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Overview

Cisco Unity Connection Survivable Remote Site Voicemail (Cisco Unity Connection SRSV) provides cost-effective backup voicemail and auto attendant services for remote sites, such as branch offices or small sites.

When a branch site is unable to access the central voicemail server due to network interruptions (WAN outages), Unity Connection SRSV ensures that all the remote sites continue to have voicemail services and outside callers have the same experience as when they are communicating with the central Unity Connection.

After restoring the network connection to the central site, all the voicemails received by subscribers at the branch site are automatically uploaded to the central server.

Components of SRSV

Unity Connection SRSV has two sites, namely, the central site and the branch site. Each site has essential components to deliver messaging and voicemail services.

Following are the two sites in a Unity Connection SRSV topology:

- The central site has Cisco Unified Communications Manager that provides call processing between central Unity Connection server and Cisco Unified CM. Unity Connection is integrated with a Cisco Unified CM server to deliver integrated messaging and voicemail services.



Note Cisco Unified CM is integrated with a Unity Connection server either using Skinny Call Control Protocol (SCCP) or Session Initiation Protocol (SIP).

The Cisco Unified Messaging Gateway (UMG) SRSV module at the central site handles the voicemail provisioning between the central and remote sites as well as voicemail upload from the remote site to the central location after the network service is restored.

- The branch site either has a Cisco Unified Survivable Remote Site Telephony (SRST) router or Cisco Unified CM Express (CUCME-SRST) that handles call processing during WAN outages or any other network interruptions. The Unity Connection SRSV server provides backup voicemail solutions to the branch site during WAN outages.

SRSV Topologies

The conventions for all the SRSV topologies are:

Convention	Description
CUC	Cisco Unity Connection
CCM	Cisco Unified Communications Manager (Cisco Unified CM)
CCM-phone	The phones registered with Cisco Unified CM at the central site.
SRST- phone	The phones registered with SRST router at the branch site.
CUCME-phone	The phones registered with CUCME-SRST router at the branch site.

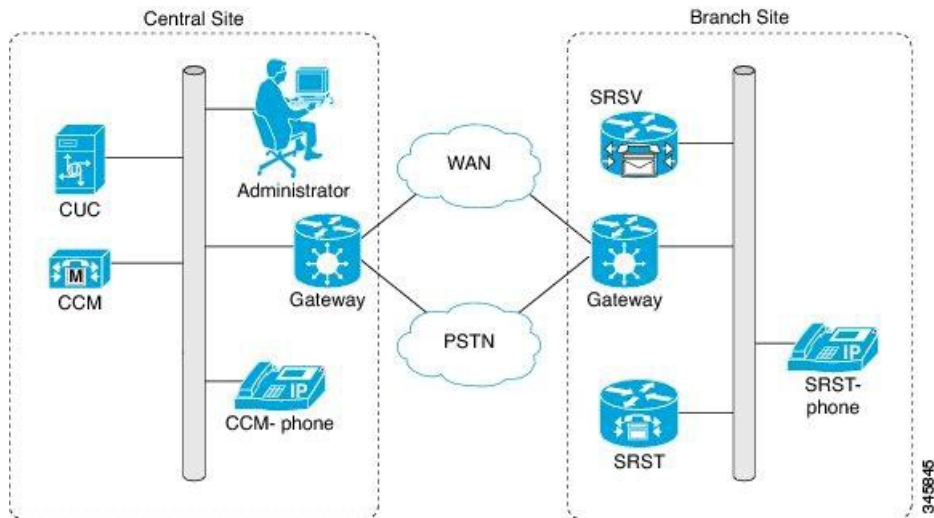
Each topology has a SRST router is deployed at the branch site. When a WAN outage occurs or there is a loss in PSTN connectivity, the IP phones on the remote site get registered with a SRST router. The IP phones then display SRST Enabled mode on the screens. The Unity Connection SRSV at the branch site remains in the idle state and is ready to receive calls from the SRST router.

Following are the three topologies supported with Unity Connection SRSV:

1. The **Figure 1** shows a topology in which the SRST router remains idle and waits for the IP phones to register with it. When the WAN outage occurs, the branch office IP phones registered with the central Cisco Unified CM detect the loss of connectivity and register with the SRST router. Now, all the incoming calls to the branch are handled by SRST. SRST forwards the unanswered calls (either busy or no answer) to the SRSV voicemail server that allows the caller to leave a voicemail for the user at the branch site. As a result, the branch office voicemail continues to work during WAN outages when the central office voicemail system is unreachable.

However, when the WAN connection is restored, the IP phones automatically register with the central Cisco Unified CM. All the calls are then managed by Cisco Unified CM and the no answer or busy calls are forwarded to the central Unity Connection voicemail system. All the voicemails stored on the branch get automatically synchronized with the central Unity Connection server.

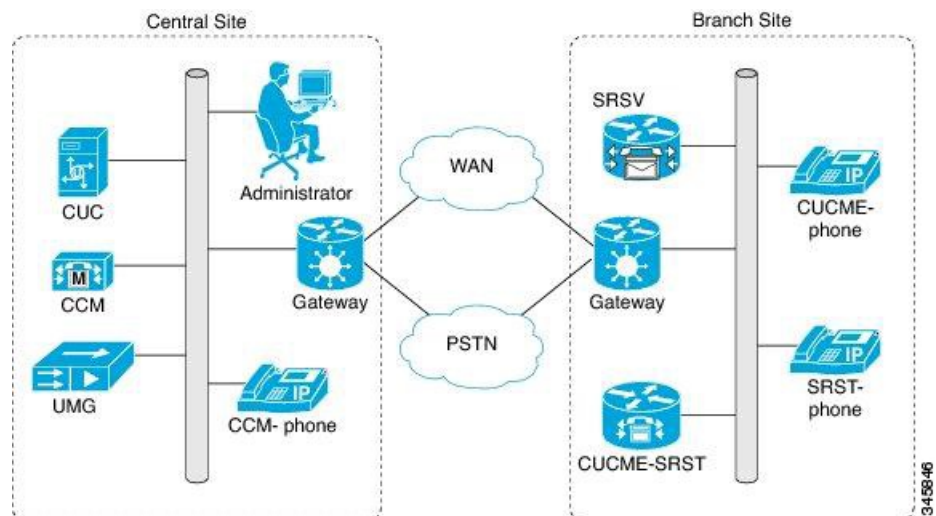
Figure 1: Topology 1



- The **Figure 2** shows a topology in which CUCME-SRST (also known as SRST Fallback Mode) router remains in the idle state and waits for the IP phones to register with it. When a WAN outage occurs or PSTN connectivity goes down, the phones on the remote site get registered with the CUCME-SRST router. As a result, the branch office voicemail continues to work during WAN outages when the central office voicemail system is unreachable.

However, when the WAN connection is restored, the IP phones automatically register with the central Cisco Unified CM. All the calls are then managed by Cisco Unified CM and the no answer or busy calls are forwarded to the central Unity Connection voicemail system. All the voicemails stored on the branch get automatically synchronized with the central Unity Connection server.

Figure 2: Topology 2

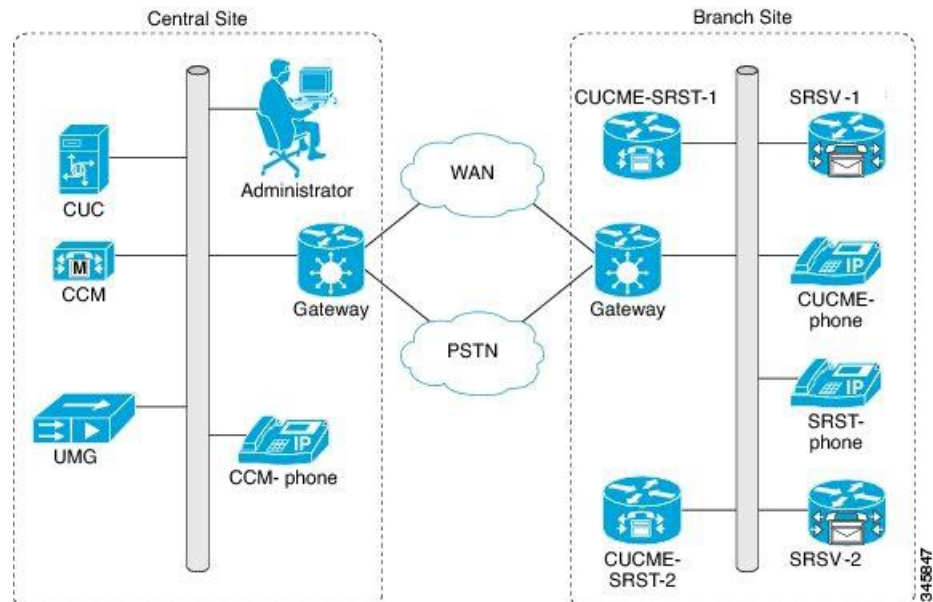


- The **Figure 3** shows a topology where multiple CUCME-SRST and SRSV devices are paired for load balancing at the survivable branch site. In this scenario, the administrator divides the branch users between CUCME-SRST-1 and CUCME-SRST-2. The central Unity Connection server sends the appropriate configuration of the users to SRSV-1 and SRSV-2 at the branch site.

When a WAN outage occurs or PSTN goes down, each SRSV device handles the calls directed to it from the paired CUCME-SRST device. As a result, the branch office voicemail continues to work during WAN outages when the central office voicemail system is unreachable.

However, when the WAN connection is restored, the IP phones automatically register with the central Cisco Unified CM. All the calls are then managed by Cisco Unified CM and the no answer or busy calls are forwarded to the central Unity Connection voicemail system. All the voicemails stored on the branch get automatically synchronized with the central Unity Connection server.

Figure 3: Topology 3



Note

- Cisco Unified Enhanced SRST (E-SRST) is used to deploy advanced Cisco Unified CM telephony features in survivable mode. The E-SRST feature is not required if you are using original SRST and not provisioning advanced telephony features for use in survivable mode. For more information on E-SRST, see the "Enhanced Survivable Remote Site Telephony (E-SRST)" section of the "Overview of Cisco Unified Messaging Gateway Release 8.5" chapter of the Cisco Unified Messaging Gateway 8.5 Administrator Guide at http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/umg/rel8_5/admin_guide/UMGadmin.html.
- MWI functionality for the branch site users is supported only if Unity Connection SRSV is SIP integrated with the SRST router.

Accessing Unity Connection SRSV Using Phone

When you access the Unity Connection SRSV server using phone, you hear the Unity Connection SRSV conversation that includes the recorded instructions and system prompts that guide you to receive messages.

Using the Phone Keypad with the Unity Connection SRSV Conversation

You can press any of the keys on phone keypad to access the Unity Connection SRSV server. There are several versions of the Unity Connection SRSV conversation, each providing different keypad mappings for the Unity Connection SRSV menu options. (For example, you might press 3 to delete a message in one version but press 7 to delete a message in another version.)

The Unity Connection SRSV administrator determines the conversation version that you hear. Typically, an administrator selects a conversation that has a keypad mapping familiar to the user.

Calling Unity Connection SRSV

You can call Unity Connection SRSV either from your desk phone or any another phone within your organization.

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- Step 1** Dial the applicable number to call Unity Connection SRSV.
 - Step 2** If you are calling from any other phone in your organization which is not registered as your known extension in Unity Connection SRSV, press * (star key) when Unity Connection SRSV answers.
 - Step 3** When prompted, enter your ID and press # (pound key) to continue.
 - Step 4** Enter your Unity Connection SRSV PIN and press # to login in to your account.
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Sending Voicemails

You can send voicemails to other Unity Connection SRSV users without dialing their extensions.



Tip Unity Connection SRSV plays a list of matches that you can navigate through quickly. Press # to select a recipient from a list; press 7 to skip to the previous name and 9 to skip to the next name; and press 77 to skip to the beginning of a list and 99 to skip to the end of a list.

Managing Receipts

Following types of receipts can be managed when working with Unity Connection SRSV:

- **Nondelivery Receipt** message informs you when your message is not delivered to the intended recipient. When you check messages, Unity Connection SRSV plays receipts along with your other messages. You can play and delete receipts in the same way as other messages but you cannot reply to or forward the receipts.
- **Read Receipts:** Unity Connection SRSV plays a list of the recipients who read the message you sent. For nondelivery receipts (NDRs), Unity Connection SRSV identifies recipients whose mailboxes did not accept the message.

After Unity Connection SRSV plays an NDR, you can hear the original message and resend it to the recipient(s) who failed to receive it. You can record an introduction, modify the recipient list, and change delivery options when resending a message. Once you resend the message, Unity Connection SRSV automatically deletes the NDR.

Managing Receipts Using Phone Keypad

- Step 1** Call and sign in to Unity Connection SRSV.
 - Step 2** From the Main menu, select Play New Messages and then select Receipts.
 - Step 3** Follow the prompts to manage your receipt.
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Finding Messages Using Phone Keypad

As you listen to your messages, you can use the Go to Message option to find a particular message by entering the number of the message.

- Step 1** Call and sign in to Unity Connection SRSV.
 - Step 2** From the Main menu, select either Play New Messages or Review Old Messages.
 - Step 3** Press the Go to Message shortcut keys.
 - Tip** Ask your Unity Connection SRSV administrator for the shortcut keys that you use to hear the prompt for entering the message number.
 - Step 4** When prompted, enter the message number followed by #.
 - Step 5** Follow the prompts to manage the message after you have listened to it.
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Managing Deleted Messages

Unity Connection SRSV saves your deleted messages that you can play, restore, or permanently delete. Deleting messages permanently can be an important way to reduce the size of your mailbox, especially if Unity Connection SRSV is not set up to automatically delete messages once they reach a certain age.

Ask your Unity Connection SRSV administrator if the system is set up to enforce a message-retention policy. Unity Connection SRSV neither indicates when a message-retention policy is enforced nor does it warn you before messages are permanently deleted as a result of the policy. If Unity Connection SRSV is not set up to do so, make sure that you permanently delete messages periodically.

Permanently Deleting Messages Using Phone Keypad

- Step 1** Call and sign in to Unity Connection SRSV.
 - Step 2** From the Main menu, select Review Old Messages and then select Deleted Messages.
 - Step 3** Follow the prompts to review your deleted messages and delete them individually, or to delete all messages at once.
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Checking Deleted Messages

You can play your deleted messages, just as you can play new and saved messages. You can also restore a deleted message as a new or saved message.

By default, the most recent messages are played first. Note that you cannot enable the Message Type menu or specify a playback order by message type for deleted messages.

Checking Deleted Messages Using Phone Keypad

- Step 1** Call and sign in to Unity Connection SRSV.
- Step 2** At the Main menu, select Review Old Messages and then select Deleted Messages.
- Step 3** Follow the prompts to manage a deleted message after you have listened to it.
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Changing Alternate Contact Numbers

To specify an alternate contact number outside your organization, begin with the access code needed to make an external call (for example, 9). For long-distance numbers, include the applicable dialing codes (for example, 1 and the area code).

Specifying Playback Settings

Playback settings allow you to change the playback volume and the playback speed of:

- An individual message when you are listening to it.
- The conversation of your current phone session at any point while Unity Connection SRSV is playing a prompt.

Changes in individual message playback do not affect playback of other messages you hear during the same phone session. Changes in conversation playback remain applicable until you hang up the phone; the next time you call Unity Connection SRSV, playback settings are reset to the defaults.



Note To adjust the conversation speed or volume, you can only use the voice commands not the phone keypad.

Changing Playback Volume for Individual Messages

As you listen to a message by phone, you can adjust the volume for that message. The changes to the message playback do not affect the playback volume of other messages that you hear during the same phone session.

Changing Playback Volume for an Individual Message Using Phone Keypad

The key that you press to adjust playback volume depends on your conversation. Ask your system administrator which key is assigned to change playback volume. While listening to a message, toggle among the following volume settings:

Option	Description
Press key once	Increases the volume
Press key again	Decreases the volume
Press key again	Returns the volume to normal

Changing Playback Speed for Individual Messages

As you listen to a message by phone, you can adjust the playback speed for that message. Changes do not affect the playback speed of other messages that you hear during the same phone session.

The key that you press to adjust playback speed depends on your conversation. Ask your system administrator which keys are assigned to increase and decrease playback speed. While listening to a message, use the following speed settings:

Option	Description
Press decrease key	Slow message playback
Press increase key once	Fast message playback
Press increase key again	Faster message playback

Changing Playback Volume for the Unity Connection Conversation

You can use voice commands to change the volume of the Unity Connection SRSV conversation at any point while Unity Connection SRSV is playing prompts. (You cannot use the phone keypad to adjust the conversation volume.)

Changes last until you hang up the phone; the next time you call Unity Connection SRSV, the volume is reset to the default setting.

Changing Playback Speed for the Unity Connection Conversation

You can use voice commands to change the speed of the Unity Connection SRSV conversation at any point while Unity Connection SRSV is playing prompts. (You cannot use the phone keypad to adjust the conversation speed.)

Changes last until you hang up the phone; the next time you call Unity Connection SRSV, the speed is reset to the default setting.

Phone Menus for the Classic Conversation

Main Menu and Shortcuts

While listening to the Main menu, press:

Action	Key(s)
Hear new messages	1
Review saved messages	3, 1

Action	Key(s)
Review deleted messages (Not available on some systems)	3, 2

During Message Menu and Shortcuts

While listening to a message, press:

Action	Key(s)
Restart message	1
Play message by number	1 2
Play previous message	1 4
Play next message	6
Save	2
Delete	3
Slow playback	4
Change volume (Not available on some systems)	5
Fast playback	6
Rewind message	7
Pause or resume	8
Fast-forward	9
Fast-forward to end	#
Restore as saved (Not available on some systems)	#2
Save or restore as new (Not available on some systems)	#6
Play message properties	#9
Skip message, save as is	##
Cancel or back up	*
Help	0

After Message Menu and Shortcuts

After listening to a message, press:

Action	Key(s)
Replay message	1
Play message by number	1 2
Play previous message	1 4
Save or restore as saved (Not available on some systems)	2
Delete	3
Forward message	5
Save or Restore as new	6
Rewind	7
Play Message Properties	9
Save as i	#
Cancel or back up	*
Help	0

Recording Menu

Use the following keys while you record a message:

Action	Key(s)
Pause or resume	8
End a recording	#

After Message Menu and Shortcuts (Alternate Keypad Mapping N)

After listening to a message, press:

Action	Key(s)
Rewind	4
Save As is	6
Call the sender (Not available on some systems)	9
Play message properties	7 0
Reply	7 1
Replay Messages	7 2
Forward Message	7 3
Reply to All	7 4

Action	Key(s)
Delete	7 6
Save or restore as saved (Not available on some systems)	7 7
Save or restore as new (Not available on some systems)	7 8
Cancel or back up	*
Operator	0

Recording Menu (Alternate Keypad Mapping N)

Use the following keys while you record messages, names, and greetings:

Action	Key(s)
Pause or resume	8
End a recording	#

Provisioning Data Synchronization between Central Unity Connection and Unity Connection SRSV

Following is the list of data synchronized between the central Unity Connection and Unity Connection SRSV:

1. User Attributes
 - FirstName
 - LastName
 - Alias
 - DisplayName
 - Language
 - DtmfAccessId
 - SmptAddress
 - VoiceName
 - Undeletable
 - ObjectId
 - callhandlerobjectid
 - initials
 - title
 - employeeId
 - address
 - building
 - city
 - state

- postalcode
 - country
 - timezone
 - department
 - manager
 - billingId
 - emailAddress
 - useDefaultTimeZone
 - useDefaultLanguage
 - saySenderExtension
 - sayAni
 - saySender
 - listInDirectory
2. Fetch voicemail for the user
 3. Fetch user PIN
 4. Fetch users' MWI display name and status
 5. Fetch message settings for the user
 6. Fetch greeting for the user: While changing the greeting for a user on the central server, check the Sync Provisioning check box on the central server to synchronize the new greeting to the branch server.
 7. Fetch distribution list: If the Replicate to SRSV Branch check box is checked on the Edit Distribution List Settings page on the central server, the distribution list data is synchronized with the branch server.

Limitations and Restrictions

Voicemail Limitations and Restrictions

Unity Connection SRSV has several voicemail limitations and restrictions:

- The following features are not supported with Unity Connection SRSV:
 - Fax support
 - Addressing contacts
 - Dispatch messages
 - Scheduled base services, such as alternate greetings and notifications.
 - Advanced telephony features, such as call screening and call transfer.
 - Updating spoken name, distribution lists, or PINs through the touchtone conversation users functionality.
 - Touchtone conversation users administration interfaces, such as broadcast or greeting administration.
 - Private distribution lists.
 - Text-to-speech or voice recognition features.
 - Customizing the voicemail flow for touchtone conversation users (TUI).
 - VPIM
 - IMAP
 - Single Inbox
 - Cisco Personal Communications Assistant and Web Inbox.

- The Compose, Forward, and Reply to voicemails functionalities are not supported with Unity Connection SRSV. Only the Ring No Answer or Call Forward Busy functionalities are supported.
- The voicemail synchronization is supported only via central Unity Connection server. The voicemails received on central Unity Connection server are not replicated to the Unity Connection SRSV.
- The voicemail upload is not synchronized with the registration of phones with Cisco Unified Communications Manager.
- The call handler configuration is not included in the provisioning data and this data is not synchronized between the central Unity Connection and the Unity Connection SRSV server.
- The system transfers for non user extensions cannot be accomplished in Unity Connection SRSV, because the Allow Transfers to Numbers Not Associated with Users or Call Handlers setting on the Edit Greeting page of a user in Cisco Unity Connection Administration is not present in Unity Connection SRSV.
- Few central Unity Connection server class of service (COS) features, such as distribution list access and message deletion behavior are provisioned for all Unity Connection SRSV users.
- The subscribers cannot log in to Cisco Unity Connection SRSV Administration until they set up their voicemail preferences at central Unity Connection server.
- The Live Record and Live Reply functionalities are not supported.

Auto-Attendant Limitations

The auto-attendant configuration is done at branch site only. There is no synchronization required from central Unity Connection server. The auto-attendants help internal and external callers locate users or departments in an organization and transfer calls to them.

Following are the auto-attendant features not supported with Unity Connection SRSV:

- Partitions or search spaces
- Advanced calling features, such as call screening
- Interview handlers
- Dispatch messages

Network Address Translation (NAT) Restrictions

- NAT is supported only at branch locations and not at the central Unity Connection server.
- Only one Unity Connection SRSV can be provisioned at each NAT site.
- Only static NAT and Port Address Translation (PAT) are supported.
- Dynamic NAT is not supported.

Backup and Restore Limitations

To avoid creating duplicate email messages, we do not recommend taking the Disaster Recovery System backup of data on Unity Connection SRSV.

Distribution Lists Limitations

- The voicemails sent to distribution lists in survivable mode are sent to members only after WAN is recovered.

- The system does not provision spoken names for distribution lists.
- The system does not provision recorded names for distribution lists.
- Only public distribution lists are supported.