

NTRLS IT: Real Stories
Setting up simple QoS

Issue / Problem:

Bandwidth in your library and patron computer use of that bandwidth when staff need to have priority over patrons for Internet access.

Background Information you should know about:

What is Internet Bandwidth and QoS. Internet Bandwidth is the speed that you have to access the internet with. The more computers you have accessing the internet the slower your speed will be. Think of it like this, you have a hose which you are drinking water from, and now come along 5 of your friends and they also want to drink, but they are drinking at the same time as you are. This will mean less water per second for you to drink. But if you have someone stop those friends from drinking while you take your drink, this is kind of what QoS (Quality of Service) does for you.

Resolution / How we solved the problem:

To setup simple QoS in your library to separate library staff from public access computers over the same internet connection, you will need to have a couple of devices in place.

1. You will need to have a router that supports QoS through Ethernet ports. Typically all the newer routers will do this, just make sure before you buy one that it does in fact support this feature.
2. You will need to have a switch with enough ports for all your staff devices. I say devices because you may want the printers dedicated to the staff to also be on the same switch as the staff computers and servers if you are upgrading the internal speed to gigabit Ethernet.
3. You will also need to use the old switch or get a new one if you are upgrading the internal speed of your public access devices to a higher Ethernet speed such as gigabit.
4. You will need extra patch cables to hook everything together.
5. After physically hooking up the router and programming it to work with your original router or replacing your original router, log into the router and go to the QoS administration page of the router. Follow instructions according to the router manual to get there if needed. Set one of the Ethernet port numbers on the back of the router to a high priority and another to a low priority and make sure to save your settings. Take note of the numbers on the Ethernet ports assigned to which is which.
6. Find out which cables go to each staff device and then plug them into the new switch and then plug that switch into the HIGH priority Ethernet port on the back of the router.

7. Repeat step 6 for the public devices on the old switch or another new one and plug it into the low priority port.
8. Test all connections to make sure internet works and networking devices work such as printers, etc. If all is well then your library is now set with simple QoS over the network to access the Internet giving requests to the staff side priority over the public side.

If you have any questions or comments, please contact me at abeatty@ntrls.org.