



Overview of Cisco Unified SRST

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This chapter describes Cisco Unified Survivable Remote Site Telephony (Cisco Unified SRST) and what it does. It also includes information about Cisco Unified IP phone, platform, and Cisco Unified Communications Manager version support, specifications, features, restrictions, and where to find additional reference documents.



Note

For the most up-to-date information about Cisco Unified IP Phone support, the maximum number of Cisco Unified IP phones, maximum DNs or virtual voice ports, and memory requirements for Cisco Unified SRST, see the *Cisco Unified SRST 4.3 Supported Firmware, Platforms, Memory, and Voice Products* at the following URL:
http://www.cisco.com/en/US/docs/voice_ip_comm/cusrst/requirements/guide/srs43spc.html.

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Cisco Unified SRST Description

Cisco Unified SRST provides Cisco Unified Communications Manager with fallback support for Cisco Unified IP phones that are attached to a Cisco router on your local network. Cisco Unified SRST enables routers to provide call-handling support for Cisco Unified IP phones when they lose connection to remote primary, secondary, or tertiary Cisco Unified Communications Manager installations or when the WAN connection is down.

Cisco Unified Communications Manager supports Cisco Unified IP phones at remote sites attached to Cisco multiservice routers across the WAN. Prior to Cisco Unified SRST, when the WAN connection between a router and the Cisco Unified Communications Manager failed or when connectivity with Cisco Unified Communications Manager was lost for some reason, Cisco Unified IP phones on the network became unusable for the duration of the failure. Cisco Unified SRST overcomes this problem and ensures that the Cisco Unified IP phones offer continuous (although minimal) service by providing call-handling support for Cisco Unified IP phones directly from the Cisco Unified SRST router. The system automatically detects a failure and uses Simple Network Auto Provisioning (SNAP) technology to autoconfigure the branch office router to provide call processing for Cisco Unified IP phones that are registered with the router. When the WAN link or connection to the primary Cisco Unified Communications Manager is restored, call handling reverts back to the primary Cisco Unified Communications Manager.

When Cisco Unified IP phones lose contact with primary, secondary, and tertiary Cisco Unified Communications Managers, they must establish a connection to a local Cisco Unified SRST router to sustain the call-processing capability necessary to place and receive calls. The Cisco Unified IP phone retains the IP address of the local Cisco Unified SRST router as a default router in the Network Configuration area of the Settings menu. The Settings menu supports a maximum of five default router entries; however, Cisco Unified Communications Manager accommodates a maximum of three entries. When a secondary Cisco Unified Communications Manager is not available on the network, the local Cisco Unified SRST Router's IP address is retained as the standby connection for Cisco Unified Communications Manager during normal operation.

**Note**

Cisco Unified Communications Manager fallback mode telephone service is available only to those Cisco Unified IP phones that are supported by a Cisco Unified SRST router. Other Cisco Unified IP phones on the network remain out of service until they reestablish a connection with their primary, secondary, or tertiary Cisco Unified Communications Manager.

Typically, it takes three times the keepalive period for a phone to discover that its connection to Cisco Unified Communications Manager has failed. The default keepalive period is 30 seconds. If the phone has an active standby connection established with a Cisco Unified SRST router, the fallback process takes 10 to 20 seconds after connection with Cisco Unified Communications Manager is lost. An active standby connection to a Cisco Unified SRST router exists only if the phone has the location of a single Cisco Unified Communications Manager in its Unified Communications Manager list. Otherwise, the phone activates a standby connection to its secondary Cisco Unified Communications Manager.

**Note**

The time it takes for a Cisco Unified IP Phone to fallback to the SRST router can vary depending on the phone type. Phones such as the Cisco 7902, Cisco 7905, and Cisco 7912 can take approximately 2.5 minutes to fallback to SRST mode.

If a Cisco Unified IP phone has multiple Cisco Unified Communications Managers in its Cisco Unified Communications Manager list, it progresses through its list of secondary and tertiary Cisco Unified Communications Managers before attempting to connect with its local Cisco Unified SRST router. Therefore, the time that passes before the Cisco Unified IP phone eventually establishes a connection with the Cisco Unified SRST router increases with each attempt to contact to a Cisco Unified Communications Manager. Assuming that each attempt to connect to a Cisco Unified Communications Manager takes about one minute, the Cisco Unified IP phone in question could remain offline for three minutes or more following a WAN link failure.

**Note**

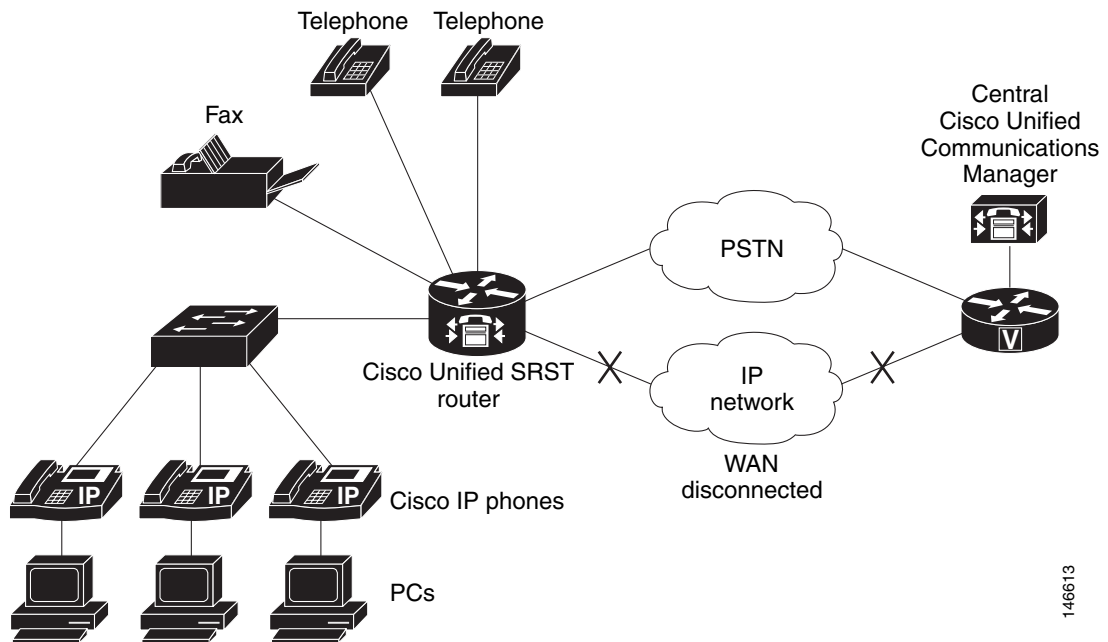
During a WAN connection failure, when Cisco Unified SRST is enabled, Cisco Unified IP phones display a message informing you that they are operating in Cisco Unified Communications Manager fallback mode. For example, the Cisco Unified IP Phone 7960G and Cisco Unified IP Phone 7940G display a “CM Fallback Service Operating” message, and the Cisco Unified IP Phone 7910 displays a “CM Fallback Service” message when operating in Cisco Unified Communications Manager fallback mode. When the Cisco Unified Communications Manager is restored, the message goes away and full Cisco Unified IP phone functionality is restored.

While in Cisco Unified Communications Manager fallback mode, Cisco Unified IP phones periodically attempt to reestablish a connection with Cisco Unified Communications Manager at the central office. Generally the default time that Cisco Unified IP phones wait before attempting to reestablish a connection to a remote Cisco Unified Communications Manager is 120 seconds. The time can be changed in Cisco Unified Communications Manager; see the “Device Pool Configuration Settings” chapter in the appropriate *Cisco Unified Communications Manager Administration Guide*. A manual reboot can immediately reconnect Cisco Unified IP phones to Cisco Unified Communications Manager.

When a connection is reestablished with Cisco Unified Communications Manager, Cisco Unified IP phones automatically cancel their registration with the Cisco Unified SRST Router. However, if a WAN link is unstable, Cisco Unified IP phones can bounce between Cisco Unified Communications Manager and Cisco Unified SRST. A Cisco Unified IP phone cannot reestablish a connection with the primary Cisco Unified Communications Manager at the central office if it is currently engaged in an active call.

[Figure 1](#) shows a branch office with several Cisco Unified IP phones connected to a Cisco Unified SRST router. The router provides connections to both a WAN link and the PSTN. Typically, the Cisco Unified IP phones connect to their primary Cisco Unified Communications Manager at the central office via the WAN link. When the WAN connection is down, the Cisco Unified IP phones use the Cisco Unified SRST router as a fallback for their primary Cisco Unified Communications Manager. The branch office Cisco Unified IP phones are connected to the PSTN through the Cisco Unified SRST router and are able to make and receive off-net calls.

Figure 1 Branch Office Cisco Unified IP Phones Connected to a Remote Central Cisco Unified Communications Manager Operating in SRST Mode



On H.323 gateways, when the WAN link fails, active calls from Cisco Unified IP phones to the PSTN are not maintained by default. Call preservation may work with the **no h225 timeout keepalive** command.

Under default configuration, the H.323 gateway maintains a keepalive signal with Cisco Unified Communications Manager and terminates H.323-to-PSTN calls if the keepalive signal fails, for example if the WAN link fails. To disable this behavior and help preserve existing calls from local Cisco Unified IP phones, you can use the **no h225 timeout keepalive** command. Disabling the keepalive mechanism only affects calls that will be torn down as a result of the loss of the H.225 keepalive signal. For information regarding disconnecting a call when an inactive condition is detected, see the [Media Inactive Call Detection](#) document.

MGCP Gateways and SRST

MGCP fallback is a different feature than SRST and, when configured as an individual feature, can be used by a PSTN gateway. To use SRST as your fallback mode on an MGCP gateway, SRST and MGCP fallback must both be configured on the same gateway. MGCP and SRST have had the capability to be configured on the same gateway since Cisco IOS Release 12.2(11)T.

To make outbound calls while in SRST mode on your MGCP gateway, two fallback commands must be configured on the MGCP gateway. These two commands allow SRST to assume control over the voice port and over call processing on the MGCP gateway. With Cisco IOS earlier than 12.3(14)T, the two commands are the **ccm-manager fallback-mgcp** and **call application alternate** commands. With Cisco IOS releases after 12.3(14)T, the **ccm-manager fallback-mgcp** and **service** commands must be configured. A complete configuration for these commands is shown in the section [“Enabling Cisco Unified SRST on an MGCP Gateway”](#) section on page 50.

**Note**

The commands listed above are ineffective unless both commands are configured. For instance, your configuration will not work if you only configure the **ccm-manager fallback-mgcp** command.

For more information on the fallback methods for MGCP gateways, see the *Configuring MGCP Gateway Support for Cisco Unified Communications Manager* document or the *MGCP Gateway Fallback Transition to Default H.323 Session Application* document.

Support for Cisco Unified IP Phones, Platforms, Cisco Unified Communications Manager, Signals, Languages, and Switches

The following sections provide information about Cisco Feature Navigator and the histories of Cisco Unified IP Phone, platform, and Cisco Unified Communications Manager support from Cisco SRST Version 1.0 to the present version of Cisco Unified SRST.

- [Finding Cisco IOS Software Releases That Support Cisco Unified SRST, page 35](#)
- [Cisco Unified IP Phone Support, page 35](#)
- [Platform and Memory Support, page 37](#)
- [Cisco Unified Communications Manager Compatibility, page 37](#)
- [Signal Support, page 37](#)
- [Language Support, page 37](#)
- [Switch Support, page 38](#)

Finding Cisco IOS Software Releases That Support Cisco Unified SRST

The tables in this chapter list only the Cisco IOS software releases that first introduce new features to Cisco Unified SRST. Other Cisco IOS software releases may subsequently inherit versions of Cisco Unified SRST. To get a list of Cisco IOS software releases that support a particular version of Cisco Unified SRST, use Cisco Feature Navigator.

To access Cisco Feature Navigator, go to: <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

Cisco Unified IP Phone Support

For the most up-to-date information about Cisco Unified IP Phone support, see the *Cisco Unified SRST 4.3 Supported Firmware, Platforms, Memory, and Voice Products* at the following URL: http://www.cisco.com/en/US/docs/voice_ip_comm/cusrst/requirements/guide/srs43spc.html.

The following IP phones are supported by Cisco Unified SRST 4.0:

- Cisco Analog Telephone Adaptor (ATA) 186 and Cisco ATA 188 Version 2.16 and later versions with Cisco Unified Communications Manager 3.3 and later versions

Cisco Unified SRST supports Cisco ATA 186 and Cisco ATA 188 using Skinny Client Control Protocol (SCCP) for voice calls only

**Note**

For ATAs that are registered to a Cisco Unified SRST system to participate in FAX calls, they must have their ConnectMode parameter set to use the “standard payload type 0/8” as the RTP payload type in FAX passthrough mode. For ATAs used with Cisco Unified SRST 4.0 and higher versions, this is done by setting bit 2 of the ConnectMode parameter to 1 on the ATA. For more information, see the “Parameters and Defaults” chapter in the *Cisco ATA 186 and Cisco ATA 188 Analog Telephone Adaptor Administrator's Guide for SCCP*, at the following URL:
http://www.cisco.com/en/US/docs/voice_ip_comm/cata/186_188/2_15_ms/english/administration/guide/sccp/sccpach5.html.

- Cisco Unified IP Phone 7902G
- Cisco Unified IP Phone 7905G
- Cisco Unified IP Phone 7910
- Cisco Unified IP Phone 7911G
- Cisco Unified IP Phone 7912G
- Cisco Unified IP Phone Expansion Module 7914
- Cisco Unified Wireless IP Phone 7920
- Cisco IP Conference Station 7935
- Cisco Unified IP Conference Station 7936
- Cisco Unified IP Phone 7940G
- Cisco Unified IP Phone 7941G, Cisco Unified IP Phone 7941G-GE
- Cisco Unified IP Phone 7960G
- Cisco Unified IP Phone 7961G, Cisco Unified IP Phone 7961G-GE
- Cisco Unified IP Phone 7970G
- Cisco Unified IP Phone 7971G-GE
- Cisco VG224 Analog Phone Gateway, IOS Version 12.4(4)XC with Cisco Unified SRST 4.0 running Cisco IOS Software Release 12.4(4)XC and later. For configuration information see, the “Enabling Fallback to Cisco Unified SRST on the Voice Gateway” section in *SCCP Controlled Analog (FXS) Ports with Supplementary Features in Cisco IOS Gateways* at the following URL:
http://www.cisco.com/en/US/docs/ios/12_4t/12_4t2/ht1vg224.html.
- Cisco VG248 Analog Phone Gateway Version 1.2(1) and higher versions.

**Note**

During Cisco Unified Communications Manager fallback, Cisco Unified SRST considers the Cisco VG248 to be a group of Cisco Unified IP phones. Cisco Unified SRST counts each of the 48 ports on the Cisco VG248 as a separate Cisco Unified IP phone. Support for Cisco VG248 Version 1.2(1) and higher versions is available as of Cisco SRST Version 2.1. For more information, see the *Cisco VG248 Analog Phone Gateway Data Sheet* and the *Cisco VG248 Analog Phone Gateway Version 1.2(1) Release Notes*.

Platform and Memory Support

For the most up-to-date information about the maximum number of Cisco Unified IP phones, maximum DNs or virtual voice ports, and memory requirements for Cisco Unified SRST, see the [Cisco Unified SRST 4.3 Supported Firmware, Platforms, Memory, and Voice Products](http://www.cisco.com/en/US/docs/voice_ip_comm/cusrst/requirements/guide/srs43sps.html) at the following URL: http://www.cisco.com/en/US/docs/voice_ip_comm/cusrst/requirements/guide/srs43sps.html.

Determining Platform Support Through Cisco Feature Navigator

Cisco IOS software is packaged in feature sets that are supported on specific platforms. To get updated information regarding platform support for this feature, access Cisco Feature Navigator. Cisco Feature Navigator dynamically updates the list of supported platforms as new platform support is added for the feature.

Availability of Cisco IOS Software Images

Platform support for particular Cisco IOS software releases is dependent on the availability of the software images for those platforms. Software images for some platforms may be deferred, delayed, or changed without prior notice. For updated information about platform support and availability of software images for each Cisco IOS software release, see the online release notes or, if supported, Cisco Feature Navigator.

**Note**

For the most up-to-date information about Cisco IOS software images, see the [Cisco Unified SRST 4.3 Supported Firmware, Platforms, Memory, and Voice Products](http://www.cisco.com/en/US/docs/voice_ip_comm/cusrst/requirements/guide/srs43sps.html) at the following URL: http://www.cisco.com/en/US/docs/voice_ip_comm/cusrst/requirements/guide/srs43sps.html.

Cisco Unified Communications Manager Compatibility

See the [Cisco Unified Communications Manager Compatibility Matrix](#).

Signal Support

Cisco Unified SRST supports FXS, FXO, T1, E1, and E1 R2 signals.

Language Support

Cisco SRST 3.2 and later supports the following languages:

- Danish
- Dutch
- English
- French
- German
- Italian
- Japanese Katakana (available under Cisco Unified Communications Manager 4.0 or later versions).

- Norwegian
- Portuguese
- Russian
- Spanish
- Swedish

**Note**

The Cisco Unified IP Phone 7911G, Cisco Unified IP Phone 7941G and 7941G-GE, Cisco Unified IP Phone 7961G and 7961G-GE, Cisco Unified IP Phone 7970G, and Cisco Unified IP Phone 7971G-GE support English only.

Switch Support

Cisco SRST 3.2 and later versions support all PRI and BRI switches including the following:

- basic-1tr6
- basic-5ess
- basic-dms100
- basic-net3
- basic-ni
- basic-ntt NTT switch type for Japan
- basic-ts013
- primary-4ess Lucent 4ESS switch type for the United States
- primary-5ess Lucent 5ESS switch type for the United States
- primary-dms100 Northern Telecom DMS-100 switch type for the United States
- primary-net5 NET5 switch type for the United Kingdom, Europe, Asia, and Australia
- primary-ni National ISDN switch type for the United States
- primary-ntt NTT switch type for Japan
- primary-qsig QSIG switch type
- primary-ts014 TS014 switch type for Australia (obsolete)

Prerequisites for Configuring Cisco Unified SRST

Before configuring Cisco Unified SRST you must do the following:

- You have an account on Cisco.com to download software.
To obtain an account on Cisco.com, go to www.cisco.com and click **Register** at the top of the screen.
- You have purchased a Cisco Unified SRST license.
To purchase a license, go to <http://www.cisco.com/cgi-bin/tablebuild.pl/ip-key>.

- Choose an appropriate Cisco Unified SRST version. Each SRST version supports a specific set of IP phones, memory requirements, features, and directory numbers (DNs). See the “[Platform and Memory Support](#)” section on page 37 and the “[Restrictions for Configuring Cisco Unified SRST](#)” section on page 42.
- Choose an appropriate phoneload. SRST only supports certain phoneloads that have been tested with the various Cisco Unified Communications Manager versions. For the most up-to-date phoneloads, see the *Cisco Unified SRST 4.3 Supported Firmware, Platforms, Memory, and Voice Products* at the following URL:
http://www.cisco.com/en/US/docs/voice_ip_comm/cusrst/requirements/guide/srs43spc.html.
- If you have Cisco Unified Communications Manager already installed, verify that your version of Cisco Unified Communications Manager is compatible with your Cisco Unified SRST release. See the “[Cisco Unified Communications Manager Compatibility](#)” section on page 37.

Prerequisites for Version

- For general prerequisites, see the “[Prerequisites for Configuring Cisco Unified SRST](#)” section on page 38.
- For the prerequisites for Enhanced 911 Services, see the “[Prerequisites](#)” section on page 225.

Installing Cisco Unified Communications Manager

When installing Cisco Unified Communications Manager consider the following:

- See the installation instructions for your version in the [Cisco Unified Communications Manager Install and Upgrade Guides](#) at the following URL:
http://www.cisco.com/en/US/products/sw/voicew/ps556/prod_installation_guides_list.html
- Integrate Cisco Unified SRST with Cisco Unified Communications Manager. Integration is performed from Cisco Unified Communications Manager. See the “[Integrating Cisco Unified SRST with Cisco Unified Communications Manager](#)” section on page 40.

Installing Cisco Unified SRST

Cisco Unified SRST versions have different installation instructions:

- [Installing Cisco Unified SRST V3.0 and Later Versions](#), page 39
- [Installing Cisco Unified SRST V2.0 and V2.1](#), page 40
- [Installing Cisco Unified SRST V1.0](#), page 40

To update Cisco Unified SRST, follow the installation instructions described in this section.

Installing Cisco Unified SRST V3.0 and Later Versions

Install the Cisco IOS software release image containing the Cisco SRST or Cisco Unified SRST version that is compatible with your Cisco Unified Communications Manager version. See the “[Cisco Unified Communications Manager Compatibility](#)” section on page 37. Cisco IOS software can be downloaded from the Cisco Software Center at <http://www.cisco.com/public/sw-center/>.

Cisco SRST and Cisco Unified SRST can be configured to support continuous multicast output of music on hold (MOH) from a flash MOH file in flash memory. For more information, see the “[Defining XML API Schema](#)” section on page 117. If you plan use music on hold, go to the Technical Support Software Download site at <http://www.cisco.com/cgi-bin/tablebuild.pl/ip-iostsp> and copy the music-on-hold.au file to the flash memory on your Cisco SRST or Cisco Unified SRST router.

Installing Cisco Unified SRST V2.0 and V2.1

Download and install Cisco SRST V2.0 or Cisco SRST V2.1 from the Cisco Software Center at <http://www.cisco.com/public/sw-center/>.

Installing Cisco Unified SRST V1.0

Cisco SRST V1.0 runs with Cisco Communications Manager V3.0.5 only. It is recommended that you upgrade to the latest Cisco Unified Communications Manager and Cisco Unified SRST versions.

Integrating Cisco Unified SRST with Cisco Unified Communications Manager

There are two procedures for integrating Cisco Unified SRST with Cisco Unified Communications Manager. Procedure selection depends on the Cisco Unified Communications Manager version that you have.

If You Have Cisco Communications Manager V3.3 or Later Versions

If you have Cisco Communications Manager V3.3 or later versions, you must create an SRST reference and apply it to a device pool. An SRST reference is the IP address of the Cisco Unified SRST Router.

-
- Step 1** Create an SRST reference.
- a. From any page in Cisco Unified Communications Manager, click **System** and **SRST**.
 - b. On the Find and List SRST References page, click **Add a New SRST Reference**.
 - c. On the SRST Reference Configuration page, enter a name in the SRST Reference Name field and the IP address of the Cisco SRST router in the IP Address field.
 - d. Click **Insert**.
- Step 2** Apply the SRST reference or the default gateway to one or more device pools.
- a. From any page in Cisco Unified Communications Manager, click **System** and **Device Pool**.
 - b. On the Device Pool Configuration page, click on the required device pool icon.
 - c. On the Device Pool Configuration page, choose an SRST reference or “Use Default Gateway” from the SRST Reference field’s menu.
-

If You Have Cisco Unified Communications Manager Version Prior to V3.3

If you have firmware versions that enable Cisco Unified SRST by default, no additional configuration is required on Cisco Unified Communications Manager to support Cisco Unified SRST. If your firmware versions disable Cisco Unified SRST by default, you must enable Cisco Unified SRST for each phone configuration.

-
- Step 1** Go to the Cisco Unified Communications Manager Phone Configuration page.
- a. From any page in Cisco Unified Communications Manager, click **Device** and **Phone**.
 - b. In the Find and List Phones page, click **Find**.
 - c. After a list of phones appears, click on the required device name.
 - d. The Phone Configuration appears.
- Step 2** In the Phone Configuration page, go to the Product Specific Configuration section at the end of the page, choose **Enabled** from the Cisco Unified SRST field's menu, and click **Update**.
- Step 3** Go to the Phone Configuration page for the next phone and choose **Enabled** from the Cisco Unified SRST field's menu by repeating Step 1 and Step 2.
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Restrictions for Configuring Cisco Unified SRST

Table 1 provides a history of restrictions from Cisco SRST Version 1.0 to the present version of Cisco Unified SRST.

Table 1 History of Restrictions from Cisco SRST V1.0 to the Present Cisco Unified SRST Version

Cisco Unified SRST Version	Cisco IOS Release	Restrictions
Version 4.1	12.4(15)T	<ul style="list-style-type: none"> Enhanced 911 Services for Cisco Unified SRST does not interface with the Cisco Emergency Responder. The information about the most recent phone that called 911 is not preserved after a reboot of Cisco Unified SRST. Cisco Emergency Responder does not have access to any updates made to the emergency call history table when remote IP phones are in Cisco Unified SRST fallback mode. Therefore, if the PSAP calls back after the Cisco Unified IP phones register back to Cisco Unified Communications Manager, Cisco Emergency Responder will not have any history of those calls. As a result, those calls will not get routed to the original 911 caller. Instead, the calls are routed to the default destination that is configured on Cisco Emergency Responder for the corresponding ELIN. For Cisco Unified Wireless IP Phone 7920 and 7921, a caller's location can only be determined by the static information configured by the system administrator. For more information, see the “Precautions for Mobile Phones” section on page 231. The extension numbers of 911 callers can be translated to only two emergency location identification numbers (ELINs) for each emergency response location (ERL). For more information, see the “Overview” section on page 226. Using ELINs for multiple purposes can result in unexpected interactions with existing Cisco Unified SRST features. These multiple uses of an ELIN can include configuring an ELIN for use as an actual phone number (ephone-dn, voice register dn, or FXS destination-pattern), a Call Pickup number, or an alias rerouting number. For more information, see the “Multiple Usages of an ELIN” section on page 234. There are a number of other ways that your configuration of Enhanced 911 Services can interact with existing Cisco Unified SRST features and cause unexpected behavior. For a complete description of interactions between Enhanced 911 Service and existing Cisco Unified SRST features, see the “Interactions with Existing Cisco Unified SRST Features” section on page 234.

Table 1 History of Restrictions from Cisco SRST V1.0 to the Present Cisco Unified SRST Version (continued)

Cisco Unified SRST Version	Cisco IOS Release	Restrictions
Version 4.0	12.4(4)XC	<ul style="list-style-type: none"> All of the restrictions in Cisco SRST Version 1.0.
Version 3.4	12.4(4)T	<ul style="list-style-type: none"> Caller-id display on supported Cisco Unified IP phones: SIP phones in fallback mode display only the name and not the number of the caller. SCCP phones in fallback mode display only the caller-id number assigned to the line; the caller-ID name configuration for SCCP phones is not preserved during SRST fallback.
Version 3.3	12.3(14)T	
Version 3.2	12.3(11)T	<ul style="list-style-type: none"> Call transfer is supported only on the following: <ul style="list-style-type: none"> VoIP H.323, VoFR, and VoATM between Cisco gateways running Cisco IOS Release 12.2(11)T and using the H.323 nonstandard information element FXO and FXS loop-start (analog) FXO and FXS ground-start (analog) Ear and mouth (E&M) (analog) and DID (analog) T1 channel-associated signaling (CAS) with FXO and FXS ground-start signaling T1 CAS with E&M signaling All PRI and BRI switch types The following Cisco Unified IP Phone function keys are dimmed because they are not supported during SRST operation: <ul style="list-style-type: none"> MeetMe GPickUp (group pickup) Park Confrn (conference) Although the Cisco IAD2420 series integrated access devices (IADs) support the Cisco Unified SRST feature, this feature is not recommended as a solution for enterprise branch offices.
Version 3.1	12.3(7)T	
Version 3.0	12.2(15)ZJ	
Version 2.1	12.2(15)T	
Version 2.02	12.2(13)T	
Version 2.01	12.2(11)T	
Version 2.0	12.2(8)T1	
Version 2.0	12.2(8)T	
Version 2.0	12.2(2)XT	
Version 1.0	12.2(2)XB	
	12.2(2)XG	
	12.1(5)YD	

Where to Go Next

The next chapters of this guide describe how to configure Cisco Unified SRST. As shown in [Table 2](#), each chapter takes you through these tasks in the order in which they need to be performed. The first task for configuring Cisco Unified SRST is to ensure that the basic software and hardware in your system is configured correctly for Cisco Unified SRST. For instructions, see the [“Prerequisites for Configuring Cisco Unified SRST”](#) section on page 38.

Table 2 Cisco Unified SRST Configuration Sequence

Task	Where Task Is Described
1. Setting up a Cisco Unified SRST system to communicate with your network	“Setting Up the Network” chapter
2. Setting up the basic Cisco Unified SRST phone configuration	“Setting Up Cisco Unified IP Phones” chapter
3. Configuring incoming and outgoing calls	“Setting Up Call Handling” chapter
4. Configuring optional system and phone parameters	“Configuring Additional Call Features” chapter
5. Configuring optional security for SRST	“Setting Up Secure SRST” chapter
6. Setting up voice mail	“Integrating Voice Mail with Cisco Unified SRST” chapter
7. Configuring Enhanced 911 Services	“Enhanced 911 Services” chapter

Additional References

The following sections provide additional references related to Cisco Unified SRST:

- [Related Documents](#), page 44
- [Standards](#), page 46
- [MIBs](#), page 46
- [RFCs](#), page 46
- [Technical Assistance](#), page 46

Related Documents

Related Topic	Documents
Cisco IOS voice configuration	<ul style="list-style-type: none"> • Cisco IOS Voice Configuration Library • Cisco IOS Voice Command Reference • Cisco IOS Debug Command Reference • Cisco IOS Tcl IVR and VoiceXML Application Guide
Cisco Unified IP phones	Cisco Unified IP Phones and Services

Related Topic	Documents
Cisco security documentation	<ul style="list-style-type: none"> • Media and Signaling Authentication and Encryption Feature for Cisco IOS MGCP Gateways • Cisco IOS Certificate Server • Manual Certificate Enrollment (TFTP and Cut-and-Paste) • Certification Authority Interoperability Commands • Certificate Enrollment Enhancements
Cisco SRST command reference	Cisco IOS Survivable Remote Site Telephony Version 3.2 Command Reference
Cisco Unified Communications Manager music on hold	<p>The “Music On Hold” chapter of the Cisco Unified CallManager and Cisco Unified IP Phone Administrator's A - Z Feature Guide for your specific Cisco Unified Communications Manager release. From the Cisco Unified Communications Manager documentation directory, click Cisco Unified Communications Manager (CallManager) > Maintain and Operate Guides.</p>
Cisco Unified Communications Manager user documentation	<ul style="list-style-type: none"> • Cisco Unified Communications Manager • Cisco Unified Communications Manager Security Guide • Cisco Unified Communications Operating System Administration Guide
Cisco Unified IP phones	<ul style="list-style-type: none"> • Cisco 7900 Series Unified IP Phones End-User Guides • Cisco IP Phone Authentication and Encryption for Cisco Communications Manager • Cisco IP Phone 7970 Administration Guide for Cisco Communications Manager, 4.x and later versions, “Understanding Security Features for Cisco IP Phones” section.
Cisco Unified SRST commands and specifications	<ul style="list-style-type: none"> • Cisco Unified SRST and Cisco Unified SIP SRST Command Reference (All Versions) • Cisco Unified SRST 4.3 Supported Firmware, Platforms, Memory, and Voice Products
Command reference and configuration information for voice and SRST	<ul style="list-style-type: none"> • Cisco IOS Voice Command Reference • Cisco IOS Debug Command Reference • Cisco IOS Survivable Remote Site Telephony Version 3.2 System Administrator Guide • Cisco SRST 3.2 Command Reference
Command reference and configuration information for voice and telephony commands	<ul style="list-style-type: none"> • Cisco IOS Voice Command Reference • Cisco IOS Debug Command Reference
Configuring SRST and MGCP Fallback	<ul style="list-style-type: none"> • Configuring MGCP Gateway Support for Cisco Unified Communications Manager • MGCP Gateway Fallback Transition to Default H.323 Session Application • Configuring SRS Telephony and MGCP Fallback

Related Topic	Documents
DHCP	<ul style="list-style-type: none"> Cisco IOS DHCP Server
Media Inactive Call Detection	<ul style="list-style-type: none"> Media Inactive Call Detection
Phone documentation for Cisco Unified SRST	<ul style="list-style-type: none"> Cisco Unified IP Phones 7900 Series Survivable Remote Site Telephony
Standard Glossary	<ul style="list-style-type: none"> Cisco IOS Voice Configuration Library Glossary
Standard Preface	<ul style="list-style-type: none"> Cisco IOS Voice Configuration Library Preface

Standards

Standard	Title
ITU X. 509 Version 3	<i>Public-Key and Attribute Certificate Frameworks</i>

MIBs

MIB	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified.	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
RFC 2246	<i>The Transport Layer Security (TLS) Protocol Version 1.0</i>
RFC 3711	<i>The Secure Real-Time Transport Protocol (SRTP)</i>

Technical Assistance

Description	Link
<p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p>	http://www.cisco.com/en/US/support/index.html

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>

