Micro-Burst Monitoring Overview

The micro-burst monitoring feature allows you to monitor traffic on a per-port basis for both ingress and egress ports and to detect unexpected data bursts within a very small time window (micro-seconds). This allows you to detect flows in the network that are at risk of data loss, and that may require extra bandwidth.

A micro-burst occurs when a specific amount of data (in bytes) is exceeded in a given time interval. The micro-burst monitoring feature allows you to specify these limits as absolute values (for data and burst size) or as a percentage of the link speed. When these thresholds are exceeded the system generates a Syslog alarm message.

Micro-Burst Monitoring

Information About Micro-Burst Monitoring

How to Use Micro-Burst Monitoring

The micro-burst monitoring feature monitors bursts in real time. The monitoring process also provides an overview of data path issues, and is helpful in identifying potential capacity issues in a network. Syslog messages are generated with the burst exceeds the configured value.

Micro-burst monitoring provides real-time burst information that is used to:

- monitor network micro bursts
- trigger to congestion detection and latency processes

Guidelines and Limitations for Micro-Burst Monitoring

- Micro-burst detection is performed on a per-link basis and port channels are not be taken into consideration.
- Micro-burst detection is supported on Ethernet ports only, and is not supported on Fabric Extender Technology (FEX), Port Channels, Virtual Ethernet (VETH), or Virtual Fibre Channel (VFC) ports.

How to Configure Micro-Burst Monitoring

Configuring Micro-Burst Monitoring

To configure micro-burst monitoring, you first set micro-burst threshold values for an interface and then configure the maximum number of micro-bursts allowed on the interface. You configure ingress and egress port settings separately.

Procedure

	Command or Action	Purpose

Step 1	**configure terminal**
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**interface ethernet** *slot/port* **Example:** `switch(config)# interface ethernet 1/1`	Enters interface configuration mode.
Step 3	**burst threshold ingress limit** *percent* **interval** *interval_time* **Example:** `switch(config-if)# burst threshold ingress limit 60 interval 10000000`	Configures micro-burst threshold values for ingress traffic on the interface.
Step 4	**burst threshold egress size** *max_bytes* **interval** *interval_time* **Example:** `switch(config-if)# burst threshold egress size 500000 interval 16000`	Configures micro-burst threshold values for egress traffic on the interface.
Step 5	**burst maximum egress burst-count** *max_bytes* **Example:** `switch(config-if)# burst maximum egress burst-count 50000`	Configures the maximum number of micro-bursts allowed within a time interval before generating an interrupt on a port in the egress direction. This time interval is equal to 10 multiplied by the micro-burst threshold interval (in seconds).
Step 6	**burst maximum ingress burst-count** *max_bytes* **Example:** `switch(config-if)# burst maximum ingress burst-count 600000`	Configures the maximum number of micro-bursts allowed within a time interval before generating an interrupt on a port in the ingress direction. This time interval is equal to 10 multiplied by the micro-burst threshold interval (in seconds).
Step 7	**exit** **Example:** `switch(config-if)# exit`	Updates the configuration and exits interface configuration mode.

	Command or Action	Purpose
Step 8	**clear burst-counters [interface {all | ethernet interface}] {both | egrees | ingress }** **Example:** `switch# clear burst-counters interface all`	Clears the micro-burst counters on all interfaces or only on ethernet interfaces. Additionally, the command is applicable to clear counters for both egress and ingress or either egress or ingress traffic.
Step 9	(Optional) **copy running-config startup-config** **Example:** `switch(config)# copy running-config startup-config`	Saves the change persistently through reboots and restarts by copying the running configuration to the startup configuration.

Verifying Micro-Burst Monitoring

To display micro-burst monitoring information, enter the following show command:

Command	Purpose
show interface burst-counters	Displays micro-burst counters information for all interfaces where micro-burst monitoring is configured.

Example for Micro-Burst Monitoring

Configuration Example for Micro-Burst Monitoring

The following example shows how to configure micro-burst monitoring on an Ethernet interface:

```
switch# configure terminal
switch(config)# interface ethernet 1/1
switch(config-if)# burst threshold egress limit 50 interval 30
switch(config-if)# burst threshold ingress size 500000 interval 16000
switch(config-if)# burst maximum egress burst-count 50000
switch(config-if)# burst maximum ingress burst-count 600000
switch(config-if)# exit
switch(config)# copy running-config startup-config
```