

# NTM Tx BData A Pkt Drp Errors

Document ID: 7007

---

- Introduction**
- Prerequisites**
  - Requirements
  - Components Used
  - Conventions
- Error Definition**
- Error Example**
- Troubleshoot**
- Related Information**

---

## Introduction

This document discusses NTM Tx BData A Pkt Drp 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 Network Trunk Module (NTM) with T1, E1, and subrate (SR) backcards.

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

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

Common causes for BData A Pkt Drops include:

1. High trunk utilization as verified by the use of the SuperUser-level command **dsptrkutl** <trunk\_number>. Packet drops can occur when trunk utilization reaches 85 percent. Frame Relay (FR) traffic is very bursty, and it causes short-term variations in the load on BData A trunk queues. Though the BData A queues are relatively large by default, they are not able to cope with all possible statistical events such as correlated bursts from many connections. Occasional BData A Packet Drops generally pose no problem.

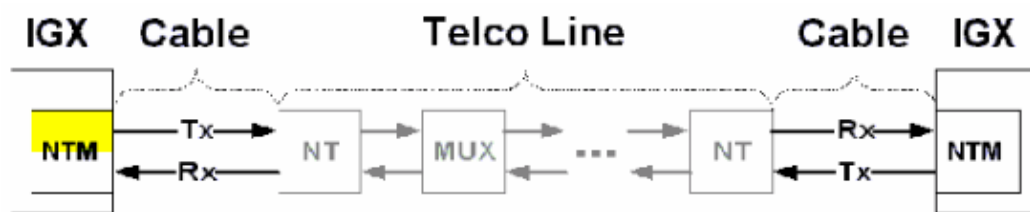
If packet drops from the BData A queue continue for a sustained period of time, verify the utilization assumptions for the FR connections. The FR connection settings of minimum information rate (MIR), percent utilization (%Util) and credit maximum (Cmax) are particularly important if packet drops continue.

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

2. Misconfigured trunk parameters as indicated in the SuperUser-level command **cnftrkparm** <trunk\_number>.

## Error Example

The likely location of equipment errors is highlighted in yellow.



Pkt Drop

NTM = Network Trunk Module  
NT = Network Termination

Tx = Transmit Rx = Receive  
MUX = Multiplexer in Telco line path

## Troubleshoot

These activities to troubleshoot are intrusive. Perform these steps in a maintenance window only if:

- user traffic is affected

–or–

- **dsptrks** indicates an error condition still persists such as when the trunk is not in Clear-OK

Both ends of the trunk must be active when you troubleshoot.

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. Issue the SuperUser-level **dsprkutl** <trunk\_number> command to check current trunk utilization.
  - a. Use the **clrtrkerrs** command frequently to clear trunk error statistics.
  - b. When **dsprkerrs** shows dropped packets, use **dsprkutl** to find current trunk utilization. If the Peak Interval Utilization field is higher than 85 percent, the packet drops are due to queue overflows.
  - c. For immediate relief, route FR connections over alternate trunks.
  - d. To resolve the problem permanently, evaluate network design of connection parameters and correct as necessary.
3. For FR connections, the parameters that affect trunk bandwidth allocation for a connection are **MIR** and **%Util**.
  - a. Issue the **dspscon** command to verify **MIR** and **%Util** settings.
  - b. To change the **MIR** or **%Util**, issue the **cnfcon** command. The lower the **%Util** for an FR connection, the greater the number of FR connections that are loaded onto one trunk by the routing algorithm. The higher the number of FR connections, the higher the probability of **TX BData A Pkt Drp errors**. For switch software to allocate the correct amount of bandwidth required on the NTM trunk, the configured **%utl** value must reflect actual activity on the connection. Packet drops result when the configured utilization of many FR connections is lower than actual use.
  - c. Use the **cnftrkstats**, **dsprkstatcnf**, and **dsprksthst** commands to collect and view target trunk statistics. These statistics require significant NPM processing time and should only be enabled for the activities to troubleshoot.
  - d. Use Cisco WAN Manager statistics to evaluate trunk use over the long term.
4. Issue the **dspscon** command to check the **Cmax** setting on the connection. **Cmax** determines the size of initial bursts that are allowed into the network at port speed. A large **Cmax** setting increases the probability of **TX BData A Pkt Drp errors**. The default value is ten, and it should not be changed without investigation.
5. Issue the **cnftrkparm** command to check all trunk parameters.
  - a. Compare the problem trunk settings 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 because it has impact on all **BData A** connections on this trunk.

If the problem persists even after you perform the steps to troubleshoot, 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 .

---

## Related Information

- [More NTM Trunk Alarm Types](#)
- [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](#)

- **Software Center – WAN Switching Software**
  - **Technical Support – Cisco Systems**
- 

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

© 2009 – 2010 Cisco Systems, Inc. All rights reserved. [Terms & Conditions](#) | [Privacy Statement](#) | [Cookie Policy](#) | [Trademarks of Cisco Systems, Inc.](#)

---

Updated: Apr 17, 2009

Document ID: 7007

---