

## Configuring a Basic Parameter Definition for QoS Administrators

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This section describes how to configure an individual parameter definition and how to associate it with an application.

Several of the following tasks are optional. Perform the required tasks and also any optional tasks that you need for your QoS parameter configuration.

To configure a parameter definition:

1. Create traffic classes.

```
host1(config)#traffic-class business-data  
host1(config-traffic-class)#exit  
host1(config)#traffic-class voice  
host1(config-traffic-class)#exit  
host1(config)#traffic-class video
```

2. Create a parameter definition.

- a. Specify the parameter definition name.

```
host1(config)#qos-parameter-define max-subscriber-bandwidth  
host1(config-qos-parameter-define)#
```

- b. Specify the logical interface types for the nodes and queues controlled by this parameter.

```
host1(config-qos-parameter-define)#controlled-interface-type atm-vc  
host1(config-qos-parameter-define)#controlled-interface-type vlan
```

You can specify up to four of the following controlled-interface types per parameter definition: atm, atm-vc, atm-vp, bridge, ethernet, fr-vc, ip, ip-tunnel, ipv6, l2tp-session, l2tp-tunnel, lsp, pppoe, serial, server-port, vlan.

- c. Specify the set of logical interfaces types upon which a QoS client can create instances of the parameter.

```
host1(config-qos-parameter-define)#instance-interface-type atm-vc  
host1(config-qos-parameter-define)#instance-interface-type ip
```

You can specify up to four of the following controlled-interface types per parameter definition: atm, atm-vc, atm-vp, bridge, ethernet, fr-vc, ip, ip-tunnel, ipv6, lag, l2tp-session, l2tp-tunnel, lsp, pppoe, serial, server-port, svlan, vlan.

- d. (Optional) Specify the set of interface types that a QoS client can assign to a parameter instance to represent subscribers.

```
host1(config-qos-parameter-define)#subscriber-interface-type ip
```

You can specify up to four of the following subscriber-interface types: atm-vc, ip, ipv6, l2tp-session, vlan.

- e. (Optional) Define the range of values that a QoS client can assign to a parameter instance.

```
host1(config-qos-parameter-define)#range 64000 8000000
```

3. Reference the parameter within a scheduler profile parameter expression and configure an assured rate, shaping rate, shared-shaping rate, or weight.

```
host1(config)#scheduler-profile business-data  
host1(config-scheduler-profile)#shaping-rate max-subscriber-bandwidth % 25
```

4. Add the scheduler profile to a QoS profile and configure the QoS profile.

```
host1(config)#qos-profile subscriber  
host1(config-qos-profile)#atm-vc queue traffic-class business-data  
                                  scheduler-profile business-data  
host1(config-qos-profile)#atm-vc queue traffic-class video scheduler-profile voice  
host1(config-qos-profile)#atm-vc queue traffic-class voice scheduler-profile video
```

#### Related Topics

- Parameter Definition Attributes for QoS Administrators Overview
- Example: QoS Parameter Configuration for Controlling Subscriber Bandwidth
- For more information about configuring a scheduler hierarchy with rates and weights, see Configuring a Scheduler Hierarchy
- For more information about configuring a QoS profile, see Configuring a QoS Profile
- assured-rate
- controlled-interface-type
- instance-interface-type
- node
- qos-parameter-define
- qos-profile
- queue
- range
- scheduler-profile
- shaping-rate
- shared-shaping-rate
- subscriber-interface-type
- traffic-class
- weight