

BTM Comm Fail Errors

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Introduction

Prerequisites

Requirements

Components Used

Conventions

Error Definition

Error Example

Troubleshooting

Related Information

Introduction

This document describes the broadband trunk module (BTM) communication failure test error (Comm Fail) and provides steps to troubleshoot this error.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document applies to the Cisco IGX" BTM with E1, E2, E3, and T3 backcards.

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.

Error Definition

The BTM logs a Comm Fail error when the communication failure test fails. The IGX network processor module (NPM) uses a Comm Fail test to verify whether a trunk can be used for communication between nodes on the same trunk.

The communication failure test runs independently on each BTM trunk. Use the SuperUser-level **cnfnodeparm** command to configure the test interval and timeout parameters. The communication failure is initiated by the NPM, which sends a packet or stream of packets that are filled with a test pattern over the target trunk to the distant-end NPM. Depending upon test results, these events can occur:

- If the packet is correctly received by the distant-end NPM, it responds with an acknowledgment over the target trunk to the originating NPM.

- If the originating NPM receives the acknowledgment that contains correct information about the node number and trunk number that matches the local topology map, then the communication failure test passes.
- If the originating NPM does not receive the acknowledgment within a timeout period, then the communication failure test is attempted again.
- If retries fail, then the trunk fails the communication failure test. The originating NPM then declares the trunk in Comm Fail. A Comm Fail error is an integrated alarm. A trunk that it is in Comm Fail may reroute all connections, depending upon the Enable Rrt setting in the **on Comm Fail** parameter of the **cnfnodeparm** command.
- If a trunk is in Comm Fail, then the test must pass at both ends before the failure clears.

Do not confuse the Comm Fail test with the communication break (Comm Break) test. The Comm Break test is used for nodes that are unable to communicate with each other and that seek to reestablish communication. A Comm Fail could result in a Comm Break between network nodes. Issue the **cnfnodeparm** command to set these parameters, to configure the Comm Fail test:

Parameter	Description
Network Timeout Period	Amount of time (in milliseconds) that the originating NPM waits for an acknowledgment from the distant-end
Num Blind Timeouts	NPM. The number of times that the originating NPM will send the Comm Fail test pattern to the target NPM before the Comm Fail test is failed.
Comm Fail Interval	Comm Fail test cycle time for all trunks on the node. The unit of measure is in milliseconds. A cycle time of five minutes for five trunks produces a Comm Fail test every one minute.
Comm Fail Multiplier	Trunks that are not in Comm Fail will be tested every Comm Failure Interval and Comm Failure Multiplier. Trunks that are in Comm Fail will be tested every Comm Fail Interval. The unit of measurement is one.
Comm Fail Delay	Amount of delay between successive Comm Fail tests. Allow real-time processing to improve after a processor card switchover or node rebuild. The unit of measurement is in milliseconds.

Note: The default values for the Comm Fail test parameters are optimized to ensure node and network function. Do not change values until you have first verified them in a laboratory environment.

Issue the **cnfcftst** command to configure the test pattern that is used by the NPM for the Comm Fail test. If you change the test pattern, you can detect trunk problems that are pattern-sensitive.

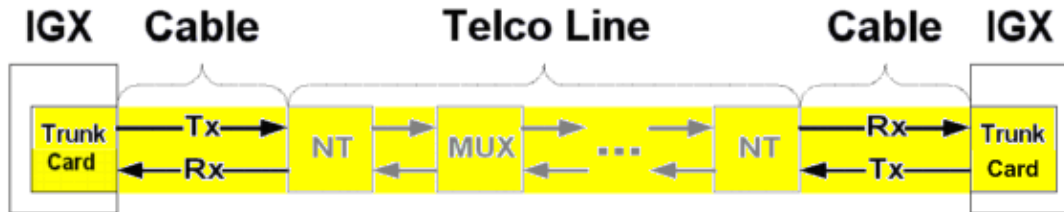
Comm Fail and Comm Break errors can have these causes:

- Carrier and cable problems

- Trunk card malfunction
- Processor card malfunction
- Hardware configuration mismatches

Error Example

The likely location of equipment errors is highlighted in yellow in this diagram:



- NT Network Termination
- MUX The Multiplexer in the Telco line path.
- Rx Receive
- Tx Transmit

Troubleshooting

Issue the Service-level **on1** command and verify that `Comm Fail Test` is Enabled.

Use the procedures in Troubleshooting Problems When Adding a Trunk to isolate the problem.

If the problem persists after you perform the troubleshooting steps, contact Cisco Systems Technical Support:

- Phone: (800) 553-24HR or (408) 526-7209
- Website: Technical Support – Cisco Systems
- E-mail: tac@cisco.com

Related Information

- [WAN Switching Network Synchronization Fundamentals](#)
 - [International Telephony Union \(ITU\) Recommendation G.704](#)
 - [Cisco WAN Switching Solutions – Cisco Documentation](#)
 - [Guide to New Names and Colors for WAN Switching Products](#)
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