

KGS-510F QoS Design for Peer-to-Peer Applications

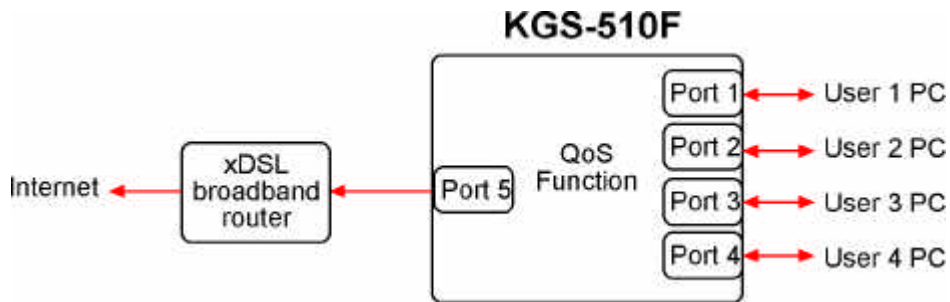
Scenario

Multiple users are sharing one broadband uplink and playing Peer-to-Peer applications over Internet. This case is quite common in school, a small office, a small community, or a dormitory. With an ordinary Ethernet switch connecting to the users, one issue often happens. Some users occupy the uplink bandwidth sometimes for a long time and the rest users are frustrated to get their application running smoothly, even the application stops running. The problem is even worse when the Internet uplink bandwidth is small.

Solution

Any switch, which can provide Weighted Fairness Queuing (WFQ) service can be a solution to resolve this problem. WFQ means that multiple user requests in different queues can be served in a weighted round robin method such that every users can get a weighted guaranteed bandwidth from the Internet up-link. No dominate user exists any more. Such WFQ QoS function is often provided in a high-end corporate switch. However, KTI s compact Gigabit switch KGS-510F is also equipped with such function. An example is provided in next section to illustrate how to configure KGS-510F to support WFQ.

KGS-510F QoS Configuration for WFQ



User #	User 1	User 2	User 3	User 4	Up-link
Port # connected	P1	P2	P3	P4	P5
QoS 802.1p mode	X	X	X	X	X
QoS DSCP mode	X	X	X	X	X
Port Priority	Class 0	Class 1	Class 2	Class 3	-
802.1p mapping	-	-	-	-	-
DSCP mapping	-	-	-	-	-
Service Policy	-	-	-	-	Weighted ratio priority Class 3:2:1:0 = 1:1:1:1

Note: X – disabled, “-” – don't care

The four users connected to the KGS-510F are allocated with an equal guaranteed bandwidth of the Internet uplink port. No more dominate user exists.