



APPENDIX **A**

Configuring SRST

Typically a branch office network is configured for Survivable Remote Site Telephony (SRST) if Cisco Unified Communications Manager becomes inaccessible. IP Phones rely on the locally configured SRST router for continued call processing when the Cisco Unified CM is inaccessible.

Phones go into SRST mode when either of the following happens:

- The WAN link to the Cisco Unified CM at the central site goes down
- The connection to the Cisco Unified CM is lost

SRST allows phones in branch offices to continue to function until the WAN link comes up or until the phones can register with a Cisco Unified CM again.

For Prime Collaboration to display phones in SRST mode and generate related events, you must configure SRST test settings, identifying the SRST components for Prime Collaboration to test.

Prime Collaboration does the following:

- Configures IP SLA jitter tests on the source router (at the central Cisco Unified Communications Manager site). Jitter tests run from the source router to detect the reachability of the destination SRST router (at the branch office).
- Generates an SRSTEntered event when a jitter test fails, which happens in response to the WAN link being down. For more information about the SRSTEntered and SRSTSuspected events, see [Supported Events for Prime Collaboration](#).
- Displays a list of Cisco Unified IP Phones that are in SRST mode on phone reports. See SRST Test in the [Cisco Prime Collaboration 9.0 Network Monitoring, Reporting, and Diagnostics Guide](#).

Requirement for SRST Tests

To configure SRST tests, you need to select the source router and then configure the destination router:

- Choose the source router in such a way that the following paths are the same:
 - Path of the IP phone TCP keepalive message to the central site Cisco Unified CM
 - IP SLA jitter test packet path

We recommend that you select a source router that is as close to the Cisco Unified CM as possible.

- Enable Cisco IOS IP SLA (IP SLA) Responder on the SRST destination router.

If you disable IP SLA Responder on the destination router, spurious SRSTEntered events might occur. See the [Cisco Prime Collaboration 9.0 Fault Management Guide](#) for more information.

Configuring SRST Tests

You can configure:

- A single SRST test from various launch points in the Prime Collaboration user interface. You can launch SRST test by selecting a single phone from the report (**Deploy > Interactive Reports > Audio/Phone Lines**). For more information, see SRST Test, in the *Cisco Prime Collaboration 9.0 Network Monitoring, Reporting, and Diagnostics Guide*.
- Multiple SRST tests by importing them from a seed file. See [Importing SRST Test Settings, page A-5](#).

When you import SRST information, Prime Collaboration adds any new settings from the seed file and updates any existing settings that you edited. To remove existing settings, you must delete them; see [Deleting SRST Test Settings, page A-6](#).

Before importing SRST test settings, ensure that:

- A formatted seed file with updated information is available. For information see, [Formatting the seed file, page A-2](#), for importing SRST test settings.
- Verify that endpoints are monitored by Prime Collaboration before import.

Formatting the seed file

You can import SRST test settings from a seed file from the /opt/CSCOpX/ImportFiles directory. You must login as root user. If you do not have access to the directory, contact a local administrator for the server where Cisco Prime Collaboration is installed.

Prime Collaboration supports two seed file formats:

- [Table A-1](#) lists the preferred format. In general, you should use this format.
- [Table A-2](#) lists another supported format.

To format the seed file correctly, do the following:

- Include up to 256 test settings in the seed file, one test setting per line.
If you include more than 256 test settings, Prime Collaboration discards the excess test settings.
- Include the following for each test setting:
 - A name
 - A unique combination of source and destination router
 - Up to 48 phones
 If you include more than 48 phones, Prime Collaboration discards the excess phones.
 - Information for all columns listed in [Table A-1](#) (or [Table A-2](#)), delimited by a comma (,)

Table A-1 *SRST Seed File—Preferred Format*

Column Number	Description
1	SRST test settings name—Must be unique.
2	IP address or DNS name of the source router—Source router and destination router (column 5) combination must be unique.

Table A-1 *SRST Seed File—Preferred Format (continued)*

Column Number	Description
3	Read community string of the source router. If no read community string exists in the DCR for the device, Prime Collaboration updates the DCR with this string.
4	Write community string of the source router. If no write community string exists in the DCR for the device, Prime Collaboration updates the DCR with this string.
5	Username—Enter a username for the source router (if you are supplying SNMPV3 credentials).
6	Password—Enter the password for the source router (if you are supplying SNMPV3 credentials).
7	IP address or DNS name of the SRST destination router—Source router (column 2) and destination router combination must be unique.
8	Read community string of the SRST destination router. If no read community string exists in the DCR for the device, Prime Collaboration updates the DCR with this string.
9	Write community string of the SRST destination router. If no write community string exists in the DCR for the device, Prime Collaboration updates the DCR with this string.
10	Phone extension numbers of IP telephones associated with SRST destination router, delimited by a colon (:).
11	MAC addresses of IP telephones associated with SRST destination router, delimited by a colon (:). MAC addresses must be sequenced in corresponding order with the phone extensions (see column 10).
12	Polling interval—Default (!{[NOVALUE]}) = 30 seconds (minimum value).
13	Interpacket interval in milliseconds—Default (!{[NOVALUE]}) = 30 milliseconds (minimum value).
14	Number of packets in each poll setting—Default (!{[NOVALUE]}) = 10 packets (minimum value).

Example A-1 shows a sample seed file.

Example A-1 *Sample SRST Seed File in Preferred Format*

```
SRST2,10.76.34.194,public,private,admin,admin,10.76.34.222,public,private,0009e847060e:00049afc920b,
4013:4017,30,30,20
```

Table A-2 *SRST Seed File—Secondarily Supported Format*

Column Number	Description
1	SRST test settings name—Must be unique.
2	IP address or DNS name of the source router—Source router and destination router (column 5) combination must be unique.
3	Read community string of the source router. If no read community string exists in the DCR for the device, Prime Collaboration updates the DCR with this string.
4	Write community string of the source router. If no write community string exists in the DCR for the device, Prime Collaboration updates the DCR with this string.
5	IP address or DNS name of the SRST destination router—Source router (column 2) and destination router combination must be unique.
6	Read community string of the SRST destination router. If no read community string exists in the DCR for the device, Prime Collaboration updates the DCR with this string.
7	Write community string of the SRST destination router. If no write community string exists in the DCR for the device, Prime Collaboration updates the DCR with this string.
8	MAC addresses of IP telephones associated with SRST destination router, delimited by a colon (:).
9	Phone extension numbers of IP telephones associated with SRST destination router, delimited by a colon (:). Phone extensions must be sequenced in corresponding order with the MAC addresses (see column 8).
10	Sample interval specification—Default (!{[NOVALUE]})! = 30 seconds (minimum value).
11	Interpacket interval in milliseconds—Default (!{[NOVALUE]})! = 30 milliseconds (minimum value).
12	Number of packets in each poll setting—Default (!{[NOVALUE]})! = 10 packets (minimum value).

Example A-2 shows a sample seed file.

Example A-2 *Sample SRST Seed File in Secondarily Supported Format*

```
Test1,10.76.34.194,public,private,10.76.34.218,public,private,0009e8470515:00075079c2da,40
15:1016,30,30,10
```

Verify that Devices are Monitored Before Import

Before you import SRST test settings, verify that the following devices are monitored by Prime Collaboration:

- The media server that runs the Cisco Unified Communications Manager at the central site. (Phones at the remote site are registered to this Cisco Unified Communications Manager.)

- Switches to which the phones at the remote site are connected.
- Source and destination routers.

Importing SRST Test Settings

When you configure SRST test settings, based on the test settings name you provide, Prime Collaboration either adds a new SRST test setting or updates an existing SRST test setting. Prime Collaboration also creates or updates IP SLA jitter tests on source routers, as needed.

To import SRST information:

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- Step 1** Choose **Administration > System Setup > SRST Import**.
- Step 2** In the SRST Import page, enter the name of the seed file in the Filename field and click **OK**.
Cisco Prime Collaboration verifies that the data in the seed file is syntactically correct and formatted properly.
If there are errors in the seed file, an error dialog box is displayed:
- Check the `srst_import.log` file at `/opt/CSCOpX/ImportFiles/` for details.
 - Correct the problems in the seed file and import the SRST information again.
- Step 3** If the seed file is correct, an information dialog box appears.
- Step 4** Click **OK**.
Prime Collaboration verifies that the routers are reachable and then creates IP SLA jitter tests on the routers. This might take some time.
- Step 5** Verify that all IP SLA jitter tests were created successfully, by examining the `srst_test_creation_results.log` file in `\logs\itemlogs\srst`.
You must login as a root user. If you do not have access to this directory, contact a local administrator for the Prime Collaboration server.
If IP SLA jitter tests were not successfully created, do the following:
- a. Use the log file to identify problems.
 - b. Make corrections in the import file and return to [Step 1](#) to import SRST information again.
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Viewing and Deleting SRST Test Settings

To remove existing SRST test settings, you must delete them; see [Deleting SRST Test Settings](#), page A-6.

Be sure to edit SRST settings after you change the SRST configuration in your network. For example, if you change MAC addresses or extension numbers on IP phones, you must reconfigure SRST settings.

Viewing SRST Test Settings

To view SRST test setting status:

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- Step 1** Choose **Administration > System Setup**.
- Step 2** From the SRST drop-down list, select **SRST > SRST Operations**.
The SRST Operations page appears with the information in [Table A-3](#).
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Table A-3 *SRST Test Field Description*

Field	Description
Test Name	SRST setting name
Source Router	Router in the central site on which the IP SLA test is created
Destination Router	Router in the branch office
Status	<ul style="list-style-type: none"> Active—SRST setting is running as configured. Pending—SRST setting is briefly in a transient state after you click Delete. <p>If device monitoring is suspended for a source router, any associated SRST test setting is also suspended.</p>

Deleting SRST Test Settings

If you delete an IP SLA router from Prime Collaboration device inventory, any associated SRST test settings are automatically deleted; see [Deleting Devices, page 6-20](#). This procedure explains how to delete one or more SRST settings.

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- Step 1** To delete one or more SRST test settings: Choose **Administration > System Setup > SRST > Operations**.
- Step 2** From the SRST Operations page, select any of the following:
- Check box in the table heading—Select to delete all SRST test settings.
 - One or more individual check boxes—Select individual SRST test settings that you want to delete.
- Step 3** Click **Delete**.
A confirmation dialog box appears, asking if you want to continue with the deletion.
- Step 4** Click **Ok**.
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