

VCO: SS7 Software Switchover Failures if SS7 AccessRd.cfg File not Properly Configured

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Introduction

This document provides information to assist in recovering from a Signaling System 7 (SS7) switchover failure caused by improper configuration of the AccessRd.cfg file. It also provides details on how to verify correct Cisco Virtual Central Office (VCO)/SS7 subsystem states.

Prerequisites

Requirements

Readers of this document should have knowledge of these topics:

- SS7 concepts
- Cisco VCO/4K administration

Components Used

The information in this document is based on these software and hardware versions:

- ITU SS7cktint V5.1.2 or later
- ANSI SS7 cktint V5.1.0 or later

Note: The information in this document is only relevant to redundantly configured systems, because non-redundant systems do not need to switch over and do not make use of the AccessRd.cfg file.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Background Information

In ITU SS7 cktint V5.1.2 or later and ANSI SS7 cktint V5.1.0 or later, the AccessRd.cfg file requires the configuration of parameters that indicate VCO A-side and B-side hosts. These parameters were not required in previous versions and they have been added to resolve an unrelated bug. However, a switchover failure will occur if they are not properly configured in these versions.

For more details on these parameters and the steps to properly configure the AccessRd.cfg file, refer to VCO: New Parameter within the Integrated-SS7 Software's AccessRd.cfg File.

Definition of "Switchover Failure"

For the purposes of this document, a "switchover failure" is when the A-sides of the system (VCO, SS7-ckint, and SS7-AccessManager (EBS)) are not all in the same state (either all active or all standby), and the B-sides of the system are also not all in the same state.

Redundant VCO/SS7 systems are designed to behave properly when each of the three A-sides show the same state and each of the three B-sides show the same state, where the B-sides' state will be the opposite state of the A-sides' state. In other words, a redundant system has effectively lost redundancy if one of the three A-side subsystems thinks that A-side is active while one of the three B-side subsystems thinks that B-Side is also active.

Checking Subsystem States

To check the state of each subsystem, perform the following queries:

1. Log on to the VCO A-side. At the bottom of the screen you should see A-ACT B-SBY or A-SBY B-ACT. For this example, assume that the output is A-ACT B-SBY.
2. Log on to SS7 A-side as **cktint**. Issue the **isup_console** command, then the **S** command. If VCO-A output shows A-ACT B-SBY, then cktint-a needs to read as active in response to the **S** command.
3. Check the status of SS7 A-side EBS by issuing the **mml 0** command to get to the MML_TH> prompt, and then issue **display-rd;;** command and press **Enter**. If VCO-A output shows A-ACT B-SBY and if cktint-a is active, then EBS-A needs to read as active in response to the **display-rd;;** command.
4. Log on to the VCO B-side. At the bottom of the screen you should see A-ACT B-SBY.
5. Log on to SS7 B-side as **cktint**, and then issue the **isup_console** command, followed by the **S** command. If VCO_B shows A-ACT B-SBY, then cktint-b needs to read as standby in response to the **S** command.
6. Check the status of SS7 B-side EBS by issuing the **mml 0** command and press **Enter** to get to the MML_TH> prompt. Next, issue the **display-rd;;** command and press **Enter**. If VCO-B shows A-ACT B-SBY and cktint-b is standby, then EBS-A needs to read as standby in response to the **display-rd;;** command.

Recovering from a Switchover Failure

Check the AccessRd.cfg file located in \$EBSHOME/access/config. At the bottom of the file it asks you to specify HOST-A and HOST-B. The HOST-A value should be the same as the hostname assigned to the A-side SS7 SPARC5 CPU. The HOST-B value should be the same as the hostname assigned to the B-side SS7 SPARC5 CPU. These hostnames can be found by logging into the A-side or B-side SS7 and issuing the **hostname** command at the prompt and pressing **Enter**.

Open AccessRd.cfg and verify that the settings for HOST-A and HOST-B match the respective hostnames. If they do not match, use a text editor such as vi, to edit and save the file.

With A-side active on the VCO (as viewed from an A-side log in on the A-side of the VCO), stop SS7 on both sides of cktint by issuing the **stop-ss7.sh** command, and then issue the **start-ss7.sh** command to restart A-side SS7. Once A-side SS7 is up, restart B-side SS7 by issuing the **start-ss7.sh** command.

For more details on the **start-ss7.sh** command error message output, given an improperly configured AccessRd.cfg file, refer to VCO: New Parameter within the Integrated-SS7 Software's AccessRd.cfg File.

Related Information

- [Voice Technology Support](#)
 - [Voice and Unified Communications Product Support](#)
 - [Recommended Reading: Troubleshooting Cisco IP Telephony](#)
 - [Technical Support & Documentation – Cisco Systems](#)
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