

BTM Loss of Sig (Red) Error

Document ID: 10853

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Introduction

This document applies to the Cisco IGX switch broadband trunk module (BTM) with E1, E2, E3, and T3 backcards.

Prerequisites

Requirements

There are no specific prerequisites for this document.

Components Used

The information in this document is based on the software and hardware versions below.

- Cisco IGX Switches
- Cisco BPX/IGX/IPX WAN Software
- Cisco E1, E2, E3, and T3 interface modules

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If you are working in a live network, ensure that you understand the potential impact of any command before using it.

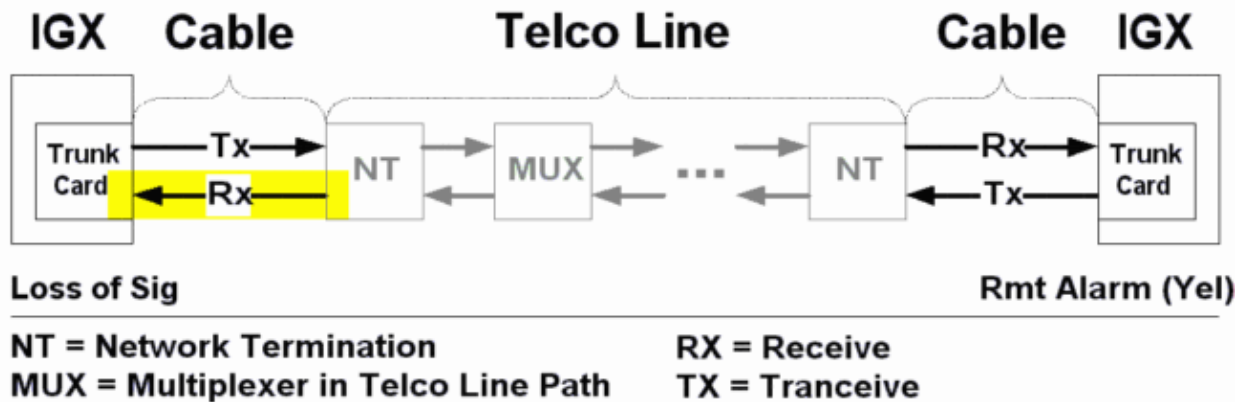
Conventions

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

Problem

The integrated trunk error `Loss of Sig` indicates that there has been a loss of signal (LOS). The BTM declares a LOS alarm when the signal level at the receiver falls below a minimum acceptable level. A LOS is a Physical Layer error and typically results in an integrated alarm.

The likely location of equipment errors is highlighted in yellow.



Solution

Note: The following troubleshooting activities are intrusive. Perform these steps in a maintenance window only if user traffic is affected, or if the **dsptrks** command output indicates an error condition still persists (such as when the trunk is not in Clear-OK status).

The solution(s) to this problem are explained in detail below.

1. Both ends of the trunk must be active during troubleshooting. Issue the **dsptrks** command to verify that the trunk is active. If the trunk number is not displayed in the **dsptrks** screen, the trunk is not active. To activate a trunk, issue the **uptrk** command.
2. Check cabling between the trunk card and the next device upstream. Typically this is the local channel service unit (CSU) or the Network Termination (NT).
 - a. Issue the **dsptrks** command at the distant-end node. If the remote end of the trunk is in the Yellow alarm condition, a one-way problem likely exists. An example of such a problem is when the receive physical link toward the local trunk card has a problem but the transmission direction works properly.
 - b. Leave the local cable connected to the trunk card but remove it from the CSU or NT.
 - c. Put a loopback plug on the disconnected end of the cable. If the trunk status in **dsptrks** changes to Clear-OK, the cable is working properly.
 - d. Wait at least ten seconds longer than the Red Alm Out timer setting in **cnftrkparm** to verify the trunk status change.
3. Check local hardware by placing a loopback plug onto the connector at the backcard of the BTM. Alternatively, place the CSU or the NT into the loop toward the customer premises equipment (CPE), which is the node. If the trunk status in **dsptrks** changes to Clear-OK and **dsptrker** no longer shows incremental errors, the trunk and backcard are working properly. Wait at least ten seconds longer than the Red Alm Out timer setting in **cnftrkparm** to verify the trunk status change.
4. Check line coding and line framing settings by using the **dsptrkenf** command. In some cases, the next equipment upstream does not send a proper signal until it receives a signal from the equipment on the other end of the wire. If the BTM trunk is not configured for correct framing, the multiplexers might not send a signal, which will look to the IGX like a cable problem. Changing the framing configuration should fix the problem.
5. Check the Telco line by placing a loopback plug onto the CSU or NT to loop it back toward the Telco line. If the remote end trunk shows a change from a Yel Alm Out to Clear-OK, the Telco line is working properly. Wait at least ten seconds longer than the Yel Alm Out timer setting in **cnftrkparm** to verify the trunk status change.
6. Contact your service provider and have the line checked.

Related Information

- **International Telephony Union (ITU) Recommendation G.704**
 - **WAN Switching Network Synchronization Fundamentals**
 - **Cisco WAN Switching Solutions – Cisco Documentation**
 - **Guide to New Names and Colors for WAN Switching Products**
 - **Downloads – WAN Switching Software**
 - **Technical Support – Cisco Systems**
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Updated: Apr 17, 2009

Document ID: 10853
