

NTM Comm Fail Errors

Document ID: 22204

- Introduction**
- Before You Begin**
 - Conventions
 - Prerequisites
 - Components Used
- Error Definition**
- Error Example**
- Troubleshooting**
- Related Information**

Introduction

This error applies to the IGX network trunk module (NTM) with T1, E1, and subrate (SR) backcards.

Before You Begin

Conventions

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

Prerequisites

There are no specific prerequisites for this document.

Components Used

This document is not restricted to specific software and hardware versions.

Error Definition

The NTM logs a `Comm Fail` error when the communication failure test fails. The IGX network processor module (NPM) uses the `Comm Fail` test to verify whether a trunk is usable for communication between nodes using the same trunk.

The communication failure test runs on each NTM trunk independently. The test interval and timeout parameters are configured using the SuperUser-level `cnfnodeparm` command. The communication failure test is initiated by the NPM, which sends a packet or stream of packets filled with a test pattern over the target trunk to the distant-end NPM. Depending upon test results, the following occurs:

- If the packet is correctly received by the distant-end NPM, an acknowledgment goes to the originating NPM over the target trunk.
- If the originating NPM receives the acknowledgment that contains correct information about the node number and trunk number matching the local topology map, then the communication failure test passes.
- If the originating NPM does not receive the acknowledgment within a timeout period, the communication failure test is reattempted.

- If a number of retries fails, the trunk fails the communication failure test. The originating NPM declares the trunk in `Comm Fail`, which is an integrated alarm. A trunk experiencing `Comm Fail` may try to reroute all connections, depending upon the setting of the `Enable Rrt on Comm Fail` parameter of the **cnfnodeparm** command.
- If a trunk is in `Comm Fail`, the test must pass at both ends before the failure clears.

Do not confuse a `Comm Fail` test with a communication break (`Comm Break`) test. The `Comm Break` test is used for nodes that are unable to communicate with each other and seek to reestablish communication. A `Comm Fail` could result in a `Comm Break` between network nodes. Configure the parameters of the `Comm Fail` test using the **cnfnodeparm** command described below.

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

Note: Default values for `Comm Fail` test parameters are optimized to ensure node and network function. Do not change values without verifying them in a laboratory environment.

Configure the test pattern used by the NPM for the communication failure test using the **cnfcftst** command. Changing the test pattern can often detect pattern-sensitive trunk problems.

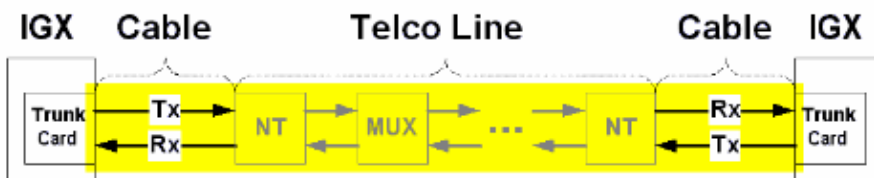
Examples of possible causes for `Comm Fail` and `Comm Breaks` include:

- Carrier and cable problems.
- Trunk card malfunction.
- Processor card malfunction.
- Hardware.
- Configuration mismatches.

For more information, please see [Configuring Communication Fail Test Patterns](#).

Error Example

The likely location of equipment errors is highlighted in yellow.



Comm Fail

Tx = Transmit

NT = Network Termination

Rx = Receive

MUX = Multiplexer in Telco line path

96.gif

Troubleshooting

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

Use the procedures described in [Problems When Adding a Trunk](#) to isolate the problem.

If the problem persists after performing the troubleshooting steps, please contact the Cisco Systems Technical Assistance Center (TAC) at (800) 553-24HR, (408) 526-7209, the Cisco Technical Support Website, or send e-mail to tac@cisco.com.

Related Information

- [IGX 8400 NTM Trunk Error Definitions](#)
- [How to Distinguish Between Different IGX NTM Models](#)
- [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](#)
- [Downloads – WAN Switching Software](#)
- [Technical Support – Cisco Systems](#)

[Contacts & Feedback](#) | [Help](#) | [Site Map](#)

© 2008 – 2009 Cisco Systems, Inc. All rights reserved. [Terms & Conditions](#) | [Privacy Statement](#) | [Cookie Policy](#) | [Trademarks of Cisco Systems, Inc.](#)

Updated: Apr 30, 2009

Document ID: 22204
