# Configure SRST

## Survivable Remote Site Telephony Overview

Survivable Remote Site Telephony (SRST) is an optional feature for sites that depend on a Wide Area Network (WAN) connection to aUnified Communications Manager node. SRST references, which are configured in theUnified Communications Manager Administration interface, allow IP gateways to provide limited telephony service to IP phones at the remote site in the event of a WAN outage:

- IP phones at the remote site can call each other

- calls from the PSTN can reach the IP phones

- calls from the IP phones can reach the external world through the PSTN

When phones at the remote site lose connectivity to all associatedUnified Communications Manager nodes, the phones connect to the SRST reference IP gateway. The status line indication on the IP phone shows the phone has failed over to the backup SRST gateway. When the connection toUnified Communications Manager is restored, the IP phones reregister withUnified Communications Manager and full telephony services are restored.

SRST supports remote sites that may have a mix of SCCP and SIP endpoints in addition to PSTN gateway access.

### Connection Monitor Duration

An IP phone that connects to an SRST gateway over a Wide Area Network (WAN) reconnects itself to Unified Communications Manager as soon as it can establish a connection withUnified Communications Manager over the WAN link. However, if the WAN link is unstable, the IP phone switches back and forth between the SRST gateway andUnified Communications Manager. This situation causes 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 toUnified Communications Manager.

To resolve the WAN link flapping issues betweenUnified Communications Manager and an SRST gateway, you can define the number of seconds (Connection Monitor Duration) that the IP Phone monitors its connection toUnified Communications Manager before it unregisters from the SRST gateway and reregisters toUnified

Communications Manager. The IP phone receives the connection monitor duration value in the XML configuration file.

# Survivable Remote Site Telephony Configuration Task Flow

**Before you begin**

Examine the dial plan. If there are 7 or 8 digits in the dial plan, you may need to configure translation rules. For more information about translation rules, see Configure Translation Patterns.

**Procedure**

|  | Command or Action | Purpose |
|---|---|---|
| **Step 1** | Configure an SRST Reference, on page 2 | Configure the gateway that can provide limited call control functionality when all other Unified Communications Manager nodes are unreachable. |
| **Step 2** | Assign the SRST Reference to a Device Pool, on page 3 | For each device pool, assign the gateways that calling devices search when they attempt to complete a call if Unified Communications Manager is unavailable. |
| **Step 3** | Perform one of the following tasks:<br>• Configure Connection Monitor Duration for the Cluster, on page 3<br>• Configure Connection Monitor Duration for a Device Pool, on page 4 | **Optional**: Configure the connection monitor duration. You can apply a cluster-wide default value, or apply the configuration to the devices in a device pool. |
| **Step 4** | Enable SRST on the SRST Gateway, on page 4 | Configure SRST parameters on the gateway. |

# Configure an SRST Reference

An SRST reference comprises the gateway that can provide limited Cisco Unified Communications Manager functionality when all other Cisco Unified Communications Manager nodes for a device are unreachable.

**Procedure**

**Step 1** Log into Cisco Unified CM Administration and choose **System** > **SRST**.

**Step 2** Click **Add New**.

**Step 3** Configure the fields in the **SRST Reference Configuration** window. For more information on the fields and their configuration options, see the system Online Help.

**Step 4** Click **Save**.

# Assign the SRST Reference to a Device Pool

You can configure SRST for each device pool of phones. When you assign an SRST reference to a device pool, all phones in the device pool try to connect to the assigned SRST gateway if they cannot reach any Cisco Unified Communications Manager node.

### Procedure

**Step 1**  From Cisco Unified CM Administration, choose **System** > **Device Pool**.

**Step 2**  Click **Find** and choose the device pool to which the remote IP phones are registered.

**Step 3**  In the Roaming Sensitive Settings area, choose the SRST reference from the **SRST Reference** drop-down list.

The **SRST Reference** drop-down list contains the following options:

- **Disable**—If a phone cannot reach any Cisco Unified Communications Manager node, it does not try to connect to an SRST gateway.

- **Use Default Gateway**—If a phone cannot reach any Cisco Unified Communications Manager node, it tries to connect to its IP gateway as an SRST gateway.

- **User-Defined**—If a phone cannot reach any Cisco Unified Communications Manager node, it tries to connect to this SRST gateway.

**Step 4**  Click **Save**.

# Configure Connection Monitor Duration for the Cluster

This procedure is optional. Complete this procedure only if you want to change the system value (enterprise parameter) for the connection monitor duration.

### Procedure

**Step 1**  From Cisco Unified CM Administration, choose **System** > **Enterprise Parameters**.

**Step 2**  Enter a value in the **Connection Monitor Duration** field. The default value is 120 seconds. The maximum number of seconds that you can enter in the field is 2592000.

**Step 3**  Click **Save**.

**Note**  You must restart all services for the change to take effect.

The enterprise parameter forms the cluster default for the Connection Monitor Duration. However, if an overriding configuration exists within a device pool, that setting overrides the enterprise parameter setting for the devices that use the device pool.

# Configure Connection Monitor Duration for a Device Pool

This procedure is optional. Complete this procedure only if the following is true:

- You do not want to use the cluster-wide value for the connection monitor duration.

- You want to define a separate connection monitor duration value for this device pool.

**Tip** When you change the value of the connection monitor duration for a device pool, it applies only to the device pool that is being updated. All other device pools use the value in their own Connection Monitor Duration fields or use the cluster-wide value that is configured in the Connection Monitor Duration enterprise parameter.

**Procedure**

**Step 1** From Cisco Unified CM Administration, choose **System** > **Device Pool**.

**Step 2** Click **Find** and choose the device pool to which the remote IP phones are registered.

**Step 3** In the Roaming Sensitive Settings area, enter a value in the **Connection Monitor Duration** field. The maximum number of seconds that you can enter in the field is 2592000.

**Note** This setting overrides the enterprise parameter setting for connection monitor duration.

**Step 4** Click **Save**.

# Enable SRST on the SRST Gateway

**Before you begin**

- Assign the SRST Reference to a Device Pool, on page 3

- (Optional) Perform one of the following tasks:

**Procedure**

**Step 1** Log into the SRST gateway (router).

**Step 2** Enter the command **call-manager-fallback**
This command enables SRST on the router.

**Step 3** Enter the command **max-ephones** max-phones, where max-phones is the maximum number of supported Cisco IP phones.

**Step 4** Enter the command **max-dn** max-directory-numbers where max-directory-numbers is the maximum number of directory numbers (DN) or virtual voice ports that can be supported by a router.

**Step 5**  Enter the command **ip source-address** ip-address where ip-address is a preexisting router IP address, typically one of the addresses of the Ethernet port of the router.
This command enables the SRST router to receive messages from Cisco IP Phones through the specified IP address.

# SRST Restrictions

| Restriction | Description |
|---|---|
| Deleting SRST References | You cannot delete SRST references that device pools or other items are using. To find out which device pools are using the SRST reference, click the **Dependency Records** link from the **SRST Reference Configuration** window. If the dependency records are not enabled for the system, the dependency records summary window displays a message. If you try to delete an SRST reference that is in use, Unified Communications Manager displays an error message. Before you delete an SRST reference that is currently in use, perform either or both of the following tasks: <br><br> • Assign a different SRST reference to any device pools that are using the SRST reference that you want to delete. <br><br> • Delete the device pools that are using the SRST reference that you want to delete. <br><br> **Note** Before you delete an SRST reference, check carefully to ensure that you are deleting the correct SRST reference. You cannot retrieve deleted SRST references. If an SRST reference is accidentally deleted, you must rebuild it. |