

Advanced QoS Policies

In This Section

This section provides information to configure advanced QoS policies using the command line interface.

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Overview

The adv-config-policy contains queue and policer configuration parameters that are not expected to be useful to most users. In Release 10.0, the policy only contains queue and policer child control parameters within a child-control node.

The parameters within the child-control node are intended to allow more precise control of the method that hierarchical virtual scheduling employs to emulate the effect of a scheduling context upon a member child queue or policer.

Once a policy is created, it may be applied to a queue or policer defined within a sap-egress or sap-ingress QoS policy. It may also be applied to a queue or policer defined within an ingress or egress queue-group template. When a policy is currently associated with a QoS policy or template, the policy may be modified but not deleted (even in the event that the QoS policy or template is not in use).

While the system maintains default values for the advanced configuration parameters, no default adv-config-policy exists.

For information about the tasks and commands necessary to access the command line interface and to configure and maintain your router, refer to CLI Usage chapter in the System Basic Configuration Guide.

Basic Configurations

A advanced QoS policy must conform to the following:

- Each advanced policy must have a unique policy ID.
- Default values can be modified but parameters cannot be deleted.

Create an Advanced QoS Policy

Configuring and applying advanced policies is optional. If no advanced policy is explicitly applied to a SAP or IP interface, then no default advanced policy is applied.

To create a new advanced policy, define the following:

- A slope policy ID value. The system will not dynamically assign a value.
- Include a description. The description provides a brief overview of policy features.
- The child control parameters, parameters that are intended to allow more precise control of the method that hierarchical virtual scheduling employs to emulate the effect of a scheduling context upon a member child queue or policer.

The following displays an example of an advanced policy configuration:

```
ALA-7>config>qos# info
#-----
echo "QoS Policies Configuration"
#-----
...
    adv-config-policy "childPolicy1" create
    description "Test"
    child-control
        offered-measurement
            add percent 30
            granularity percent 30
        exit
    bandwidth-distribution
        above-offered-cap percent 5
        granularity percent 5
    exit
    exit
exit
...
#-----
ALA-7>config>qos#
```

Applying Advanced Policies

Apply advanced policies to the following entities:

- [Queue Group](#)
 - [SAP Ingress](#)
 - [SAP Egress](#)
-

Queue Group

Use the following CLI syntax to apply advanced policies to ingress queue groups.

CLI Syntax: `config> qos queue-group-templates ingress queue-group group1 policer 1 adv-config-policy child1`

Use the following CLI syntax to apply advanced policies to egress queue groups.

CLI Syntax: `config> qos queue-group-templates egress queue-group group1 policer 1 adv-config-policy child1`

SAP Ingress

Use the following CLI syntax to apply advanced policies to an ingress SAP.

CLI Syntax: `qos sap-ingress 11 policer 1 adv-config-policy child1 queue 1 adv-config-policy child1`

SAP Egress

Use the following CLI syntax to apply advanced policies to an egress SAP.

CLI Syntax: `qos sap-egress 11 policer 1 adv-config-policy child1 queue 1 adv-config-policy child1`

Default Advanced Policy Values

The default policies cannot be edited or deleted. The following displays default advanced policy parameters:

Table 47: Advanced Policy Parameter Defaults

Field	Default
offered-measurement	
high-rate-hold-time	0
time-average-factor	0
sample-interval	4

Deleting QoS Policies

Delete advanced policies from the following entities:

- [Queue Group](#)
 - [SAP Ingress](#)
 - [SAP Egress](#)
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Queue Group

Use the following CLI syntax to delete advanced policies from ingress queue groups.

CLI Syntax: `config> qos queue-group-templates ingress queue-group group1 policer 1 no adv-config-policy`

Use the following CLI syntax to delete advanced policies from egress queue groups.

CLI Syntax: `config> qos queue-group-templates egress queue-group group1 policer 1 no adv-config-policy`

SAP Ingress

Use the following CLI syntax to delete advanced policies from an ingress SAP.

CLI Syntax: `qos sap-ingress 11 policer 1 adv-config-policy child1 queue 1 no adv-config-policy`

SAP Egress

Use the following CLI syntax to delete advanced policies from an egress SAP.

CLI Syntax: `qos sap-egress 11 policer 1 adv-config-policy child1 queue 1 no adv-config-policy`

Copying and Overwriting Advanced Policies

You can copy an existing advanced policy, rename it with a new policy ID value, or overwrite an existing policy ID. The `overwrite` option must be specified or an error occurs if the destination policy ID exists.

CLI Syntax: `config>qos> copy {adv-config-policy} source-policy-id dest-policy-id [overwrite]`

Editing Advanced Policies

You can change existing advanced policies and entries in the CLI or NMS. The changes are applied immediately to all services where this policy is applied. To prevent configuration errors copy the policy to a work area, make the edits, and then write over the original policy.

