

How do I configure my QoS on DIR series router?

QoS (Quality of Service) is designed to shape and prioritize your internet traffic among the computers on your LAN. This allows for an optimized internet experience.

The QoS engine can be configured in many ways.

Note: *The lower the priority number, the higher its priority over all.*

Also remember that multiple priority can be set to a single IP address for multiple port ranges. When doing this, ensure that the ports for one rule do not overlap in to another as this will cause a conflict and deter desired performance.

To set up QoS in your router, use the following steps:

Step 1 Open a web browser and type the IP address of the DIR series router into the address bar (default is http://192.168.0.1).

Step 2 The default username is **admin** (all lower case) and the default password is blank (nothing). Click on **OK**.

Step 3 Click on the **Advanced** tab at the top and then click on **QOS Engine** on the left hand side.

The screenshot displays the D-Link DIR-625 router's web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar lists various configuration options, with QOS ENGINE selected. The main content area is titled 'QOS ENGINE' and contains a description of the QoS Engine's purpose. Below the description are two buttons: 'Save Settings' and 'Don't Save Settings'. The 'QOS ENGINE SETUP' section includes several configuration options with checkboxes and input fields:

- Enable QoS Engine :** ☒
- Automatic Classification :** ☒
- Dynamic Fragmentation :** ☒
- Automatic Uplink Speed :** ☒
- Measured Uplink Speed :** Not Estimated kbps
- Manual Uplink Speed :** 128 kbps << Select Transmission Rate
- Connection Type :** Auto-detect
- Detected xDSL Or Other Frame Relay Network :** No

On the right side of the page, there is a 'Helpful Hints...' section with text explaining the importance of the Measured Uplink Speed and a 'More...' link.

Step 4 Ensure the **Enable QoS Engine** box is checked. Also ensure that the **Automatic Classification** and **Automatic Uplink Speed** boxes are checked as well as.

Step 5 Under **QOS Engine Rules**, fill in the required information for the QoS rule as follows:

Make sure to click the check mark next to the rule to enable it.

- **Name** - Create a name for the rule that is meaningful to you. (this identifies, to the user, which rule is being configured)
- **Priority** - Assign the rule a priority. (1 being highest and 255 being lowest).
- **Protocol** - Define a protocol number and/or type. (e.g. for streaming media you would use UDP and for FTP you would use TCP)
- **Source IP Range** - Assign the local IP address range. (This tells the router what IP addresses on the LAN are to use the given QoS rule)
- **Source Port Range** - Define the ports that you want prioritized. (e.g. Web traffic (http) operates on port 80.)
- **Remote IP range** - Assign a remote IP address range. (Unless you are positive of the remote IP address range you want prioritized, leave this at it is default setting. 0.0.0.0 to 255.255.255.255)
- **Destination Port Range** - Assign a remote port range. (Unless you are positive of the remote port range you want prioritized, leave this at it is default setting. 0 to 65535)

Here is an example:

User wish to have higher priority to the Game traffic, lower priority for the rest of the normal traffic.

The screenshot displays the '10 -- QOS ENGINE RULES' configuration window. It contains two rule entries, each with a red border. The first rule, 'GameTraffic', has a priority of 1 and a remote port range of 1025 to 65535. The second rule, 'NormalTraffic', has a priority of 255 and a remote port range of 1 to 1024. Both rules are enabled (checked) and have a protocol of 257 and a local port range of 0 to 65535. The 'Both' option is selected for the protocol direction in both rules.

Name	Priority	Protocol	Local IP Range	Local Port Range	Remote IP Range	Remote Port Range
GameTraffic	1	257 << Both	0.0.0.0 to 255.255.255.255	0 to 65535	0.0.0.0 to 255.255.255.255	1025 to 65535
NormalTraffic	255	257 << Both	0.0.0.0 to 255.255.255.255	0 to 65535	0.0.0.0 to 255.255.255.255	1 to 1024

Step 6 Click **Save Settings** to complete the setup.

The following screen shot is an example of a properly configured QoS:

QOS ENGINE

Use this section to configure D-Link's QoS Engine powered by StreamEngine™ Technology. The QoS Engine improves your online gaming experience by ensuring that your game traffic is prioritized over other network traffic, such as FTP or Web. For best performance, use the Automatic Classification option to automatically set the priority for your applications.

Save Settings

Don't Save Settings

QOS ENGINE SETUP

Enable QoS Engine : ☒

Automatic Classification : ☒

Dynamic Fragmentation : ☒

Automatic Uplink Speed : ☒

Measured Uplink Speed : 2071 kbps

Manual Uplink Speed : 128 kbps << Select Transmission Rate

Connection Type : Auto-detect

Detected xDSL or Other

Frame Relay Network : No

10 -- QOS ENGINE RULES

	Name	Priority	Protocol
	Gaming Machines	10 (1..255)	257 << Both
<input checked="" type="checkbox"/>	Local IP Range		Local Port Range
	192.168.0.2 to 192.168.0.3		0 to 65535
	Remote IP Range		Remote Port Range
	0.0.0.0 to 255.255.255.255		0 to 65535
	Name	Priority	Protocol
	Remote Manage	40 (1..255)	6 << TCP
<input checked="" type="checkbox"/>	Local IP Range		Local Port Range
	192.168.0.1 to 192.168.0.1		80 to 80
	Remote IP Range		Remote Port Range
	0.0.0.0 to 255.255.255.255		0 to 65535
	Name	Priority	Protocol
	RDP	30 (1..255)	6 << TCP
<input checked="" type="checkbox"/>	Local IP Range		Local Port Range
	192.168.0.6 to 192.168.0.6		59997 to 59999
	Remote IP Range		Remote Port Range
	0.0.0.0 to 255.255.255.255		0 to 65535
	Name	Priority	Protocol
	FTP	125 (1..255)	6 << TCP
<input checked="" type="checkbox"/>	Local IP Range		Local Port Range
	192.168.0.6 to 192.168.0.6		60000 to 61000
	Remote IP Range		Remote Port Range
	0.0.0.0 to 255.255.255.255		0 to 65535
	Name	Priority	Protocol
	BT	255 (1..255)	257 << Both
<input checked="" type="checkbox"/>	Local IP Range		Local Port Range
	192.168.0.6 to 192.168.0.6		62000 to 62000
	Remote IP Range		Remote Port Range
	0.0.0.0 to 255.255.255.255		0 to 65535
	Name	Priority	Protocol
	Gaming Machine	25 (1..255)	257 << Both
<input checked="" type="checkbox"/>	Local IP Range		Local Port Range
	192.168.0.4 to 192.168.0.5		0 to 65535
	Remote IP Range		Remote Port Range
	0.0.0.0 to 255.255.255.255		0 to 65535
	Name	Priority	Protocol
	Camera	75 (1..255)	257 << Both
<input checked="" type="checkbox"/>	Local IP Range		Local Port Range
	192.168.0.9 to 192.168.0.9		1026 to 1028
	Remote IP Range		Remote Port Range
	0.0.0.0 to 255.255.255.255		0 to 65535