

1. Add an Internet connect PVC (8/35 for example) and enable the Quality of Service during the PVC addition (see the PIC1).

Enable Quality Of Service

Enabling packet level QoS for a PVC improves performance for selected classes of applications. QoS cannot be set for CBR and Realtime VBR. QoS consumes system resources; therefore the number of PVCs will be reduced. Use **Advanced Setup/Quality of Service** to assign priorities for the applications. (Note: If Enable Quality Of Service checkbox is selected, you must enable QoS function simultaneously in **Advanced Setup/Quality of Service** window to make the function effective.)

Enable Quality Of Service

PIC1

2. Go to the "Advanced Setup" => "Quality of Service", then you can see the Web-Page (PIC2), and this indicates what "DSCP" value you want the modem marked when the packet send from the WAN port for each packets.

QoS -- Queue Management Configuration

If Enable QoS checkbox is selected, choose a default DSCP mark to automatically mark incoming traffic without reference to a particular classifier. Click 'Save/Apply' button to save it.

Note: If Enable QoS checkbox is not selected, all QoS will be disabled for all interfaces.
If Enable QoS checkbox is selected, you should also enable Quality Of Service when you configure a new pvc or edit an existent pvc in Advanced Setup/WAN window to make the QoS Queue effective.

Note: The default DSCP mark is used to mark all egress packets that do not match any classification rules.

Enable QoS

Select Default DSCP Mark

PIC2

3. Go to the "Advanced Setup" => "Quality of Service" => "Queue Config" (PIC3), and add the Queue for the Internet PVC you added, each PVC has maximum 3 Queues and the Queue1 is the highest priority, Queue3 is the lowest.

Device Info

Advanced Setup

 WAN

 LAN

 Security

 Parental Control

 Quality of Service

Queue Config

 QoS Classification

 Routing

 DSL

Diagnostics

Management

QoS Queue Configuration -- A maximum 16 entries can be configured.

Interfacename	Precedence	Queue Key	Enable	Remove
PVC 0/8/35	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PVC 0/8/35	2	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PVC 0/8/35	3	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>

PIC3

4. Go to the "Advanced Setup" => "Quality of Service" => "Qos Classification" and add the traffic classification that you want to prioritize.

A. See the PIC4 and fill the Rule name, select the rule order (the order means the process sequence, select last if this rule is new or the rule will be process right after the previous rule) and enable/disable.

Add Network Traffic Class Rule

The screen creates a traffic class rule to classify the upstream traffic, assign queue which defines the precedence and the interface and optionally overwrite the IP header DSCP byte. A rule consists of a class name and at least one condition below. All of the specified conditions in this classification rule must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate the rule.

Traffic Class Name:

Rule Order:

Rule Status:

PIC4

B. See the PIC5 and select the Queue that you created in step3, the "DSCP" you want to mark for this specific rule and the 802.1p precedence (the PVC most confired VLAN tagged) if needed (at least one of three selections has to been selected)

Assign ATM Priority and/or DSCP Mark for the class

If non-blank value is selected for 'Assign Differentiated Services Code Point (DSCP) Mark', the corresponding DSCP byte in the IP header of the upstream packet is overwritten by the selected value.

Assign Classification Queue:

Assign Differentiated Services Code Point (DSCP) Mark:

Mark 802.1p if 802.1q is enabled:

PIC5

C. See the "**Specify Traffic Classification Rules**" (see PIC6). Select either the SET-1 or SET-2 (only one of them), the parameter of SET-1 or SET-2 is the **Condition** of the rule that you want to assign Queue or 802.1p or mark DSCP.

PS: The **Condition** could be the IP, IP range, IP port number, MAC address, protocol (TCP/UDP), the packets marked DSCP number came from LAN or WLAN side for the **SET-1** and also the 802.1q for the **SET-2**.

Specify Traffic Classification Rules

Enter the following conditions either for IP level, SET-1, or for IEEE 802.1p, SET-2.

SET-1

Protocol:

Differentiated Services Code Point (DSCP) Check:

Source Subnet Mask:

UDP/TCP Source Port (port or port:port):

Destination IP Address:

Destination Subnet Mask:

UDP/TCP Destination Port (port or port:port):

Source MAC Address:

Source MAC Mask:

Destination MAC Address:

Destination MAC Mask:

SET-2

802.1p Priority:

Save/Apply

PIC6

5. Setup a Qos configuration that has 3 priorities, SIP, Video and Data and use the IP port difference to classify the precedence and use Charitot to pump the different packet to see if each classific packet has different throughput rate.

6. Use LAN PC with running the Chariot console and setup 3 pairs using address of LAN PC and the DSLAM PC address (the traffic direction should be from LAN to WAN) with script "FTPput".

7. Edit each pair's IP port number (see the attached port change example.file) in order to differentiate the 3 services.