TeleWell TW-EAV510

XDSL ROUTER

RELEASE 1.3

USER MANUAL

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Device Installation

The TW-EAV510 connects two separate physical interfaces, an xDSL (WAN) and an Ethernet (LAN) interface. Place the Router in a location where it can be connected to the various devices as well as to a power source. The Router should not be located where it will be exposed to moisture or excessive heat. Make sure the cables and power cord are placed safely out of the way so they do not create a tripping hazard. As with any electrical appliance, observe common sense safety procedures.
The Router can be placed on a shelf or desktop, ideally you should be able to see the LED indicators on the front if you need to view them for troubleshooting.

Power on Router

The Router must be used with the power adapter included with the device.

1. Insert the DC Power Adapter cord into the power receptacle located on the rear panel of the Router and plug the adapter into a suitable nearby power source.

2. Depress the Power button into the on position. You should see the Power LED indicator light up and remain lit. The Status LED should light solid green and begin to blink after a few seconds.

3. If the Ethernet port is connected to a working device, check the LAN LED indicators to make sure the connection is valid. The Router will attempt to establish the xDSL connection, if the xDSL line is connected and the Router is properly configured this should light up after several seconds. If this is the first time installing the device, some settings may need to be changed before the Router can establish a connection.

Factory Reset Button

The Router may be reset to the original factory default settings by using a ballpoint or paperclip to gently push down the reset button in the following sequence:
1. Press and hold the reset button while the device is powered off.
2. Turn on the power.
3. Wait for 10 seconds and then release the reset button.
Remember that this will wipe out any settings stored in flash memory including user account information and LAN IP settings. The device settings will be restored to the factory default IP address **192.168.0.254** and the subnet mask is **255.255.255.0**, the default management Username is “admin” and the default Password is “admin.”

Network Connections

Connect xDSL Line
Use the xDSL cable included with the Router to connect it to a telephone wall socket or receptacle. Plug one end of the cable into the xDSL port (RJ-11 receptacle) on the rear panel of the Router and insert the other end into the RJ-11 wall socket. If you are using a low pass filter device, follow the instructions included with the device or given to you by your service provider. The xDSL connection represents the WAN interface, the connection to the Internet. It is the physical link to the service provider's network backbone and ultimately to the Internet.

Connect Router to Ethernet
The Router may be connected to a single computer or Ethernet device through the 10BASE-TX Ethernet port on the rear panel. Any connection to an Ethernet concentrating device such as a switch or hub must operate at a speed of 10/100 Mbps only. When connecting the Router to any Ethernet device that is capable of operating at speeds higher than 10Mbps, be sure that the device has auto-negotiation (NWay) enabled for the connecting port. Use standard twisted-pair cable with RJ-45 connectors. The RJ-45 port on the Router is a crossed port (MDI-X). Follow standard Ethernet guidelines when deciding what type of cable to use to make this connection. When connecting the Router directly to a PC or server use a normal straight-through cable. You should use a crossed cable when connecting the Router to a normal (MDI-X) port on a switch or hub. Use a normal straight-through cable when connecting it to an uplink (MDI-II) port on a hub or switch. The rules governing Ethernet cable lengths apply to the LAN to Router connection. Be sure that the cable connecting the LAN to the Router does not exceed 100 meters.

Hub or Switch to Router Connection
Connect the Router to an uplink port (MDI-II) on an Ethernet hub or switch with a straight-through cable. If you wish to reserve the uplink port on the switch or hub for another device, connect to any on the other MDI-X ports (1x, 2x, etc.) with a crossed cable.

Computer to Router Connection
You can connect the Router directly to a 10/100BASE-TX Ethernet adapter card (NIC) installed on a PC using the Ethernet cable provided.

Configuration

This section will show you how to configure your new Router using the web-based configuration utility.

Web-based Configuration Utility

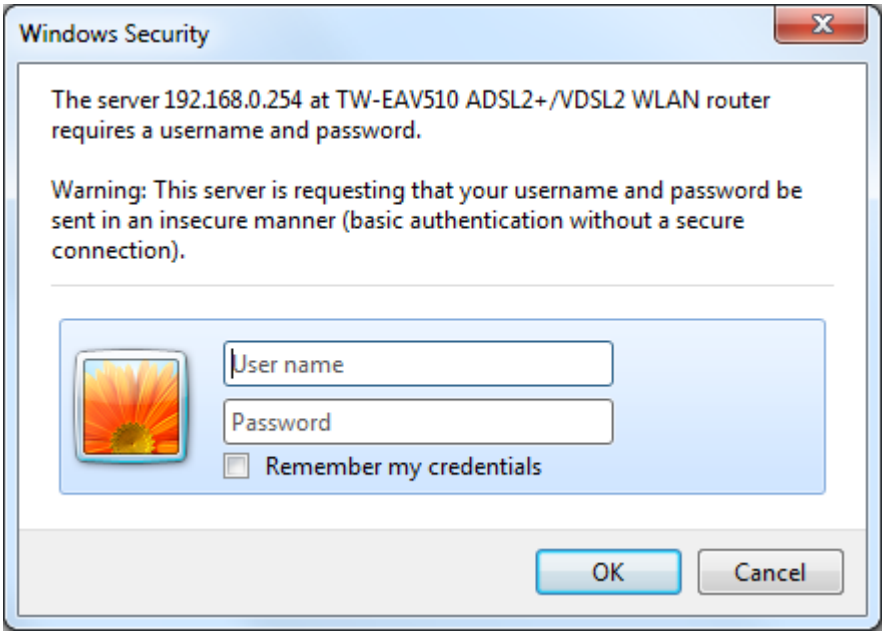
Connect to the Router

The default IP address for xDSL MODEM is: 192.168.0.254; The Subnet Mask is：255.255.255.0. Users can configure xDSL MODEM through an Internet browser. xDSL MODEM can be used as gateway and DNS server; users need to set the computer's TCP/IP protocol as follow:

1. Set the computer IP address at same segment of xDSL MODEM, such as set the IP address of the network card to one of the "192.168.0.100"～ "192.168.0.200".
2. Set the computer's gateway the same IP address as the xDSL Modem's.
3. Set computer's DNS server the same as xDSL Modem's IP address or that of an effective DNS server.

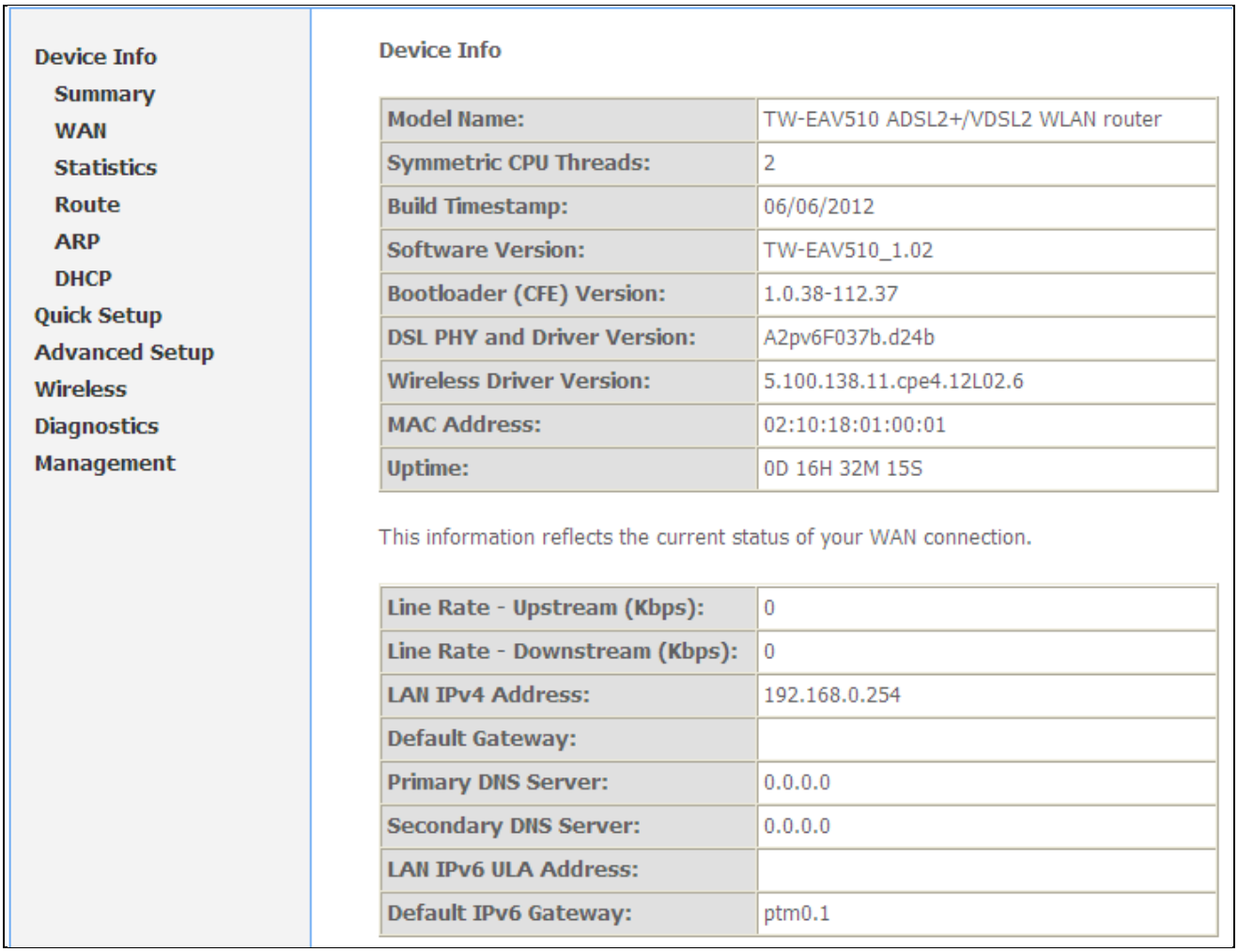
To access the configuration utility, open a web-browser such as Internet Explorer and enter the IP address of the router (192.168.0.254).

Type **"admin**" for the User Name and "**admin**" in the Password field. If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.



Device Info

To access the **Device Info** window, click either the **Device Info** or **Summary** button in the **Device Info** directory. The following page opens:



Summary

To access the Router's first **Summary** window, click the **Summary** button in the **Device Info** directory.
This window displays the current status of your DSL connection, including the software version, LAN IP address, and DNS server address.

Device Info

Model Name:	TW-EAV510 ADSL2+/VDSL2 WLAN router
Symmetric CPU Threads:	2
Build Timestamp:	06/06/2012
Software Version:	TW-EAV510_1.02
Bootloader (CFE) Version:	1.0.38-112.37
DSL PHY and Driver Version:	A2pv6F037b.d24b
Wireless Driver Version:	5.100.138.11.cpe4.12L02.6
MAC Address:	02:10:18:01:00:01
Uptime:	0D 16H 32M 15S

This information reflects the current status of your WAN connection.

Line Rate - Upstream (Kbps):	0
Line Rate - Downstream (Kbps):	0
LAN IPv4 Address:	192.168.0.254
Default Gateway:	
Primary DNS Server:	0.0.0.0
Secondary DNS Server:	0.0.0.0
LAN IPv6 ULA Address:	
Default IPv6 Gateway:	ptm0.1

WAN

To access the **WAN Info** window, click the **WAN** button in the **Device Info** directory.
This window displays the current status of your WAN connection.

WAN Info

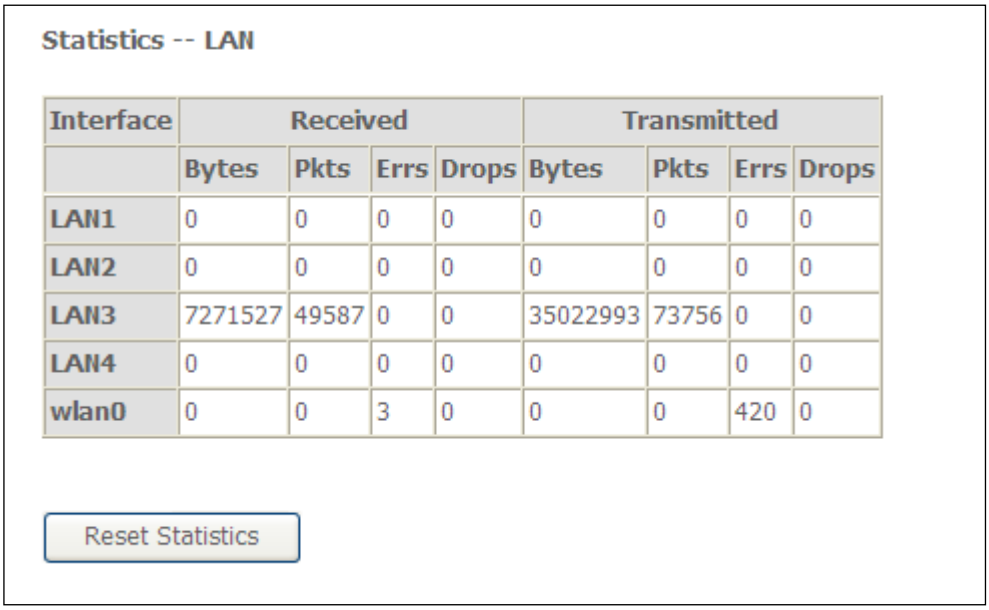
Interface	Description	Type	VlanMuxId	IPv6	Igmp	MLD	NAT	Firewall	Status	IPv4 Address	IPv6 Address
atm0.1	ipoe_0_0_33	IPoE	Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Unconnect		
atm1.1	ipoe_0_0_100	IPoE	Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Unconnect		
ptm0.1	ipoe_4_1_1	IPoE	Disabled	Enabled	Enabled	Enabled	Enabled	Enabled	Unconnect		
ppp7	3G dongle	PPPoE	Disabled	Disabled	Disabled	Disabled	Enabled	Disabled	Unconnect		

Statistics

The **Statistics** menu contains statistical information about the LAN, WAN service, and Optical. Select **Statistics** in the **Device Info** menu to open the Statistics submenu.

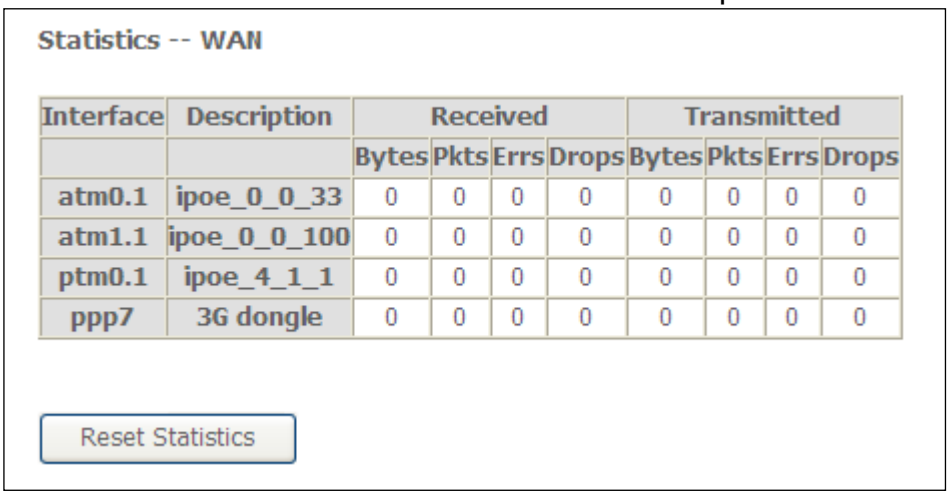
LAN

The LAN window displays the statistics for the information received and transmitted over the LAN interface.
Click **LAN** in the **Statistics** submenu to open the LAN window;



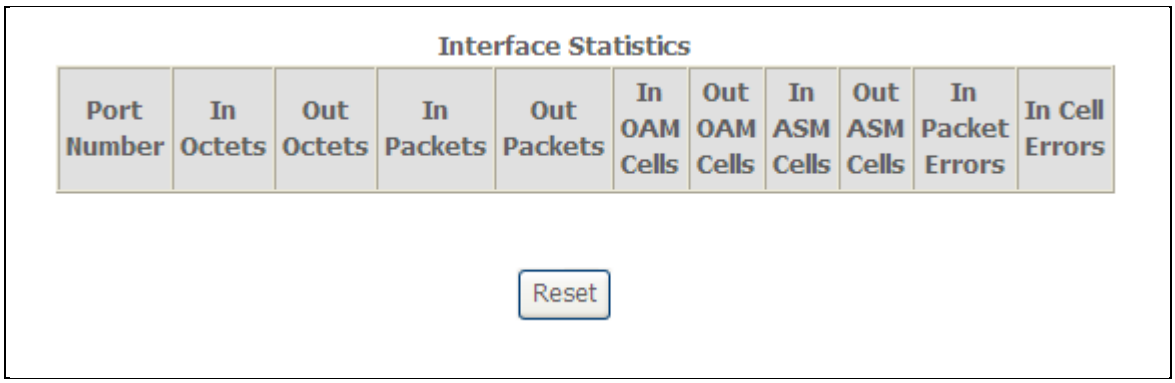
WAN Service

The WAN window displays the statistics for the information received and transmitted over the WAN interface.
Click **WAN Service** in the **Statistics** submenu to open the WAN window;



xTM

To access the **Device Info – xTM** window, click the **xTM** button in the **Device Info** directory.
This read-only window displays xTM info.



xDSL

To access the **Device Info – XDSL** window, click the **xDSL** button in the **Device Info** directory.
This read-only window displays xDSL info.

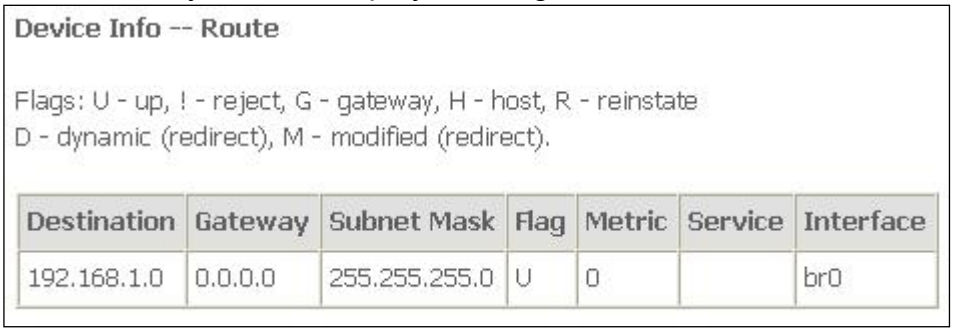
Statistics -- xDSL

Mode:		
Traffic Type:		
Status:		NoSignal
Link Power State:		
	Downstream	Upstream
Line Coding(Trellis):		
SNR Margin (0.1 dB):		
Attenuation (0.1 dB):		
Output Power (0.1 dBm):		
Attainable Rate (Kbps):		
Rate (Kbps):		
Super Frames:		
Super Frame Errors:		
RS Words:		
RS Correctable Errors:		
RS Uncorrectable Errors:		
HEC Errors:		
OCD Errors:		
LCD Errors:		
Total Cells:		
Data Cells:		
Bit Errors:		
Total ES:		
Total SES:		
Total UAS:		

xDSL BER Test Reset Statistics

Route

To access the **Device Info – Route** window, click the **Route** button in the **Device Info** directory.
This read-only window displays routing info.



Device Info -- Route

Flags: U - up, ! - reject, G - gateway, H - host, R - reinstate
D - dynamic (redirect), M - modified (redirect).

Destination	Gateway	Subnet Mask	Flag	Metric	Service	Interface
192.168.1.0	0.0.0.0	255.255.255.0	U	0		br0

ARP

To access the **Device Info – ARP** window, click the **ARP** button in the **Device Info** directory.
This read-only window displays Address Resolution Protocol info.

Device Info -- ARP

IP address	Flags	HW Address	Device
192.168.1.2	Complete	00:27:19:8f:7c:d6	br0

DHCP

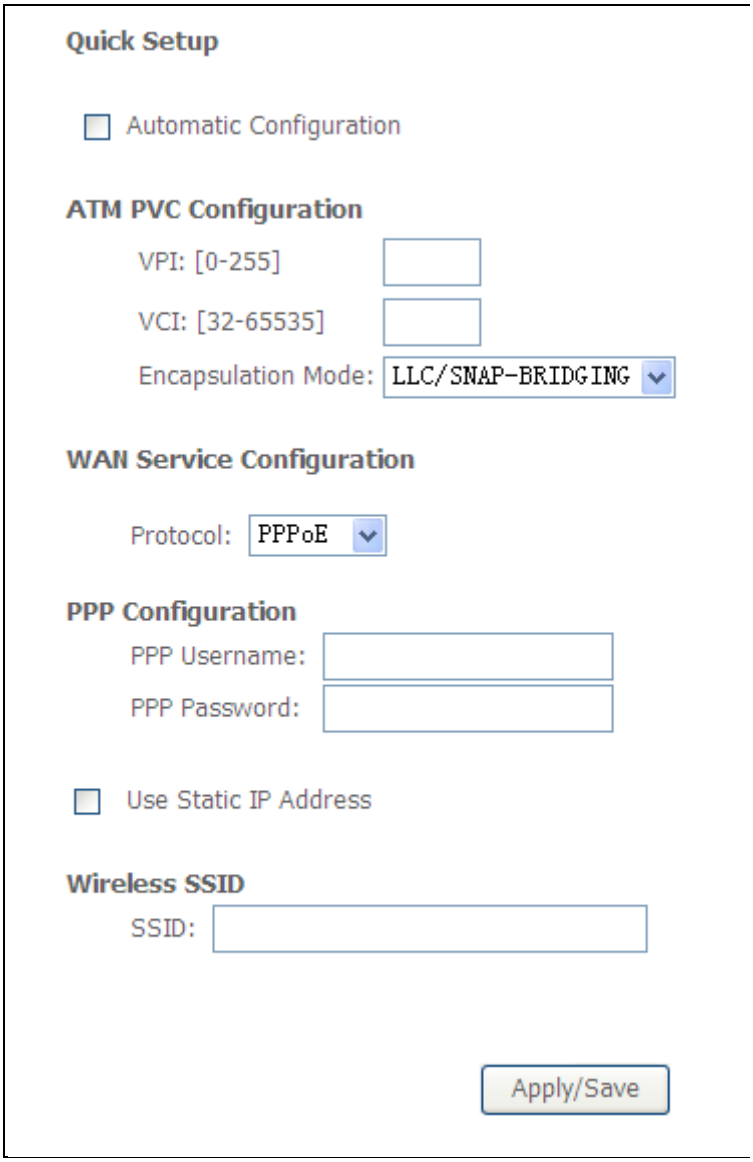
To access the **Device Info – DHCP Leases** window, click the **DHCP** button in the **Device Info** directory.
This read-only window displays DHCP lease info.

Device Info -- DHCP Leases

Hostname	MAC Address	IP Address	Expires In
FREESKYC-AAA4C0	00:27:19:8f:7c:d6	192.168.1.2	23 hours, 53 minutes, 58 seconds

Quick Setup

The Quick Setup will help you to configure the device eazily. If you want Automatic Configuration, click the checkbox of **Automatic Configuration**. When you are finished, click the **Apply/Save** button to save.



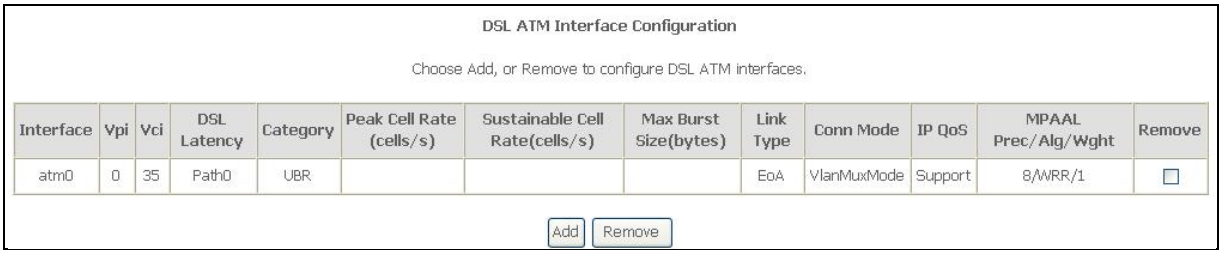
Advanced Setup

This chapter include the more advanced features used for network management and security as well as administrative tools to manage the Router, view status and other information used to examine performance and for troubleshooting.

Layer2 Interface

To access the **DSL ATM Interface Configuration** window, click the **ATM Interface** button in the **Layer2 Interface** directory.
This window is used to configure the ATM interface. You can add and delete ATM interface on this window.

If you are setting up the ATM interface for the first time, click the **Add** button.

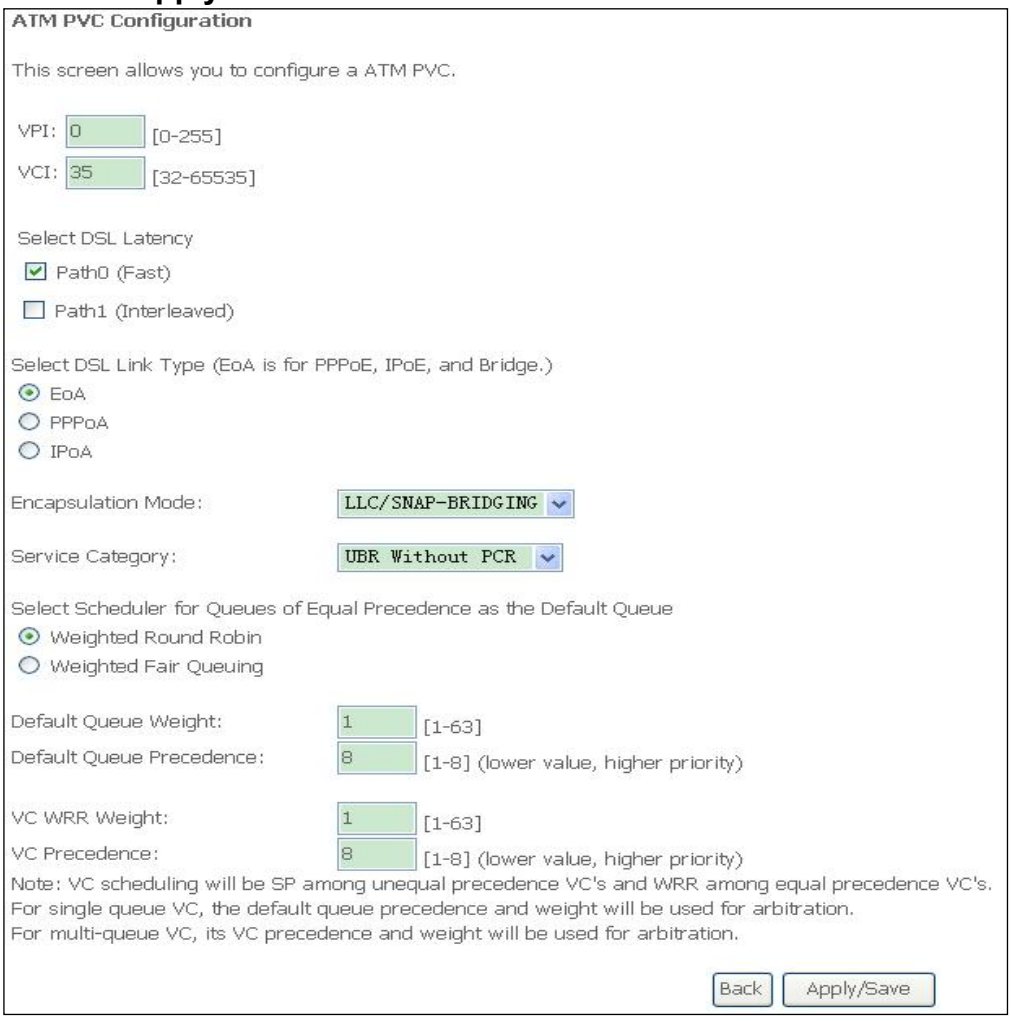


ATM Interface

The **ATM PVC** Configuration window allows you to set up ATM PVC configuration. Enter Virtual Path Identifier, and Virtual Channel Identifier. The VPI and VCI values should be provided by your ISP. This window also allows you to select DSL Link Type, PPPoA、IPoA and EoA (EoA is for PPPoE, IPoE, and Bridge)

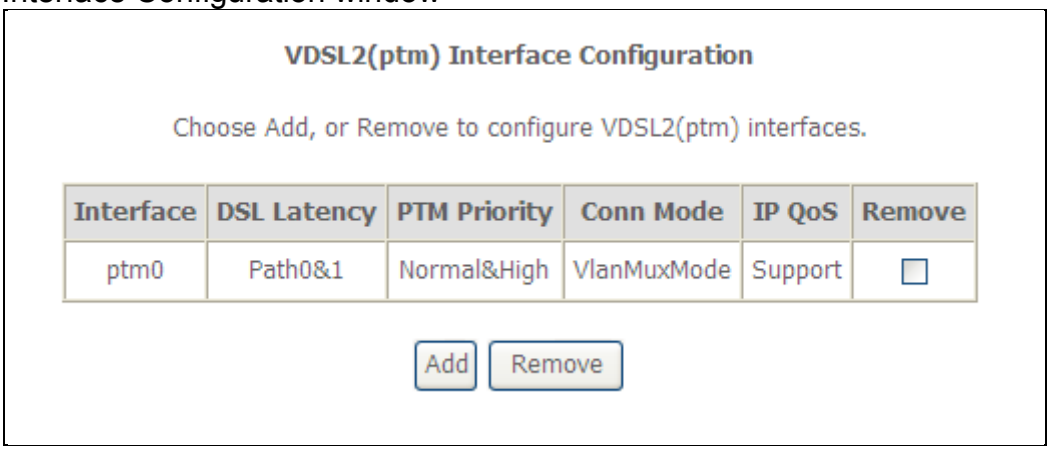
Use the drop-down menu to select the desired Encapsulation Mode.

Click the **Apply / Save** button to save.

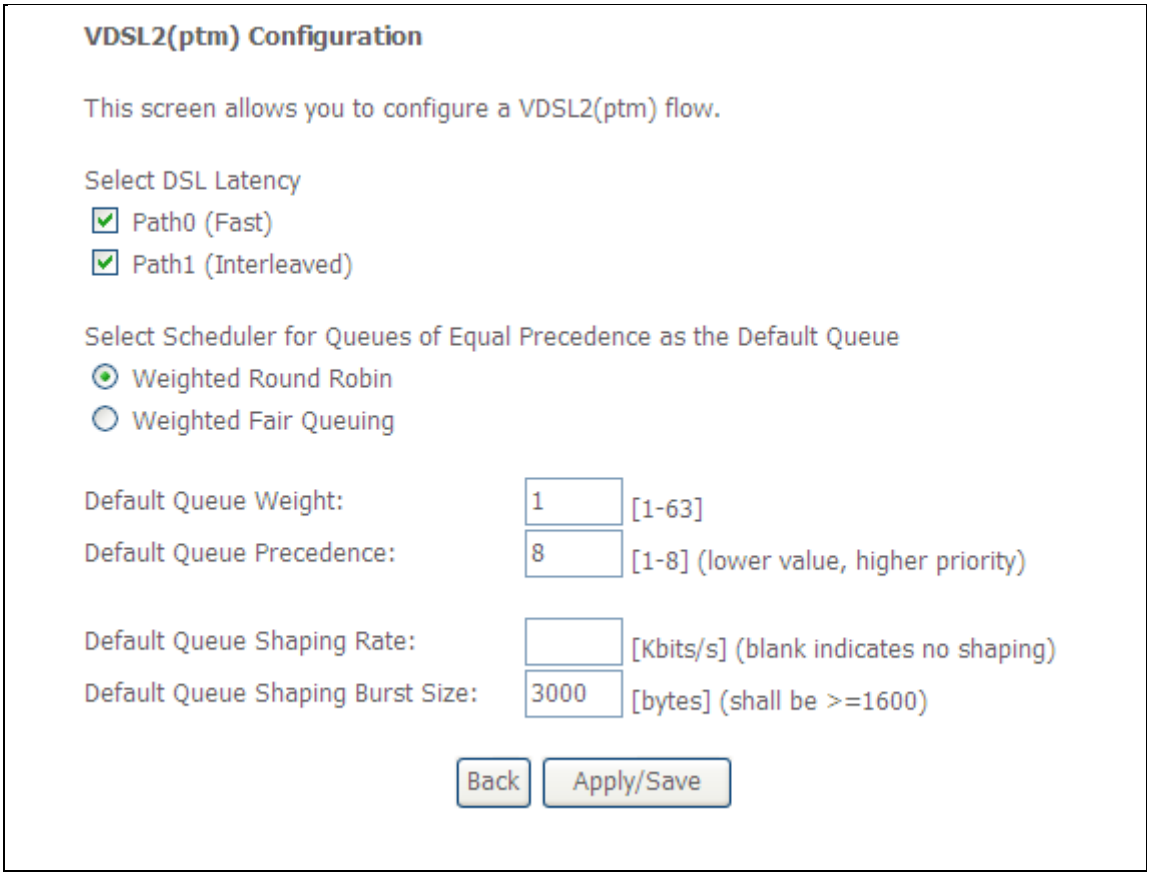


VDSL2 (ptm) interface

The **VDSL2 (ptm) interface** Configuration window enables you to add, delete, or modify up to one VDSL WAN Layer 2 interface connections.
Click **VDSL2 (ptm) Interface** in the Layer2 Interface menu to open the VDSL(ptm) WAN Interface Configuration window

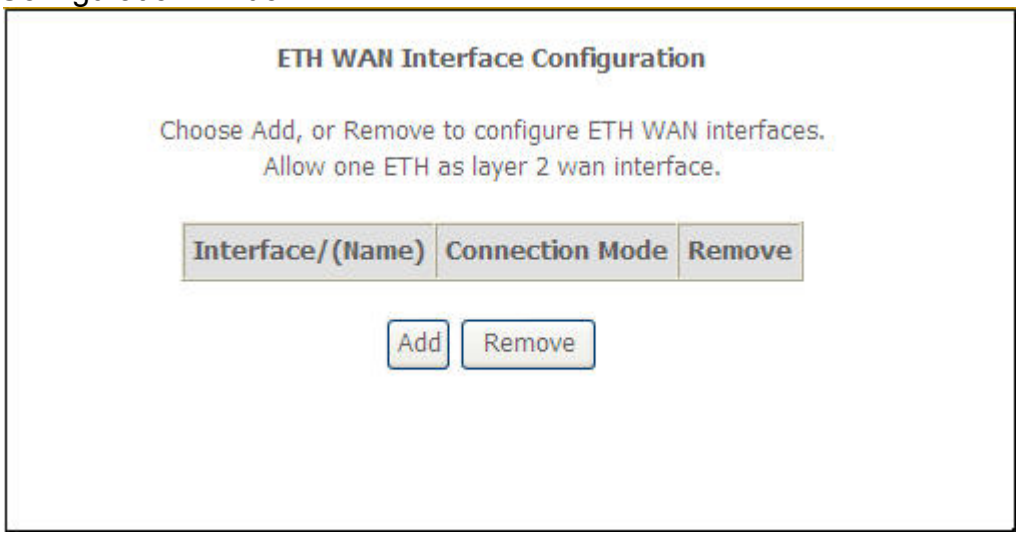


VDSL WAN Configuration
If you have selected to add or modify a VDSL interface connection, the VDSL WAN Configuration window opens. Click the **Apply/Save** button to save.

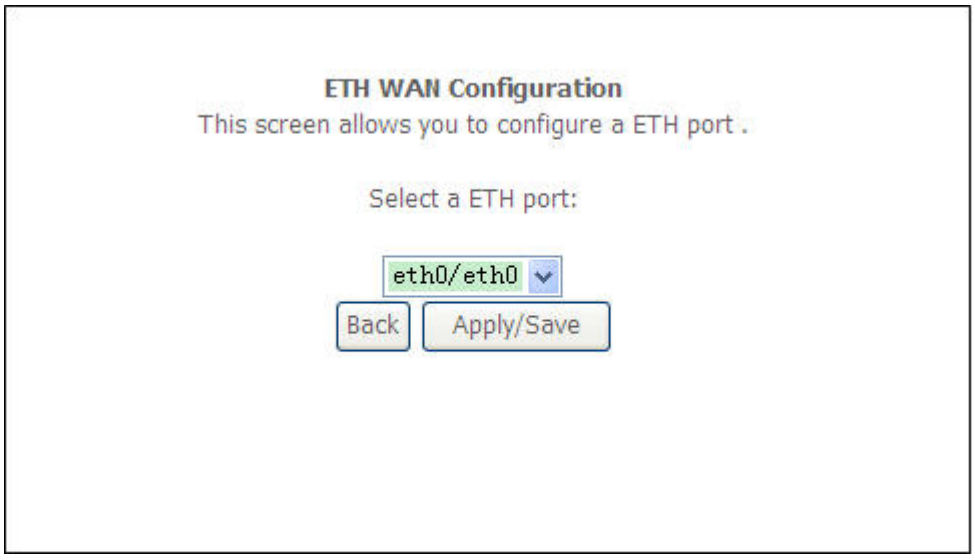


ETH interface

The ETH WAN Interface Configuration window enables you to add, delete, or modify up to one ETH WAN Layer 2 interface connections.
Click **ETH Interface** in the Layer2 Interface menu to open the ETH WAN Interface Configuration window



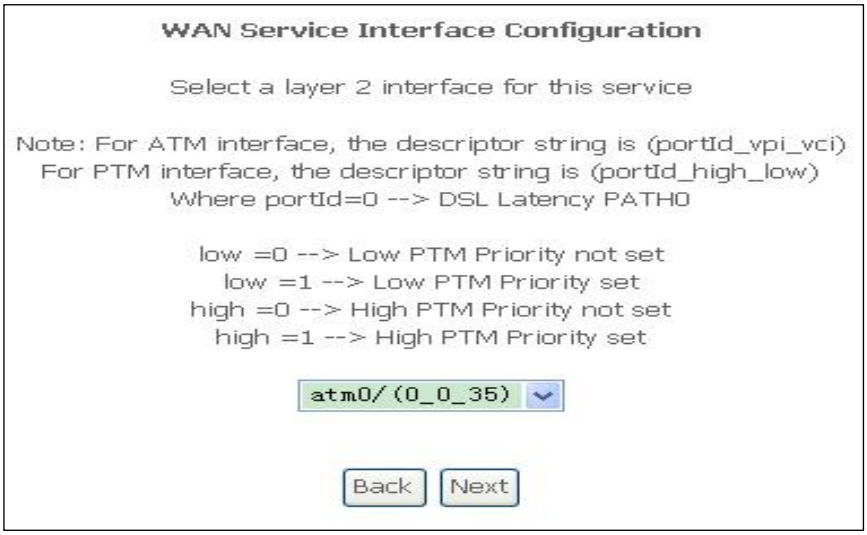
ETH WAN Configuration
If you have selected to add or modify an ETH interface connection, the ETH WAN Configuration window opens



WAN Service

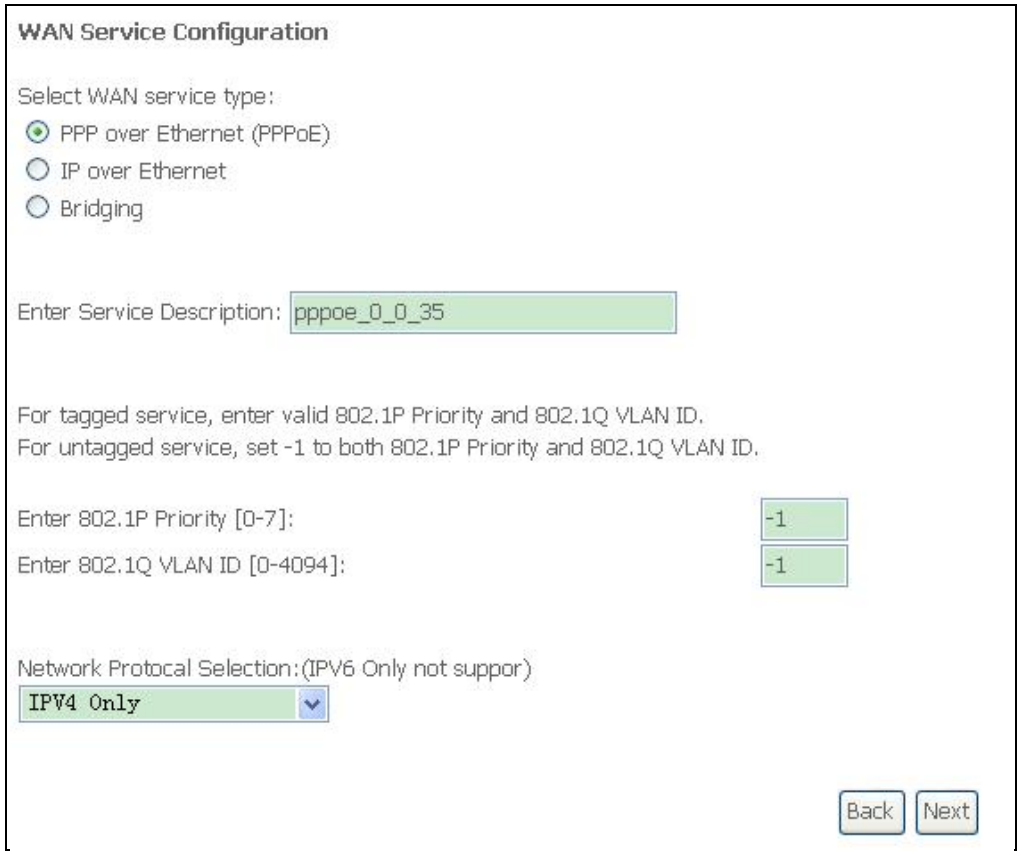
To access the **Wide Area Network (WAN) Service Setup** window, click the **WAN Service** button in the **Advanced Setup** directory.
This window is used to configure the WAN interface. You can add and delete WAN interface on this window.
If you are setting up the WAN interface for the first time, click the **Add** button.

The **WAN Service Interface Configuration** Configuration window allows select a layer 2 interface for this service. Click the **Next** button to continue



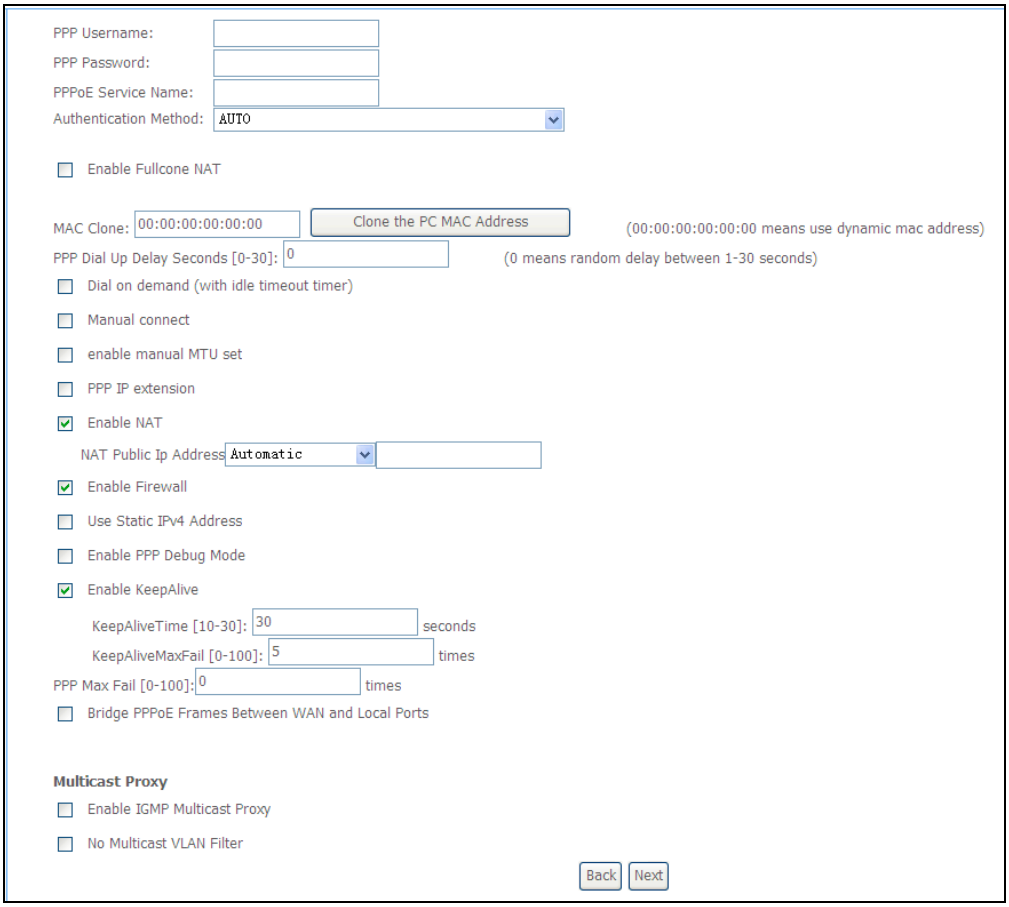
This window allows you to select the appropriate connection type. The choices include PPP over ATM (PPPoA), PPP over Ethernet (PPPoE), IP over Ethernet (IPoE), IP over ATM (IPoA), and Bridging.

WAN Service Configuration – PPPoE
Click the PPP over Ethernet (PPPoE) radio button on this window. This window also allows you to use the drop-down menu to enable IPv6 service. Click the **Next** button to continue.



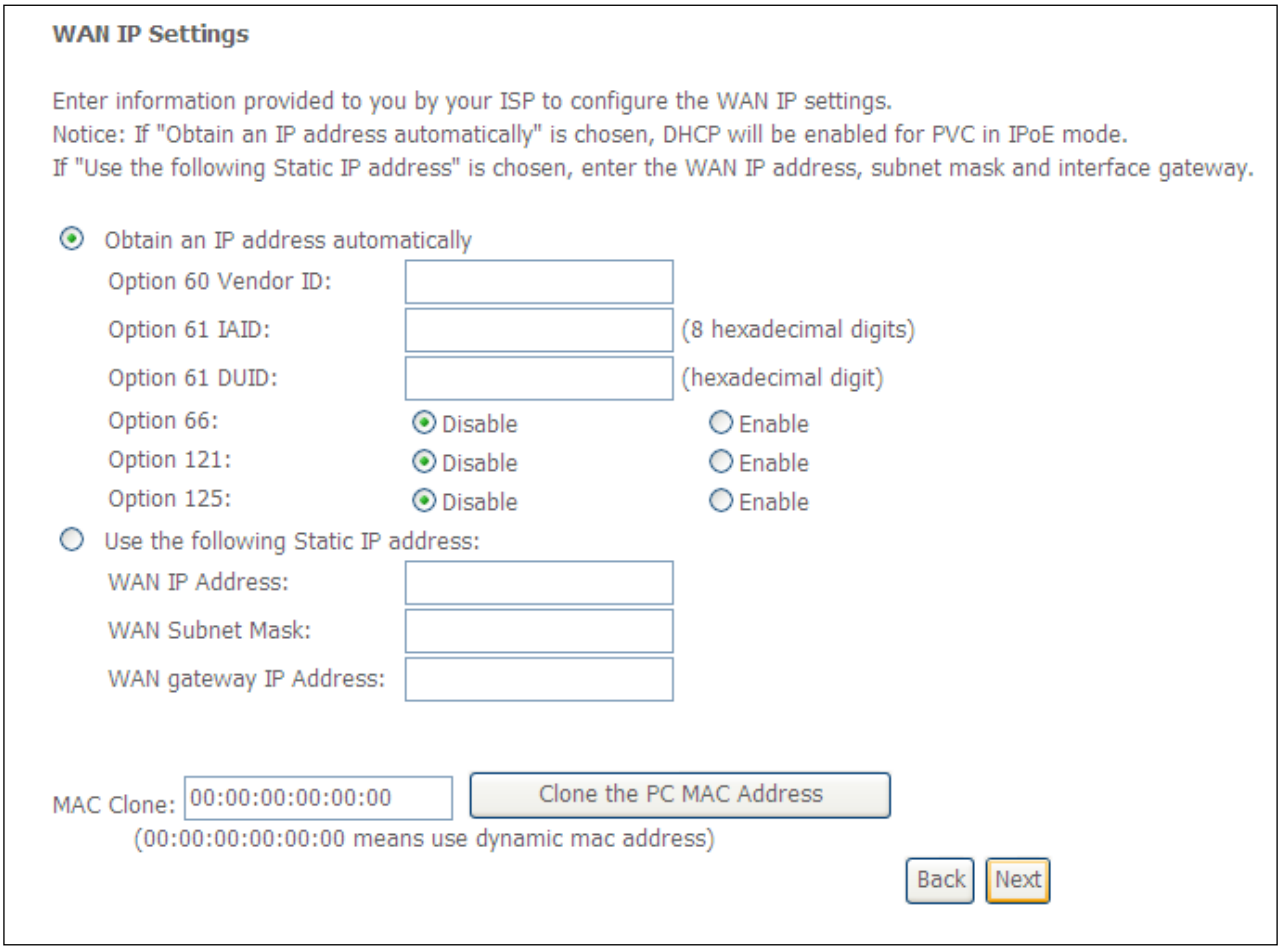
WAN Service Configuration – PPPoE

This window allows you to set the username and the password for your PPP connection. This information is obtained from your ISP. Additional settings on this window will also depend on your ISP. And you can input 2nd IP on this page. Click the **Next** button to continue.



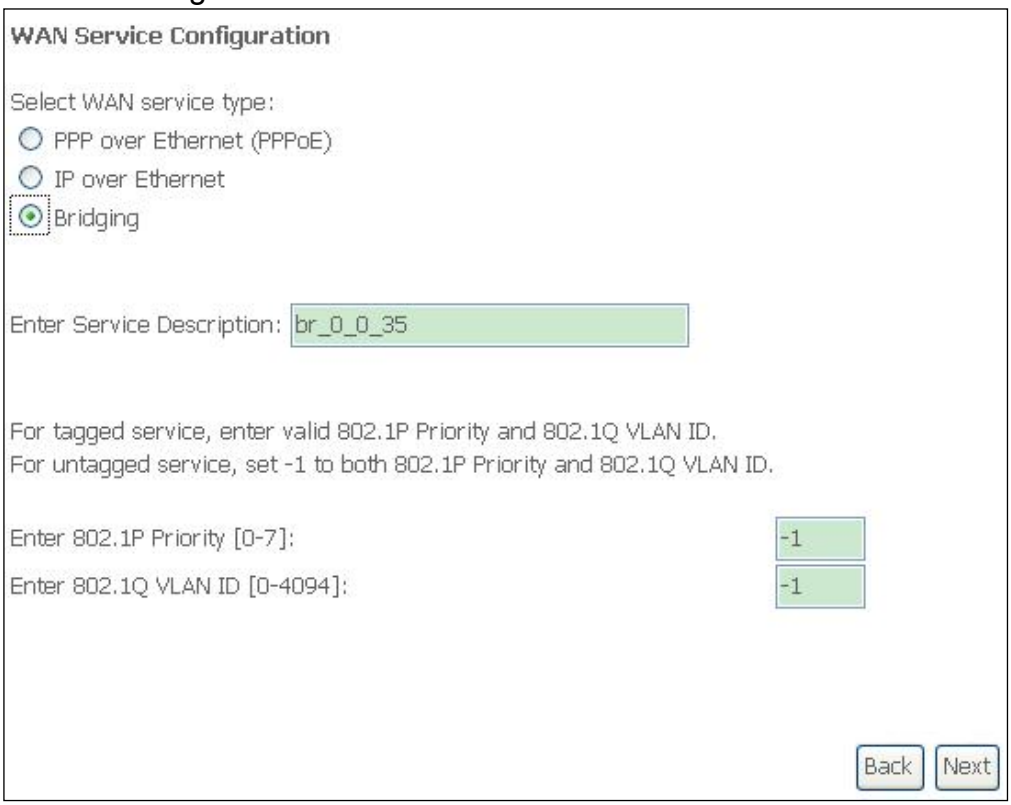
WAN Service Configuration – IPoE

This window allows you to configure the WAN IP settings. This information is obtained from your ISP. Click the **Next** button to continue



WAN Service Configuration – Bridging

Click the Bridge radio button on this window. Click the **Next** button to continue.

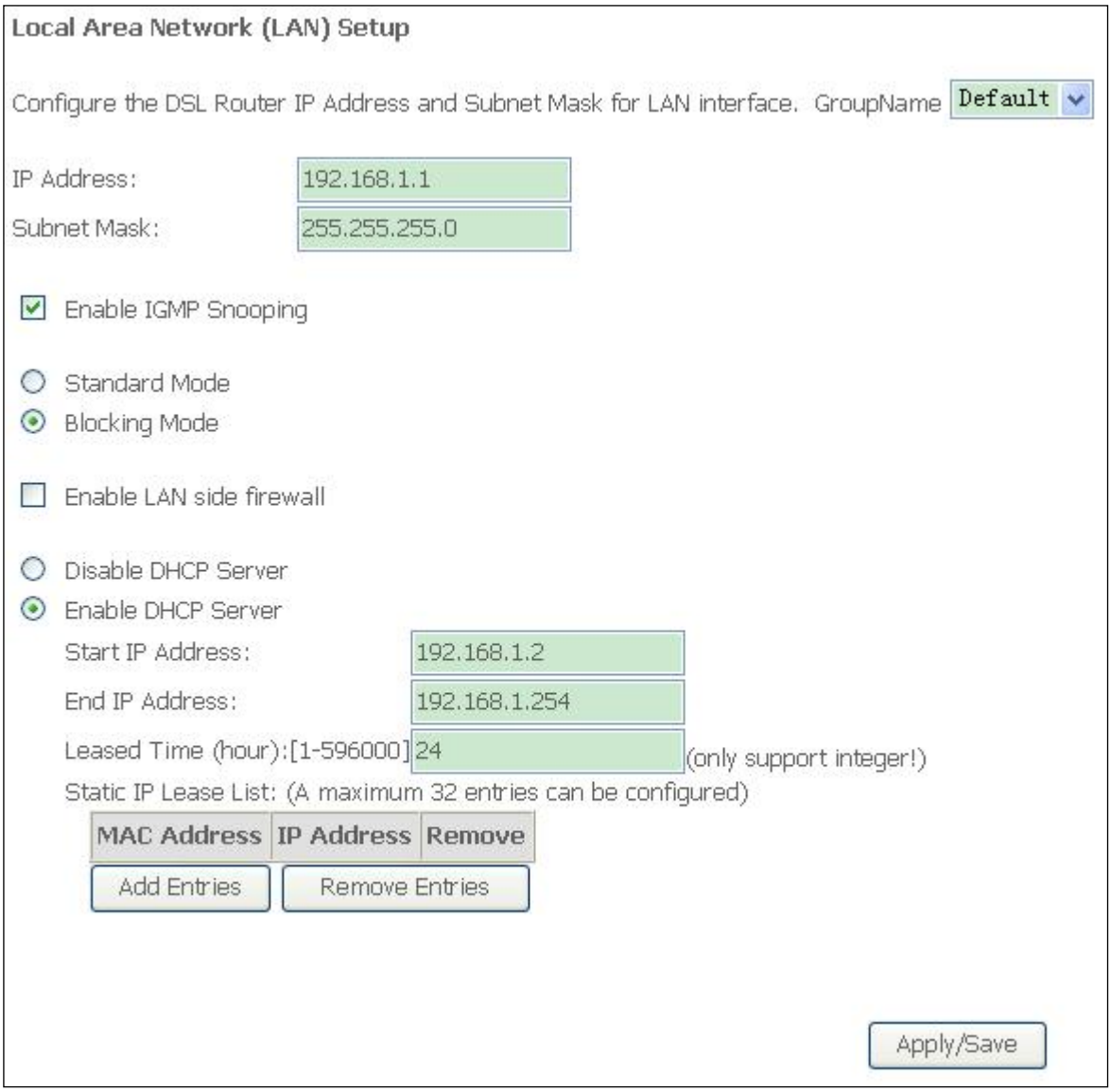


LAN

You can configure the LAN IP address to suit your preference. Many users will find it convenient to use the default settings together with DHCP service to manage the IP settings for their private network. The IP address of the Router is the base address used for DHCP. In order to use the Router for DHCP on your LAN, the IP address pool used for DHCP must be compatible with the IP address of the Router. The IP addresses available in the DHCP IP address pool will change automatically if you change the IP address of the Router.

LAN setting

To access the **Local Area Network (LAN) Setup** window, click the **LAN** button in the **Advanced Setup** directory.
This window allows you to set up a LAN interface. When you are finished, click the **Apply / Save** button.

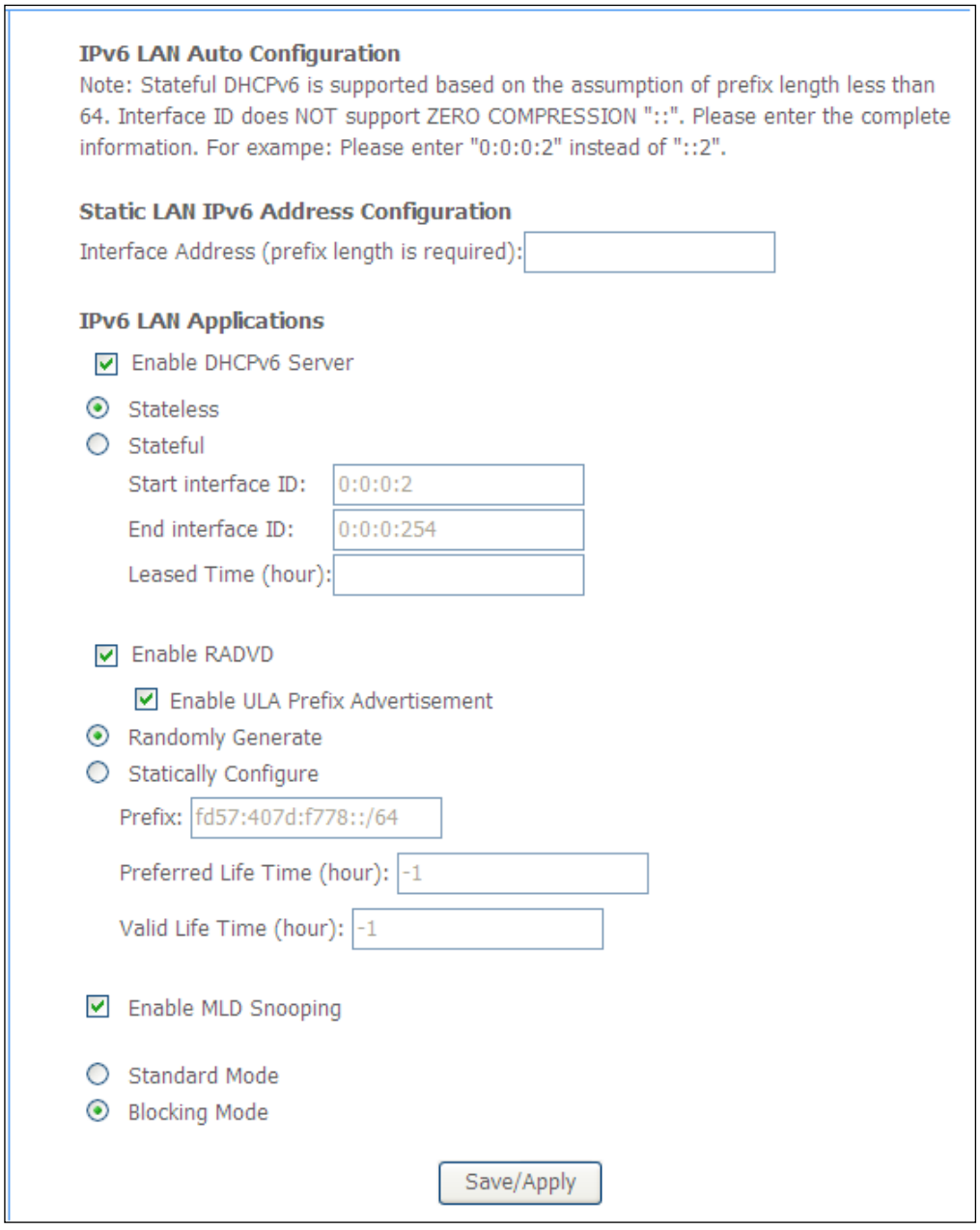


IPv6 Autoconfig

The IPv6 Autoconfig window enables you to configure the settings for the LAN interface with IPv6.

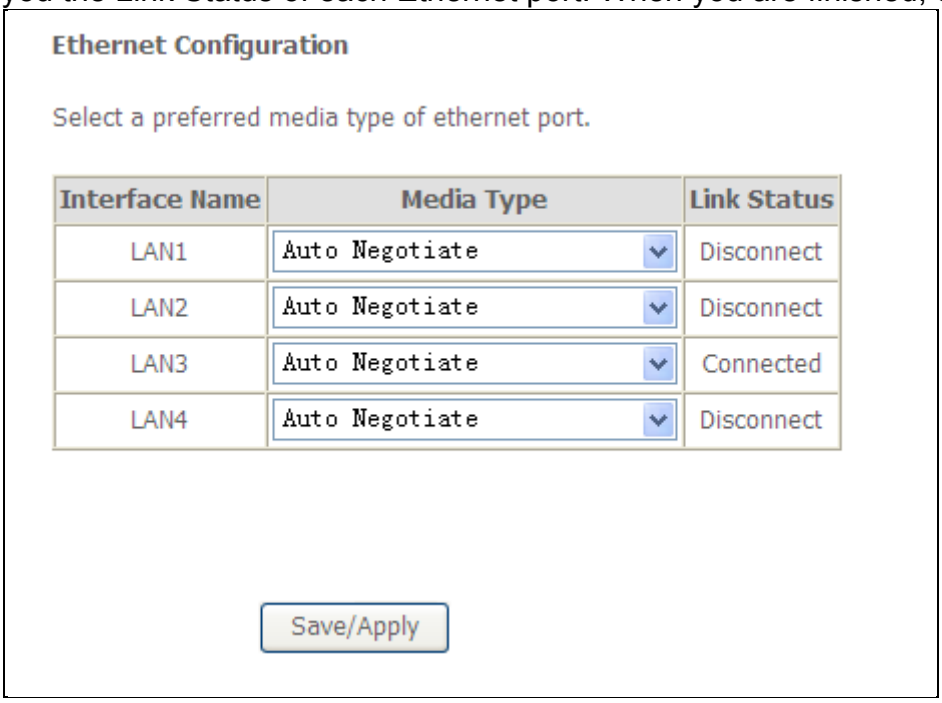
Click IPv6 Autoconfig in the LAN submenu to open the IPv6 Autoconfig window;

This window allows you to configure IPv6. When you are finished, click the **Apply / Save** button.



Ethernet Port

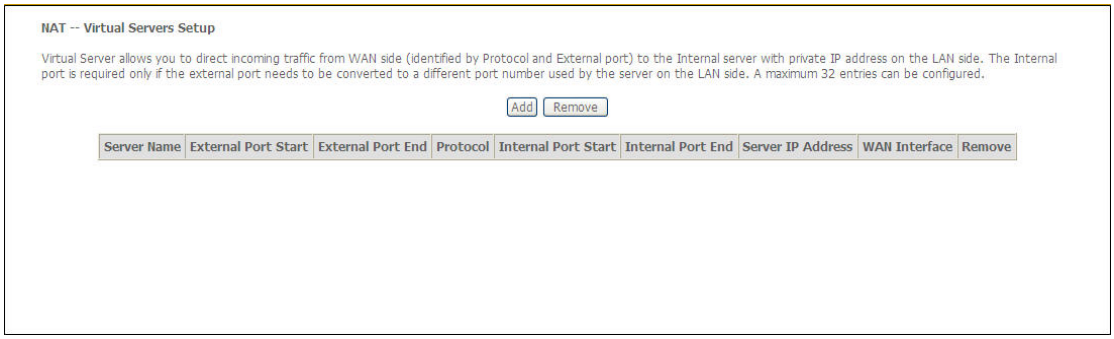
To access the **Ethernet Port** window, click the **Ethernet Port** button in the **Advanced Setup** submenu. You can configure the Media Type of Ethernet port in the new page and it will show you the Link Status of each Ethernet port. When you are finished, click the **Save/Apply** button



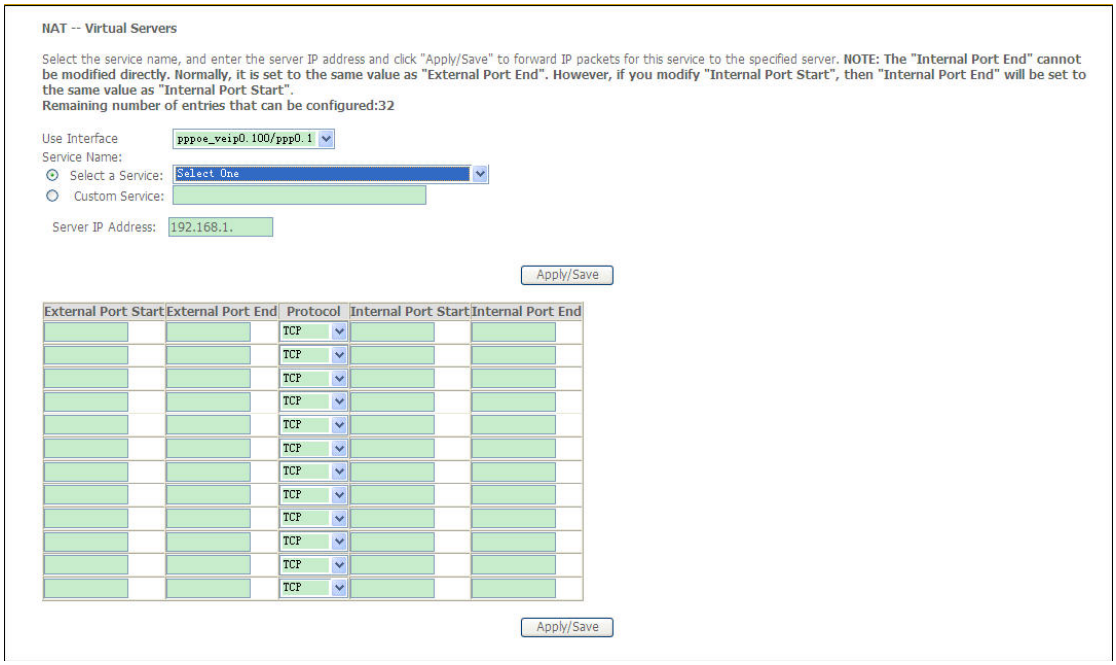
NAT

Virtual Servers

Select **Virtual Servers** from the **Advanced Setup** menu to open the NAT submenu.



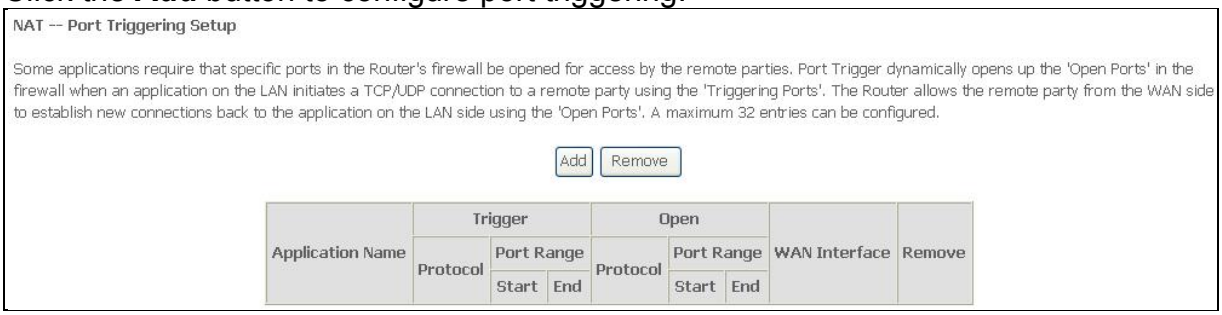
If you have selected to **Add** a virtual server, the Add NAT – Virtual Servers window opens



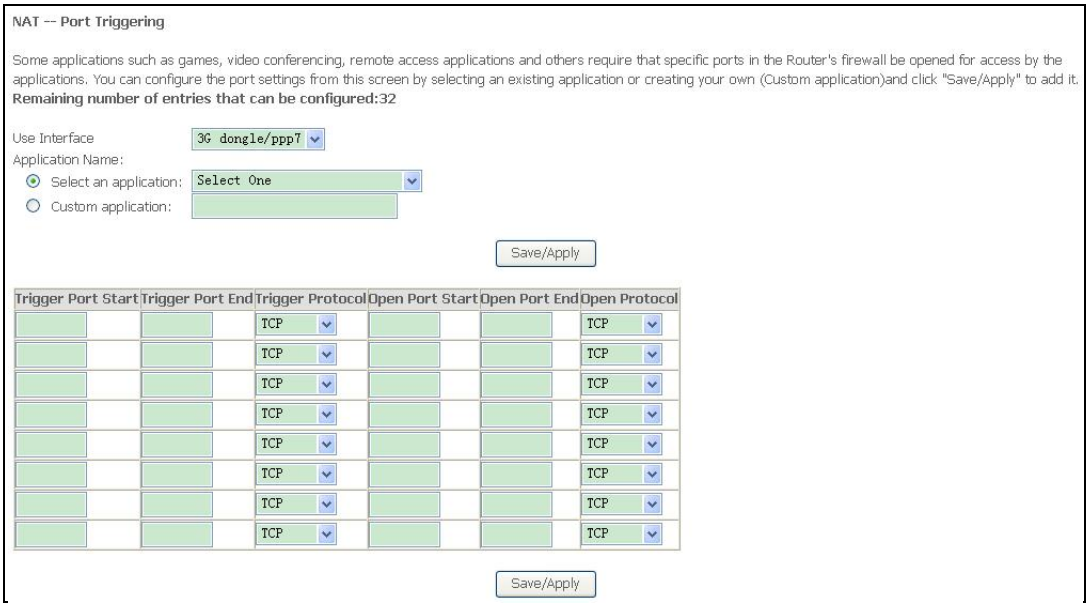
Port Triggering

Some applications such as games, video conferencing, remote access applications and others require that specific ports in the Router's firewall be opened for access by the applications. You can configure the port settings from this screen by selecting an existing application or creating your own (Custom application).

Click the **Add** button to configure port triggering.

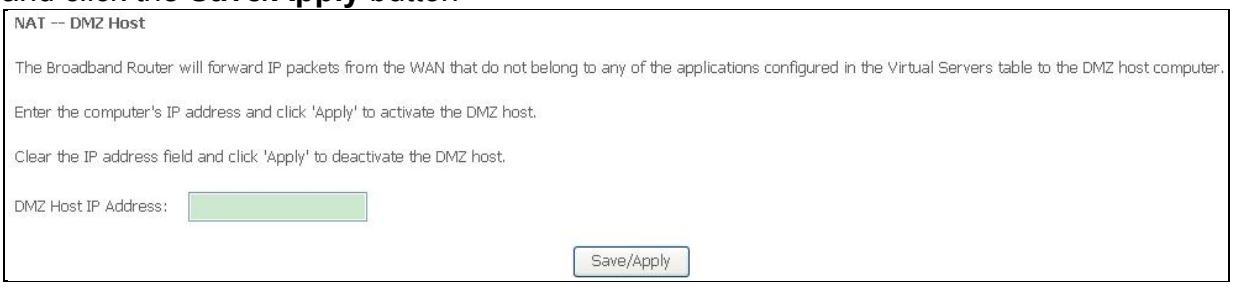


You can configure the port settings on this window by clicking the **Select an application** radio button and then using the drop-down list to choose an existing application, or by clicking the **Custom application** radio button and entering your own Application Rule in the field provided. Click **Save/Apply** when you are finished with the port setting configuration. The new Application Rule will appear in the Port Triggering table.



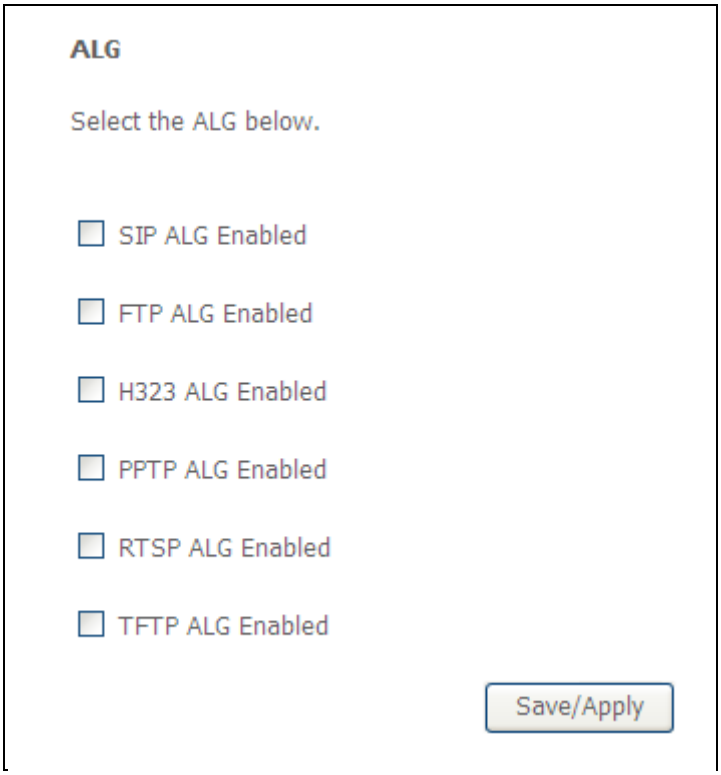
DMZ Host

Since some applications are not compatible with NAT, the Router supports use of a DMZ IP address for a single host on the LAN. This IP address is not protected by NAT and will therefore be visible to agents on the Internet with the right type of software. Keep in mind that any client PC in the DMZ will be exposed to various types of security risks. If you use the DMZ, take measures (such as client-based virus protection) to protect the remaining client PCs on your LAN from possible contamination through the DMZ.
To designate a DMZ IP address, type in the IP Address of the server or device on your LAN, and click the **Save/Apply** button



ALG

To access the **ALG** window, click the **ALG** button in the **NAT** submenu. You can enable and disable the **ALG** functions in the new page. When you are finished, click the **Save/Apply** button.



Security

To access the **Security** window, click the **Security** button in the **Advanced Setup** directory.
The **Security** button appears after configuring WAN interface in PPPoA, PPPoE, IPoE or IPoA.

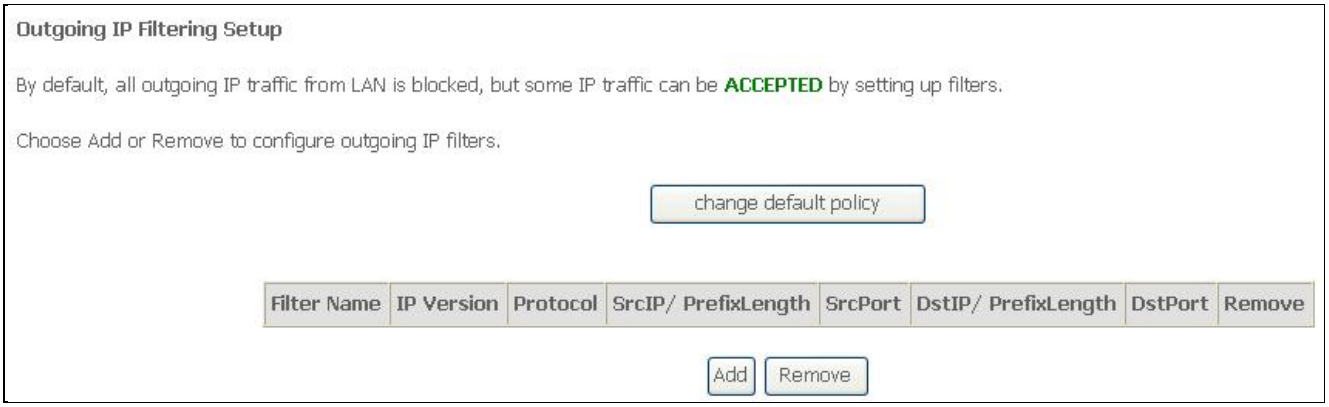
IP Filtering

The **IP Filtering** button appears when configuring WAN interface in PPPoA, PPPoE, IPoE or IPoA.

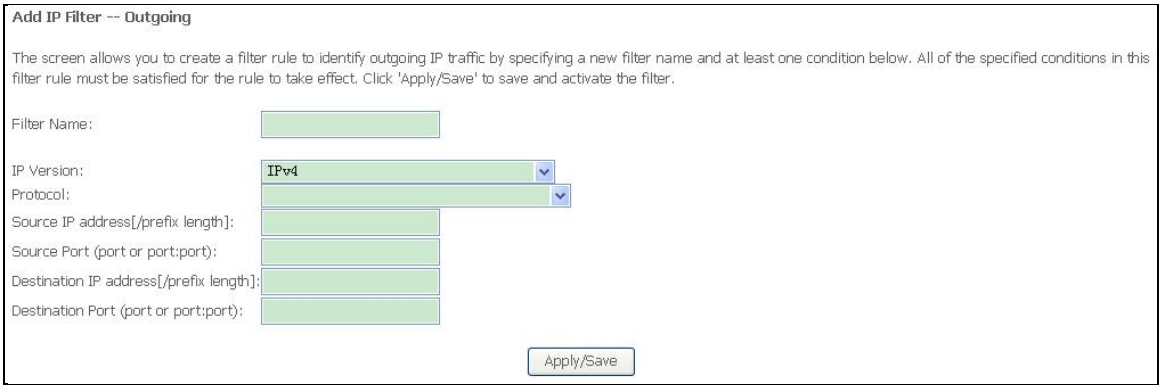
IP Filtering - Outgoing

This window allows you to create a filter rule of **Outgoing**.
Click **change default policy** to change the mode of policy.
Now default policy is **BLOCK**, it means all outgoing IP traffic from LAN is blocked, but some IP traffic can be accepted by setting up filters.
If you are setting up the outgoing IP filtering, click the **Add** button.

Now default policy is ACCEPT, it means all outgoing IP traffic from LAN is allowed, but some IP traffic can be blocked by setting up filters.
If you are setting up the outgoing IP filtering, click the **Add** button.



Enter the information in the section. Explanations of parameters are described below. Click the **Apply / Save** button to add the entry in the Active Outbound IP Filtering table.

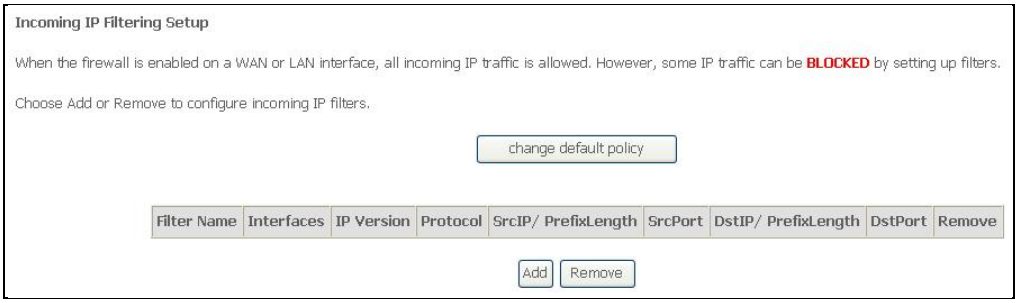


IP Filtering – Incoming
This window allows you to create a filter rule of **Incoming**.
Click **change default policy** to change the mode of policy.

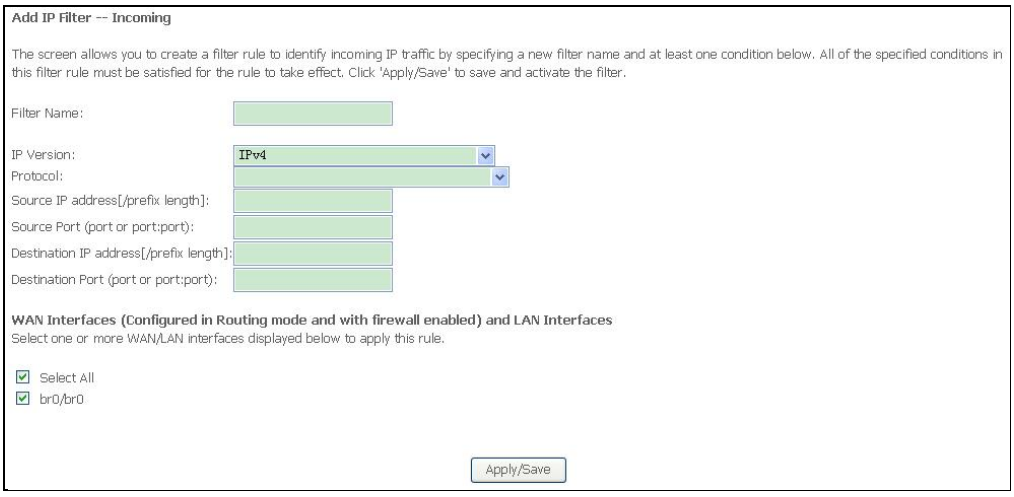
Now default policy is **ACCEPT**, it means all incoming IP traffic from WAN is accepted, but some IP traffic can be blocked by setting up filters.
If you are setting up the incoming IP filtering, click the **Add** button.

Now default policy is **BLOCK**, it means all incoming IP traffic from WAN is blocked, but some IP traffic can be accepted by setting up filters.

If you are setting up the incoming IP filtering, click the **Add** button.

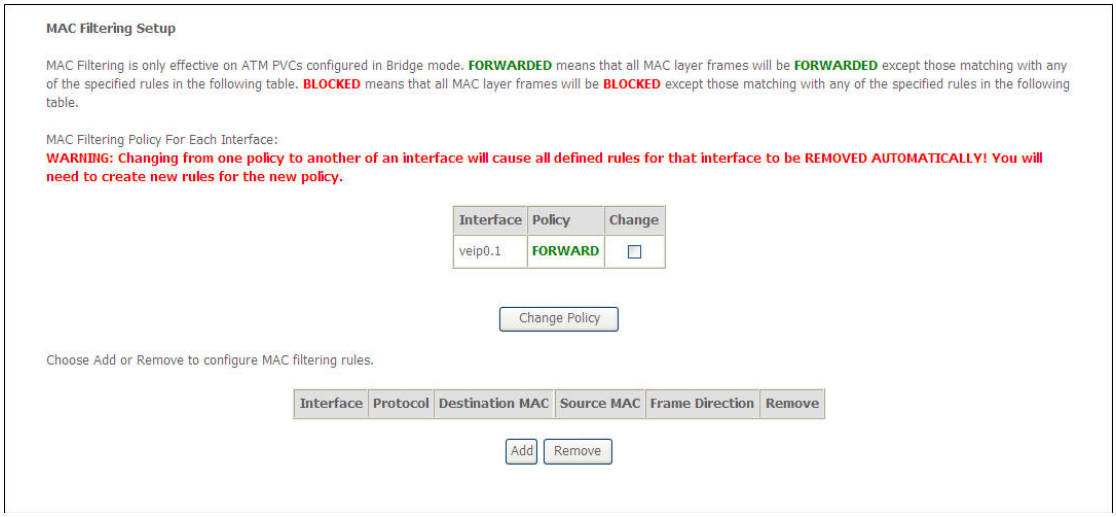


Enter the information in the section. Explanations of parameters are described below. Click the **Apply / Save** button to add the entry in the Active Inbound IP Filtering table.

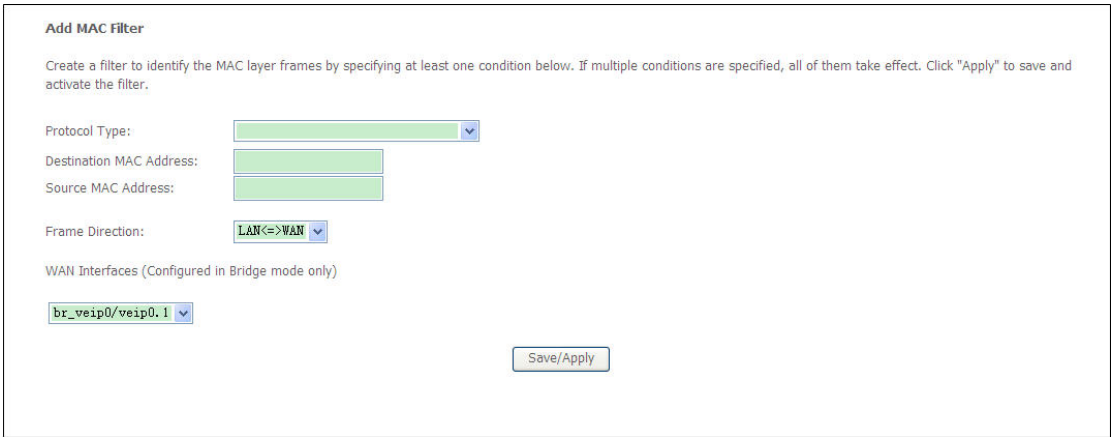


MAC filter

The MAC Filtering window enables you to control access to and from specific MAC addresses. Select **MAC Filtering** from the **Security** submenu to open the MAC Filtering Setup window;



If you have selected to **Add** a MAC filter, the Add MAC Filter window opens

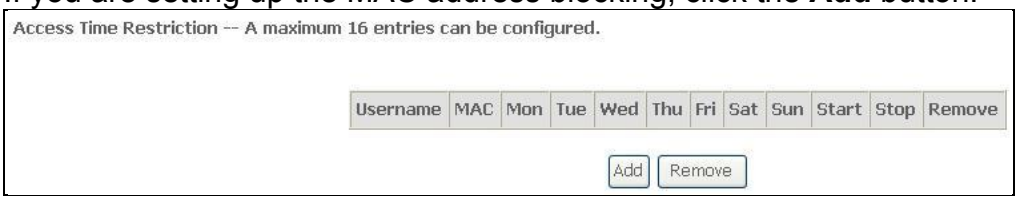


Parental Control

Use this window to deny access to specified MAC address.

Time Restriction

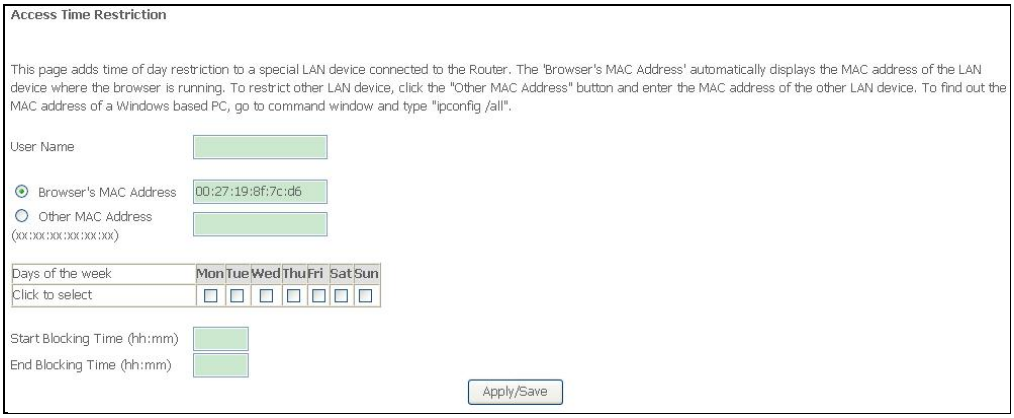
If you are setting up the MAC address blocking, click the **Add** button.



MAC address is a specially formatted text string (xx:xx:xx:xx:xx:xx) that uniquely identification of a device. This section will allow users to block devices with certain MAC addresses on the LAN.

To configure for MAC address blocking, enter the username into the **Username** field, click **Browser's MAC Address** to have MAC address of the LAN device, or click **Other MAC Address** and enter a MAC address manually. Tick the checkboxes for the desired individual days of the week and enter desired **Start Blocking Time** and **End Blocking Time**.

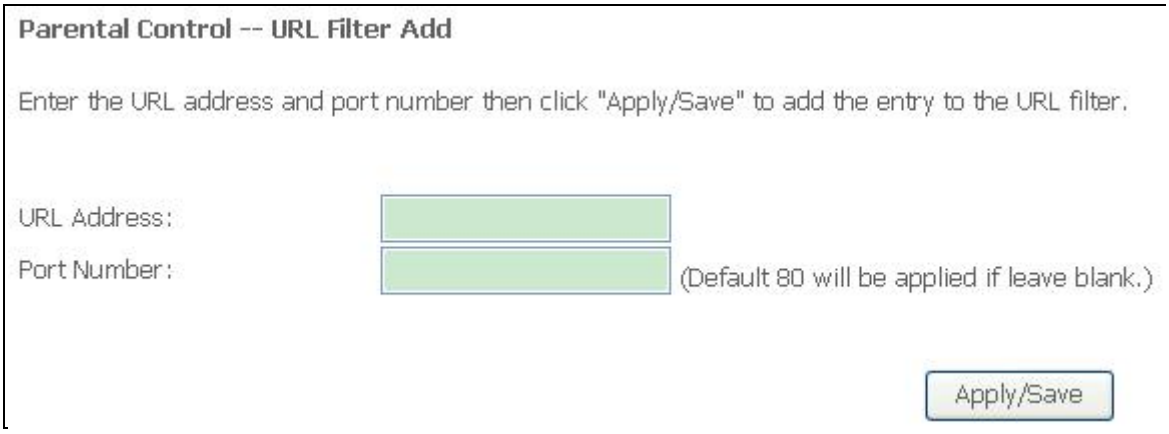
Click the **Save/Apply** button to save the configuration



URL Filter

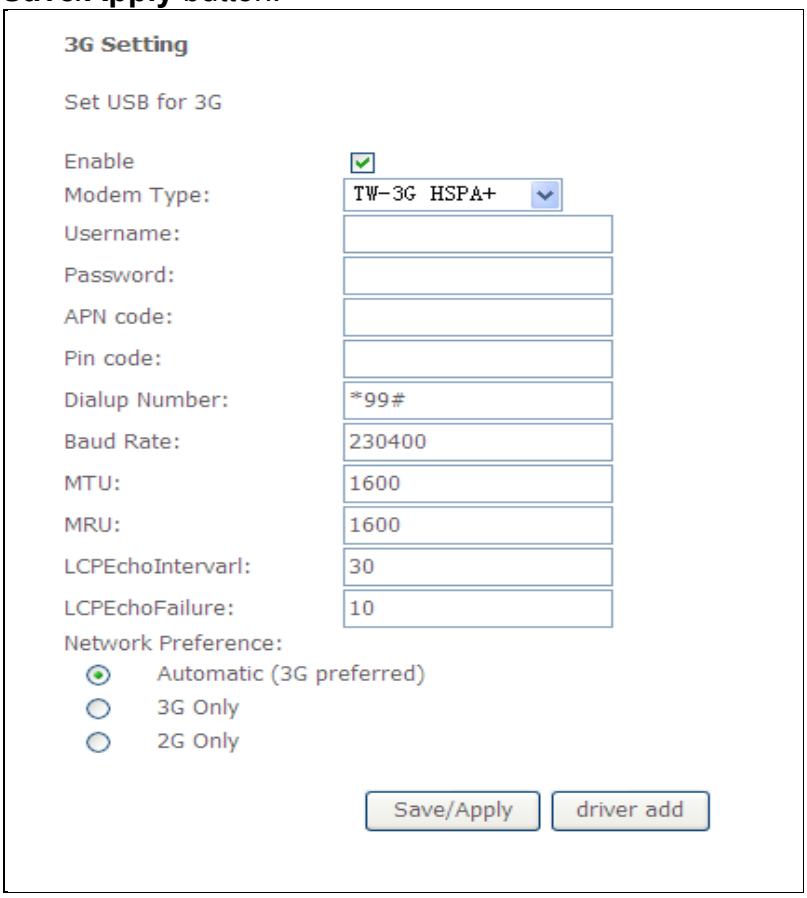
This window allows you to set up **URL Filter** on the Router.
Choose URL List Type **Exclude** or **Include** first and click **Add** button.

Enter the URL address and port number then click **Apply / Save** to add the entry to the URL filter.

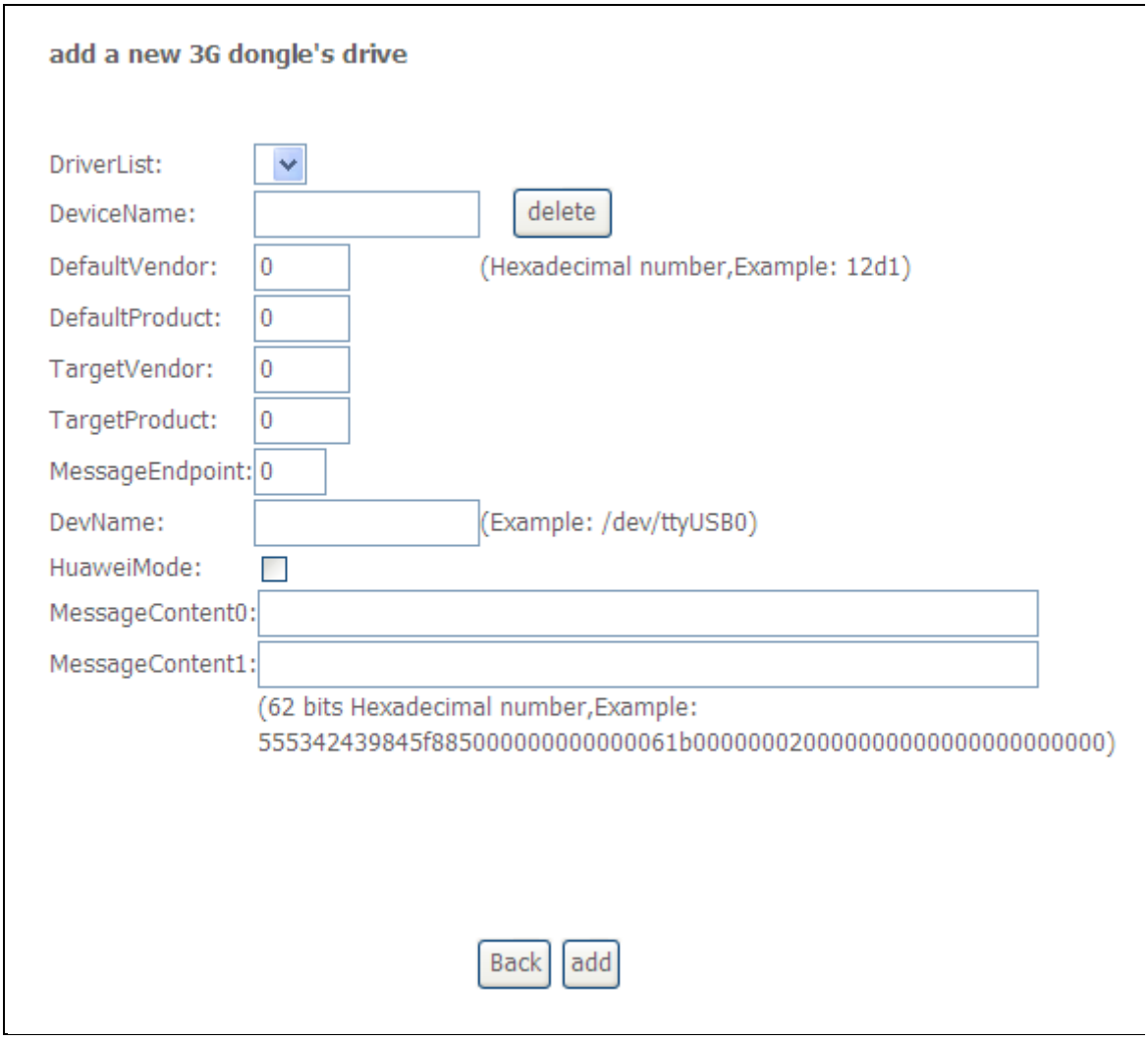


3G

To access the **3G** window, click the **3G** button in the **Advanced Setup** directory.
This window allows you to set up 3G on the Router. When you are finished, click on the **Save/Apply** button.

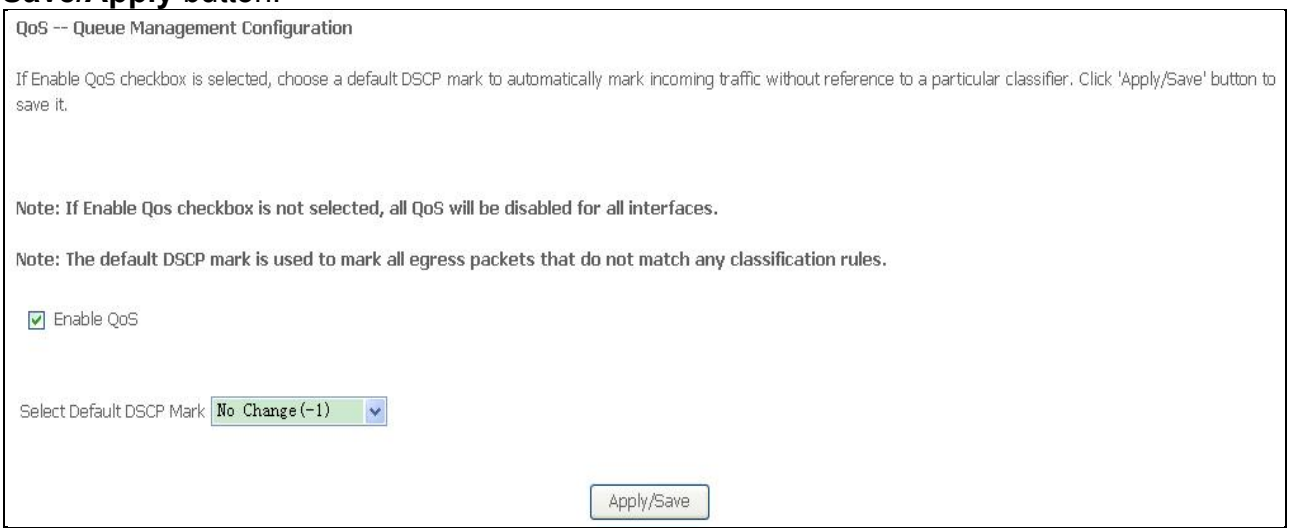


If you want to add new 3G dongle, click **driver add** button, and the new page will show you how to configure a new 3G dongle. After you are finished, click on the **add** button.


add a new 3G dongle's drive
DriverList:
DeviceName:
delete
DefaultVendor:
0
(Hexadecimal number,Example: 12d1)
DefaultProduct:
0
TargetVendor:
0
TargetProduct:
0
MessageEndpoint:
0
DevName:
(Example: /dev/ttyUSB0)
HuaweiMode:
MessageContent0:
MessageContent1:
(62 bits Hexadecimal number,Example:
555342439845f8850000000000000061b000000020000000000000000000000)
Back
add

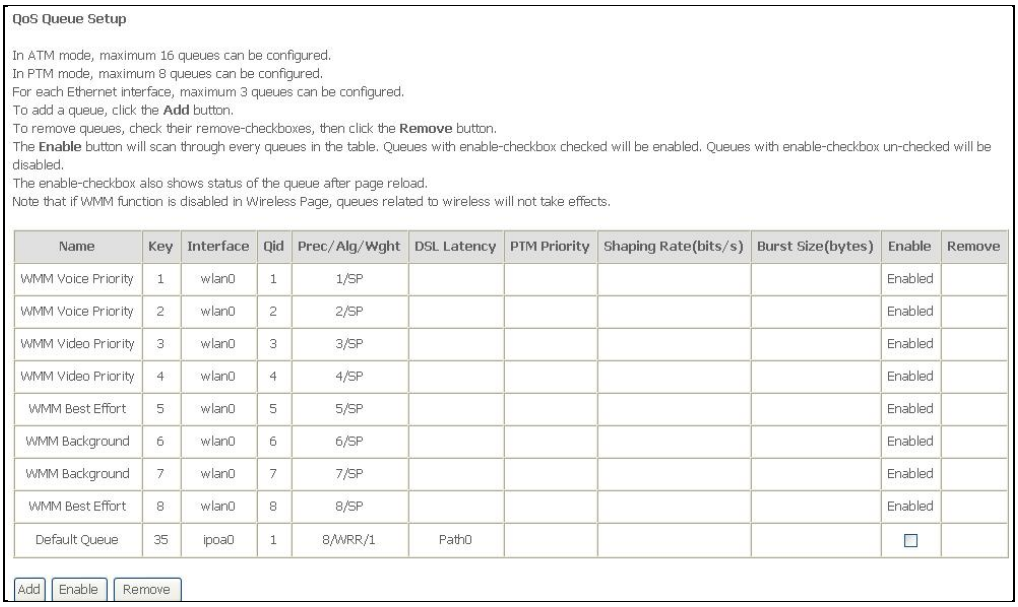
Quality of Service

QoS or Quality of Service allows your Router to help prioritize the data packet flow in your Router and network. This is very important for time sensitive applications such as VoIP where it may help prevent dropped calls. Large amounts of non-critical data can be scaled so as not to affect these prioritized sensitive real-time programs.
To access the **QoS – Queue Management Configuration** window, click the **Quality of Service** button in the **Advanced Setup** directory.
This window allows you to set up QoS on the Router. When you are finished, click on the **Save/Apply** button.

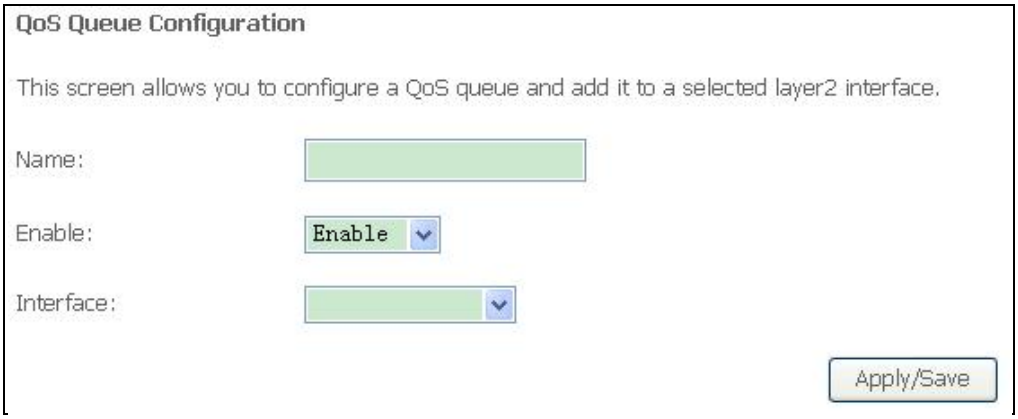


Qos Queue

Click the **Add** button to add a QoS Queue Configuration table entry.

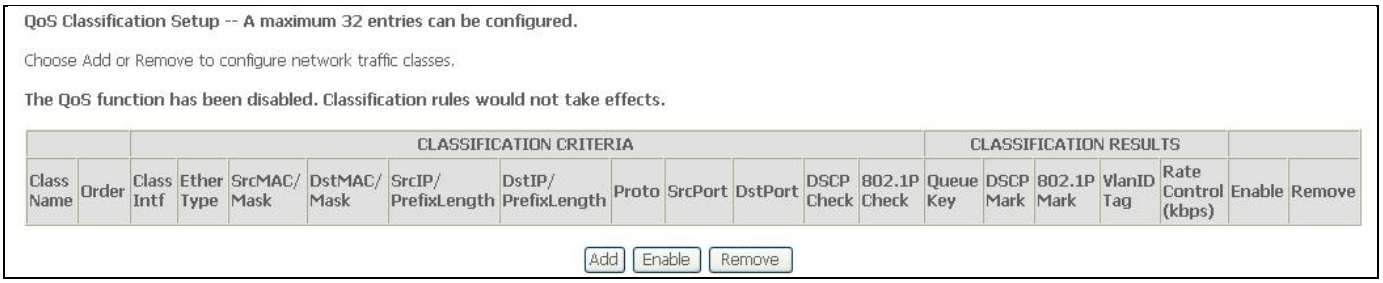


This window allows you to configure a QoS queue entry and assign it a specific network interface.
Click the **Apply / Save** button to save and activate the filter.

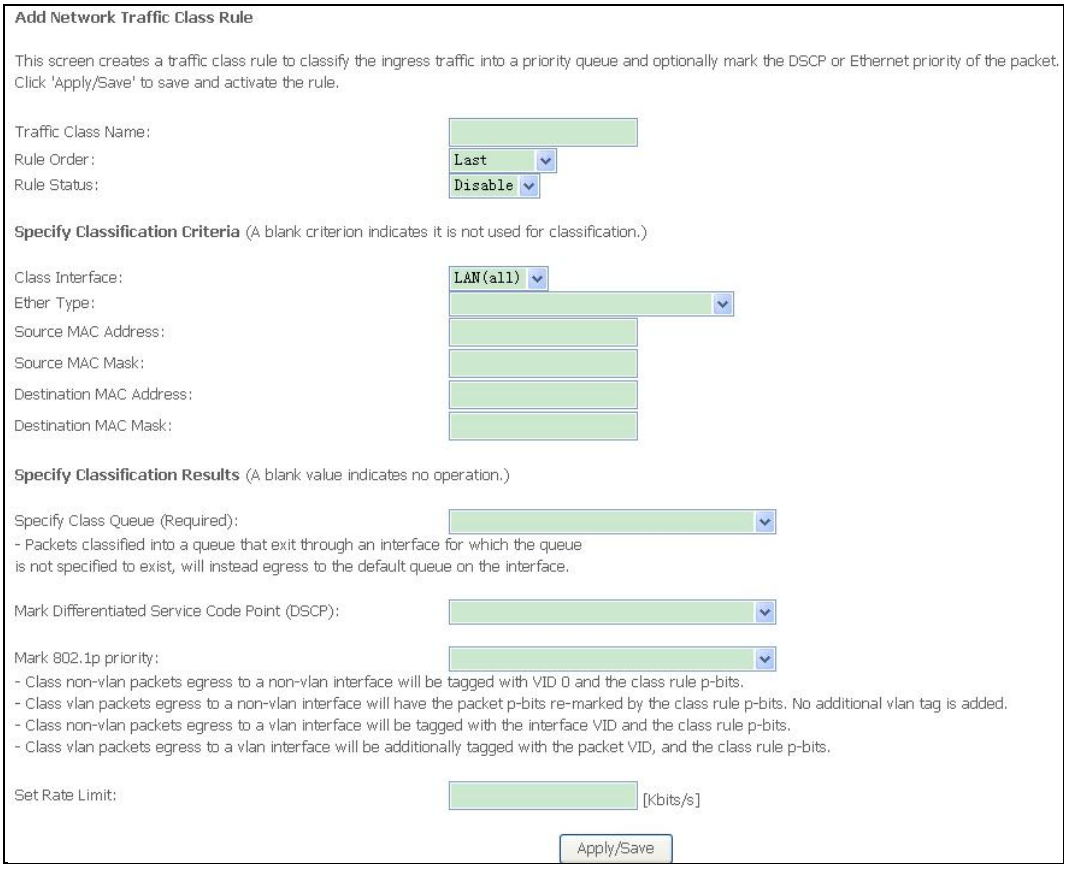


QoS Classification

Choose **Add** or **Remove** to configure network traffic classes.



Use this window to create a traffic class rule to classify the upstream traffic, assign a queue that defines the precedence and the interface, and optionally overwrite the IP header DSCP byte. A rule consists of a class name and at least one condition. Please remember that all of the specified conditions on this window must be met for the rule to take effect.
Click the **Apply / Save** button to save and activate this rule.

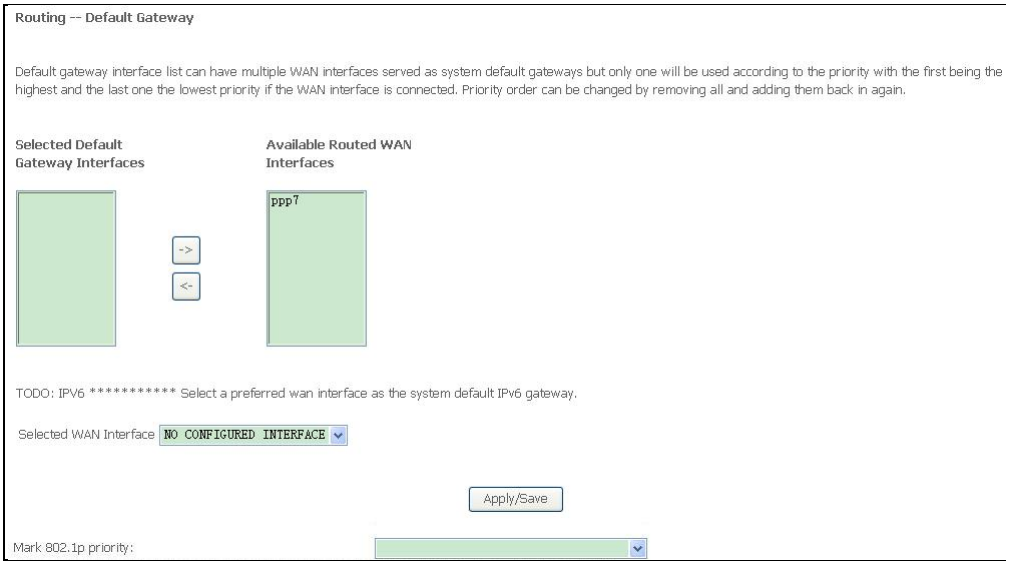


Routing

To access the **Routing** windows, click the **Routing** button in the **Advanced Setup** directory.

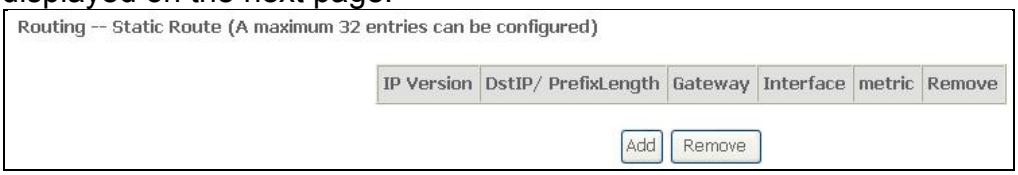
Default Gateway

Default gateway interface list can have multiple WAN interfaces served as system default gateways but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the **Apply / Save** button when you are finished.

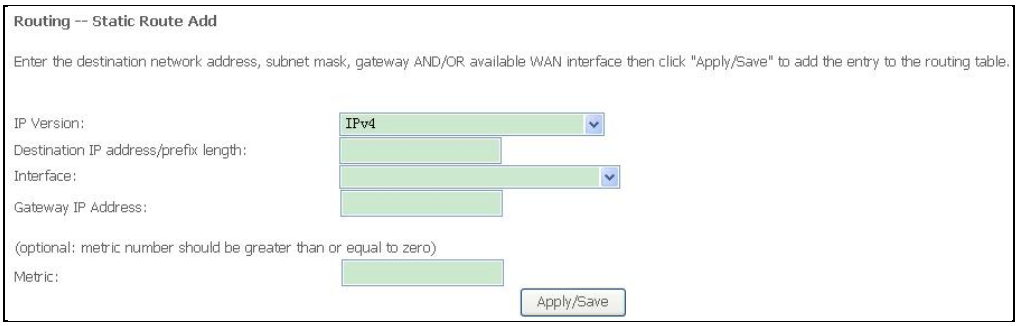


Static Route

Click the **Add** button on the **Routing – Static Route** window to access the following window displayed on the next page.

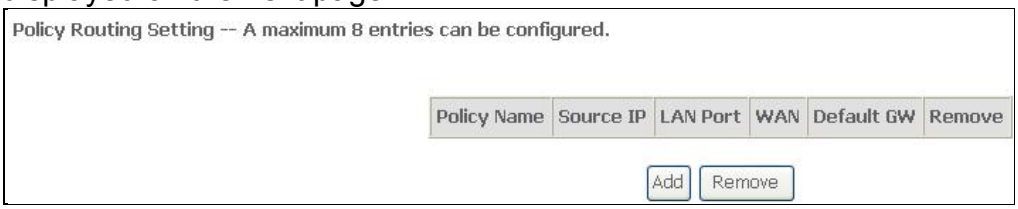


Enter the static routing information for an entry to the routing table.
Click the **Apply / Save** button when you are finished.

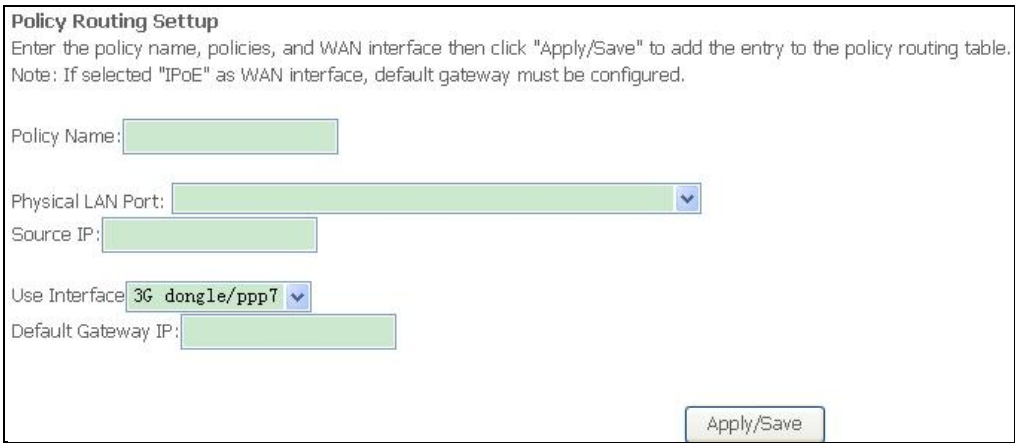


Policy Routing

Click the **Add** button on the **Policy Routing Setting** window to access the following window displayed on the next page.

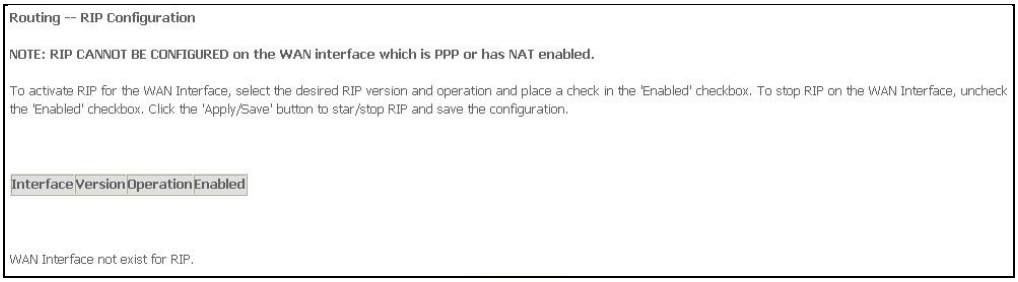


Enter the Policy Routing information. Click the **Apply / Save** button when you are finished.



RIP

To activate RIP for the device, select the **Enabled** radio button for Global RIP Mode. To configure an individual interface, select the desired RIP version and operation, followed by placing a check in the 'Enabled' checkbox for the interface. Click the **Save/Apply** button to save the configuration, and to start or stop RIP based on the Global RIP mode selected.

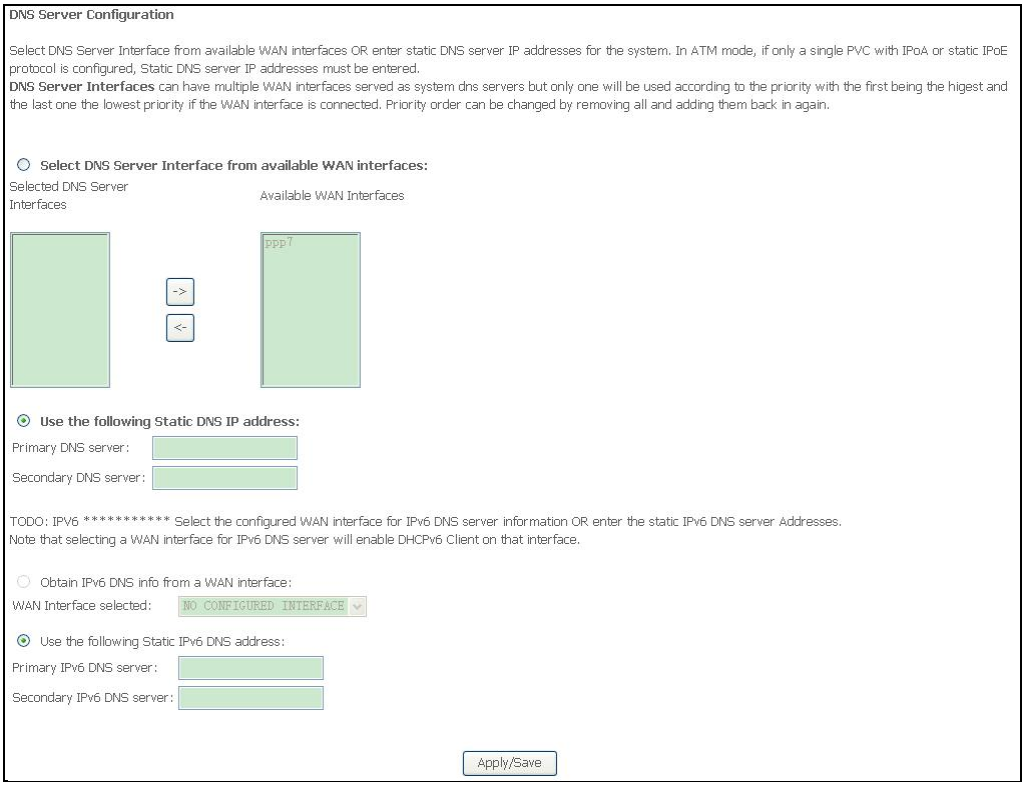


DNS

To access the **DNS** windows, click the **DNS** button in the **Advanced Setup** directory. The **DNS** button appears when configuring WAN interface in PPPoA, PPPoE, MER or IPoA.

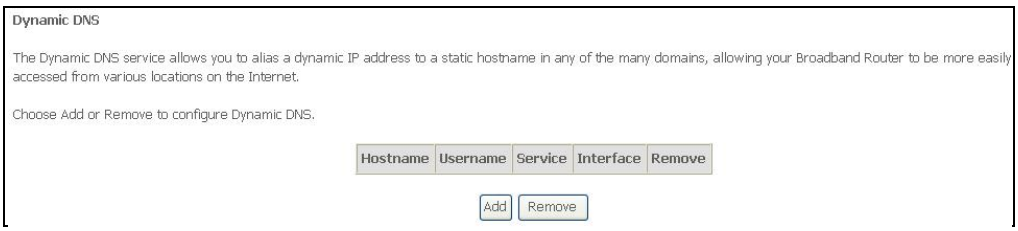
DNS Server

Select DNS Server Interface from available WAN interfaces OR enter static DNS server IP addresses for the system. In ATM mode, if only single PVC with IPoA or static IPoE protocol is configured, Static DNS server IP addresses must be entered.
DNS Server Interfaces can have multiple WAN interfaces served as system DNS servers but only one will be used according to the priority with the first being the highest and the last one the lowest priority if the WAN interface is connected. Priority order can be changed by removing all and adding them back in again. Click the **Apply / Save** button when you are finished.

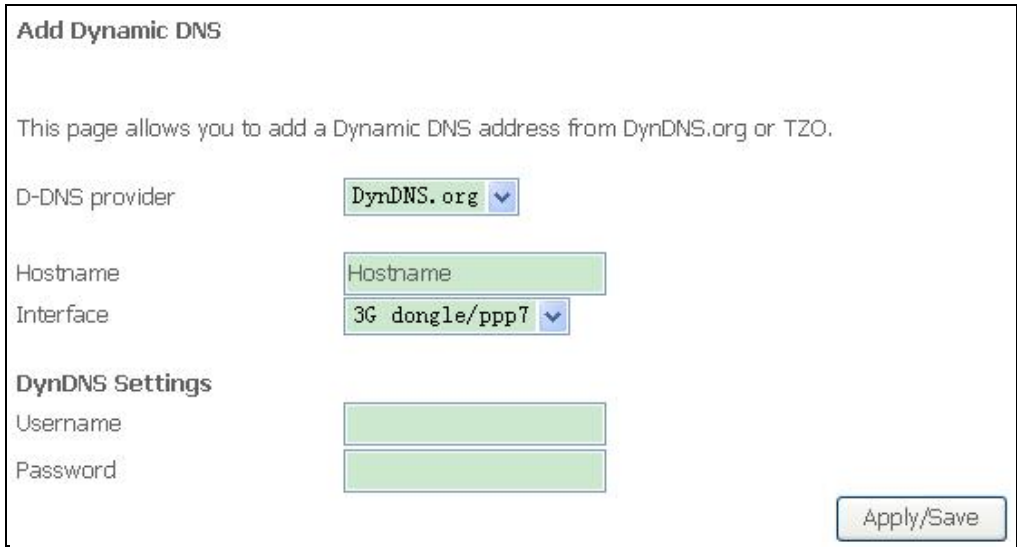


Dynamic DNS

The Router supports Dynamic DNS (Dynamic Domain Name Service). The Dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specified host from various locations on the Internet. This is enabled to allow remote access to a host by clicking a hyperlinked URL in the form **hostname.dyndns.org**, Many ISPs assign public IP addresses using DHCP, and this can make it difficult to locate a specific host on the LAN using standard DNS. If for example you are running a public web server or VPN server on your LAN, this ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be setup with one of the supported DDNS providers.
Click **Add** to see the Add DDNS Settings section.



Enter the required DDNS information, click the **Apply / Save** button to save the information.

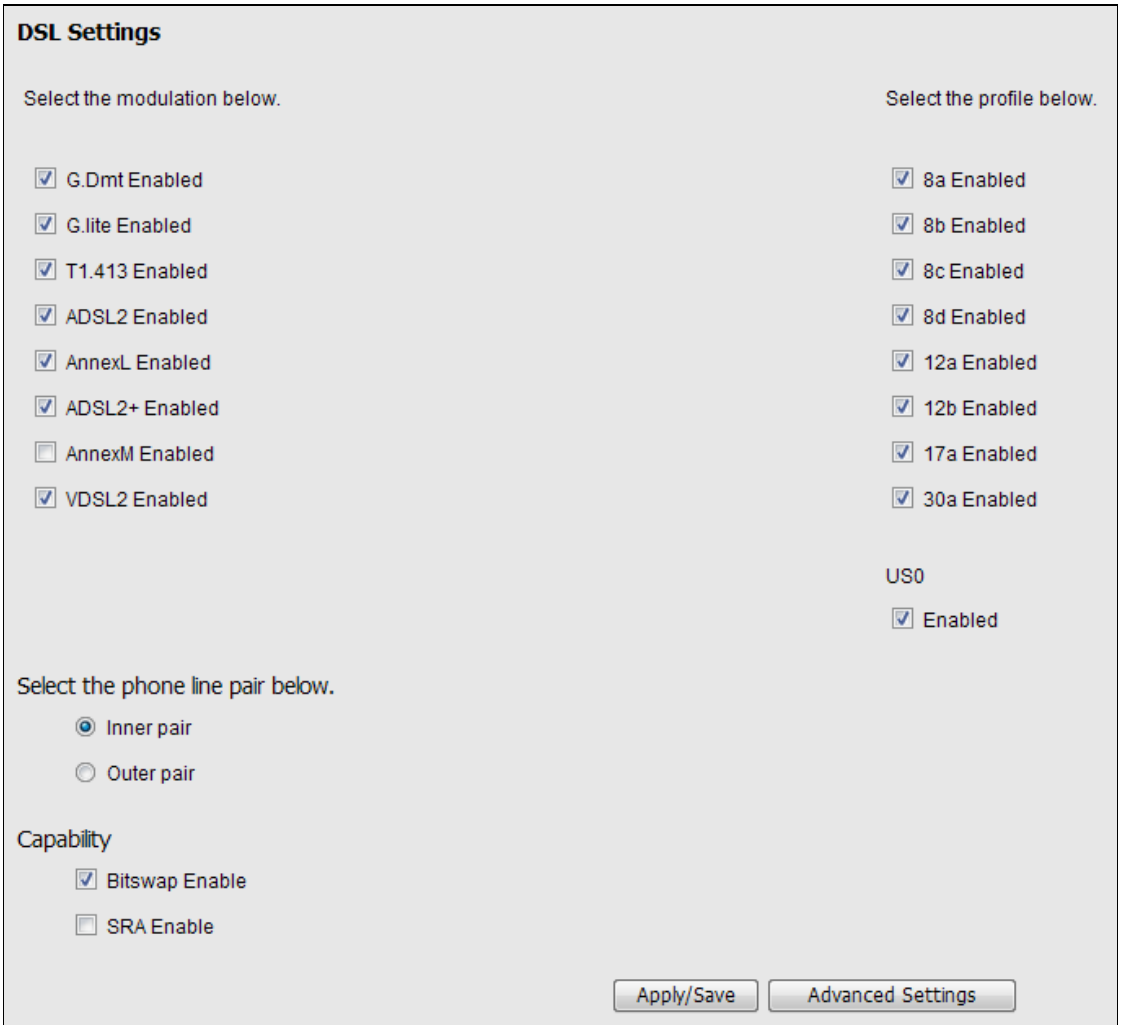


Note

DDNS requires that an account be setup with one of the supported DDNS servers prior to engaging it on the Router. This function will not work without an accepted account with a DDNS server.

DSL

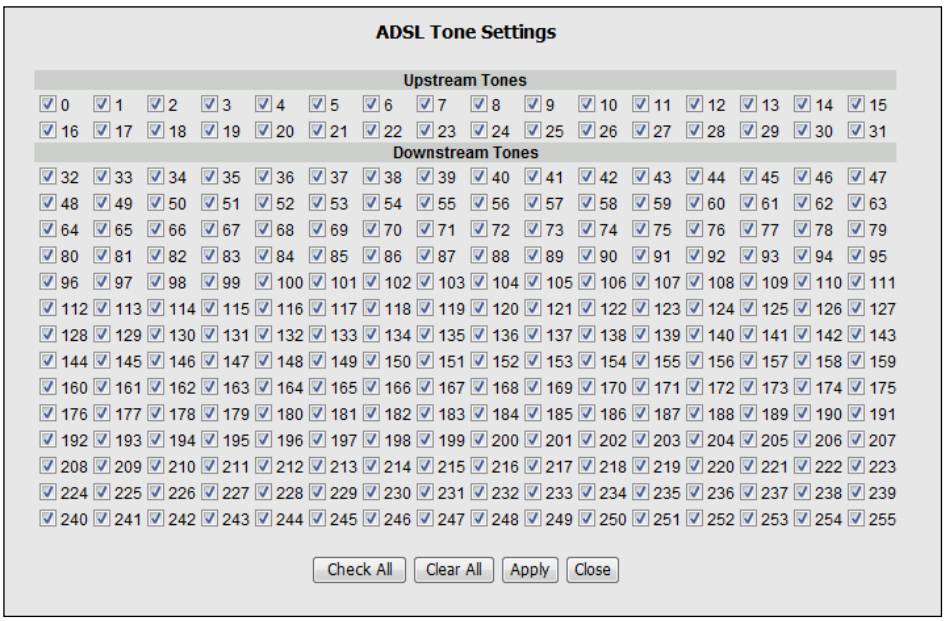
The DSL window enables you to configure the DSL settings of the gateway.
Select **DSL** from the **Advanced Setup** menu to open the DSL Settings window



If you clicked **Advanced Settings** in the **DSL Settings** window, the DSL Advanced Settings window opens

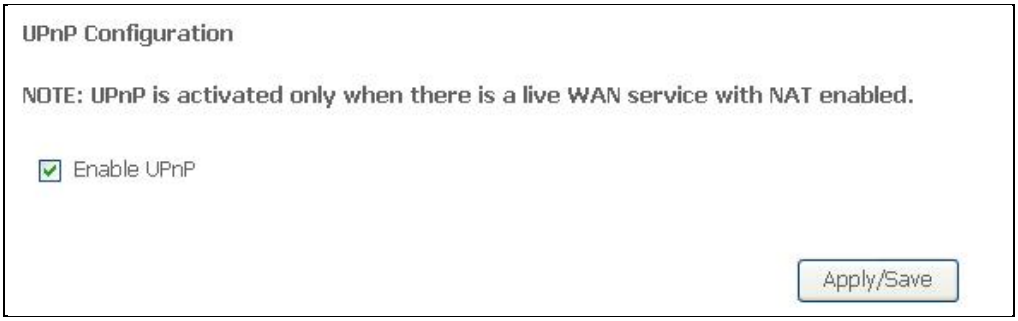
If you clicked the **Tone Selection** button, the ADSL Tone Settings window opens

Note: The ADSL tone settings should only be configured with the assistance of your ISP.



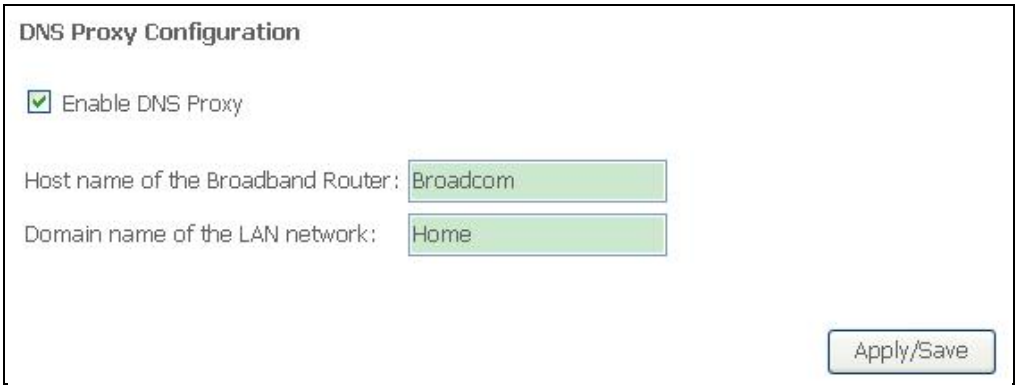
UPNP

To access the **UPnP Configuration** window, click the **UPnP** button in the **Advanced Setup** directory.
This window allows you to Config UPnP Proxy. Click the **Apply / Save** button when you are finished.



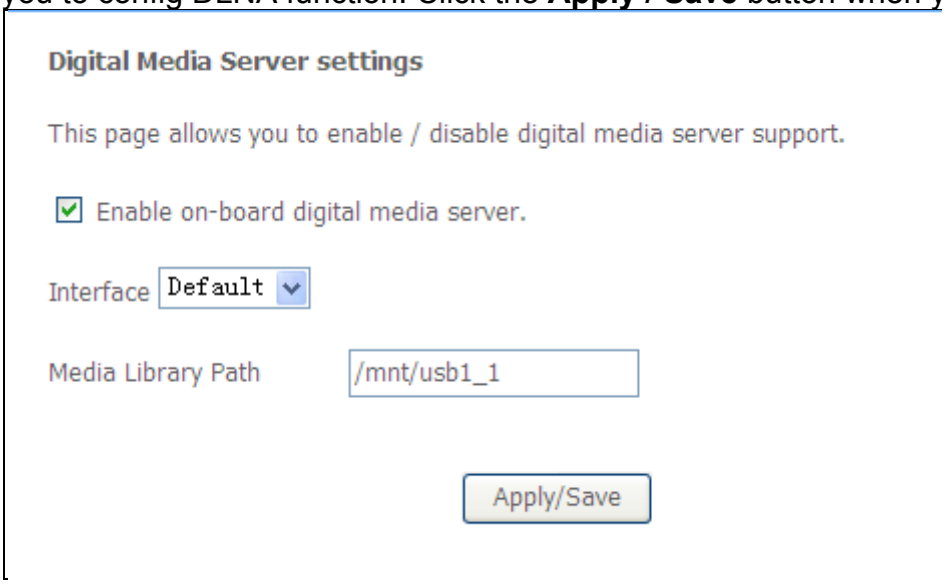
DNS Proxy

To access the **DNS Proxy Configuration** window, click the **DNS Proxy** button in the **Advanced Setup** directory.
This window allows you to Config DNS Proxy. Click the **Apply / Save** button when you are finished.



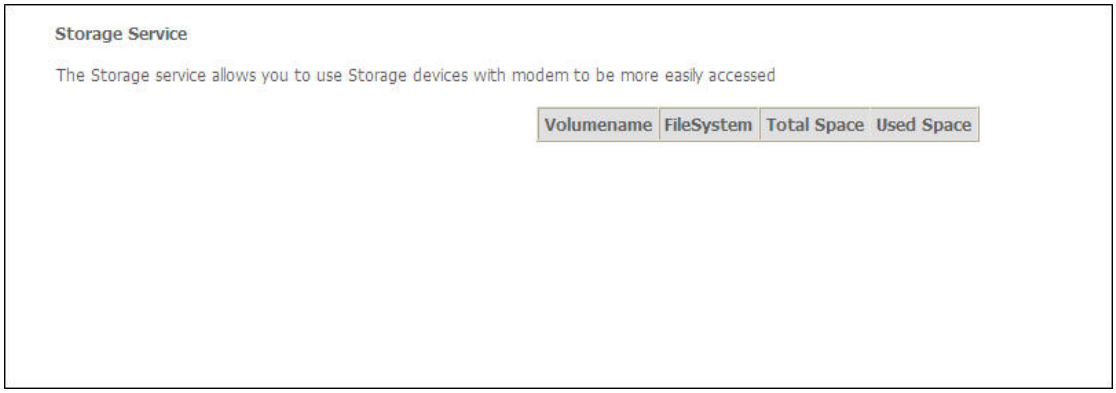
DLNA

Select **DLNA** from the **Advanced Setup** menu to open the DLNA window. This window allows you to config DLNA function. Click the **Apply / Save** button when you are finished.



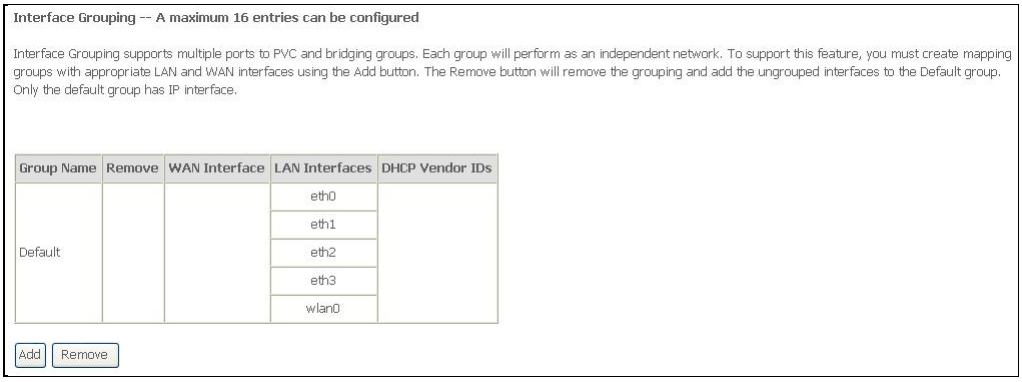
Storage service

The Storage Service window displays Storage Device information from USB interface.
Select **Storage Service** from the **Advanced Setup** menu to open the Storage Service window

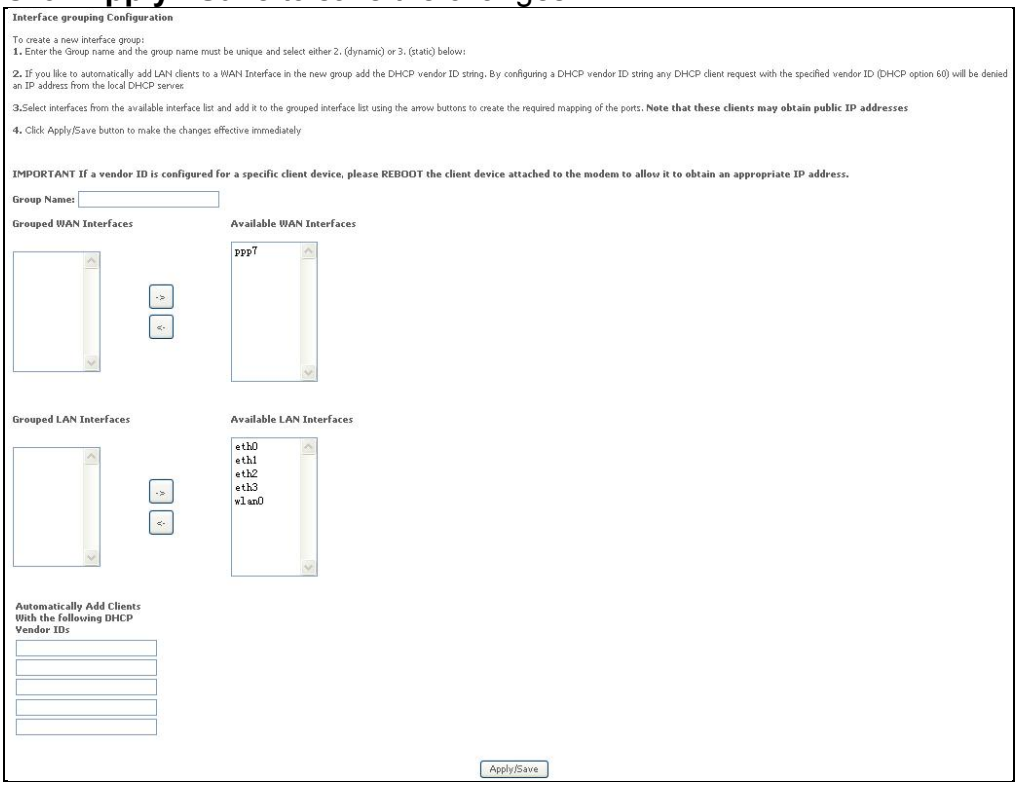


Interface Grouping

Interface Group supports multiple ports to PVC and bridging groups. Each group will perform as an independent network.
To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the Add button. The Remove button will remove the grouping and add the ungrouped interfaces to the Default group. Only the default group has IP interface.
Click **Add** to do advanced settings.



To create a new mapping group, enter **Group Name**, add interfaces to **Grouped Interfaces**.
Click **Apply / Save** to save the changes.



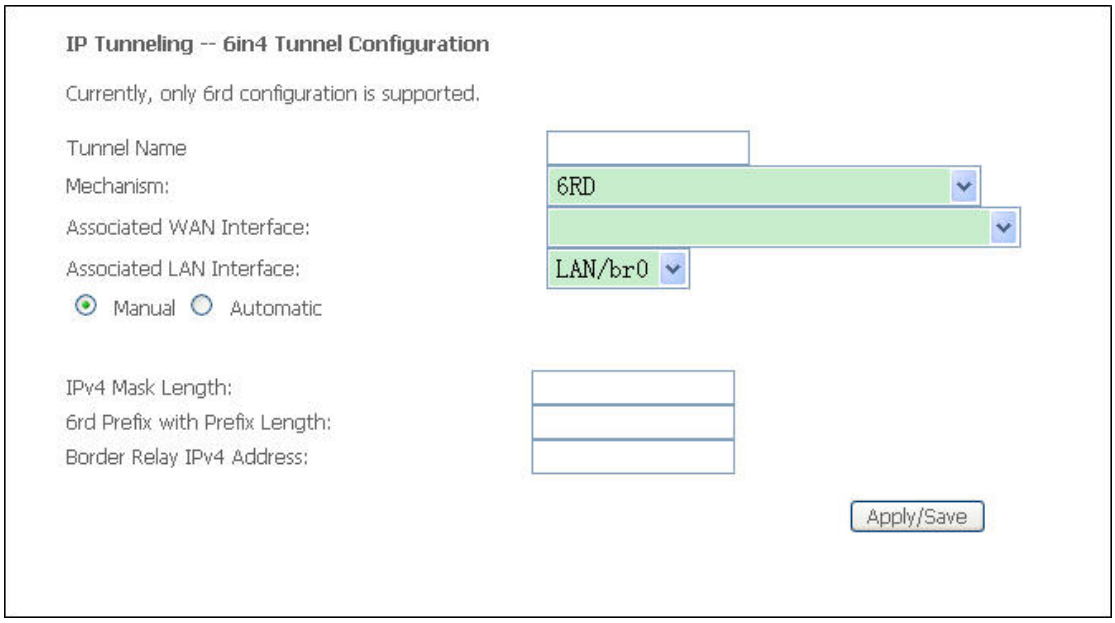
IP Tunnel

Select **IP Tunnel** from the **Advanced Setup** menu to open the IP Tunnel submenu.

IPv6inIPv4

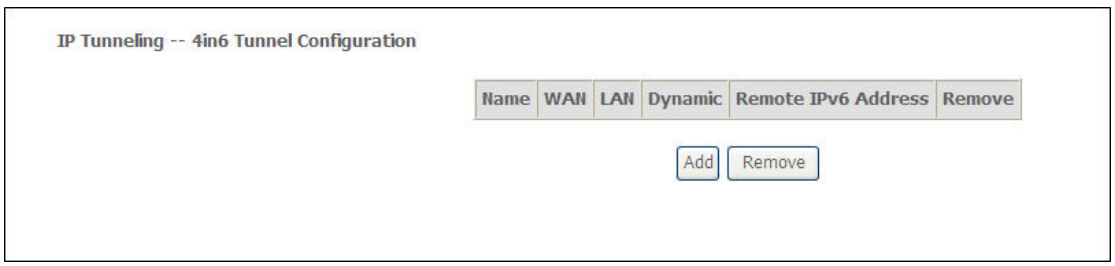
Select **IPv6inIPv4** from the **IP Tunnel** submenu to open the IP Tunneling-6in4 Tunnel Configuration window

If you click **Add**, the detail of the IP Tunneling-6in4 Tunnel Configuration window will open

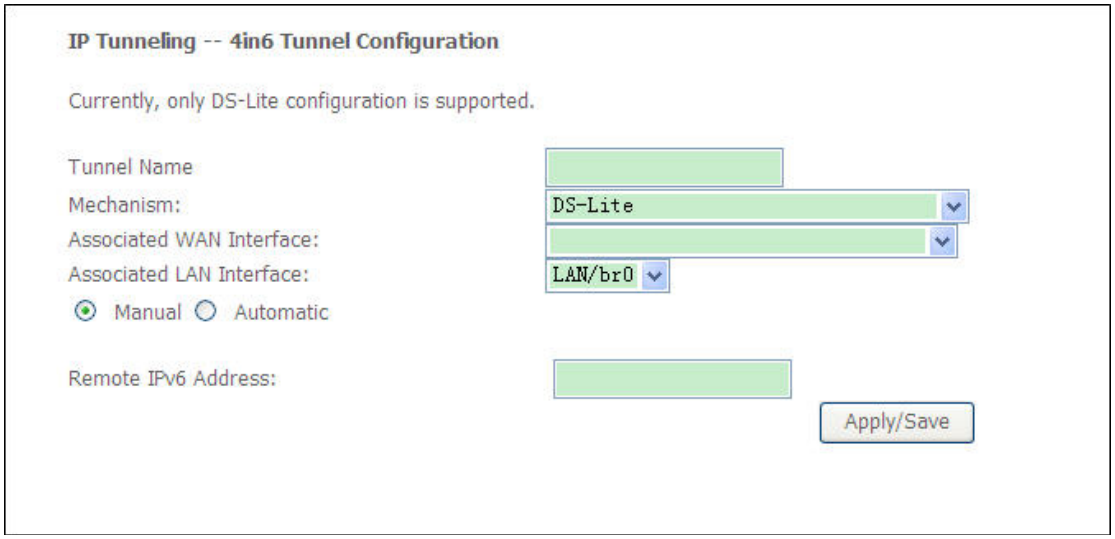


IPv4inIPv6

Select **IPv4inIPv6** from the **IP Tunnel** submenu to open the IP Tunneling-4in6 Tunnel Configuration window;



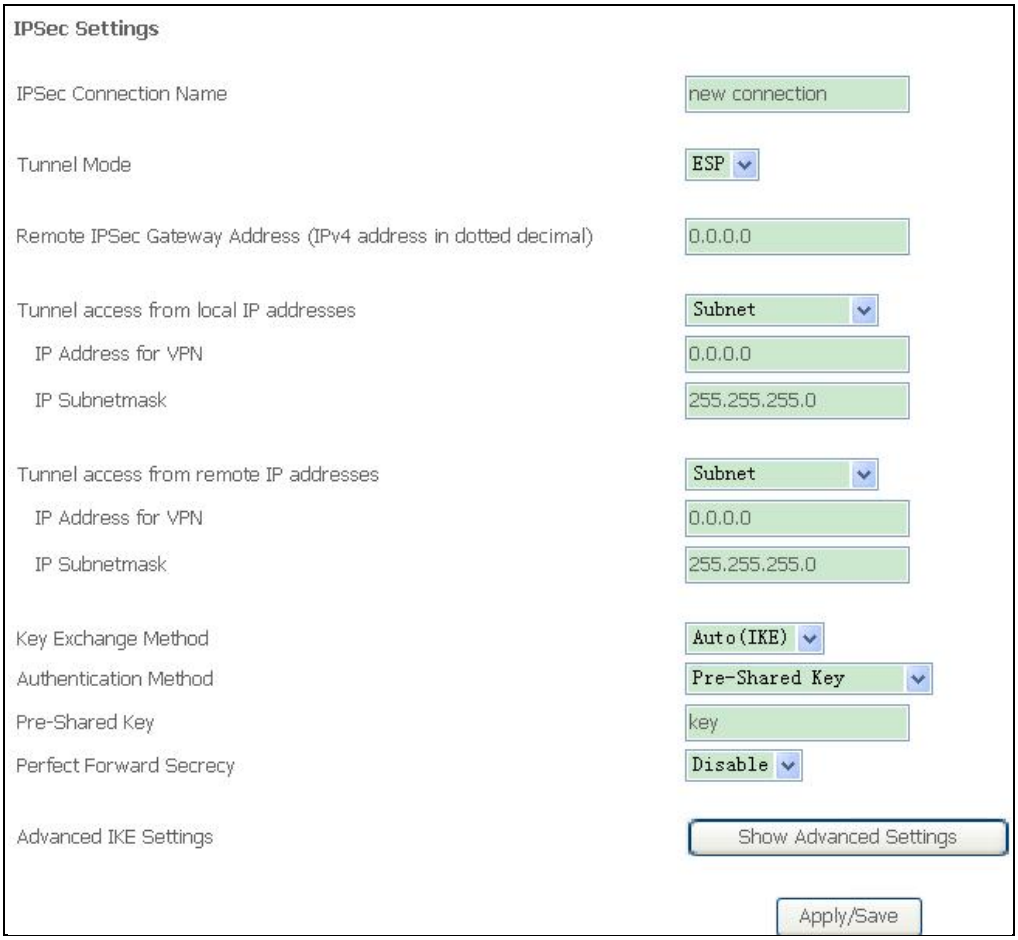
If you click **Add**, the detail of the IP Tunneling-4in6 Tunnel Configuration window will open



IPSec

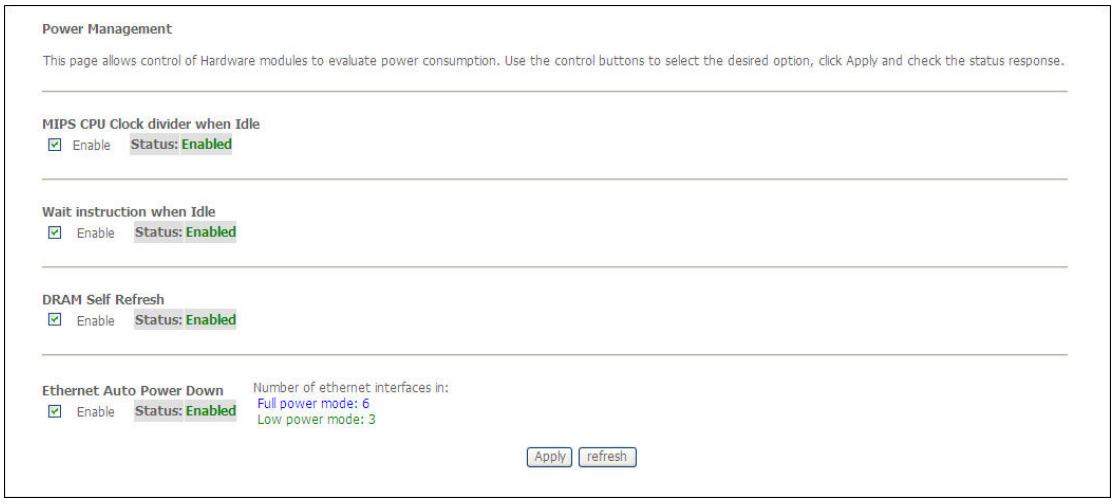
To access the **IPSec Tunnel Mode Connections** window, click the **IPSec** button in the **Advanced Setup** directory.
This window allows you to configure **IPSec**.
Click **Add New Connection** to edit IPSec tunnel mode connections from this page

This window allows you to advanced settings.



Power Management

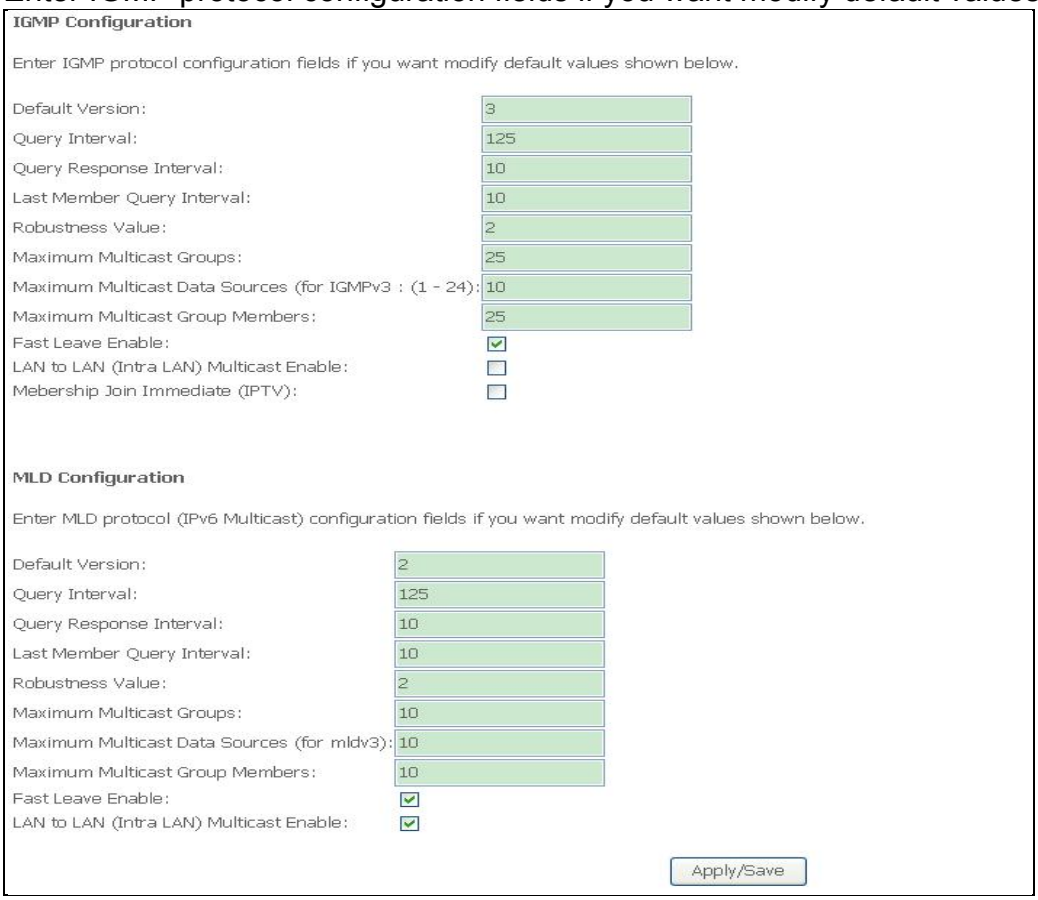
The Power Management window enables you to control of Hardware to evaluate power consumption.
Select **Power Management** from the **Advanced Setup** menu to open the Power Management window



Multicast

To access the **IGMP Configuration** window, click the **Multicast** button in the **Advanced Setup** directory.

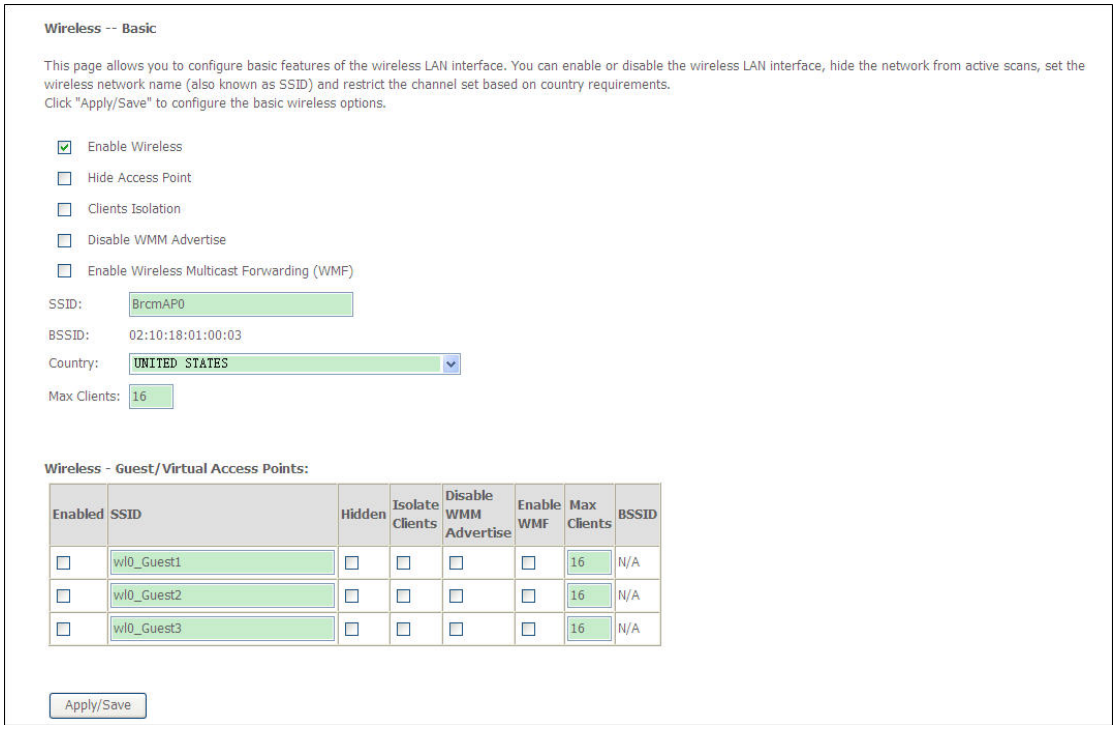
Enter IGMP protocol configuration fields if you want modify default values shown below.



Wireless

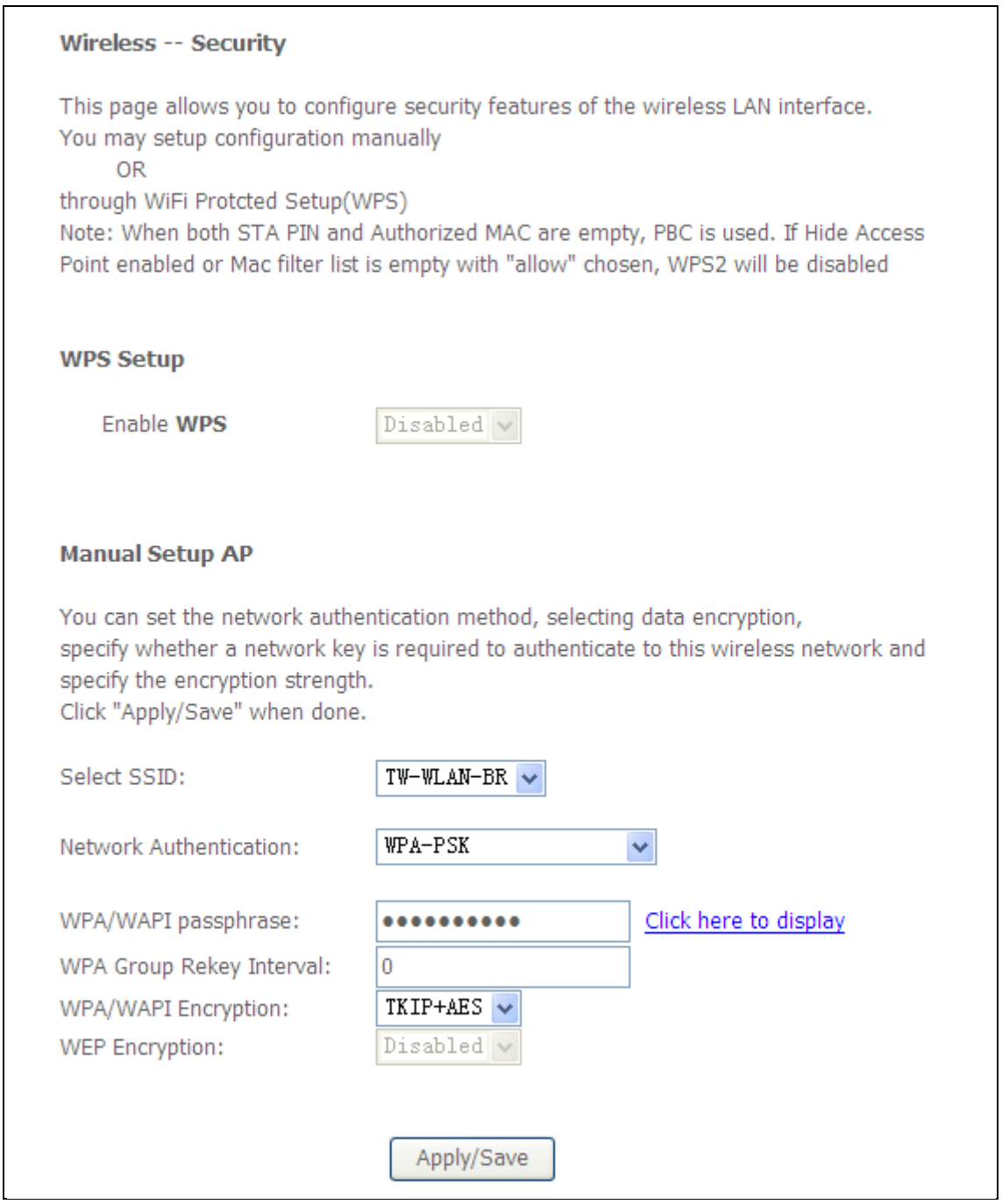
Basic

The Basic menu enables you to configure basic features of the wireless LAN interface.
Select **Basic** from the **Wireless** menu to open the basic submenu;



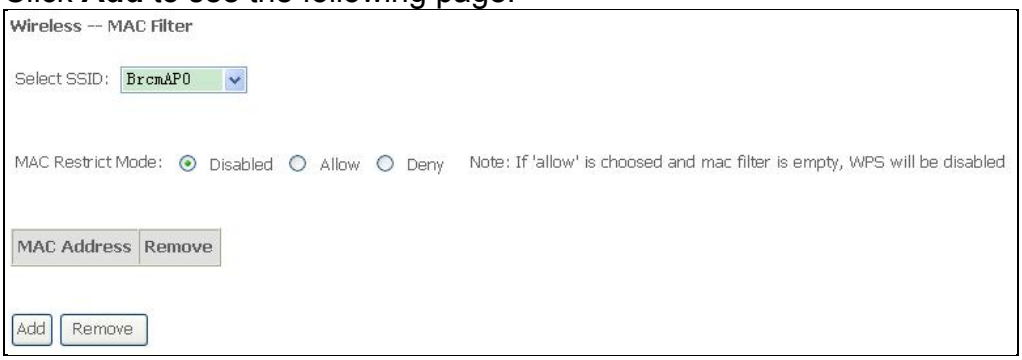
Security

This page allows you to configure security features of the wireless LAN interface. You may setup configuration manually or through WiFi Protected Setup(WPS)
You can select to configure WEP encryption, Shared, 802.1x, WPA, and WPA2 authentication.



MAC Filter

This page can help you to allow or deny certain MAC addresses to pass through or block out. Click **Add** to see the following page.

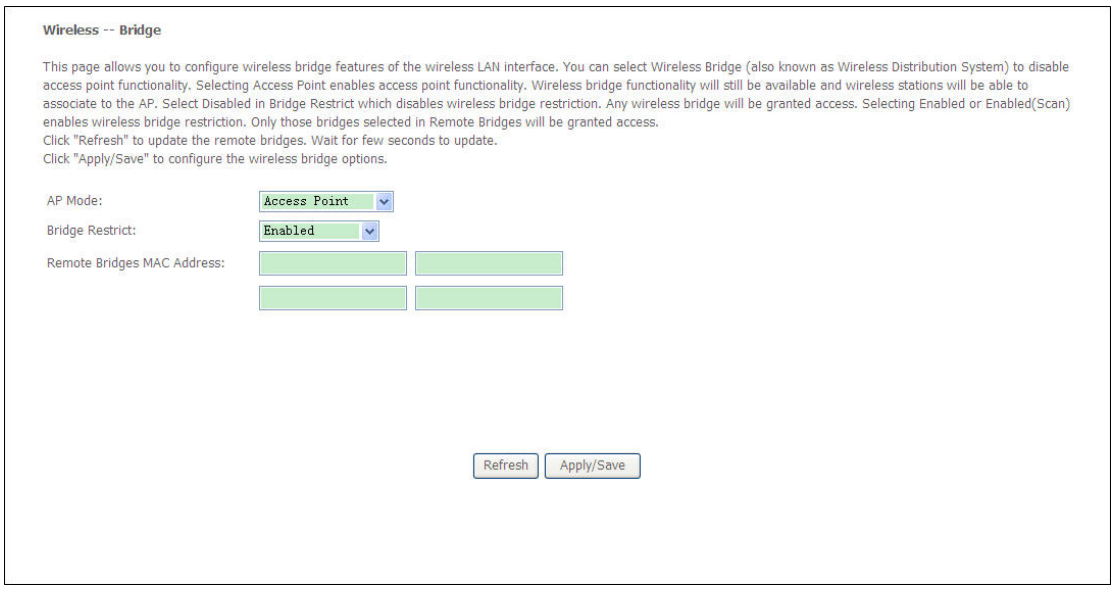


Enter MAC Address and click **Apply / Save** to add the MAC address to MAC filter.

Wireless Bridge

The Wireless Bridge menu enables you to configure wireless bridge features of the wireless LAN interface.

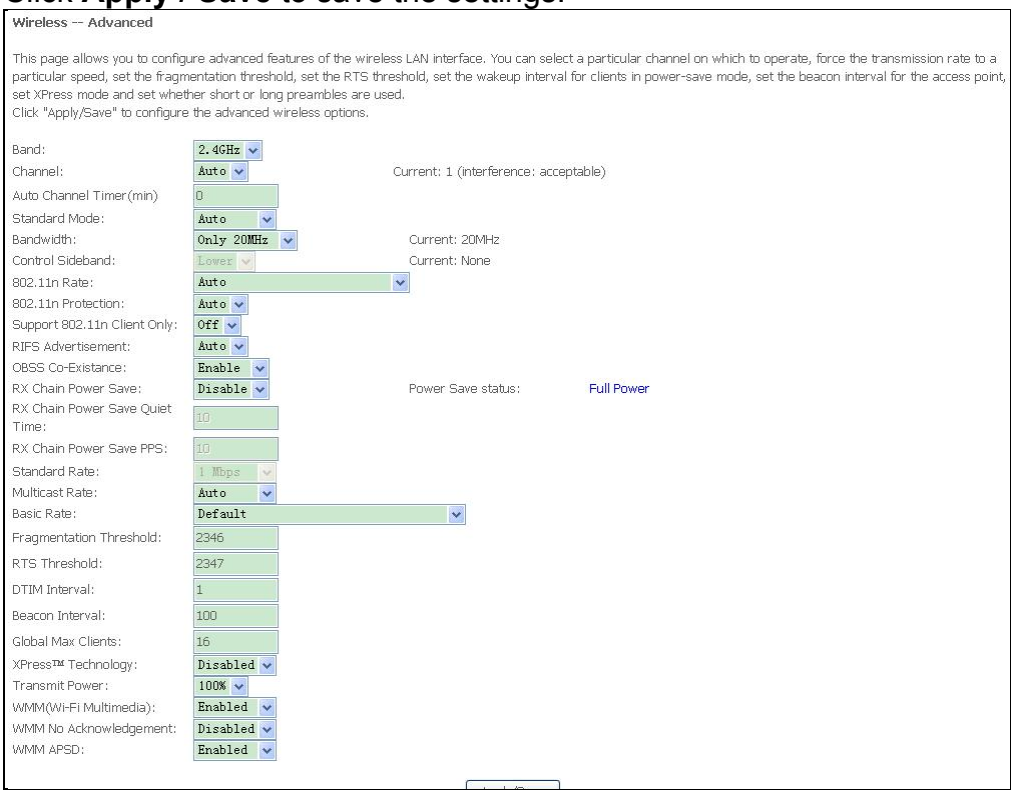
Select **Wireless Bridge** from the **Wireless** menu to open the wireless bridge submenu



Advanced

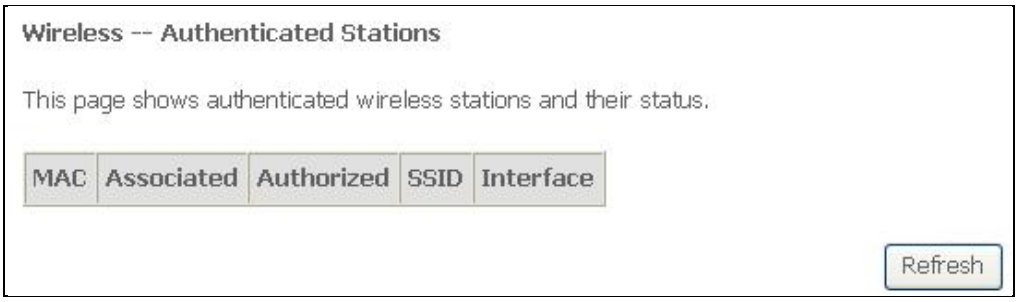
This page allows you to configure advanced wireless LAN interface. Configuring these settings may increase the performance of your router but if you are not familiar with networking devices and protocols, this section should be left at its default settings.

Click **Apply / Save** to save the settings.



Station Info

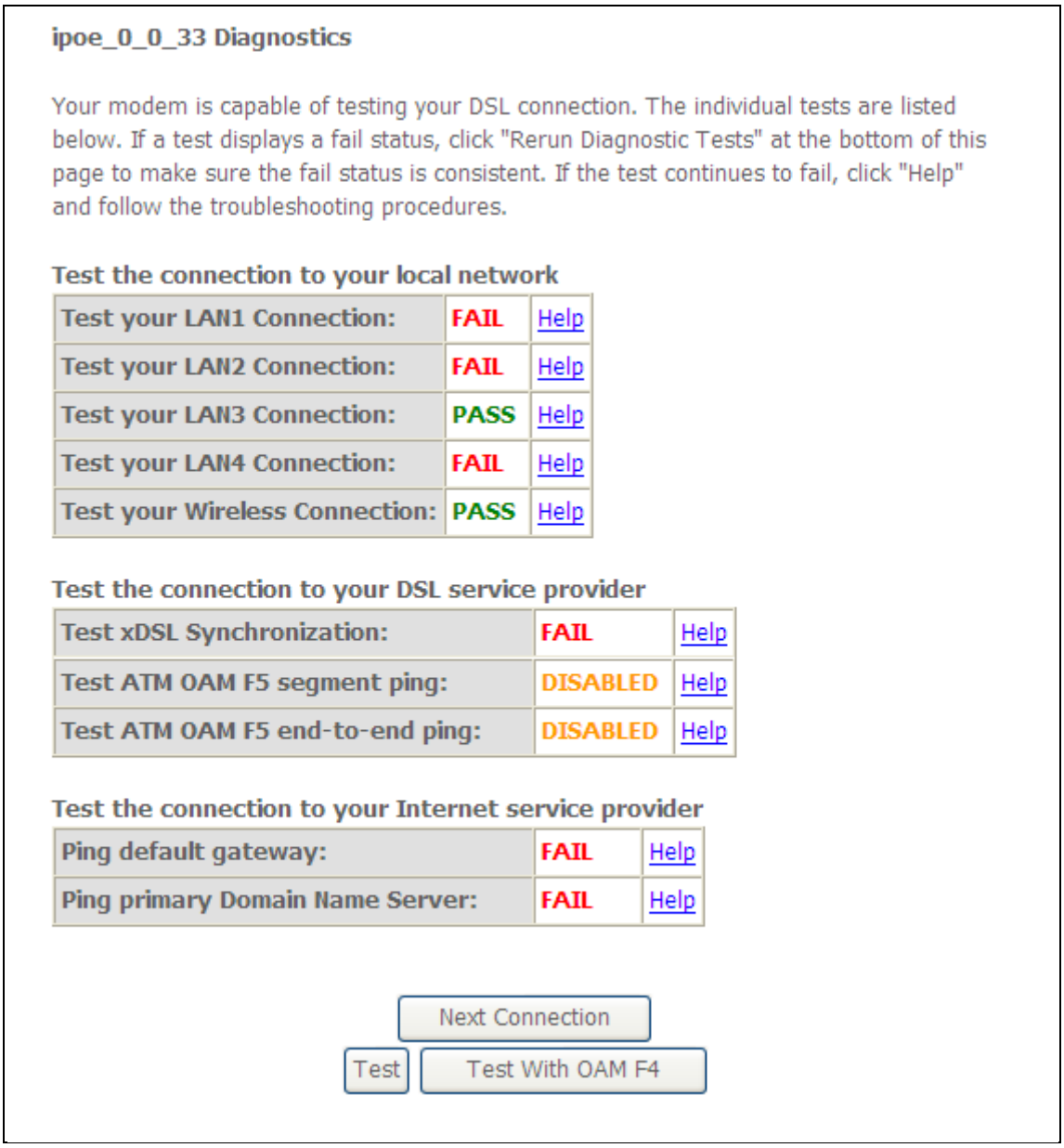
This page shows the authenticated wireless stations and their status.
Click **Refresh** to update the information.



Diagnostics

Diagnostics

Your modem is capable of testing your DSL connection with access to **Diagnostics**. This window is used to test connectivity of the Router.

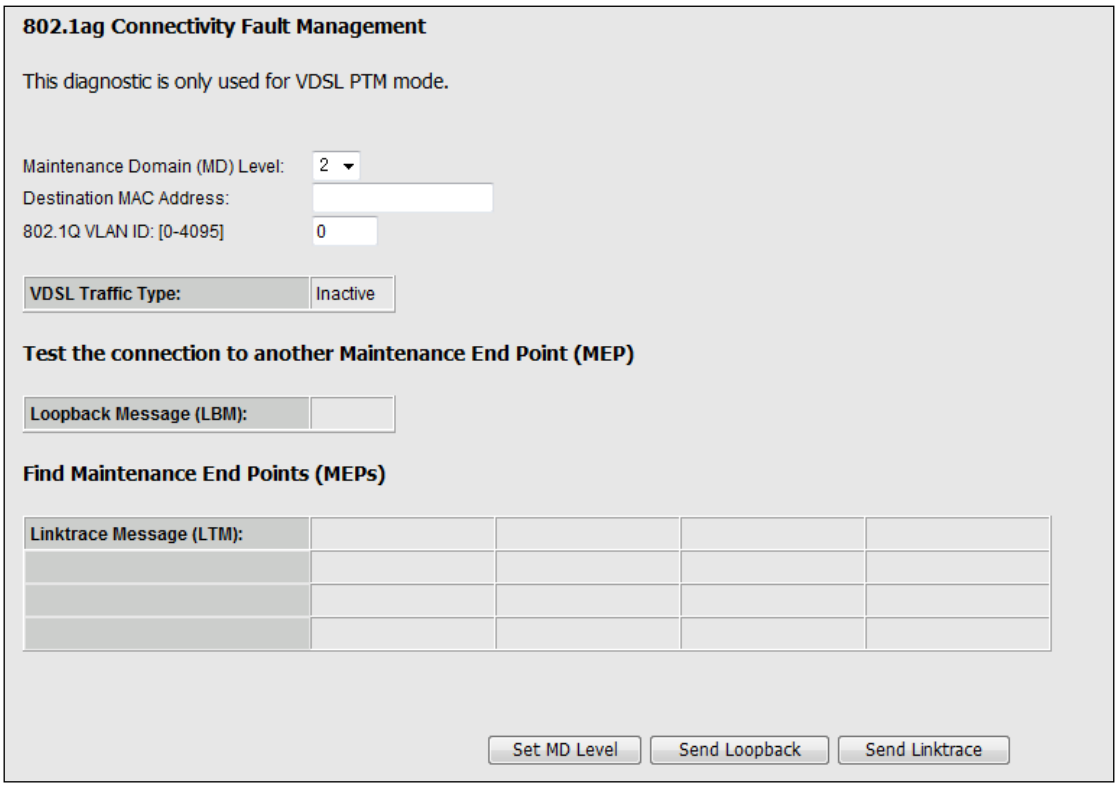


Fault Management

Fault Management enables you to test the connectivity of the xDSL PTM mode.

Note: Fault management should only be run with assistance from your ISP.

Select **Fault Management** from the **Diagnostics** menu to open the 802.1ag Connectivity Fault Management window

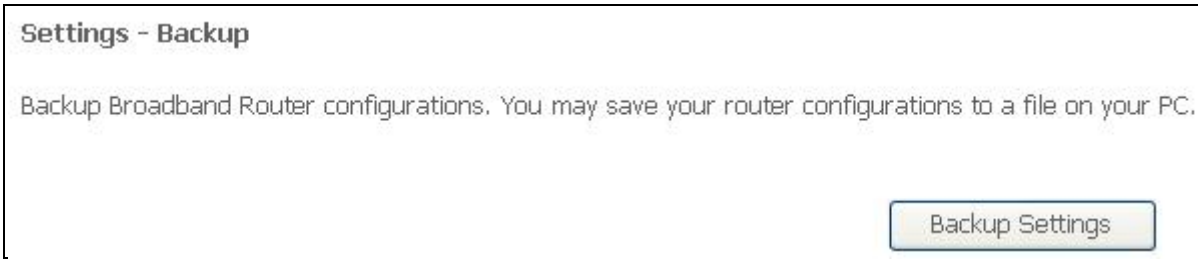


Management

The Management directory features an array of options designed to help you get the most out of your Router.

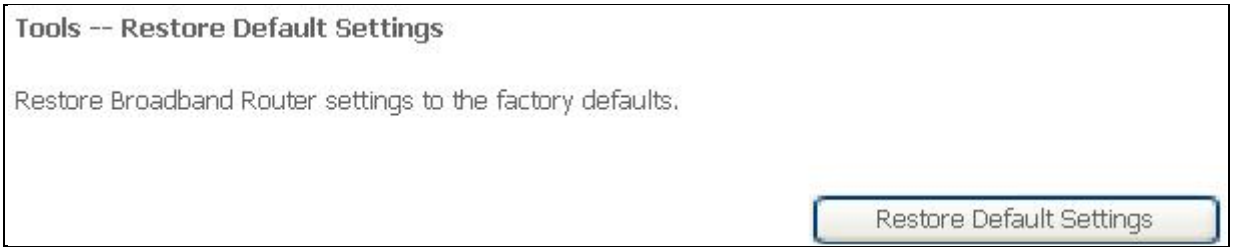
Settings

To access the **Settings - Backup** window, click the **Settings** button in the **Management** directory.
This window allows you to backup your DSL Router configurations.
Click the **Backup Settings** button to save your Router configurations to a file on your computer.



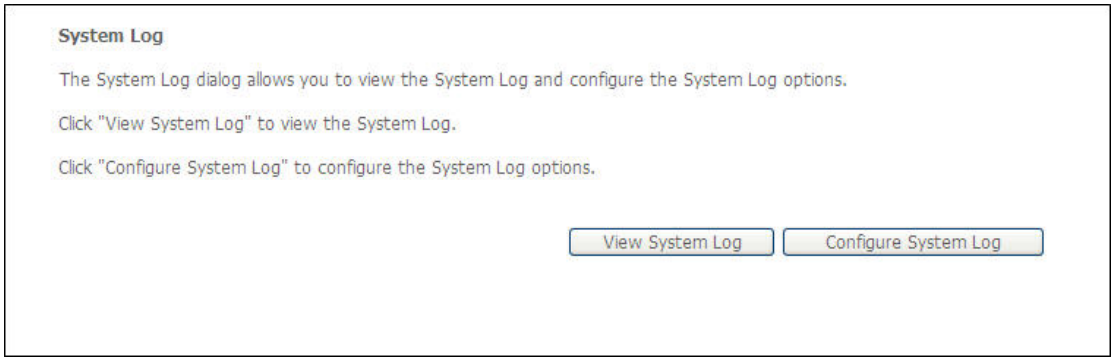
This window allows Update DSL router settings. You may update your router settings using your saved files.
Click the **Update** button to update your Router configurations with a file on your computer.

This window allows Restore DSL router settings to the factory defaults.
Click the **Restore DSL Settings** button to restore DSL router settings to the factory defaults.



System Log

The System Log windows enable you view and configure the system log of this device.
Select **System Log** in the **Management** menu to open the System Log window

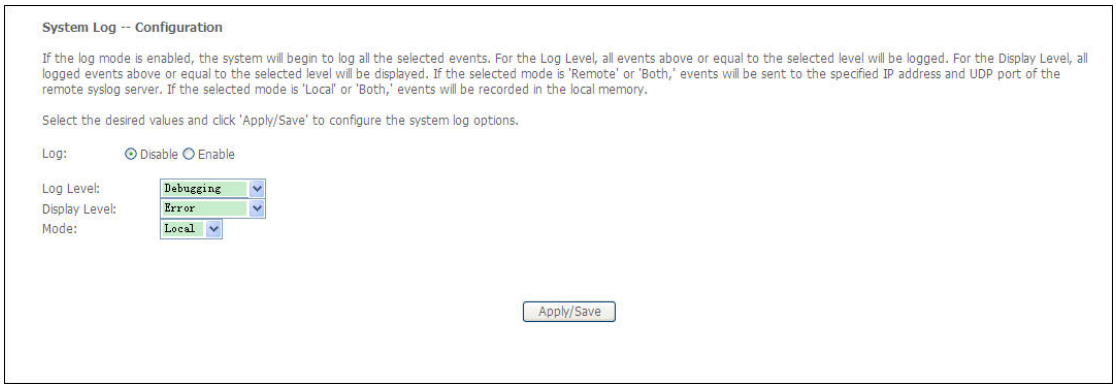


If you clicked **View System Log** in the **System Log** window, the System Log information window opens;

If you clicked **Configure System Log** in the **System Log** window, the Configuration window

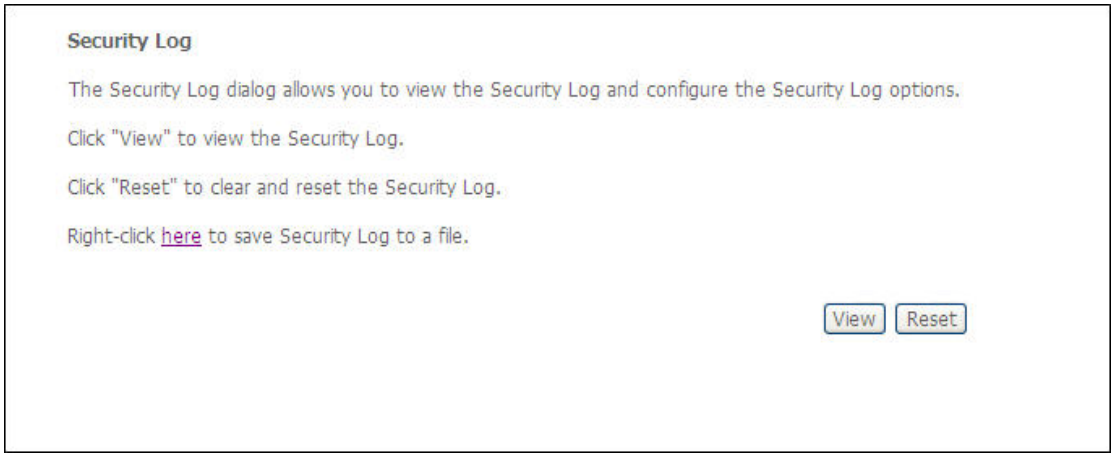
opens;

Note: Configuring the system log should be done with assistance from your ISP.

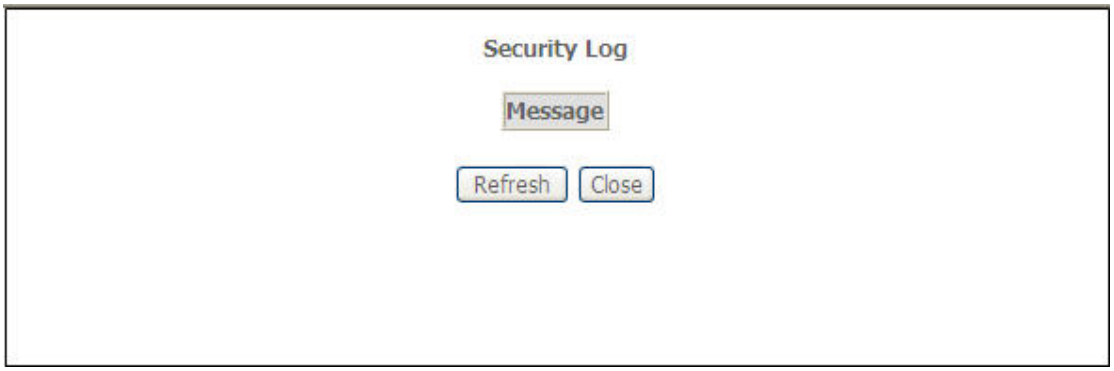


Security Log

The System Log windows enable you view the security log of this device.
Select **Security Log** in the **Management** menu to open the Security Log window;

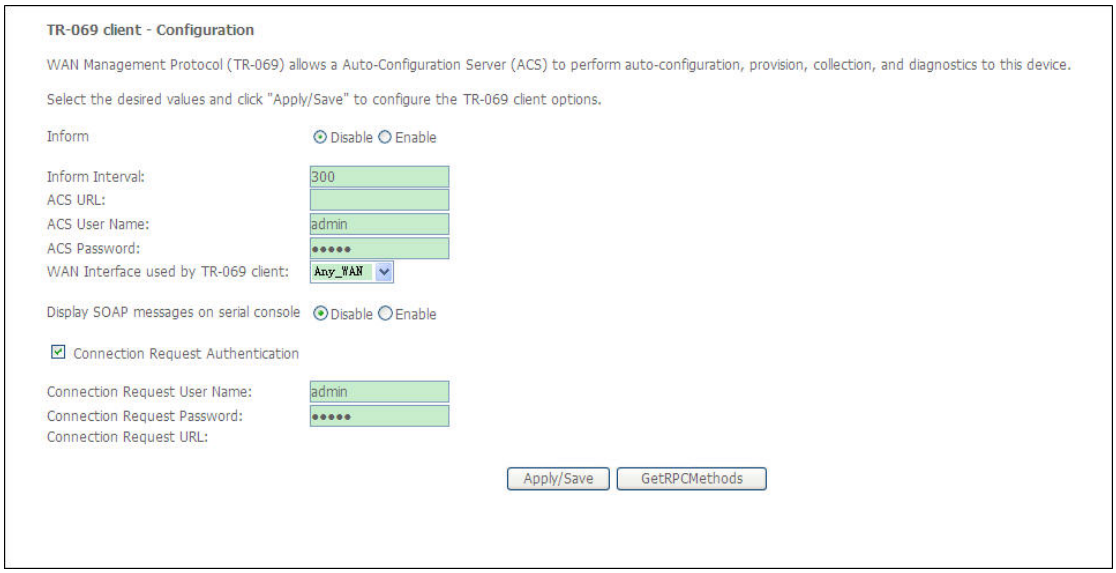


If you clicked **View** in the **Security Log** window, the Security Log information window opens;



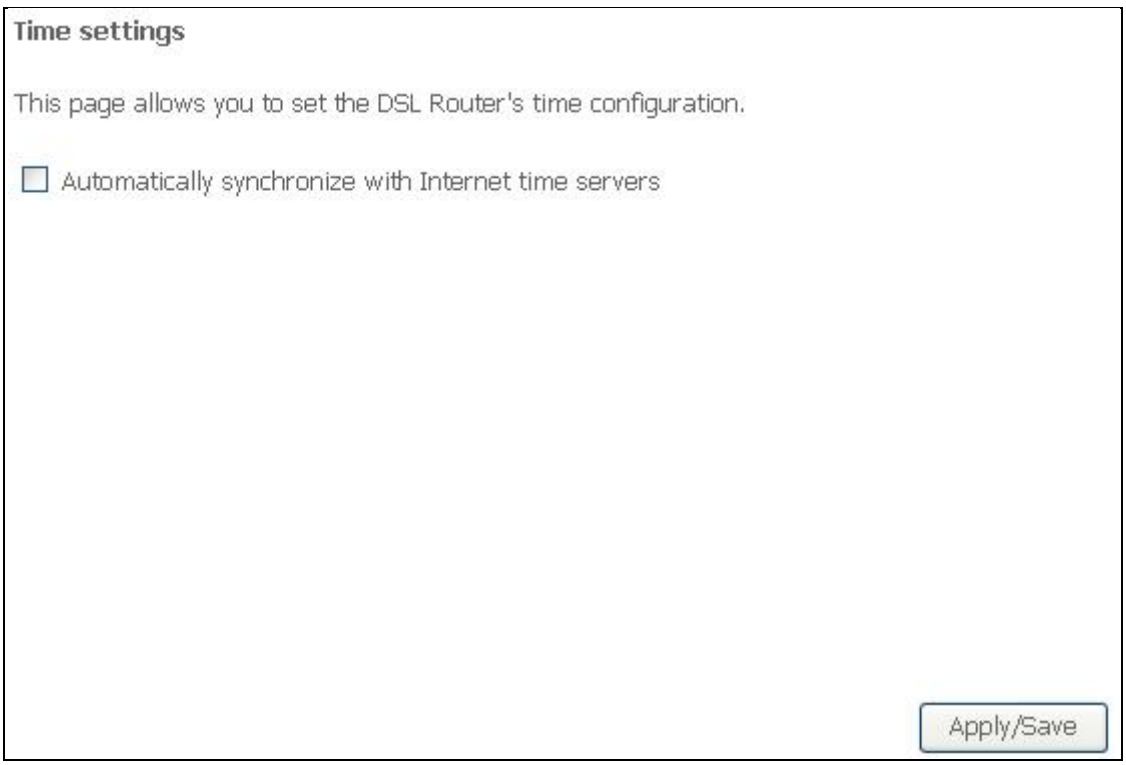
TR069 client

The TR-069 Client window enables you to configure the ACS for this device
Select **TR-069 Client** in the **Management** menu to open the TR-069 Client-Configuration window;



Internet Time

To access the **Time settings** window, click the **Internet Time** button in the **Management** directory.
This window allows you to set the Router's time configuration. When you are finished, click the **Save/Apply** button.

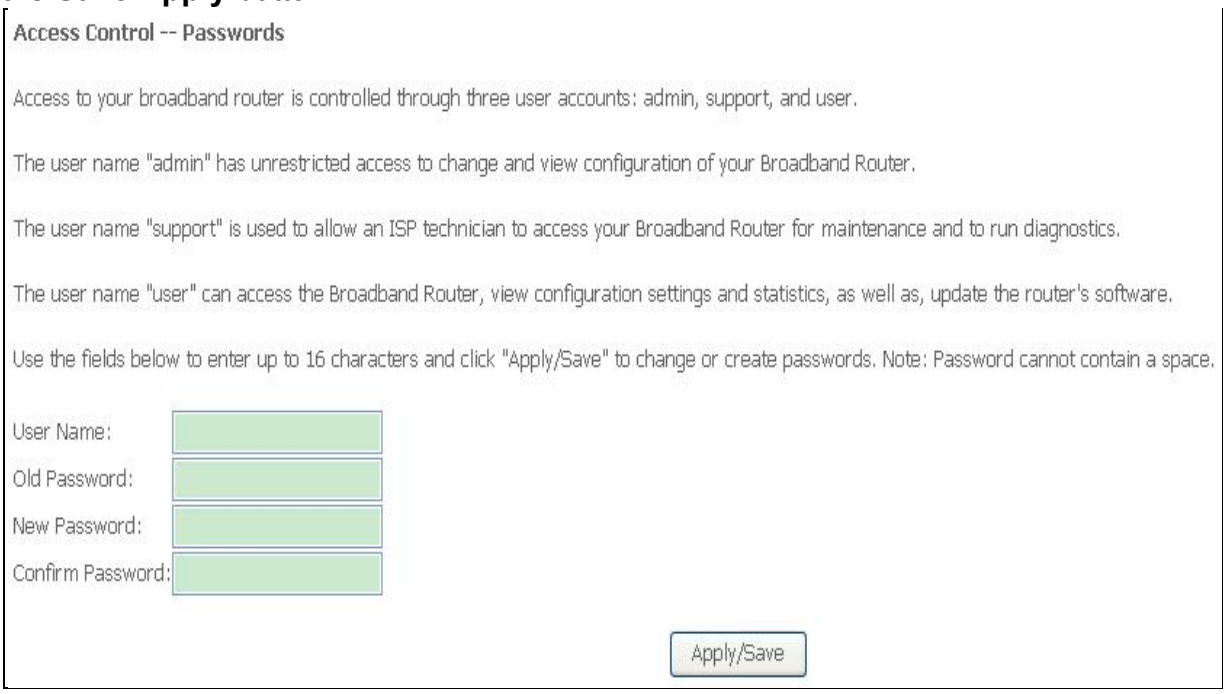


Access Control

To access the **Access Control** windows, click the **Access Control** button in the **Management** directory.

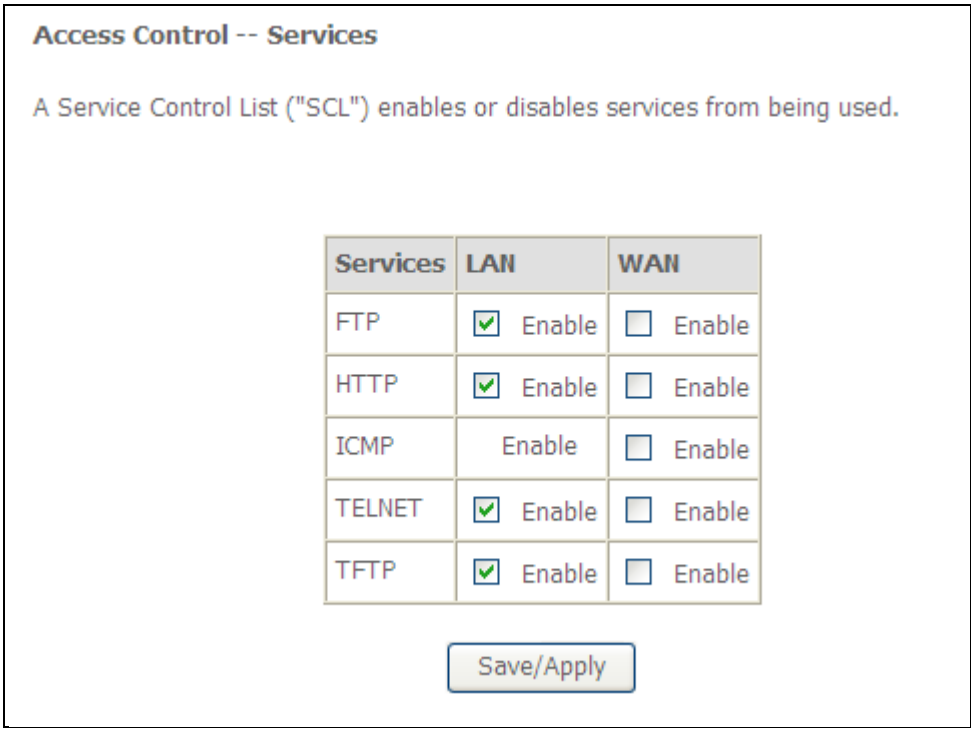
Passwords

This window allows you to change the password on the Router. When you are finished, click the **Save/Apply** button.



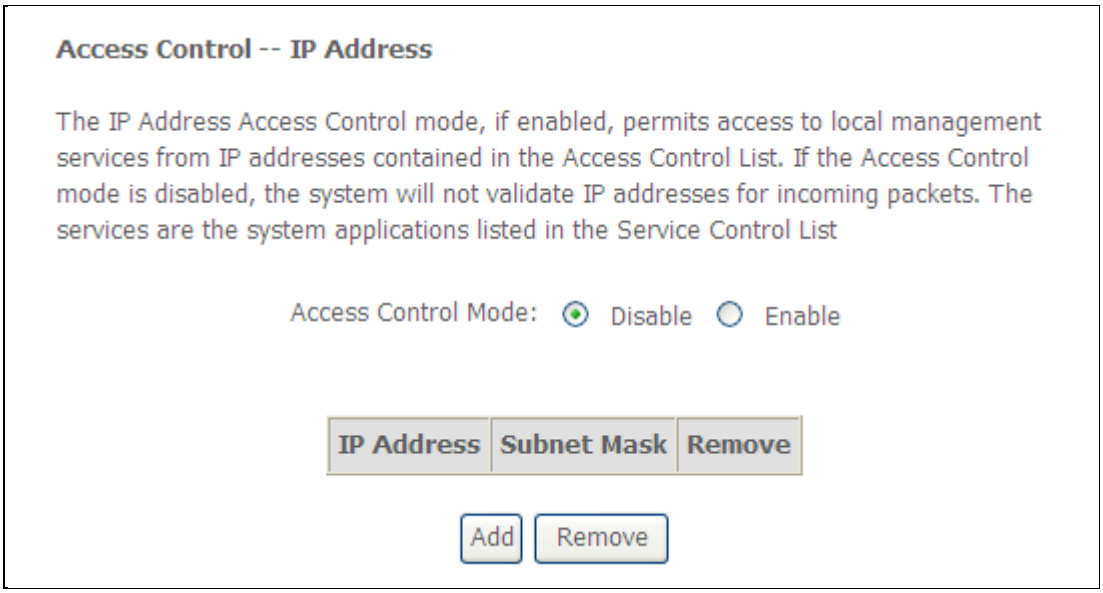
Services

The Services window enables you to enable or disable services
Select **Services** from the **Access Control** menu to open the Services window

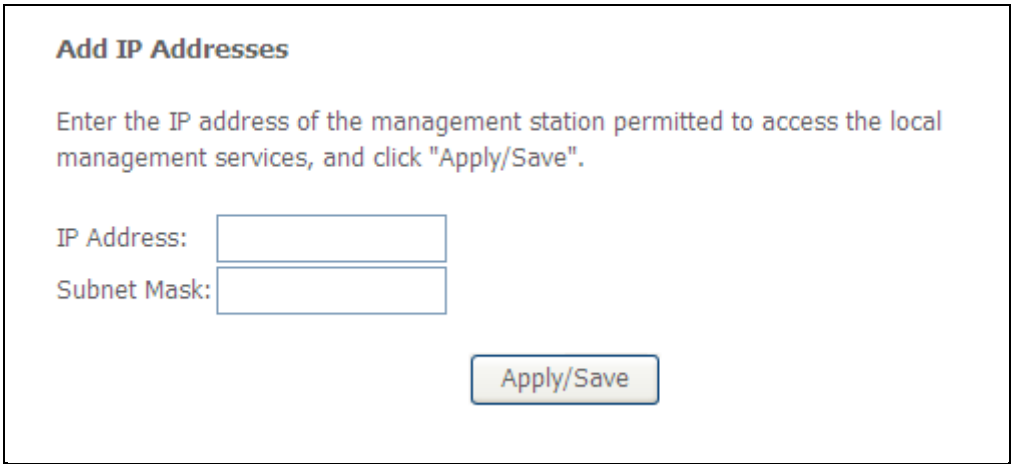


IP Addresses

The IP Address Access Control mode, if enabled, permits access to local management services from IP addresses contained in the Access Control List. If the Access Control mode is disabled, the system will not validate IP addresses for incoming packets. The services are the system applications listed in the Service Control List.
To access this window, click the **IP addresses** button in the **Access Control** directory.



Click the **Add** button, access the following window displayed on the next page.



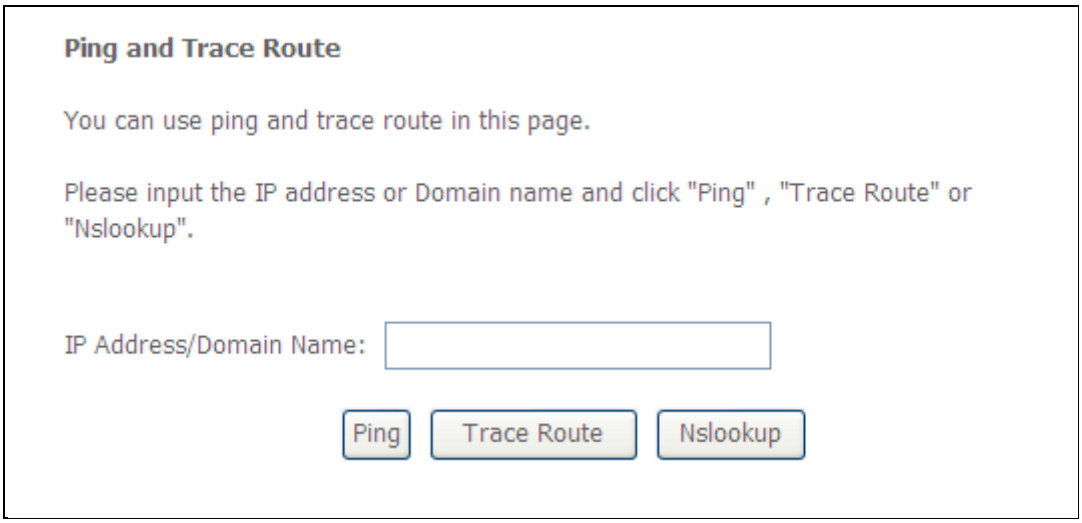
Input the IP Address and Subnet Mask which you want to configure, and then click **Apply** to enable this IP Address.

Reboot

To access this window, click the **Reboot** button in the **Management** directory.
To save your settings and reboot the system, click the **Reboot** button.

Tools

This page will help you to diagnostic the status of your Network. You can use “Ping”, “Trace Route” and “Nslookup” methods in this page. After you input the IP address or Domain name, click "**Ping**", "**Trace Route**" or "**Nslookup**" button.



Troubleshooting

1. How do I configure my TW-EAV510 Router without the CD-ROM?

- Connect your PC to the Router using an Ethernet cable.
- Open a web browser and enter the address http://192.168.0.254
- The default username is 'admin' and the default password is 'admin'.
- If you have changed the password and cannot remember it, you will need to reset the Router to the factory default setting (see question 2), which will set the password back to 'admin'.

Note: Please refer to the next section "Networking Basics" to check your PC's IP configuration if you can't see the login windows.

2. How do I reset my Router to the factory default settings?

- Ensure the Router is powered on.
- Press and hold the reset button on the back of the device for approximately 10 seconds.
- This process should take around 30~60 seconds.

3. What can I do if my Router is not working correctly?

There are a few quick steps you can take to try and resolve any issues:

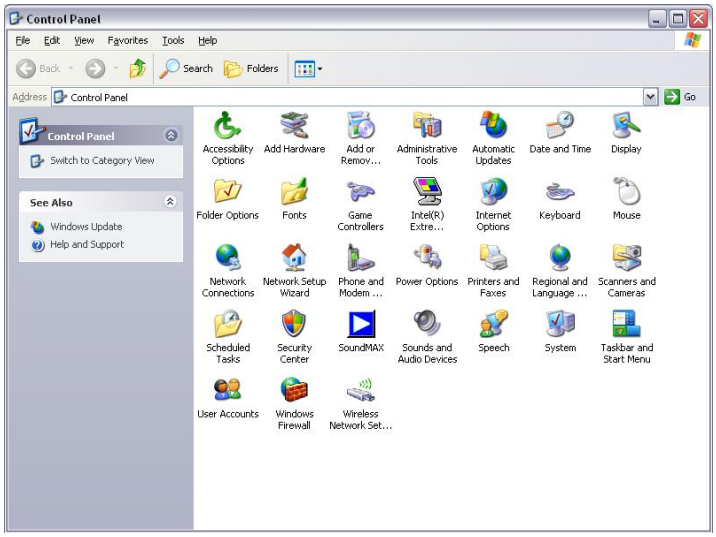
- Follow the directions in Question 2 to reset the Router.
- Check that all the cables are firmly connected at both ends.
- Check the LEDs on the front of the Router. The Power indicator should be on, the Status indicator should flash, and the DSL and LAN indicators should be on as well.
- Please ensure that the settings in the Web-based configuration manager, e.g. ISP username and password, are the same as the settings that have been provided by your ISP.

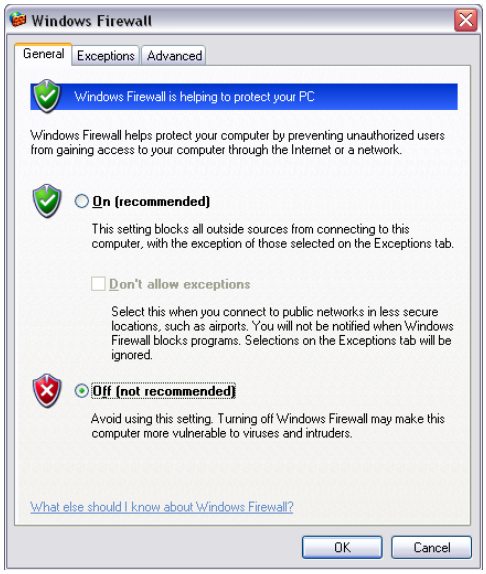
4. Why can't I get an Internet connection?

For xDSL ISP users, please contact your ISP to make sure the service has been enabled/connected by your ISP and that your ISP username and password are correct.

5. What can I do if my router can't be detected by running installation CD?

- Ensure the Router is powered on.
- Check that all the cables are firmly connected at both ends and all LEDs work correctly.
- Ensure only one network interface card on your PC is activated.
- Click on **Start** > **Control Panel** > **Security Center** to disable the setting of **Firewall**.





Note: There might be a potential security issue if you disable the setting of Firewall on your PC. Please remember to turn it back on once you have finished the whole installation procedure and can surf on Internet without any problem

Glossary

Numerics

10/100Base-T
The most widely used standard for Ethernet over twisted pair or copper-based computer networking. Runs at 10 Mb/s, 100 Mb/s, and 1000 Mb/s (1 Gb/s) respectively.

A

ACS
Auto-Configuration Server

ADSL
Asymmetric Digital Subscriber Line

ALG
Application-Level Gateway

ATM
Asynchronous Transfer Mode

C

CHAP
Challenge-Handshake Authentication Protocol

CPE
Customer Premises Equipment

D

DDNS
Dynamic Domain Name System

DHCP
Dynamic Host Configuration Protocol

DNS
Domain Name System

DSCP
Differentiated Services Code Point

DSL
Digital Subscriber Line

Dynamic Routing
The capability of a system, through which routes are characterized by their destination, to alter the path that the route takes through the system in response to a change in conditions.

E

Ethernet
A family of frame-based computer networking technologies for local area networks (LANs).

F

Firewall
An integrated collection of security measures designed to prevent unauthorized electronic access to a networked computer system.

G

Gateway
A network node equipped for interfacing with another network that uses different protocols.

H

HDSL
High-Rate Digital Subscriber Line

HTML
Hyper Text Markup Language

I

IP
Internet Protocol

ISP
Internet Service Provider

K

Kb/s
Kilo bit per second; a data rate unit.

L

L2TP
Layer 2 tunneling protocol; a tunneling protocol used to support virtual private networks (VPNs).

LAN
Local Area Network

M

MAC
Media Access Control

Mb
Megabit; a unit of information commonly used to express the rate data is transferred.

MTU
Maximum Transmission Unit

N

NAT
Network Address Translation

Net mask
The designated IP address routing prefix for a network of computers and devices.

NIC
Network Interface Controller

NTP
Network Time Protocol

O

OAM
Operations, Administration, and Maintenance

P

PAP
Password Authentication Protocol

Ping
A computer network tool used to test whether a particular host is reachable across an IP network.

PPP
Point-to-Point Protocol

PPPoE
Point-to-Point Protocol over Ethernet

PVC
Permanent Virtual Circuit

Q

QoS
Quality of Service

S

Subnet
See Net mask.

T

TCP
Transmission Control Protocol

Telnet
Telecommunications network; a network protocol used on the internet or local area network (LAN) connections.

U

UDP
User Datagram Protocol

UPnP
Universal Plug and Play

URL
Uniform Resource Locator

USB
Universal Serial Bus

V

VCI
Virtual Circuit ID

xDSL
Very High Bit rate Digital Subscriber Line

VLAN
Virtual Local Area Network

VPI
Virtual Path ID

W

WAN
Wide Area Network