

NTM Tx Non-TS Pkt Drop Errors

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Introduction

This document discusses network trunk module (NTM) non-timestamped (Non-TS) packet drop errors and provides steps to troubleshoot these errors.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document applies to the Cisco IGX" NTM with T1, E1, and subrate (SR) back cards.

Conventions

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

Error Definition

NTM packet drop errors indicate the number of cells that are discarded from these trunk queues:

Queue	Definition
Voice	Voice activity detection (VAD) voice traffic.
Timestamped (TS)	Low-speed data, voice-signaling traffic.
Non-timestamped (Non-TS)	High-speed data, non-VAD voice, and modem traffic.
Control Card (CC)	Network processor module (NPM) and first two packets of talkspurt traffic. (This was the High Priority queue.)
Bursty data A	Non-Foresight Frame Relay and

(BData A)	high-level data link control (HDLC) frame-forwarded traffic.
Bursty data B (BData B)	Foresight Frame Relay and HDLC frame-forwarded traffic.

TX Non-TS Pkt Drps can have these causes:

- High trunk utilization, as verified with the **dsprkutil** *trunk_number* SuperUser-level command. Packet drops can occur when trunk utilization reaches 85 percent. This situation most likely occurs if the utilization of connections was underestimated during configuration.

Because actual fill grade can vary quickly for the Non-TS queue, and the rate of FastPackets per connection depends on traffic patterns on the end systems, packet drops typically do not follow predictable patterns. However, more drops will occur during peak hours than during off-peak hours.

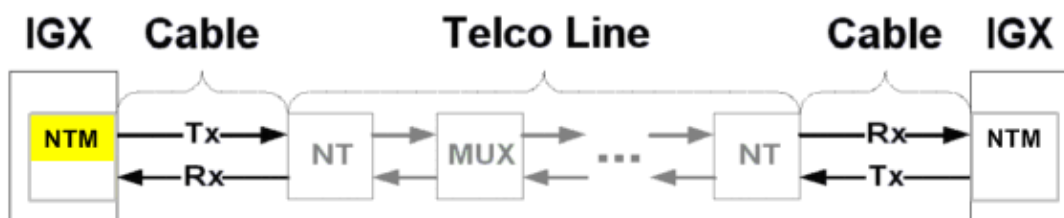
If a small number of packet drops occurs, monitor the trunk for a few days. Take action only if discards reduce service quality. If this is the case, then the most likely symptom is end-system retransmission or timeouts.

- Incorrectly configured trunk parameters, as indicated in the SuperUser-level **cnftrkparm** *trunk_number* command.

Error Example

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

Tx Non-TS Pkt Drop



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

Troubleshooting

Follow these steps to troubleshoot the error:

1. Issue the SuperUser-level **dsprkutil** *trunk_number* command, to check current trunk utilization.
 - a. Issue the **clrtrkerrs** command frequently, to clear trunk error statistics.
 - b. When **dsprkerrs** shows dropped packets, issue the **dsprkutil** command to find current trunk utilization. If the Peak Interval Utilization field is higher than 85 percent, then the packet drops are the result of queue overflows. For immediate relief, route Non-TS connections over alternate trunks.

- c. To resolve the problem permanently, evaluate the network design of connection parameters and correct them as necessary.
2. For Non-TS connections, the parameters that affect trunk bandwidth allocation are data rate and utilization. Issue the **dspcon** and **dspchcnf** commands, to verify connection settings.
 - a. To change the data rate, the connection must be deleted and added again.
 - b. To change utilization, issue the **cnfchutl** command. The lower the configured utilization for a Non-TS connection, the greater the number of Non-TS connections that will be loaded onto one trunk by the routing algorithm. The higher the number of Non-TS connections, the higher the probability of TX Non-TS Pkt Drp errors.
 3. Issue the **cnftrkparm** command, to check all trunk parameters.
 - a. Compare the settings of the problem trunk to the default values or to other trunks that have similar traffic without packet drops. An important parameter for data connections is the Transmit Queue Depth TS field of **cnftrkparm**.
 - b. Consider network-specific requirements before you change the queue depth. This is because of the impact that changes would have on all Non-TS connections on this trunk.

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

- [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](#)
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