



Appendix - Enhanced Quality of Service

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Enhanced QoS provides a higher resolution of QoS at the service level (SL). Users can configure rate limit values per SL for physical ports, virtual ports, and port groups, using `enhanced_qos_policy_file` configuration parameter.

Valid values of this parameter:

- Full path to the policy file through which Enhanced QoS Manager is configured
- “null” – to disable the Enhanced QoS Manager (default value)

Note

To enable Enhanced QoS Manager, QoS must be enabled in SM configuration file.

Enhanced QoS Policy File

The policy file is comprised of two sections:

- **BW_NAMES:** Used to define bandwidth setting and name (currently, rate limit is the only setting). Bandwidth names are defined using the syntax:

```
<name> = <rate limit in 1Mbps units>
```

Example:

```
My_bandwidth = 50
```

- **BW_RULES:** Used to define the rules that map the bandwidth setting to a specific SL of a specific GUID. Bandwidth rules are defined using the syntax:

```
<guid> | <port group name> = <sl id>:<bandwidth name>, <sl id>:<bandwidth name>...
```

Examples:

```
0x2c90000000025 = 5:My_bandwidth, 7:My_bandwidth  
Port_grp1 = 3:My_bandwidth, 9:My_bandwidth
```

Notes

- **Rate limit = 0** represents unlimited rate limit.
- Any unspecified SL in a rule will be set to 0 (unlimited) rate limit automatically.
- “default” is a well-known name which can be used to define a default rule used for any GUID with no defined rule (If no default rule is defined, any GUID without a specific rule will be configured with unlimited rate limit for all SLs).
- Failure to complete policy file parsing leads to an undefined behavior. User must confirm no relevant error messages in SM log in order to ensure Enhanced QoS Manager is configured properly.
- An empty file with only ‘BW_NAMES’ and ‘BW_RULES’ keywords configures the network with an unlimited rate limit.
- The VPORT_BW_RULES section is optional and includes virtual port GUIDs only (including the vport0 GUID). Physical port GUIDs added to this section are treated as vport0 GUIDs.

Policy File Example

The below is an example of configuring all ports in the fabric with rate limit of 50Mbps on SL1, except for GUID 0x2c90000000025, which is configured with rate limit of 100Mbps on SL1. In this example, all SLs (other than SL1) are unlimited.

```
-----  
BW_NAMES  
bw1 = 50
```

bw2 = 100

BW_RULES

default: 1:bw1

0x2c90000000025: 1:bw2

VPORT_BW_RULES

default = all:DEF_BW_2

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