides information to help you resolve common issues with Unified Communications Manager features and services.
SNMP Troubleshooting	Provides information on how to troubleshoot with SNMP
Opening a Case With TAC	Describes what information is needed to open a case for TAC.
Case Study: Troubleshooting Cisco Unified IP Phone Calls	Describes in detail the call flow between two Cisco Unified IP Phones within a cluster.
Case Study: Troubleshooting Cisco Unified IP Phone-to-Cisco IOS Gateway Calls	Describes a Cisco Unified IP Phone calling through a Cisco IOS Gateway to a phone that is connected through a local PBX or on the Public Switched Telephone Network (PSTN).

Related Documentation

Refer to the *Cisco Unified Communications Manager Documentation Guide* for further information about related Cisco IP telephony applications and products. The following URL shows an example of the path to the documentation guide:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_documentation_roadmaps_list.html

For documentation that relates to Cisco Unity, refer to the following URL:

https://www.cisco.com/c/en/us/support/unified-communications/index.html

Conventions

This document uses the following conventions:

Convention	Description
boldface font	Commands and keywords are in **boldface**.
italic font	Arguments for which you supply values are in *italics*.
[]	Elements in square brackets are optional.
{ x | y | z }	Alternative keywords are grouped in braces and separated by vertical bars.
[x | y | z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
`screen` font	Terminal sessions and information the system displays are in `screen` font.
`boldface screen` font	Information you must enter is in `boldface screen` font.
italic screen font	Arguments for which you supply values are in *italic screen* font.
<>	Nonprinting characters, such as passwords, are in angle brackets.

Notes use the following conventions:

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

Timesavers use the following conventions:

Timesaver Means *the described action saves time*. You can save time by performing the action described in the paragraph.

Tips use the following conventions:

Tip Means *the information contains useful tips*.

Cautions use the following conventions:

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

Warnings use the following conventions:

Warning This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, you must be aware of the hazards involved with electrical circuitry and familiar with standard practices for preventing accidents.

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What''s New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

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

Cisco Product Security Overview

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

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