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Introduction

This document describes the procedure to collect modem crash information on Cisco Long Term Evolution (LTE) Routers. The crash information is necessary for the Cisco Technical Assistance Center (TAC) to analyse the root cause for cellular modem crash issues.

Prerequisites

Requirements

Cisco recommends that you have knowledge of LTE technology and configuration of the same on a Cisco Router.

Components Used

The information in this document is based on Cisco 4G fixed Routers and modules.

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.

Configure

Identify a Modem Crash

These error messages in router console or logs indicate a modem firmware crash:

When the modem is in a crashed state, modem hardware statistics will be empty:

Configure Router to Collect the Crash Dump

The router needs to be configured in the special diagnostic mode to collect the crash dump. Once

the router is configured in the diagnostic mode, wait till the modem crashes again. Once the modem crashes, it remains in the crashed state and the crash dump from the router is collected. When the modem is in the crashed state, it is useful only for crash dump collection, but it doesn't provide any data service.

Step 1. Configure this command. This command needs to be configured to run some of the IOS test commands.

Step 2. Verify the line number correspond to the cellular modem. As seen, line number three corresponds to the cellular modem.

Step 3. Configure a Loopback interface on the router and assign an IP address.

Step 4. Reverse telnet to the modem and configure the modem in the special diagnostic mode to collect the crash information.

Press CTRL+SHIFT+6 and then ENTER to return in to the router prompt.

Step 5. Turn off the automatic modem link recovery and use this command in privileged mode. Use the keyword cell-host for fixed platforms and cell-hwic for modular platforms such as the Cisco Integrated Services Routers Generation 2 (ISR G2) platforms.

Step 6. Ensure that there is no link recovery scripts configured on the router. If there is any Embedded Event Managar (EEM) script which power cycles the modem when the router losses the Internet connection, remove it.

Once these steps are completed, the modem will be in special diagnostic mode to collect the crash dump. Wait until the modem crashes again.

Step 7. Once the modem crashes, execute CLI and generate the **crash dump** file.

This command may take an hour to complete. Since the modem is in the crashed state, it cannot connect to the 4G networks and hence can't be used for any data traffic. If you collect the crash dump in the flash memory, ensure that enough free space is available in the router flash. For 4G modem crash logs, you need approximately 80 MB free space in the Flash memory. Once the modem crash dump collection completes, you see lot of crash dump files in the flash memory. All these crash dump files are needed to identify the root cause of the modem crash.

Step 8. Once the modem crash dump generation is completed successfully, power recycle the modem to recover from the crashed state by with this command.

Step 9. Switch the modem back to the normal mode with the help of a reverse telnet to the modem and run these commands.

Verify

Use this section to confirm that your configuration works properly.

These commands can be used to verify the crash dump collection.

show cellular

show flash

show cellular 0 logs modem-crashdump

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

Related Information

[4G LTE Software Configuration](#)