MGX 8220 Frame Relay Service Module Frame Source Aborts

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Introduction

This document explains Cisco MGX 8220 Frame Relay Service Module (FRSM) frame source aborts. The FRSM loads frames into 48−byte buffers as fast as the frame arrives from the customer premise equipment (CPE). The FRSM central processing unit (CPU) forwards the 48−byte buffers to the segmentation and reassembly (SAR) processor as fast as it can. The SAR builds cells from the buffers by adding headers and sends them out to the network. Typically, the FRSM transmits cells into the network via the feeder trunk between the MGX 8220 Broadband Network Module (BNM) and the BPX 8600 Broadband Network Interface (BNI)/Broadband Switch Module (BXM).

FRSM uses the source abort to notify the distant end of the following:

- It has detected a bad frame being processed into cells and transmitted to the network.
- No further cells for the frame will be transmitted into the network.
- It needs to dump all the cells for the current frame because the frame is bad.

The source abort is intended to cause the distant end to dump any of the cells it still has from the bad frame; conserving network resources. The cause of a bad frame should be investigated at the FRSM as well as the frame origination equipment, such as a router.

Before You Begin

Conventions

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

Prerequisites

There are no specific prerequisites for this document.

Components Used

The information in this document is based on generally−available firmware releases 4.x and 5.x for the Cisco MGX 8220 Edge Concentrator.

Screens to Capture to Identify the Source of the Frame Source Abort

MGX 8220 command output does not refresh automatically. Repeat commands every 10 seconds to determine the rate of discard. The following commands provide useful information on the cause of the frame source abort. Issue them at both of the terminating FRSMs.

- **dspportcnt <port_number>** − Indicates the port traffic and may indicate the reason for the frame discards.
- **dspchancnt <channel_number>** − Indicates the status of the channel traffic to the end equipment or router and will indicate the reason for the frame discards.
- **dspsarcnt <channel_number>** − Indicates the status of the traffic to the network or BPX 8600.
- shellConn **freebuf_avail** − Indicates the number of available buffers.

The frame source abort count is highlighted in the **dspchancnt** command output below.

```
a2.1.8.FRSM.a > dspchancnt 100
  ChanNum:                   100
  ChanState:                 alarm
  ChanUpTime:                0

                                    Tx                  Rx
                             ---------------       ---------------
  AbitState:                 Sending A=0           Off
  ATMState:                  Sending AIS OAM state Not receiving any state
  Total Frames:              0                     0
  Total Bytes:               0                     0
  Frames DE:                 0                     0
  Bytes DE:                  0                     0
  Frames Discarded:          0                     0
  Bytes Discarded:           0                     0
  FramesDiscXceedQDepth:     0                     0
  BytesDiscXceedQDepth:      0                     0
  FramesDiscXceedDEThresh:   0                     0
  Frames FECN:               0                     0
  Frames BECN:               0                     0
  FramesTagged FECN:         0                     0
  FramesTagged BECN:         0                     0
  KbpsAIR:                   0                     0
  FramesTaggedDE:            0                     0
  BytesTaggedDE:             0                     0
  RcvFramesDiscShelfAlarm:                         0
  XmtFramesDiscPhyLayerFail: 0
  XmtFramesDiscCRCError:     0
  XmtFramesDiscReAssmFail:   0
  XmtFramesDiscSrcAbort:     0
  XmtFramesDuringLMIAlarm:   0
  XmtBytesDuringLMIAlarm:    0
  RcvFramesDiscUPC:                                0
  XmtFramesInvalidCPIs:      0
  XmtFramesLengthViolations: 0
  XmtFramesOversizedSDUs:    0
  XmtFramesUnknownProtocols: 0
  RcvFramesUnknownProtocols:                       0
```

The shellConn command **freebuf_avail** also provides information on available buffers as illustrated below.

- A shelf with no problems shows a value much greater than 5000 plus:

```
a2.1.8.FRSM.a > freebuf_avail
```

```
freebuf_avail
freebuf_avail = 0x80155684: value = 7709 = 0x1e1d
```

- A shelf with problems may show a value much less than 1000:

```
pa69.1.12.FRSM.a > freebuf_avail
freebuf_avail
freebuf_avail = 0x80160390: value = 475 = 0x1db
```

Related Information

- **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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