

IGX 8400 UXM Trunk Error Troubleshooting and Definitions

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Introduction

This document defines trunk errors reported by the Cisco IGX 8400 Series Switch universal switching module (UXM). The UXM uses trunks and physical lines to implement the inverse multiplexing over ATM (IMA) feature. One IMA trunk can be composed of multiple physical lines. The display counters are divided to identify whether the trunk or the physical line(s) are experiencing errors. Although IMA is only implemented using T1 or E1 trunks, the physical line error counters are used for T3, E3, and OC3 trunks.

In order to use this document, select the link to the target error. The error page provides the error definition and troubleshooting steps to isolate the problem.

These commands are commonly used to troubleshoot trunk or physical line problems:

- **dspphyslns** A current view of all physical lines and their status at the node.
- **dspphyslnerrrs** A current and historical view of status for all physical lines at the node. In order to ensure a current view, use the **clrphyslnerrrs** command.
- **dspphyslnerrrs <slot_number>** A current and historical view of specified physical line status at the node. In order to ensure a current view, use the **clrphyslnerrrs <slot_number>** command. Before you troubleshoot, use the **clrphyslnerrrs <slot_number>** command to ensure error counters are registering current events.
- **dsptrks** A current view of all trunks and their status at the node.
- **dsptrkerrrs** A current and historical view of status for all trunks at the node. In order to ensure a current view, use the **clrtrkerrrs** command.
- **dsptrkerrrs <slot_number>** A current and historical view of specified trunk status at the node. In order to ensure a current view, use the **clrtrkerrrs <slot_number>** command. Before you troubleshoot, use the **clrtrkerrrs <slot_number>** command to ensure error counters are registering current events.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

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

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

UXM Trunk and Physical Line Alarm Types

- Comm Fails
- IMA Failures
- VTRK Path Fails
- Loss of Sig (RED)
- AIS (BLU)
- AIS-16 (RED)
- Out of Frms (RED)
- Remote/Rmt Oof (YEL)
- Loss of Cell
- Loss of Pointer
- Path AIS
- Path Yellow
- Frame Sync
- Remote Framing
- Rmt Path Trace
- Rmt Section Trace
- IMA Line Failures

Statistical Alarms are displayed in the left column and Integrated Alarms are displayed in the right column of both the **dsptkerrs** <slot_number> and **dspphyslerrs** <slot_number> screens for a UXM E3 trunk:

```
labigx      TN      StrataCom      IGX 8420  9.2.34      Apr. 9 2001  20:05 GMT
TRK 11.3          Clear - OK          Clrd:04/09/01 20:05:00

Statistical Alarm Count ETS      Status      Integrated Alarm      Count ETS      Status

Tx Voice Cl Drp          0      0          Comm Fails          0      -
TX TS CL Drp            0      0          VTRK Path Fails    0      -
TX NTS CL Drp           0      0
TX Hi-Pri CL Drp        0      0
TX BData A CL Drp       0      0
TX BData B CL Drp       0      0
TX CBR CL Drp           0      0
TX VBR CL Drp           0      0
TX ABR CL Drp           0      0
CGW: Dscd Pkts          0      0
CGW: Dscd Cells         0      0

Last failure time: Date/Time Not Set

Last Command: dsptkerrs 11.3
g4static      TN      StrataCom      IGX 8420  9.2.34      Apr. 9 2001  20:06 GMT
PHYSLN 11.3          Clear - OK          Clrd:04/09/01 20:05:09
Statistical Alarm Count ETS      Status      Integrated Alarm      Count ETS      Status
Out of Frms             0      0          Loss of SIG (RED)   0      -
Loss of SIG              0      0          AIS (BLU)           0      -
Frame BitErrs           0      0          Out of Frms (RED)   0      -
```

CRC Err	0	0	Remote (YEL)	0	-
Line Code Errs	0	0	Loss of Cell	0	-
P-bit Parity Errs	0	0	Loss of Pointer	0	-
BIP-8 Code Errs	0	0	Frame Sync	0	-
Frame Sync Errs	0	0	Remote Framing	0	-
			Rmt Path Trace	0	-

Last Command: dspphyslneres 11.3

Note: The IGX **dsptkerrs** and **dspphyslneres** detail screens can provide alarm counts for errors that do not apply to the physical interface. For example, Loss of Pointer and Rmt Path Trace are OC3 errors and do not apply to the E3 interface.

This is the screen output for a UXM with a T1 or E1 backcard:

labigx VT StrataCom IGX 8420 9.2.34 Apr. 9 2001 22:04 GMT

```
TRK 9.2(2) Clear - OK Cldr:04/09/01 22:03:23
Statistical Alarm Count ETS Status Integrated Alarm Count ETS Status
TX Voice CL Drp 0 0 Comm Fails 0 -
TX TS CL Drp 0 0 IMA Failures 0 -
TX NTS CL Drp 0 0 VTRK Path Fails 0 -
TX Hi-Pri CL Drp 0 0
TX BData A CL Drp 0 0
TX BData B CL Drp 0 0
TX CBR CL Drp 0 0
TX VBR CL Drp 0 0
TX ABR CL Drp 0 0
CGW: Dscd Pkts 0 0
CGW: Dscd Cells 0 0
```

Last failure time: Date/Time Not Set

Last Command: dsptkerrs 9.2

labigx VT StrataCom IGX 8420 9.2.34 Apr. 9 2001 22:05 GMT

```
PHYSLN 9.2 Clear - OK Cldr:04/09/01 22:05:35
Statistical Alarm Count ETS Status Integrated Alarm Count ETS Status
Bipolar Err 0 0 Loss of SIG (RED) 0 -
Out of Frms 0 0 AIS (BLU) 0 -
Loss of SIG 0 0 Out of Frms (RED) 0 -
Frame BitErrs 0 0 Rmt Oof (YEL) 0 -
CRC Err 0 0 Loss of Cell 0 -
Line Code Errs 0 0 IMA Line Failures 0 -
P-bit Parity Errs 0 0 IMA Failures 0 -
C-bit Parity Errs 0 0
BIP-8 Code Errs 0 0
Frame Sync Errs 0 0
```

Last Command: dspphyslneres 9.2

If the **dsptks** command shows the trunk as Clear - OK and the **dspphyslns** command shows the physical line(s) as Clear - OK, then no immediate action is required. Minor alarms are typically caused by increasing error counts in the Statistical Alarm column. Minor alarms indicate that the trunk or physical line is experiencing errors but is not failed. If the error counts in the Statistical Alarm column exceed the threshold specified in the **cnflnal** display, then a major alarm will be declared and the trunk or physical line removed from service. After a trunk is removed from service all connections are routed off the trunk or failed if no alternate trunk is available. After a physical line is removed from service, connections might be routed off the

IMA trunk if the retained links configuration or connection bandwidth exceeds remaining physical line bandwidth. Major alarms are typically caused by an error in the Integrated Alarm column.

If a new trunk is experiencing persistent Integrated Alarms, use the **dsprkcnf** *<slot_number>* command to verify the trunk configuration. Refer to Setting Up Trunks for a list of trunk error events and their error categories.

Related Information

- [IGX Universal Switching Module \(UXM\) Product Information](#)
- [Virtual Trunking Solution & Traffic Shaping on Cisco IGX 8400](#)
- [How to Distinguish Between Different IGX NTM Models](#)
- [International Telecommunication Union](#)
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