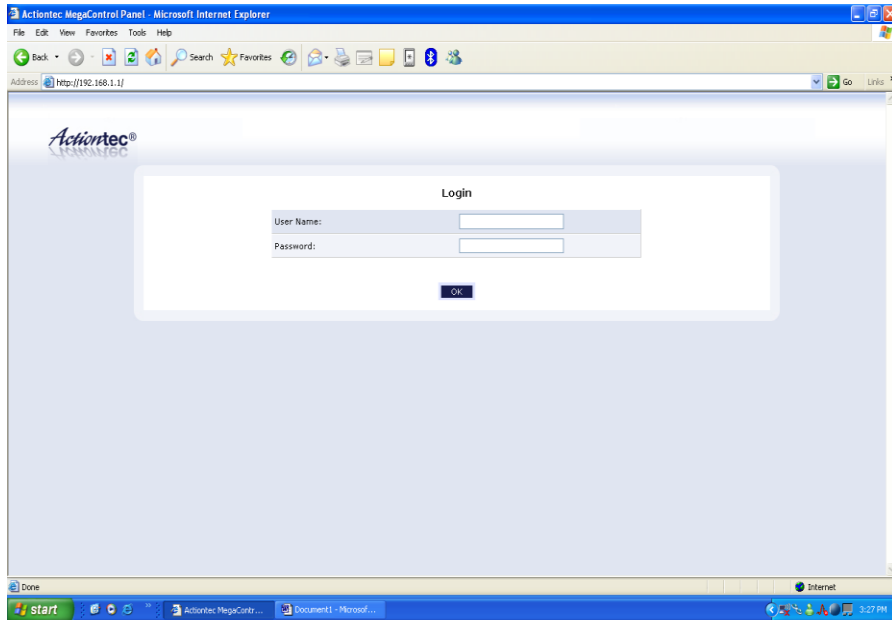


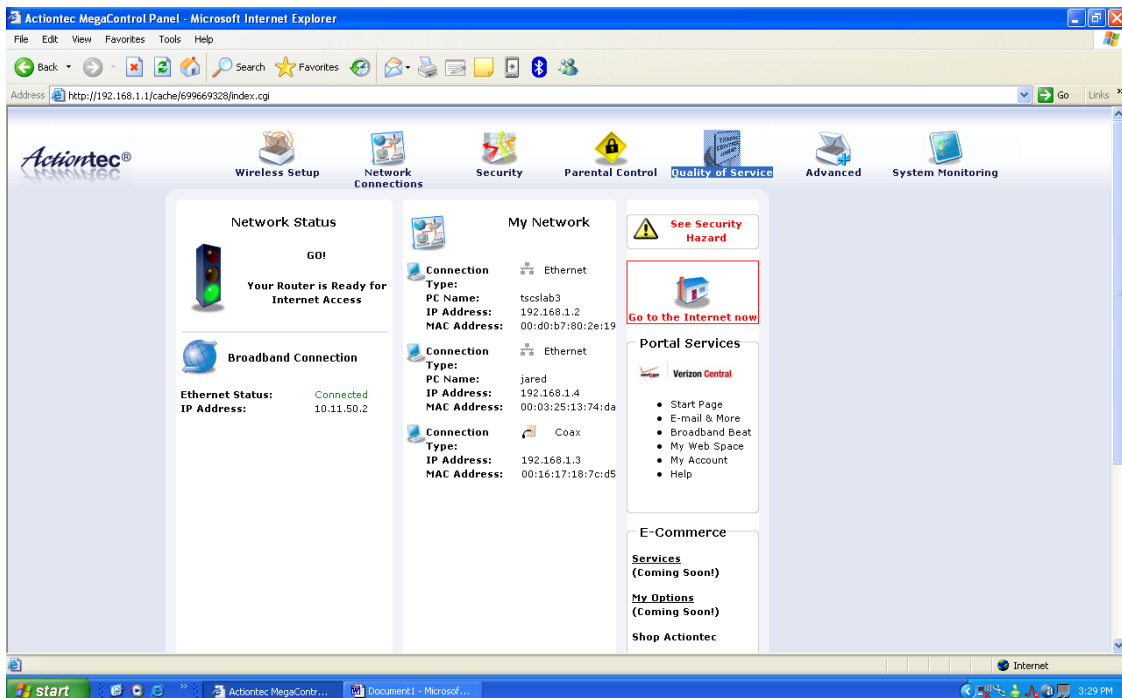
# **Quality of Service**

Let's begin with saying "Hello, and Thank You for choosing the Actiontec MI424WR. You will find this device to very powerful, and outstanding, for many purposes. One of the options you might find useful is Quality of Service. What is it used for, and how will it benefit you? It refers to the capability of a network to provide better service to selected network traffic over various technologies, including Frame Relay, Asynchronous Transfer Mode (ATM), Ethernet and 802.1 networks, SONET, and IP-routed networks that may use any or all of these underlying technologies. The primary goal of QoS is to provide priority including dedicated bandwidth, controlled jitter and latency (required by some real-time and interactive traffic), and improved loss characteristics. Also important is making sure that providing priority for one or more flows does not make other flows fail. QoS technologies provide the elemental building blocks that will be used for future business applications in campus, WAN and service provider networks. So your next big question is how do you set it up? Well let's take a walk inside of the router.

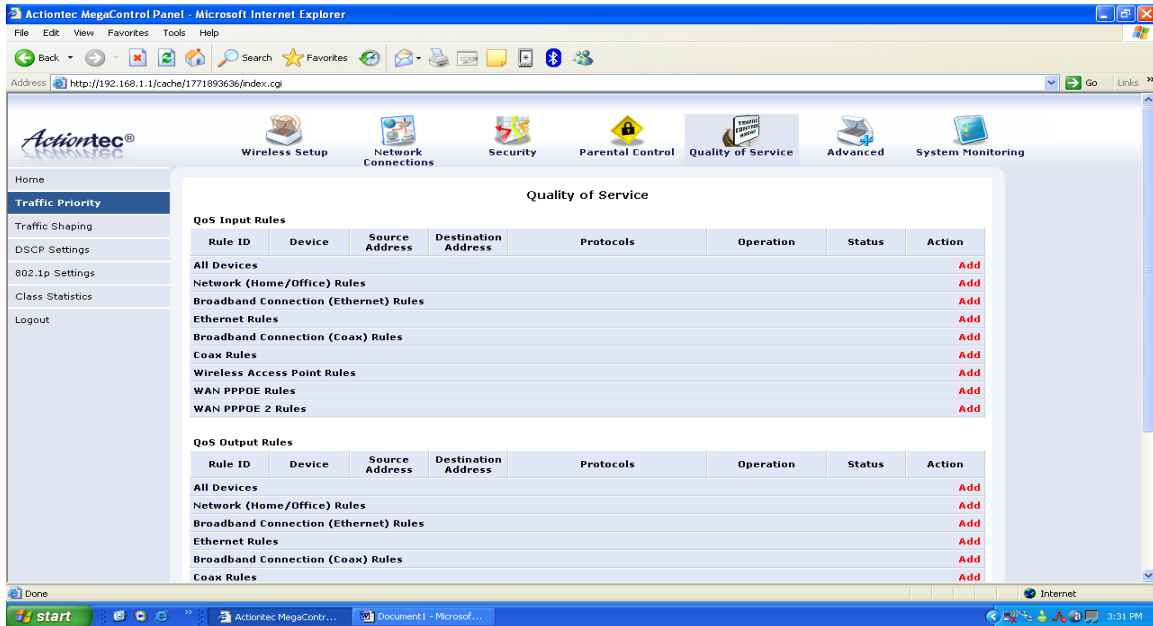
- 1) First what you going to have to do is login to the Actiontec router, either via Ethernet cable, or Wireless, which ever is easier for you to access. Once at the login screen, go ahead and type in your username and password so we can begin.



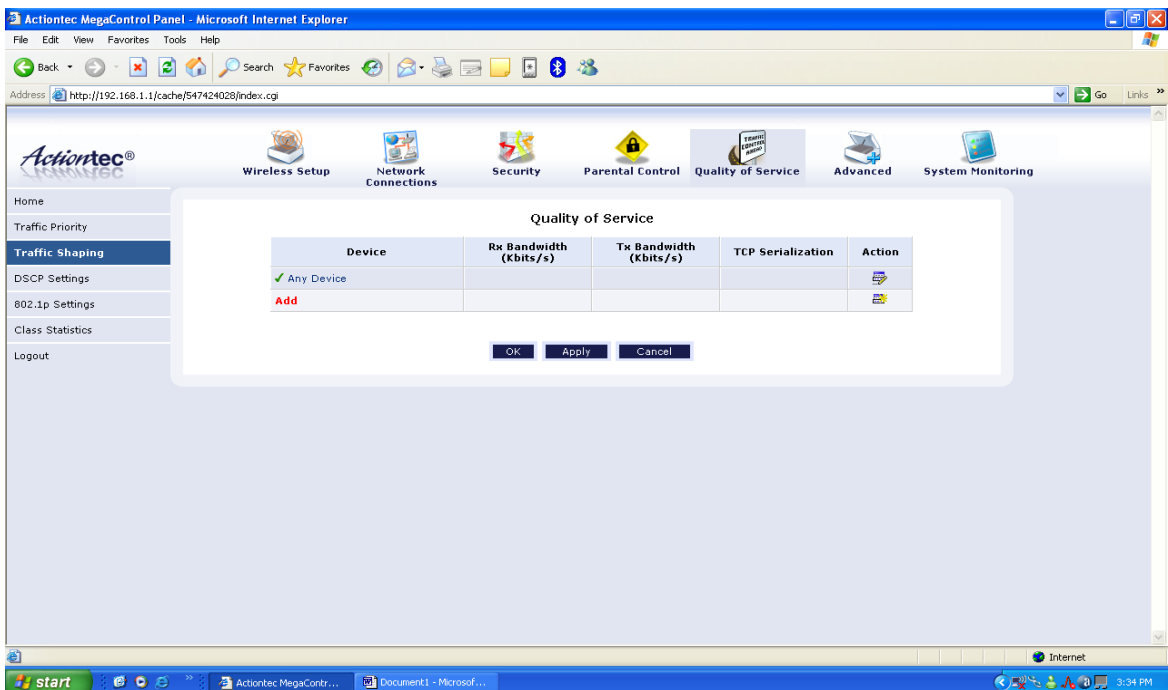
- 2) Next let's go ahead and click on Quality of Service. In this screen shot I have highlighted it blue, just so you can see which one I'm pointing us too.



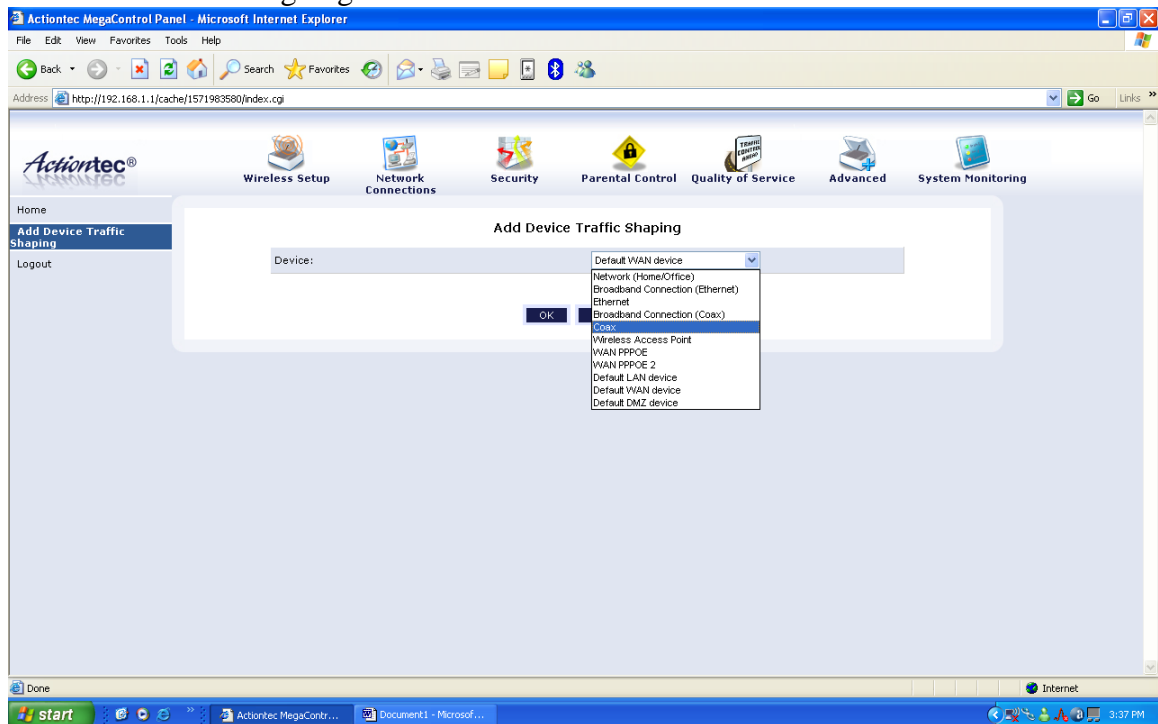
- 3) Once in here you will see several options, such as Traffic Priority, Traffic Shaping, DSCP Settings, 802.1p Settings, and Class Statistics.



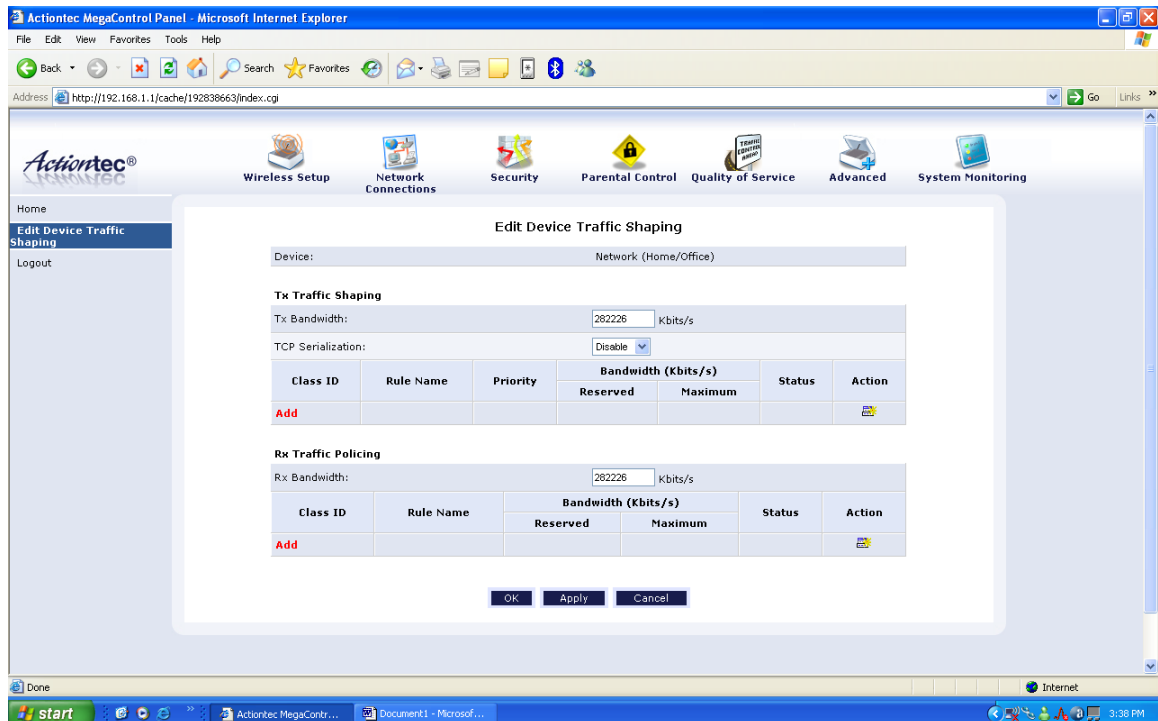
- 4) To begin setting up Quality of Service, first you'll want to make sure the devices you want to restrict or limit are connected to the Actiontec Router. Next if you want to limit or reserve any kind of Bandwidth, you'll first have to go to Traffic Shaping off to the left hand side of the screen.



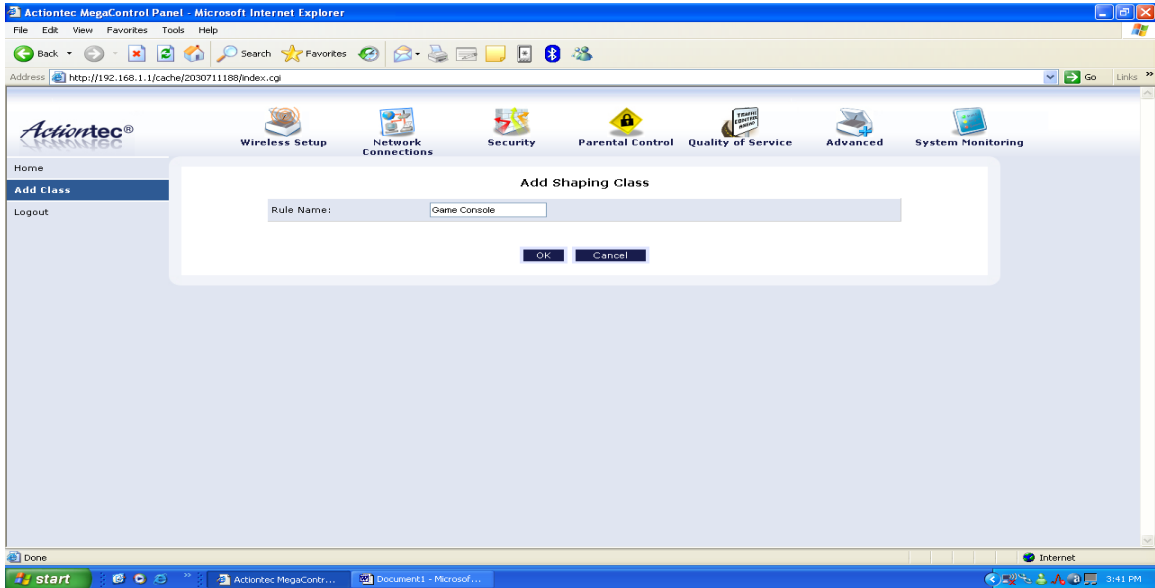
5) In here is where we can add an any device to limit its Bandwidth coming into the Router or going out of the Router.



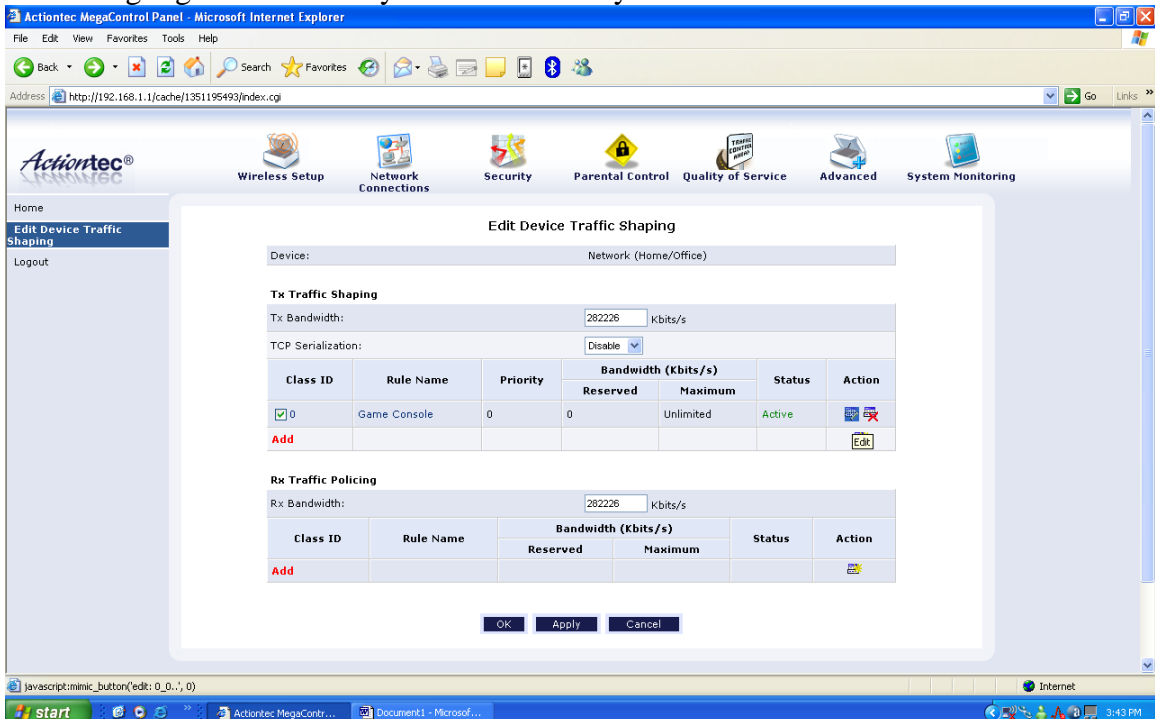
6) So lets go ahead and add one. Now in the next screen is where you will find where to set limitations on the Bandwidth.



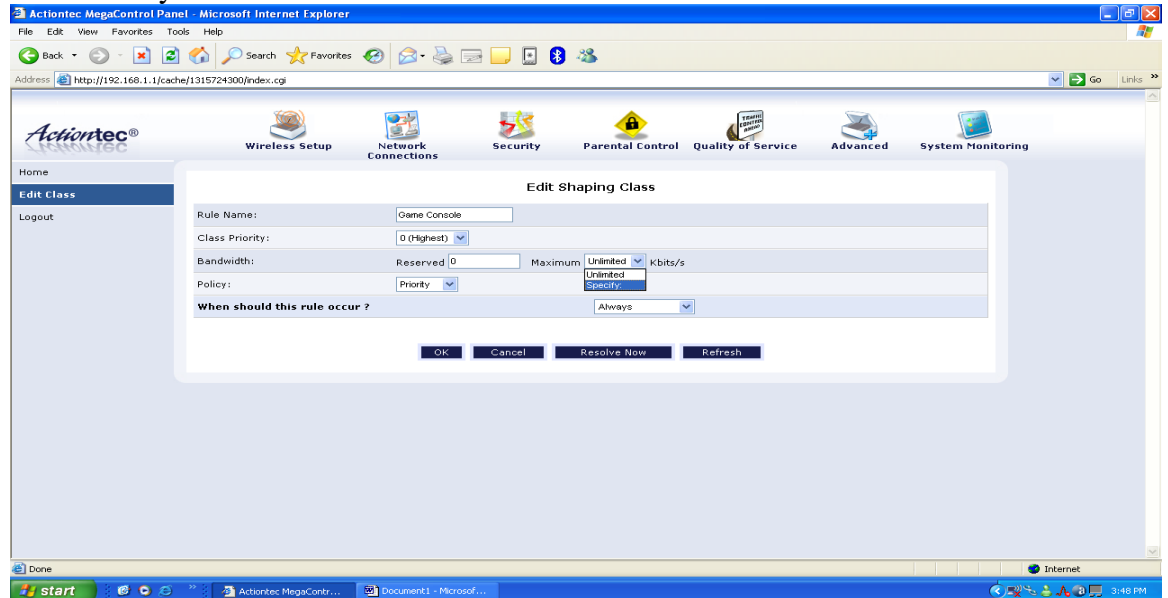
- 7) So, let's say your daughter/son is taking all of your Bandwidth on the Video Game Console. How would you change it so that there not taking all of your Bandwidth away? Simple! Here you'll add under Class ID, in this case what we will call Game Console as a Rule Name.



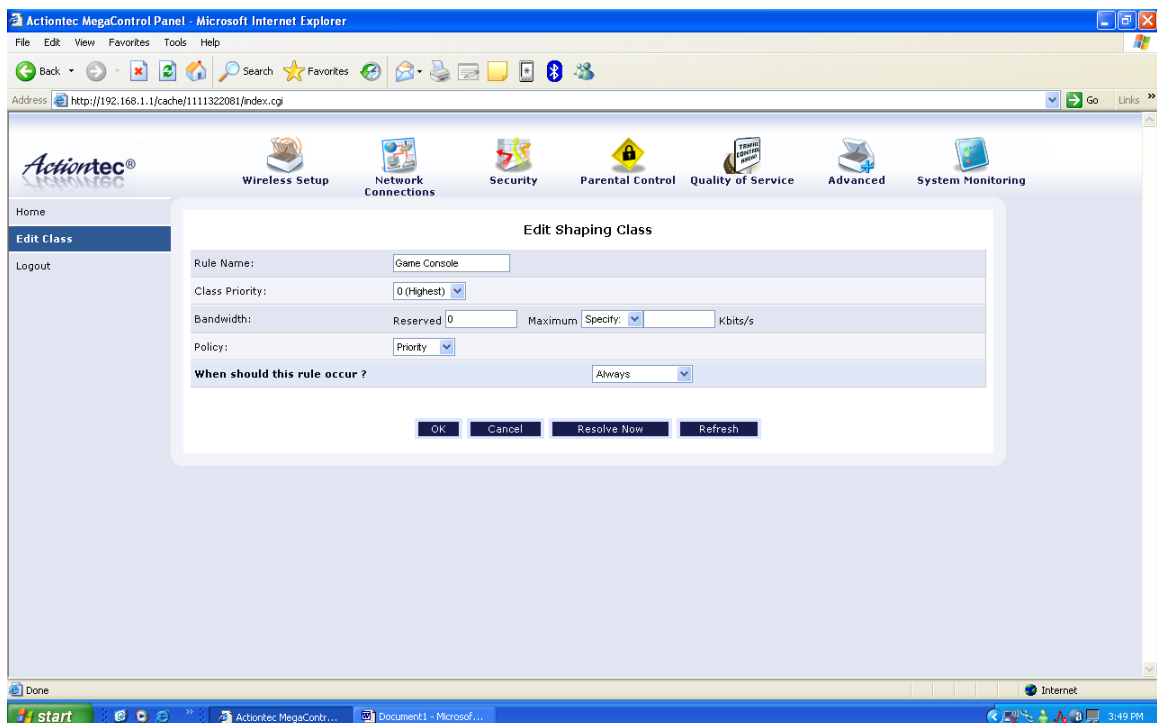
- 8) Once you hit ok, it will then take you back to the Edit Device Traffic Shaping screen. Here we will want to click on the Edit icon located to the right of the rule name we just made, right under the word ACTION. In the screen I have highlighted it blue so you can see exactly which one it is.



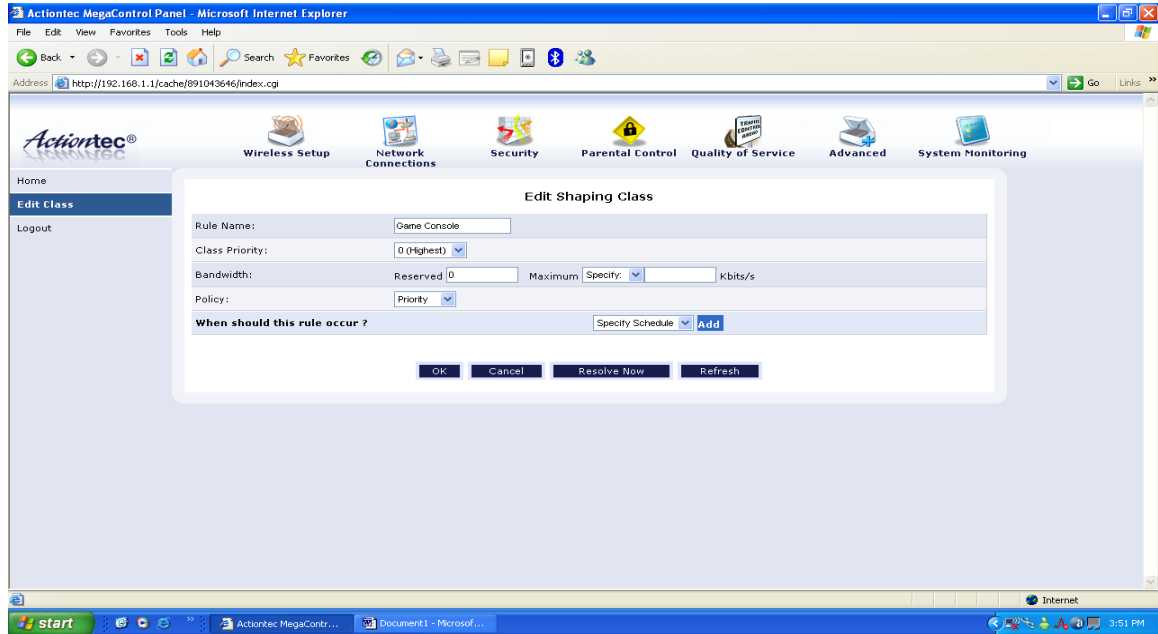
- 9) Now that we're in the edit option for the rule name we have just created, we will then want to choose the class priority, which basically means, if it's first or last on the list of priority sorting. Also here we will want to choose the maximum bandwidth, and the reserved Bandwidth. In here, if you select the drop down box for Maximum Bandwidth, you can specify exactly how much Bandwidth you want for that a Game Console.



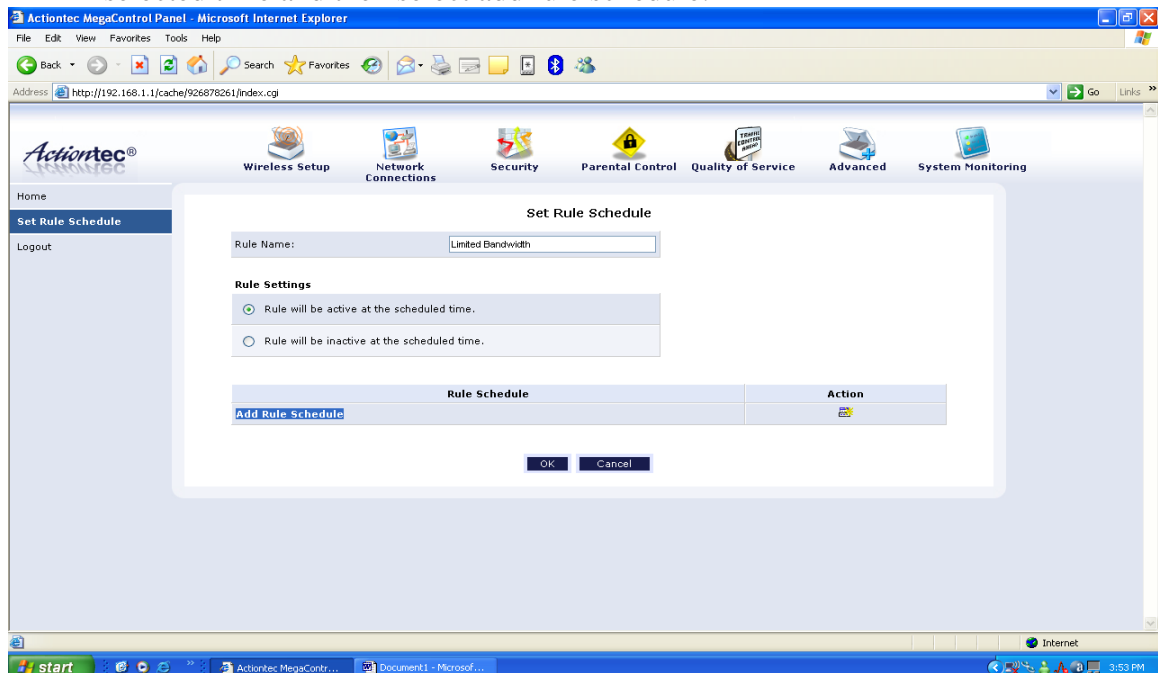
- 10) Now once you've selected specify then you can set exactly how much you want to go to that Game Console.



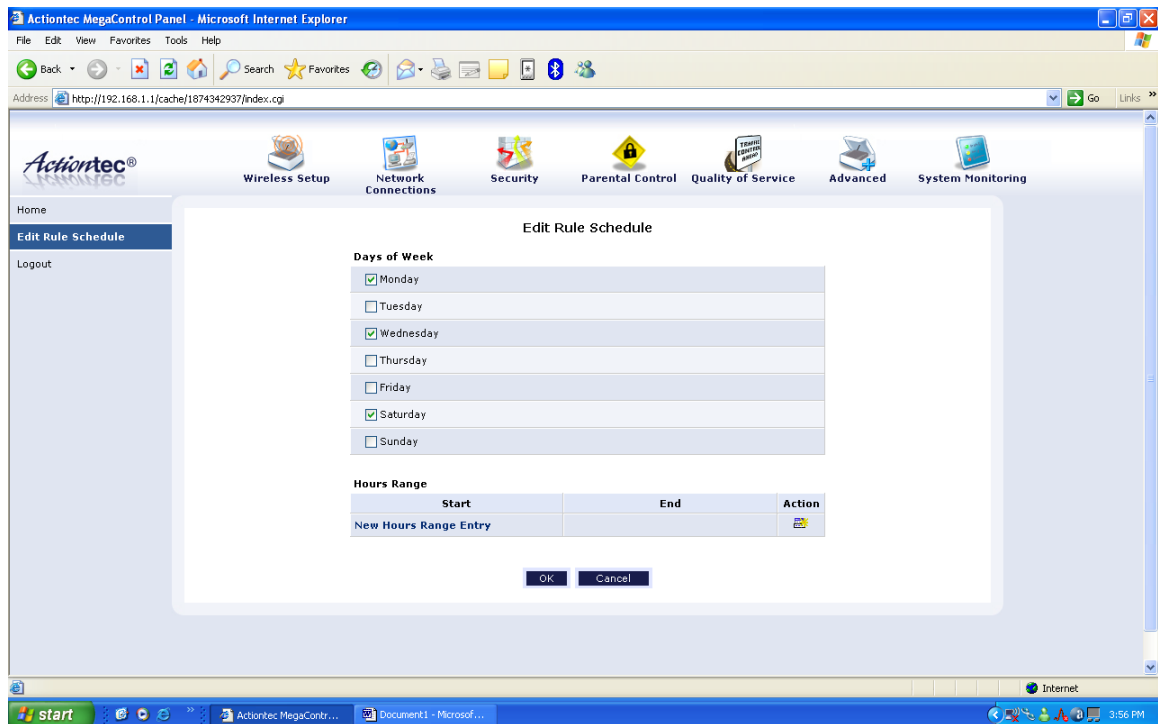
- 11) And one other great feature is you can specify a set date for when you want this rule to occur. So if you don't want to be to mean, you can set this rule to occur only Thursday. So if you select specify schedule on the drop down box next to When Should This Rule Occur? You will get an add button, go ahead and select that.



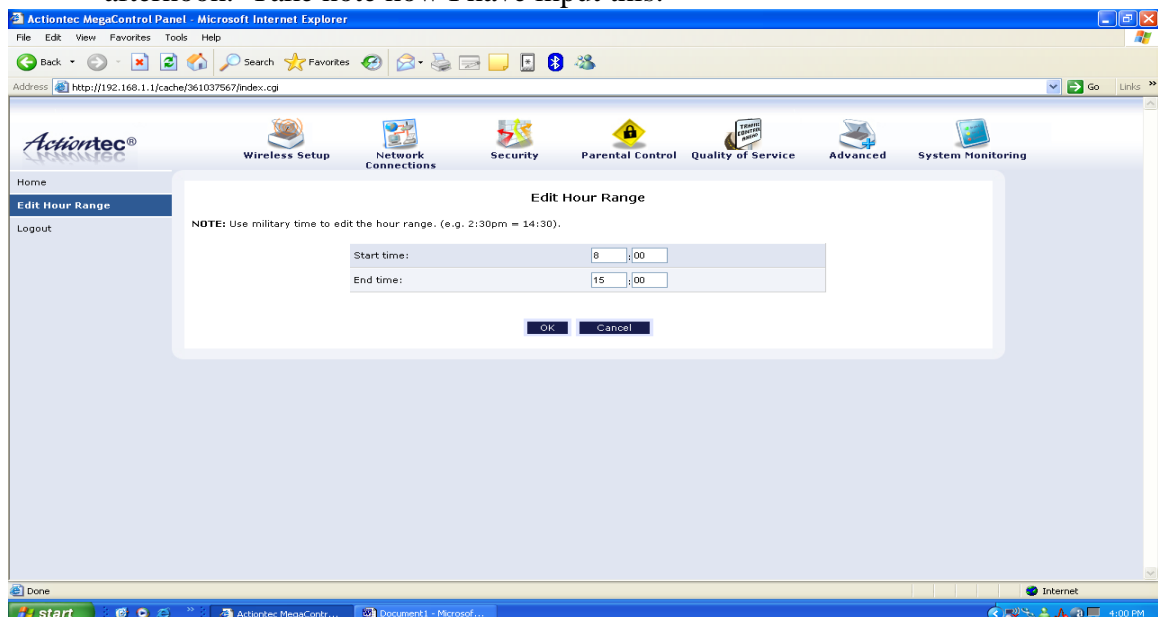
- 12) Once in here we can set the name for the schedule rule, when this rule will be active or inactive. So let's just call this Limited Bandwidth. We're going to set this rule to be active on the days when you're on your computer the most. So Monday, Wednesday, and Saturday. So select this rule will be active at the selected time and then select add rule schedule.



- 13) Now that we're in Edit Rule Schedule let's just check the boxes Monday, Wednesday, and Saturday. You can even set what hours of the day on those days you want this to occur.

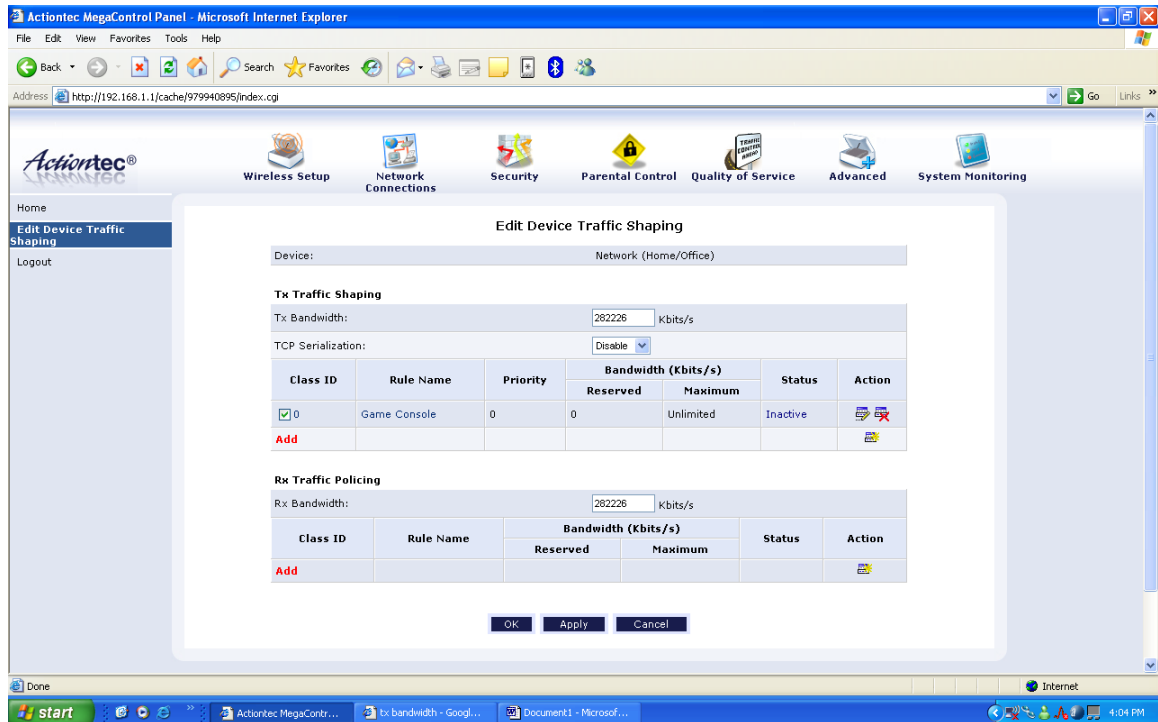


- 14) Now for this feature to work you have set a hours range. So let's go ahead and select New Hours Range Entry. In here we will want to set the time during the day we want this to occur. Now this has to be in military time just for your notice. Now I only want this to occur from 8 in the morning to 3 in the afternoon. Take note how I have input this.

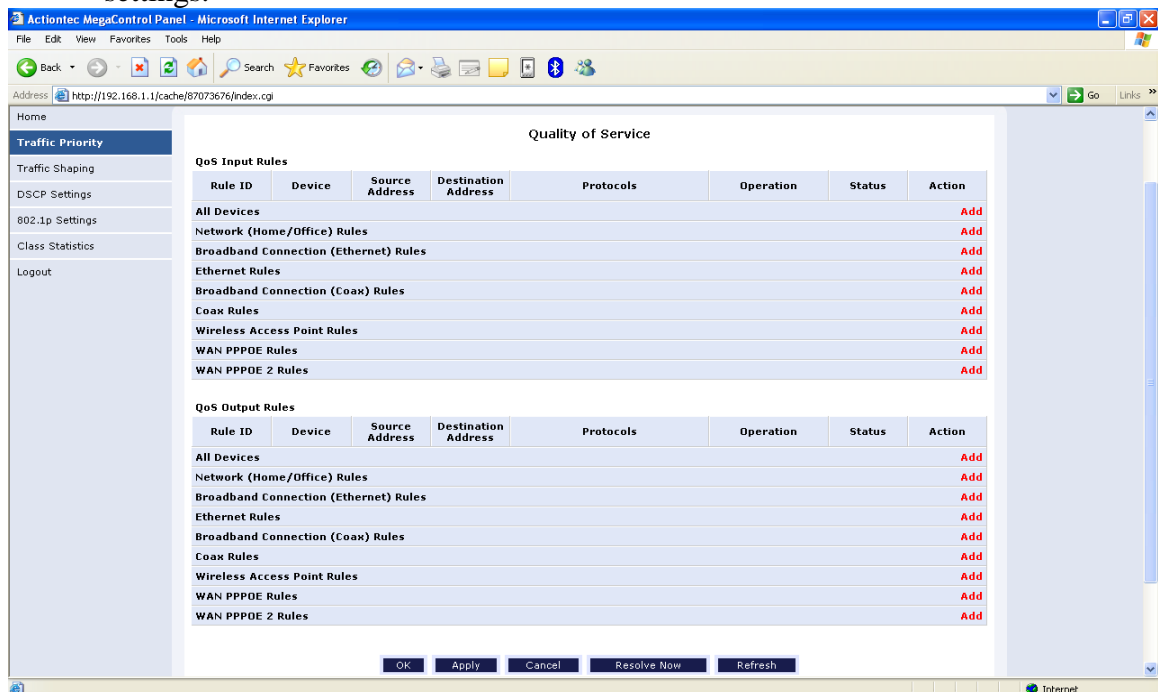




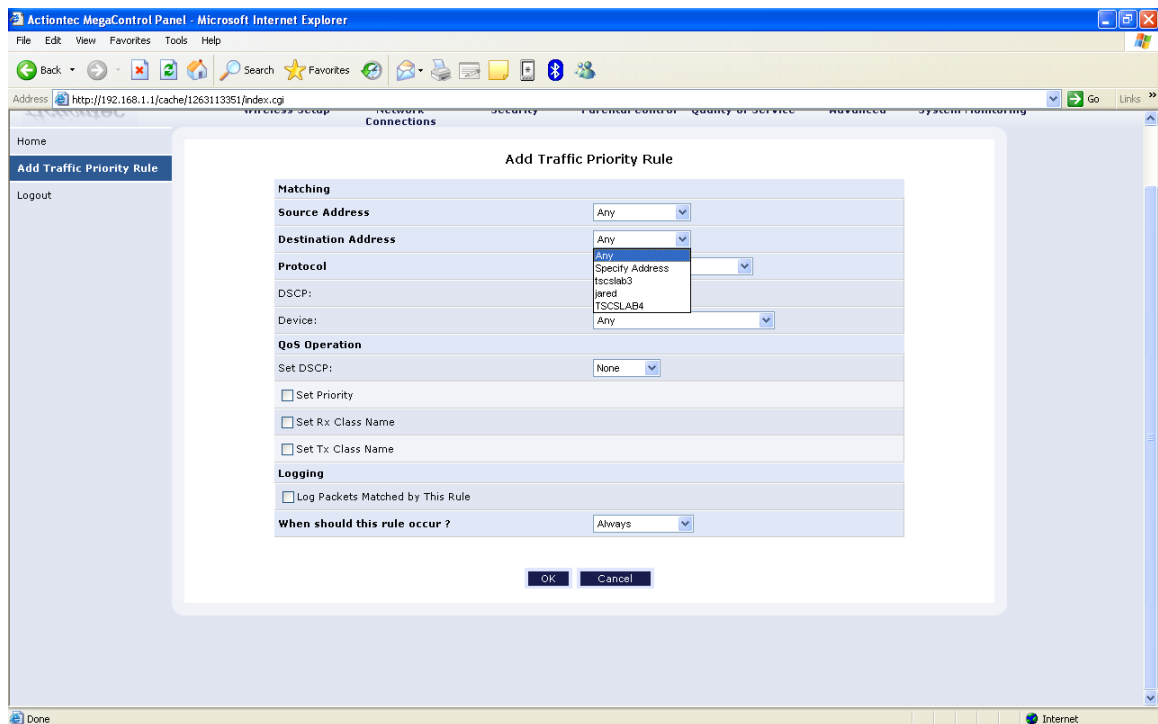
- 15) Now let's just go ahead and hit ok in tell were back at the main Edit Device Traffic Shaping screen, you'll notice that your rule has been put in place. Also look that this is for the Tx Bandwidth, so your going to want to do the same for the Rx Bandwidth too



- 16) Once all this is done click Apply, then ok for the settings to take effect. Now that we've set one device for the traffic shaping lets go set our Traffic Priority settings.

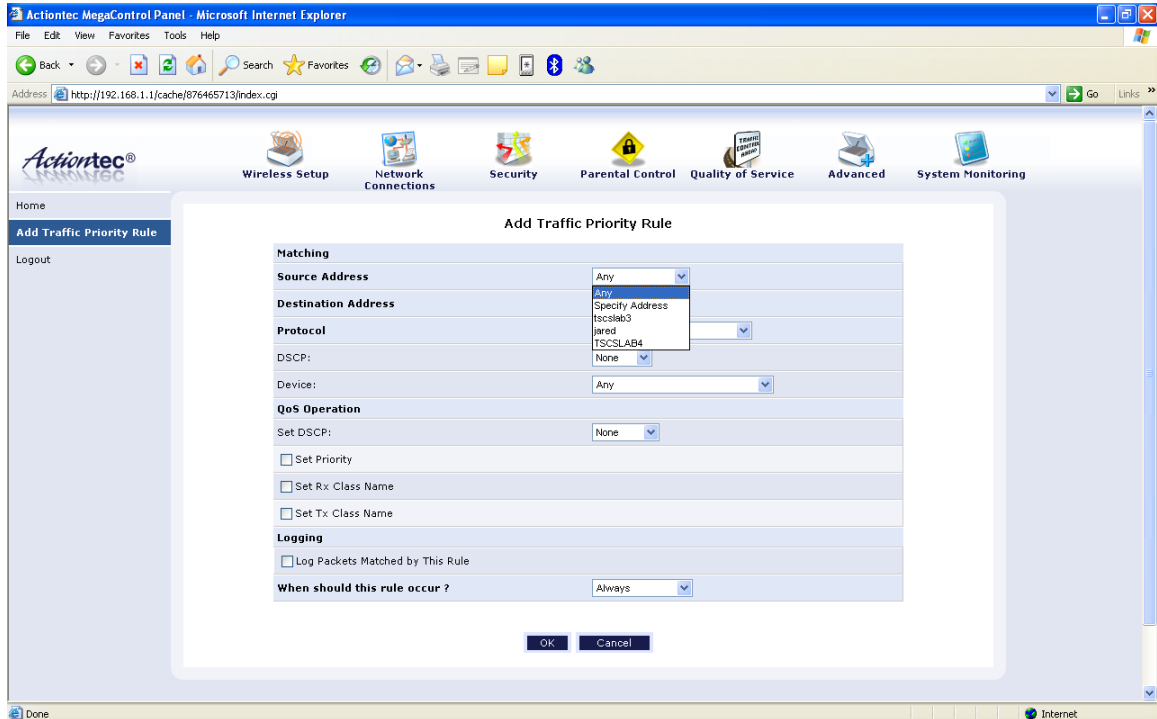


- 17) Now in this screen we can choose where we want to apply this rule, either for All Devices, your home or office rules, the broadband connection through Ethernet, your regular Ethernet connections, the broadband connection through COAX, your COAX connection, your wireless access point, and the last two which are WAN PPPOE, AND WAN PPPOE 2. But where going to apply this rule is under Network (Home/Office) Rule for the input rules first, because the Game Console is under our home/office network.
- 18) Now in this screen you'll source address, and destination address. Your going to want to click the arrow next to destination address, just because destination is for the computers on the LAN side of the Router. If the Game Console is connected then in the drop down box you will see it there. For our example for you, we have just called it tscslab3. So go ahead and choose your device in that drop down box.



- 19) So now that we've selected our device, you don't have to worry about much on this page, except for where it says set Rx class name, and set Tx class name. Now to make those Bandwidth limitations apply, your going to want to check those two boxes and then press ok. Once down so its going to take us back to the main Quality of Service screen, here were going to do the same thing only except for the output rules at the lower part of the screen.

- 20) Now one thing to take note of is that in when you select add under the output rules, under add traffic priority rule, the source and destination address, your going to want to think as flipped. Only because now were going outbound, so now instead of choosing Destination Address, your going to want to choose Source Address



- 21) Now after this just click ok, in tell your at the home page. Now you have successfully set up Quality of Service, with limiting Bandwidth, to one LAN device, on certain days of the week, and certain hours of those days.