



Traffic Monitoring

For a router to function smoothly and effortlessly, monitoring traffic is an essential task. Traffic Monitoring helps you get count of packets going inwards and outwards.

This chapter describes the process to monitor packet drops as part of troubleshooting process.

In routing, the information is passed around in the form of packets. Packets contains unit size data. Sometimes, due to network congestion, or outdated software/hardware the packets fail to reach at their destined location. You can identify packet loss in the form of incomplete information or missing information.

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System Log Alerts for Packet Loss

Table 1: Feature History Table

Feature Name	Release Information	Description
System Log Alerts for Packet Loss	Release 24.1.1	<p>You can quickly get notified about any traffic impacting errors within the router's Network Processing Unit (NPU). These notifications are error log messages on the router console for NPU interrupts that affect traffic. To diagnose traffic loss, follow the recommended actions in the log.</p> <p>Previously, the only way to identify NPU errors that impacted traffic was to run the show ASIC-error command.</p> <p>This feature introduces the following changes:</p> <p>CLI:</p> <p>This feature introduces the hw-module profile packet-loss-alert command.</p> <p>YANG Model:</p> <p>New xpaths for Cisco-IOS-XR-npu-hw-profile-cfg.yang data model (see GitHub, YANG Data Models Navigator)</p>

Network packet loss can significantly impact the overall experience of end-users, particularly when using real-time applications such as voice or video. Therefore, network administrators need to address such issues promptly to ensure the integrity of these services.

Now you can configure your router to provide immediate alerts in the event of packet loss, along with configuring the duration of packet loss to raise the alert. This feature enables network administrators to quickly identify the specific router within the network that is experiencing the problem. It facilitates a swift and precise response to rectify the issue and maintain optimal network performance.



Note Only line cards and routers with the Q100, Q200, P100, or G100 based Silicon One ASIC support this feature.

Configuration Example

Execute the **hw-module profile packet-loss-alert** command to enable this feature, as shown below:

```
Router# configure
Router(config)# hw-module profile packet-loss-alert 3Min
Router(config)# commit
```

You can configure the duration of packet loss to raise the alert to either 3 minutes or 5 minutes.

Running Configuration

```
Router# show running-config hw-module profile
hw-module profile packet-loss-alert 3Min
```

System Log Alert Generated for Packet Loss

When you enable this feature, the router generates a system log message whenever there's a packet loss for the configured duration. To diagnose the reason for the packet loss, follow the recommended action in the log.

```
LC/0/3/CPU0:Nov 4 21:12:47.062 UTC: npu_drvr[213]:
%FABRIC-NPU_DRV-3-ASIC_ERROR_TRAFFIC_IMPACT : [10118] : npu[2]: Potential PACKET_LOSS due
to error, please check configuration to see if drop is expected; if not, collect showtech
fabric link-include and follow the TAC guideline for this message
```

