



## H Commands

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# hardware pq-drain

To configure the proxy-queue drain rate settings, use the `hardware pq-drain` command in global configuration mode. To disable proxy-queue drain settings, use the `no` form of this command.

```
hardware pq-drain 10g 10g-drain-rate 40g 40g-drain-rate
no hardware pq-drain
```

## Syntax Description

|                    |  |
|--------------------|--|
| 10g 10g-drain-rate | Proxy Queue drain rate for the 10 G interface. The range is from 1 Mbps to 20000 Mbps. |
| 40g 40g-drain-rate | Proxy Queue drain rate for the 10 G interface. The range is from 1 Mbps to 80000 Mbps. |

## Command Default

Disabled

## Command Modes

Global configuration mode

## Command History

| Release     | Modification                 |
|-------------|------------------------------|
| 7.0(0)N1(1) | This command was introduced. |

## Usage Guidelines



**Note** This command is applicable to only Cisco Nexus 6000 switches.

When the proxy queue reaches a threshold that indicates congestion, Explicit Congestion Notification (ECN) marking is performed so that the receiver of the packet echoes the congestion indication to the sender. The proxy-queue drain rate is configured to ensure that during congestion at egress ports only a certain amount of packets are drained.

## Examples

This example shows how to configure proxy-queue settings to drain 9900 Mbps of traffic from 10 Gigabit interfaces and 39900 Mbps of traffic from 40 Gigabit interfaces:

```
switch(config)# hardware pq-drain 10g 9900 40g 39900
```

## Related Commands

| Command                             | Description                     |
|-------------------------------------|---------------------------------|
| <code>hardware random-detect</code> | Configures ECN for a QoS group. |

# hardware random-detect

To configure Explicit Congestion Notification (ECN) for a Quality of Service (QoS) group, use the hardware random-detect command in global configuration mode. To disable ECN, use the no form of this command.

```
hardware random-detect min-thresh 10g 10g-min-threshold 40g 40g-min-threshold max-thresh 10g
10g-max-threshold 40g 40g-max-threshold ecn qos-group group-number
no hardware random-detect
```

## Syntax Description

|                        |   |
|------------------------|---|
| min-thresh             | Minimum threshold.  |
| 10g 10g-min-threshold  | Minimum threshold for 10 Gigabit interfaces. The range is from 1 to 67108863 bytes. |
| 40g 40g-min-threshold  | Minimum threshold for 40 Gigabit interfaces. The range is from 1 to 67108863 bytes. |
| max-thresh             | Maximum threshold.  |
| 10g 10g-max-threshold  | Maximum threshold for 10 Gigabit interfaces. The range is from 1 to 67108863 bytes. |
| 40g 40g-max-threshold  | Maximum threshold for 40 Gigabit interfaces. The range is from 1 to 67108863 bytes. |
| ecn                    | Enables ECN for the specified QoS group.  |
| qos-group group-number | Specifies the QoS group that is being configured.                                   |

## Command Default

Disabled

## Command Modes

Global configuration mode

## Command History

| Release     | Modification                 |
|-------------|------------------------------|
| 7.0(0)N1(1) | This command was introduced. |

## Usage Guidelines



**Note** This command is applicable to only Cisco Nexus 6000 switches.

To implement Weighted Random Early Detection (WRED) Explicit Congestion Notification (ECN) on proxy queues you use the hardware random-detect command to configure minimum and maximum threshold values per QoS group. Then you use the hardware pq-drain command to configure the proxy-queue drain rate.

## Examples

This example shows how to enable ECN threshold values for the class-default QoS group:

```
switch(config)# hardware random-detect min-thresh 10g 64000 40g 4000 max-thresh 10g 128000  
40g 246000 ecn qos-group 0
```

**Related Commands**

| Command           | Description                        |
|-------------------|------------------------------------|
| hardware pq-drain | Configures proxy queue drain rate. |