

# BTM Rx Voice Pkt Drp Errors

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## Introduction

This document describes the RX Voice Pkt Drp (BTM packet drop) error, which occurs on the IGX broadband trunk module (BTM) with E1, E2, E3, and T3 backcards.

## Prerequisites

### Requirements

Readers of this document should have knowledge of these topics:

- IGX
- BTM

### 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

The RX Voice Pkt Drp error indicates the number of cells discarded from these trunk queues:

Trunk Queue	Description
Voice	Voice activity detection (VAD) voice traffic.
Timestamped (TS)	<del>Low-speed data, voice-signaling traffic.</del>
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.

The RX Voice Pkt Drp error causes include:

- Check for high trunk utilization by using the SuperUser-level **dsprkutil** 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. For statistical real-time services such as voice with voice activity detection (VAD), trunk bandwidth will be assigned to each connection based on configuration. VAD is available for voice connections and is a feature that only assembles FastPackets when voice is detected.

If the assumption about how much bandwidth VAD can save was too optimistic, then the connections can generate more FastPackets than what the trunk can handle. BTM queue overflow can result in RX Voice Pkt Drp errors on the trunk.

This scenario frequently occurs if VAD no longer works properly because of an inappropriate configuration. Inappropriate configuration can occur when the VAD threshold is set too high or too low. Such conditions can cause the source IGX channelized voice module (CVM) or universal voice module (UVM) to generate FastPackets even when the speaker is quiet. Refer to Voice Parameters and Tuning Guide for the IGX 8400, VISM, 3810, FastPAD, and VNS for more information about VAD tuning.

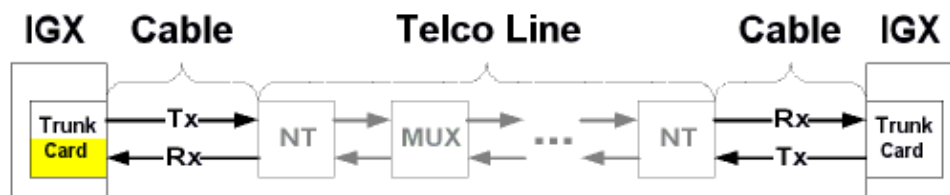
Because actual fill grade can vary quickly for the voice queue and because the rate of FastPackets per connection depends on caller behavior, talk patterns, and background noise, packet drops on trunk queues typically do not follow predictable patterns. More RX Voice Pkt Drp errors occur during peak hours than off-peak hours.

A few discarded cells will not impact service. If a small number of packet drops occurs, monitor the trunk for a few days and take action only if discards reduce voice quality. If this is the case, the most likely symptom reported will be choppy voice.

- Misconfigured trunk parameters as indicated in the SuperUser-level **cnftrkparm** command.

## Error Example

The likely location of equipment errors is shown in yellow:



Rx Pkt Drop

NT = Network Termination

MUX = Multiplexer in Telco Line Path

Tx = Transmit

Rx = Receive

# Troubleshoot

Complete these steps to troubleshoot your error:

1. Use the SuperUser–level **dsprkutil** command to verify the current trunk utilization.
  - a. Use the **clrtrkerrs** command frequently to clear trunk error statistics.
  - b. When the **dsprkerrs** command output shows dropped packets, use the **dsprkutil** command to find the current trunk utilization. If the Peak Interval Utilization field is higher than 85 percent, the packet drops are caused by queue overflows.
  - c. Use the **dsprks** command to identify the distant–end switch and trunk number.
  - d. Use the **vt** command to open a virtual session with the distant–end switch. Use the **clrtrkerrs**, **dsprkerrs**, **dsprkutil**, and **dsprks** commands to verify the trunk errors and utilization at the distant end switch.
  - e. For immediate relief, route voice connections over alternate trunks. Use the SuperUser–level **dsprkcons** command to identify the total number of connections routed over the problem trunk.
  - f. Use the **dsprts** command to identify the connection identifiers and current route for all connections routed across the problem trunk.
  - g. Use these SuperUser–level commands to display utilization for each connection routed across the problem trunk:

This command	& displays utilization for this connection
<b>dsputl</b>	Voice
<b>dsputl</b>	Data
<b>dsprkstats</b>	ATM or Frame Relay

2. Use the **cnftrkparm** command to verify all trunk parameters.
  - a. Compare the problem trunk settings to the default values or to other trunks that have similar traffic without packet drops. Important parameters for voice connections are the Receive Queue Depth settings for the rt–VBR, TS, and Non TS fields of the **cnftrkparm** command.
  - b. Consider network specific requirements before changing the queue depth because changes will affect all voice connections on this trunk.

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## Related Information

- [IGX 8400 BTM Trunk Error Troubleshooting and Definitions](#)
- [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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