



## Preface

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This administrator guide describes the Cisco IP 7960G/7940G phones in a Session Initiation Protocol (SIP) network. This preface describes the objectives and organization of the document and explains how to find additional information on related products and services. It contains the following sections:

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## Overview

The *Cisco SIP IP Phone Administrator Guide* provides information about how to set up, cable, and configure a Cisco IP 7960G/7940G phone in a SIP network. It also provides information on how to configure the network and SIP parameters and change the settings and options of the Cisco IP phone. The appendixes include reference information such as RFC compliance and Cisco IP phone call flows.

## Who Should Use This Guide

Network engineers, system administrators, Cisco partners, and telecommunications engineers should use this guide to learn the tasks required to set up the Cisco IP phone in an SIP network. The described tasks are administration-level tasks and are not intended for the end users of the phones. Many of the tasks involve configuring network settings that could affect the ability of the phone to function in the network and require an understanding of IP networking and telephony concepts.

# Objectives

This guide provides necessary information to get the Cisco IP phone operational in a SIP network. It is not intended to provide information on how to implement a SIP or a VoIP network. For information on implementing SIP and VoIP networks, refer to the documents listed in the [“Related Documentation” section on page ix](#).

# Document Organization

This document is organized into the following chapters and appendixes:

- [Chapter 1, “Product Overview”](#)—Describes the SIP protocol and the Cisco 7960G/7940G phone.
- [Chapter 2, “Installing Cisco IP 7960G/7940G Phone Hardware on the Desktop or Wall”](#)—Describes how to install phone hardware.
- [Chapter 3, “Initializing Cisco SIP IP Phones”](#)—Describes how to install firmware, customize configuration files, and connect the phone.
- [Chapter 4, “Managing Cisco SIP IP Phones”](#)—Describes how to upgrade firmware and perform other management tasks.
- [Chapter 5, “Monitoring Cisco SIP IP Phones”](#)—Describes how to debug and troubleshoot.
- [Appendix A, “Compliance with RFC 3261”](#)—Provides reference information about Cisco SIP IP phone compliance to RFC 3261.
- [Appendix B, “SIP Call Flows”](#)—Provides reference information about Cisco SIP IP phone call flows.
- [Appendix C, “Technical Specifications of the Cisco IP 7960G/7940G Phone”](#)—Provides physical and operating environment specifications, cable specifications, and connection specifications.
- [Appendix D, “Configurable Parameters for the SIP IP Phone”](#)—Lists and describes configurable parameters.

# Document Conventions

This document uses the following conventions:

- Commands and keywords are in **boldface** font.
- Arguments for which you supply values are in *italic* font.
- Elements in square brackets ([ ]) are optional.
- Required alternative keywords are grouped in braces and are separated by vertical bars (for example, {**x** | **y** | **z**}).
- Optional alternative keywords are grouped in brackets and are separated by vertical bars (for example, [**x** | **y** | **z**]).
- Terminal sessions and information that the system displays are in `screen` font.
- Information that you must enter is in **boldface screen** font.
- Buttons and menus that are called out in text in an imperative context are in **boldface** font.

**Note**

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

**Caution**

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

**Warning**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. To see translations of the warnings that appear in this publication, refer to the translated safety warnings that accompanied this device.

## Related Documentation

### Cisco IP Phone 7960 and Cisco IP Phone 7940

- *Cisco IP Phone 7960 and 7940 Series at a Glance*  
[http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_ipphon/english/ipp7960/6040atag.pdf](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/english/ipp7960/6040atag.pdf)
- *Installing the Wall Mount Kit on the Cisco IP Phone*  
[http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_ipphon/english/ipp7960/ippmount.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/english/ipp7960/ippmount.htm)

### Session Initiation Protocol

- *Session Initiation Protocol Gateway Call Flows*  
[http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/re1\\_docs/sip-flo/](http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/re1_docs/sip-flo/)

### Implementing a VoIP Network

- *Cisco IOS Voice Configuration Library*  
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123cgcr/vcl.htm>
- *Cisco IOS Voice Command Reference*  
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123tcr/123tvr/>
- *Cisco IOS IP Configuration Guide*  
[http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123cgcr/ip\\_veg.htm](http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123cgcr/ip_veg.htm)
- *Cisco IOS IP Command Reference, Volume 1 of 4: Addressing and Services*  
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123tcr/123tip1r/>
- *Cisco IOS IP Command Reference, Volume 2 of 4: Routing Protocols*  
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123tcr/123tip2r/>
- *Cisco IOS IP Command Reference, Volume 3 of 4: Multicast*  
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123tcr/123tip3r/>
- *Cisco IOS IP Command Reference, Volume 4 of 4: IP Mobility*  
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123tcr/123tip4r/>

### Tones

- Telcordia document GR-506-CORE, *Signaling for Analog Interfaces*  
<http://telecom-info.telcordia.com>
- *Cisco BTS 10200 Softswitch System Description*  
<http://www.cisco.com/univercd/cc/td/doc/pcat/bts10200.htm>



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**Note** Access to the Cisco BTS 10200 Softswitch System technical documentation set is restricted. Contact your Cisco representative for access information.

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### Upgrading Firmware

- *Cisco 7940 and 7960 IP Phones Firmware Upgrade Matrix*  
[http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_ipphon/english/ipp7960/addprot/mgcp/rmwrup.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/english/ipp7960/addprot/mgcp/rmwrup.htm)
- *Cisco IP Phone 7960/40 Release Notes for SIP*

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

### Ordering Documentation

You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:  
<http://www.cisco.com/en/US/partner/ordering/index.shtml>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

# Documentation Feedback

You can submit e-mail comments about technical documentation to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour-a-day, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance. If you do not hold a valid Cisco service contract, please contact your reseller.

### Cisco TAC Website

The Cisco TAC website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year. The Cisco TAC website is located at this URL:

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

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

### Opening a TAC Case

Using the online TAC Case Open Tool is the fastest way to open P3 and P4 cases. (P3 and P4 cases are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using the recommended resources, your case will be assigned to a Cisco TAC engineer. The online TAC Case Open Tool is located at this URL:

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

For P1 or P2 cases (P1 and P2 cases are those in which your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

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

## TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

Priority 1 (P1)—Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Priority 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Go to this URL to visit the company store:  
<http://www.cisco.com/go/marketplace/>
- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:  
<http://cisco.com/univercd/cc/td/doc/pcat/>
- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press online at this URL:  
<http://www.ciscopress.com>
- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:  
<http://www.cisco.com/packet>
- *iQ Magazine* is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:  
<http://www.cisco.com/go/iqmagazine>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:  
<http://www.cisco.com/ipj>
- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:  
<http://www.cisco.com/en/US/learning/index.html>

