BTM CGW Abrt Frms Errors

Document ID: 10848

Introduction

This error applies to the IGX broadband trunk module (BTM) with E1, E2, E3, and T3 backcards.

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, see the Cisco Technical Tips Conventions.

Error Definition

`CGW Abrt Frms` errors indicate that the complex gateway (CGW) function of the BTM has aborted an ATM Adaptation Layer 5 (AAL5) frame. CGW is not a form of traffic. CGW generates legacy StrataCom Trunk Interface (STI) or standard AAL5 ATM cell payloads out of FastPackets. The BTM trunk card can convert FastPackets into AAL5 ATM cells. The BTM firmware keeps a state machine for each CGW connection to track start−of−frame (SOF) and end−of− frame (EOF) sequences. If the firmware detects out−of−sequence SOF or EOF, the current frame aborts.

Ingress Errors	Egress Errors
From network termination (NT) to IGX.	From IGX to NT.
The `CGW Abrt Frms` error occurs because the BTM is aborting frames in the ingress direction, which is based on invalid cyclic redundancy check (CRC−32) results. This	The `CGW Abrt Frms` error occurs because a FastPacket that is carrying a part of the FR frame has been corrupted,

usually indicates a problem in the remote node. The most likely cause of this problem is cross−coupled connections. For example, the switch software may have misprogrammed the BTM trunk translation table, which resulted in two separate connections that are told to translate to the same cell address. The receiving BTM treats cells from two sources as one stream and cannot reconstruct the frame relay (FR) frame correctly.	which causes an invalid CRC−16 result. This makes the rest of the FR frame, a part of which was carried in the corrupted FastPacket, useless. The entire FR frame is then aborted, which causes the network egress FR card to fail to deliver the frame to the remote customer premises equipment (CPE).

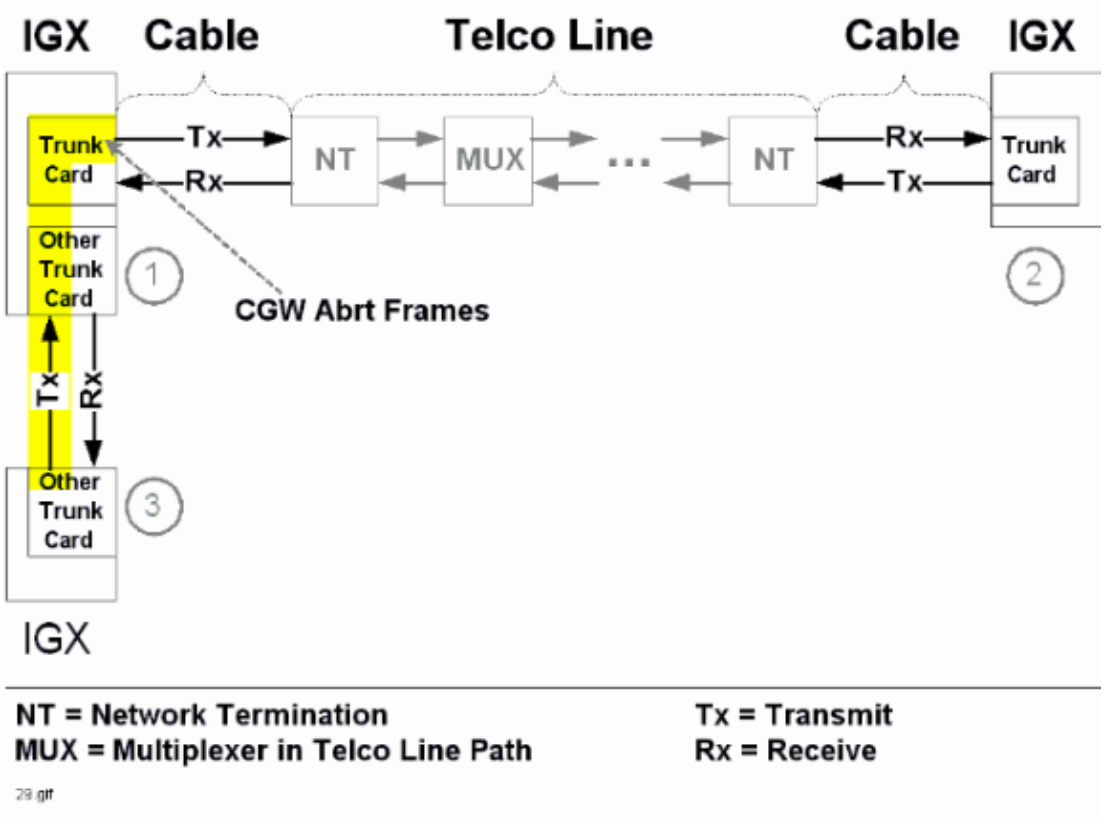
The BTM supports CGW connections with the limitation that CGW connections will not pass data if they are routed across a BTM trunk that has been configured for simple addressing mode (SAM). CGW connections pass data when they are routed across BTM trunks that are configured for BPX addressing mode (BAM) or cloud addressing mode (CAM). See IGX Trunk Interfaces for more information. The CGW function is determined by endpoint cards. ATM−to−FR connections always use CGW. Most FR−to−FR connections use CGW, except for Frame Relay Module (FRM)−to−FRM connections, which use simple gateway. See FastPacket Adaptation to ATM for more information.

This error is typically caused by bit errors that have corrupted the payload of FastPackets on trunks they traversed. Other reasons for failure can include:

- Inadequate node grounding.
- Faulty hardware.

Error Example

The likely location of equipment errors is highlighted in yellow.



Troubleshooting

Use the following procedure to troubleshoot the BTM CGW.

1. Identify FR or Frame Forwarding (FF) connections that terminate on the BTM trunk and increment `CGW Abrt Frms` errors.
2. Identify the trunk further upstream that could be causing the FastPacket payload to corrupt.

    a. Using the SuperUser level **dsptrkcons** command, identify the node displayed under `Src Node`.
    b. Issue the **vt** command to initiate a virtual session with the node displayed under `Src Node`.
    c. At the `Src Node`, issue the **dsprts** command until you find a connection that traverses the BTM trunk that is incrementing `CGW Abrt Frms` errors.
    d. Cut and paste the matching connections and paths into a text file.
3. Look through the list and check each connection end point by issuing the **clrchstats** command.
4. Issue the SuperUser level **dspchstats** command to view discarded frames from the network.
5. In the error example above, the **dsptrkcons** command was issued on the BTM trunk in IGX1. Assume this displays IGX2 as a `Src Node`. **vt** to IGX2 and look through all connections displayed after you issue the **dsprts** command to find a FR or FF connection that traverses the BTM trunk in IGX1. This may not be practical if there is a very large number of connections.
6. Once such a connection has been identified, use the commands **clrchstats** and **dspchstats** to identify connections that are discarding frames from the network.
7. If there are discarded frames on a connection, refer to the route to see which trunks they have crossed before traversing the BTM trunk in IGX1.
8. If the connection terminates on IGX3 and traverses the *Other Trunk Card* shown in the above graphic, then investigate the trunk as the cause of `CGW Abrt Frms` errors.
9. Check **dsptrkerrs** on IGX1 to see if there are indications that trunk quality is deteriorating. Troubleshoot those trunk errors first.
10. In networks with a few trunks, issue the **dsptrkerrs** command on the trunks in the proximity of the

node that shows `CGW Abrt Frms` errors to check for trunk errors.

The trunk that causes payload corruption might be located multiple hops away from the BTM trunk that is incrementing `CGW Abrt Frms` errors.

11. Make sure that the IGX chassis is properly grounded. Incorrect or insufficient grounding can cause problems.

    See Power and Grounding for more information on grounding a chassis.

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 BTM Trunk Error Troubleshooting and Definitions**
- **How to Distinguish Between Different IGX NTM Models**
- **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**

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