Optimize Online Game Traffic Using Bigfoot Networks Killer™ Xeno™ Pro and NETGEAR® Routers

INTRODUCTION

You can build a better network for online gaming by optimizing the path for your game data on your PC and your wired home network by using the Killer™ Xeno™ Pro in conjunction with your NETGEAR® router. In this article, we'll show you some tips to make that happen.

The Killer Xeno Pro gaming network card and its Intelligent Bandwidth Control feature help you prioritize traffic on your online gaming PC. NETGEAR® Wireless-N routers such as the WNR3500L and the WNDR3700 offer a Quality of Service (QoS) feature that helps you prioritize wired traffic that goes between your home network and the Internet. This helps you set priority and control bandwidth usage between different users on your home network. When used in combination, you can dramatically improve online gaming performance. By prioritizing gaming traffic over other types of network traffic on your home network, you can keep racking up kills or leveling up your favorite game character without having to worry about someone in the next room uploading a new video to YouTube or downloading music with a Torrent application.

CONFIGURING NETGEAR ROUTERS FOR ONLINE GAMING

To get the best online gaming performance, it is best to optimize your home router as well as your PC. With the NETGEAR WNR3500L or WNDR3700 Internet Access QoS feature, you can assign priority to certain applications across all of your networked PCs. To set the priority for games, or any network application, follow these steps:

1. Open a browser and type in the following URL: http://www.routerlogin.com or http://192.168.1.1 (assuming you have not changed the default IP address on your router).

2. Enter your username and password.

3. Click **QoS** setup under the **Advanced menu**.

4. Click the button labeled **Turn Bandwidth Control On**

    1. Make sure to set the Uplink Bandwidth Maximum to the proper value for your Internet connection, or select **Automatically Check Uplink Bandwidth** and click the **Check** button.

5. Click the button labeled **Turn Internet Access QoS On.**

6. Click on **Add Priority Rule**.

7. Select the appropriate **Priority Category** that meets your need. In this case, since we're setting up your network for online games, select **Online Gaming**.

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8. Click **Apply** for changes to take effect.
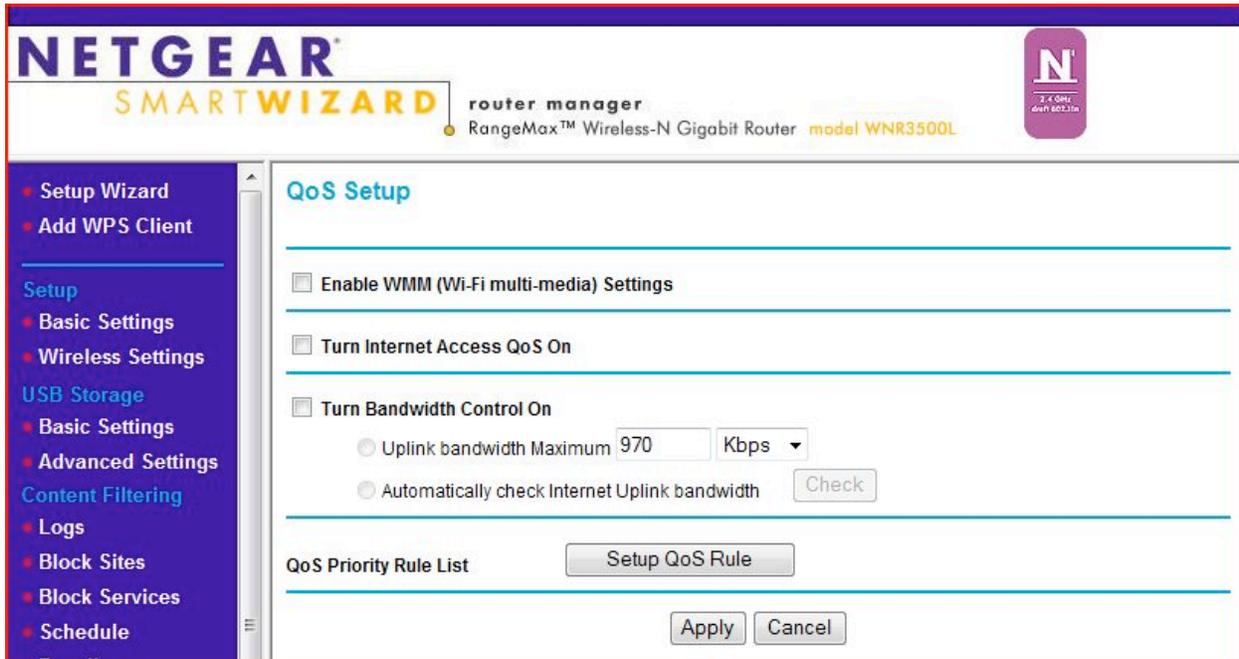
To add or edit a new game to have the **Online Gaming** priority, follow these steps:

1. Specify a **User defined name** on **QoS Policy for (*game)*.** In this example, we'll use *Unreal Tournament*.

2. Set the **Priority Category** to **Online Gaming.**

3. Select the **Application** to "Add a new game".

4. Set the Priority to **Highest.**

5. Specify the **Connection Type** for the game as either TCP or UDP. In this case, *Unreal Tournament* uses mostly UDP traffic.

6. Set the starting port and ending port for the game. These ports can be found in your user manual for the game or on the developer's website. These settings vary for every game, so don't assume that the ports for one game will work with another.

    See the table at the end of this document for port settings for several popular online PC games.

    For more port forwarding settings for online games, check out websites such as www.portforward.com .
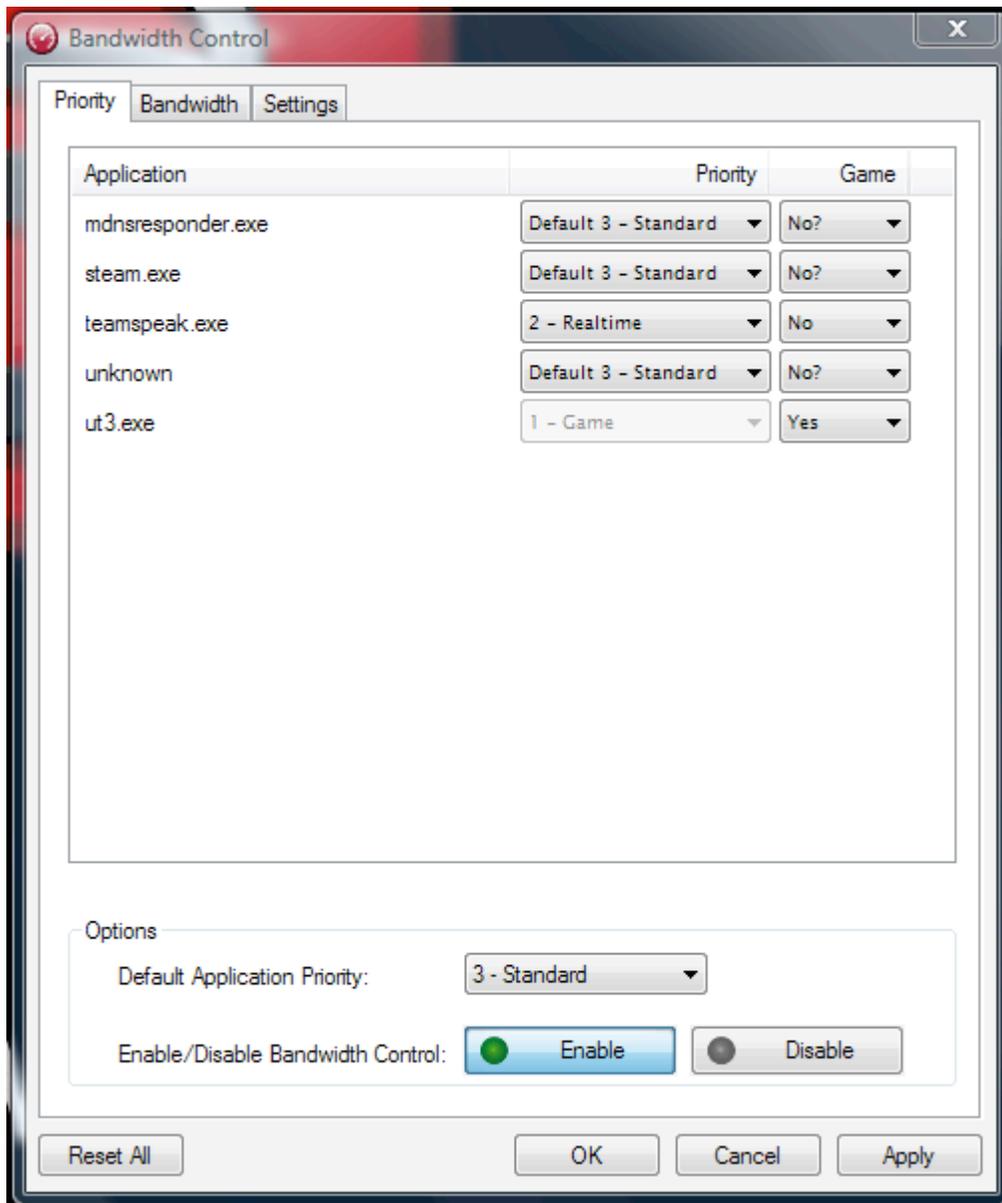
7. Click **Apply** to apply the settings.
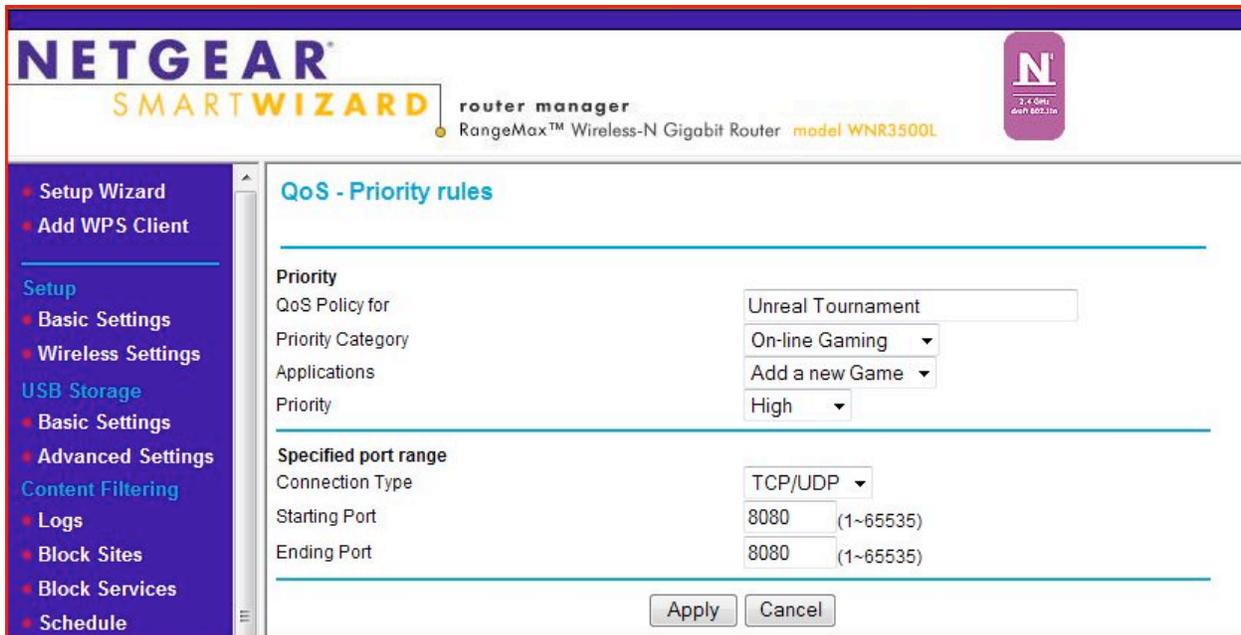
CONFIGURING KILLER XENO PRO

Now that you've properly configured your router to assign Highest Priority to Unreal Tournament, you can then work with the Killer Xeno Pro and its Intelligent Bandwidth Control feature to assign priority and bandwidth to the game on your online gaming PC.

1. Right-click on the Xeno Tray Icon and select **Bandwidth Control**.

2. Select "Enable" to turn Bandwidth Control on.

3. If the game you want to prioritize (in this case, *Unreal Tournament*) isn't already listed in the **Priority** tab, minimize bandwidth control and start the game. Bandwidth Control will use Game Detect technology in the Killer Xeno Pro to identify the game as soon as it starts. After you finish playing the game, return to the Bandwidth Control window.

4. Your game should automatically appear in the **Priority** list. It should also automatically be set to **Priority 1 – Game**. If not, manually select **Priority 1 – Game** from the drop-down list

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next to the game and select the **Yes** option from the **Game** column.

5. Check on the **Bandwidth** tab to ensure that the game's bandwidth is set to **Unlimited** in both the Up and Down categories.
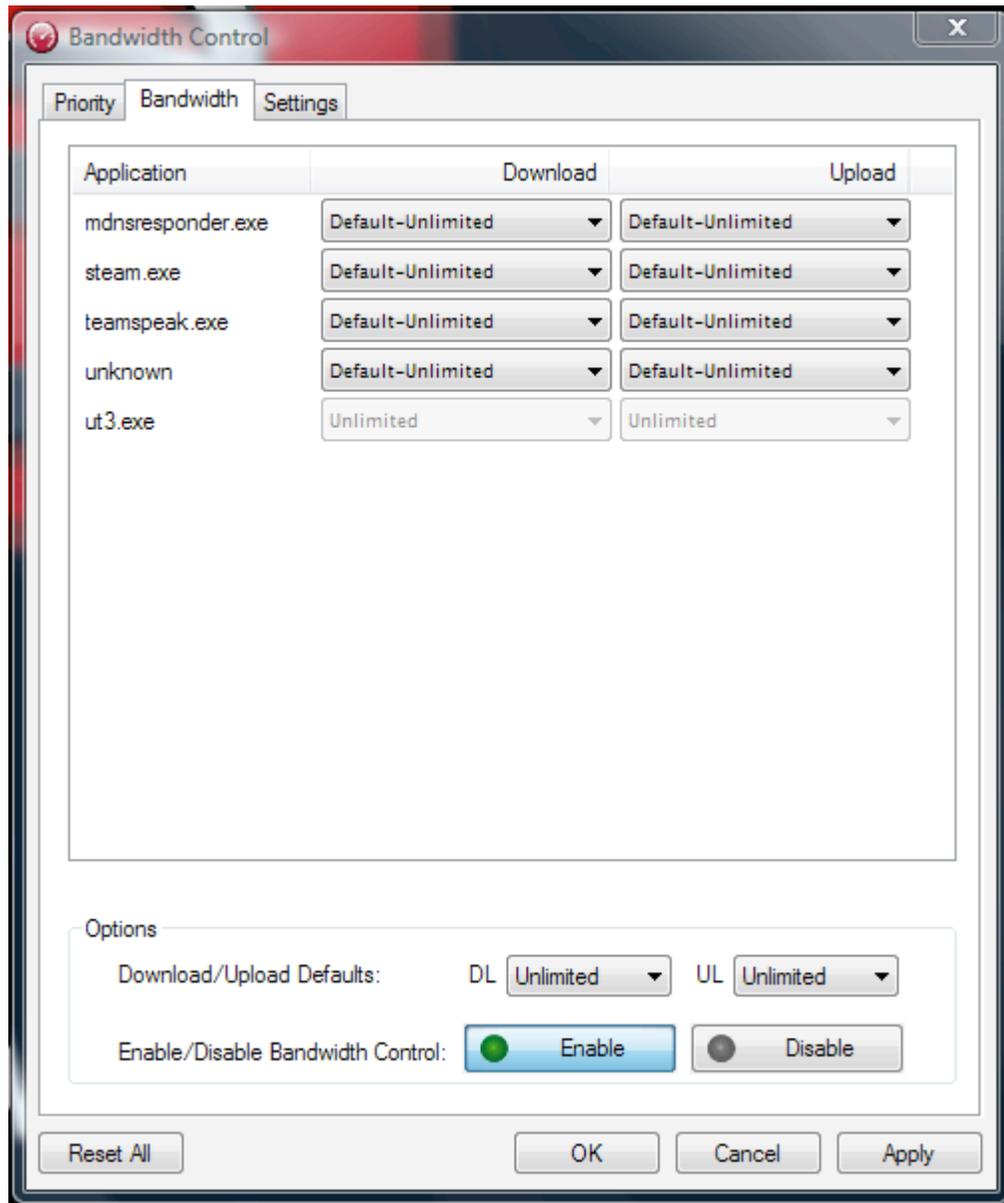
6. Click **Apply** to save your Intelligent Bandwidth Control settings.

Now, your game has the highest priority of all your online applications, not only on your PC, but also your network.

PERFORMANCE

In our lab testing with the NETGEAR WNR3500L and the Killer Xeno Pro, we designed a test where multiple computers on a network would download large files such as a Linux image via Torrent clients over the Internet, while one system, equipped with a Killer Xeno Pro and Intelligent Bandwidth Control, would play online games.

When we enabled QoS rules on the NETGEAR WNR3500L and Intelligent Bandwidth Control on the Killer Xeno Pro, we saw a 50% decrease in latency in *World of Warcraft* and a 56% decrease in latency in *Call of Duty: Modern Warfare* on the gaming PC. Your experience may vary, depending on Internet and local network conditions.

With the combination of the Killer Xeno Pro and the NETGEAR WNR3500L or WNDR3700 routers, your online game data can have the highest priority and maximum bandwidth from your PC, across your home network and out to the Internet -- all while sharing the connection with other computers on your network.

TABLE 1: PORT SETTINGS FOR POPULAR ONLINE GAMES

Game	Port number(s)	Type	Notes
Steam	27000-27050, 4380	TCP and UDP	Includes Source-engine games like *CounterStrike: Source*, *Team Fortress 2* and *Left 4 Dead 2*
Call of Duty: Modern Warfare 2	1500, 3005, 3101, 28960	UDP	These ports are important for the Steam functionality in *Modern Warfare 2.*
World of Warcraft	3724, 6112, 6881-6999	TCP	The 6881-6999 range is important for multiple WoW players on the same local network.
Flight Sim X	23456, 6073	UDP	
Borderlands	3783 , 27900 , 28900 , 29900 , 29901 , 13139 , 6515 , 6500 , 7777 ,	TCP and UDP	
Spore	80, 443, 18120, 18060	TCP	
Call of Duty: Modern Warfare	28960	UDP	
Empire: Total War	27015, 49181	TCP	
Civilization IV	6667 , 2033 , 2056 , 2300-2400 , 3784 , 6500 , 6667 , 27900 , 28900 , 29900 , 29901 , 47624 , 13139 ,	TCP and UDP	May require additional Gamespy settings.
Battle.Net Games	6112-6119,	TCP and UDP	Includes *Warcraft III*, *Starcraft*, and *Diablo II*