



Configuring Rate Limits

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About Rate Limits

You can configure span-egress hardware rate-limit to restrict amount of ERSPAN monitor traffic transmitted out of the Cisco NX-OS device. You can configure rate limits in packets per second for the following types of traffic:

- SPAN egress traffic—For this option, you can configure rate limits in kilobits per seconds.

Licensing Requirements for Rate Limits

The following table shows the licensing requirements for this feature:

| Product | License Requirement |
|-------------|---|
| Cisco NX-OS | No license is required for rate limits. Any feature not included in a license package is bundled with the nx-os image and is provided at no extra charge to you. For an explanation of the Cisco NX-OS licensing scheme, see the <i>Cisco NX-OS Licensing Guide</i> . |

Guidelines and Limitations for Rate Limits

Rate limits has the following configuration guidelines and limitations:

- You can configure a hardware rate-limiter to show statistics for outbound ERSPAN monitor traffic on egress ports.

The rate-limiter on egress ports is limited per ASIC, rather than per port or SPAN session.

The rate-limiter only applies to ERSPAN and not local SPAN traffic.

sFlow and ERSPAN cannot co-exist in the same Cisco Nexus NFE2-enabled devices.



Note If you are familiar with the Cisco IOS CLI, be aware that the Cisco NX-OS commands for this feature might differ from the Cisco IOS commands that you would use.

Default Settings for Rate Limits

This table lists the default settings for rate limits parameter.

Table 1: Default Rate Limits Parameters Settings

| Parameters | Default |
|------------------------|-----------|
| SPAN egress rate limit | No limits |

Configuring Rate Limits

You can set rate limits on supervisor-bound traffic.

Procedure

| | Command or Action | Purpose |
|---------------|--|--|
| Step 1 | configure terminal Example: <pre>switch# configure terminal switch(config)#</pre> | Enters global configuration mode. |
| Step 2 | hardware rate-limiter span-egress rate Example: <pre>switch(config)# hardware rate-limiter span-egress 100</pre> | Configures rate limits in kilobits per second for SPAN for egress traffic. The range is from 0 to 100000000. |

| | Command or Action | Purpose |
|---------------|---|--|
| | | Note You should not configure both sFlow and the SPAN egress rate-limiter because the SPAN egress rate-limiter can affect the functionality of sFLOW. |
| Step 3 | (Optional) show hardware rate-limiter span-egress Example: switch# show hardware rate-limiter span-egress | Displays the rate limit configuration. |
| Step 4 | (Optional) copy running-config startup-config Example: switch# copy running-config startup-config | Copies the running configuration to the startup configuration. |

Monitoring Rate Limits

You can monitor rate limits.

Procedure

| | Command or Action | Purpose |
|---------------|--|-------------------------------------|
| Step 1 | show hardware rate-limiter span-egress Example: switch# show hardware rate-limiter span-egress | Displays the rate limit statistics. |

Clearing the Rate Limit Statistics

You can clear the rate limit statistics.

Procedure

| | Command or Action | Purpose |
|---------------|--|-----------------------------------|
| Step 1 | clear hardware rate-limiter span-egress Example: switch# clear hardware rate-limiter span-egress | Clears the rate limit statistics. |

Verifying the Rate Limit Configuration

To display the rate limit configuration information, perform the following tasks:

| Command | Purpose |
|---|--|
| <code>show hardware rate-limiter span-egress</code> | Displays the rate limit configuration. |

Configuration Examples for Rate Limits

The following shows an example of the rate-limiter configuration for ERSPAN:

```
switch(config)# hardware rate-limiter span-egress 100
Warning: This span-egress rate-limiter might affect functionality of sFlow
switch(config)# show hardware rate-limiter span-egress
Units for Config: packets per second (kilo bits per second for span-egress)
Allowed, Dropped & Total: aggregated since Module: 1
R-L Class          Config          Allowed          Dropped          Total
+-----+-----+-----+-----+
span-egress        123             0                 0                 0
<<configured
```

Additional References for Rate Limits

This section includes additional information related to implementing rate limits.

Related Documents

| Related Topic | Document Title |
|-----------------------|------------------------------------|
| Cisco NX-OS licensing | <i>Cisco NX-OS Licensing Guide</i> |