Proscend 120

VDSL2 Router

User Manual

Version 0.01

Tables of Contents

1 INTRODUCTION 3

1.1 FEATURES 3

1.2 SPECIFICATION 4

1.3 DEVICE REQUIREMENTS 5

2 GETTING TO KNOW THE DEVICE 6

2.1 PARTS CHECK 6

2.2 FRONT PANEL 7

2.3 REAR PANEL 7

3 CONNECTING YOUR DEVICE 9

3.1 CONNECTING THE HARDWARE 9

4 GETTING START WITH THE WEB PAGES 11

4.1 ACCESSING THE WEB PAGES 11

4.2 COMMONLY USED BUTTONS 14

4.3 HELP INFORMATION 15

4.4 TESTING YOUR SETUP 16

4.5 DEFAULT DEVICE SETTINGS 17

5 BASIC SETUP 18

5.1 DEVICE CONFIGURATION 18

5.2 INTERNET PORT 19

5.2.1 PPPoE connection 20

5.2.2 DHCP (Dynamic IP Configuration) 21

5.2.3 Static IP Configuration 22

5.3 LOCAL PORT 23

6 ADVANCED SETUP 24

6.1 DYNAMIC DNS 24

6.2 FIREWALL 26

6.3 STATIC ROUTES 27

6.4 DYNAMIC ROUTES 28

6.5 UPNP 29

6.6 VIRTUAL SERVER 30

6.7 IP QOS 32

6.7.1 QoS Scheduler 32

6.7.2 QoS Policy 33

6.8 PORT-BASED VLAN 34

7 MANAGEMENT 35

7.1 REMOTE MANAGEMENT 35
7.2 SYSTEM RESET 36
7.3 FIRMWARE UPGRADE 37
7.4 NETWORK STATUS 38
7.5 SAVE CONFIGURATION 39
7.6 DIAGNOSTIC 40
7.7 TIME 41

8 TROUBLESHOOTING 42

8.1 TROUBLESHOOTING SUGGESTIONS 42
8.2 DIAGNOSING PROBLEM USING IP UTILITIES 44
8.2.1 Ping 44
8.2.2 Nslookup 44

1 Introduction

The Proscend 120 is a VDSL2 Router that complies with various VDSL/VDSL2 standards and provides unprecedented broadband service over a single pair of copper wire. It integrates four ports 10/100 Base-T/TX Ethernet switch that can easily connect to any PC or LAN in home or small office environments. Quality of multimedia service is ensured with its powerful traffic control and management over layer 2 or 3. While the NAT/PAT technologies share the broadband connection to all its LAN clients for all prevailing Internet applications, the embedded firewall keeps out those malicious attacks and intrusions. Network management is implemented so it can be easily configured and managed by the service provider. The Proscend 120 delivers a compact, cost-effective and innovative solution to its customers.

This User Manual will show you how to connect your Proscend 120 VDSL2 Router and how to customize its configuration to get the most out of your device.

1.1 Features

The list below contains the main features of the device and may be useful to users with knowledge of networking protocols. The chapters throughout this guide will provide you with enough information to get the most out of your device.

The features include:

- High Speed Data Transmission on Twisted Copper Pair Wire
- Service providers can deploy VDSL rapidly over existing wire infrastructure (POTS line)
- Support mandatory and optional features of VDSL2 (G.993.2) standard
- Support VDSL2 profiles, 8a/8b/8c/8d, 12a/12b, 17a and 30a
- Support the speed of downstream or upstream up to 100Mbps
- Support bridge and router mode
- Interchangeable between Bridge and Router mode
- Network address translation (NAT) functions to provide security for your LAN and multiple PCs surfing Internet simultaneously.
- Network configuration through DHCP Server and DHCP Client
- Services including IP route, QoS and UPnP
- Built-in four-port 10/100BaseTX Ethernet switch for PC or LAN connection
- Supports USB host interface for connecting USB storage devices
- Configuration and management with Telnet through the Ethernet interface, and remote Telnet through VDSL interface

- Firmware upgradeable through HTTP
- User-friendly configuration program accessed via a web browser

1.2 Specification

Hardware Specifications

 LAN Interface

- Four port 10/100BaseT Ethernet Switch (4 * RJ-45 connectors), IEEE 802.3u with MDI/MDIX auto-detection
- Integrated 802.11b/g WLAN Access Point
- Integrated USB slave and host ports

 WAN VDSL2 Line Interface

- Comply with VDSL2 and support 8a/8b/8c/8d, 12a/12b, 17a and 30a
- Connection Loops: One (pair wire)
- Connector: RJ-11

 Indicators

- PWR – Red Blink: Only occur when you open the modem, it will become green after 5s.Red On: boot fail
  Green On: device is powered on
- DSL – Green LED indicates VDSL2 connection
- PPP – Green On: establish a PPP connection
  Red On: PPP disconnection
- LAN – Green LED indicates LAN connection
- USB – GREEN LED indicates USB connection

 OAM&P

- Local: Web management
- Remote: Web Management

 Environment

- Operation Temperature: 0°C ~ 40°C
- Operation Humidity: 5% ~ 95%
- Storage Temperature: -20 ~ +85°C
- Storage Humidity: 5%~95%

 Power

- AC/DC Switching supply : AC Input :100~240V 50/60Hz DC Output :12V 1.5Amp

1.3 Device Requirements

In order to use the Proscend 120, you must have the following:

- DSL service up and running on your telephone line
- Instructions from your ISP on what type of Internet access you will be using, and the addresses needed to set up access
- Need one or more computers, each containing an Ethernet card (10Base-T/100Base-T network interface card (NIC)).
- For system configuration, using the supplied web-based program: a web browser such as Internet Explorer v4 or later, or Netscape v4 or later. Note that version 4 of each browser is the minimum version requirement – for optimum display quality, use Internet Explorer v5, or Netscape v6.1

Note：

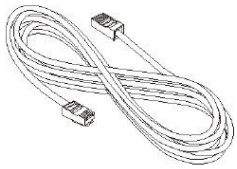
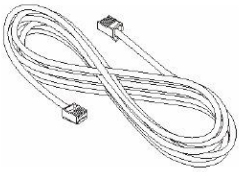
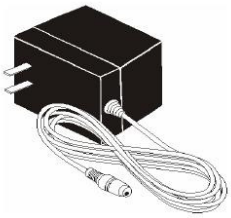
You do not need to use a hub or switch in order to connect more than one Ethernet PC to the device. Instead, you can connect up to four Ethernet PCs directly to the device using the ports labeled LAN1 to LAN4 on the rear panel.

2 Getting to know the device

2.1 Parts Check

In addition to this document, your package should arrive containing the following:

DSL Modem Package Contents

	The device
	Ethernet RJ-45 Cable
	USB Cable
	DSL RJ-11 Line Cable
	Power adapter
	User's Manual CD

2.2 Front Panel

Connector and LED definitions from right to left:

Label	Color	Function
USB connector	N/A	It is USB 2.0 interface and connects to the USB storage.
PWR	Green/Red	Red Blink: Only occur when you open the modem, it will become green after 5s. Green On: device is powered on Red On: boot fail
DSL	Green	On: DSL link reaches showtime, which means that your device has successfully connected to your ISP's DSL network. Off: DSL link not in showtime, your device has not successfully connected to your ISP's DSL network. Blink: Try to connect to ISP's DSL network
PPP	Green/Red	Green On: establish a PPP connection Red On: PPP disconnection
LAN	Green	On: LAN link established and active Off: No LAN link Blink: Data being transmitted
USB	*Green*	On: USB link established and active Off: No USB link

2.3 Rear Panel

Connector definition definitions from right to left:

Label	Function
Power Switch	ON/OFF switch for DC power input
Power Jack	Connects to the supplied power adapter
USB port (slave)	Connects the device via USB cable to your PC
RES	A reset button to reset the device or reset to default settings
LAN1 ~ LAN4	Connects the device via Ethernet to your devices in LAN
DSL Jack	Connects to the ISP's DSL network

3 Connecting your device

This chapter provides basic instructions for connecting the device to a computer or LAN and to the Internet.

In addition to configuring the device, you need to configure the Internet properties of your computer(s).

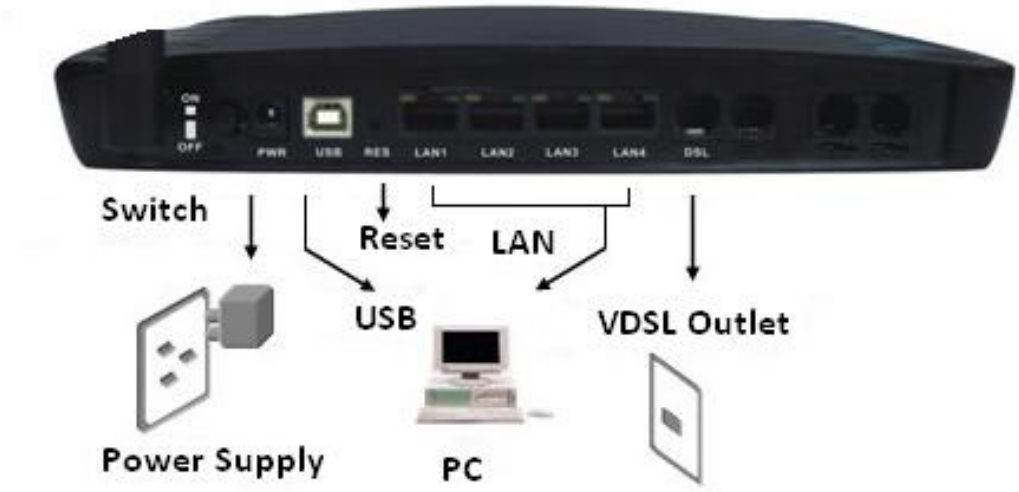
This chapter assumes that you have already established a DSL service with your Internet service provider (ISP). These instructions provide a basic configuration that should be compatible with your home or small office network setup. Refer to the subsequent chapters for additional configuration instructions.

3.1 Connecting the Hardware

This section describes how to connect the device to the power outlet and your computer(s) or network.

Before you begin, turn the power off for all devices. *These include your computer(s), your LAN hub/switch (if applicable), and the device.*

The diagram below illustrates the hardware connections. The layout of the ports on your device may vary from the layout shown. Refer to the steps that follow for specific instructions.



Overview of Hardware Connections

Step 1. Connect the DSL cable and optional telephone line

Connect one end of the provided phone cable to the port labeled DSL on the rear panel of the device. Connect the other end to DSL outlet.

Step 2. Connect the Ethernet cable

Connect up to four single Ethernet computers or to a HUB/Switch directly to the device via Ethernet cable(s).

Note that the cables do not need to be crossover cables, the switch provides MDI and MDIX auto-detection.

Step 3. Attach the power connector

Connect the AC power adapter to the Power connector on the back of the device and plug the adapter into a wall outlet or power strip. Turn on and boot up your computer(s) and any LAN devices such as hubs or switches.

Step 4. Configure your Ethernet PCs

You must also configure the Internet properties on your Ethernet PCs. See Configuring Ethernet PCs section.

Next step

After setting up and configuring the device and PCs, you can log on to the device by following the instructions in chapter “Getting Started with the Web pages”. The chapter includes a section called Testing your Setup, which enables you to verify that the device is working properly.

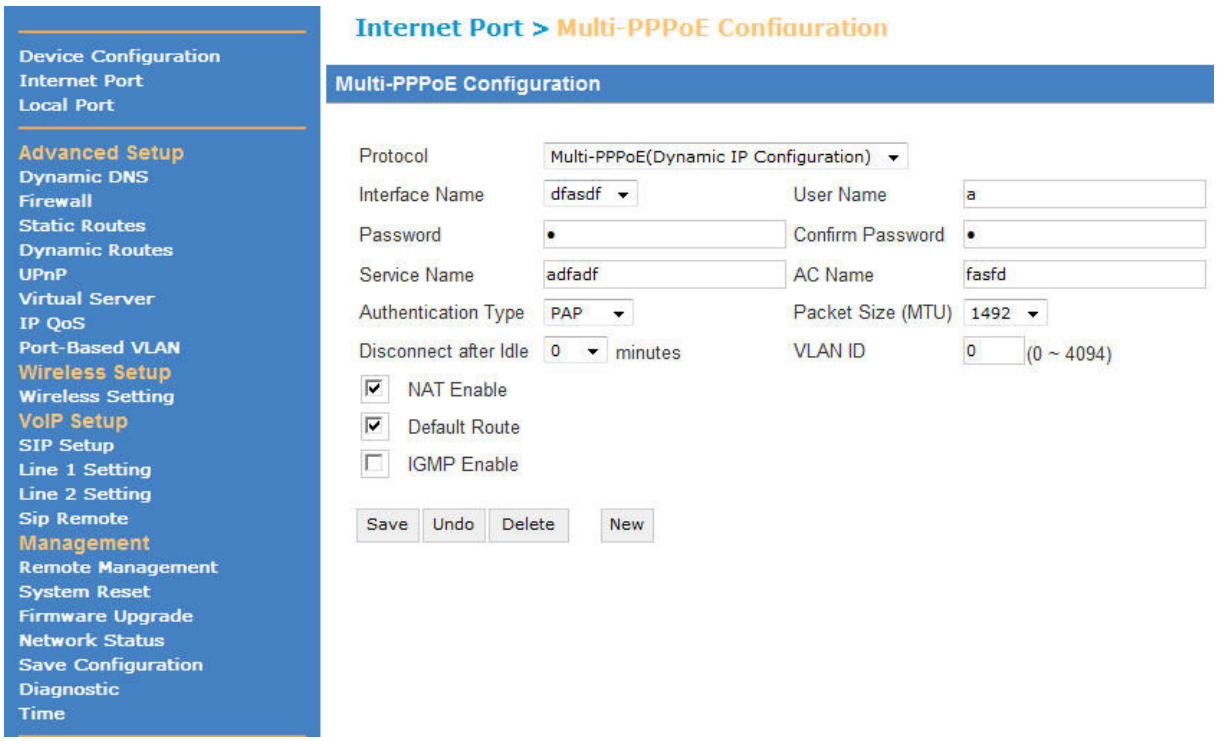
4 Getting Start with the Web pages

The DSL Modem includes a series of Web pages that provide an interface to the software installed on the device. It enables you to configure the device settings to meet the needs of your network. You can access it through a web browser on a PC connected to the device.

4.1 Accessing the Web pages

To access the web pages, you need the following:
A laptop or PC connected to the LAN or WLAN port on the device.
A web browser installed on the PC. The minimum browser version requirement is Internet Explorer v4 or Netscape v4. For the best display quality, use latest version of Internet Explorer, Netscape or Mozilla Firefox from any of the LAN computers, launch your web browser, type the URL, **http://192.168.1.1** in the web address (or location) box, and press [Enter]. The default IP address of the device is 192.168.1.1. Then enter the default username and password: admin/admin to access the configuration web page, if you have not changed the username and password.

The home page opens displaying the Internet Port Configuration page of device:



Home – Internet Port Configuration

The Menu comprises:

It provides the basic configuration of the system. It includes sub menus, Device Configuration, Internet Port, Local Port. By default, the page of Internet Port is displayed after the login.

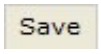
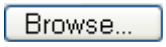
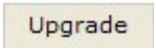
Advanced Setup: provides information about the current configuration of various system features with options to change the configuration. It includes the sub menus Dynamic DNS, Firewall, Static Routes, Dynamic Routes, UPnP, Virtual Server, IP QoS, and Port-Based VLAN.

Management: provides the administration utilities such as Remote Management, System Reset,

Firmware Upgrade, Network Status, Save Configuration, Diagnostic and Time Zone.

4.2 Commonly used buttons

The following buttons are used throughout the web pages:

Button	Function
	You could click this button to refresh the information on this current page again so that you could get the real time information.
	This button appears on every configuration page. Click on this button if at any time you decide that you do not want to change the existing settings.
	check button – these appear on many configuration pages. You will be asked to check if you want this feature be selected.
	This button appears on every configuration page. Click on this button once you are through with the changes and decide to save the made changes.
	You may need to browse to find a file which needs to be uploaded for new configuration.
	This button allows you to upgrade to the new configuration file attached using the Browse button.

The following terms are used throughout this guide in association with these buttons:

Click – point the mouse arrow over the button, menu entry or link on the screen and click the left mouse button. This performs an action, such as displaying a new page or performing the action specific to the button on which left mouse button is clicked.

Select – usually is used when describing which radio button to select from a list, or which entry to select from a drop-down list. Point the mouse arrow over the entry and left-click to select it. This does not perform an action – you will also be required to click on a button, menu entry or link in order to proceed.

4.3 Help information

To view the help, click the desired menu or submenu. The related help information appears in a separated page.

4.4 Testing your Setup

Once you have connected your hardware and configured your PCs, any computer on your LAN should be able to use the device's DSL connection to access the Internet.

To test the connection, turn on the device, wait for 30 seconds and then verify that the LEDs are illuminated as follows:

LED	Behavior
Power (PWR)	Red Blinking when you open the modem, it will become green after 5s. Then the device is powered on If Red On means boot fail
LAN	Solid green to indicate that the device can communicate with your LAN.
DSL	Flashing on/off while trying to SYNC UP with ISP CO site. Solid green to indicate that the device has successfully established a connection with your ISP.

LED Indicators

If the LEDs illuminate as expected, test your Internet connection from a LAN computer.
To do this, open your web browser, and type the URL of any external website (such as *http://www.yahoo.com*).
If the LEDs do not illuminate as expected, you may need to configure your Internet access settings using the information provided by your ISP. If the LEDs still do not illuminate as expected or the web page is not displayed, see Troubleshooting section or contact your ISP for assistance.

4.5 Default device settings

In addition to handling the DSL connection to your ISP, the DSL Modem can provide a variety of services to your network. The device is preconfigured with default settings for use with a typical home or small office network.

The table below lists some of the most important default settings; these and other features are described fully in the subsequent chapters. If you are familiar with network configuration, review these settings to verify that they meet the needs of your network. Follow the instructions to change them if necessary. If you are unfamiliar with these settings, try using the device without modification, or contact your ISP for assistance.

We strongly recommend that you contact your ISP prior to changing the default configuration.

Option	Default Setting	Explanation/Instructions
User/Password	admin/admin	User name and password to access the device
LAN Port *IP Address*	Assigned static IP address: 192.168.1.1 Subnet mask: 255.255.255.0	This is the IP address of the LAN port on the device. The LAN port connects the device to your Ethernet network. Typically, you will not need to change this address. See *Local Network* section.
DHCP (Dynamic Host Configuration Protocol)	DHCP server enabled with the following pool of addresses: 192.168.1.10 through 192.168.1.250	The device maintains a pool of private IP addresses for dynamic assignment to your LAN computers. To use this service, you must have set up your computers to accept IP information dynamically, as described in *DHCP Server* section.

5 Basic Setup

5.1 Device Configuration

The Device Configuration Page of the device allows you to configure the device to work as router or bridge.

Device Configuration

To configure the *Device Mode*:

- Select Route Mode or Bridge Mode from the list.

5.2 Internet Port

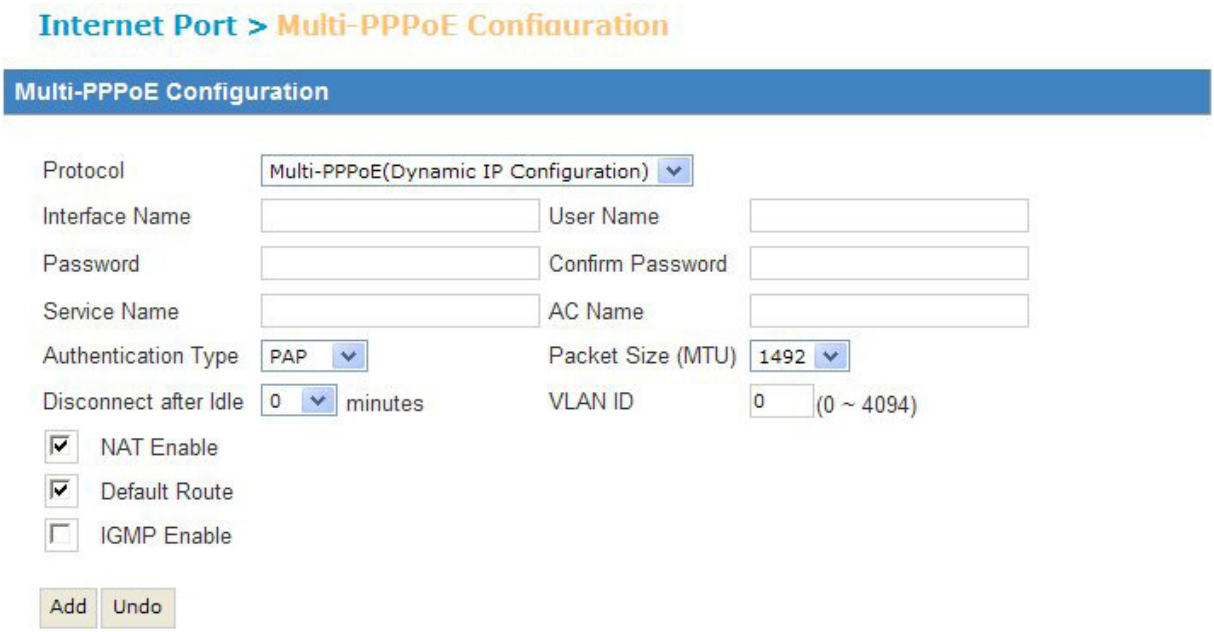
You can configure your internet connection from this page. This page displays the details of existing internet connection, if any. This page contains all of options that could establish a connection to your Telco or ISP.

Before configuring the device, you should ask for and get the following information from your ISP:

- Connection Protocol: PPPoE (dynamic IP assignment), DHCP (dynamic IP assignment) or Static IP address from ISP.
- If the connection protocol is “fixed IP address”, need more information about subnet mask, default gateway, and DNS server.
- NAT: Disabled or Enabled
- Default Route: Disabled or Enabled
- IGMP: Disabled or Enabled
- PPP User Name and Password (also known as Broadband User Name and Password)

5.2.1 PPPoE connection

This web page allows you to configure the device to establish a connection through PPPoE protocol.



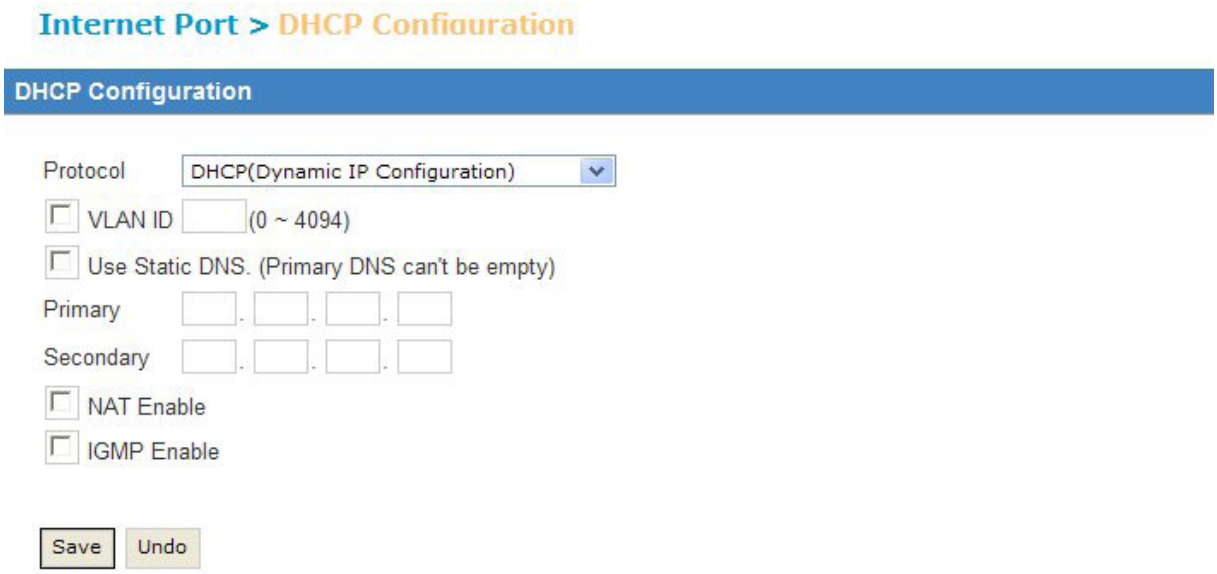
Internet Port – PPPoE (Dynamic IP assignment)

To configure the PPPoE settings:

- Select the Multiple-PPPoE (Dynamic IP onfiguration) to be used as *Protocol*.
- Enter name in the *Interface Name*
- Enter the *username* and *password* provided from your Telco or ISP and enter the password again in the *Confirm Password* field again to double check the password.
- Enter name in the *Service Name* and *AC Name*.
- Select the *Authentication Type*, PAP or CHAP
- Select the *Packet Size (MTU)* from the list
- Select the minutes from *Disconnect after Idle minutes* to disconnect the PPPoE connection if there is no traffic for that minutes.
- Enter the *VLAN ID* if the traffic is tagged with VLAN ID.
- Click to *Enable NAT*.
- Click to *Add Default Route*
- Click to *Enable IGMP* if need
- Click *Add* and then click *Save* to save the configuration, otherwise click *New* to configure it again.

5.2.2 DHCP (Dynamic IP Configuration)

This web page allows you to configure the device to establish a connection through DHCP client protocol. The Dynamic IP Configuration means “get an IP address automatically”.

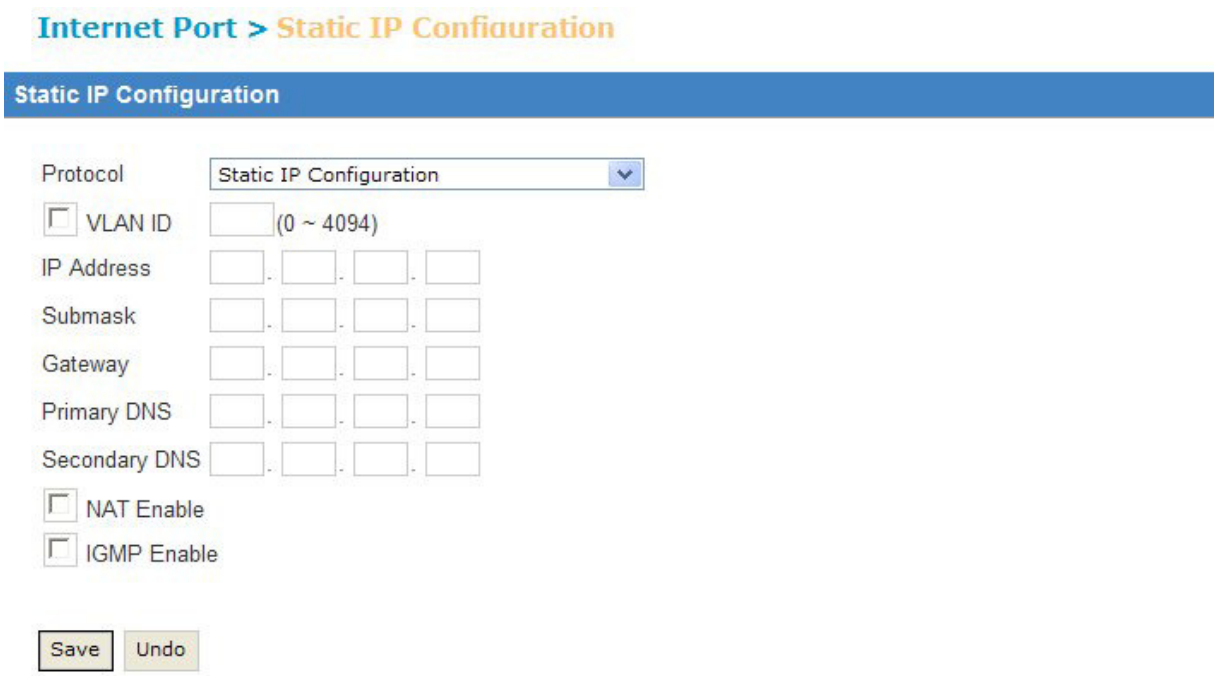


Internet Port - DHCP (Dynamic IP Configuration)

- To configure the DHCP (Dynamic IP Configuration) settings:
- Select the DHCP (Dynamic IP Configuration) to be used as *Protocol*.
- Enter the *VLAN ID* if the traffic is tagged with VLAN ID.
- Click to *use Static DNS* (Domain Name Server) and then enter the IP addresses of *Primary DNS* and *Secondary DNS*. Usually, the information of DNS sever will be given from DHCP server in ISP site.
- Click to *enable NAT* if need
- Click to *enable IGMP* if need
- Click *Save* to save the configuration

5.2.3 Static IP Configuration

This web page allows you to set the fixed IP address in the Internet (WAN) port.



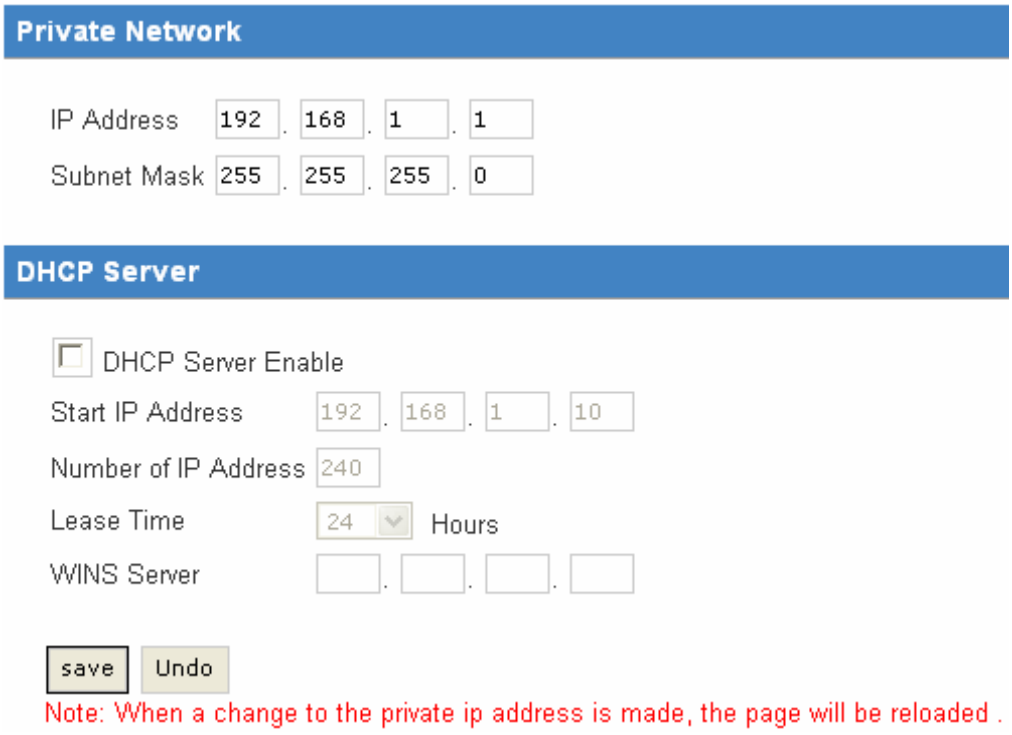
Internet Port – Static IP Configuration

To configure the Static IP settings:

- Select the Fixed IP Configuration to be used as *Protocol*.
- Enter the *VLAN ID* if the traffic is tagged with VLAN ID.
- Enter the IP address, Submask, Gateway, Primary DNS address and Secondary DNS address.
- Click to *enable NAT* if need
- Click to *enable IGMP* if need
- Click *Save* to save the configuration

5.3 Local Port

This page allows you to setup the Local Network (LAN) connection.



Local Port Configuration

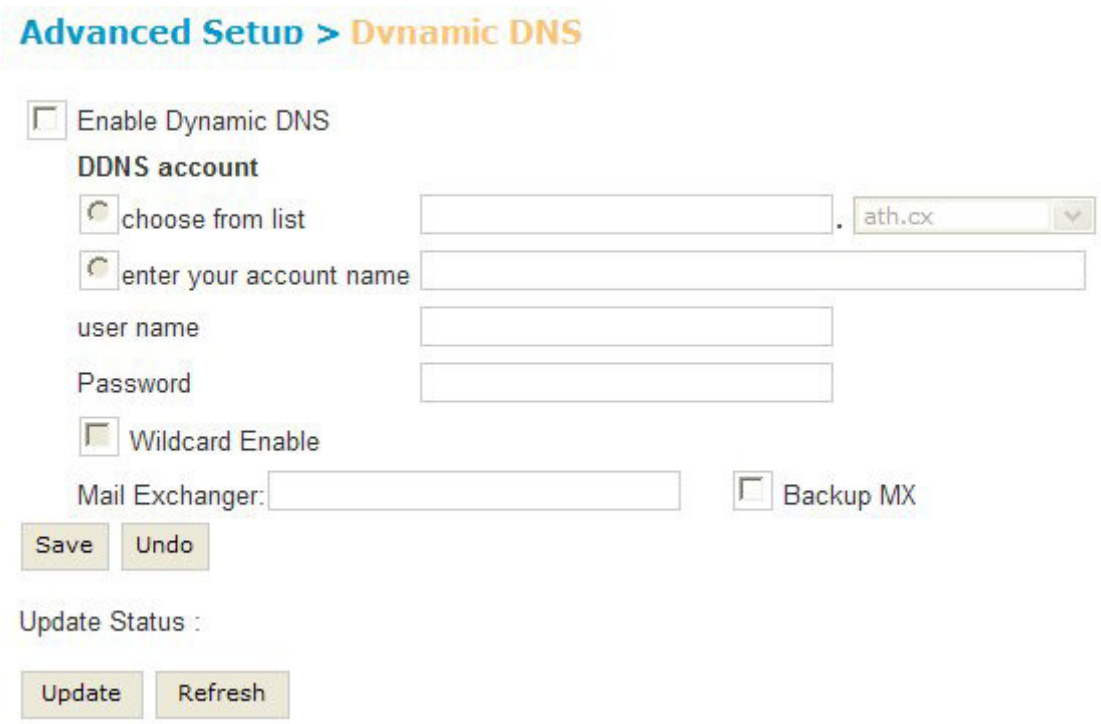
To configure the Local Port settings:

- Enter the device *IP address*.
- Enter the *Subnet Mask* : The subnet mask determines the number of computers are allowed in this network. Usually a class (255.255.255.0) is satisfactory for a local network.
- Click to enable *DHCP server* to assign IP addresses to the client.
- Enter the *start of the IP address* for DHCP client users. The default value is 192.168.1.10. Please make sure there is no fixed IP address within the rage of DHCP IP pool, otherwise the DHCP client may not get the IP address correctly.
- Enter the number of IP addresses (users) allowed to use the DHCP service.
- Select the *lease time*. A DHCP client gets the IP address with a lease time. When the lease time is expired, the client must connect to the DHCP server to request the dynamic IP address again.
- Enter the IP address of WINS (Windows Internet Naming Service). The WINS provides a distributed database for registering and querying dynamic computer name-to-IP address in a routed network environment. It means WINS provides easy configuration and administration of Windows-based TCP/IP networks. If you do not use WINS server, leave it as blank.
- Click *Save* to save the configuration

6 Advanced Setup

6.1 Dynamic DNS

The device provides Dynamic Domain Name System (DDNS) feature. The DDNS lets you assign a fixed host and domain name to a dynamic Internet IP address. It is useful when you are hosting your own website, FTP server and other server applications behind the device. Before you can use this feature, you need to sign up for DDNS service from the DDNS service provider like dyndns.org (refer to www.dyndns.org).



Dynamic DNS Configuration

To configure the Dynamic DNS (DDNS) page:

Click to enable *Dynamic DNS* feature

- Enter your registered *account name* (host name) and select the *DDNS service provider* from the pull down list if you find your DDNS service provider from the list.
- Enter your *account name* (full registered host name) if your DDNS service provider is not supported in the above pull down list.
- Enter your *username* and *password* for login which you register the account name in the DDNS service provider.

- Click to enable *Wildcard*. If you like to have an unregistered hostname followed by the registered hostname and domain name to work as well.
- Click to *enable the Mail Exchanger*. If you like that others send emails to your DDNS name will be redirected to the mail server you specified in the *Mail Exchanger* field.
- Click to enable *Backup MX* if you need to back up the mail exchanger's address while you login the DDNS service provider every time.
- Click *Save* to save the configuration.
- Click *Update* to update the DDNS service or click *Refresh* to refresh display.

6.2 Firewall

The device provides firewall feature to protect the device.

Firewall Configuration

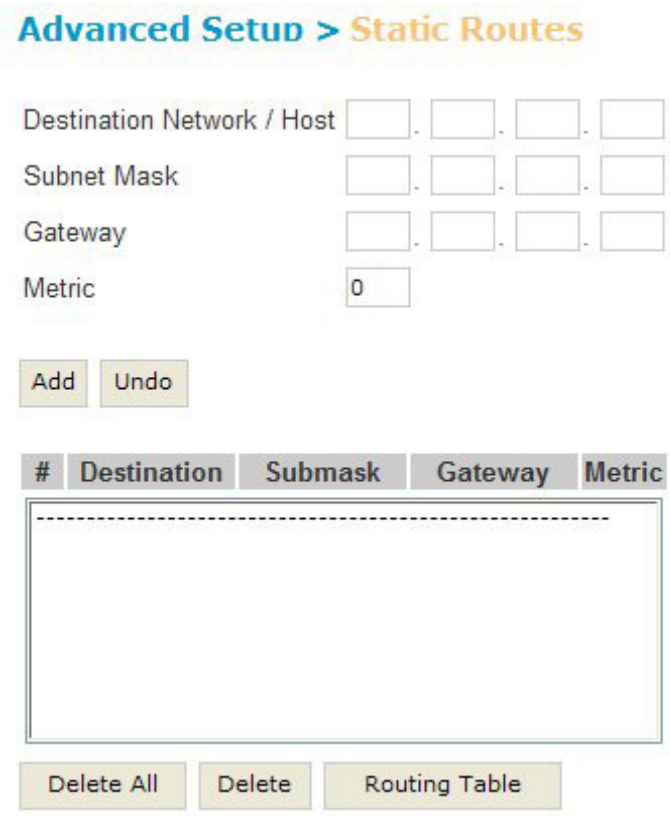
Global Setting

- Check to enable "*Block Request From Wan Port*"
- Check to enable "*Block Ping From Wan Port*"
- Check to enable "*Block PPTP, L2TP, IPSec Request*"
- Check to enable *DMZ* and enter the IP address of DMZ host
- Click *Save* to save the configuration

Besides, A DMZ (DeMilitarized Zone) host is a computer on your network that can be accessed from the Internet regardless of NAT, port forwarding and IP filter settings. A DMZ is often used to host Web servers, FTP servers etc that need to be accessible from the Internet.

6.3 Static Routes

The device provides to add the routing rules manually.



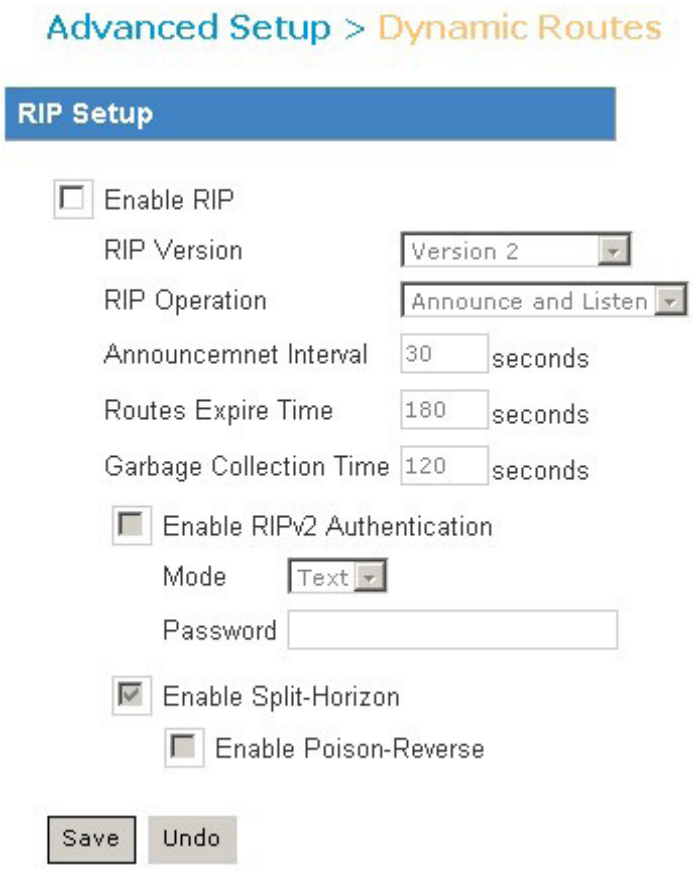
Static Routes Configuration

Global Setting

- Enter the IP address of *Destination Host/Network*
- Enter the *Subnet Mask* related the Destination Host/Network that packets to those IP addresses will be forwarded to the gateway.
- Enter the IP address of *Gateway*
- Enter the number of *Metric*
- Click *Add* to add this routing rule
- The added routing rule will be shown in the table. Click *Delete All* to remove all entries or click *Delete* to remove the specified entry.
- Click *Routing Table* to get the current routing table.

6.4 Dynamic Routes

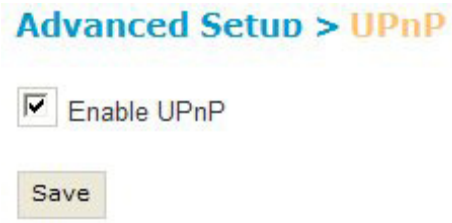
The device provides to set RIP, RIPv2 Authentication, Split-Horizon and Poison-Reverse.



Dynamic Routes Configuration

6.5 UPnP

The device provides UPnP feature..



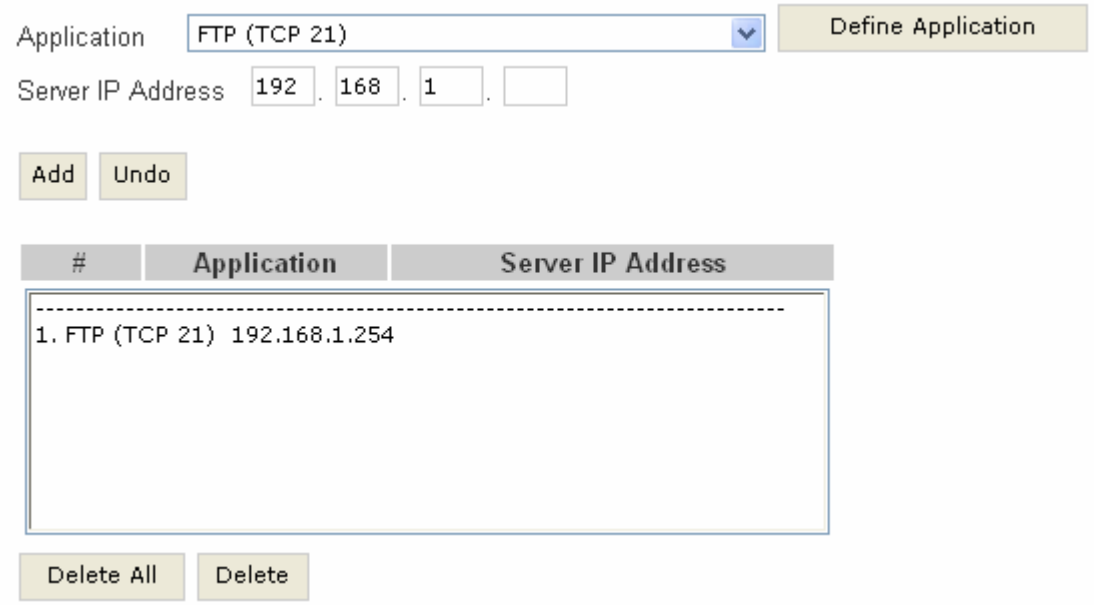
UPnP Configuration

Global Setting

- Check to enable "*UPnP*"
- Click *Save* to save the configuration

6.6 Virtual Server

The device provides port mapping to local host for incoming packets. Virtual server enables you to run a server on your local network that can be accessed from the Internet. You need to set up port forwarding rule to tell the device on which computer the server is held. When port forwarding is enabled, your router (the device) routes all the inbound traffic on a particular port to the chosen computer on your network.



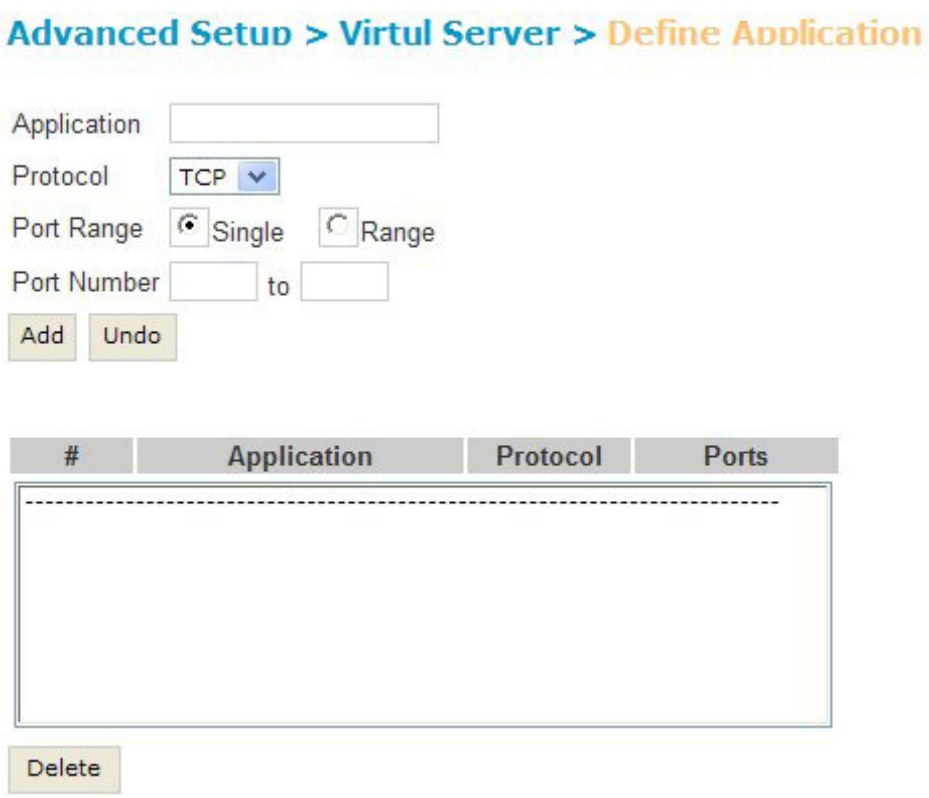
Virtual Server Configuration

Global Setting

- Select the *application (port)*. If it is not listed in default, click *Define Application* to add your own application as below figure.
- Enter the IP address of *Server IP Address* in your local network.
- Click *Add* to add this rule
- The added port forwarding rule will be shown in the table. Click *Delete All* to remove all added entries or click *Delete* to remove the specified entry.

To define the application

- Enter the *Application* name
- Select the *Protocol* (TCP, UDP, or ICMP) used by the application
- Check if you want to forward the *Single* port or a *Range* of ports
- Enter the *Port number (Range)* from start to end
- Click *Add* to add this application into the selection list



Virtual Server Configuration – Define Application

6.7 IP QoS

The page provides to configure the four different priority queues (High, Middle, Low and Default) and provide bandwidths to them separately. Besides, setup the checking rules to determine the packets to each queue. That will help to provide better bandwidth efficiently and serve important packets like voice, email, FTP and so on in higher priority with more bandwidth.

6.7.1 QoS Scheduler

The page provides to enable upstream and/or downstream QoS and configure the four different priority queues (High, Middle, Low and Default) and provide bandwidths to them separately.

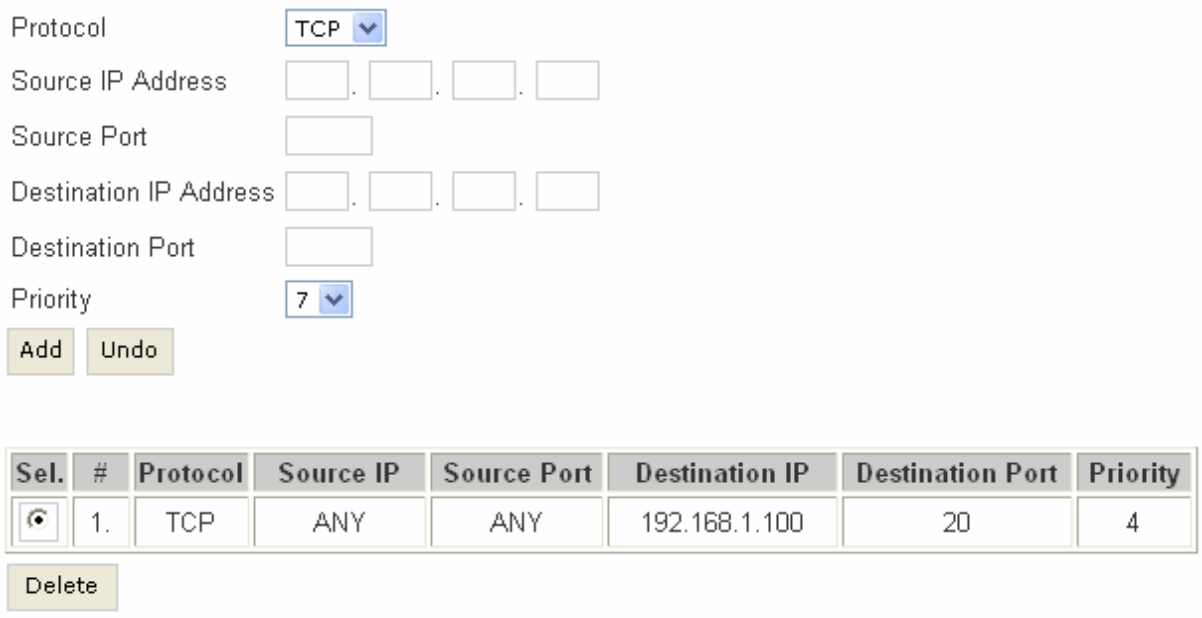
IP QoS – QoS Scheduler

Global Setting

- Check to *Enable Upstream* (packets from LAN to Internet) QoS.
- Select *Auto* in *Bandwidth* that the device will get the sync up upstream bandwidth and determine the bandwidth used for QoS. Select the *Manual* in the *Bandwidth* and then enter the bandwidth in Kbps used for QoS.
- Enter the *Priority Percentage* for *High*, *Medium*, and *Low* queues. The rest of percentage will be assigned to *Default* queue automatically.
- Check to *Enable Downstream* (packets from LAN to Internet) QoS.
- Select *Auto* in *Bandwidth* that the device will get the sync up downstream bandwidth and determine the bandwidth used for QoS. Select the *Manual* in the *Bandwidth* and then enter the bandwidth in Kbps used for QoS.
- Enter the *Priority Percentage* for *High*, *Medium*, and *Low* queues. The rest of percentage will be assigned to *Default* queue automatically.
- Click *Save* to save the configuration

6.7.2 QoS Policy

This page provides to setup the rule to check the packet and put it into the right priority queue.



IP QoS – QoS Policy

Global Setting

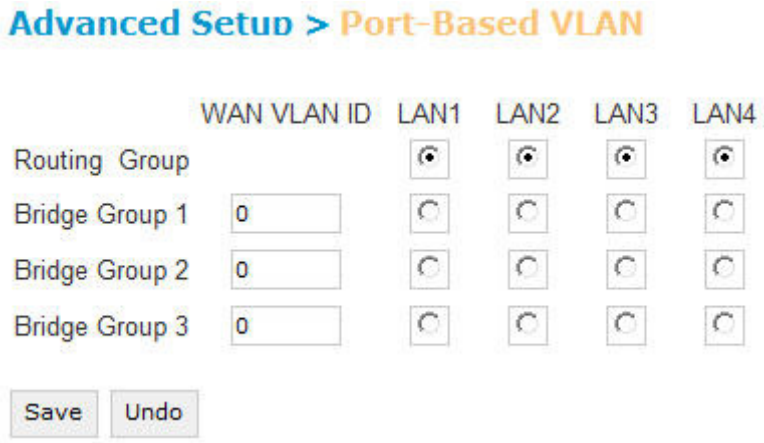
- Select the *Packet Type* (TCP or UDP).
- Enter the *Source IP Address* and/or *Port Number* if any.
- Enter the *Destination IP Address* and/or *Port Number* if any.
- Select the *Priority Queue* for this packet.
- Click *Add* to create this rule.

  In the above figure, it shows the any packet with destination IP address,192.168.1.100 and port number, 20 will be put into medium queue.

- Select the specified entry in the QoS policy table and click *Delete* to remove the rule.

6.8 Port-Based VLAN

The page provides port-based VLAN configuration. In default, the LAN1 to LAN4 are grouped together as a single Ethernet environment. But you could enable VLAN feature and get up to 4 separated Ethernet environments. Besides, each VLAN can associate with VLAN ID in the Internet (WAN) port. Those packets does not match the VLAN ID in below figure will be sent to default group (Routing Group).



Port-Based VLAN Configuration

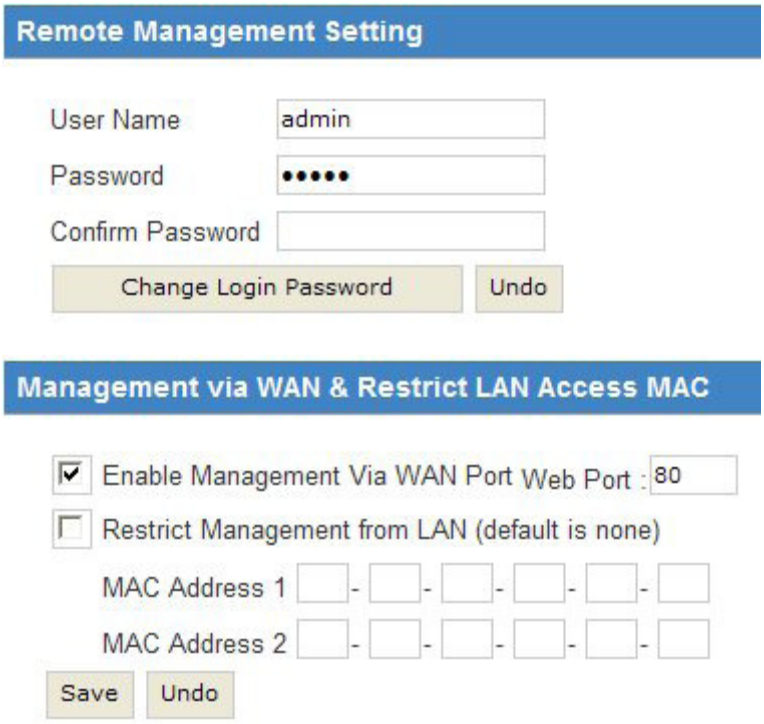
Global Setting

- Enter the value of *WAN VLAN ID* in Bridge Group 1, 2 and 3
- Select the *LAN ports* from LAN1 to LAN4 for each Bridge Group.
- Click *Save* to save the configuration.

7 Management

7.1 Remote Management

This page allows you to setup the remote management capability which is useful to check and configure the device from remote site.



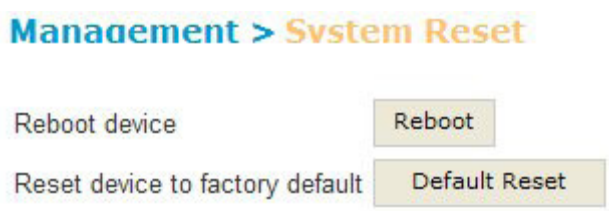
Management Configuration – Remote Management

Global Setting

- The default username/password is admin/admin. You could enter the new username, password in the *Password* and *Confirm Password* fields and then click *Change Login Password* to change it.
- Check and enter the port number of WEB to allow login request from remote site by WEB browser.
- Check to enable *Restrict Management from LAN*, the default is disabled. Enter the *MAC addresses* that you allow them to access the device if this feature is enabled.
- Click *Save* to save the configuration

7.2 System Reset

This page allows you to reboot the device with current settings or factory default settings.



Management Configuration – System Reset

Global Setting

- Click *Reboot* to reboot the device with current settings
- Click *Default Reset* to reboot the device with factory default settings

7.3 Firmware Upgrade

This page allows you to upgrade the firmware of the device to get more features and Improvements

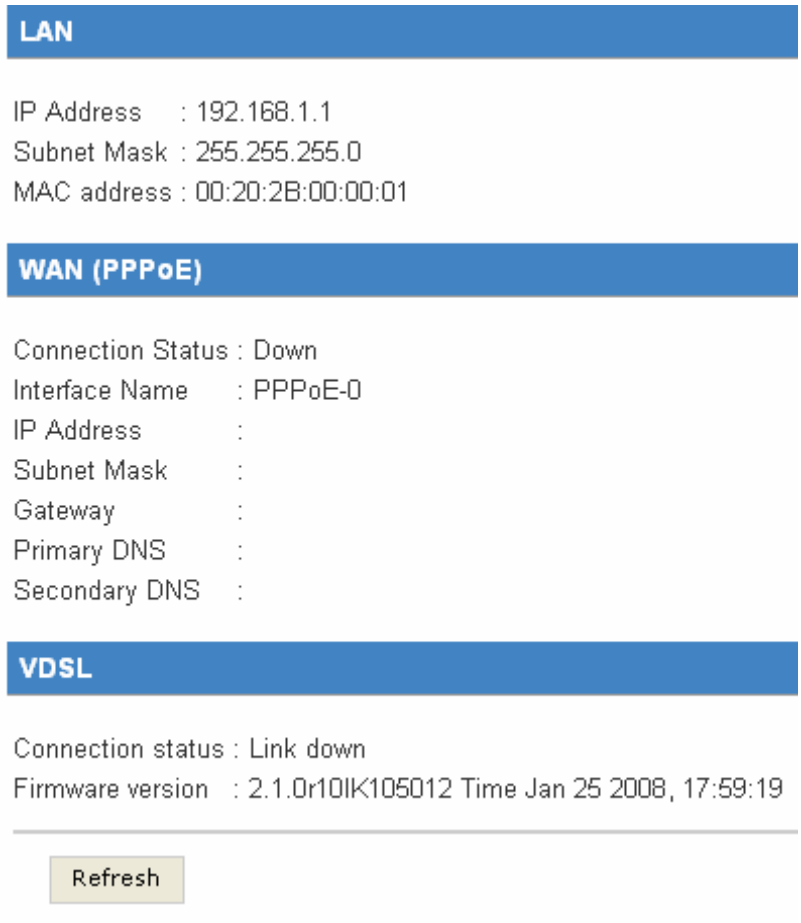
Management Configuration – Firmware Upgrade

Global Setting

- Click *Browse* to specify the location of firmware
- Click *Upgrade* to start the upgrade procedure. The device will reboot automatically when the firmware is loaded completely.

7.4 Network Status

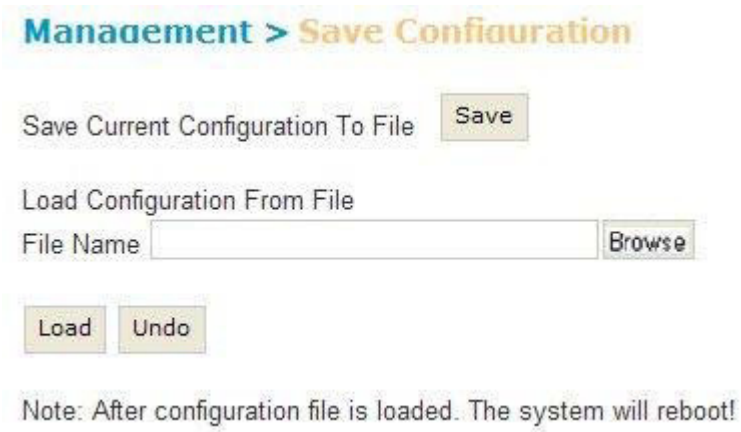
This page shows the network status and most important information about LAN, WAN protocol, and VDSL.



Management Configuration – Network Status

7.5 Save Configuration

This page allows you to save current configuration into file in your PC or load the configuration from PC.



Management Configuration – Save Configuration

Global Setting

- Click *Save* and follow the system instructions to save configuration profile into file
- To load the configuration profile from file, click *Browse* to specify the location of file and click *Load* to load the configuration profile into the device. The device will reboot automatically when the configuration is loaded.

7.6 Diagnostic

This page allows you to ping a remote IP or domain name to test the Internet connection working fine or not.

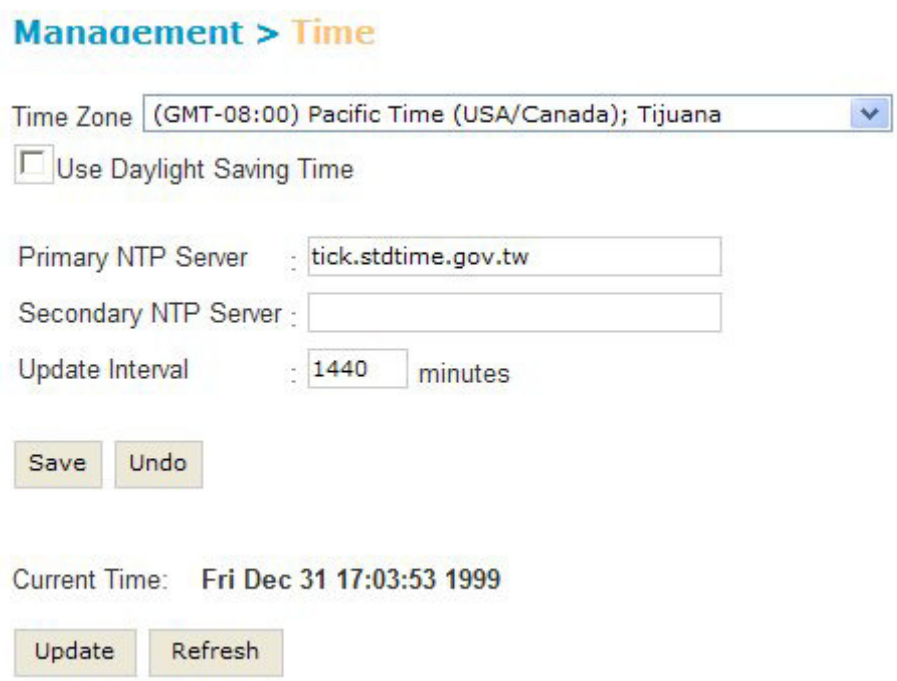
Management Configuration – Diagnostic

Global Setting

- Enter the *IP address* or *Host name* (domain name)
- Click *ping* to start the diagnostic process.

7.7 Time

This page allows you to setup the time zone and get the real time clock from Internet.



Management Configuration – Time Zone Configuration

Global Setting

- Select the your local *Time Zone* from the list
- Check to use the *Daylight Saving Time*
- Enter the NTP server domain name in the *Primary NTP Server* and *Secondary NTP Server* fields which provide the real time network clock
- Enter the value of *Update Interval* to sync up the clock with NTP server
- Click *Save* to save your settings
- Click *Update* to get the real time clock now

8 Troubleshooting

This chapter suggests solutions for problems you may encounter in installing or using the device, and provides instructions for using several IP utilities to diagnose problems.
Contact Customer Support if these suggestions do not resolve the problem.

8.1 Troubleshooting suggestions

Troubleshooting Suggestions

Problem	Troubleshooting Suggestion
LEDs	
Power LED does not illuminate after product is turned on.	Verify that you are using the power cable provided with the device and that it is securely connected to the device and a wall socket/power strip.
Internet LED does not illuminate after phone cable is attached.	Verify that a standard telephone cable (called an RJ-11 cable) like the one provided is securely connected to the DSL port and your wall phone port. Allow about 30 seconds for the device to negotiate a connection with your ISP.
LINK LAN LED does not illuminate after Ethernet cable is attached.	Verify that the Ethernet cable is securely connected to your LAN hub or PC and to the device. Make sure the PC and/or hub is turned on. Verify that your cable is sufficient for your network requirements. A 100 Mbit/sec network (10BaseTx) should use cables labeled CAT 5. A 10Mbit/sec network may tolerate lower quality cables.
Internet Access	
My PC cannot access the Internet	Run a health check on your device. Use the ping utility (discussed in the following chapter) to check whether your PC can communicate with the device's LAN IP address (by default 192.168.1.1). If it cannot, check the Ethernet Cabling. If you statically assigned a private IP address to the computer, (not a registered public address), verify the following: ● Check that the gateway IP address on the computer is your public IP address. If it is not, correct the address

	or configure the PC to receive IP information automatically. ● Verify with your ISP that the DNS server specified for the PC is valid. Correct the address or configure the PC to receive this information automatically.
My LAN PCs cannot display web pages on the Internet.	Verify that the DNS server IP address specified on the PCs is correct for your ISP. If you specified that the DNS server be assigned dynamically from a server, then verify with your ISP that the address configured on the device is correct, and then you can use the ping utility to test connectivity with your ISP's DNS server.
Web pages	
I forgot/lost my user ID or password.	If you have not changed the password from the default, try using "admin" as both the user ID and password. Otherwise, you can reset the device to the default configuration by pressing three times the Reset Default button on the front panel of the device. Then, type the default User ID and password shown above. **WARNING:** Resetting the device removes any custom settings and returns all settings to their default values.
I cannot access the web pages from my browser.	Use the ping utility, discussed in the following section, to check whether the PC can communicate with the device's LAN IP address (by default 192.168.1.1). If it cannot, check the Ethernet cabling. Verify that you are using Internet Explorer or Netscape Navigator v4.0 or later. Verify that the PC's IP address is defined as being on the same subnet as the IP address assigned to the LAN port on the device.
My changes to the web pages are not being retained.	Be sure to use the *Confirm Changes* function after any changes.

8.2Diagnosing Problem using IP Utilities

8.2.1 Ping

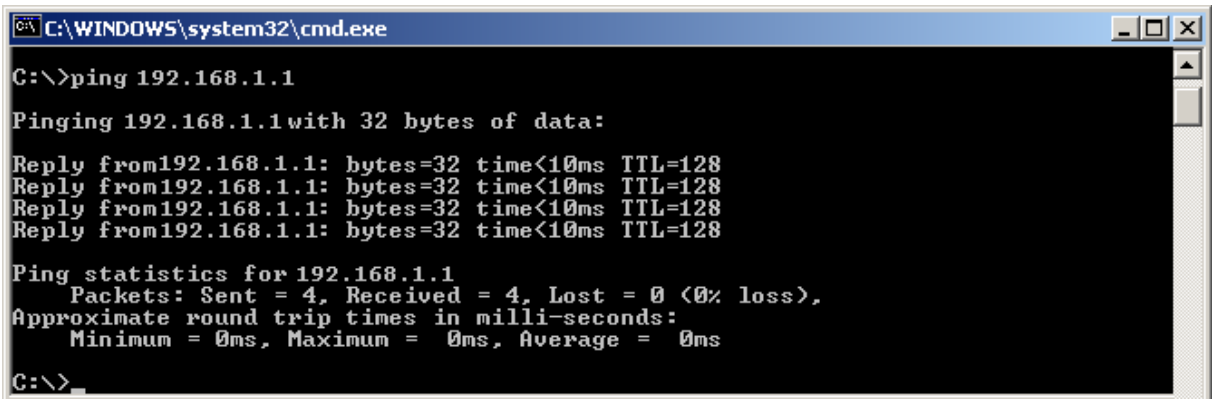
Ping is a command you can use to check whether your PC can recognize other computers on your network and the Internet. A ping command sends a message to the computer you specify. If the computer receives the message, it sends messages in reply. To use it, you must know the IP address of the computer with which you are trying to communicate.

On Windows-based computers, you can execute a ping command from the Start menu. Click the Start button, and then click Run. In the Open text box, type a statement such as the following:

ping 192.168.1.1

Click OK. You can substitute any private IP address on your LAN or a public IP address for an Internet site, if known.

If the target computer receives the message, a Command Prompt window is displayed:



If the target computer cannot be located, you will receive the message Request timed out.

Using the ping command, you can test whether the path to the device is working (using the preconfigured default LAN IP address 192.168.1.1) or another address you assigned.

You can also test whether access to the Internet is working by typing an external address, such as that for www.yahoo.com (216.115.108.243). If you do not know the IP address of a particular Internet location, you can use the nslookup command, as explained in the following section.

From most other IP-enabled operating systems, you can execute the same command at a command prompt or through a system administration utility.

8.2.2 Nslookup

You can use the nslookup command to determine the IP address associated with an Internet site name. You specify the common name, and the nslookup command looks up the name in on your DNS server (usually located with your ISP). If that name is not an entry in your ISP's DNS table, the request is then

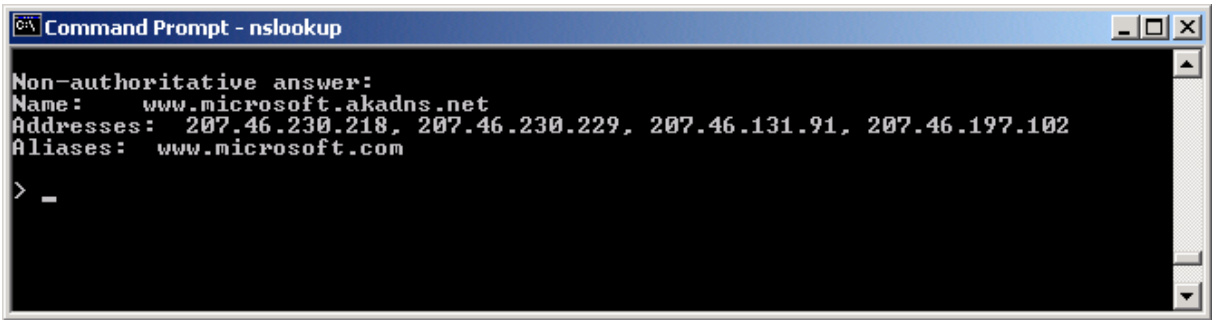
referred to another higher-level server, and so on, until the entry is found. The server then returns the associated IP address.

On Windows-based computers, you can execute the nslookup command from the Start menu. Click the Start button, and then click Run. In the Open text box, type the following:

Nslookup

Click OK. A Command Prompt window displays with a bracket prompt (>). At the prompt, type the name of the Internet address that you are interested in, such as www.microsoft.com.

The window will display the associate IP address, if known, as shown below:



There may be several addresses associated with an Internet name. This is common for web sites that receive heavy traffic; they use multiple, redundant servers to carry the same information.

To exit from the nslookup utility, type **exit** and press **[Enter]** at the command prompt.