

Metro Ethernet 3600X Series Switches

QOSMGR-3-PROFILE_EXHAUST: No free scheduler profiles available in hardware Log Interpretation



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Introduction

This document describes a problem with the creation of new policy maps along with attempts to follow logs on a Cisco Metro Ethernet 3600X Series switch (ME3600X).

Problem

After you create a certain number of policy maps, the ME3600X switch might report this log along with a failure to create any new policy maps:

```
QOSMGR-3-PROFILE_EXHAUST:  
No free scheduler profiles available in hardware
```

This might occur even if the Quality of Service (QoS) Ternary Content Addressable Memory (TCAM) has available space:

```
Switch#show platform tcam utilization qos  
Nile Tcam Utilization per Application & Region:  
ES == Entry size == Number of 80 bit TCAM words  
=====
```

App/Region	Start	Num Avail	ES	Used Range	Num Used
QOS	36864	4096	2		
nile0					2966
nile1					

```
=====
```

Solution

This log is expected when all scheduler profiles (255) run out, as per the policy map configuration. In order to verify this, enter the *show platform qos scheduler profile queue 0* command:

```
Switch#show platform qos scheduler profile queue 0  
Asic 01)PIR =1000000 bandwidth =0 eir_ratio=1 ref_count=19 mtu=1500  
2)PIR =1000000 bandwidth =0 eir_ratio=1 ref_count=1 mtu=9200  
3)PIR =5000 bandwidth =5000 eir_ratio=1 ref_count=0 mtu=1500  
So on?.
```

```
252)PIR =5083 bandwidth =5083 eir_ratio=1 ref_count=0 mtu=1500
253)PIR =5083 bandwidth =0 eir_ratio=1 ref_count=1 mtu=1500
254)PIR =5083 bandwidth =0 eir_ratio=98 ref_count=0 mtu=1500
255)PIR =1000000 bandwidth =0 eir_ratio=1 ref_count=1 mtu=2000
```

Scheduler is a different hardware resource, and TCAM utilization is independent of this problem. The amount of scheduler usage depends on the configuration. A policy map that utilizes more features (percent of bandwidth available, shape) is expected to use more scheduler resources than others.

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