

## Configuring a Parameter Definition to Adjust Cell Shaping Rates for ADSL Traffic

You can adjust shaping rates to account for different layer 2 encapsulations as well as the ATM cell pad, header, and trailer on interfaces with cell shaping mode using the **qos-byte-adjustment** application.



**NOTE:** When you apply a parameter with the **qos-byte-adjustment** application to an interface with frame shaping mode, you adjust shaping rates to account for different layer 2 encapsulations only.

To associate a parameter instance with the byte adjustment application:

1. Configure the traffic classes.

```
host1(config)#traffic-class voice  
host1(config-traffic-class)#exit  
host1(config)#traffic-class best-effort  
host1(config-traffic-class)#exit
```

2. Create a parameter definition.

- a. Configure the QoS parameter name and the application.

```
host1(config)#qos-parameter-define byteadjust1 application  
qos-byte-adjustment
```

- b. Configure a controlled-interface type.

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

- c. Configure an instance-interface type.

```
host1(config-qos-parameter-define)#instance-interface-type vlan
```

3. Do one of the following:

- Configure the shaping mode by issuing the **qos-shaping-mode** command.

Frame shaping mode is the default for Ethernet interfaces on all E Series routers. You can only set the cell shaping mode for Gigabit Ethernet and 10-Gigabit Ethernet interfaces configured on the GE-2 line module, the GE-HDE line module, and the ES2 4G LM.

- Configure the shaping mode by specifying the QoS cell mode application with a parameter definition.

```
host1(config)#qos-parameter-define cell-mode application qos-cell-mode
```

4. Attach the parameter definition to a logical Ethernet interface.

In this example, parameter instances are created for both the byte adjustment and QoS cell mode applications.

```
host1(config)#interface gigabitEthernet 7/0
host1(config-if)#encapsulation vlan
host1(config-if)#exit
host1(config)#interface gigabitEthernet 7/0.1
host1(config-if)#vlan id 1
host1(config-if)#qos-parameter byteadjustment -16
host1(config-if)#qos-parameter cell-mode 1
host1(config-if)#ip address 1.1.1.1 255.255.255.0
```

- Related Topics**
- Byte Adjustment for ADSL and VDSL Traffic Overview
  - Guidelines for Configuring Byte Adjustment of Cell and Frame Shaping Rates Using QoS Parameters
  - Example: QoS Parameter Configuration for QoS Cell Mode and Byte Adjustment for Cell Shaping
  - For information about managing packet fragmentation for traffic with frame shaping mode, see Configuring a Parameter Definition to Adjust Frame Shaping Rates for VDSL Traffic
  - For more information about configuring shaping modes for Ethernet, see QoS Shaping Mode for Ethernet Interfaces Overview and Cell Shaping Mode Using QoS Parameters Overview
  - controlled-interface-type
  - encapsulation vlan
  - instance-interface-type
  - ip address
  - node
  - qos-parameter
  - qos-parameter-define
  - qos-profile
  - queue
  - traffic-class
  - vlan id

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