



# Configuring SRST Fallback Mode

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**Last Updated: October 7, 2009**

This chapter describes SRST fallback mode using Cisco Unified Communications Manager Express (Cisco Unified CME).

## Finding Feature Information in This Module

Your Cisco Unified CME version may not support all of the features documented in this module. For a list of the versions in which each feature is supported, see the [“Feature Information for SRST Fallback Mode”](#) section on page 1203.

## Contents

- [Prerequisites for SRST Fallback Mode, page 1187](#)
- [Restrictions for SRST Fallback Mode, page 1188](#)
- [Information About SRST Fallback Mode, page 1188](#)
- [How to Configure SRST Fallback Mode, page 1192](#)
- [Configuration Examples for SRST Fallback Mode, page 1198](#)
- [Additional References, page 1202](#)
- [Feature Information for SRST Fallback Mode, page 1203](#)

## Prerequisites for SRST Fallback Mode

- The IP address of the Cisco Unified CME router must be registered as the SRST reference on the Cisco Unified Communications Manager device pool.
- Cisco Unified CME 4.0 or a later version must be installed on the Cisco Unified CME router that is configured in SRST mode.
- Following tasks must be completed:
  - [“Generating Configuration Files for Phones”](#) on page 261.
  - [“Configuring System-Level Parameters”](#) on page 101. Note that the **max-dn** command must be explicitly configured with the **preference** keyword to support calls between PSTN and IP phones during SRST fallback mode.

- “Generating Configuration Files for Phones” on page 261.
- “Configuring Call Transfer and Forwarding” on page 595.

## Restrictions for SRST Fallback Mode

- The **call-manager-fallback** command, which is used to configure Cisco Unified SRST, cannot be used on a router that is configured for Cisco Unified CME.
- The **telephony-service setup** command and **auto assign** command must not be enabled on a Cisco Unified CME router configured for SRST fallback mode. If you used the **telephony-service setup** command before configuring the router for SRST fallback support, you must remove any unwanted ephone directory numbers created by the setup process.
- The number of phones that fall back to a Cisco Unified CME router in SRST mode cannot exceed the maximum number of phones that is supported by the router. To find the maximum number of phones for a particular router and Cisco Unified CME version, see the appropriate *Cisco CME Supported Firmware, Platforms, Memory, and Voice Products* document at [http://www.cisco.com/en/US/products/sw/voicesw/ps4625/products\\_device\\_support\\_tables\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps4625/products_device_support_tables_list.html).
- The ephone-dns and ephones that are created from fallback may have less information associated with them than appears in their original configuration on a Cisco Unified Communications Manager or on an active Cisco Unified CME system. This situation occurs because the Cisco Unified CME router in SRST mode is designed to learn only a limited amount of information from the fallback IP phones. For example, if an ephone-dn has in its configuration the command **number 4888 no-reg** (to keep that extension from registering under its E.164 address), after fallback the **no-reg** part of this command will be lost because this information cannot be learned from the IP phones.
- The order of the SRST fallback ephone-dns and ephones will be different from the order of the active Cisco Unified Communications Manager or Cisco Unified CME ephone-dns and ephones. For example, ephone 1 on an active Cisco Unified Communications Manager might be numbered ephone 5 on the Cisco Unified CME router in SRST mode, because the order of learned ephone-dns and ephones is determined by the sequence of the ephone fallback occurrence, which is random.

## Information About SRST Fallback Mode

To configure SRST fallback mode, you should understand the following concepts:

- [SRST Fallback Mode Using Cisco Unified CME](#), page 1188
- [Prebuilding Cisco Unified CME Phone Configurations](#), page 1192
- [Autoprovisioning Directory Numbers in SRST Fallback Mode](#), page 1192

## SRST Fallback Mode Using Cisco Unified CME

This feature enables routers to provide call-handling support for Cisco Unified IP phones if they lose connection to remote primary, secondary, or tertiary Cisco Unified Communications Manager installations or if the WAN connection is down. When Cisco Unified SRST functionality is provided by Cisco Unified CME, provisioning of phones is automatic and most Cisco Unified CME features are available to the phones during periods of fallback, including hunt-groups, call park and access to

Cisco Unity voice messaging services using SCCP protocol. The benefit is that Cisco Unified Communications Manager users will gain access to more features during fallback without any additional licensing costs.

This feature offers a limited telephony feature set during fallback mode. Customers who require the following features should continue to use Cisco Unified SRST, because these features are not supported with SRST fallback support using Cisco Unified CME.

- More than 240 phones during fallback service
- Cisco VG 248 Analog Phone Gateway support
- Secure voice fallback during SRST fallback service
- Simple, one-time configuration for SRST fallback service

Cisco Unified Communications Manager supports Cisco Unified IP phones at remote sites attached to Cisco Integrated Services Routers across the WAN. This new feature combines the many features available in Cisco Unified CME with the ability to automatically detect IP phone configurations that is available in Cisco Unified SRST to provide seamless call handling when communication with the Cisco Unified Communications Manager is interrupted.

When the system automatically detects a failure, Cisco Unified SRST uses Simple Network Auto Provisioning (SNAP) technology to auto-configure a branch office router to provide call processing for the 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 returns to the primary Cisco Unified Communications Manager.

A limited number of phone features are automatically detected at the time that call processing falls back to Cisco Unified CME in SRST Fallback Mode, and an advantage of SRST fallback support using Cisco Unified CME is that you can choose to prebuild a Cisco Unified CME configuration that contains a number of extensions (ephone-dns) with additional features that you want them to have for some or all of your extensions. The configurations will contain ephone-dn configurations but will not identify which phones (which MAC addresses) will be associated with which ephone-dns (extension numbers).

By copying and pasting a prebuilt configuration onto Cisco Unified CME routers at several locations, you can use the same overall configuration for sites that are identically laid out. For example, if you have a number of retail stores, each with five to ten checkout registers, you can use the same overall configuration in each store. You might use a range of extensions from 1101 to 1110. Stores with fewer than ten registers will simply not use some of the ephone-dn entries you provide in the configuration. Stores with more extensions than you have prebuilt will use the auto-provisioning feature to populate their extra phones. The only configuration variations from store to store will be the specific MAC addresses of the individual phones, which are added to the configurations at the time of fallback.

When a phone registers for SRST service with a Cisco Unified CME router and the router discovers that the phone was configured with a specific extension number, the router searches for an existing prebuilt ephone-dn with that extension number and then assigns that ephone-dn number to the phone. If there is no prebuilt ephone-dn with that extension number, the Cisco Unified CME system automatically creates one. In this way, extensions without prebuilt configurations are automatically populated with extension numbers and features as the numbers and features are “learned” by the Cisco Unified CME router in SRST mode when the phone registers to the router after a WAN link fails.

The SRST fallback support using Cisco Unified CME feature is able to interrogate phones to learn their MAC addresses and the extension-to-ephone relationships associated with each phone. This information is used to dynamically create and execute the Cisco Unified CME **button** command for each phone and automatically provision each phone with the extensions and features you want it to have.

The following sequence describes how Cisco Unified CME provides SRST services for Cisco Unified Communications Manager phones when they lose connectivity with the Cisco Unified Communications Manager and fall back to the Cisco Unified CME router in SRST mode:

**Before Fallback**

1. Phones are configured as usual in Cisco Unified Communications Manager.
2. The IP address of the Cisco Unified CME router is registered as the SRST reference on the Cisco Unified Communications Manager device pool.
3. SRST mode is enabled on the Cisco Unified CME router.
4. (Optional) Ephone-dns and features are prebuilt on the Cisco Unified CME router.

**During Fallback**

5. Phones that are enabled for fallback register to the default Cisco Unified CME router that has SRST mode enabled. Each display-enabled IP phone displays the message that has been defined using the **system message** command under telephony-service configuration mode. By default, this message is “Cisco Unified CME.”
6. While the fallback phones are registering, the router in SRST mode initiates an interrogation of the phones in order to learn their phone and extension configurations. The following information is acquired or “learned” by the router:
  - MAC address
  - Number of lines or buttons
  - Ephone-dn-to-button relationship
  - Speed-dial numbers
7. The option defined with the **srst mode auto-provision** command determines whether Cisco Unified CME adds the learned phone and extension information to its running configuration. If the information is added, it appears in the output when you use the **show running-config** command and is saved to NVRAM when you use the **write** command.
  - Use the **srst mode auto-provision none** command to enable the Cisco Unified CME router to provide SRST fallback services for Cisco Unified Communications Manager.
  - If you use the **srst mode auto-provision dn** or **srst mode auto-provision all** commands, the Cisco Unified CME router includes the phone configuration it learns from Cisco Unified Communications Manager in its running configuration. If you then save the configuration, the fallback phones are treated as locally configured phones on the Cisco Unified CME-SRST router which could adversely impact the fallback behavior of those phones.
8. While in fallback mode, Cisco Unified IP phones periodically attempt to reestablish a connection with Cisco Unified Communications Manager every 120 seconds (default). To manually reestablish a connection to Cisco Unified Communications Manager you can reboot the Cisco Unified IP phone.
9. When a connection is reestablished with Cisco Unified Communications Manager, Cisco Unified IP phones automatically cancel their registration with the Cisco Unified CME router in SRST mode. However, if a WAN link is unstable, Cisco Unified IP phones can bounce between Cisco Unified Communications Manager and the Cisco Unified CME router in SRST mode.

An IP phone connected to the Cisco Unified CME-SRST router over a WAN reconnects itself to Cisco Unified Communications Manager as soon as it can establish a connection to Cisco Unified Communications Manager over the WAN link. However, if the WAN link is unstable, the IP phone switches back and forth between Cisco Unified CME-SRST and Cisco Unified Communications Manager, causing temporary loss of phone service (no dial tone). These reconnect attempts, known as WAN link flapping issues, continue until the IP phone successfully reconnects itself back to Cisco Unified Communications Manager.

WAN link disruptions can be classified into two types: infrequent random outages that occur on an otherwise stable WAN, and sporadic, frequent disruptions that last a few minutes.

To resolve WAN-link flapping issues between Cisco Unified Communications Manager and SRST, Cisco Unified Communications Manager provides an enterprise parameter and a setting in the Device Pool Configuration window called Connection Monitor Duration. (Depending on system requirements, the administrator decides which parameter to use.) The value of the parameter is delivered to the IP phone in the XML configuration file.

- Use the enterprise parameter to change the connection duration monitor value for all IP phones in the Cisco Unified Communications Manager cluster. The default for the enterprise parameter is 120 seconds.
- Use the Device Pool Configuration window to change the connection duration monitor value for all IP phones in a specific device pool.

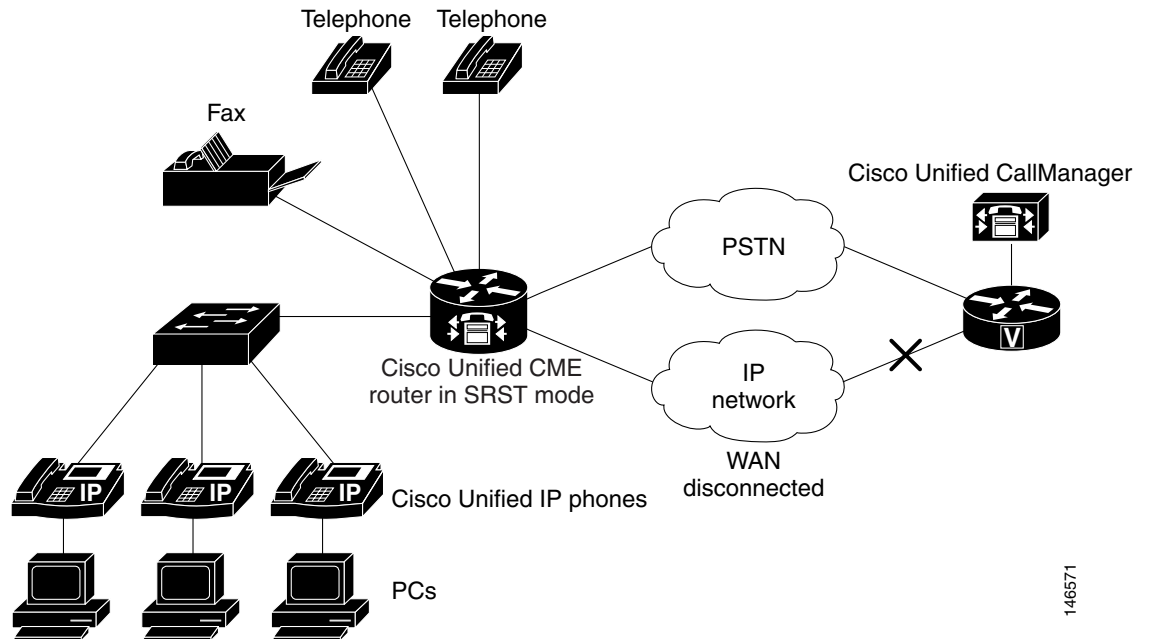
A Cisco Unified IP phone will not reestablish a connection with the primary Cisco Unified Communications Manager at the central office if it is engaged in an active call.

**After the First Fallback**

Additional features can be set up, such as ephone hunt groups, which can contain learned extensions and prebuilt extensions. The complete core set of Cisco Unified CME phone features is available to the IP phones and extensions, whether they are learned or configured.

Figure 42 shows a branch office with several Cisco Unified IP phones connected to a Cisco Unified CME router in SRST fallback mode. The router provides connections to both a WAN link and the PSTN. The Cisco Unified IP phones connect to their primary Cisco Unified Communications Manager at the central office via this WAN link. Cisco Unified CME provides SRST services for the phones when connectivity over the WAN link is interrupted.

**Figure 42 SRST Fallback Support using Cisco Unified CME**



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## Prebuilding Cisco Unified CME Phone Configurations

Prebuilding Cisco Unified CME ephone-dns allows you to create a set of directory numbers with extension numbers and some features, which will provide service during fallback that is similar to the service that is provided during normal operation. You can prebuild all of your normal extensions, a limited set of your extensions, or none of your extensions. Directory numbers that are not prebuilt will be populated with extension numbers and features as they are “learned” by the Cisco Unified CME router in SRST mode at the time of fallback.

An ephone-dn is the IP equivalent of a normal phone line in most cases. It represents a potential call connection and is associated with a virtual voice port and virtual dial peer. An ephone-dn has one or more extension or telephone numbers associated with it, which allow call connections to be made. An ephone-dn can be single-line, which allows one call connection to be made at a time, or dual-line, which allows two simultaneous call connections. Dual-line ephone-dns are useful for features such as call transfer or call waiting, in which one call is put on hold to connect to another. Single-line ephone-dns are required for certain features such as intercom, paging, and message-waiting indication (MWI). For more information, see [“Cisco Unified CME Overview” on page 17](#).

If an ephone-dn is manually configured in Cisco Unified CME, incoming calls will always route to the manually configured ephone-dn in Cisco Unified CME rather than to Cisco Unified Communications Manager using the voip dial peer. To avoid incorrect routing, configure a higher preference for the voip dial peer than the preference for the prebuilt directory number. For configuration example, see [“Prebuilding DNs: Example” section on page 1202](#).

## Autoprovisioning Directory Numbers in SRST Fallback Mode

Cisco Unified CME 4.3 and later versions support octo-line directory numbers in SRST fallback mode. You can specify whether Cisco Unified CME in SRST fallback mode creates octo-line or dual-line directory numbers based on the phone type. For the Cisco Unified IP Phone 7902 or 7920, or an analog phone connected to the Cisco VG224 or Cisco ATA, the system creates a dual-line directory number; it creates an octo-line directory number for all other phone types. This applies only to the ephone-dns that are “learned” automatically from ephone configuration information, and not to ephone-dns that are manually configured in Cisco Unified CME.

## How to Configure SRST Fallback Mode

This section contains the following tasks:

- [Enabling SRST Fallback Mode, page 1193](#) (required)
- [Verifying SRST Fallback Mode, page 1196](#) (optional)
- [Prebuilding Cisco Unified CME Phone Configurations, page 1197](#) (optional)
- [Modifying Call Pickup for Fallback Support, page 1197](#) (optional)

## Enabling SRST Fallback Mode

To enable SRST mode on the Cisco Unified CME router, perform the following steps.

### Restrictions

Do not enable the **telephony-service setup** command or **auto assign** command on a Cisco Unified CME router that you are configuring for SRST fallback mode. If you used the **telephony-service setup** command previously on the router, you must remove any unwanted ephone directory numbers created by the setup process.

### SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **telephony-service**
4. **srst mode auto-provision {all | dn | none}**
5. **srst dn line-mode {dual | dual-octo | octo | single}**
6. **srst dn template *template-tag***
7. **srst ephone template *template-tag***
8. **srst ephone description *string***
9. **end**

### DETAILED STEPS

	Command or Action	Purpose
Step 1	<b>enable</b>  <b>Example:</b> Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
Step 2	<b>configure terminal</b>  <b>Example:</b> Router# configure terminal	Enters global configuration mode.
Step 3	<b>telephony-service</b>  <b>Example:</b> Router(config)# telephony-service	Enters telephony-service configuration mode.

Command or Action	Purpose
<p><b>Step 4</b></p> <pre>srst mode auto-provision {all   dn   none}</pre> <p><b>Example:</b> Router(config-telephony)# srst mode auto-provision none</p>	<p>Enables SRST mode for a Cisco Unified CME router.</p> <ul style="list-style-type: none"> <li>• <b>all</b>—Includes information for learned ephones and ephone-dns in the running configuration.</li> <li>• <b>dn</b>—Includes information for learned ephone-dns in the running configuration.</li> <li>• <b>none</b>—Does not include information for learned ephones or learned ephone-dns in the running configuration. Use this keyword when you want Cisco Unified CME to provide SRST fallback services for Cisco Unified Communications Manager.</li> </ul>
<p><b>Step 5</b></p> <pre>srst dn line-mode {dual   dual-octo   octo   single}</pre> <p><b>Example:</b> Router(config-telephony)# srst dn line-mode dual-octo</p>	<p>(Optional) Specifies the line mode for ephone-dns in SRST mode on a Cisco Unified CME router.</p> <ul style="list-style-type: none"> <li>• <b>dual</b>—SRST fallback ephone-dns are dual-line ephone-dns.</li> <li>• <b>dual-octo</b>—SRST fallback ephone-dns are dual-line or octo-line, depending on the phone type. This keyword is supported in Cisco Unified CME 4.3 and later versions.</li> <li>• <b>octo</b>—SRST fallback ephone-dns are octo-line. This keyword is supported in Cisco Unified CME 4.3 and later versions.</li> <li>• <b>single</b>—SRST fallback ephone-dns are single-line ephone-dns. Default value.</li> </ul> <p><b>Note</b> This command is used only when ephone-dns are learned at the time of fallback. It is ignored when you prebuild ephone-dn configurations.</p>
<p><b>Step 6</b></p> <pre>srst dn template template-tag</pre> <p><b>Example:</b> Router(config-telephony)# srst dn template 3</p>	<p>(Optional) Specifies an ephone-dn template to be used in SRST mode on a Cisco Unified CME router. The template includes features that were specified when the template was created. See <a href="#">“Configuring Templates for Fallback Support: Example”</a> on page 1201.</p> <ul style="list-style-type: none"> <li>• <i>template-tag</i>—Identifying number of an existing ephone-dn template. Range is 1 to 15.</li> </ul>
<p><b>Step 7</b></p> <pre>srst ephone template template-tag</pre> <p><b>Example:</b> Router(config-telephony)# srst ephone template 5</p>	<p>(Optional) Specifies an ephone template to be used in SRST mode on a Cisco Unified CME router.</p> <ul style="list-style-type: none"> <li>• <i>template-tag</i>—Identifying number of an existing ephone template. Range is 1 to 20.</li> </ul>

	Command or Action	Purpose
Step 8	<pre>srst ephone description <i>string</i></pre> <p><b>Example:</b> Router(config-telephony)# srst ephone description Cisco Unified CME SRST Fallback</p>	(Optional) Specifies a description to be associated with an ephone learned in SRST mode on a Cisco Unified CME router. <ul style="list-style-type: none"><li><i>string</i>—Description to be associated with an ephone. Maximum string length is 100 characters.</li></ul>
Step 9	<pre>end</pre> <p><b>Example:</b> Router(config-telephony)# end</p>	Returns to privileged EXEC mode.

## Verifying SRST Fallback Mode

- Step 1** Use the **show telephony-service all** or the **show running-config** command to verify that SRST fallback mode has been set on this router.

```
telephony-service
 srst mode auto-provision all
 srst ephone template 5
 srst ephone description srst fallback auto-provision phone : Jul 07 2005 17:45:08
 srst dn template 8
 srst dn line-mode dual
 load 7960-7940 P00305000600
 max-ephones 30
 max-dn 60 preference 0
 ip source-address 10.1.68.78 port 2000
 max-redirect 20
 system message "SRST Mode: Cisco Unified CME"
 keepalive 10
 max-conferences 8 gain -6
 moh welcome.au
 create cnf-files version-stamp Jan 01 2002 00:00:00
```

- Step 2** Use the **show telephony-service ephone-dn** command during fallback to review ephone-dn configurations. Learned ephone-dns are noted by a line stating that they were learned during SRST fallback.

**Note** Learned ephone-dns do not appear in the output for the **show running-config** command if the **none** keyword is used in the **srst mode auto-provision** command.

```
ephone-dn 1 dual-line
 number 4008
 name 4008
 description 4008
 preference 0 secondary 9
 huntstop
 no huntstop channel
 call-waiting beep
 ephone-dn-template 8
 This DN is learned from srst fallback ephones
```

- Step 3** Use the **show telephony-service ephone** command during fallback to review ephone configurations. Learned ephones are noted by a line stating that they were learned during SRST fallback.

**Note** Learned ephones do not appear in the output for the **show running-config** command if the **none** keyword is used in the **srst mode auto-provision** command.

```
ephone 1
 mac-address 0112.80B3.9C16
 button 1:1
 multicast-moh
 ephone-template 5
 Always send media packets to this router: No
 Preferred codec: g711ulaw
 user-locale JP
 network-locale US
 Description: "YOUR Description" : Oct 11 2005 09:58:27
 This is a srst fallback phone
```

## Prebuilding Cisco Unified CME Phone Configurations

You can optionally create a set of ephone-dns that are preconfigured with extension numbers and some features to provide service during fallback that is similar to the service that is provided during normal operation. Extensions that are not prebuilt are populated with extension numbers and features as they are “learned” by the Cisco Unified CME router in SRST mode at the time of fallback.

**Note**

To avoid incorrect routing when you prebuild ephone-dns for Cisco Unified Communications Manager phones in Cisco Unified CME, use the **preference** command in ephone-dn and voip-dial-peer configuration mode to create a higher preference (0 being the highest) for the voip dial peer than the preference for the prebuilt directory number. For configuration example, see the [“Prebuilding DNs: Example” section on page 1202](#).

See the following procedures to set up a few of the most common features to associate with phones in fallback mode:

- [“SCCP: Creating Directory Numbers” section on page 158](#)
- [“Enabling Call Park or Directed Call Park” section on page 543](#)
- [“SCCP: Enabling Ephone Templates” section on page 1130](#)
- [“SCCP: Enabling Ephone-dn Templates” section on page 1132](#)
- [“SCCP: Configuring Ephone Hunt Groups” section on page 702](#). Note that the **dial-peer hunt** command must be configured for hunt-selection order of explicit preference to support hunt groups during SRST fallback mode.

## Modifying Call Pickup for Fallback Support

An especially useful feature for fallback phones is modifying the behavior of the Pickup soft key in Cisco Unified CME to match that of the Pickup soft key in Cisco Unified Communications Manager. To modify the call pickup feature for fallback support, perform the following steps.

### SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **telephony-service**
4. **no service directed-pickup**
5. **create cnf-files**
6. **reset all**
7. **exit**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<b>enable</b>  <b>Example:</b> Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"><li>Enter your password if prompted.</li></ul>
Step 2	<b>configure terminal</b>  <b>Example:</b> Router# configure terminal	Enters global configuration mode.
Step 3	<b>telephony-service</b>  <b>Example:</b> Router(config)# telephony-service	Enters telephony-service configuration mode.
Step 4	<b>no service directed-pickup</b>  <b>Example:</b> Router(telephony)# no service directed-pickup	(Optional) Disables directed call pickup and changes the behavior of the Pickup soft key so that a user pressing it invokes local group pickup rather than directed call pickup. This behavior is consistent with that of the Pickup soft key in Cisco Unified Communications Manager.  <b>Note</b> For changes to the service-phone settings to be effective, the Sep*.conf.xml file must be updated with the <b>create cnf-files</b> command and the phone units must rebooted with the <b>reset</b> command.
Step 5	<b>create cnf-files</b>  <b>Example:</b> Router(telephony)# create cnf-files	Builds XML configuration files for Cisco Unified IP phones.
Step 6	<b>reset all</b>  <b>Example:</b> Router(telephony)# reset all	Resets all phones.
Step 7	<b>exit</b>  <b>Example:</b> Router(telephony)# exit	Exits dial-peer configuration mode.

## Configuration Examples for SRST Fallback Mode

This section contains the following examples:

- [Enabling SRST Mode: Example, page 1199](#)
- [Provisioning Directory Numbers for Fallback Support: Example, page 1200](#)
- [Configuring Templates for Fallback Support: Example, page 1201](#)
- [Enabling Hunt Groups for Fallback Support: Example, page 1201.](#)

- [Modifying Call Pickup for Fallback Support: Example, page 1201](#)
- [Prebuilding DNs: Example, page 1202](#)

## Enabling SRST Mode: Example

The following example enables SRST mode on the Cisco Unified CME router. It specifies that learned fallback ephone-dns should be created in dual-line mode and use ephone-dn template 3 for their configuration parameters. Learned ephones will use the parameters in ephone template 5 and a description will be associated with the phones.

```
telephony-service
max-ephones 30
max-dn 60 preference 0
srst mode auto-provision all
srst dn line-mode dual
srst dn template 3
srst ephone description srst fallback auto-provision phone
srst ephone template 5
.
.
.
```

The following excerpt from the **show running-config** command displays the configuration of ephone 1, which was learned during fallback; the description is stamped with the date and time that the **show running-config** command was used. The configuration of ephone 2, which was prebuilt rather than learned, is shown for comparison.

```
ephone 1
description srst fallback auto-provision phone : Jul 07 2005 17:45:08
ephone-template 5
mac-address 100A.7052.2AAE
button 1:1 2:2

ephone 2
mac-address 1002.CD64.A24A
type 7960
button 1:3
```

The following excerpt from the **show running-config** command displays the configuration of ephone-dn 1 through ephone-dn 3. All three ephones are learned ephone-dns that are configured in dual-line mode and use ephone-dn template 5, as specified in the telephony-service configuration mode commands.

```

ephone-dn 1 dual-line
  number 7001
  description 7001
  name 7001
  ephone-dn-template 5
  This DN is learned from srst fallback ephones
!
!
ephone-dn 2 dual-line
  number 4005
  name 4005
  ephone-dn-template 5
  This DN is learned from srst fallback ephones
!
!
ephone-dn 3 dual-line
  number 4002
  label 4002
  name 4002
  ephone-dn-template 5
  This DN is learned from srst fallback ephones

```

## Provisioning Directory Numbers for Fallback Support: Example

The following example sets up five ephone-dns and two call-park slots that are used for fallback phones.

```

ephone-dn 1
  number 1101
  name Register 1

ephone-dn 2
  number 1102
  name Register 2

ephone-dn 3
  number 1103
  name Register 3

ephone-dn 4
  number 1104
  name Register 4

ephone-dn 5
  number 1105
  name Register 5

ephone-dn 21
  number 1121
  name Park Slot 1
  park-slot timeout 60 limit 3 recall alternate 1100

ephone-dn 22
  number 1122
  name Park Slot 2
  park-slot timeout 60 limit 3 recall alternate 1100

```

## Configuring Templates for Fallback Support: Example

The following example creates ephone-dn template 3 and ephone template 5 that will be used with the SRST fallback support using Cisco Unified CME feature. Ephone-dn template 3 adds the fallback phones to pickup group 24 and specifies call forwarding for busy and no-answer conditions to extension 1100. Ephone template 5 defines two fastdial numbers that will appear as menu entries displayed from the Directories > Local Services > Personal Speed Dials option on the fallback phones, and also specifies the soft-key layouts for the fallback phones.

```
ephone-dn-template 3
pickup-group 24
call-forward busy 1100
call-forward noan 1100 timeout 45

ephone-template 5
fastdial 1 1101 name Front Register
fastdial 2 918005550111 Headquarters
softkeys idle Newcall Cfdall Pickup
softkeys seized Endcall Cfdall Pickup
softkeys alerting Endcall
softkeys connected Endcall Hold Park Trnsfer
```

## Enabling Hunt Groups for Fallback Support: Example

The following example configures the dial peers to hunt in the following order: (1) explicit preference, 2) longest match in phone number, and (3) random selection. The **dial-peer hunt** command must be configured for hunt-selection order of explicit preference to support hunt groups during SRST fallback mode.

```
dial-peer hunt 2
```

The following example creates a peer hunt group with the pilot number 1111.

```
ephone-hunt 3 peer
pilot 1111
list 1101, 1102, 1103
hops 3
timeout 25
final 1100
```

## Modifying Call Pickup for Fallback Support: Example

The following example changes the behavior of the Pickup soft key to be like the one in Cisco Unified Communications Manager.

```
telephony-service
no service directed-pickup
create cnf-files
```

## Prebuilding DNs: Example

In the following partial example, the **preference** command in ephone-dn and voip-dial-peer configuration mode is configured to create a voip dial peer with a higher preference (0) than the preference (1) of the manually-configured directory number (ephone-dn 1).

```
dial-peer voice 1002
  voip destination-pattern 1019
  .
  .
  preference 0 <<=====This dial peer has precedence and will match first.

ephone-dn 1
  number 1019
  preference 1 <<=====Configure lower preference for prebuilt DN.
```

## Additional References

The following sections provide references related to Cisco Unified CME features.

## Related Documents

Related Topic	Document Title
Cisco Unified CME configuration	<ul style="list-style-type: none"> <li><a href="#">Cisco Unified CME Command Reference</a></li> <li><a href="#">Cisco Unified CME Documentation Roadmap</a></li> </ul>
Cisco IOS commands	<ul style="list-style-type: none"> <li><a href="#">Cisco IOS Voice Command Reference</a></li> <li><a href="#">Cisco IOS Software Releases 12.4T Command References</a></li> </ul>
Cisco IOS configuration	<ul style="list-style-type: none"> <li><a href="#">Cisco IOS Voice Configuration Library</a></li> <li><a href="#">Cisco IOS Software Releases 12.4T Configuration Guides</a></li> </ul>
Phone documentation for Cisco Unified CME	<ul style="list-style-type: none"> <li><a href="#">User Documentation for Cisco Unified IP Phones</a></li> </ul>

## Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register on Cisco.com.	<a href="http://www.cisco.com/techsupport">http://www.cisco.com/techsupport</a>

## Feature Information for SRST Fallback Mode

Table 58 lists the features in this module and enhancements to the features by version.

To determine the correct Cisco IOS release to support a specific Cisco Unified CME version, see the *Cisco Unified CME and Cisco IOS Software Version Compatibility Matrix* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/cucme/requirements/guide/33matrix.htm](http://www.cisco.com/en/US/docs/voice_ip_comm/cucme/requirements/guide/33matrix.htm).

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which Cisco IOS software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.



**Note**

Table 58 lists the Cisco Unified CME version that introduced support for a given feature. Unless noted otherwise, subsequent versions of Cisco Unified CME software also support that feature.

**Table 58** Feature Information for SRST Fallback Mode

Feature Name	Cisco Unified CME Version	Feature Information
Octo-Line Directory Numbers	4.3	Support for octo-line directory numbers was added.
SRST Fallback Support Using Cisco Unified CME	4.0	SRST fallback support using Cisco Unified CME was introduced.

