Troubleshooting HA Service Manager

The sections in this chapter are:

Resolving Error Messages

Table 6-1 displays some common error messages and explains how to resolve them.

Table 6-1 Error Messages in HA SM

Error Message	Possible Solution
`Error while fetching config. Either no config in archive (or) SNMP credentials might be wrong`	Check the latest status of the device in the Sync Report Dashboard window. (Choose Service Manager > Sync Report > Sync Report Dashboard.)
`Message: Deploy succeeded, Synchronization of RME archive with Device Config failed.`	Increase the SNMP timeout for the device. To do this, choose Resource Manager Essentials > Devices > Device Management > RME Devices > Edit Device Attributes.
`Config export from RME might have failed. Check whether selected devices have config.`	Either: • There is no configuration for the selected device in the archive. • Display name has changed. To get the latest, choose HA Service Manger > Service Manager > Select Group, and check the Fetch Config check box. • Device is suspended in RME. Check if the device is suspended, (Choose Resource Manager Essentials > Device > Device Management > Suspended Devices) and resubmit the device.

Table 6-1 Error Messages in HA SM (continued)

Error Message	Possible Solution
`An error occurred while retrieving latest config version from RME for the Devices: <DeviceList>. See the log file for more information.`	Get the latest status of the device in the Sync Report Dashboard window. (Choose Service Manager > Sync Report > Sync Report Dashboard.) You can view the HA SM log file in: */var/adm/CSCOpx/log/cmxha.log*
`No Devices are managed in RME.`	Verify if the devices in the group are deleted in RME. Choose Resource Manager Essentials > Device > Device Management, and verify if device exists.
`Debug enable failed. Check job details of <JobID> for more information.`	Verify if you have configured a device for debugging. For more details, see Configuring a Device for Debugging, page 5-4. To view the details of the NetConfig job in the NetConfig job browser, choose Resource Manager Essentials > Config Mgmt > NetConfig > NetConfig Jobs.
`No realm configured on the device.`	Configure a realm on the device. To do this, choose HA Service Manager > Service Activation > Home Address Assignment > With NAI.
`A job is already running. Only one job can run at a time.`	You have to wait for 30 seconds to submit new job.
`Specific Static IP Addresses are not applicable for domain realm.`	This message appears in the Home Address Assignment NAI window when you configure static IP addresses for domain realms (*@realm*). Ensure you configure dynamic IP addresses for domain realms.

About the TE Properties File

The Troubleshooting Engine (TE) Properties file contains parameters that control the behavior of the CMX TE. The parameters that usually affect customer usage are the timeout values. You can increase these timeout values when the network is very slow and response times are high.

Table 6-2 shows the TE properties. You can configure the timeout values in the properties file at */opt/CSCOpx/lib/classpath/cmxTe.properties*. This file has several other variables that can be changed if required. You do not have to change the default values under normal conditions.

Table 6-2 TE Properties File

S. No.	Variable	Default Value	Description
1	DEFAULT_SYSLOG_LOCAL_FACILITY	Local7	Logging facility; should not be changed under normal conditions. **Note** Changing this value will affect RME Syslog Analyzer functionality.

2	DEFAULT_SYSLOG_FILE	*/var/adm/CSCOpx/log/cmxTe.log*	Log file of CMX SMs.
			When debug or syslog is enabled, the log file can grow to a considerable size. This might lead to a disk full error. To overcome this, take a backup of the existing log file when it becomes very large.
			To do so:
			a. Stop the daemon, using the command
			`\etc\init.d\dmgtd stop`
			b. Back up the log file.
			c. Trim the *cmxTe.log*
			d. Start the daemon, using the command
			`\etc\init.d\dmgtd start`

3	DEFAULT_INITIAL_CAPACITY	30	Initial capacity of CMX TE data structures.
4	DEFAULT_INCREMENT_SIZE	5	Capacity increment.
5	DEFAULT_SYSLOG_QUEUE_CAPACITY	100000	CMX TE Queue capacity. New syslogs will be dropped if received logs exceed the processed logs by this value.
6	DEBUG_INITIAL_TIMEOUT	360s (6m)	Timeout for downloading debug commands.
7	DEBUG_HEARTBEAT_TIMEOUT	600s (10m)	Timeout between two consecutive Debug window refreshes when new debug logs are available.
8	SYSLOG_VIEWER_INITIAL_TIMEOUT	1800s (30m)	Timeout for both the Syslog and Debug windows when no new logs are available.
9	SYSLOG_VIEWER_HEARTBEAT_TIMEOUT	600s (10m)	Timeout between two consecutive Syslog window refreshes (Figure 5-4) when new syslogs are available.
10	DEFAULT_MAX_LOGS_TO_SEND	1000	Number of logs sent to the GUI on refresh.
11	DEFAULT_MAX_OLD_LOGS_TO_STORE	5000	Maximum number of old logs processed and displayed to the user in the Syslog window.
12	MAX_LOG_SIZE	10	Maximum size(in MB) of the cmxTe.log. Once the log file size has been exceeded, the HA SM displays a warning message when you select Tools > Debugging or Tools > Syslog. The same message appears in the resulting Debug or Syslog window.

Configuring the HA SM Log Properties

This section provides instructions for configuring the HA SM log file. The HA SM logs all messages under the directory */var/adm/CSCOpx/log* in *cmxha.log*.

The levels of logging supported are:

- Debug
- Info
- Warn
- Error
- Fatal

To change logging levels, update the property **log4j.rootCategory** to the desired level. You need not restart the HA Service Manager after updating this property file.

For example, to convert the log level from Info to Debug:

Step 1 Open the log file: */opt/CSCOpx/MDC/tomcat/webapps/ha/WEB-INF/classes/log4j.properties*

Step 2 Modify the following line:

```
inlog4j.rootCategory=info, R
```

to

```
log4j.rootCategory=debug, R
```

Frequently Asked Questions

Q. Why does the HA SM not list Home Agent devices that are available in DCR?

A. HA SM will not list Home Agent devices if:

- Home Agent services are not enabled on the device.
- SNMP credentials of the device are wrong.
- Device is not in Normal state.

Q. How do I view details of the HA SM Jobs?

A. The HA SM processes commands in parallel while the jobs submitted to RME NetConfig utility are processed sequentially and will stop if problems are encountered. You can view the details of the HA SM jobs in the RME NetConfig Job browser. (Choose **Resource Manager Essentials > Config Mgmt > NetConfig > NetConfig Jobs**.)

Q. How do I check the state of a device in RME?

A. Choose **Resource Manager Essentials > Device > Device Management** to check the state of the device.

Q. How do I increase the SNMP timeout and Telnet timeout values for a Home Agent device?

A. To set different device attributes value for different devices, choose **Resource Manager Essentials > Devices > Device Management > RME Devices > Edit Device Attributes**.

Q. In the Job Details window and the Show Command Output window, why does the `Failed to lock Device` message appear?

A. The debug stop job might be running in the backend. Repeat the job after some time.

Q. How do I check the device credentials configured on the device?

A. You can check the device credentials configured on the device in the Device Credential Verification window in RME. (Choose **Resource Manager Essentials > Device > Device Management**.)

Q. Does the Sync Report Dashboard show the Telnet credential status?

A. When you Generate Diff, the Sync Report Dashboard checks whether the device:

- Is reachable through Telnet and SNMP.
- Display Name, Host Name, or IP Address are changed.
- Exists in RME or DCR.
- Is in Suspended state.

The Sync Report Dashboard does not check the credentials of the device.

Q. Why does the size of the *cmxTe.log* file increase rapidly?

A. The size of the *cmxTe.log* file will rapidly increase if you have enabled the devices for debugging, and to view syslogs. The *cmxTe.log* contains all the debug and syslog messages from the devices. For optimum performance of the product you must control the size of this log file.

Q. How do I control the size of the *cmxTe.log* file?

A. You can use the log-rotation utility (Logrot) in */opt/CSCOpx/bin/* to control the growth of log files.

To do this:

Step 1 Enter the command:

```
/opt/CSCOpx/bin/logrot.pl -c
```

The following message appears:

```
Read config successfully.
```

The Logrot configuration menu appears.

```
Logrot Configuration Menu
```

1. Edit variables
2. Edit log files
3. Quit and save changes
4. Quit without saving changes

Step 2 Enter option 2. The following messages appears:

```
Warning: No log files found.
      a. Add logfile(s)
      b. Delete logfile(s)
      c. Go back
Enter option or logfile number to edit: a
Enter logfile path: /var/adm/CSCOpx/log/cmxTe.log
Enter number of archives to keep [0]:5
Enter maximum file size (in kilobytes) [1024]: 4096
Compression extension (gz, Z, bz2): Z
Number    Logfile Name                 Number of Archives   Max Size   Compress
-------------------------------------------------------------------------
 1.     /var/adm/CSCOpx/log/cmxTe.log              5             4096           Z
      a. Add logfile(s)
      b. Delete logfile(s)
      c. Go back
```

Step 3 Enter **q** to quit the Logrot configuration menu.