



Configuring Single Number Reach (SNR)

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This chapter describes the Single Number Reach (SNR) feature in Cisco Unified Communications Manager Express (Cisco Unified CME) 7.1 and later versions.

Contents

- [Information About Single Number Reach, page 1039](#)
- [How to Configure Single Number Reach, page 1040](#)
- [Additional References, page 1044](#)
- [Feature Information for Single Number Reach, page 1046](#)

Information About Single Number Reach

To configure SNR, you should understand the following concept:

- [Single Number Reach, page 1039](#)

Single Number Reach

The Single Number Reach (SNR) feature allows users to answer incoming calls to their extension on either their desktop IP phone or at a remote destination, such as a mobile phone. Users can pick up active calls on the desktop phone or the remote phone without losing the connection. This enables callers to dial a single number to reach the phone user. Calls that are not answered can be forwarded to voice mail.

Remote destinations may include the following devices:

- Mobile (cellular) phones.
- Smart phones.
- IP phones not belonging to the same Cisco Unified CME router as the desktop phone.
- Home phone numbers in the PSTN. Supported PSTN interfaces include PRI, BRI, SIP, and FXO.

For incoming calls to the SNR extension, Cisco Unified CME rings the desktop IP phone first. If the IP phone does not answer within the configured amount of time, it rings the configured remote number while continuing to ring the IP phone. Unanswered calls are sent to a configured voice-mail number.

The IP phone user has these options for handling calls to the SNR extension:

- Pull back the call from the remote phone—Phone user can manually pull back the call to the SNR extension by pressing the Resume soft key, which disconnects the call from the remote phone.
- Send the call to remote phone—Phone user can send the call to the remote phone by using the Mobility soft key. While connected to the call, the phone user can press the Mobility soft key and select “Send call to mobile.” The call is forwarded to the remote phone.
- Enable or disable Single Number Reach—While the IP phone is in the idle state, the user can toggle the SNR feature on and off by using the Mobility soft key. If the user disables SNR, Cisco Unified CME does not ring the remote number.

IP phone users can modify their own SNR settings directly from the phone by using the menu available with the Services feature button. You must enable the feature on the phone to allow a phone user to access the user interface.

This feature is supported in Cisco Unified CME 7.1 and later versions on SCCP IP phones that support soft keys.

How to Configure Single Number Reach

This section contains the following task:

[SCCP: Configuring Single Number Reach, page 1040](#)

SCCP: Configuring Single Number Reach

To enable the Single Number Reach (SNR) feature on SCCP IP phones, perform the following steps.

Prerequisites

- Cisco Unified CME 7.1 or a later version
- Cisco IP Communicator requires version 2.1.4 or later

Restrictions

- Each IP phone supports only one SNR directory number.
- SNR feature is not supported for the following:
 - SIP phones or SCCP-controlled analog FXS phones.
 - MLPP calls.
 - Secure calls.
 - Video calls.
 - Hunt group directory numbers (voice or ephone).
 - MWI directory numbers.

- Trunk directory numbers.
- An overlay set can support only one SNR directory number and that directory number must be the primary directory number.
- Call forward no answer (CFNA), configured with the **call-forward noan** command, is disabled if SNR is configured on the directory number. To forward unanswered calls to voice mail, use the **cfwd-noan** keyword in the **snr** command.
- Call forwarding of unanswered calls, configured with the **cfwd-noan** keyword in the **snr** command, is not supported for PSTN calls from FXO trunks because the calls connect immediately.
- If the SNR directory number is the transferred number (Xee) in a blind or consultive transfer, the user cannot send the call to the remote phone.
- When an SNR call is answered on the remote phone and the call is then transferred, parked, or joined in a hardware conference in Cisco Unified CME, the user cannot resume the call on the desktop IP phone.
- Ad hoc and meet-me hardware conferencing support is limited:
 - If the SNR directory number is participating in a hardware conference, the user cannot send the call to the remote phone.
 - If the call is answered on the remote phone and then is joined in a hardware conference in Cisco Unified CME, the user cannot resume the call on the desktop phone.

These conference restrictions do not apply to software conferencing.

- Calls always remain private. If a call is answered on a remote phone, the desktop IP phone can not listen to the call unless it resumes the call.
- U.S. English is the only locale supported for SNR calls.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ephone-dn** *dn-tag*
4. **number** *number*
5. **mobility**
6. **snr** *e164-number* **delay** *seconds* **timeout** *seconds* [**cfwd-noan** *extension-number*]
7. **snr calling-number** **local**
8. **exit**
9. **ephone-template** *template-tag*
10. **softkeys connected** {[**Acct**] [**ConfList**] [**Confrn**] [**Endcall**] [**Flash**] [**HLog**] [**Hold**] [**Join**] [**LiveRcd**] [**Mobility**] [**Park**] [**RmLstC**] [**Select**] [**TrnsfVM**] [**Trnsfer**]}
11. **softkeys idle** {[**Cfwdall**] [**ConfList**] [**Dnd**] [**Gpickup**] [**HLog**] [**Join**] [**Login**] [**Mobility**] [**Newcall**] [**Pickup**] [**Redial**] [**RmLstC**]}
12. **exit**
13. **ephone** *phone-tag*
14. **ephone-template** *template-tag*
15. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	<p>enable</p> <p>Example: Router> enable</p>	<p>Enables privileged EXEC mode.</p> <ul style="list-style-type: none"> Enter your password if prompted.
Step 2	<p>configure terminal</p> <p>Example: Router# configure terminal</p>	<p>Enters global configuration mode.</p>
Step 3	<p>ephone-dn dn-tag [dual-line octo-line]</p> <p>Example: Router(config)# ephone-dn 10</p>	<p>Enters directory number configuration mode.</p>
Step 4	<p>number number</p> <p>Example: Router(config-ephone-dn)# number 1001</p>	<p>Associates an extension number with this directory number.</p> <ul style="list-style-type: none"> <i>number</i>—String of up to 16 digits that represents an extension or E.164 telephone number.
Step 5	<p>mobility</p> <p>Example: Router(config-ephone-dn)# mobility</p>	<p>Enables the Mobility feature on the directory number.</p>
Step 6	<p>snr e164-number delay seconds timeout seconds [cfwd-noan extension-number]</p> <p>Example: Router(config-ephone-dn)# snr 4085550133 delay 5 timeout 15 cfwd-noan 2001</p>	<p>Enables Single Number Reach on the extension.</p> <ul style="list-style-type: none"> <i>e164-number</i>—E.164 telephone number to ring if IP phone extension does not answer. delay seconds—Sets the number of seconds that the call rings the IP phone before ringing the remote phone. Range: 0 to 10. Default: disabled. timeout seconds—Sets the number of seconds that the call rings after the configured delay. Call continues to ring for this length of time on the IP phone even if the remote phone answers the call. Range: 5 to 60. Default: disabled. cfwd-noan extension-number—(Optional) Forwards the call to this target number if the phone does not answer after both the delay and timeout seconds have expired. This is typically the voice-mail number. <p>Note The cfwd-noan option is not supported for calls from FXO trunks because the calls connect immediately.</p>
Step 7	<p>snr calling-number local</p> <p>Example: Router(config-ephone-dn)# snr calling-number local</p>	<p>(Optional) Replaces the original calling party number with the SNR extension number in the caller ID display of the remote phone.</p> <ul style="list-style-type: none"> This command is supported in Cisco Unified CME 8.0 and later versions.

	Command or Action	Purpose
Step 8	<p>exit</p> <p>Example: Router(config-ephone-dn)# exit</p>	Exits ephone-dn configuration mode.
Step 9	<p>ephone-template <i>template-tag</i></p> <p>Example: Router(config)# ephone-template 1</p>	<p>Enters ephone-template configuration mode to create an ephone template.</p> <ul style="list-style-type: none"> <i>template-tag</i>—Unique identifier for the ephone template that is being created. Range: 1 to 20.
Step 10	<p>softkeys connected {[Acct] [Conflist] [Confrn] [Endcall] [Flash] [HLog] [Hold] [Join] [LiveRcd] [Mobility] [Park] [RmLstC] [Select] [TrnsfVM] [Trnsfer]}</p> <p>Example: Router(config-ephone-template)# softkeys connected endcall hold livercd mobility</p>	<p>Modifies the order and type of soft keys that display on an IP phone during the connected call state.</p> <ul style="list-style-type: none"> Pressing the Mobility soft key during the connected call state forwards the call to the PSTN number defined in Step 6.
Step 11	<p>softkeys idle {[Cfwdall] [Conflist] [Dnd] [Gpickup] [HLog] [Join] [Login] [Mobility] [Newcall] [Pickup] [Redial] [RmLstC]}</p> <p>Example: Router(config-ephone-template)# softkeys idle dnd gpickup pickup mobility</p>	<p>Modifies the order and type of soft keys that display on an IP phone during the idle call state.</p> <ul style="list-style-type: none"> Pressing the Mobility soft key during the idle call state enables the SNR feature. This key is a toggle; pressing it a second time disables SNR.
Step 12	<p>exit</p> <p>Example: Router(config-ephone-template)# exit</p>	Exits ephone-template configuration mode.
Step 13	<p>ephone <i>phone-tag</i></p> <p>Example: Router(config)# ephone 21</p>	<p>Enters ephone configuration mode.</p> <ul style="list-style-type: none"> <i>phone-tag</i>—Unique number that identifies this ephone during configuration tasks.
Step 14	<p>ephone-template <i>template-tag</i></p> <p>Example: Router(config-ephone)# ephone-template 1</p>	<p>Applies the ephone template to the phone.</p> <ul style="list-style-type: none"> <i>template-tag</i>—Unique identifier of the ephone template that you created in Step 12.
Step 15	<p>end</p> <p>Example: Router(config-ephone-template)# end</p>	Exits configuration mode.

Examples

The following example shows extension 1001 is enabled for SNR on IP phone 21. After a call rings at this number for 5 seconds, the call also rings at the remote number 4085550133. The call continues ringing on both phones for 15 seconds. If the call is not answered after a total of 20 seconds, the call no longer rings and it is forwarded to the voice-mail number 2001.

```
ephone-template 1
  softkeys idle Dnd Gpickup Pickup Mobility
  softkeys connected Endcall Hold LiveRcd Mobility
!
ephone-dn 10
  number 1001
  mobility
  snr 4085550133 delay 5 timeout 15 cfwd-noan 2001
  snr calling-number local
!
!
ephone 21
  mac-address 02EA.EAEA.0001
  ephone-template 1
  button 1:10
```

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"> • Cisco Unified CME Command Reference • Cisco Unified CME Documentation Roadmap
Cisco IOS commands	<ul style="list-style-type: none"> • Cisco IOS Voice Command Reference • Cisco IOS Software Releases 12.4T Command References
Cisco IOS configuration	<ul style="list-style-type: none"> • Cisco IOS Voice Configuration Library • Cisco IOS Software Releases 12.4T Configuration Guides
Phone documentation for Cisco Unified CME	<ul style="list-style-type: none"> • User Documentation for Cisco Unified IP Phones

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>	<p>http://www.cisco.com/techsupport</p>

Feature Information for Single Number Reach

Table 45 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.

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 45 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 45 *Feature Information for Single Number Reach*

Feature Name	Cisco Unified CME Version	Modification
Calling Number Local	8.0	Added the snr calling-number local command to replace the calling party number with the SNR extension in the caller ID display.
Single Number Reach	7.1	Introduced the SNR feature.