

NTM AIS (Blu) Errors

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Introduction

This document discusses Network Trunk Module (NTM) alarm indication signal (AIS) blue errors.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

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

Conventions

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

Error Definition

This error applies to the IGX NTM with E1 and T1 backcards. A receiving interface raises a blue alarm when it detects an unframed all-ones signal. This all-ones signal, also known as an AIS, indicates one of these two situations:

- Equipment upstream from the trunk interface has an alarm.
- Equipment upstream from the trunk interface is functional. However, an intermediate device has an alarm.

The term upstream refers to the relative position of a piece of transmission equipment in the network. The NTM is:

- Downstream from the nearest piece of transmission equipment in the receive direction.
- Upstream from the nearest piece of transmission equipment in the transmit direction.

The NTM records a blue alarm on the **dsptkerrs** screen if it receives an unframed all-ones signal. The NTM does not generate an all-ones signal. Transmission equipment generates an all-ones or keep-alive pattern

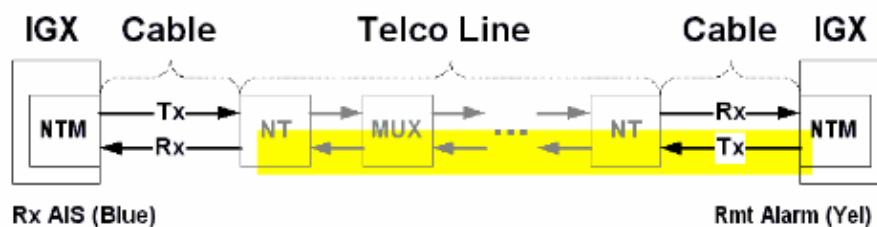
instead of a normal signal in the downstream direction if it fails to recover from a problem that occurs with an upstream signal. Transmission equipment includes:

- Multiplexers
- Channel service units (CSUs)
- Digital Crossconnect Systems (DCS)

Error conditions such as a loss of signal (LOS) or loss of frame (LOF) prevent the trunk from delivering the signal received from the equipment upstream to the equipment downstream. To maintain transmission continuity for all equipment downstream of the failure, an all-ones signal is generated. The all-ones signal maintains pulse density. This allows transmission continuity on the physical plant.

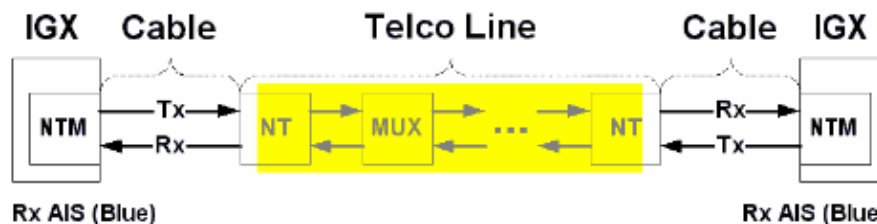
Error Example

The likely location of equipment errors is highlighted in yellow.



NTM = Network Trunk Module
 NT = Network Termination
 Tx = Transmit Rx = Receive
 MUX = Multiplexer in Telco line path

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Troubleshooting

These troubleshooting activities are intrusive. Perform these steps in a maintenance window only:

- If user traffic is affected.
- or–
- If **dsprks** indicates that an error condition still persists such as when the trunk is not in Clear-OK.

Both ends of the trunk must be active at the time of troubleshooting.

1. Issue the **dsprks** command to verify that the trunk is active.

If the trunk number is not displayed in the **dsprks** screen, the trunk is not active. To activate a trunk, issue the **uptrk** command.

2. If the remote end trunk shows a yellow alarm, verify that the cabling is correct between the remote IGX and the remote end of the trunk.

The local trunk end shows a blue alarm if the transmit direction of the remote IGX trunk cable is not connected. This means that the remote CSU or Network Termination (NT) has an LOS.

3. Ask your Telco to trace the source of the AIS. It is possible that the problem resides on an intermediate device.

If the problem persists even after you perform the troubleshooting steps, contact Cisco Technical Support at (800) 553-24HR, (408) 526-7209, the TAC web site, or send e-mail to tac@cisco.com.

Related Information

- [IGX 8400 NTM Trunk Errors Definition](#)
- [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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