



# Preface

---

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

The preface covers these topics:

- [Purpose, page ix](#)
- [Audience, page x](#)
- [Organization, page x](#)
- [Related Documentation, page xi](#)
- [Conventions, page xii](#)
- [Obtaining Documentation, page xiii](#)
- [Obtaining Technical Assistance, page xv](#)

## Purpose

The *Troubleshooting Guide for Cisco CallManager* provides descriptions of the tools and utilities used to configure, monitor, and troubleshoot Cisco CallManager Release 3.1(1), Cisco IOS Gateways, and Gatekeeper.

Appendices provide detailed examples of three different call flows. In the first case study, a Cisco IP Phone calls another Cisco IP Phone within a cluster, which is called an intra-cluster call. Once you understand the call flow and debug traces, it will be easier to isolate a problem and determine which component is causing the problem.

# Audience

The *Troubleshooting Guide for Cisco CallManager* is written for network administrators responsible for managing the Cisco CallManager system, enterprise managers, and employees. This guide requires knowledge of telephony and IP networking technology.

# Organization

Table 1 shows how this guide is organized.

**Table 1**     *How This Document is Organized*

Chapter and Title	Description
<a href="#">Chapter 1, “Overview”</a>	Provides an overview of the tools available for troubleshooting potential problems you may have with Cisco CallManager.
<a href="#">Chapter 2, “Troubleshooting and Monitoring Tools and Utilities”</a>	Describes the tools and utilities you can use to configure, monitor, and troubleshoot Cisco CallManager.
<a href="#">Chapter 3, “Diagnosing Cisco CallManager Problems”</a>	Describes how to diagnose some of the common problems that you may experience with Cisco CallManager.
<a href="#">Appendix A, “Troubleshooting Intra-Cluster Phone Calls”</a>	Describes a case study on the call flow between two Cisco IP Phones within a cluster.
<a href="#">Appendix B, “Troubleshooting Cisco IP Phone-to-Cisco IOS Gateway Calls”</a>	Describes a case study on a Cisco IP Phone calling through a Cisco IOS Gateway to a phone connected through a local PBX or on the PSTN.

**Table 1**     *How This Document is Organized (continued)*

Chapter and Title	Description
<a href="#">Appendix C, “Troubleshooting Inter-Cluster Calls”</a>	Describes a case study on a Cisco IP Phone calling another Cisco IP Phone located in a different cluster.
<a href="#">Appendix D, “Call Detail and Call Management Records”</a>	Provides detailed information about CDRs and CMRs.

## Related Documentation

Refer to the following documents for further information about related Cisco IP Telephony applications and products:

- *Cisco CallManager Administration Guide*
- *Cisco CallManager System Guide*
- *Cisco CallManager Serviceability Administration Guide*
- *Installing Cisco CallManager Release 3.1*
- *Release Notes for Cisco CallManager Release 3.1(1)*
- *Hardware Configuration Guide for the Cisco Voice Gateway 200*
- *Software Configuration Guide for the Cisco Voice Gateway 200*
- *Cisco IP Phone Administration Guide for Cisco CallManager*
- *Bulk Administration Tool Guide for Cisco CallManager*
- *Administrative Reporting Tool Guide for Cisco CallManager*

# Conventions

This document uses the following conventions:

Convention	Description
<b>boldface font</b>	Commands and keywords are in <b>boldface</b> .
<i>italic font</i>	Arguments for which you supply values are in <i>italics</i> .
[ ]	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 <code>screen font</code> .
<b>boldface screen font</b>	Information you must enter is in <b>boldface screen font</b> .
<i>italic screen font</i>	Arguments for which you supply values are in <i>italic screen font</i> .
< >	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:



**Tips**

---

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

The following sections provide sources for obtaining documentation from Cisco Systems.

## World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- <http://www.cisco.com>
- <http://www-china.cisco.com>
- <http://www-europe.cisco.com>

## Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

## Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products Marketplace:  
[http://www.cisco.com/cgi-bin/order/order\\_root.pl](http://www.cisco.com/cgi-bin/order/order_root.pl)
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:  
<http://www.cisco.com/go/subscription>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

## Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can submit technical comments electronically. Click **Feedback** in the toolbar and select **Documentation**. After you complete the form, click **Submit** to send it to Cisco.

You can e-mail your comments to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Attn Document Resource Connection  
Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Obtaining Technical Assistance

Cisco provides [Cisco.com](http://Cisco.com) as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For [Cisco.com](http://Cisco.com) registered users, additional troubleshooting tools are available from the TAC website.

### Cisco.com

[Cisco.com](http://Cisco.com) is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

[Cisco.com](http://Cisco.com) provides a broad range of features and services to help customers and partners streamline business processes and improve productivity. Through [Cisco.com](http://Cisco.com), you can find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online technical support, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

<http://www.cisco.com>

## Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

### Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

<http://www.cisco.com/tac>

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

<http://www.cisco.com/register/>

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

<http://www.cisco.com/tac/caseopen>

## Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

