



## Enabling QoS for DLink DGL 4100

The DLink DGL 4100 calls its QoS functionality "GameFuel." Although the GameFuel moniker implies gaming, it is in fact a top notch QoS feature (as most games played on the Internet are network intensive) and has no direct bearing on its functionality.

Enabling QoS for your router involves three basic steps:

1. Enable GameFuel
2. Configure a SIP GameFuel Rule
3. Disable built in SIP ALG

### Step One

Look under the Advanced tab in the router interface.

Under GameFuel Setup,

1. Click the Enable GameFuel check box
2. Click the check boxes for:
  - Automatic Classification
  - Dynamic Fragmentation
  - Automatic Uplink Speed
  - Select Connection type as Auto-detect



## Step Two

You next need to configure a GameFuel Rule for SIP under Add/Edit GameFuel™ Rule. The various settings that need to be specified in this process, along with recommended settings for each of the options, are listed below:

Click on the **Enable** check box and enter the following details for the new rule:

	Rule Setting Option	Details	Recommended Setting
1	Name	Create a name for the rule that is meaningful to you	SIP
2	Priority	The priority of the message flow is entered here. 0 receives the highest priority (most urgent) and 255 receives the lowest priority	1
3	Protocol	The protocol used by the messages	TCP
4	Source IP Range	Applies to a flow of messages whose LAN-side IP address is within the range set here.	0.0.0.0-255.255.255.255
5	Source Port Range	Applies to a flow of messages whose LAN-side port number is within the range set here.	5060-5060
6	Destination IP Range:	Applies to a flow of messages whose WAN-side IP address is within the range set here.	0.0.0.0-255.255.255.255
7	Destination Port	Applies to a flow of messages whose WAN-side port number is within the range set here.	5060-5060
8	Save	Saves the new rule or modified existing rule to the Rules list. When you have finished editing the settings, you must click the <b>Save Settings</b> button at the top of the page to make the changes effective and permanent.	

The screenshot below shows the setting described above:

### GAMEFUEL SETUP

**Enable GameFuel :**   
**Automatic Classification :**   
**Dynamic Fragmentation :**   
**Automatic Uplink Speed :**   
**Measured Uplink Speed :** 1219 kbps  
**Manual Uplink Speed :**  kbps <<   
**Connection Type :**   
**Detected xDSL Or Other Frame Relay Network :** Yes

### ADD GAMEFUEL RULE

**Enable :**   
**Name :**   
**Priority :**  (1..255, 255 is the lowest priority)  
**Protocol :**  <<   
**Source IP Range :**  to   
**Source Port Range :**  to   
**Destination IP Range :**  to   
**Destination Port Range :**  to

### GAMEFUEL RULES LIST

Enable	Name	Priority	Source IP Range	Destination IP Range	Protocol / Ports		
<input checked="" type="checkbox"/>	BitTard	120	0.0.0.0-255.255.255.255	0.0.0.0-255.255.255.255	TCP 6881-6881/ 6881-65535		
<input checked="" type="checkbox"/>	https	40	0.0.0.0-255.255.255.255	0.0.0.0-255.255.255.255	TCP 0-65535/ 443-443		
<input checked="" type="checkbox"/>	www	80	0.0.0.0-255.255.255.255	0.0.0.0-255.255.255.255	TCP 0-65535/ 80-80		
<input checked="" type="checkbox"/>	SIP	1	0.0.0.0-255.255.255.255	0.0.0.0-255.255.255.255	TCP 5060-5060/ 5060-5060		

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*Note: The router must reboot before the new settings can take effect. You will be prompted to **Reboot the Device** or **Continue**. If you need to make additional settings changes, click **Continue**. If you are finished with your configuration settings, click **Reboot the Device**.*



## Step Three

Make sure that the built-in SIP ALG (Application Layer Gateway) is not enabled. The SIP ALG allows devices and applications using VoIP (Voice over IP) to communicate across NAT. Some VoIP applications and devices have the ability to discover NAT devices and work around them. This ALG may interfere with the operation of such devices (including WorldSmart). Make sure that the SIP ALG is disabled by deselecting the check box next to SIP. The image below has information as described above.

ROUTING	<b>FIREWALL SETTINGS</b>
ACCESS CONTROL	Enable SPI : <input checked="" type="checkbox"/>
WEB FILTER	<b>NAT ENDPOINT FILTERING</b>
MAC ADDRESS FILTER	UDP Endpoint Filtering : <input type="radio"/> Endpoint Independent <input checked="" type="radio"/> Address Restricted <input type="radio"/> Port And Address Restricted
FIREWALL	TCP Endpoint Filtering : <input type="radio"/> Endpoint Independent <input type="radio"/> Address Restricted <input checked="" type="radio"/> Port And Address Restricted
INBOUND FILTER	<b>DMZ HOST</b>
ADVANCED NETWORK	<p>The DMZ (Demilitarized Zone) option lets you set a single computer on your network outside of the router. If you have a computer that cannot run Internet applications successfully from behind the router, then you can place the computer into the DMZ for unrestricted Internet access.</p> <p><b>Note:</b> Putting a computer in the DMZ may expose that computer to a variety of security risks. Use of this option is only recommended as a last resort.</p> Enable DMZ : <input type="checkbox"/>
	<b>NON-UDP/TCP/ICMP LAN SESSIONS</b>
	Enable : <input checked="" type="checkbox"/>
	<b>APPLICATION LEVEL GATEWAY (ALG) CONFIGURATION</b>
	PPTP : <input checked="" type="checkbox"/>
	IPSec (VPN) : <input checked="" type="checkbox"/>
	RTSP : <input type="checkbox"/>
	Windows/MSN Messenger : <input checked="" type="checkbox"/> (automatically disabled if UPnP is enabled)
	FTP : <input checked="" type="checkbox"/>
	H.323 (NetMeeting) : <input type="checkbox"/>
	SIP : <input type="checkbox"/>
	Wake-On-LAN : <input type="checkbox"/>
	MMS : <input checked="" type="checkbox"/>

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