# BTM Cell HEC Errors

### Document ID: 10847

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## Introduction

This error applies to the IGX broadband trunk module (BTM) with an E1, E2, E3, or T3 backcard.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

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

### Conventions

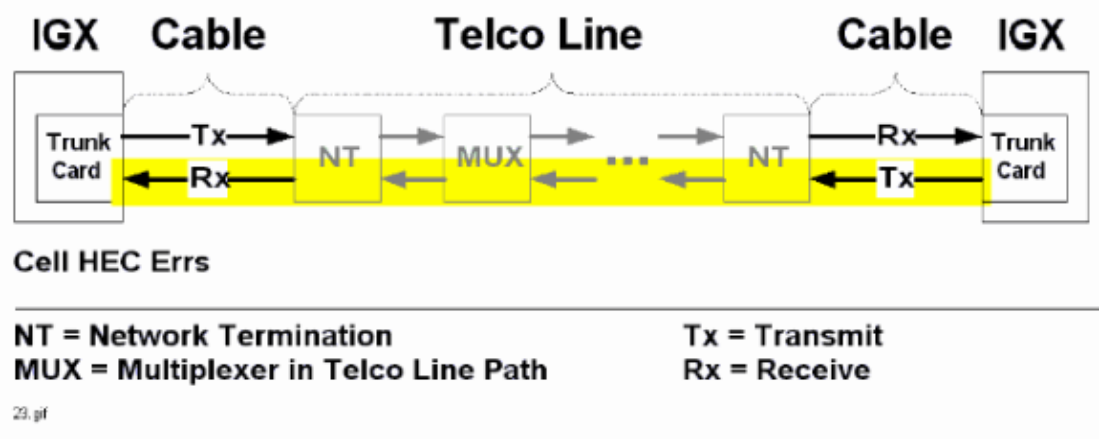
For more information on document conventions, see the Cisco Technical Tips Conventions.

## Error Definition

The `Cell HEC Errs` count indicates that the BTM is receiving ATM cells that have a corrupted header error checksum (HEC). This typically indicates a problem on the transmission path.

## Error Example

The likely location of equipment errors is shown in yellow:




# Troubleshooting

The troubleshooting activities described in this section are intrusive. Perform them in a maintenance window only if user traffic is affected or if the **dsptrks** command output indicates an error condition still persists, such as when the trunk is not in the `Clear-OK` state.

Both ends of the trunk must be active during troubleshooting.

1. Use the **dsptrks** command to verify that the trunk is active. If the trunk number is not displayed in the **dsptrks** command output, the trunk is not active. Use the **uptrk** command to activate a trunk.
2. Check the cables between the trunk card and the next device upstream. Typically, this is the local network termination (NT).

    a. Leave the local cable connected to the trunk card but remove it from the NT.
    b. Connect the transmit (Tx) end to the receive (Rx) end of the open cable to loop it back to the local trunk card.

    For E1, use a loopback plug.

    For T3/E3, use an appropriate BNC connector.

    Alternatively, place the local NT into the metallic loop toward the local customer premises equipment (CPE). The local CPE is the local BTM card set. If the **dsptrkerrs** command output does not show incremental errors, the cable and the local trunk module are working properly.
    c. Monitor the **dsptrkerrs** command output for five minutes before proceeding. Continue with Step 3. If the **dsptrkerrs** command output continues to show incremental errors, continue with Step 2.
3. Place a loopback plug for E1 or loopback cable for T3/E3 onto the BTM backcard connector to check the local hardware.

    If the trunk status in the **dsptrks** command output changes to `Clear-OK` and if the **dsptrkerrs** command output does not show incremental errors, the BTM card set is functioning properly.

    a. Replace the cables and verify that the errors have stopped.
    b. Wait at least five minutes before you continue.
4. Check the cables between the remote trunk card and its next device downstream. Typically, this is the remote NT.

    a. Leave the remote cable connected to the remote trunk card but remove it from the remote NT.

b. Connect Tx to Rx of the open cable to loop it back to the trunk card.

   For E1, use a loopback plug.

   For T3/E3, use an appropriate BNC connector.

   Alternatively, place the remote NT into the metallic loop toward the trunk module on the same site of the CPE. If you use the **dsptrkerrs** command and the output does not show incremental errors, the cable and trunk module are working properly.

c. Monitor the **dsptrkerrs** command output for at least five minutes before you proceed.

5. Check the Telco line.

   a. Connect Tx and Rx of the remote NT to loop it back to the Telco line.

      For E1, use a loopback plug.

      For T3/E3, use an appropriate BNC cable.

      If no line test equipment is available, check whether the **dsptrkerrs** command output on the local trunk continues to increment errors.

   b. Monitor the **dsptrkerrs** command output for at least five minutes before you proceed. If no further trunk errors are counted, the Telco line is functioning properly in one direction.

   c. Reconnect the cable to the NT and perform the test in the opposite direction.

6. Ensure the signal strength is sufficient and that the maximum cable length is not exceeded. For T3 trunks, the line build−out (LBO) is configured from the `Line cable length` field of the **cnftrk** command. Delete the trunk to correct the `Line cable length` setting.

   **Note:** If you delete the trunk, you could remove all connections routed across the trunk. Before you delete a trunk, verify whether an alternate route for the connections exist, or record all connections and parameters as needed to re−add connections.

7. Ask the Telco to test the line.

If the problem persists after you perform the troubleshooting steps, contact the Cisco Systems Technical Support 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**
- **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**
- **Downloads − WAN Switching Software**
- **Technical Support − Cisco Systems**



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