

VERSALINKTM WIRELESS GATEWAY (MODEL 7500)

USER GUIDE



User Guide

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1. PRODUCT DESCRIPTION

The Verizon[®] VersaLink[™] Wireless Gateway provides reliable, high-speed, Internet access to your existing small office phone line and is capable of data rates hundreds of times faster than a traditional analog modem. But unlike analog modems, the VersaLink Gateway allows you to use the same phone line for simultaneous voice/fax communications and high-speed Internet access, eliminating the need for dedicated phone lines for voice and data needs. In addition, VersaLink supports a variety of networking interfaces such as Wireless 802.11b/g, ADSL, Ethernet and USB, along with the following optional features:

- UPLINK/E1: Alternate WAN uplink port
- E4/DATA: Alternate Ethernet/USB connection
- Layer w/2 QOS with VLAN tagging
- HotSpot
- Simultaneous public/private network support

Hereafter, the Verizon[®] VersaLink[™] Wireless Gateway will be referred to as "VersaLink," "Router," or "Modem."

2. SAFETY INSTRUCTIONS

- Never install any telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- Never touch non-insulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.



Risk of electric shock. Voltages up to 140 Vdc (with reference to ground) may be present on telecommunications circuits.



3. REGULATORY INFORMATION

3.1 FCC Compliance Note

(FCC ID: CH87500XX-07)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the Federal Communication Commission (FCC) Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to a different circuit from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING: While this device is in operation, a separation distance of at least 20 cm (8 inches) must be maintained between the radiating antenna and users exposed to the transmitter in order to meet the FCC RF exposure guidelines. Making changes to the antenna or the device is not permitted. Doing so may result in the installed system exceeding RF exposure requirements. This device must not be co-located or operated in conjunction with any other antenna or radio transmitter. Installers and end users must follow the installation instructions provided in this guide.

Modifications made to the product, unless expressly approved, could void the users' rights to operate the equipment.

PART 68 – COMPLIANCE REGISTRATION

This equipment is designated to connect to the telephone network or premises wiring using a compatible modular jack that is Part 68 compliant. A FCC compliant telephone cord and modular plug is provided with the equipment. See the Installation Information section of this User Guide for details.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instruction for details.

If this terminal equipment (Model 7500) causes harm to the telephone network, the telephone company may request you to disconnect the equipment until the problem is resolved. The telephone company will notify you in advance if temporary discontinuance of service is required. If advance notification is not practical, the telephone company will notify you as soon as possible. You will be advised of your right to file a complaint with the FCC if you believe such action is necessary. If you experience trouble with this equipment (Model 7500), do not try to repair the equipment yourself. The equipment cannot be repaired in the field. Contact Verizon for instructions.

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The telephone company may make changes to their facilities, equipment, operations, or procedures that could affect the operation of this equipment. If this happens, the telephone company will provide advance notice in order for you to make the modifications necessary to maintain uninterrupted service.

If your home has specially wired alarm equipment connected to the telephone line, ensure that the installation of this equipment (Model 7500) does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection of this equipment to party line service is subject to state tariffs.

3.2 Canada Certification Notice

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operations and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The department does not guarantee the equipment will operate to the user's satisfaction.

This equipment meets the applicable Industry Canada Terminal Equipment Technical Specification. This is confirmed by the registration number. The abbreviation, IC, before the registration number signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment. The Ringer Equivalence Number (REN) is 0.0. The Ringer Equivalence Number that is assigned to each piece of terminal equipment provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed five.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local Telecommunication Company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Connection to a party line service is subject to state tariffs. Contact the state public utility commission, public service commission, or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure that the installation of this equipment (Model 7500) does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

If you experience trouble with this equipment (Model 7500), do not try to repair the equipment yourself. The equipment cannot be repaired in the field and must be returned to the manufacturer. Repairs to certified equipment should be coordinated by a representative, and designated by the supplier. Contact Verizon for instructions.

The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed five.

Users should ensure, for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal, metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.



Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.



4. NETWORKING REQUIREMENTS

The following system specifications are required for optimum performance of the Router via 10/100 Base-T Ethernet or USB installations.

| Connection Type | Connection Type Minimum System Requirements | | |
|---|---|--|--|
| Pentium® or equivalent class machines or higher | | | |
| ETHERNET | • Microsoft® Windows® (Vista [™] , XP, 2000, ME, NT 4.0, 98 SE) | | |
| UPLINK/E1 Macintosh® OS X, or Linux installed | | | |
| E2 | • 64 MB RAM (128 MB recommended) | | |
| E3 | • 10 MB of free hard drive space | | |
| E4/Data | • 10/100 Base-T Network Interface Card (NIC) | | |
| | • Internet Explorer 5.5 or later or Netscape Navigator 7.x or later | | |
| | Computer Operating System CD-ROM on hand | | |
| | • Pentium [®] or equivalent class machines or higher | | |
| | • Microsoft [®] Windows [®] (Vista [™] , XP, 2000, ME, 98 SE) installed | | |
| | • 64 MB RAM (128 MB recommended) | | |
| USB | • 10 MB of free hard drive space | | |
| | USB Version 1.1 or higher compliant bus | | |
| | • Internet Explorer 5.5 or higher or Netscape Navigator 7.x or later | | |
| | Computer operating system CD-ROM | | |
| | • Pentium [®] or equivalent class or higher | | |
| | • Microsoft [®] Windows [®] (Vista [™] , XP, 2000, ME, NT 4.0, 98 SE) or | | |
| | Macintosh® OS X installed | | |
| WIRELESS | • 64 MB RAM (128 MB recommended) | | |
| IEEE 802.11b/g | • 10 MB of free hard drive space | | |
| | • Internet Explorer 5.5 or Netscape Navigator 7.x or later | | |
| | • An available IEEE 802.11b/g PC adapter | | |
| | Computer Operating System CD-ROM on hand | | |

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5. HARDWARE FEATURES

5.1 LED Indicators

This section explains the LED States and Descriptions. LED indicators are used to verify the unit's operation and status.

| LED | State | Description | |
|---|----------------|--|--|
| | Solid Green | Router power is ON. | |
| | OFF | Router power is OFF. | |
| POWER | Solid Red | POST (Power On Self Test), Failure (not bootable) or Device Malfunction. Note: The Power LED should be red no longer than two seconds after the power on self test passes. | |
| E1, E2, E3, E4 (Ethernet LAN) | Solid Green | Powered device is connected to the associated port (includes devices with wake-on LAN capability where slight voltage is supplied to an Ethernet connection). Note: When using the optional uplink port (E1), Ethernet LAN connection is limited to E2, E3, and E4. | |
| | Flashing Green | 10/100 Base-T LAN activity is present (traffic in either direction) | |
| | OFF | Router power is OFF, no cable or no powered device is connected to the associated port. | |
| | Solid Green | Link Established. | |
| WIRELESS | Flashing Green | Wireless LAN activity is present (traffic in either direction). | |
| | OFF | Router power is OFF or No Link. | |
| | Solid Green | USB link established. | |
| USB | Flashing Green | USB LAN activity present (traffic in either direction). | |
| | OFF | No USB link established. | |
| | Solid Green | Good DSL link. | |
| DSL | Flashing Green | DSL attempting to sync. | |
| DSL | Solid Amber | Modem is in safeboot mode. | |
| | OFF | Router power is OFF. | |
| | Solid Green | Internet link established. With DSL up, the Router has a WAN IP address from IPCP or DHCP; or a static IP is configured; or PPP negotiation has successfully completed (if used) and no traffic is detected. | |
| INTERNET | Flashing Green | IP connection established and IP Traffic is passing through device (in either direction). Note: If the IP or PPP session is dropped due to an idle timeout, the light will remain solid green, if an ADSL connection is still present. If the session is dropped for any other reason, the light is turned OFF. The light will turn red when it attempts to reconnect and DHCP or PPP fails). | |
| | Solid Red | Device attempted to become IP connected and failed (no DHCP response, no PPP response, PPP authentication failed, no IP address from IPCP, etc.). | |
| | OFF | Router power is OFF, Router is in Bridge Mode, or the ADSL connection is not present. | |

LED States and Descriptions



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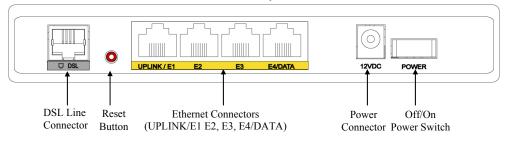
5.2 Cable Connectors and Switch Locations

- DSL connector (RJ-11)
- Reset push button
- Four Ethernet (RJ-45) connectors with optional UPLINK/E1 port and optional E4/DATA port

NOTE:

- 1. When using the optional UPLINK/E1 jack (when VersaLink is configured for WAN Uplink mode), Ethernet LAN connection is limited to ports E2, E3, and E4. The Uplink feature is optional. If Uplink is not enabled via the Web pages, VersaLink will use DSL as the WAN interface.
- 2. If you desire to install VersaLink via USB, use the optional E4/DATA port, which can be used for either USB or Ethernet installation. See section 6 for hardware installation instructions.
- Power connector (12 VDC) barrel
- OFF/ON power switch

VersaLink Gateway - Rear View



5.3 Connector Descriptions

The following chart displays the Router's connector types.

| NAME | Түре | FUNCTION |
|-----------|--|--|
| DSL LINE | Modular 6-pin (RJ-11) DSL jack | Connects the Router to a telephone jack that has active ADSL service or to the DSL port of a POTS splitter. |
| UPLINK/E1 | Modular 8-pin (RJ-45) Ethernet jack | Connects the Router to a PC or Hub via 10/100 BaseT Ethernet. |
| E2/E3/E3 | Modular 8-pin (RJ-45) Ethernet jack | Connects the Router to a PC or Hub via 10/100 BaseT Ethernet. |
| E4/DATA | Modular 8-pin (RJ-45) Ethernet jack | Connects the Y-cable provided with the kit to the 10/100 Base-T Ethernet A DATA port on the rear of the Router and to the Ethernet port on a PC or Hub. The USB connector built in to the Y-cable also functions through the Router's E4/DATA port. When the Ethernet connector is plugged in to the Router's DATA port, the USB cable can then be plugged in to the USB port on a PC or Hub. Thus, the Y-cable provides Internet connectivity via Ethernet or USB; however, both connectors cannot be used sumultaneously. If both connectors are |



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| | | installed in a PC or Hub at the same time, only the connector that syncs up first will be used. |
|-------|------------------|---|
| POWER | Barrel connector | Connects the 12 VDC power connector to an AC wall jack. |

5.4 Installation Requirements

This section explains the hardware installation procedures for installing your Router.

To install the VersaLink, you will need the following:

- Active DSL line
- Network Interface Card (NIC) installed in your PC, or
- Available USB port installed in your PC
- 802.11 b/g wireless adapter installed in your PC

IMPORTANT: Please wait until you have received notification from your Internet service provider (ISP) that your DSL line has been activated before installing your VersaLink.

5.5 Before you begin

Make sure that your kit contains the following items:

- Verizon[®] ProLine[™] Modem
- Power Supply
- Y-cable contains:
 - o Built-in 10/100 BaseT Ethernet cable—labeled PC/Ethernet, yellow
 - o Built-in USB cable—labeled PC/USB, blue
- RJ-11 Phone cable
- CD-ROM containing User Guide in PDF format

5.6 Microfilters

ADSL signals must be blocked from reaching each telephone, answering machine, fax machine, computer Modem or any similar conventional device. Failure to do so may degrade telephone voice quality and ADSL performance. Install a microfilter if you desire to use the DSL-equipped line jack for telephone, answering machine, fax machine or other telephone device connections. Microfilter installation requires no tools or telephone rewiring. Just unplug the telephone device from the baseboard or wall mount and snap in a microfilter, next snap in the telephone device. You can purchase microfilters from your local electronics retailer, or contact the original provider of your DSL equipment.



6. HARDWARE INSTALLATIONS

The following instructions explain how to install your VersaLink Gateway using 10/100 Base-T Ethernet, Wireless, Ethernet Uplink, or USB connections. Before you begin, please read the following notes:

NOTE:

- 1. If your Ethernet card does not auto-negotiate, set it to half duplex. Refer to the Ethernet card manufacturer's instructions for installing and configuring your Ethernet card.
- 2. If you are using VersaLink in conjunction with an Ethernet Hub or Switch, refer to the manufacturer's instructions for proper installation and configuration.
- 3. When using a Microfilter, confirm that the DSL RJ-11 phone cable is connected to the DSL port of the DSL/HPN non-filtered jack.
- 4. It is recommended that you use a surge suppressor to protect equipment attached to the power supply. Use only the power supply provided with your kit.
- 5. Additional Ethernet cables may be required depending on the installation method you are using. Ethernet cables and DSL filters can be purchased at your local computer hardware retailer.
- 6. VersaLink supports simultaneous use of 10/100 Base-T Ethernet and Wireless configurations. To use this installation method, follow the instructions provided in sections 6.1.1 and 6.1.2. VersaLink does not support simultaneous use of 10/100 Base-T Ethernet and USB connections.

VersaLink supports two modes for WAN access, which are configurable through VersaLink's Web pages: (1) LAN Ethernet port mode and (2) WAN Uplink port mode.

- LAN Ethernet port mode allows you to use VersaLink's DSL port for WAN access (VersaLink's DSL functionality is Enabled). In this mode you should install VersaLink according to the instructions in the following sections:
 - Section 6.1.1, Connecting VersaLink via 10/100 Base-T Ethernet
 - Section 6.1.2, Connecting VersaLink via Wireless
 - Section 6.1.4, Connecting VersaLink via USB
- WAN Uplink port mode allows you to use VersaLink as an Ethernet Gateway (for example, to connect to a cable modem or to another ADSL device that provides WAN access). In WAN Uplink port mode, VersaLink's DSL functionality is Disabled. In this mode you should install VersaLink according to the instructions in section 6.1.3, "Connecting VersaLink via UPLINK/E1."

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6.1.1 Connecting VersaLink via 10/100 Base-T Ethernet

To connect your VersaLink using the 10/100-BaseT Ethernet connection, please follow these steps:

1. Connect the DSL phone cable from the connector marked **DSL** on the rear panel of the Modem to the DSLequipped telephone line jack on the wall. Please use the DSL phone cable that was provided with your kit.

IMPORTANT: Plug the RJ-11 DSL phone cable from the Router into the DSL port of the microfilter plugged into the telephone jack at the wall.

2. Use the Y-cable provided with your kit. Plug the Ethernet jack (labeled PC/Ethernet, yellow) into the Ethernet port on your computer. Then, at the other end of the Y-cable, plug the other Ethernet jack (labeled PC/Ethernet, yellow) into any of the four Ethernet connectors on the rear panel of the Router.

NOTE: You can connect to any of the four Ethernet jacks on the rear panel of your Router as they serve as an Ethernet switch. However, when using the optional uplink port (labeled UPLINK/E1), Ethernet LAN connection is limited to ports E2, E3, and E4/DATA.

- 3. Connect the power supply cord to the power connector marked **12VDC** on the rear panel of the Modem. Plug the other end of the power supply into an AC wall socket, and then turn on the Router (if it is not already on).
- 4. Check to see if the **POWER** LED is solid green. Solid green indicates that the Router is functioning properly.
- 5. Check to see if the **DSL** LED is solid green. If it is solid green, DSL is functioning properly.
- 6. Check to see if the **ETHERNET** LED is solid green. Solid green indicates that Ethernet is functioning properly. Check the **ETHERNET** LED for the Ethernet jack you are using on the VersaLink.
- 7. After you have logged on to your account and established an Internet connection, as explained later in section 9, check to see if the Modem's **INTERNET** LED is solid green. Solid green indicates that the Internet link has been established. (Flashing green indicates the presence of IP traffic.)

Congratulations! You have completed the Ethernet hardware installation. No software installation is required when using only an Ethernet connection. Now proceed to section 8 to access VersaLink's Web pages.

6.1.2 Connecting VersaLink via Wireless

IMPORTANT: If you are connecting to VersaLink via a wireless network adapter, the SSID must be the same for both VersaLink and your PC's wireless network adapter. The default SSID for VersaLink is the serial number of the unit (located below the bar code on the bottom of the modem and also on the shipping carton). Locate and run the utility software provided with your PC's Wireless network adapter and enter the SSID value. The PC's wireless network adapter must be configured with the SSID (in order to communicate with VersaLink) before you begin the account setup and configuration procedures. Later, for privacy you can change the SSID by following the procedures outlined in section 13, "Wireless Settings."

NOTE: Client PCs can use any Wireless 802.11b/g card to communicate with VersaLink. The Wireless card and VersaLink must use the same Wired Equivalent Privacy (WEP) security code type. The factory default for WEP is Enabled. Please be sure that your computer's wireless adapter is configured properly for whichever network setting you use: WEP or WPA. You can access the settings in the advanced properties of the wireless network adapter.



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To network VersaLink to computers in your home or office using a wireless installation, you will need to confirm the following:

- 1. Ensure that each PC on your wireless network has an 802.11b/g wireless network adapter installed.
- 2. Ensure that appropriate drivers for your wireless adapter have been installed on each PC.
- 3. Connect the DSL phone cable from the connector marked **DSL** on the rear panel of VersaLink to the DSLequipped telephone line jack on the wall. Please use the DSL phone cable that was provided with your kit.

IMPORTANT: Plug the RJ-11 DSL phone cable from the Router into the DSL port of the microfilter plugged into the telephone jack at the wall.

4. Use the Y-cable provided with your kit. Plug the Ethernet jack (labeled PC/Ethernet, yellow) into the Ethernet port on your computer. Then, at the other end of the Y-cable, plug the other Ethernet jack (labeled PC/Ethernet, yellow) into any of the four Ethernet connectors on the rear panel of the Router.

NOTE: You can connect to any of the four Ethernet jacks on the rear panel of your Router as they serve as an Ethernet switch. However, when using the optional uplink port (labeled UPLINK/E1), Ethernet LAN connection is limited to ports E2, E3, and E4/DATA.

- 5. Connect the power supply cord to the power connector marked **12VDC** on the rear panel of the VersaLink. Plug the other end of the power supply into an AC wall socket, and then turn on VersaLink (if it is not already on).
- 6. Check to see if VersaLink's **POWER** LED is solid green. This indicates that VersaLink is powered on.
- 7. Check to see if VersaLink's DSL LED is solid Green. If it is solid Green, VersaLink is functioning properly.
- 8. Check to see if the **ETHERNET** LED is solid green. Solid green indicates that the Ethernet connection is functioning properly. Check the **ETHERNET** LED for the Ethernet jack you are using on the VersaLink.
- 9. Check to see if VersaLink's **WIRELESS** LED is solid Green. This means that the Wireless interface is functioning properly.
- 10. After you have logged on to your account and established an Internet connection, as explained later in section 9, check to see if VersaLink's **INTERNET** LED is solid green. Solid green indicates that an Internet link has been established. (Flashing green indicates the presence of IP traffic.)

Congratulations! You have completed the Wireless installation for VersaLink. Now proceed to section 8 to access VersaLink's Web pages.



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6.1.3 Connecting VersaLink via UPLINK/E1

The Uplink feature is optional. If you want to install your Router so that it uplinks to another ADSL device, follow the steps outlined below:

1. Connect the attached ADSL device to the ADSL-equipped jack on the wall, using the RJ-11 phone cord that was provided with the kit. If you are using a microfilter at the wall jack, you must connect the RJ-11 DSL phone cable from the DSL port of the ADSL device to the DSL port of the microfilter.

NOTE: The ADSL device to which you are connecting will function as your WAN interface to the Internet. Be sure you have connected the ADSL device appropriately. If needed, refer to the manufacturer's instructions.

2. Use the Y-cable provided with your kit. Plug the Ethernet jack from the port marked **UPLINK/E1** on the rear panel of VersaLink to the Ethernet port on the attached ADSL device, and then turn on the power switch of the attached ADSL device (if it is not already on).

NOTE: Later, in VersaLink's Web pages, be sure to select WAN Uplink port mode to allow VersaLink to uplink to the ADSL device. When VersaLink is configured for WAN Uplink port mode, VersaLink's DSL transceiver will not be used. The ADSL device to which VersaLink is connected will be your WAN interface to the Internet. LAN Ethernet port is VersaLink's factory default setting, refer to section 14.2.3 for details.

- 3. Connect additional PCs to VersaLink using the Ethernet jacks marked **E2**, **E3**, or **E4/DATA** on the rear panel of VersaLink; each jack serves as an Ethernet switch. (Additional Ethernet cables are not provided with the kit.)
- 4. Connect the power supply cord to the power connector marked **12VDC** on the rear panel of the VersaLink. Plug the other end of the power supply into an AC wall socket, and then turn on the power (if it is not on).
- 5. Check to see if the VersaLink's **POWER** LED is solid green. This indicates that VersaLink is powered on.
- 6. Check to see if the **ETHERNET** LED is solid green. Solid green indicates that the Ethernet connection is functioning properly. Check the **ETHERNET** LED for the Ethernet jack you are using on VersaLink.
- 7. After you have logged on to your account and established an Internet connection, as explained later in section 7, check to see if the VersaLink's **INTERNET** LED is solid green. Solid green indicates that an Internet link has been established. (Flashing green indicates the presence of IP traffic.)

Congratulations! You have completed the UPLINK/E1 installation for VersaLink. No software installation is required when using the uplink connection. Now proceed to section 8 to access VersaLink's Web pages.

6.1.4 Connecting VersaLink via USB

It is recommended that you connect your VersaLink via Ethernet connections. However, if you choose to connect your computer via USB, you must follow the instructions in this section.

IMPORTANT: The USB installation will not function for Macintosh computers. Macintosh users will need to install the Router via Ethernet connection. See section 6.1.1 for Ethernet installation instructions.

To install your Router using a USB connection, please follow these steps in the order presented:

- 1. Insert the CD-ROM provided with your kit into the CD-ROM drive of the PC that will connect via USB.
- 2. Use the Y-cable provided with your kit. At the "Y" end of the cable, plug the USB connector (labeled PC/USB, blue) into the USB port on your computer. Then, at the other end of the Y-cable, plug the Ethernet jack (labeled PC/Ethernet, yellow) into the Ethernet connector marked **E4/DATA** on the rear panel of the Router.
- 3. Connect the power supply cord to the power connector marked **12VDC** on the rear panel of the Router. Plug the other end of the power supply into an AC wall socket, and then turn on the Router (if it is not already on).



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- 4. Complete the instructions outlined in section 7, "Installing the USB Drivers." Then, return to this section to complete the remaining steps.
- 5. Connect the DSL phone cable from the connector marked **DSL** on the rear panel of the Modem to the DSLequipped telephone line jack on the wall. Please use the DSL phone cable that was provided with your kit.

IMPORTANT: Plug the RJ-11 DSL phone cable from the Router into the DSL port of the microfilter plugged into the telephone jack at the wall.

- 6. Check to see if the **POWER** LED is solid green. This indicates that VersaLink is powered on.
- 7. Check to see if the DSL LED is solid green. If it is, DSL is functioning properly
- 8. After the USB drivers have been installed, check to see if the USB LED is solid green. Solid green indicates that the USB connection is functioning properly.
- 9. After you have logged on to you account and established an Internet connection, as explained later in section 9, check to see if the Modem's **INTERNET** LED is solid green. Solid green indicates that the Internet link has been established. (Flashing green indicates the presence of IP traffic.)

Congratulations! You have completed the USB hardware installation. Now proceed to section 8 to access VersaLink's Web pages.



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7. INSTALLING THE USB DRIVERS

This section explains how to install the USB drivers for your Router. If you are using only an Ethernet connection, USB driver installation is not necessary. The Microsoft Plug and Play auto-detect feature recognizes when new hardware has been installed. After you connect the Router to the PC, the Router will be detected automatically.

IMPORTANT: Make sure that the CD-ROM provided with your kit is inserted into the PC's CD-ROM drive before you connect the blue USB cable to the Router and the PC, as explained in section 6.1.4, "Connecting VersaLink via USB."

Determine which operating system is installed on your PC, and then follow the USB driver instructions that match your operating system. The following table provides a reference to the USB driver installation instructions. After you have completed the USB driver installation, return to section 6.1.4 to complete the USB hardware installation instructions.

| Your Operating System | Refer to this section for USB driver instructions |
|--|--|
| Windows 98 SE 7.1 Installing the USB Driver for Windows 98 | |
| Windows ME | 7.2 Installing the USB Driver for Windows ME |
| Windows 2000 | 7.3 Installing the USB Driver for Windows 2000 |
| Windows XP | 7.4 Installing the USB Driver for Windows XP |
| Windows Vista TM | 7.5 Installing the USB Driver for Windows Vista [™] |

7.1 Installing the USB Driver for Windows 98 SE

IMPORTANT: Confirm that the CD-ROM provided with the Router kit is inserted into the PC's CD-ROM drive before beginning this installation.

1. Windows 98 SE: After you connect the Router to your PC, the Found New Hardware window will appear (Figure 1). After a brief delay, the Add New Hardware Wizard window will appear (Figure 2) Click Next.

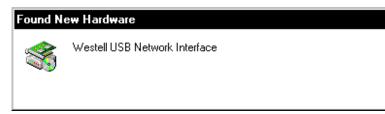


Figure 1. Windows 98 SE



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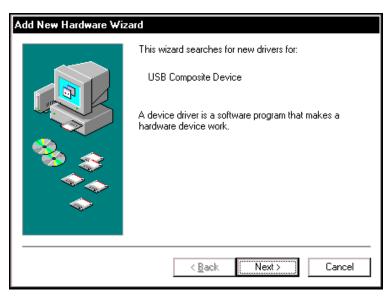


Figure 2. Windows 98 SE

2. Windows 98 SE: Select Search for the best driver for your device. (Recommended). See Figure 3. Click Next.

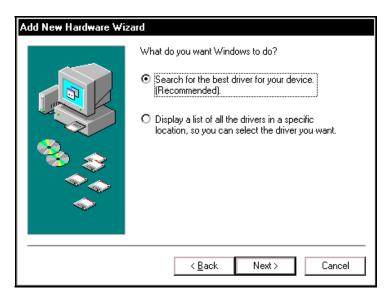


Figure 3. Windows 98 SE



3. Windows 98 SE: Select CD-ROM drive (Figure 4). Click Next. Windows will search for the driver.

| Add New Hardware Wiz | rard |
|----------------------|--|
| | Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search. Floppy disk drives CD-ROM drive Microsoft Windows Update Specify a location Browse |
| | < <u>B</u> ack Next> Cancel |

Figure 4. Windows 98 SE

Note: If Figure 4 does not appear at this step, and Figure 5 appears with the text 'USB Composite device', 'C:\Windows\Inf\USB.Inf', do not continue. Click **Back** to Step 3 and specify the location of the CD-ROM.

4. Windows 98 SE: Select The updated driver (Recommended) Westell USB Network Interface (Figure 5). Click Next.

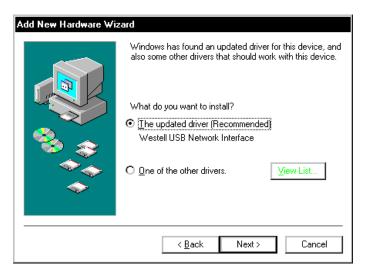


Figure 5. Windows 98 SE



5. Windows 98 SE: Windows will display the location of the driver (Figure 6). The drive "letter" may vary. Click Next.



Figure 6. Windows 98 SE

6. Windows 98 SE: Remove the CD from the CD-ROM Drive. Next, insert the Windows operating system CD into the CD-ROM Drive (Figure 7). Click OK.



Figure 7. Windows 98 SE

7. Windows 98 SE: The system will begin copying files (Figure 8).

| Copying Files |
|---|
| Source: Windows 98 Second Edition CD-ROM Destination: Scanning |
| 57% |
| (Cancel) |

Figure 8. Windows 98 SE



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VersaLink Wireless Gateway (Model 7500)

8. Windows 98 SE: Figure 9 may pop up, depending on how Windows 98 SE was installed on the computer. The installation of the Router requires files that are supplied by Microsoft for Windows 98 SE. If Figure 10 pops up, insert the Windows 98 SE Operating System CD into the computers CD-ROM drive, wait a moment for the CD to be recognized by the system, and then click on OK. The system should find the required files on the Windows 98 SE CD-ROM and automatically complete the installation.

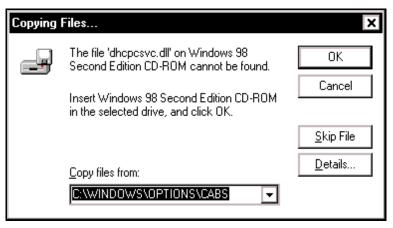


Figure 9. Windows 98 SE

If the Operating System CD is not available, or if Figure 9 pops up again, you will have to manually specify the location of the files. The required files may be stored on your hard drive. A common location for these files is "C:\Windows\Options\Cabs." Try specifying this path or the path to your CD-ROM drive (usually "D:\") by clicking the **Browse...** button in the **Insert Disk** screen (Figure 10). When you have specified the correct path, click on **OK**. The system will begin copying the files.

IMPORTANT: It is very important that the Windows 98 SE files be installed. Do not click on **Cancel** or **Skip File** in the dialogs; doing so will result in an improper installation, and the Router will not function correctly.

| Insert Di | sk | × |
|-----------|---|-------------------|
| | The file 'nettrans.cat' on Windows 98 Second Edition CD-ROM cannot be found. | OK |
| | Setup could not find a file on the specified | Cancel |
| | path. If the path appears below, make sure it | |
| | is correct. Click OK to try copying again. | <u>S</u> kip File |
| | <u>C</u> opy files from: | <u>D</u> etails |
| | ▶ ▼ | <u>B</u> rowse |
| | | |

Figure 10. Windows 98 SE



9. Windows 98 SE: The window below confirms that the PC has finished loading the drivers (Figure 11). Click Finish.

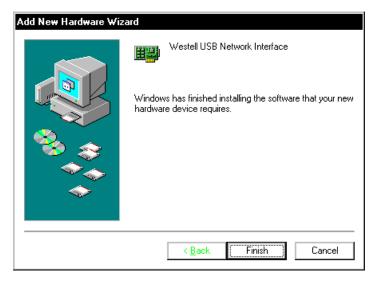


Figure 11. Windows 98 SE

10. Windows 98 SE: Click Yes to restart your computer (Figure 12).

| System S | iettings Change | |
|----------|--|--|
| ? | To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now? | |
| | Yes <u>N</u> o | |

Figure 12. Windows 98 SE

Congratulations! You have completed the software installation for the USB drivers. Now return to section 6.1.4, "Connecting VersaLink via USB," to complete the hardware installation instructions.



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7.2 Installing the USB Driver for Windows ME

IMPORTANT: Confirm that the CD-ROM provided with the Router kit is inserted into the PC's CD-ROM drive before beginning this installation.

1. Windows ME: After you connect the Router to your PC, the Found New Hardware window will appear (Figure 13). After a brief delay, the Add New Hardware Wizard will appear (Figure 14). Select Automatic search for a better driver (Recommended). Click Next.

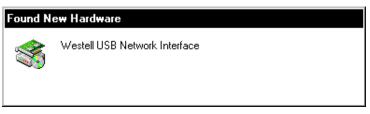


Figure 13. Windows ME



Figure 14. Windows ME



2. Windows ME: Windows will display the location of the driver (Figure 15). Click Next.

| Add New Hardware Wiz | zard | | |
|----------------------|--|--|--|
| | Windows driver file search for the device: | | |
| | Westell USB Network Interface | | |
| | Windows is now installing the best software for this device. | | |
| 🌯 🍃 | Location of driver: | | |
| | | | |
| | | | |
| | < Back Next > Cancel | | |

Figure 15. Windows ME

3. Windows ME: The window below confirms that the PC has finished loading the drivers (Figure 16). Click Finish.

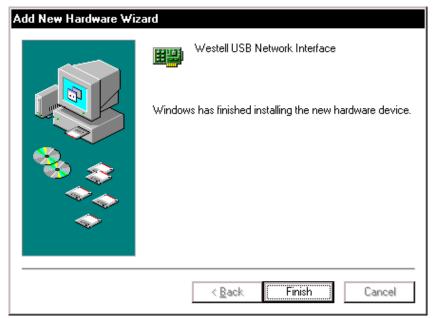


Figure 16. Windows ME



4. Windows ME: When the System Settings Change screen appears, the USB drivers are installed properly (Figure 17). Click Yes.

| System S | iettings Change | | | | |
|----------|---|--|--|--|--|
| ? | To finish setting up your new hardware, you must restart your computer. | | | | |
| \sim | Do you want to restart your computer now? | | | | |
| | Yes <u>N</u> o | | | | |

Figure 17. Windows ME

Congratulations! You have completed the software installation for the USB drivers. Now return to section 6.1.4, "Connecting VersaLink via USB," to complete the hardware installation instructions.

7.3 Installing the USB Driver for Windows 2000

IMPORTANT: Confirm that the CD-ROM provided with the Router kit is inserted into the PC's CD-ROM drive before beginning this installation.

1. Windows 2000: After you connect the Router to your PC, the Found New Hardware window will appear (Figure 18). After a brief delay, the Found New Hardware Wizard will appear (Figure 19). Click Next.

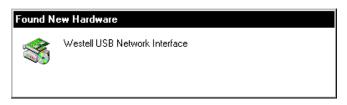


Figure 18. Windows 2000



Figure 19. Windows 2000



2. Windows 2000: The Install Hardware Device Drivers window appears (Figure 20). Select Search for a suitable driver for my device (recommended). Click Next.

| Found New Hardware Wizard Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with |
|---|
| an operating system. |
| This wizard will complete the installation for this device: |
| Westell USB Network Interface |
| A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next. |
| What do you want the wizard to do? |
| Search for a suitable driver for my device (recommended) |
| Display a list of the known drivers for this device so that I can choose a specific driver |
| |
| < <u>B</u> ack <u>N</u> ext > Cancel |

Figure 20. Windows 2000

3. Windows 2000: The Locate Driver Files window appears. Select CD-ROM drives (Figure 21). Click Next.

| Where | iver Files do you want Windows to search for driver files? |
|----------|--|
| Search | for driver files for the following hardware device: |
| <u>_</u> | Westell USB Network Interface |
| | zard searches for suitable drivers in its driver database on your computer and in the following optional search locations that you specify. |
| | t the search, click Next. If you are searching on a floppy disk or CD-ROM drive, ne floppy disk or CD before clicking Next. |
| Option | al search locations: |
| | Floppy <u>d</u> isk drives |
| | CD-ROM drives |
| | Specify a location |
| | Microsoft Windows Update |

Figure 21. Windows 2000



4. Windows 2000: The Driver Files Search Results window appears (Figure 22). Note: The drive "letter" may vary. Click Next.

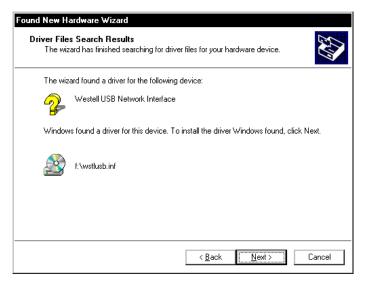


Figure 22. Windows 2000

5. Windows 2000: The window below confirms that the PC has finished loading the drivers (Figure 23). Click Finish.



Figure 23. Windows 2000



6. Windows 2000: When the System Settings Change screen appears, the USB drivers are installed properly (Figure 24). Click Yes.

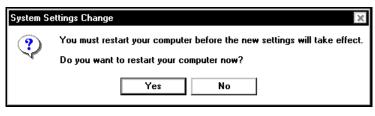


Figure 24. Windows 2000

Congratulations! You have completed the software installation for the USB drivers. Now return to section 6.1.4, "Connecting VersaLink via USB," to complete the hardware installation instructions.

7.4 Installing the USB Driver for Windows XP

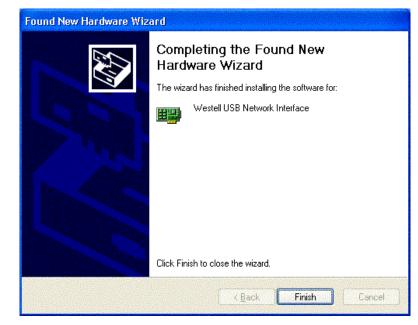
IMPORTANT: Confirm that the CD-ROM provided with the Router kit is inserted into the PC's CD-ROM drive before beginning this installation.

1. Windows XP: After you connect the Router to your PC, the following screen will appear. (Figure 25). Select Install the software automatically (Recommended). Click Next.



Figure 25. Windows XP





2. Windows XP: The window below confirms that the PC has finished loading the drivers (Figure 26). Click Finish.

Figure 26. Windows XP

Congratulations! You have completed the software installation for the USB drivers. Now return to section 6.1.4, "Connecting VersaLink via USB," to complete the hardware installation instructions.



7.5 Installing the USB Driver for Windows VistaTM

IMPORTANT: Confirm that the CD-ROM provided with the Router kit is inserted into the PC's CD-ROM drive before beginning this installation.

1. Windows VistaTM: After you connect the Router to your PC, the following Found New Hardware screen will appear (Figure 27). Click Next.



Figure 27. Windows Vista

2. Windows VistaTM: The window below confirms that the PC has finished loading the drivers (Figure 28). Click Close.

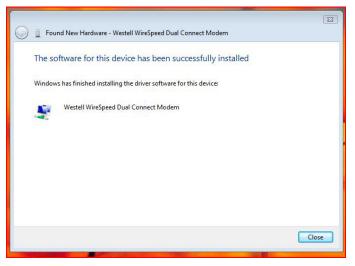


Figure 28. Windows Vista

Congratulations! You have completed the software installation for the USB drivers. Now return to section 6.1.4, "Connecting VersaLink via USB," to complete the hardware installation instructions.



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8. ACCESSING VERSALINK

8.1 Logging on to VersaLink

This section explains the logon procedures for your VersaLink. This procedure should be used any time you want to access or make changes to VersaLink's configurations or firewall settings.

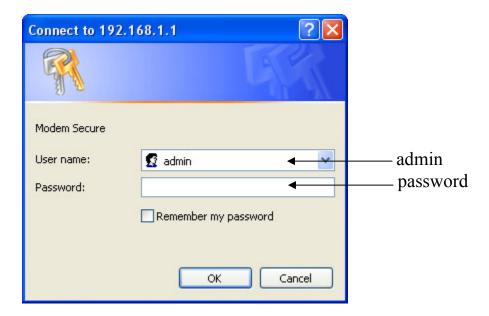
IMPORTANT: VersaLink is capable of automatically sensing protocol type (DHCP or PPPoE). This process is designed to start after you have connected VersaLink. To access VersaLink, your PC must be configured for DHCP. Refer to your Windows help screen for information on configuring your computer for DHCP. At your PC, click **Start**, then **Help** to access the Windows help screen.

To log on to VersaLink, start your Web browser and type the following IP address in the browser's address bar:

http://192.168.1.1

After you type the IP address, press **Enter** on your keyboard. The following **Modem Secure** screen will appear. Type the default user name (which is **admin**) and the default password (which is **password**) in the fields provided. Click **OK**.

NOTE: Hereafter, the VersaLink Wireless Gateway will be referred to as the "Router" or "Modem."





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8.2 Changing the Password

After you have clicked **OK** in the **Modem Secure** screen, the following **User Settings** screen will appear. This screen allows you to change the default administrator name and password to the values of your choice. The password change is required to continue your network logon. If the Router is password protected and you are not an authorized user, you will not be able to change the values in this screen. The Router cannot be configured unless an authorized user is logged in. If necessary, contact your network administrator for further instructions.

IMPORTANT:

- 1. The User Settings screen allows you to use admin as your administrator name (your administrator name can match your user name). However, this screen does not allow you to use "password" as your administrator password. If you enter password in the fields, this screen will not continue the logon. You must enter a different password in order for this screen to take effect. The values in these fields are case sensitive. Once you decide on an administrator name and password, please record them for future reference.
- 2. This feature changes the Administrator's password, not the PPP password.

Type your administrator **User Name** and **Password** in the fields provided. The password fields will be masked for security purposes.

| Versalink Wireless Gateway File Edk View Favorkes T Verti Mein | ools Help | ¢plorer Event Wy Network | Firewall Settings | Advanced | System Monitoring | | |
|---|-----------|---|----------------------|----------|----------------------|----------|--|
| Main User Settings | | General Full Name: User Name (case sensiti New Password: Retype New Password: | re): | ngs | | | Type admin or the name of your choice. Type a new password. (Do not type the word password here.) |
| < | | | 10 | | | Internet | |



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| 🗿 VersaLink V | Wireless Gateway - Mi | crosoft Internet Explor | er | | | | | |
|-----------------|-----------------------|-------------------------|-----------------------------|----------------------|-----------|----------------------|----------|-----|
| File Edit V | /iew Favorites Tools | Help | | | | | | _ 🥂 |
| | verizo | 1 | | | | | | ~ |
| | Main | Wireless Settings | Wy Network | Firewall Settings | Advanced | System Monitoring | | |
| Main User Se | ettings | | | User Setting | <u>js</u> | | | |
| | | | General | | | | | |
| | | | Full Name: | Admini | strator | | | |
| | | | User Name (case sensitive): | admin | | | | |
| | | | New Password: | ••••• | • | | | |
| | | | Retype New Password: | ••••• | | | | |
| | | | J | Apply Ca | ncel | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| < | | | | u | | | | > |
| 🕘 Done | | | | | | | Internet | |

After you have entered the desired values, click **Apply**.

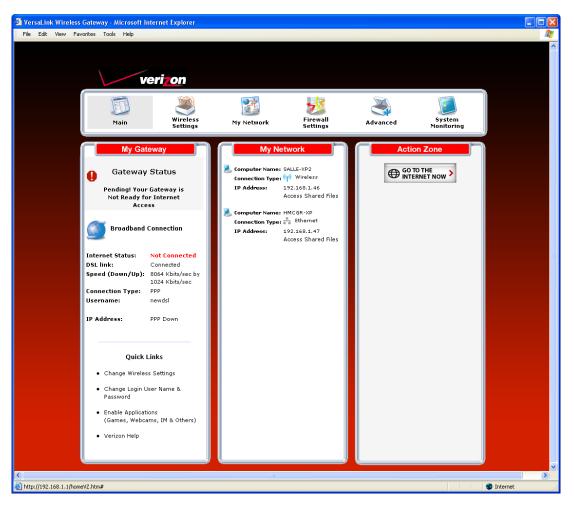
If you clicked **Apply**, the following pop-up screen will appear. Click **OK** to allow the changes to take effect.

| Microso | ft Internet Explorer 🛛 🔀 |
|---------|---|
| 2 | Are you sure you want to change the User Name and Password? |
| | OK Cancel |



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If you clicked **OK** in the pop-up screen, the following screen will appear. This is the main page of your Router's Web pages, also referred to in this document as the home page. You can access this page by clicking **Main** in the navigational menu located across the top of the Router's Web pages. Details on this page will be explained in the following sections.





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9. CONFIGURING YOUR BROADBAND CONNECTION

To browse the Internet using your Router, you must confirm your DSL connection, set up your account profile, and establish a DHCP or PPP session with your Internet service provider (ISP). The procedures for configuring your Router's connection settings are explained in this section.

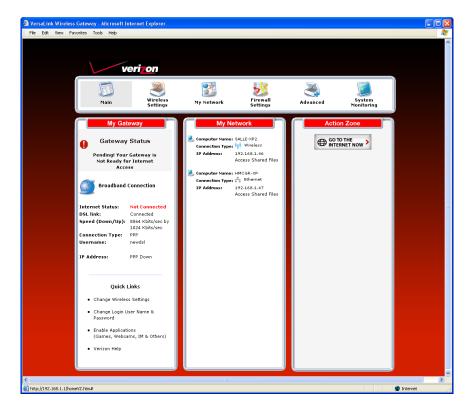
9.1 Confirming Your DSL Connection

After you have logged on to the Router and changed your administrator password, as explained in section 8, the following home page will appear. Use this page to determine the status of your DSL and Internet connections.

IMPORTANT: You must have active DSL service before the Router can synchronize with Verizon's equipment.

To determine if the Router has established a DSL link, do any of the following:

- In the **My Modem** panel of the **Main** page, view the **DSL link** field. If the status reads **Not Connected**, you do not have a DSL link. However, if **DSL Link** field displays **Connected** and the **Speed (Down/Up)** field displays numeric values, a DSL link has been established. The values displayed represent the transmission rates of your DSL signal, downstream and upstream. (You may need to wait a brief moment for the Router to report these values.)
- At the front of the Router, check to see if the Router's DSL LED is solid green. Solid green indicates that the Router's DSL connection has been established. (The DSL LED may flash while the connection is being established.) Please wait a brief moment for the Router to connect.





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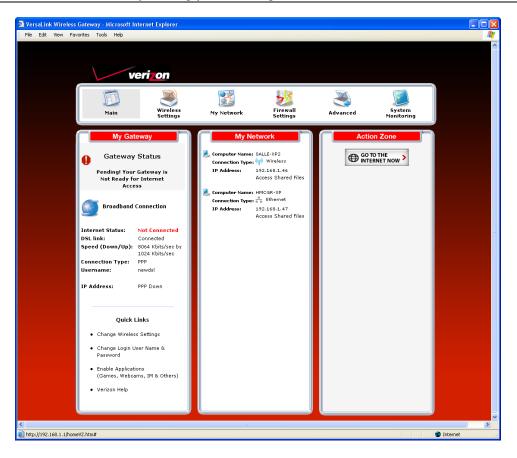
After confirming your DSL link, DHCP customers can now browse the Internet. However, PPP customers will need to complete further instructions, as explained in the following note.

NOTE: If the Router has established a DSL link and if you are connecting to the Internet via DHCP, you can now browse the Internet by following the instructions provided by Verizon. However, if you are connecting to the Internet via PPP, please proceed to section 9.2 to configure your Router's broadband connection settings. After you have configured the broadband settings and connected to the Internet, view the **My Modem** panel; the **Internet Status** field will display **Connected**.

9.2 Setting Up an Account Profile

Your account profile is used to identify you to Verizon. To begin your account setup, go to the **My Modem** panel in the home page. Next, click the **Not Connected** link.

NOTE: Before you set up your account profile, obtain your **Account ID** and **Account Password** from Verizon. You will use this information when you set up your account parameters.





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If you clicked **Not Connected** in the preceding screen, the following pop-up screen will prompt you for a user name and password. Enter the **User name** and **Password** you used in the **User Settings** screen, in section 8.2, and then click **OK** to continue.

| Connect to 192.168.1.1 | ? 🔀 | |
|------------------------------------|-------------|---|
| R | Ger | Enter the name you used in |
| Modem Secure User name: 🕵 admin | • | the User Settings screen. |
| Password: | my password | Enter the password you used in the User Settings screen. |
| | OK Cancel | |

If you clicked **OK**, the following **DSL Connection** screen will appear. This screen displays information about your Internet connection and allows you to access the Router's connection settings. If you have not set up your account profile, the **PPP Status** field will display **Down**, indicating that you have not established an Internet connection with Verizon.

Throughout this User Guide, the following icons are used to indicate clicking actions that you can take with your mouse to configure the Router's settings.

| Icon | Description |
|--------------|---|
| . | Details/Edit |
| | Clicking this icon allows you to either view the details of or edit your Router's settings. |
| | Add/New |
| | Clicking this icon allows you to add new entries your Router. |
| | Delete |
| R | Clicking this icon allows you to delete an entry from your Router. |
| | Expand |
| + | Clicking this icon allows you to expand the page to view additional entries. |
| | Collapse |
| _ | Clicking this icon allows you to collapse the page. |
| 6 | Connect |
| 🙂 connect | Clicking this icon allows you to connect to Verizon |
| Martin and | Disconnect |
| 0 disconnect | Clicking this icon allows you to disconnect from Verizon. |



User Guide

| VersaLink Wireless Gateway - M File Edit View Favorites Tools | | rnet Explorer | | | | | |
|--|----------------------|------------------------|---|------------|-----------|----------------------|--|
| verizo | n | | | | | | |
| Main | Wireless Settings | My Network | Firew. Settin | all gs | Advanced | System Monitoring | |
| Main Network Status | | PPP Connection Profile | DSL | Connection | | | |
| Network Connections Broadband Connection | | Connection Name | Default (profile used when auto connecting) | PPP Status | Action | Edit | |
| | | My Connection | 2 | Down | 🙂 connect | | |
| | | Add | | | | | |
| | | | | | | | |
| | | | | | | | |

To set up your account profile. Click the **Edit** icon.

- Connection Name: The name of the connection profile your are using for your Internet connection.
- **Default:** The name of the default profile that is used when the Router auto connects to the ISP.
- **PPP Status:** The status of the PPP connection. Down = no PPP connection, Up = PPP connection is established.
- Action: Click the icon in the Action column to connect to Verizon or to disconnect from Verizon (end your PPP session). If you end your PPP session, this does not end your DSL connection.
- Add: Click the Add link to add additional profiles to your Router.
- Edit: Click the Edit icon for My Connection to set up your connection profile. My Connection is the name of the default connection profile that you will use to connect to Verizon. Then, if you want, you can click Add to add additional connection profiles, and assign one as your default profile.

If you clicked **Edit** in the preceding screen, the following **Edit Connection Profile** screen will appear. Type your account parameters in the fields provided. The following account parameters are required for your Internet connection:

- Connection Name: The Connection Name is a word or phrase that you use to identify your account.
- Account ID: The Account ID is provided by Verizon
- Account Password: The Account Password is provided by Verizon.



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| VersaLink Wireless Gateway - | Microsoft Inte | ernet Explorer | | |
|--------------------------------|---------------------------------------|----------------------------------|---|----------|
| File Edit View Favorites Tools | ; Help | | | AL |
| verizo | m | | | |
| Main | Wireless Settings | My Network | Firewall Settings Advanced System Monitoring | |
| Main Broadband Connection | | | Edit Connection Profile | |
| | * | Connection Name: | User provided name for connection profile. | |
| | | Account ID: | Provided by your ISP. | |
| | · · · · · · · · · · · · · · · · · · · | | Provided by your ISP. | |
| | | NAT Profile: | Default 🗸 | |
| | | Connection Type: | Always On The router always tries to establish a connection with your ISP. | |
| | | Time Out Enable: | (Not applicable when Connection Type is Always On) | |
| | | Minutes for Connection Time Out: | 30 | |
| | | Save Password: | Make PPP connection without prompting for password (Prompt for password available only in Manual connection mode) | |
| | | | Apply Cancel | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| < | | | III. | > |
| Done | | | | Internet |

Next, select the connection type (Manual, On Demand, Always On) that you want to use for your default connection profile.

- Manual: Select this option if you want to manually establish your PPP session.
- **On Demand:** Select this option if you want the Router to automatically reestablish your PPP session on demand anytime your PC requests Internet activity (for example, browsing the Internet, email, etc.). Please note that when you have Internet traffic, this setting may cause a delay.
- Always On: Select this option if you want the Router to automatically establish a PPP session when you log on or if the PPP session goes down. The Router's factory default setting is Always On.

If you enable the Router's timeout feature, the Router will end the PPP session upon reaching the number of minutes you specify for connection timeout. To configure connection timeout, do the following:

1. In the Connection Type field, select either Manual or On Demand as the connection setting.

NOTE: The **Time Out Enable** feature does not apply to **Always On**, only to **On Demand** and **Manual**, and the timeout option will be dimmed if you select **Always On**. The Router's default connection type is **Always On**.

- 2. Next, click the Time Out Enable check box (a check mark will appear in the box).
- 3. Type the number of minutes in the **Minutes for Connection Time Out** box.



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To save your account password, in the **Save Password** field, click the top option. Clicking this option allows the Router to make a PPP connection without first prompting you for a password. (By default this option is already selected; the Router will automatically save the account password.) If you want the Router to prompt you for the account password, select **Manual** as the connection type, and then click the bottom option in the **Save Password** field. (The Router will prompt you for a password only if you have selected **Manual** as the connection type.)

After you have entered the appropriate settings in the **Edit Connection Profile** screen, click **Apply** to allow the settings to take effect. The following **DSL Connection** screen will appear.

| VersaLink Wireless Gateway - File Edit View Favorites Tools | | rnet Explorer | | | | | |
|--|----------------------|------------------------|---|------------|-----------|----------------------|------------|
| | | | | | | | |
| Main | Wireless Settings | My Network | Firew Settin | all gs | Advanced | System Monitoring | |
| Main Network Status | | PPP Connection Profile | | Connection | | | |
| Network Connections Broadband Connection | | Connection Name | Default (profile used when auto connecting) | PPP Status | Action | Edit | |
| | | My Connection | Ø | Down | 🙂 connect | | |
| | | Add | | | | COLC. | |
| | | | | | | | _ |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| < [| | | iii) | | | | |
| ど Done | | | | | | | 🌍 Internet |



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9.3 Connecting to the Internet

After you have set up your account profile using the steps explained in section 9.2, you are ready to establish a PPP session (Internet connection) with Verizon. View the **DSL Connection** screen. If the **PPP Status** field displays **Down**, you do not have an Internet connection established. To establish an Internet connection, click **connect**. The **PPP Status** field will briefly display **connecting**; this means that the Router is establishing a PPP session. After Router's establishes a PPP session, the **PPP Status** field will display **Up.** Congratulations! You can now browse the Internet.

NOTE: Whenever the PPP Status displays **Down**, you do not have a PPP session established. If your Router's connection setting is set to **Always On** or **On Demand**, after a brief delay the PPP session will be established automatically, and PPP Status will display **Up**. However, if the connection setting is set to **Manual**, you must click the **connect** button to establish a PPP session. Once the PPP session has been established (PPP Status displays **Up**), you can browse the Internet.

| VersaLink Wireless Gateway - N | | ernet Explorer | | | | | |
|---|----------------------|---|--|--------------------------|--------------|----------------------|------------|
| File Edit View Favorites Tools | | | | | | | |
| Main | Wireless Settings | My Network | Firew Settin | all gs | Advanced | System Monitoring | |
| Main Network Status Network Connections | | PPP Connection Profile Connection Name | Default | Connection PPP Status | Action | Edit | |
| Broadband Connection | | My Connection | (profile used when auto connecting) | Up | 0 disconnect | - | |
| | | Add | | | | E | |
| | | | | | | | - |
| | | | | | | | |
| Conce Conception | | | ш | | | | 🔮 Internet |



9.4 Disconnecting from the Internet

If you have finished browsing the Internet and want to disconnect from your Internet service provider, from the **My Modem** panel in the home page, click the **connected** link (next to Internet Status). The following **DSL Connection** screen will appear. Click **disconnect** to end your PPP session.

| <mark>VersaLink Wireless Gateway -</mark> File Edit View Favorites Tools | | ernet Explorer | | | | | |
|---|----------------------|------------------------|---|------------|--------------|----------------------|------------|
| verizo | on | | | | | | |
| Main | Wireless Settings | My Network | Firew Settin | all gs | Advanced | System Monitoring | |
| Main Network Status | | PPP Connection Profile | DSL | Connection | | | |
| Network Connections Broadband Connection | | Connection Name | Default (profile used when auto connecting) | PPP Status | Action | Edit | |
| L | | My Connection | 2 | Up | 0 disconnect | - | |
| | | Add | | | | 3 | |
| | | | | | | | , <u> </u> |
| | | | | | | | |

If you clicked disconnect, the following pop-up screen will appear. Click OK to continue.

IMPORTANT: If you disconnect the PPP session, this will disconnect the Router from the Internet, and Internet access for any device connected to your LAN will be unavailable until the PPP session is reestablished.



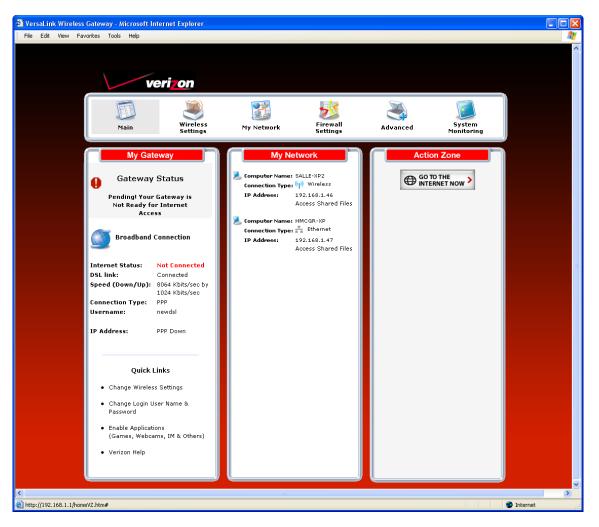
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If you clicked **OK** to disconnect your PPP session, after a brief moment, the PPP Status in the **DSL Connection** screen should display **Down**.

Also, at the home page in the **My Modem** panel, the **Internet Status** field will display **Not Connected**. Although your Internet connection is down, your DSL session will not be affected. When you are ready to end your DSL session, simply turn off the Router via the power switch on the Router's rear panel.



NOTE: When you are ready to exit the Router's interface, click the **X** (close) in the upper-right corner of the window. Closing the window will not affect your PPP Status (your PPP session will not be disconnected) or your DSL connection. You must click the **disconnect** button to disconnect your PPP session. When you are ready to restore the Router's interface, start your Internet browser, and then type **http://192.168.1.1** in the browser's address bar. Next, press **Enter** on your keyboard.



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10. SETTING UP MACINTOSH OS X

This section provides instructions on how to use Macintosh Operating System 10 with the Router. Follow the instructions in this section to create a new network configuration for Macintosh OS X.

NOTE: Macintosh computers must use the Router's Ethernet installation. Refer to section 6 "Hardware Installations," for details.

10.1 Opening the System Preference Screen

After you have connected the Router to the Ethernet port of your Macintosh, the screen below will appear. Click the "**Apple**" icon in the upper-left corner of the screen and select **System Preferences**.

| Ű | Grab | File | Edit | Captu | | | | |
|-----------------------|----------|---------|------|-------------|--|--|--|--|
| A | bout Th | is Mac | | | | | | |
| Get Mac OS X Software | | | | | | | | |
| Sy | stem Pi | referer | nces | | | | | |
| D | ock | | | • | | | | |
| Location 🕨 | | | | | | | | |
| Recent Items | | | | | | | | |
| Fo | orce Qui | it | | | | | | |
| SI | eep | | | | | | | |
| Re | estart | | | | | | | |
| Sł | nut Dow | 'n | | | | | | |
| Lo | og Out | | | ☆ %Q | | | | |

10.2 Choosing the Network Preferences

After selecting **System Preferences** from the previous screen, the **following** screen will appear. Click the **Network** icon.





10.3 Creating a New Location

After clicking the Network icon, the Network screen will appear. Select New Location from the Location field.

| 000 | | Network | | | | | | |
|------------|------------|------------|--------|---------|---------|--|--|--|
| 3 Č | | ۵ | l | ? | | | | |
| Show All | Displays | Sound | Start | up Disk | Network | | | |
| | | Location 🖌 | Autor | natic | | | | |
| Configure: | Internal M | lodem | New L | ocation | | | | |
| j | | | Edit L | ocation | | | | |
| | | TCP/IP | PPP | Proxies | Modem | | | |

10.4 Naming the New Location

After selecting **New Location** in the **Network** screen, the following screen will appear. In the field labeled **Name your new location:**, change the text from "**Untitled**" to "**Westell**." Click **OK**.

| All users of this comp hoose this location i without entering a pa | n the Apple m | |
|--|---------------|--|

10.5 Selecting the Ethernet Configuration

After clicking **OK** in the preceding screen, the **Network** screen will appear. The **Network** screen shows the settings for the newly created location. From the **Configure** field in the **Network** screen, select **Built-in Ethernet**. Click **Save** to save the settings.

NOTE: Default settings for the Built-in Ethernet configuration are sufficient to operate the Router.



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Show All

Displays

Configure ✓ Internal Modem Built-in Ethernet

Advanced

0

Sound

Location:

Configure: Using PPP

Network

10.6 Checking the IP Connection

To verify that the computer is communicating with the Router, follow the instructions below.

- 1. Go to the "Apple" icon in the upper-left corner of the screen and select System Preferences.
- 2. In the System Preferences screen, click the Network icon. The Network screen will appear.
- 3. In the Configure field in the Network screen, select Built-in Ethernet.
- 4. View the IP address field. An IP address that begins with 192.168.1 should appear.

NOTE: The Router's DHCP server provides this IP address. If this IP address is not displayed, check the Router's wiring connection to the PC. If necessary, refer to section 6, "Hardware Installations," for instructions.

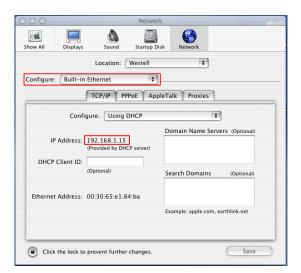
Network

Startup Disk

oxies Modem

\$

Westell





10.7 Accessing Your Router

In your Internet Explorer Web browser address bar, type http://192.168.1.1/. Next, press Enter on your keyboard.

| 000 | 0 | | | | 0 |) WireSpee | ed Dual Cor | nnect | | | |
|-----------|-------------|---------------|-----------------|-----------|-------------|------------|-------------|----------------------|----------------------|-------|------|
| d Back | Forward | X Stop | - | n lome | AutoF | ill Print | 🞽 Mail | | | | 0 |
| Address | 🔘 http:/ | /192 168 1.1/ | | | | | | | | |) go |
| 🔘 Live | e Home Page | O Apple (| 💩 Apple Support | @ # | Apple Store | iTools | 🔘 Mac OS X | 🔘 Microsoft MacTopia | Office for Macintosh | O MSN | |
| Fav | | | | | | | | | | | |

The **Modem Secure** screen will appear. Please proceed to the **Modem Secure** screen in section 8.1 of this User Guide for logon instructions.

| Connect to 192. | 168.1.1 🛛 🛛 🔀 |
|-----------------|----------------------|
| | GA |
| Modem Secure | |
| User name: | 🖸 admin 💌 |
| Password: | |
| | Remember my password |
| | |
| | OK Cancel |



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11. BASIC CONFIGURATION

IMPORTANT: The following sections assume that you have active DSL and Internet service.

VersaLink allows you to make changes to the configurable features of your Router such as account profiles, routing configurations, and firewall settings. The following sections explain each feature and show you how to make changes to the Router's settings. The navigational menu displayed at the top of each page allows you to navigate to the various configuration screens of your Router. Whenever you change the configurable settings of your Router, you must click **Apply** (or **Save** where applicable) to allow the changes to take effect in the Router.

NOTE: If you need help, go to the **Quick Links** section in the home page and then click **Verizon Help**. Clicking this link takes you to Verizon's OnLine Help site where you can find additional information about your DSL Router.

To configure the basic settings in your Router, follow the instructions provided in sections 12 through 15.

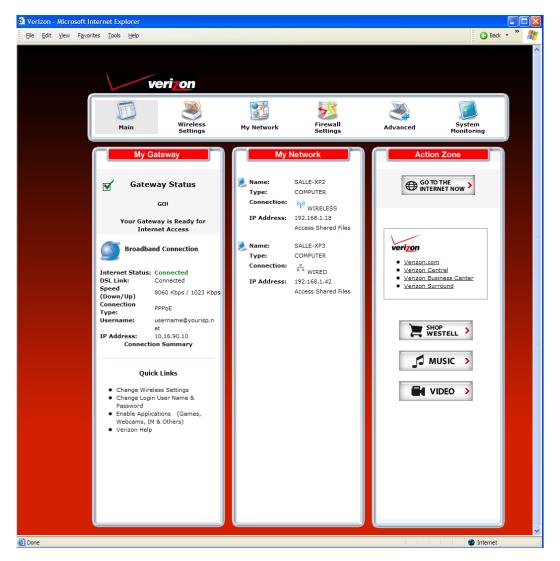
NOTE: The menu options displayed will vary according to the configuration you have chosen to use: **LAN Ethernet port** or **WAN Uplink port.** If you are using WAN Uplink port, some menu options will not be available. However, all menu options will be available when the Router is configured for LAN Ethernet port. Instructions on enabling and disabling LAN Ethernet port and WAN Uplink port are explained in the section 14.2.3, "Configuring VersaPort." This document was created with the Router configured for LAN Ethernet port mode.



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12. MAIN (HOME PAGE)

After you have logged on to your Router and established a PPP session with your Internet service provider (ISP), click **Main** in the top navigational menu. The following home page will appear. The home page allows you to view connection information reported by your Router and to quickly access Internet services provided by Verizon. The following sections discuss each panel in the Main page. The Main page will be referred to as the home page throughout this User Guide.





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12.1 My Gateway Panel

In the home page, the **My Modem** panel allows you to view details about your Router's connections and to access the connection settings in your Router. A green check mark displayed in the **Modem Status** check box signals you to Go! You can now browse the Internet. The **Quick Links** section allows you to quickly access Help information related to your Router and information on your Router's configurable settings. The following details are displayed in the **My Modem** panel.

| | My Modem |
|---|--|
| Internet Status | This field displays status of your Internet connection. Click this link to set up new account profiles, edit existing account profiles, and connect to or disconnect from Verizon. Additional details about your Router's broadband connection can be found |
| | in section 9.2, "Setting Up an Account Profile," of this User Guide. |
| DSL Link | This field allows you to view the status of your DSL connection. |
| Speed (Down/Up) | This field displays the transmission rates (in Kbits/sec) of your DSL signal. Down is the rate at which data is transmitted downstream (from the Internet to your computer). Up is the rate at which data is transmitted upstream (from your computer to the Internet). |
| Connection Type | This field displays the protocol used for your Internet connection, provided by Verizon. |
| Username | This field displays the username that you used to connect to Verizon. The username and password are provided by Verizon. |
| Internet IP Address | This is a WAN IP address that has been assigned to your Router by Verizon. You will receive the WAN IP address only after your Router has established an Internet connection with Verizon. (The LAN IP address of your Router is "192.168.1.1" which is assigned to your Router by factory default.) |
| Change Wireless Settings | Click this link to change the Router's wireless settings. |
| Change Login User Name & Password | Click this link to change the administrator user name and password. |
| Enable Applications (games, webcams, IM, etc.) | Click this link to set up a service profile and attach VPN, Gaming, or other NAT services to the profile. |
| Verizon Help | Click this link to access Verizon's Online Help where you can obtain detailed information about your Router. |

12.2 My Network Panel

In the home page, the My Network panel allows you to view information about devices that are connected to your network. If your network provides access to shared files, you can access the files by clicking the **Access Shared Files** link. The following details are displayed in the My Network panel.

| My Network | | | |
|---|---|--|--|
| Computer Name | The ASCII (text) name of the device connected network | | |
| Connection Type | The physical connection used to interface with your Router. | | |
| IP Address | The IP address assigned to your computer by your Router's DHCP server. | | |
| Access Shared Files | Click this link to access shared files from a device on your local network. (The device | | |
| must have file sharing enabled.) Note: If the device has a firewall turned on, you will | | | |
| | not be able to access shared file from the device. | | |



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12.3 Action Zone Panel

In the home page, the Action Zone panel allows quick access to Internet services provided by Verizon. The following details are displayed in the Action Zone panel.

NOTE: The links displayed in the **Action Zone** panel are specific to the services offered by Verizon and will be available only after you have established a PPP session (Internet connection) with Verizon.

| | Action Zone | | | | |
|--|--|--|--|--|--|
| Go to the Internet Now Click this button to go to the default page of your Web browser. (Click will take you to the browser's default page. However, if your PPP sessed do not have Internet access. To browse the Internet, you must first estat session with Verizon.) When you are ready to return to the Router's W type http://192.168.1.1/ in your Internet browser's address bar, and proyour keyboard. | | | | | |
| Verizon | Click the links in this section to access networking services provides by Verizon. | | | | |
| Shop Westell | Click this button to go to Westell's home page. | | | | |
| Music | Click this button to go to the Verizon Surround - Music page. | | | | |
| Video | Click this button to go to the Verizon Surround - Movies page. | | | | |



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13. WIRELESS SETTINGS

This section explains the wireless features of your Router and guides you through the configurable settings.

13.1 Wireless Status

If you select **Wireless Settings** from the top navigational menu and then select **Wireless Status** in the submenu options at the left of the screen, the following screen will appear. At this screen, you can view your Router's wireless connection settings.

| 🗿 http:/ | //10.16.90.10:2420 - Veri | zon - Microsoft Int | ernet Explorer | | | | |
|----------------|--|----------------------|---------------------|------------------------|----------------------------|----------------------|-------|
| <u>F</u> ile E | <u>E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools | Help | | | | 😋 Back | • " 🥂 |
| | veriz | on | | | | | |
| | Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | J |
| w | ain Iireless Status | | | Wireless Status | ; | | |
| Si | mple Config | | Radio Enabled: | Yes | | | |
| Ba | asic Security Settings | | SSID: | 750015 | | | |
| Ac | dvanced Security Settings | | Channel: | 6 | | | |
| | | | Security Enabled: | YES | | | |
| | | | WEP 64-bit: | 12345678 | 395 | | |
| | | | Frameburst Mode: | Disabled | | | |
| | | | SSID Broadcast: | Enabled | | | |
| | | | MAC Authentication: | Disabled | | | |
| | | | Wireless Mode: | Mixed: ac connectio | ccepts 802.11b and 802.11g | | |
| | | | Packets Sent: | 130845 | | | |
| | | | Packets Received: | 16828 | | | |
| | | | | | | | |
| | | | | | | | , |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| 57 | | | | | | | × |
| ど Done | | | | | | 🥝 Internet | |



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13.2 Simple Config

If you select **Wireless Settings** from the top navigational menu and then select **Simple Config** in the submenu options at the left of the screen, the following screen will appear. Simple Config allows you to configure wireless access to your Router. Devices that support Wi-Fi protected setup can quickly connect to your Router using the Router's simple config button, without first requesting long keywords or passphrases. By default, this feature is disabled in the Router.

Simple Config offers two methods for quick wireless connection to your Router.

- Push Button method: Clicking this option allows you to press a button on the Router and on the client (usually a software button) to automatically setup secure wireless access to the Router.
- PIN entry method: Clicking this option allows you to enter a PIN code, generated by the client (PC, Wireless Printer, Dual Mode Phone, etc.), into the Router to automatically setup secure wireless access to the Router.

NOTE:

- 1. To use either method, your Router must be configured for WPA-PSK, WEP Open, or WPA2-PSK settings
- 2. Security settings "WEP Shared Key" and "WPA Enterprise" are not supported by Simple Config.
- 3. Your wireless client must support wi-fi protected setup. If needed, refer to your device manufacturer's user guide for details about your device.

13.2.1 Push Button Method

To configure wireless connection to the Router using the push button method, do the following:

- 1. At the Router's **Simple Config** screen, click the black **Enable Simple Config** button, and then select **Use Push Button Method**.
- 2. Either click the simple config button 🔮 in the screen, or press the simple config button on your Router.
- 3. Within 2 minutes of pressing the simple config button, return to your client and click the client's software button to run the wi-fi protected setup application. The client will search for the device and make the wireless connection to the Router.

13.2.2 Pin Entry Method

To configure wireless connection to the Router using the pin entry method, do the following:

- 1. Run your client's wi-fi protected setup application to generate a pin value.
- 2. At the Router's Simple Config screen, click the black Enable Simple Config button, and then select Use Pin Entry Method.
- 3. Enter the pin value in the field provided.
- 4. Either click the simple config button 🕑 in the screen, or press the simple config button on your Router. Within 2 minutes of pressing the simple config button, return to your client and click the client's software button to run the wi-fi protected setup application. The client will search for the device and make the wireless connection to the Router.



The following example illustrates Simple Config using the Push Button Method:

1. At the Simple Config screen, click the black Enable Simple Conf button, and then select Use Push Button method.

| 🗿 http://10.16.90.10:2420 - Verizon - Microsoft Internet Explorer | | | | | | | |
|--|---|--------------------|---------------|-------------------------------|------------|--|--|
| Ejle Edit View Favorites Iools Help 🛛 🖓 Back 🕶 💦 | | | | | | | |
| verizon | ireless | My Network | Firewall | Advanced | System | | |
| Se | ettings | , | Settings | | Monitoring | | |
| Main Wireless Status Simple Config Basic Security Settings Advanced Security Settings | Simple Config Wi-Fi Protected Setup (WPS) Begin Simple Config 🔮 WPS is disabled | | | | | | |
| | | | Use PIN entry | / method | | | |
| | | | Device PIN: | Back | | | |
| | | **Security setting | | PA Enterprise' are not suppor | ted | | |

2. Next, either click the simple config button 🕑 in the screen, or press the simple config button on your Router.

IMPORTANT: You must return to the client and run the wi-fi protected setup Wizard within 2 minutes of either pressing the Simple Config button on your Router or clicking the Simple Config button **(**) in the screen.





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3. Run the client's wi-fi protected setup Wizard—for the "push button" method.

NOTE: Your device's wi-fi protected setup Wizard may differ from the Wizard screens shown in this example.



4. Complete the instructions in the setup Wizard, and then confirm your wireless network connection to the Router. Repeat these steps for each wireless client that you want to connect to your Router. (Confirm that the client supports wi-fi protected setup.)

| SecureEasySetup Wizard | SecureEasySetup Wizard |
|---|---|
| Configuration Status Searching for Access Point | Secure Congratulations! You have successfully set up a secure Wi.Fi network connection. You have successfully set up a secure Wi.Fi network connection. Wi.Fi Configuration Information: Wi.Fi Configuration Information: Network name: Test Security Type: WPA.Personal Security Key: letmein2here |
| | Click Next to save these settings. |
| <back next=""> Cancel</back> | Next > Cancel |



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13.3 Basic Security Settings

If you select **Wireless Settings** from the top navigational menu and then select **Basic Security Settings** in the submenu options at the left of the screen, the following screen will appear. This screen allows you to configure basic security settings for your Router such as SSID and WEP security values. Enter the appropriate settings in the fields provided, and then click **Apply** to allow the settings to take effect. The following table explains the details of this feature.

IMPORTANT:

- 1. If you are connecting to VersaLink via a wireless network adapter, the computer's wireless network adapter must be configured with VersaLink's Service Set ID (SSID) in order to communicate with VersaLink; that is, the SSID used in the wireless network adapter must be identical to VersaLink's SSID. The default SSID for VersaLink is the serial number of the unit (located below the bar code on the bottom of the unit and also on the shipping carton). Locate and run the utility software provided with the wireless network adapter, and then enter the identical SSID and security settings displayed in the VersaLink. For privacy, you can change the SSID and security settings to your desired values.
- 2. In order for every computer on your network to connect to the VersaLink wirelessly, confirm that each computer is using the same security settings you have configured in VersaLink's Basic Security Settings screen. After you have configured all the settings in this screen, please record the settings for future reference.

| 🗿 http://10.16.90.10:2420 - Verizor | | ल | | | Low . | · " 🧖 |
|-------------------------------------|--|-------------------------------------|---------------------------|---|-------------------------|-------|
| Ele Edit Vew Pavorites Iools He | op | | | | 0 100 | |
| | | | | | | |
| verizor | 1 | | | | | |
| m | (19) | 2 | >5 | | | |
| Main | | Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | |
| Mein Wireless Status | | 0 | asic Security Sett | tings | | |
| Simple Config | If y | ou want to setup a wirel | ess network, we recom | imend that you do the follo | awing: | |
| Basic Security Settings | 1. Turn Wireless O | N | | | | |
| Advanced Security Settings | Wireless: © 0n | | | | | |
| | | | | | | |
| | | setting to any name | | | | |
| | SSID: 00001 | | | | | |
| | | | | | | |
| | 3. Channel | | | | | |
| | To change the channe apply to save your so | el of the frequency band ttings. | at which the Router co | ammunicates, please enter | it below. Then click | |
| | | tates, use channels 1-1: | | | | |
| | Channel: 6 | ~ | | | | |
| | 4. Turn WEP On | | | | | |
| | | g WEP because it encry | pts your wireless traffic |) | | |
| | ⊙wep ©off | | | | | |
| | 5. Select a WEP Ke | | | | | |
| | Note:To create a 64- a-t or any number fro | bit WEP Key, you need t im 0-9. | to enter a combination | of 10 digits. You can choo | se any letter from A·F, | |
| | Sample WEP Key: OF | 5310Ff28 | | | | |
| | Select a WEP Key | Entry Type: | | | | |
| | Hex V Select a WEP Key | | | | | |
| | 64/40 bit | | | | | |
| | Key Code: | | | | | |
| | | | 10 | Digits left. | | |
| | 6. Turn Frameburs | t Mode ON | | | | |
| | Frameburst Mode: | ⊙on ⊛off | | | | |
| | 7. Write down wire | 1 | | | | |
| | | - | s Router wirelessly, vo | a need to make sure that | the wireless setun for | |
| | each computer uses t this screen. | he SAME acttings listed | bolow. Please make su | u need to make sure that ire that you write down all | of the values set on | |
| | Current Wireless | | | | | |
| | Wireless: SSID: WEP: | ON 00001 ON | | | | |
| | 64-BIT WEP KEY: Channel: | 6 | | | | |
| | Frameburst Mode: SSID Broadcast: MAC Authentication: | OFF Enabled | | | | |
| | Wireless Moder Packets Sent: | Mixed: accept 132228 | s 902.11b and 902.11g | connections | | |
| | Packets Received: | 17004 | | | | |
| | | | Apply | | | |
| | | | | | | |
| | <u> </u> | | | | | |



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| Versulink Wireless Out | |
|------------------------|---|
| | Basic Security Settings |
| Wireless Operation | Factory Default = On |
| | Choose the desired setting. |
| | When On is selected, wireless stations (wireless computers or other wireless devices) can |
| | connect to the Router, as long as the appropriate settings are configured in the wireless |
| | station's network adapter. |
| | When Off is selected, computers will not be able to connect to the Router wirelessly. |
| Network Name (SSID) | Factory Default = 07B407578407 |
| | This string, (30 characters or less) is the name of your wireless network. To connect to the |
| | Router, the SSID on a computer's wireless card must match the SSID on the Router. You can |
| | change the SSID to any name or code you want. |
| Channel | Factory Default = 6 |
| | This is the channel of the frequency band at which the Router communicates. |
| | The Router transmits and receives data on this channel. The number of channels to choose |
| | from is pre-programmed into the Router. A computer's wireless card does not have to be set to |
| | the same channel as the Router; the wireless cards scan all channels, and look for a Router to |
| | connect to. Note: In the United States, use channels 1 through 11. |
| WEP configured | Factory Default = On |
| () El configured | Click the desired option. |
| | If WEP is selected, the Router will allow you to enter WEP key values for wireless security, |
| | and any wireless computer can connect to the Router (as long as its SSID and security settings |
| | matches the Router's). |
| | If Off is selected, you will not be allowed to enter WEP key values, and wireless traffic will |
| | not be encrypted. This maximizes the risk of unauthorized access to your computer. |
| WEP Key Entry Type | Factory Default = Hex |
| WEI Rey Endy Type | Choose the desired WEP Key Entry Type from the drop-down menu. |
| | A WEP key is treated as either a string of text (ASCII) characters or a set of hexadecimal |
| | (Hex) characters. |
| | Possible Responses: |
| | Hex (hexadecimal) – Selecting Hex allows you to enter characters from (A-F) or (0-9) as the |
| | key code. |
| | ASCII (text) – Selecting ASCII allows you to enter characters from (A-Z) or (0-9) as the key |
| | code. |
| WEP Key | Choose the desired WEP Key encryption from the drop-down menu. |
| WEI Rey | The WEP key value is used to encrypt your wireless traffic. |
| | The Router supports 64/40-bit, 128/104-bit, or 256/232-bit WEP encryption. |
| Key Code | Enter the key code values in this field. |
| Key Coue | ASCII: If you are using an ASCII key code, the number of characters entered into this field |
| | |
| | must be either 5 (for 40/64 bit encryption), 13 (for 128 bit encryption) or 29 (for 256 bit |
| | encryption). |
| | HEX: If you are using a Hex key code, the number of characters that you can enter into this |
| | field must be either 10 (for 40/64 bit encryption), 26 (for 128 bit encryption) or 58 (for 256 |
| | bit encryption). The only allowable hexadecimal characters are: A-F and 0-9. |
| | Note: Do not use symbols or blank spaces in the key code field. |
| 4x Support | Factory Default = Off |
| | Select On to turn on the 4X feature. |
| | Select Off to turn off the 4X feature. |
| | When On is selected, this feature provides additional algorithms for increased wireless |
| | throughput. Note: This feature will only operate with wireless clients that support this feature. |
| | Verify with the manufacturer of your wireless client that 4X is supported. |
| Current Wireless | Displays the settings and packet information for your Wireless connection. Settings displayed |
| Status | in this window can be configured through the Basic Security Settings screen or through the |
| | Advanced Security Settings screen. |



User Guide

13.4 Advanced Security Settings

If you select **Wireless Settings** from the top navigational menu and then select **Advanced Security Settings** in the submenu options at the left of the screen, the following screen will appear. The following table explains the details of the Advanced Security Settings screen.

IMPORTANT: Only the advanced user should change the settings in this screen. If you need to reset the Router to factory default settings, press the reset button at the rear of the Router. Or follow the instructions in section 16.2, "Restore Defaults," to restore the Router to factory default settings.

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|--|---|---|---|------------------------------|----------------------|
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring |
| Main Wireless Status Simple Config Basic Security Settings Advanced Security Settings | Please sele Level 1: 5 WEP WPA network) Level 2: 5 | ct the item for which you w iecuring your wireless t (Recommended) (Allows you to enable a p itop your Router from b adcast (Allows you to pre | raffic as it transmits thr re-shared key for a home n roadcasting your Wirele | this page. | |
| | Wireless devices w 802.11b/ | th specific MAC addresses. | llows you to limit access to) nit access to your wireless r | your wireless network by all | |

| | Advanced Security Settings | | | | |
|-------------------|---|--|--|--|--|
| Wireless Security | Factory Default = WEP (recommended) | | | | |
| | WEP – Selecting WEP allows you to enable a WEP key for wireless security. The Router's card supports 64-bit, 128-bit, or 256-bit WEP encryption. If WEP is selected, any station can connect to the Router (as long as its SSID matches the Router's SSID). | | | | |
| | WPA – Selecting WPA allows you to enable a pre-shared key for home network or more advanced security for an enterprise network. | | | | |
| SSID Broadcast | Allows you to prevent unauthorized wireless access to your Router by blocking the Router's SSID on the network. When SSID Broadcast is enabled, any computer or wireless device using the SSID of "ANY" can see the Router. To prevent this from happening, disable SSID broadcast so that only the wireless devices that know your SSID can access your Router. | | | | |
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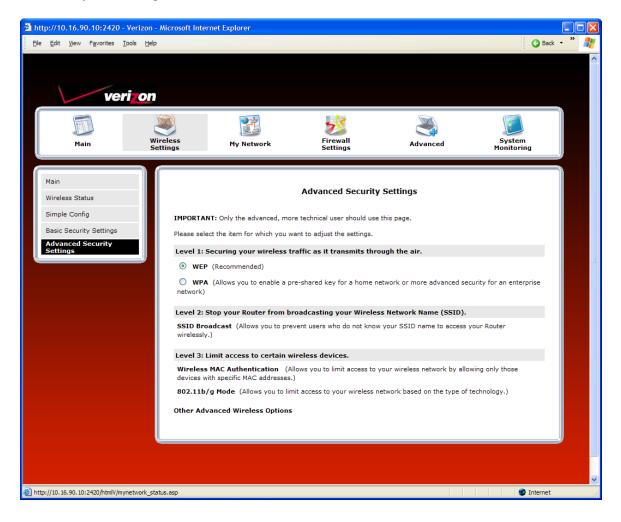


| VersaLink Wireles | ss Gateway (Model 7500) User Guide | |
|-------------------|---|---------|
| Wireless MAC | Allows you to limit access to your wireless network by allowing only devices with specific MA | C |
| Authentication | address to connect to your Router. | |
| 802.11b/g Mode | Allows you to limit access to your Router based on technology type. | |
| | 11b only: Communication with VersaLink is limited to 802.11b | |
| | 11g only: Communication with VersaLink is limited to 802.11g | |
| | Mixed Mode: Computers using any of the 802.11b or 802.11g rates can communicate with Vers | saLink. |

13.4.1 Securing the Wireless Traffic

In the **Advanced Security Settings** screen, select one of the following options to secure your wireless traffic.

- WEP: Clicking this option allows you to enable a WEP key for wireless security. (WEP is the • recommended setting.)
- WPA: Clicking this option allows you to enable a pre-shared key for a home network or for more advanced • security for an enterprise network.





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13.4.1.1 WEP Security

If you select WEP in the Advanced Security Settings screen, the following screen will be displayed.

NOTE: A WEP key is treated as either a string of text (ASCII) characters or a set of hexadecimal (Hex) characters. The number of text characters must be either 5 (for 40/64 bit encryption), 13 (for 128 bit encryption) or 29 (for 256 bit encryption). The number of Hex characters must be either 10 (for 40/64 bit encryption), 26 (for 128 bit encryption) or 58 (for 256 bit encryption). The only allowable hexadecimal characters are: A-F and 0-9.

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| veri Main | OT Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Wireless Status Simple Config Basic Security Settings Advanced Security Settings | Please sele Level 1: 5 WEP WPA network) Level 2: 5 SSID Bro wirelessly Level 3: 1 Wireless devices w 802.11b/ | Stop your Router from b adcast (Allows you to pre .) imit access to certain w MAC Authentication (A th specific MAC addresses. | rant to adjust the settings. raffic as it transmits the re-shared key for a home in roadcasting your Wirele went users who do not kno vireless devices. Illows you to limit access to) nit access to your wireless | e this page. | your Router | |
| ど http://10.16.90.10:2420/htmlV/mynetwo | ork_status.asp | | | | 🥑 Internet | |



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13.4.1.2 WPA Security

If you select **WPA** in the **Advanced Security Settings** screen, the following screen will appear. Enter the appropriate values in the fields, and then click **Apply** to allow the settings to take effect.

NOTE: A WPA key is treated as either a string of text (ASCII) characters or a set of hexadecimal (Hex) characters. The WPA key can be either 8 to 63 text (ASCII) characters or 64 hexadecimal (Hex) characters. The only allowable hexadecimal characters are: 0-9 and A-F.

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|---|----------------|--|----------------------|-----------------------|----------|
| Main Wireless Status Simple Config Basic Security Settings Advanced Security Settings | | Authentication method WPA Type ☑ Group Key Update Interval WPA Shared Key | in length | WPA2 Pre-Authenticati | |
| | | | | | |
| Done | | | | | Internet |



User Guide

| | WPA |
|-----------------------|---|
| Authentication Method | Factory Default = Personal (Pre-Shared Key) |
| | Personal (Pre-Shared Key) – WPA stations share a pre-shared key (string format) with the |
| | Router and do not authenticate with the RADIUS server. |
| | Enterprise 802.1x – WPA stations authenticate with the RADIUS server using EAP-TLS over |
| | 802.1x, a standard for passing extensible authentication protocol (EAP) for authentication |
| | purposes. EAP is used to communicate authentication information between the supplicant and |
| | the authentication server. With 802.1x EAP messages are packaged in Ethernet frames, rather |
| | than using and PPP. |
| WPA Type | Factory Default = WPA Any |
| | WPA Any – Allows stations that support WPA, WPA2, or WPA Any to connect to the Router. |
| | WPA – Allows stations that support WPA v.1 to connect to the Router. |
| | WPA2 – Allows stations that support WPA v.2 to connect to the Router. |
| WPA2 Pre- | Factory Default = Disabled |
| Authentication | To Enable this feature, click the box (a check mark will appear in the box). |
| Group Key Update | The number of seconds between rekeying the wPA group key. A value of zero means that |
| Interval (in seconds) | rekeying is disabled. |
| WPA Shared Key | The WPA key can be either 8 to 63 text (ASCII) characters or 64 hexadecimal (Hex) characters. |
| | The only allowable hexadecimal characters are: A-F and 0-9. |

After you have entered your values and clicked **Apply** in the **WPA** screen, the following pop-up screen will appear. The pop-up screen indicates that wireless access may be interrupted. Click **OK** to continue.

NOTE: Wireless access to the Router may be interrupted and wireless stations may require reconfiguration.

| Microso | ft Internet Explorer |
|---------|--|
| 2 | Wireless access will be interrupted and the wireless stations may require reconfiguration, continue? |
| | OK Cancel |



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13.4.2 SSID Broadcast

If you click the **SSID Broadcast** link in the **Advanced Security Settings** screen, the following screen will be displayed. When SSID Broadcast is enabled, any computer or wireless device using the SSID of "ANY" can see the Router. To prevent this from happening, click the **Disable** option. This will disable SSID Broadcast so that only the wireless devices that are configured with your SSID can access your Router.

Click the desired option, and then click **Apply** to allow the settings to take effect. Click **Back** to return to the **Advanced Security Settings** screen.

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| ve | ri <mark>zon</mark> | | | | | ~ |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Wireless Status Simple Config Basic Security Settings Advanced Security Settings | your Route | | opening, disable the SSID br | wireless device using the SS roadcast so that only those V | | |
| Done 3 | | | | | | |



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13.4.3 Wireless MAC Authentication

If you select the **Wireless MAC authentication** link in the **Advanced Security Settings** screen, the following screen will appear. This screen allows you configure wireless MAC address authentication in the Router. By enabling the **Access List**, you can permit or restrict wireless access to the Router based on specific MAC addresses.

To limit access to the Router using the MAC address of specific wireless devices, follow the steps below:

- 1. Click the Enable Access List check box (a check mark will appear in the box).
- 2. Click Apply to save the setting, and then click OK in the pop-up screen.

To add, edit, or delete the MAC addresses of wireless devices, click the desired button below the **List** window. For example, to Add a MAC address, click **Add**.

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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Wireless Status Simple Config Basic Security Settings Advanced Security Settings | 1. Cli 2. Cli If you wau 1. Cli Th 2. Re 3. Ve | ck the box next to "Enable A ck Apply to save this setting nt to limit access to a certair ck Add and in the screen the en click Save. peat the process for each W rify that all devices were ent | uccess List". • I list of wireless devices: at appears enter the MAC Ad ireless device that you want | ireless devices, please follow Idress of first Wireless device to have access to the netwo | a that is to be allowed. | |
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| Main Wireless Status | | | Wireless MAC Authe | entication | | |
| Simple Config | | | ss being entered is to be Allo | wed or Blocked. | | |
| Basic Security Settings Advanced Security Settings | 3. Ent in i | ter the MAC Address of the N ter the station name or desc identifying the station. en click Apply. | Wireless device. ription that the MAC address | is assigned to. This is an op | tional field that is useful | = |
| | Traffic | | Allowed 💌 | | | |
| | MAC Add | | 00:00:00:00:00:00 | | | |
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If you clicked Add, the following screen will appear. Enter the desired settings, and then click Apply.

| Traffic | Allowed: When the MAC Filter is enabled, only stations in the MAC Filter Table (which are set |
|--------------|---|
| | to "Allowed") will have access to the Router. |
| | Blocked: This allows a computer to remain in the table, but it is not allowed access to the Router. |
| MAC Address | The MAC address assigned to the computer that you want to allow access to. (A hardware |
| | address is assigned to a computer or device by the manufacturer.) |
| Station Name | The computer name or description that you want to associate with the MAC address. This is an |
| | optional field that is useful in identifying the station. |



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| Main Wireless Status Simple Config Basic Security Settings Advanced Security Settings | Select whether the MAC addres Enter the MAC Address of the Enter the station name or desc in identifying the station. Then click Apply. | Wireless device. | ed or Blocked. | ional field that is useful | |
| | Traffic MAC Address Station Name | Allowed as bb oc iddree ff First Station | | | |
| http://10.16.90.10:2420/htmlV/sys_router_stat. | | Back App | | 🖉 Internet | |

The following screen provides an example of values entered into the fields.

After you have entered your values and clicked **Apply** in the preceding screen, the following pop-up screen will appear. The pop-up screen indicates that wireless access may be interrupted. Click **OK** to continue.

| NOTE: Wireless access to the | Router may be interrupted | and wireless stations may | require reconfiguration. |
|-------------------------------------|---------------------------|---------------------------|--------------------------|
| | | | |

| Microso | ft Internet Explorer 🛛 🛛 🔀 |
|---------|---|
| ? | Wireless access may be interrupted, continue? |
| | OK Cancel |



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If you clicked **OK** in the pop-up screen, the following screen will appear. The MAC address has been added to the list of MAC addresses. Confirm that a ckeck mark is displayed **Enable Access List** check box, and then click **Apply**. Repeat this process for each wireless device that you want to add to the list.

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| Main Wireless Status Simple Config | To limit ac | cess to this Router using the | Wireless MAC Aut | hentication | the instructions below. | |
| Basic Security Settings Advanced Security Settings | 2. Clic | ck the box next to "Enable A ck Apply to save this setting. It to limit access to a certain | | | | |
| | The 2. Rep | en click Save. | reless device that you wa | Address of first Wireless device int to have access to the netwo ig the list at the bottom. | | 3 |
| | Enable Ac | _ | | | | |
| | List: | | | | | |
| | Allowed | aa:bb:cc:dd:ee:ff First St | ation | | | |
| | Add | Edit Delete | Back | | | |
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| Done 🖉 | | | | | Internet | |

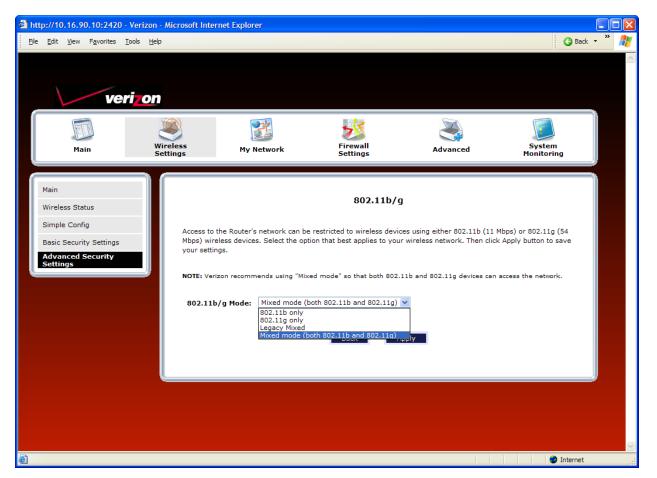


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13.4.4 802.11b/g Mode

If you select the **802.11b/g Mode** link in the **Advanced Security Settings** screen, the following screen will be displayed. This screen allows you to limit access to your Router based on technology type. From the drop-down menu, select the desired setting. Then, click **Apply** to allow the settings to take effect.



| | 11b only: Communication with VersaLink is limited to 802.11b | | | | |
|----------------|---|--|--|--|--|
| 802.11b/g Mode | 11g only: Communication with VersaLink is limited to 802.11g Legacy Mixed: Communication with VersaLink is limited to 802.11b/g | | | | |
| 802.110/g Mode | | | | | |
| | Mixed mode: Computers using 802.11b or 802.11g technology can communicate with VersaLink. | | | | |



13.4.5 Other Advanced Wireless Options

If you select the **Other Advanced Wireless Options** link in the **Advanced Security Settings** screen, the following screen will appear. From the drop-down menus, select the desired settings. Then, click **Apply** to allow the settings to take effect.

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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Wireless Status Simple Config | | | Advanced Wireless | Options | | |
| Basic Security Settings Advanced Security Settings | | Beacon Interval: DTIM Interval: Fragmentation Threshold: | 100 ms (range:1-6 3 bytes (range:1 2346 bytes (range:2 | 1-255) | | |
| | | RTS Threshold: Supported Rates (Mbps) | 2347 bytes (range:0 | | | |
| | | N - not supported Y - supported B - basic supported | Y 🕶 9 🛛 💌 11 | Y 12 Y 18 Y 48 Y 54 | | |
| | | | Back A | pply | | |

| | Wireless Advanced Configuration | | | | |
|-------------------------|---|--|--|--|--|
| Beacon Interval | The time interval between beacon frame transmissions. Beacons contain rate and | | | | |
| | capability information. Beacons received by stations can be used to identify the | | | | |
| | access points in the area. | | | | |
| DTIM Interval | The number of Beacon intervals between DTIM transmissions. Multicast and | | | | |
| | broadcast frames are delivered after every DTIM | | | | |
| Fragmentation Threshold | Any MSDU or MPDU larger than this value will be fragmented into an MPDU of | | | | |
| | the specified size. | | | | |
| RTS Threshold | RTS/CTS handshaking will be performed for any data or management MPDU | | | | |
| | containing a number of bytes greater than the threshold. If this value is larger than | | | | |
| | the MSDU size (typically set by the fragmentation threshold), no handshaking will | | | | |
| | be performed. A value of zero will enable handshaking for all MPDUs. | | | | |
| Supported Rates (Mbps) | These are the allowable communication rates that VersaLink will attempt to use. | | | | |
| 802.11b Rates (Mbps) | The rates are also broadcast within the connection protocol as the rates supported | | | | |
| 802.11g Rates (Mbps) | by VersaLink. | | | | |

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14. MY NETWORK

This section discusses details about your Router's network.

14.1 Network Status

To view your Router's network settings, from the top navigational menu, select **My Network**. Next, click **Network Status** in the submenu at the left of the screen. The following screen will appear. This screen displays information about the devices connected to your local area network (LAN).

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| veriz | on | | | | | < |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main | My Ne | twork | | | Connected Devices | |
| Network Status | | COMPUTER 2 Type: COMPUT Status: ONLINE Connection type: WIRELES IP Address: 192.168 IP Address: ODHCP MAC Address: 00:03:C | 55 | Access Shared Files View Device Details Rename Device Delete Device Enable Application | *** Ethernet: 1 device(s) (**) Wireless: 1 device(s) *** USB: 0 device(s) | THE SECOND |
| | 2.1 | SALLE-XP3 Type: COMPUT Status: ONLINE Connection type: WIRED IP Address: 192.168 IP Address Source: DHCP | ER | Access Shared Files View Device Details Rename Device Delete Device Enable Application | Disable Scanning | |
| Ø Done | | | | | 😵 Internet | |

| | My Network | | | | | |
|-------------------|--|--|--|--|--|--|
| Туре | The type of device connected to your network. | | | | | |
| Status | The connection status for the device. | | | | | |
| Connection Type | The physical connection used to interface with your Router. | | | | | |
| IP Address | The IP address assigned to your computer. | | | | | |
| IP Address Source | The method by which your computer receives its IP address. | | | | | |
| MAC Address | The Media Access Controller; the hardware address assigned to the deviced by the | | | | | |
| MAC Address | manufacturer. | | | | | |
| Connected Devices | The interfaces used to connect to your Router to the computer. | | | | | |
| | Ethernet: Displays the number of devices that are connected to the Router via Ethernet 10/100 BaseT connection. | | | | | |
| | Wireless: Displays the number of devices that are connected to the Router wirelessly. | | | | | |
| | USB: Displays the number of devices that are connected to the Router via USB connection. | | | | | |
| | Note: If you have computers on your network that are not being displayed, check the firewall setting on the PCs to ensure that the firewall is disabled. | | | | | |
| | mewan setting on the res to ensure that the mewan is disabled. | | | | | |



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14.1.1 Access Shared Files

In the **My Network** panel, click the **Access Shared Files** link to access files from a device on your local network. (The device from which you will access files must have file sharing enabled.) If the device has a firewall turned on, you will not be able to access shared files from the device.

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| 2 objects | | | |

14.1.2 View Device Details

In the **My Network** panel, click the **View Device Details** link to view details about your device. After you have finished viewing this screen, click **Close** to return to the My Network page.

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| Type: CONFUTER Status: ONLINE Connection: WIRELESS IPAddress Source: DHCP IPAddress: 192.168.1.18 UP/P Enabled: No MACAdress: 00/03.05v4F12:66 Windows Shared \\COMPUTER 2 | | | This | | | ce. | |
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| Connection: WIRELESS IP Address Source: DHCP IP Address: 102.163.1.18 UP/P Enabled: No MAC Address: 00:103:C9:4F12:66 Windows Shared V:COMPUTER 2 | | | т | ype: | COMPUTER | | |
| IP Address Source: DHCP IP Address: 152.163.118 UPNP Enabled: No MAC Address: 00:03.C9-4F12:66 Windows Shared \\COMPUTER 2 | | | s | itatus: | ONLINE | | |
| IP Address: 192.168.1.18 UPr0 Enabled: No MAC Address: 00/33.C914F12:66 Windows Shared \\CCOMPUTER 2 | | | c | Connection: | WIRELESS | | |
| UP:P Enabled: No MAC Address: 00:03:C9:4F:12:66 Windows Shared \\.COMPUTER 2 Folders: | | | 1 | P Address Source: | DHCP | | |
| MAC Address: 00:03:C9-4F12:66 Windows Shared \\COMPUTER 2 Folders: | | | 1 | P Address: | 192.168.1.18 | | |
| Vicidores Shared V.COMPUTER 2 | | | L | IPnP Enabled: | No | | |
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14.1.3 Rename Device

In the **My Network** panel, click the **Rename Device** link to rename a device on your network. In the following screen, type the desired name in the **New Name** box, and then (if desired) select an icon from the **New Icon** dropdown menu to assign a different icon to this device. Next, click the **Rename Device** button to allow the changes to take effect. Click **Back** to return to the **My Network** panel.

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| | | New Name: | COMPUTER 2 | | | |
| | | To assign a new dev New Type and Icon: | ice type, select from the d COMPUTER COMPUTER | rop-down box below and click A | | |
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14.1.4 Delete Device

In the **My Network** panel, click the **Delete Device** link to remove a device from your network. Click the **Clear** button next to the device that you want to remove from your network, or click **Clear All** to remove all devices from your network.

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14.1.5 Enable Application

In the **My Network** panel, click the **Enable Application** link to set up applications for your service profile. This feature enables applications (Games, Webcams, IM & Others) by opening a tunnel between remote (Internet) computers and a specific device port inside your local area network (LAN). Details on this screen will be discussed later in section 15.3, "Port Forwarding."

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| Main General Port Forwarding DMZ Host Remote Administration Static NAT | | applications(Games, We | Port Forwardin boams, IM & Others) device port inside yo New Edi | - by opening a tunnel between r ur local area network(LAN). | emote(Internet) | |
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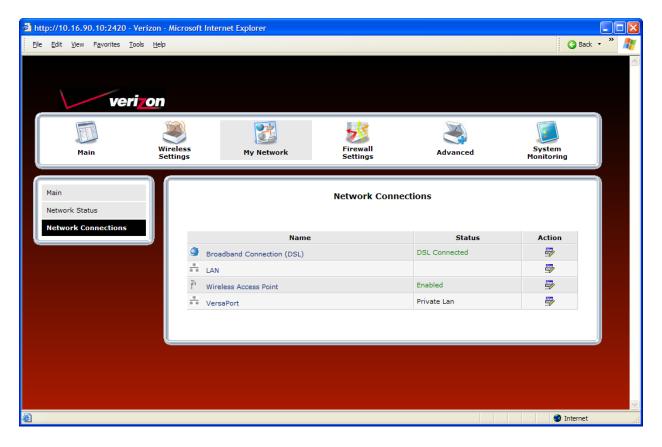


User Guide

14.2 Network Connections

To edit your connection settings, from the top navigational menu select **My Network**. Next, select **Network Connections** in the submenu options at the left of the screen; the following screen will be displayed. This screen allows you to access your Router's connection settings and your local area network (LAN) settings. The following sections discuss the details of this screen.

- To access the Router's Broadband connection settings, in the **Network Connections** screen click the **Broadband Connection (DSL)** link. The **Basic DSL Configuration** screen will appear. Refer to section 14.2.1 for details about this feature.
- To access the Router's LAN settings, in the **Network Connections** screen click the **LAN** link. The **Private LAN** screen will appear. Refer to section 16.18 for details about this feature.
- To access the Router's Wireless settings, in the Network Connections screen, click the Wireless Access Point link. Refer to section 13.3 for details about this feature.
- To access the Router's Uplink settings, in the **Network Connections** screen, click the **VersaPort** link. Refer to section 14.2.3 for details about this feature.





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14.2.1 Basic DSL Configuration

If you clicked the **Broadband Connection (DSL)** link in the **Network Connections** screen, the following screen will appear. This screen displays the virtual connection (VC) settings and the account information needed to authenticate your Internet connection. A virtual connection identifies a connection through the service provider's ATM network to Verizon. Unlike physical hardware connections, virtual connections are defined by data. The VPI/VCI and account parameters are provided by Verizon.

IMPORTANT: You should not change the VPI/VCI settings unless instructed by Verizon.

If you change any settings in this screen, click **Apply** to allow the settings to take effect. To access the Advanced DSL Configuration screen, click the **Advanced** button.

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| Main | | | Basic DSL Confi | guration | | |
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| Network Connections Broadband Connection | | | ider, a VC (virtual connection | on) identifies a connection thre | ough the service provider's | |
| | ATM network | с. | | | | |
| | VPI: 0 | VCI: 35 | | | | |
| | 2. Enter ye | our PPP User Name and | Password. | | | |
| | Provided by | your Internet service prov | ider, used to authenticate y | our Internet connection. | | |
| | Account | ID: Username | @yourisp.net |] | | |
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| | Basic DSL Configuration | | | | | | |
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| VPI | Displays the VPI (Virtual Path Indicator) value for a particular VC, which is defined by Verizon. | | | | | | |
| VCI | Displays the VCI (Virtual Channel Indicator) value for a particular VC, which is defined by Verizon. | | | | | | |
| Account ID | The account ID is provided by Verizon. | | | | | | |
| Account Password | The account password is provided by Verizon. | | | | | | |



User Guide

14.2.2 Advanced DSL Configuration

If you clicked **Advanced** in the preceding screen, the following **Advanced DSL Configuration** screen will appear. Depending on the connection settings you want to edit, you can:

- Click the **Edit** icon adjacent to My Connection to edit your connection profile settings.
- Click the New icon 🐸 (or click Add) to add a new connection profile.
- Click the **Edit** icon in the VCs section to edit your virtual connection (VC) settings.

14.2.2.1 Editing VC Protocol Settings

The following sections discuss your virtual connection (VC) settings. A virtual connection (VC) identifies a connection through the service provider's ATM network to Verizon.

IMPORTANT:

- 1. The screens displayed in the following sections reflect the Router when it is configured for LAN Ethernet port mode, which is the Router's factory default setting. For details on configuring the Router's VC settings while in WAN Uplink port mode, refer to section 14.2.3, "Configuring VersaPort."
- 2. You should not change the VC settings unless instructed by Verizon.

If you change any settings in this screen, you must click **Apply** to allow the settings to take effect. To expand the VCs list, click the expand icon 🛨 located below **Status.**

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| | VC Settings |
|---------------------------------|---|
| Status | Allows you to enable or disable your VC (Virtual Connection). This field must |
| Status | display "Enable" in order to allow edits to the VC settings. |
| VPI | Displays the VPI (Virtual Path Indicator) value for a particular VC, which is |
| VII | defined by your Service Provider. |
| VCI | Displays the VCI (Virtual Channel Indicator) value for a particular VC, which |
| | is defined by your Service Provider. |
| Protocol | Displays the Protocol for each VC, which is specified by your Service |
| | Provider. |
| | Possible Responses: |
| NOTE: The configuration | PPPoA = Point to Point Protocol over ATM (Asynchronous Transfer Mode) |
| specified by your Service | PPPoE = Point to Point Protocol over Ethernet |
| Provider will determine which | Bridge = Bridge Protocol |
| Protocols are available to you. | Classical IPoA = Internet Protocol over ATM (Asynchronous Transfer Mode). |
| | This is an ATM encapsulation of the IP protocol. |
| Bridge Broadcast | Factory Default = Enabled (box contains a check mark) |
| | When this setting is enabled, the Router will allow Broadcast IP packets |
| | to/from the WAN. |
| | When this setting is disabled (box is cleared), the Router will block Broadcast |
| | IP packets to/from the WAN. |
| | Bridge Broadcast is only valid if one of the Virtual Channels is configured for |
| | Bridge mode. |
| Bridge Multicast | Factory Default = Enabled |
| | When this setting is disabled, the Router will block Multicast IP packets |
| | to/from the WAN. |
| | When this setting is enabled, the Router will allow Multicast IP packets |
| | to/from the WAN. |
| | Bridge Multicast is only valid if one of the Virtual Channels is configured for |
| | Bridge mode. |
| Spanning Tree Protocol | Factory Default = Disabled |
| | Spanning Tree Protocol is a link management protocol that provides path |
| | redundancy while preventing undesirable loops in the network. For Ethernet |
| | network to function properly, only one active path can exist between two |
| | stations. |
| | When enabled, two bridges are used to interconnect the same two computer |
| | network segments. Spanning Tree Protocol will allow the bridges to exchange |
| | information so that only one of them will handle a given message that is being |
| | sent between two computers within the network. |



User Guide

If you clicked the expand icon in the preceding screen, the following screen will appear. When you are ready to collapse the VCs list, click the collapse icon \Box .

NOTE:

1. A VC's Status field must display Enabled before you can edit its VC settings.

2. The actual values displayed in the following screen may vary, depending on the network connection established. If you have questions about the settings in this screen, please contact Verizon.

To edit a VC setting, click the edit icon adjacent to the "Enabled" VC protocol that you want to edit.

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| | Disabled | 0 | 37 | Bridge | | - | |
| | Disabled | 0 | 38 | Bridge | | P | |
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| | Disabled | 0 | 40 | Bridge | | | |
| | Disabled | 0 | 41 | Bridge | | . | |
| | Disabled | 0 | 42 | Bridge | | . | |
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The following table explains the settings in the VC 1 Configuration screen. If you change any VC settings in this screen, click Apply to save the settings.

NOTE: If you experience problems, reset the Router via the hardware reset button at the rear of the Router. Or follow the instructions in section 16.2, "Restore Defaults," to restore the Router to factory default settings. After the Router has been reset, the values in the screens will display the factory default settings, and any settings that you have previously configured will be discarded.

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| | | Protocol: | PPPoE 💌 | | | |
| | | Secondary Wan: | Disabled | | | |
| | | PPPoE Settings | | | | |
| | | DNS Primary: | | | | |
| | | DNS Secondary: | | | | |
| | | MRU Negotiation: | Enabled | | | |
| | | LCP Echo: | 🗹 Enabled | | | |
| | | LCP Echo Failures: | 6 (1-30) | | | |
| | | LCP Echo Duration: | 60 (5-300) | | | |
| | | LCP Echo Retry Duration: | 10 (5-300) | | | |
| | | Tunneling: | Enabled | | | |
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| | VC 1 Configuration |
|-----|--|
| VPI | This field allows you to change your VPI (Virtual Path Indicator) value for a |
| | particular VC, which is defined by your Service Provider. |
| VCI | This field allows you to change your VCI (Virtual Channel Indicator) value for a |
| | particular VC, which is defined by your Service Provider. |
| PCR | Factory Default = 100% |
| | Peak Cell Rate (PCR)-The maximum rate at which cells can be transmitted across a |
| | virtual circuit, specified in cells per second and defined by the interval between the |
| | transmission of the last bit of one cell and the first bit of the next. |
| | This value is a percentage of the current data rate. |
| | 100 allows this VC to use 100% of the available bandwidth. |
| | 80 allows this VC to use 80% of the available bandwidth. |



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|-----------------------------|---|--|--|--|--|
| QoS | Quality of Service, which is determined by your Service Provider. | | | | |
| | Possible Responses: | | | | |
| | CBR = Constant Bit Rate | | | | |
| | UBR = Unspecified Bit Rate | | | | |
| | VBR = Variable Bit Rate | | | | |
| Protocol | The Protocol for each VC, which is specified by your Service Provider. | | | | |
| | Possible Responses: | | | | |
| | PPPoA = Point to Point Protocol over ATM (Asynchronous Transfer Mode) | | | | |
| | PPPoE = Point to Point Protocol over Ethernet | | | | |
| | Bridge = Bridge Protocol | | | | |
| | Classical IPoA = Internet Protocol over ATM (Asynchronous Transfer Mode). This | | | | |
| | is an ATM encapsulation of the IP protocol. | | | | |
| Status | The protocol status. | | | | |
| | PPPoE / PPPoA Settings | | | | |
| IP Address | Displays the IP network address that your Router is on. | | | | |
| Gateway | Displays the Router's IP address | | | | |
| DNS Primary | Provided by Verizon | | | | |
| DNS Secondary | Provided by Verizon | | | | |
| MRU Negotiation | Factory Default = Disabled | | | | |
| | If Enabled, the Maximum Received Unit (MRU) would enforce MRU negotiations. | | | | |
| | Note: Enable this option only at your Internets provider's request. | | | | |
| LCP Echo Disable | Factory Default = Disabled | | | | |
| | If checked, this option will disable the modem LCP Echo transmissions. | | | | |
| LCP Echo Failures | Indicates number of continuous LCP echo non-responses received before the PPP | | | | |
| | session is terminated. | | | | |
| LCP Echo Duration | The interval between LCP Echo transmissions with responses. | | | | |
| LCP Echo Retry Duration | The interval between LCP Echo after no response. | | | | |
| Tunneling | Factory Default = Enable | | | | |
| | If Enabled, this option allows PPP traffic to be bridged to the WAN. This feature | | | | |
| | allows you to use a PPPoE shim on the host computer to connect to the Internet | | | | |
| | Service Provider, by bypassing the Router's capability to do this. | | | | |
| | Note: Tunneling is available in PPPoE mode only. | | | | |
| Note: The values for the IP | Address, Gateway, DNS Primary, and DNS Secondary are all "Override of the value | | | | |
| | nection," They default to "0.0.0," in which case the override is ignored. It is | | | | |
| recommended that you do r | not change the values unless your Internet service provider instructs you to do so. | | | | |



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14.2.2.2 Configuring the Router's Protocol Settings for PPPoE or PPPoA

To configure the Router's protocol settings for PPPoE or PPPoA, access to the VC 1 Configuration screen, as explained earlier in section 14.2.2.1 "Editing VC Protocol Settings." At the VC 1 Configuration screen, select PPPoE or PPPoA from the Protocol drop-down menu.

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| | | VC Status: | Enabled | | | |
| | | VPI: | 0 | | | |
| | | VCI: | 35 | | | |
| | | PCR: | 100 | | | |
| | | QoS: | UBR 💌 | | | |
| | | Protocol: | PPPoE V | | | |
| | | Secondary Wan: | PPPoE PPPoA Bridge | | _ | |
| | | PPPoE Settings | | | | |
| | | DNS Primary: | | | | |
| | | DNS Secondary: | | | | |
| | | MRU Negotiation: | Enabled | | | |
| | | LCP Echo: | Enabled | | | |
| | | LCP Echo Failures: | 6 (1-30) | | | |
| | | LCP Echo Duration: | 60 (5-300) | | | |
| | | LCP Echo Retry Duration: | 10 (5-300) | | | |
| | | Tunneling: | Enabled | | | |
| | | | Arabi | - | | |
| | | | Apply Cancel | | | |



For example, the following VC 1 Configuration screen displays **PPPoA** as the selected Protocol. The PPPoA and PPPoE screens have identical configuration options with the exception of the Tunneling feature. Tunneling is available only for PPPoE protocol and is not displayed when the Router is configured for PPPoA protocol. After you have made the appropriate changes to VC 1 Configuration screen, click Apply to continue.

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| | | PCR: | 100 | | | |
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| | | Protocol: | PPPoA 🗸 | | | |
| | | PPPoATM Settings | | | | |
| | | DNS Primary: | | 7 | | |
| | | DNS Secondary: | |] | | |
| | | MRU Negotiation: | Enabled | - | | |
| | | LCP Echo: | Enabled | | | |
| | | LCP Echo Failures: | 6 (1-30) | | | |
| | | LCP Echo Duration: | 60 (5-300) | | | |
| | | LCP Echo Retry Duration: | 10 (5-300) | | | |
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VersaLink Wireless Gateway (Model 7500)

14.2.2.3 Configuring the Router's Protocol Settings for Bridge

To configure the Router's protocol settings for Bridge, access the VC 1 Configuration screen, as explained earlier in section 14.2.2.1, "Editing VC Protocol Settings."

To configure the Router's Bridge settings, follow these steps at the VC 1 Configuration screen:

- 1. Select **Bridge** in the **Protocol** drop-down menu.
- 2. Select the desired Bridge mode from **Bridge Mode** drop-down menu.
- 3. Enter the desired values in the fields provided (if requested).
- 4. Click **Apply** to save your settings.
- 5. Click **OK** in the pop-up screen to reset the Router.

For example, at the VC 1 Configuration screen, select Bridge from the Protocol drop-down menu.

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| | | VC Status: | Enabled | | | |
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| | | VCI: | 35 | | | |
| | | PCR: | 100 | | | |
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| | | | PPPoA Bridge | | | |
| | | PPPoATM Settings DNS Primary: | | ٦ | | |
| | | DNS Secondary: | | 7 | | |
| | | MRU Negotiation: | Enabled | | | |
| | | LCP Echo: | Enabled Enabled | | | |
| | | LCP Echo Failures: | 6 (1-30) | | | |
| | | LCP Echo Duration: | 60 (5-300) | | | |
| | | LCP Echo Retry Duration: | 10 (5-300) | | | |
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| Ma | in | | | VC 1 Configur | ation | | |
| Br | oadband Connection | | | VC 1 Conngui | auon | | |
| | | | VC Status: | Enabled | | | |
| | | | VPI: | 0 | | | |
| | | | VCI: | 35 | | | |
| | | | PCR: | 100 | | | |
| | | | QoS: | UBR 💌 | | | |
| | | | Protocol: | Bridge 💌 | | | |
| | | | Bridge Mode: | Bridge | | | |
| | | | bridge mode. | Bridge Routed Bridge | | | |
| | | | | | | | |
| | | | | Apply Ca | ancel | | |
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The following screen will appear. Bridge settings are described in the following table.

| Protocol | Mode | Description |
|----------|---------------|--|
| | Bridge | A bridge is a layer 2 device that connects two segments of the same LAN that use the same protocol such as Ethernet. The modem does not have a WAN IP address in this mode. The client PC will typically get an IP address from a DHCP server in the network or the IP address can be assigned to the client PC statically. |
| Bridge | Routed Bridge | Routed Bridged Encapsulation (RBE) is the process by which a bridged segment is terminated on a routed interface. Specifically, the Router is routing on an IEEE 802.3 or Ethernet header carried over RFC 1483 bridged ATM. RBE was developed to address the known RFC1483 bridging issues, including broadcast storms and security. The modem will get a WAN IP address through DHCP or can be assigned statically. NAT will use the global address assigned to the modem. |



User Guide

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| CO | | 1/htmlV/net_edit_vc.asp?vc= | 0&showVcs=8&curVPI=0&curV | CI=35&curPCR=100&curQOS=ubr | _pcr&curProtocol=Bridge | 💌 🗲 🗙 Livi | e Search |
| 🚖 🎄 | 6 Verizon | | | | | | 🚮 Home 🔹 🂙 |
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| | Ven | <mark>70</mark> 1 | | | | | |
| | | | 22 | 55 | | | |
| | | Wireless | | | | System | |
| | Main | Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | | |
| M | ain | | | VC 1 Configu | ration | | |
| В | roadband Connection | | | | | | |
| | | - | VC Status: | Enabled | | | |
| | | | VPI: | 0 | | | |
| | | | VCI: | 35 | | | |
| | | | PCR: | 100 | | | |
| | | | QoS: | UBR 💌 | | | |
| | | | Protocol: | Bridge 😽 | | | |
| | | | Bridge Mode: | Bridge 💌 | | | |
| | | | | Bridge Routed Bridge | | | |
| | | | | Apply C | Cancel | | |
| | | | | | | | |
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Next, select the desired Bridge mode from **Bridge Mode** drop-down menu.



User Guide

| | VC 1 – B | ridge Protocol (Bridge Mode) | | | | | | |
|-------------|----------------------|--|--|--|--|--|--|--|
| VC Status | The protocol status | | | | | | | |
| VPI | This setting allows | This setting allows you to change your VPI (Virtual Path Indicator) value for a | | | | | | |
| | particular VC, which | particular VC, which is defined by your Service Provider. | | | | | | |
| VCI | This setting allows | is setting allows you to change your VCI (Virtual Channel Indicator) value for a | | | | | | |
| | particular VC, which | icular VC, which is defined by your Service Provider. | | | | | | |
| PCR | Factory Default = 1 | | | | | | | |
| | | R)-The maximum rate at which cells can be transmitted across a | | | | | | |
| | | ified in cells per second and defined by the interval between the | | | | | | |
| | | last bit of one cell and the first bit of the next. | | | | | | |
| | | centage of the current data rate. | | | | | | |
| | | to use 100% of the available bandwidth. | | | | | | |
| | | to use 80% of the available bandwidth. | | | | | | |
| QoS | | which is determined by your Service Provider. | | | | | | |
| | Possible Responses | | | | | | | |
| | CBR = Constant B | | | | | | | |
| | UBR = Unspecified | | | | | | | |
| D (1 | VBR = Variable Bi | | | | | | | |
| Protocol | | ch VC, which is specified by your Service Provider. | | | | | | |
| | Possible Responses | s: Point Protocol over ATM (Asynchronous Transfer Mode) | | | | | | |
| | | Point Protocol over ATM (Asynchronous Transfer Mode) | | | | | | |
| | Bridge = Bridge Pr | | | | | | | |
| | Diluge – Diluge II | | | | | | | |
| | | A bridge is a layer 2 device that connects two segments of the | | | | | | |
| | | same LAN that use the same protocol such as Ethernet. The | | | | | | |
| | Bridge | modem does not have a WAN IP address in this mode. The client | | | | | | |
| | | PC will typically get an IP address from a DHCP server in the | | | | | | |
| | | network or the IP address can be assigned to the client PC | | | | | | |
| Bridge Mode | | statically. Routed Bridged Encapsulation (RBE) is the process by which a | | | | | | |
| | | bridged segment is terminated on a routed interface. Specifically, | | | | | | |
| | | the Router is routing on an IEEE 802.3 or Ethernet header carried | | | | | | |
| | | over RFC 1483 bridged ATM. RBE was developed to address the | | | | | | |
| | Routed Bridge | known RFC1483 bridging issues, including broadcast storms and | | | | | | |
| | | security. The modem will get a WAN IP address through DHCP | | | | | | |
| | | or can be assigned statically. NAT will use the global address | | | | | | |
| | | assigned to the modem. | | | | | | |



User Guide

If you select **Bridge** as the Protocol, and then select **Bridge** from the **Bridge Mode** drop-down menu, the following screen will appear. Click **Apply** to save your selection.

IMPORTANT: If you configure the Router to use Bridge protocol and Bridge Mode, you must disable the Router's DHCP server. By disabling the DHCP server and using Bridge protocol (Bridge mode), you will allow the computer to receive its IP address directly from the ISP's DHCP server, not from the Router's DHCP server. For instructions on disabling the Router's DHCP server, see section 16.17, "IP Address Distribution." **After you have disabled the Router's DHCP server, you must reboot the computer to allow the change to take effect.**

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| 🔆 🕸 🌈 Verizon | | | | | | 🔓 Home 🔹 🎽 |
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| Main Broadband Connection | | | VC 1 Configu | ration | | |
| ų. | | VC Status: | Enabled | | | |
| | | VPI: | 0 | | | |
| | | VCI: | 35 | | | |
| | | PCR: | 100 | | | |
| | | QoS: Protocol: | UBR 🗸 | | | |
| | | Bridge Mode: | Bridge V | | | |
| | | bridge mode. | Dirugo | | | |
| | | | Apply | Cancel | | |
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User Guide

If you select **Bridge** as the Protocol, and then select **Routed Bridge** from the **Bridge Mode** drop-down menu, the following screen will appear. Enter the desired values in the fields provided, and then click **Apply**.

| Verizon - Windows Internet | t Explorer | | | | | |
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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
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| Main | | | | | | |
| Broadband Connection | | | VC 1 Configu | ration | | |
| | | VC Status: | Enabled | | | |
| | | VPI: | 0 | | | |
| | | VCI: | 35 | | | |
| | | PCR: | 100 | | | |
| | | QoS: | UBR 💌 | | | |
| | | Protocol: | Bridge 🗸 | | | |
| | | Bridge Mode: | Routed Bridge 💌 | | | |
| | | | | | | |
| | | Routed Bridge Se | | | _ | |
| | | | s automatically (enable DHC | | | |
| | | | g static addresses (disable D | DHCP Client) | | |
| | | IP Address | 0.0.0.0 | | | |
| | | Subnet | 255.255.255 | | | |
| | | Gateway | 0.0.0.0 | | | |
| | | DNS Primary: | 10.16.16.8 | | | |
| | | DNS Secondary: | 10.16.16.2 | | | |
| | | | | | | |
| | | | Apply C | Cancel | | |
| | | | | | | |
| | | | | | | |

| VC 1 – Bridge Protocol (Routed Bridge Mode) | | | | | | | |
|---|--|--|--|--|--|--|--|
| DHCP Client | Allows you to either Enable or Disable the DHCP Client. | | | | | | |
| | Select (enable DHCP Client) to obtain IP address automatically. | | | | | | |
| | Select (disable DHCP Client) to use the static IP address that you enter into fields provided. | | | | | | |
| IP Address | The IP network address that your Router is on. | | | | | | |
| Subnet Mask | The subnet mask, which determines if an IP address belongs to your local network. | | | | | | |
| Gateway | The Router's IP gateway address. | | | | | | |
| DNS Primary | This value is provided by Verizon. | | | | | | |
| DNS Secondary | This value is provided by Verizon. | | | | | | |



User Guide

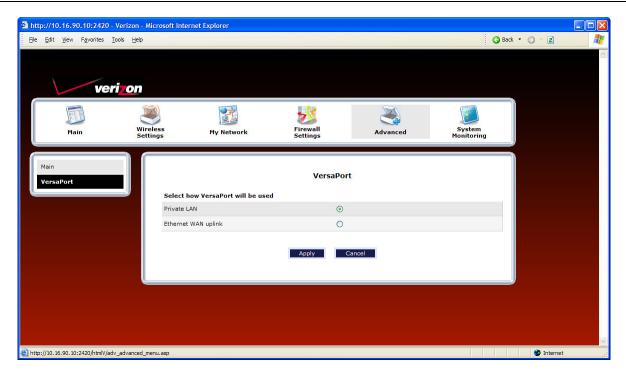
14.2.3 Configuring VersaPort (Ethernet WAN Uplink)

If you clicked the **VersaPort** link in the **Network Connections** screen, the following screen will appear. This screen allows you to select how the UPLINK/E1 port on the rear of the Router will be used.

Select one of the following options:

- **Private LAN:** This mode allows you to use the Router's DSL port for WAN access (the Router's DSL functionality is enabled).
- Ethernet WAN Uplink. This mode allows you to use the Router as an Ethernet Gateway (for example, connecting to a cable modem or to another ADSL device that provides WAN access). In WAN Uplink mode, the Router's DSL functionality is disabled.

NOTE: The menu options displayed will vary according to the configuration you have chosen to use, LAN Ethernet port or WAN Uplink port. If you are using WAN Uplink port, some menu options will not be available. However, all menu options will be available when the Router is enabled for LAN Ethernet port. Instructions on enabling and disabling LAN Ethernet port and WAN Uplink port are explained in the following sections. This document was created with the Router configured for LAN Ethernet port.





VersaLink Wireless Gateway (Model 7500)

14.2.3.1 Enabling Private LAN—Disabling Ethernet WAN Uplink

If you selected **Private LAN** in the **VersaPort** screen, this will enable the Router's DSL transceiver, and the Router will use its DSL port as the WAN interface. This configuration will disable the WAN Uplink port (**UPLINK/E1** on the rear of the Router).

- When **Private LAN** is selected, the **DSL** port on the rear of the Router is enabled and is the WAN interface to the Internet.
- When Ethernet WAN Uplink is selected, the UPLINK/E1 port on the rear of the Router is enabled and is the WAN uplink to another ADSL device through which you will make your Internet connection.

Remember, you must click **Apply** to allow the settings to take effect in the Router.

NOTE:

- 1. When using the optional UPLINK/E1 port, Ethernet LAN connection is limited to E2, E3, and E4. The WAN Uplink feature is optional and, if it is disabled, the Router will use DSL only as the WAN interface.
- 2. Some menu options are unavailable when the Router is configured for **WAN Uplink port.** However, all of the Router's menu options are displayed when the Router is configured for **LAN Ethernet port**.
- 3. The Router's factory default setting is Private LAN.
- 4. If WAN Uplink is not enabled in the .ini file, the Router will use DSL only as the WAN interface.

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VersaLink Wireless Gateway (Model 7500)

14.2.3.2 Enabling Ethernet WAN Uplink—Disabling Private LAN

If you selected **Ethernet WAN Uplink** in the **VersaPort** screen, this will disable the Router's DSL transceiver and the DSL port. This configuration allows the port labeled **UPLINK/E1** on the rear of the Router to become the WAN interface port. Then, you can use **UPLINK/E1** to uplink to another ADSL device, through which you can connect to the Internet.

- When **Private LAN** is selected, the **DSL** port on the rear of the Router is enabled and is the WAN interface to the Internet.
- When Ethernet WAN Uplink is selected, the UPLINK/E1 port on the rear of the Router is enabled and is the WAN uplink to another ADSL device through which you will make your Internet connection.

Remember, you must click **Apply** to allow the settings to take effect in the Router.

NOTE:

- 1. When using the optional UPLINK/E1 port, Ethernet LAN connection is limited to E2, E3, and E4. The UPLINK feature is optional and, if it is disabled, the Router will use DSL only as the WAN interface.
- 2. All of the Router's menu options are displayed when the Router is configured for LAN Ethernet port. However, some menu options are unavailable when the Router is configured for WAN Uplink port. The sections explained throughout this document will indicate when a menu item is unavailable.
- 3. The Router's factory default setting is Private LAN.
- 4. If UPLINK is not enabled in the .ini file, the Router will use DSL only.

If you selected **Ethernet WAN Uplink**, the following screen will be displayed. Proceed to the next section for instructions on editing the Ethernet WAN Uplink settings.

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| Main VersaPort | | | VersaPort | | | | |
| | Select I | now VersaPort will be use | d O | | | | |
| | | WAN uplink | • | | | | |
| | Etherne | t WAN uplink Settings | | | | | |
| | Protocol | | PPPoE | v | | | |
| | Tunnelin | g | 💿 Ena | able 🔿 Disable | | | |
| | Seconda | ry WAN | O Ena | able 💿 Disable | | | |
| | | | Apply Ca | ncel | | | |
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VersaLink Wireless Gateway (Model 7500)

14.2.3.3 Editing the VC Protocol Settings for Ethernet WAN Uplink

NOTE: The instructions in this section refer to the Router configured for **Ethernet WAN Uplink** mode. Be sure that you have selected **Ethernet WAN Uplink** in the **VersaPort** screen.

14.2.3.3.1 Configuring the WAN Uplink Protocol Settings for PPPoE

After you have selected **Ethernet WAN Uplink**, in the preceding steps, select the desired protocol from the **Protocol** drop-down menu. If you select PPPoE, the following screen will appear. Select the desired options, and then click **Apply** to save the settings.

NOTE:

1. If you experience any problems, reset the Router by pressing the reset button on the rear of the Router. Or follow the instructions in section 16.2, "Restore Defaults," to restore the Router to factory default settings. The actual information displayed in this screen may vary, depending on network connection established.

2. PPPoE is the factory default setting for Ethernet WAN Uplink.

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| | Seconda | ry WAN | 0 | Enable 📀 Disable | | | |
| | | | Αρρίγ | Cancel | | | |
| | | | | | | | |

| Uplink Settings for Ethernet WAN Uplink (PPPoE protocol) | | | | | | |
|--|--|--|--|--|--|--|
| Tunneling | Factory Default = Enable | | | | | |
| | If Enabled, this option allows PPP traffic to be bridged to the WAN. This feature | | | | | |
| | allows you to use a PPPoE shim on the host computer to connect to the Internet | | | | | |
| | Service Provider, by bypassing the Router's capability to do this. Factory default is | | | | | |
| | "Enable." | | | | | |
| Secondary WAN | Factory Default = Disable | | | | | |
| | The secondary WAN interface is used for multicast traffic. This feature applies only when you are using PPPoE as the Primary WAN protocol. | | | | | |



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14.2.3.3.2 Configuring the Ethernet WAN Uplink Protocol Settings for Routed IP

If you select **Routed IP** from the **Protocol** drop-down menu, the following screen will appear. Enter the desired options, and then click **Apply** to save the settings.

NOTE:

1. If you experience any problems, reset the Router by pressing the reset button on the rear of the Router. Or follow the instructions in section 16.2, "Restore Defaults," to restore the Router to factory default settings. The actual information displayed in this screen may vary, depending on network connection established.

2. PPPoE is the factory default setting for Ethernet WAN Uplink.

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| l | Select ho | ow VersaPort will be use | ed | | | |
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| | Ethernet V | VAN uplink | | ۲ | | |
| | Ethernet | WAN uplink Settings | | | | |
| | Protocol | | | Routed IP 💌 | | |
| | Routed I | P Settings | | | | |
| | Tunneling | | | ● Enable ○ Disable | | |
| | Obtain add | dresses automatically (ena | able DHCP Client) | ۲ | | |
| | Use the fo | llowing static addresses (c | disable DHCP Client) | 0 | | |
| | IP Address | s | | 0.0.0.0 | | |
| | Subnet | | | 255.255.255.255 | | |
| | Gateway | | | 0.0.0.0 | | |
| | DNS Prima | | | | | |
| | DNS Seco | ndary | | | | |
| | | | Apply | Cancel | | |
| | | | - the the test | Cancer | | |
| | | | | | | J |
| 🖉 Done | | | | | | S Internet |



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| Up | link Settings for Ethernet WAN Uplink (Routed IP protocol) | | | | | |
|----------------------------|--|--|--|--|--|--|
| Tunneling | Factory Default = Enable If Enabled, this option allows PPP traffic to be bridged to the WAN. This feature allows you to use a PPPoE shim on the host computer to connect to the Internet Service Provider, by bypassing the Router's capability to do this. | | | | | |
| DHCP Client | Selecting a option allows you to either Enable or Disable the DHCP Client. Click the top option labeled (enable DHCP Client) to allow the Router to obtain an IP address automatically from your service provider. Click the bottom option labeled (disable DHCP Client) to allow the Router to accept static IP address information. Then, manually enter the IP values into the fields. Obtain these values from Verizon. | | | | | |
| IP Address | The IP network address that your Router is on. | | | | | |
| Subnet | The IP subnet address that your Router is on. | | | | | |
| Gateway | The Router's IP gateway address. | | | | | |
| DNS Primary | Provided by Verizon. | | | | | |
| DNS Secondary | Provided by Verizon. | | | | | |
| obtained from the PPP conr | Note: The values for the IP Address, Gateway, DNS Primary, and DNS Secondary are all "Override of the value obtained from the PPP connection," They default to "0.0.0," in which case the override is ignored. It is recommended that you do not change the values unless Verizon instructs you to do so. | | | | | |



User Guide

15. FIREWALL SETTINGS

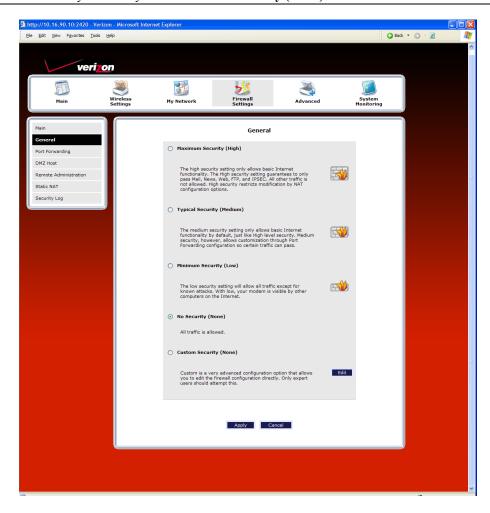
15.1 General Firewall Security Settings

This section explains how to configure your Router's firewall security features. The Router's firewall security settings allow you reduce the risk of unauthorized access to your network by prohibiting certain types of inbound and outbound network traffic and by allowing you to configure specific firewall rules.

IMPORTANT: If you need help, click **Main** in the top navigational menu to go to the home page. In the **Quick Links** section of the home page, click **Verizon Help**. Clicking this link takes you to Verizon's OnLine Help site, where you can access additional information about your DSL Router.

To change your firewall security level, click the option next to the desired security setting. Next, click **Apply** to allow the changes to take effect.

IMPORTANT: It is recommended that you do not change the settings in this **User Defined Firewall Rules** screen. If you need to reset your Router to factory default settings, push the reset button on the rear of the Router. Or follow the instructions in section 16.2, "Restore Defaults," to restore the Router to factory default settings. The factory default security level for your Router is **No Security (None)**.





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| | General Firewall Settings | | | | | | | |
|------------------|--|--|--|--|--|--|--|--|
| Maximum Security | Maximum Security High security level only allows basic Internet functionality. Only Mail, News, Web, | | | | | | | |
| (High) | FTP, and IPSEC are allowed. All other traffic is prohibited. | | | | | | | |
| Typical Security | Like High security, Medium security only allows basic Internet functionality by | | | | | | | |
| (Medium) | default. However, Medium security allows customization through NAT configurat | | | | | | | |
| | so that you can enable the traffic that you want to pass. | | | | | | | |
| Minimum Security | Low security setting will allow all traffic except for known attacks. With Low | | | | | | | |
| (Low) | security, your Router is visible to other computers on the Internet. | | | | | | | |
| No Security | Factory Default = No Security (None) | | | | | | | |
| (None) | The Firewall is disabled. (All traffic is passed) | | | | | | | |
| Custom Security | Custom is a security option that allows you to edit the firewall configuration directly. | | | | | | | |
| (Custom) | Note: Only the most advanced users should try this. | | | | | | | |

15.2 Editing Firewall Security Rules

To edit the firewall security rules and customize them to your preference, in the **General** screen, click **Edit**. If no security rules have been previously configured, the following pop-up screen will appear. Click **OK** in the pop-up screen. At the **General** screen, select the security option that want to edit, and then click **Apply**.

Next, select the **Custom Security (None)** option in the **General** screen, and then click **Apply.** Click **Edit** to go to the **User Defined Firewall Rules** screen and edit the security rules for the security option you selected (High, Medium, Low, None) in the **General** screen.

IMPORTANT:

- Custom Security is a very advanced configuration option that allows you to edit the firewall configuration directly. Only expert users should attempt this. It is recommended that you do not change the settings in this screen. If you need to reset your Router to factory default settings, push the reset button on the rear of the Router. Or follow the instructions in section 16.2, "Restore Defaults," to restore the Router to default settings.
- 2. If you need help, click **Main** in the top navigational menu to go to the home page, and then click **Verizon Help** to access Verizon's Online Help Web site for your DSL Router.



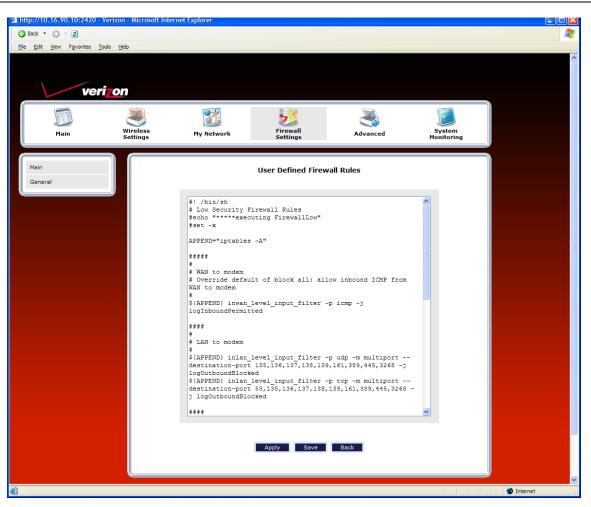
The User Defined Firewall Rules screen allows you to configure the security parameters on your Inbound and Outbound traffic. Inbound rules will restrict inbound traffic from the WAN to the LAN. Outbound rules will restrict outbound traffic from the LAN to WAN. Enter the desired parameters, click **Save**, and then click **Apply** to allow the settings to take effect in your Router.

NOTE: Clicking Save allows the firewall rules to be saved to flash (a temporary storage area in your Router).



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NOTE: The information displayed in this screen may differ from your actual screen, depending on the level of security you have selected.





User Guide

15.3 Port Forwarding

To access the Port Forwarding screen, from the top navigational menu, select **Firewall Settings.** Then select **Port Forwarding** from the menu options at the left of the screen. A warning screen will display the following message:

Any changes made in this section may affect your device's performance and configuration. Do you want to proceed?

Click Yes to proceed.

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| Main | Wireless | My Network | Firewall | Advanced | System Monitoring | |
| | Settings | in in iteration | Settings | navancea | Monitoring | |
| Main | | | Warning!! | | | |
| <u> </u> | | Any changes made in this | | | onfiguration. | |
| | | | Do you want to pro | ceed? | | |
| | | | Yes | No | | |
| | | | | | | |
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| s Done | | | | | 🔮 Int | |

If you clicked **Yes**, in the preceding warning screen, the following **Port Forwarding** screen will be displayed. This feature enables applications (Games, Webcams, IM & Others) by opening a tunnel between remote (Internet) computers and a specific device port inside your local area network (LAN).

The Port Forwarding screen allows you to do the following:

- Edit connection profiles, create new connection profiles
- Configure port forwarding services: predefined, customized, and port forwarding/port triggering services

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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main General Port Forwarding DMZ Host Remote Administration Static NAT Security Log | This feature er | hables applications(Gam computers and a si default v | Port Forwar es, Webcams, IM & Oth beacfic device port inside New | ding ers) by opening a tunnel b a your local area network(Edit | etween remote(Internet) LAN). | |
| Security Edg | Name | Mode | | | Action | |
| | IPSEC ALG | Port Forwar | ding Dyna | imic | ₽ ₽ | |
| Done | | | Close | | Internet | |



User Guide

15.3.1 Editing a Profile Name

Port Forwarding services can be added to connection profiles. To edit an existing profile name, and then later add port forwarding services to the profile, follow the instructions in this section.

To edit a connection profile name, in the **Port Forwarding** screen, click the **Current Profile** drop-down menu, and then select the name of the profile that you want to edit. Next, click **Edit** .

NOTE: If you have not previously configured a profile, the "Default" profile will be displayed.

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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main General Port Forwarding DMZ Host Remote Administration Static NAT Security Log | This feature Current Profile: | enables applications(G computers and default v | Port Forwar ames, Webcams, IM & Ott a specific device port insid | - | between remote(Internet) (LAN). | |
| Secarity Edg | Name | Mode | Hos | st Device | Action | |
| | IPSEC ALG | Port For | warding Dyn | hamic | ₽ 🗣 | |
| Done | Add | | Close | | Er Disterne | |

If you have selected a profile and clicked **Edit**, the following screen will appear. In the following example, "Default" has been selected from the **Current Profile** drop-down menu displayed in the preceding screen. This is the profile name that will be edited.

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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
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| Port Forwarding | | | Edit Service Pro | ofile | | |
| Edit Profile | | default | | | | |
| Lait Profile | Profile Name: | deraut | | | | |
| | | | Apply Ca | ancel | | |
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User Guide

Type the name of your choice in the field provided. Then, click **Apply** to allow the change to take effect.

NOTE: If you reset your Router to factory default settings, the default profile "Default" will be displayed, and any previously configured settings will be lost.

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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | |
| Main | | | | | | |
| Port Forwarding | | | Edit Service Pr | ofile | | |
| Edit Profile | Profile Name | Profile 1 | | | | |
| | | | Apply (| Cancel | | |
| | | | | | | |
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The name you entered should now be displayed in the **Current Profile** drop-down menu.

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| verizo | n | | | | |
| Main | Wireless Settings My Ne | twork Settin | | ed System Monitoring | |
| Main General Port Forwarding | This feature enables | | Forwarding s, IM & Others) by opening a t port inside your local area n | tunnel between remote(Internet) etwork(LAN). | |
| DMZ Host Remote Administration Static NAT | Current Profile: Profile | 1 💌 | Edit | | |
| Security Log | Name | Mode | Host Device | Action | |
| | IPSEC ALG | Port Forwarding | Dynamic | in 1990 🚽 🙀 | |
| | Add | | | 2 | |
| | | | Close | | |
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15.3.2 Creating a New Connection Profile

If you desire to create a new profile, and then later add port forwarding services to the new profile, follow the instructions in this section.

To create a new connection profile, in the **Port Forwarding** screen, click **New**. Then, from the **Current Profile** drop-down menu, select **A New Service Profile #1**.

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| | ireless attings Hy Netw | ork Firewall Settings | Advanced | System Honitoring | |
| Main General Port Forwarding DM2 Host Remote Administration Static NAT | Current Profile: Profile 1 | Port Fe | A & Others) by opening a tunn rt inside your local area netwo Edit | el between remote(Internet) rrk((LAN), | 1 |
| Security Log | Name | Mode | Host Device | Action | |
| | IPSEC ALG | Port Forwarding | Dynamic | 🗟 🚔 | |
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Next, click the **Edit** button to edit the profile.

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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | | | | |
| Main General Pott Forwarding DM2 Host Remote Administration Static NAT Secury Log | This feature Current Profile: | Port Forwarding This feature enables applications(Games, Webcams, IM & Others) by opening a tunnel between remote(Internet) computers and a specific device port inside your local area network(LAN). Current Profile: A New Service Potile #1 | | | | | | | |
| Secondy Edg | Name | Mode | | t Device | Action | | | | |
| | IPSEC ALG | Port For | warding Dyna | amic | ₽ | | | | |
| a | Add | | Close | | | | | | |

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If you clicked the **Edit** button, the following screen will appear. Type the profile name of your choice in the field, and then click **Apply** to allow the change to take effect.

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| veriz | on | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Nain Port Forwarding | | | Edit Service P | ofile | | |
| Edit Profile | Profile Name: | A New Service Profile | | ancel | | |
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For example, "My First Service Profile" is the name that has been entered in the Profile Name field. Click Apply.

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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Port Forwarding | | | Edit Service Pr | ofile | | |
| Edit Profile | Profile Name: | My First Service Profile | | ancel | | |
| | L | | | | | |
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If you clicked **Apply**, the following screen will be displayed. The **Current Profile** field now displays the profile name that you entered.

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| veriz | on | | | | | <u>^</u> |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main General Port Forwarding DMZ Host Remote Administration Static NAT | This feature Current Profile: | enables applications(computers and My First Service Profile | a specific device port ins | Dthers) by opening a tunnel side your local area network | between remote(Internet) (LAN). | I |
| Security Log | Name | Mode | | ost Device | Action | |
| | IPSEC ALG | Port For | rwarding Dj | ynamic | <i>₽</i> ₽ ₽ | |
| | | | Close | | | |
| 🙆 Done | | | | | 🔮 Internet | |

15.3.3 Configuring Port Forwarding Services

Port Forwarding Services contain specific service settings. The service can then be associated with connection profiles, allowing you to customize profiles for specific users. For example, if you want to attach specific services to a profile or if you want to set up a different connection setting for a profile. You can create new service profiles and customize them to your preference.

Your Router contains a list of predefined Port Forwarding services, and you can select any service from this list. By selecting your specific service and setting up a profile, you will ensure that the appropriate ports on your Router are open and that the required application traffic can pass through your local area network (LAN). For a list of supported services, go to section 18, "Port Forwarding Services."

NOTE: You can create up to four service profiles and attach an unlimited number of services to each profile. The current profile labeled "Default" is the factory default profile.



User Guide

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| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main General Port Forwarding DM2 Host Remote Administration Static NAT | This feature Current Profile: | enables applications(Gar computers and a Default | Port Forward nes, Webcams, IM & Othe specific device port inside | ling rs) by opening a tunnel betw your local area network(LAP | een remote(Internet)). | |
| Security Log | Name | Moc | e | Host Device | Action | |
| | IPSEC ALG | Client | Dynamic | | ₽ ₽ | |
| | Add | | | | | ~ |
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| http://192.168.1.1/port_forwarding.h | ntm?currentNatProfileId=0# | | | | 🧐 Internet | |

15.3.3.1 Adding Port Forwarding Services to a Profile

To add a predefined service to a profile, in the **Port Forwarding** screen, click the **Current Profile** drop-down menu, and then select the name of the profile to which you want to add services. Next, click **Add**.

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| | Wireless | 24 | Firewall | 1 | System | |
| Main | Settings | My Network | Settings | Advanced | Monitoring | |
| | | | | | | N |
| Main | | | Port Forwar | ding | | |
| General | This featu | re enables applications(| Sames, Webcams, IM & Oth a specific device port inside | ers) by opening a tunnel | between remote(Internet) | |
| Port Forwarding | | computers and | a specific device port inside | r your local area network | (CAN). | |
| DMZ Host | Current Profile | : Default 🔽 | | | | - |
| Remote Administration | | | New | Edit | | |
| Static NAT | | | | | | |
| Security Log | | Mode | | Device | Action | |
| C. C | IPSEC ALG | | warding Dyna | | Action | |
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If you clicked **Add**, the following **New Port Forwarding Rule** screen will appear. Using this screen, you can do any of the following:

- Add a predefined service to a profile
- Create a customized service
- Edit an existing service profile
- Delete an existing profile

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| veriz | on | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Port Forwarding | | Follows | New Port Forward | | | |
| | | 1. Select an existing Service Select A Service / Rule | | Edit | Delete | |
| | | 2. Select how the service will | be activated | | | |
| | | Host | Allows unsolicited inbour | nd traffic to a particular PC on | the LAN. | |
| | | O Dynamic | Enables inbound traffic b | based on specific outbound tra | ffic. | |
| | | 3. For Hosted Service, Select | a PC on the LAN | | | |
| | | Select a Discovered LAN device: | SALLE-XP2 💌 | Or manually enter a LAN IP: | 192.168.1.18 | |
| | | | Apply Ca | ancel | | |
| http://10.16.90.10:2420/html//welcom | eMain.htm | | | | | Internet |

15.3.3.2 Adding a Predefined Port Forwarding Service to a Profile

To add a predefined port forwarding service to a profile, in the **New Port Forwarding Rule** screen, perform the following steps:

1. Select the desired service from the **Select a Service** drop-down menu. After you have selected a service, it will appear in the window.

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| | Wireless | 24 | Firewall | | System | |
| Main | Settings | My Network | Settings | Advanced | Monitoring | |
| - | | | | | | |
| Main | | | | | | |
| | | | New Port Forwardi | ng Rule | | |
| Port Forwarding | | Follow | the steps below to set up a ser | rvice on your device. | | |
| | | -last an existing frame | / Rule or create a new on | _ | | |
| | | et A Senice / Bile | | Edit | Delete | |
| | Sel | ict A Service / Rule | Create | Edit | Delete | |
| | Age | ns vs. Predator of Empires II: The Conquerors | | | | |
| | Ame | nicas Amy nica Online | be activated | | 1 | |
| | AOL | rchy Online . Instant Messenger | | traffic to a particular PC on | | |
| | Batt | eron's Call lecom | Enables inbound traffic bas | sed on specific outbound tra | arric. | |
| | Blac | lefield 1942 sk and White | | | | |
| | Bud | tard Battle net (Diablo II) dy Phone | a PC on the LAN | | | |
| | Cali | gie net, Myth, Myth II Server sta IP Phone | SALLE-XP2 V | Or manually enter a LAN IP: | 192.168.1.18 | |
| | Cie | < Metaframe ht POP/IMAP | | | | |
| | Cou | nt SMTP nter Strike | | | | |
| | Det | k Reign 2 a Force (Client and Server) | Apply Can | rel | | |
| | Det | a Force 2 a Force: Land Warrior | | | | |
| | DN: Bite | Force | | | | |
| | F-16 | rquest 5, Mig 29 | | | | |
| | F-21 F-2 | 2 Lightning 3 2 Raptor | | | | Internet |



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- 2. Select the option that describes how you want the service to be activated.
 - Host: Allows the unsolicited inbound traffic to a particular PC on the LAN
 - Dynamic: Enables inbound traffic based on specific outbound traffic
- 3. Select the desired IP address from the drop-down menu or manually enter the LAN IP address of the device that you want to host the service.
- 4. Click **Apply** to allow the settings to take effect.

NOTE: If you click **Cancel** in the **New Port Forwarding Rule** screen, the service you selected will be displayed; however, it will not be assigned to a device on the LAN. You must click **Apply** to allow the settings to take effect.

If you clicked **Apply**, the following screen will be displayed. In this example, the screen shows that service "America Online" has been added to the "Default" profile.

- To add additional predefined services, in the **Port Forwarding** screen, first select the desired profile from the **Current Profile** drop-down menu. Next, click **Add** and then repeat the preceding steps 1 through 4.
- To view the details of a service you have added, in the Action field click the details icon
- To delete a service from your list of active services, at the **Port Forwarding** screen, click the delete icon **R** next to the service that you want to delete. The selected service will be deleted from the Router's list of active services.

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| Veri Main | ۲ | My Network | Firewall Settings | Advanced | System Honitoring | |
| | | | | | | |
| Main | | | Port Forward | ling | | |
| General | This feature er | ables applications(Ga | ames, Webcams, IM & Othe | rs) by opening a tunne | l between remote(Internet) ·k(LAN). | |
| Port Forwarding | | computers and a | specific device port inside | your local area netwo | ·k(LAN). | |
| DMZ Host | Current Profile: | Default 🗸 | | | | |
| Remote Administration | Current Profile: | Deradit | New | Edit | | |
| Static NAT | | | New | Edit | | |
| Security Log | | | | | | |
| | Name | Mode | | Device | Action | |
| | America Online | Port Forw | arding 192.1 | 68.1.18 | 🖻 😽 | |
| | IPSEC ALG | Port Forw | arding Dyna | mic | 🚽 🙀 | |
| | Add | | | | 2 | |
| | | | Close | | | |
| | | | | | | Internet |



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If you clicked the details icon in the preceding screen, the following screen will be displayed. Click **Cancel** when you are ready to return to the **Port Forwarding** screen.

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|--------------------------------|----------------------|------------------|----------------------|-----------------|---------------|----------------------|----------|
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| Main | Wireless Settings | My Network | Firewall Settings | Advar | iced | System Monitoring | |
| - | | | | | | | |
| Main | | | | | | | |
| | | | Service | Details | | | |
| Port Forwarding | | | Service Name | America Online | | | |
| | | | Туре | Port Forwarding | 3 | | |
| | | | | | | | |
| | Entry | Protocol | Global Po | rt(s) | Local Port(s) | | |
| | 1 | both | 5190 | | 5190 | | |
| | | | | | | | |
| | | | | | | | |
| | | | Cl | ose | | | |
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| Done | | | | | | | Internet |

15.3.3.3 Creating a Customized Port Forwarding Service

To create a customized port forwarding service, click Add in the Port Forwarding screen.

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| veriz | on | | | | , | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main General | This feature | enables applications(c | Port Forward | | between remote(Internet) | |
| Port Forwarding DMZ Host Remote Administration | Current Profile: | Default 💌 | | Edit | (LANY). | |
| Static NAT Security Log | | | нси | | | |
| occurry cog | Name | Mode | Host | Device | Action | |
| | IPSEC ALG | Port For | warding Dyna | mic | 🗇 🙀 | |
| | Add | | | | 2 | |
| | | | Close | | | |
| 🕘 Done | | | | | | 🕐 Internet |



If you clicked Add, the following screen will be displayed. Click Create.

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| veriz | on | | | | | .^ |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Port Forwarding | | Follow to | New Port Forward | | | |
| | | 1. Select an existing Service Select A Service / Rule | / Rule or create a new o | ne Edit | Delete | |
| | | 2. Select how the service will Host Dynamic | Allows unsolicited inboun | d traffic to a particular PC or ased on specific outbound tra | | |
| | | 3. For Hosted Service, Select Select a Discovered LAN device: | a PC on the LAN | Or manually enter a LAN IP | : 192.168.1.18 | |
| | | | Apply Ca | ncel | | |
| <u>)</u> | | | | | | Internet |

If you clicked **Create**, the following **Create Port Forwarding Service** screen will appear. Using this screen, you can create port forwarding and port triggering services for your Router. The following sections explain how to customize these services in your Router.

- **Port Forwarding Ranges of Ports**: This option allows you to forward a range of WAN ports to an IP address on the LAN.
- **Trigger Ports:** This option allows you to forward a range of ports to an IP address on the LAN only after specific outbound traffic.

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| ver | on | | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | 1 | System Monitoring | |
| Main | | - | Create Port Forwa | | | | |
| Port Forwarding | 1 Enter 3 n | Follow the st | eps below to define a new | custom port forwarding | service. | | |
| | 1. Enter a n | ame for the custom so | ivice : | | | | |
| | 2. Specify the Port For | | try based on your speci t Triggering | fic ports: | | | |
| | 3. Define th | e first rule: | | | | | |
| | Protocol | Global PortStart | Global PortEnd | Base HostPort | Direction | Port Direction | |
| | top 💌 | | Apply | Cancel | h v | Dat | |
| | | | | | | | |
| Done | | | | | | | 🔮 Internet |



VersaLink Wireless Gateway (Model 7500)

15.3.3.3.1 Creating a Service Based on Specific Port Forwarding Ports

The Port Forwarding feature allows you to forward a range of WAN ports to an IP address on the LAN. You can set up a port forwarding entry based on your specific ports.

IMPORTANT: Using various Internet applications depends on the Router's firewall settings. Make sure that the Router's firewall is set to Medium Security or lower to take advantage of all the port forwarding features. Firewall settings take precedence over port forwarding services configured in the Router. For example, if the firewall is set to Medium Security, this will block ICMP packets even if the ICMP service is enabled. If a port forwarding service is not working, try setting the firewall to a lower setting.

To create a port forwarding service based on specific port forwarding ports, at the **Create Port Forwarding Service** screen, do the following:

- 1. Type the name of the custom service that you are creating in the field provided. This will be the name of the port forwarding service for which you are configuring specific Port Forwarding rules.
- 2. Click the **Port Forwarding** option.
- 3. Select the desired protocol from the **Protocol** drop-down menu.
- 4. Enter the desired Global Port Start, Global Port End, and Base Host Port values in the fields provided, as shown in the example below.
- 5. Select the desired direction settings
- 6. Click **Apply** to allow the changes to take effect.

NOTE: If you clicked **Cancel** in the **Create Port Forwarding Service** screen, the service you created will be displayed; however, it will not be activated in your Router. You must click **Apply** to allow the settings to take effect.

| http://10.16.90.10:2420 - V | | net Explorer | | | | |
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| veri | on | | | | | |
| U.S.I. | | | | ~ | | |
| E | 2 | 22 | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | |
| Main | | | Create Port Forward | - | | |
| Port Forwarding | | Follow the st | eps below to define a new cu | istom port forwarding se | ervice. | |
| | | ame for the custom se | ervice : | | | |
| | First Port Forwa | arding Service | | | | |
| | 2. Specify t | he port forwarding ent | ry based on your specific | ports: | | |
| | OPORT FO | rwarding 🔿 Port | t Triggering | | | |
| | 3. Define th | a first rula | | | | |
| | Protocol | Global PortStart | Global PortEnd | Base HostPort | Direction Port Direction | |
| | tcp 💌 | 22 | 24 | 23 | In 💌 Dst 🖂 | |
| | | | | | | |
| | | | Apply Ca | ancel | | |
| | | | | | | |
| | <u> </u> | | | | | |
| | | | | | | |
| | | | | | | 🥑 Internet |



VersaLink Wireless Gateway (Model 7500)

| | Port Forwarding Service | | | | |
|-------------------|---|--|--|--|--|
| Protocol | TCP – Transmission Control Protocol | | | | |
| PIOLOCOI | UDP – User Datagram Protocol | | | | |
| Global Port Start | The WAN-side TCP/UDP start port. | | | | |
| Global Port End | The WAN-side TCP/UDP end port. | | | | |
| Base Host Port | The port on the WAN that will host the port forwarding service selected. Base Host Port is | | | | |
| | the first port that will be used for a specific service when configured for a range of ports. | | | | |
| Direction/ | The port direction for the port forwarding rule. | | | | |
| Port Directon | | | | | |

If you clicked Apply, the following Service Details screen will be displayed. Click Done.

| http://10.16.90.10:2420 - V | | t Explorer | | | | | |
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| Ele Edit View Favorites Ioc | ols Help | | | | | | 4 |
| | | | | | | | |
| | | | | | | | |
| veri | on | | | | | | |
| | (@) | | | | F | | |
| | Wireless | <u>e</u> | Firewall | | Syste | | |
| Main | Settings | My Network | Settings | Advanced | Monito | ring | |
| | | | | | | | |
| Main | | | Service De | tails | | | |
| Port Forwarding | | | | | | | |
| L | | Service | Name First Port Port Forw | Forwarding Ser | vice | | |
| | | ()pc | Torcrow | arding | | | |
| | Entry | Protocol | Global Port Start | Global Port End | Base Host Port | Action | |
| | 1 | top | 22 | 24 | 23 | 🗮 | |
| | Add | | | | | 2 | |
| | | | | | | | |
| | | | Close | | | | |
| | | | | | | | |
| | <u> </u> | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Done | | | | | | | 🥑 Internet |

7. Return to the **New Port Forwarding Rule** screen and, from the drop-down menu, select the name of the custom service that you created (the name should appear at the bottom of the list under **Custom Defined Service**).

| http://10.16.90.10:2420 Ele Edt yew Favorites Vel Main | Iools Help Yiron Wireless Settings | My Network | Frewall | Advanced | System Honitoring | |
|---|---|--|---|-------------------------|----------------------|--|
| Main Port Forwarding | | Cutom Contrast Contra | Create C | service on your device. | ffic. | |



VersaLink Wireless Gateway (Model 7500) This screen displays the service name in the field.

| http://10.16.90.10:2420 - Verizo File Edit View Favorites Tools H | | t Internet Explorer | | | | |
|--|----------------------|--|---------------------------|------------------------------------|----------------------|------------|
| verizo | | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Port Forwarding | | Follow th | New Port Forward | | | |
| | | 1. Select an existing Service / First Port Forwarding Service | Rule or create a new o | Edit | Delete | |
| | | 2. Select how the service will l | be activated | | | |
| | | Host | Allows unsolicited inbour | nd traffic to a particular PC on t | the LAN. | |
| | | O Dynamic | Enables inbound traffic b | based on specific outbound traf | fic. | |
| | | 3. For Hosted Service, Select a | PC on the LAN | | | |
| | | Select a Discovered LAN device: | SALLE-XP2 💌 | Or manually enter a LAN IP: | 192.168.1.18 | |
| | | | Apply Cr | ancel | | |
| | | | | | | |
| | | | | | | 🔮 Internet |

- 8. Select how the service will be activated.
 - Host allows unsolicited inbound traffic to a particular PC on the LAN.
 - Dynamic enables inbound traffic based on specific outbound traffic.
- 9. Select the IP address of the device that will host the service (select a device from the Select a Discovered LAN device drop-down menu or type an IP address in the field provided).
- 10. Click Apply to allow the service to be added to the Router's list of active services.



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If you clicked **Apply**, the following screen will appear. The Port Forwarding service has been added to the list of active services. To add additional port forwarding services to your Router, repeat steps 1 through 10.

| 🐴 http://10.16.90.10:2420 - Verizo | n - Microsoft Internet Explorer | | | | |
|---|--|-------------------------|---|----------------------|------------|
| <u>File Edit View Favorites Tools H</u> | lelp | | | | A. |
| Veri o Main | 1) Wireless Settings Hy Netwo | rk Firewall Settings | Advanced | System Monitoring | |
| Main General Port Forwarding DMZ Host Remote Administration Static NAT Security Log | This feature enables applicompute Current Profile: Default V Name First Port Forwarding Service IPSEC ALG Add | Port Forwarding | Others) by opening a tunnel inside your local area network Edit Host Device 192.168.1.18 Dynamic | Action | |
| E Done | | | | | V Internet |

To view the details for the service, click the details icon in the **Action** field. The following screen will appear. Click **Close** to return to the **Port Forwarding** screen.

| http://10.16.90.10:2420 - | Verizon - Microsoft Intern | et Explorer | | | | | |
|--|----------------------------|-----------------|--|-----------------|----------------|-------------|------------|
| <u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> | [ools <u>H</u> elp | | | | | | |
| ver | rizon | | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | Syste | em oring | |
| Main Port Forwarding | | Service Type | Service De Name First Port Port Forw | | vice | | |
| | Entry | Protocol | Global Port Start | Global Port End | Base Host Port | Action | |
| | 1 | tcp | 22 | 24 | 23 | R | |
| | Add | | | | | 2 | |
| | | | Close | | | | |
| 🕘 Done | | | | | | | 🥏 Internet |



15.3.3.3.2 Creating a Service Based on Specific Port Triggering Ports

The Trigger Ports feature allows you to forward a range of ports to an IP address on the LAN only after specific outbound traffic. You can set up a port triggering entry based on your specific ports.

IMPORTANT: Using various Internet applications depends on the Router's firewall settings. Make sure that the Router's firewall is set to Medium Security or lower to take advantage of all the port forwarding features. Firewall settings take precedence over port forwarding services configured in the Router. For example, if the firewall is set to Medium Security, this will block ICMP packets even if the ICMP service is enabled. If a port forwarding service is not working, try setting the firewall to a lower setting.

To create a port forwarding service based on specific port triggering ports, at the **New Port Forwarding Rule** screen, click **Create.**

| http://10.16.90.10:2420 - Verizon - Microso | oft Internet Explorer | | | | |
|---|--|------------------------------|---|----------------------|------------|
| Elle Edit View Favorites Tools Help | | | | | |
| verizon | | | | | |
| Main Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Port Forwarding | Follow th | New Port Forward | | | |
| | 1. Select an existing Service / Select A Service / Rule | Create | ne Edit | Delete | |
| | 2. Select how the service will b | Allows unsolicited inbour | id traffic to a particular PC on t ased on specific outbound trafi | | |
| | 3. For Hosted Service, Select a Select a Discovered LAN device: | PC on the LAN SALLE-XP2 V | Or manually enter a LAN IP: | 192.168.1.18 | |
| | | Apply Ca | ncel | | |
| Done | | | | | 🔮 Internet |

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If you clicked **Create** in the preceding screen, the following screen will appear. Complete the following steps to add a port triggering rule.

1. Click the **Port Triggering** option. (By factory default, the **Port Forwarding** option will be selected.)

| http://10.16.90.10:2420 - Ve | rizon - Microsoft Inter | net Explorer | | | | | |
|-------------------------------|------------------------------|-----------------------|---|---------------|-----------|----------------------|------------|
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| veriz | on | | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | | System Monitoring | |
| Main Port Forwarding | | | Create Port Forwa | | service. | | |
| | | nme for the custom se | ervice :] try based on your spec | ific ports: | | | |
| | Port For | warding 🔿 Por | t Triggering | | | | |
| | 3. Define the Protocol | Global PortStart | Global PortEnd | Base HostPort | Direction | Port Direction | |
| | tcp 🕑 | | | base nostPort | | Dst 🕑 | |
| | | | Apply | Cancel | | | |
| 🖉 Done | | | | | | | 🤡 Internet |

If you clicked the **Port Triggering** option in the preceding screen, the following **Create Port Triggering Rule** screen will be displayed.

| http://10.16.90.10:24 | | nternet Explorer | | | | | | - 🗆 🛛 |
|-------------------------|------------------------------|---|--|------------------------|------------------|----------------------|------------|----------|
| Ele Edit View Favorites | s <u>T</u> ools <u>H</u> elp | | | | | | | |
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| V | eri <mark>zon</mark> | | | | | | | |
| | 100) | | 11 | 2 | | | | |
| ELD | Wireless | | Firew | 2 | | | | |
| Main | Settings | My Network | Setti | | Advanced | System Monitoring | | |
| | | | | | | | 5 | |
| Main | | | Create Port Tr | ggering Rule | | | | |
| Port Forwarding | | Follow the | e steps below to defin | e a new port triggerin | g rule. | | | |
| | 1. Enter a name for t | he port triggering rul | e: | | | | | |
| | | | | | | | | - |
| | | | | | | | | |
| | | iggering rule based o | | ts: | | | | |
| | O Port Forwarding | Port Triggerin | 9 | | | | | |
| | 3. Define the first ru | e: | | | | | | |
| | Global Port Start | Global Port End | Local Port Start | Local Port End | IncomingProtocol | OutGoingProtocol | | |
| | | | | | tcp 🔽 | tcp 💌 | | |
| | When outbound traffic | is detected in the 'Trigge the range of 'G | er' Port, Port Forward Nobal' Ports | ng is enabled through | | | | |
| | | | | | | | | |
| | | | Apply | Cancel | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | ~ |
| 🙆 Done | | | | | | | 🤣 Internet | |



- 2. Type the name of the custom service that you are creating in the field provided. This will be the name of the port forwarding service for which you are configuring specific Port Triggering rules.
- 3. Enter the desired Global Port Start, Global Port End, Local Port Start, and Local Port End values in the fields provided, as shown in the example below.
- 4. Select the desired Incoming and Outgoing protocol for the rule.
- 5. Click Apply to allow the changes to take effect.

NOTE: If you clicked **Cancel** in the **Create Port Triggering Service** screen, the values you entered will be displayed; however, they will not be active in your Router. You must click **Apply** to allow the settings to take effect.

| a http://10.16.90.10:2420 | | nternet Explorer | | | | | | |
|---------------------------|--|---|-------------------------|----------------|----------|----------------------|------------|---|
| Ele Edit View Favorites | | | | | | | | |
| Main | Wireless Settings | My Network | k Fire Setti | | Advanced | System Monitoring | | |
| Main Port Forwarding | | Follow t | Create Port Tr | iggering Rule | ı rule. | | | |
| | 1. Enter a name for t First Port Triggering Service | | ıle : | | | | | |
| | 2. Specify the port to O Port Forwarding | iggering rule based | | rts: | | | | |
| | 3. Define the first ru | | | | | | | |
| | Global Port Start | Global Port End | Local Port Start | Local Port End | | OutGoingProtocol | | |
| | | is detected in the 'Trigg the range of | ger' Port, Port Forward | | | ICP 🖌 | | |
| <u>ا</u> | | | | | | | 🔮 Internet | ~ |

| Port Triggering Service | | | | |
|-------------------------|---|--|--|--|
| Global Port Start | The WAN side TCP/UDP start port. | | | |
| Global Port End | The WAN side TCP/UDP end port. | | | |
| Local Port Start | The local LAN side TCP/UDP start port. | | | |
| Local Port End | The local LAN side TCP/UDP end port. | | | |
| Incoming Protocol | The protocol to use for inbound traffic. | | | |
| Outgoing Protocol | The protocol to use for outbound traffic. | | | |

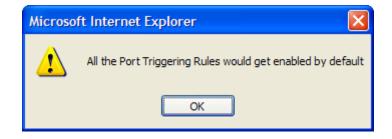


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- 6. After you click **Apply**, the following screen will be displayed. From the drop-down list, select name of your custom port triggering rule (the name will appear at the bottom of the list under **Triggering Rule**).
- 7. Click **Apply** to allow the service to be added to the Router's list of active services.

| http://10.16.90.10:2420 - Verizon - | Microsoft Internet Explorer | | | | |
|-------------------------------------|---|---|--|----------------------|------------|
| Eile Edit View Favorites Tools Help | | | | | A |
| | ireless ettings My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Port Forwarding | Fo | New Port Forwar | 17 | | |
| | 1. Select an existing Se | rvice / Rule or create a new | one | | |
| | Select A Service / Rule Return To Castle Wolfenstein Roger Wilco Session Initiation Protocol (SIP) ShouCast Server SIP ALG Spriner Radio-Netscape Music SSH Secure Shell Starfleet Command SOF/SOFII Tehret Thesis Sun & Dune 2000 Tifbes2 Umaa Tournament Server USENET News Service Westwood Online, C&C Workt Westwood Online, C&C Westwood Online, C&C Westwood Online, C&C Work Westwood Wes | Enables inbound traffic I a PC on the LAN SALLE-XP2 v | Edit nd traffic to a particular PC or based on specific outbound tra Or manually enter a LAN IP | affic. | |
| ê | First Port Triggering Service | × | | | 🥑 Internet |

If you click **Apply**, the following pop-up screen will appear. Click **OK** to continue.





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If you click **OK** in the pop-up screen, the following screen will appear. The Port Triggering service has been added to the list of active services. To add additional port triggering services to your Router, repeat steps 1 through 7.

| | Verizon - Microsoft Internet Explore | | | | |
|--------------------------------------|--------------------------------------|---|--|--|------------|
| <u>File Edit View Favorites To</u> | ools <u>H</u> elp | | | | A |
| | | | | | |
| veri | i <mark>zon</mark> | | | | |
| Main | Wireless Settings My Ne | twork Set | wall ings Advance | ed System Monitoring | |
| Main | | Ро | rt Forwarding | | |
| General Port Forwarding | This feature enables co | applications(Games, Webca mputers and a specific dev | ms, IM & Others) by opening a t ce port inside your local area ne | unnel between remote(Internet) etwork(LAN). | |
| DMZ Host Remote Administration | Current Profile: Defaul | v | | | |
| Static NAT | | Ne | w Edit | | |
| Security Log | Name | Mode | Host Device | Action | - 1 |
| e | IPSEC ALG | Port Forwarding | Dynamic | | |
| | First Port Triggering Serv | ice Trigger Ports | Dynamic | 🖶 🖶 | |
| | Add | | | | |
| | | | Close | | |
| | | | | | |
| | | | | | |
| 🕘 http://10.16.90.10:2420/htmlV/welc | comeMain.htm | | | | 🔮 Internet |

15.3.3.4 Deleting a Port Forwarding or Port Triggering Service

If you have created a port forwarding or port triggering service and have added it to your Router's list of active services, at the **Port Forwarding** screen you can do one of the following:

- Click the delete icon 🛱 adjacent to the service you want to delete.
- Click the details icon adjacent to the service you want to view.



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15.4 DMZ Host—Single IP Address Passthrough

In the **Firewall Settings** screen, select **DMZ Host** from the submenu options displayed at the left of the screen. A warning screen will display the following message:

Any changes made in this section may affect your device's performance and configuration. Do you want to proceed?

Click Yes to proceed.

| 🗿 VersaLink Wireless Gate | | xplorer | | | | |
|---------------------------|--------------|--------------------------|---------------------------|---------------------------|--------------|--------|
| File Edit View Favorites | : Tools Help | | | | | A |
| | | | | | | |
| ve | ri on | | | | | |
| | Wireless | 22 | S Firewall | 3 | System | |
| Main | Settings | My Network | Settings | Advanced | Monitoring | |
| | | | | | | |
| Main | | | Warning!! | | | |
| | | Any changes made in this | section may affect your d | evices performance and co | nfiguration. | |
| | | | Do you want to pro | ceed? | | |
| | | | Yes | No | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| < | | | III | | | > > |
| 🕘 Done | | | | | 🥑 Inter | rnet 🤤 |

15.4.1 Enabling DMZ Host

If you clicked **Yes**, in the preceding warning screen, the following **DMZ Host** screen will be displayed. The demilitarized zone (DMZ) feature allows you to select one device on the LAN that will share the WAN-assigned IP address. By enabling DMZ, the selected device becomes visible on the Internet. Network Address Translation (NAT) and Firewall rules do not apply to the device configured for DMZ. If you are using Bridge protocol, you will not be able to configure DMZ Host in the Router.

IMPORTANT:

- 1. Before you configure DMZ Host, configure your PC settings to obtain an IP address from VersaLink automatically. If needed, refer to your computer's Windows help screen for instructions.
- 2. If you have previously enabled Public LAN, you will need to disable Public LAN and enable the DHCP for Private LAN and the Private LAN settings before you configure DMZ Host.
- 3. DMZ Host and Static NAT are mutually exclusive features. Before you enable DMZ Host, confirm that Static NAT is disabled. If needed, refer to section 15.6.2 for details on disabling Static NAT.



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To configure DMZ Host, in the DMZ Host screen, select a device from the drop-down menu. The selected device will share your WAN IP address. Next, click Enable to allow the setting to take effect.

| le <u>E</u> dit <u>V</u> iew F <u>a</u> vorites] | <u>F</u> ools <u>H</u> elp | | | | | A |
|---|-------------------------------|------------|--|----------|----------------------|---|
| | | | | | | |
| Viel Main | vi on Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main General | | | DMZ Hos | t | | |
| Port Forwarding DMZ Host Remote Administration | - | Please sel | lect which LAN device will sh WAN IP Address : 10 | | | |
| Static NAT Security Log | | | SALLE-XP2 | | | |
| | | | | | | |
| | | | Enable | Cancel | | |

If you clicked Enable in the preceding screen, the following pop-up screen will appear. The Router must be reset to allow the new configuration to take effect. Click OK to continue.





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If you clicked **OK**, the following screen will appear. After a brief delay, the home page will be displayed. Confirm that you have a DSL link and that your PPP Status displays **UP**. (If necessary, click the **Connect** button to establish a PPP session).

| 🗿 Resetting Modem - Microsoft Internet Explorer | |
|--|---------|
| File Edit View Favorites Tools Help | |
| verizon | à |
| Resetting Modem Please Wait | |
| The modern is resetting in order for the requested changes to take effect. Your page will be reloaded shortly. | |
| | |

To confirm that DMZ Host has been enabled, select **Firewall Settings** in the top navigational menu, and then click **DMZ Host** in the submenu options at the left of the screen. Next, click **Yes** in the warning screen. The following **DMZ Host** screen will be displayed. This screen shows that DMZ Host is currently enabled for the selected device.

| 🖉 Ver | izon - Windows Internet Explor | er | à | | | | |
|-------|--------------------------------|----------------------|-------------------------------|-------------------------|-------------|----------------------|------------|
| Ge | + 10 http://192.168.1.1/htmlV/ | fw_dmz_hosting.asp?t | ack_location=fw_security_gene | eral.asp | | 🖌 🛃 🗶 Live | |
| 🚖 🤞 | Verizon | | | | | | 🟠 Home 🔹 🍟 |
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| | verizo | n | | | | | |
| 6 | | (10) | _ | | \sim | | |
| | ALE | 2 | 21 | | <u> </u> | | |
| | Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | |) |
| | Main | | | DMZ Host | e | Ì | |
| | General | | | DMZ HOS | | | |
| | Port Forwarding | | | | | | |
| | DMZ Host | | | WAN IP Address : 10. | 16.90.10 | | |
| | Remote Administration | | | DMZ Host is currently e | enabled for | | |
| | Static NAT | | | SALLE-XP3. | | | |
| | Security Log | | | | | | |
| L C | | | | | | | |
| | | | | Disable | Cancel | | |
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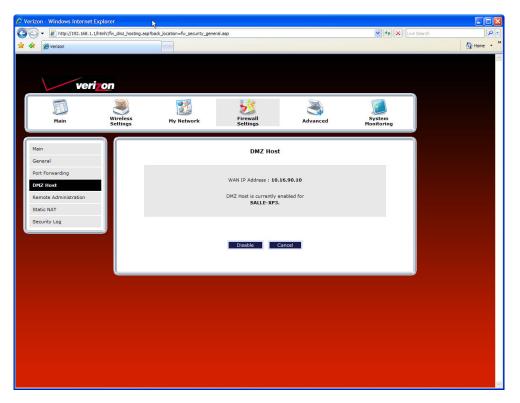
IMPORTANT: After you enable DMZ Host, you will need to reboot your computer.



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15.4.2 Disabling DMZ Host

To disable DMZ Host (if it has been previously enabled), click **Disable** in the DMZ Host screen.



If you clicked **Disable**, the following screen will be displayed. The Router must be reset to allow the new configuration to take effect. Click **OK** to continue.

| Window | rs Internet Explorer 💦 🔀 |
|--------|---|
| ? | The modem must be reset in order for the new configuration to take affect |
| T | Do you wish to disable DMZ Hosting and restart? |
| | OK Cancel |



User Guide

If you clicked **OK**, the following pop-up screen will appear. After a brief delay, the home page will be displayed. Confirm that you have a DSL link and that your PPP Status displays **UP**. (If necessary, click the **Connect** button to establish a PPP session).

| Verion Resetting Modem Please Wait The modem is reseting in order for the requested changes to take effect. Your page will be reloaded shortly. |
|---|
| Verion |
| Resetting Modem Please Wait |
| |

IMPORTANT: After you disable DMZ Host, you will need to reboot your computer.



User Guide

15.5 Remote Administration

In the **Firewall Settings** screen, select **Remote Administration** from the submenu options displayed at the left of the screen. A warning screen will display the following message:

Any changes made in this section may affect your device's performance and configuration. Do you want to proceed?

Click Yes to proceed.

| 🗿 VersaLink Wireless Gatewa | ay - Microsoft Internet E | Explorer | | | | |
|-----------------------------|---------------------------|--------------------------|----------------------|---------------------------|----------------------|--------|
| File Edit View Favorites | Tools Help | | | | | |
| veri | on | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main | | Any changes made in this | Do you want to pre | evices performance and co | nfiguration. | |
| ۲ | | | а П | | | |
| 🙆 Done | | | | | 💙 Inte | rnet 🤤 |

If you clicked **Yes** in the warning screen, the following **Remote Administration** screen will appear. Follow the steps below to configure Remote Administration in your Router.

NOTE: The User Name and Password should be at least 4 characters long and should not exceed 32 characters. Do not type a blank space or asterisks. The user name and password are case sensitive.

- 1. Type the administrator's User Name. (By default **admin** appears in this field; however, you can change this value, if desired).
- 2. Type the administrator's Password.
- 3. Enter the number of minutes after which you want remote access to time out.
- 4. Click the Enable Remote Access box (a check mark will appear in the box).
- 5. Click **Apply** to allow the settings to take effect.



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| Verizon - Microsoft Interne Ele Edit View Fgvorites Ver | | | | | | |
|--|----------------------|------------------------------|---|--|----------------------|------------|
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main General Port Forwarding DMZ Host | | | Remote Adminis | n ! | | |
| Remote Administration Static NAT Security Log | | | ration enabled, your ne attacks. cess is currently Enable | twork will be at risk fron d, Timeout is Disabled | n outside | |
| | | User Name Password | admin |] | | |
| | | Timeout Disable Timeout | 20 | | | |
| | | Enable Remote Access URL: | Zonning | | | |
| | | | Apply Ca | ncel | | |
| Done | | | | | | 🥑 Internet |

| Remote Administration | | | | | |
|-----------------------|---|--|--|--|--|
| User Name | Enter the user name in this field. | | | | |
| Password | Enter your password in this field. | | | | |
| Timeout | Default = 20 minutes | | | | |
| | Enter the number of minutes after which remote access will be deactivated. (It will | | | | |
| | also be deactivated if the Router is reset to factory defaults). | | | | |
| Disable Timeout | Click this box (a check mark will appear) to activate the Disable Timeout feature. | | | | |
| | This means that once you enable Remote Access, it will remain on until you reset | | | | |
| | the Router to factory defaults. This function overrides any timeout values. | | | | |
| | Deselect the box to deactivate this feature. | | | | |
| Enable Remote Access | Click this box (a check mark will appear) to enable Remote Access. | | | | |
| | Deselect the box to disable this feature. | | | | |
| Remote URL | Displays the URL of the remote management device (VersaLink). | | | | |



User Guide

The following screen shows a check mark in the **Enable Remote Access** and **Disable Timeout** check boxes. The following message is displayed:

Remote access is currently enabled. After 20 minutes of inactivity, or on reboot, remote access will be automatically disabled.

After 20 minutes of inactivity or on reboot, Remote Access will be automatically disabled. To disable Remote Access, click the **Enable Remote Access** box to clear the check mark. Then click **Apply** to allow the change to take effect.

| 🕘 htt | p://10.16.90.10:2420 - V | /erizon - Microsoft Int | ernet Explorer | | | | |
|-------|--|-------------------------|-----------------------|---|---|----------------------|--------------|
| Ele | Edit View Favorites Too | ols <u>H</u> elp | | | | | # |
| | veri | on | | | | | <u>^</u> |
| | Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | Main General | | | Remote Adminis | tration | | |
| | Port Forwarding DMZ Host Remote Administration | | With Remote Administr | Attention ation enabled, your no attacks. | n ! atwork will be at risk fror | n outside | |
| | Static NAT Security Log | | Remote Acc | ess is currently Enable | ed, Timeout is Disabled | | |
| | | | User Name | admin |] | | |
| | | | Password Timeout | 20 |] | | |
| | | | Disable Timeout | | | | |
| | | | Enable Remote Access | - | | | |
| | | | URL: | http://10.16.90.10:2420 | | | |
| | | | | Apply Ca | incel | | |
| (R) = | | | | | | | ✓ |
| 🙆 Don | e | | | | | | 🔮 Internet 🚬 |



15.6 Static NAT

In the **Firewall Settings** screen, select **Static NAT** from the submenu options displayed at the left of the screen. A warning screen will display the following message:

Any changes made in this section may affect your device's performance and configuration. Do you want to proceed?

Click Yes to proceed.

| VersaLink Wireless Gatewa | y - Microsoft Internet E | xplorer | | | | |
|---------------------------|--------------------------|--------------------------|----------------------|----------|----------------------|---------|
| File Edit View Favorites | Tools Help | | | | | A. |
| veri | <u>70n</u> | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main | | Any changes made in this | Do you want to pro | | nfiguration. | |
| < | | | | | | > |
| 🙋 Done | | | | | 🥩 Int | ernet 🦽 |

15.6.1 Enabling Static NAT

If you clicked **Yes** in the warning screen, the following **Static NAT** screen will appear. The **Static NAT** screen allows you to configure your Router to work with the special NAT services. When the Router is configured for Static NAT, any unsolicited packets arriving at the WAN will be forwarded to the selected device. This feature can be used when you want to host a server for a specific application.

IMPORTANT:

Static NAT and DMZ Host are mutually exclusive features. Before you enable static NAT, confirm that DMZ Host is disabled. If needed, refer to section 15.4.2 for details on disabling DMZ Host.



User Guide

To enable Static NAT, select a device from the **Static NAT Device** drop-down menu, or enter the IP address of the device to which you want to assign Static NAT. Next, click **Enable**.

| 🗿 http://10.16.90.10:2420 - Veri: | | ternet Explorer | | | | | | |
|--|----------------------|--|--|----------------------|----------------------|--------------|--|--|
| Ele Edit View Favorites Tools | Help | | | | | <u></u> | | |
| veri | on | | | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | | | |
| Main General | | | Static NA | г | | | | |
| Port Forwarding DMZ Host Remote Administration | | Set up an IP address to be your default NAT destination. | | | | | | |
| Static NAT Security Log | | | Static NAT Device or spectry | LE-XP2 | | | | |
| | | | All unsolicited inbound trai to the above de Note: Static NAT and D mutually exclusive i | vice. MZ Host are | | | | |
| | | | Enable Disable | Cancel | | | | |
| | | | | | | ~ | | |
| 6 | | | | | | 🔮 Internet 💦 | | |

The following screen shows that Static NAT has been enabled for the device you selected.

| 🗿 http://10.16.90.10:2420 - V | /erizon - Microsoft Inte | rnet Explorer | | | | |
|----------------------------------|--------------------------|---------------|---|-------------------------|----------------------|----------|
| Ele Edit View Favorites To | ols <u>H</u> elp | | | | | |
| veri | on | | Ha | <u> </u> | | <u>`</u> |
| EL | 3 | <u>T</u> | 22 | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | |
| Main | | | Static NA | т | | |
| General | | | | | | |
| Port Forwarding | | | Enabled for 192.1 | 68.1.18 | | |
| DMZ Host | | Set up | p an IP address to be your d | efault NAT destination. | | |
| Remote Administration Static NAT | | | Static NAT Device | ~ | | 8 |
| Security Log | | | | | | |
| Decarity Log | | | or specify | | | |
| | | | IP Address | | | |
| | | | All unsolicited inbound trai to the above de | | | |
| | | | Note: Static NAT and D mutually exclusive f | | | |
| | | | | | | |
| | | | | | | |
| | | | Enable Disable | Cancel | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 🔄 Done | | | | | | Internet |



User Guide

15.6.2 Disabling Static NAT

To disable Static NAT (if it has been previously enabled), click Disable in the Static NAT screen.

| b http://10.16.90.10:2420 . Veri Ele Edt Yew Favorites Iods | Help | tternet Explorer | Firewall Settings | Advanced | System Monitoring | |
|---|------|------------------|---|------------------------|----------------------|------------|
| Main General Port Forwarding DMZ Host Remote Administration Static NAT Security Log | | Set up | Static NAT Enabled for 192.1 an IP address to be your d Static NAT Device or specify IP Address All unsolicited inbound upd mutuelly exclusive for mutuelly exclusive for | fault NAT destination. | | |
| Done . | | | | | | V Internet |

After you have disabled Static NAT the following screen will show no devices enabled for static NAT.

| a http://10.16.90.10:2420 - | | rnet Explorer | | | | |
|-----------------------------|----------------------|---------------|---|----------------------|----------------------|------------|
| Ele Edit View Favorites Io | ools Help | | | | | |
| | | | | | | |
| ver | i <mark>ron</mark> | | | | | |
| FT | | 22 | 53 | X | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | |
| Main | | | Static NA | r | | |
| General Port Forwarding | | | | | | |
| DMZ Host | | | | | | |
| Remote Administration | | Set up | an IP address to be your d | | | |
| Static NAT Security Log | | | Static NAT Device | Y | | |
| Security Log | | | or specify | | | |
| | | | IP Address | | | |
| | | | All unsolicited inbound trai to the above der Note: Static NAT and D | vice. MZ Host are | | |
| | | | mutually exclusive f | eatures. | | |
| | | | | | | |
| | | | Enable Disable | Cancel | | |
| | | | | | | |
| | | | | | | |
| 🙆 Done | | | | | | S Internet |



15.7 Security Log

In the **Firewall Settings** screen, select **Security Log** from the submenu options displayed at the left of the screen. A warning screen will display the following message:

Any changes made in this section may affect your device's performance and configuration. Do you want to proceed?

Click Yes to proceed.

| 🕘 VersaLii | nk Wire | less Gateway - | Microsoft Intern | et Explorer | | | | |
|------------|---------|----------------|----------------------|--------------------------|----------------------|---------------------------|----------------------|------------|
| File Edit | View | Favorites Tool | s Help | | | | | A. |
| | | veri | on | | | | | |
| | Main |) | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main | | | | Any changes made in this | Do you want to pro | evices performance and co | nfiguration. | |
| < | | | | | | | | |
| ど Done | | | | | | | | Internet 🔡 |

If you clicked **Yes** in the warning screen, the following **Security Log** screen will appear. This screen alerts you of noteworthy information sent to VersaLink from the Internet. The screen can contain 1000 entries, but a maximum of 50 entries are displayed at a time. Once 1000 entries have been logged, the oldest entry is removed to make space for the new entries as they occur.

| http://10.16.90.10:2420 - Ver | izon - Microsoft Internet E | xplorer | | | | |
|--|-----------------------------|------------|--|------------------|----------------------|------------|
| Ele Edit View Favorites Tools | Help | | | | | At |
| veriz | on | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main General Port Forwarding DMZ Host | Cia | | Security Lo Settings the Refresh button to | Printable Format | Refresh | |
| Remote Administration Static NAT | Time | Direction | Rage 1 | ule/Reason | Details | |
| Security Log | | | · | | | |
| http://10.16.90.10:2420/htmlV/adv_ad | vanced_menu.asp | | | | | 🔮 Internet |



User Guide

| | Security Log | | | | | |
|--------------------------|---|--|--|--|--|--|
| Close | Clicking this button closes the security log screen. | | | | | |
| Clear log | Clicking this button removes all entries from the log. | | | | | |
| Settings | Clicking this button opens a new window that contains configuration settings for selecting the information that you want logged. | | | | | |
| Printable/savable format | Clicking this button opens a new window that contains a list of all the logged packets that can be saved or printed. You can send a copy of the Firewall log to a designated printer. | | | | | |
| Refresh | Clicking this button updates the screen so that it displays the most current data. | | | | | |
| Time | Displays the time that the packet was sent. | | | | | |
| Direction/Source | Displays the direction of transmission. | | | | | |
| Rule/Reason | Displays the internal rule that caused the logged event. The internal rule is set up under Firewall rules. | | | | | |
| Alert | Displays a description of the logged event. | | | | | |
| Details | Displays details about logged event. | | | | | |

If you clicked **Settings** in the preceding **Security Log** screen, the following **Firewall Log Settings** screen will appear. This screen allows you to configure firewall remote logging. Remote logging allows the firewall logs to be sent to a machine running a syslog server.

NOTE: The syslog server must be configured to isten on udp port 514, which is usually the default port. In order for the logs to be saved to the syslog server, the server should be configured to save the logs to a file. Some of the free syslog servers available on the Internet are kiwisyslog, MT_syslog and 3Csyslog.

To configure Remote Logging, do the following:

- 1. Select the desired firewall log settings from the drop-down menus.
- 2. Click the Enable check box below Remote Logging (a check mark will appear in the box).
- 3. Type the IP address of the syslog server in the Remote IP Address field.
- 4. Click **Apply** to allow the settings to take effect.

| http://10.16.90.10:2420 - Ele Edit View Favorites | | rnet Explorer | | | | |
|--|----------------------|-----------------|----------------------|--------------|----------------------|----------|
| | ri <mark>z</mark> on | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main General | | | Security Log Se | ettings | | |
| Security Log | | Log Allowed Tr | affic | Disabled | | |
| Security Settings | | Log Blocked Tr | | Disabled | | |
| | | Log Traffic Spe | | Enabled 💌 | | |
| | | Log Administra | tive Access | Disabled 💌 | _ | |
| | | | Remote Logo | jing | | |
| | | Enable | | | | |
| | | Remote IP Add | ress | 192.168.1.47 | | |
| | | | Apply Ca | incel | | |
| | | | | | | |
| | | | | | | |
| one | | | | | | Internet |



User Guide

16. ADVANCED

The following sections discuss the advanced features of your Router, such as IP address distribution, firmware upgrades, etc.

IMPORTANT: This section assumes that you have active DSL and Internet service.

If you select Advanced in the top navigational menu, a warning screen will display the following message:

Any changes made in this section may affect your device's performance and configuration. Do you want to proceed?

Click Yes to proceed.

| 省 VersaLink Wireless Gateway | / - Microsoft Internet E | xplorer | | | | |
|------------------------------|----------------------------|--------------------------|----------------------|---------------------------|----------------------|--------|
| File Edit View Favorites To | ools Help | | | | | 2 |
| veri Main | OT Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main | | Any changes made in this | Do you want to pro | evices performance and co | nfiguration. | |
| < ▲ Done | | | 11 | | hrī 🍥 | ternet |



User Guide

If you clicked **Yes** in the preceding warning screen, the following screen will appear. The **Advanced** screen allows you to access various configurable features in your Router. To access a feature, click the link of the feature that you want to access. The features shown in this page will be discussed in the following sections.

| http://10.16.90.10:2420 - Ver File Edit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools | | lorer | | | |
|--|---|--------------------|-----------------------------|--|----------|
| | on | y Network Settings | Advanced | System Monitoring | |
| Main Advanced | Diagnostics Restore Defaults Rebot Gateway Users Quality of Service (Remote Administrai ALG Detect WAN Config | (QoS) tion | anced Configuration File | Firmware Upgrade Event Vertice Routing IP Address Distribution Private LAN Public LAN RIP Configuration | |
| 🙆 Done | | | | | Internet |

16.1 Diagnostics

In the **Advanced** screen, click **Diagnostics.** The following screen will appear. Using this screen, you can run the following diagnostics tests:

- To run a DNS test, type the appropriate host name in the field provided, and then click test.
- To run a PING test, type the appropriate IP address or host name in the field provided, and then click test.
- To run a Trace Route, type the appropriate IP address or host name in the field provided, and then click **trace.**
- To run a full diagnostic test on your Router, click **Test All.**



User Guide

| a http://10.16.90.10:2420 - Verize | on - Microsoft Intern | et Explorer | | | | |
|------------------------------------|-----------------------|-------------|-------------------------------|-------------|----------------------|------------|
| Ele Edit View Favorites Tools | Help | | | | | A* |
| | | | | | | <u></u> |
| | | | | | | |
| verizo | 10 | | | | | |
| FTT | | 22 | 55 | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | - | | oottings | | ········ | |
| Main | | | Diagnostics | | | |
| Diagnostics | | | | | | |
| | | | Connection Status DSL Up | 5 | | |
| | | | PPPoE connec | ted | | |
| | | | PPP Up | | | - |
| | | Те | est Description / Test Res | ults Status | | |
| | | р | Self Test ING ISP's Router | | | |
| | | | | | | |
| | | | DNS | | | |
| | Host Name | | | | Test | |
| | IP Address: | | | | | |
| | | | PING | | | |
| | IP Address / | | PING | | Test | |
| | Host Name | - | | | | |
| | Trace Route | | | | Trace | |
| | Trace Koule | Max Hops 5 | | | Hate | |
| | | | | | <u>_</u> | |
| | | | | | | |
| | | | | | | |
| | | | | | ~ | |
| | | | | | | |
| | | | | | | |
| | | | Test All Cano | cel | | |
| | | | | | | |
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| ê | | | | | | 🔮 Internet |
| U | | | | | | Unternet |

If you want to PING using the System Self Test screen (diagnostics page) shown above, enter your **DNS** or **IP** address in the fields provided and click on the **test** button. The System Self Test will run a diagnostic test that executes independent of firewall security settings. See the following table for test descriptions and possible responses.

If you want to PING using the MS-DOS (shell) window, first you will need to check your firewall security setting. (If you PING via DOS shell you are susceptible to firewall rules, as this PING is dependent on VersaLink's firewall settings.) If your firewall is set to **Medium** or **High**, you will not be able to PING. You must set your firewall security setting to **Low** or **None**.

| | Diagnostics |
|-------|--|
| DSL | VersaLink checks the status of the DSL connection. |
| | Possible Responses: |
| | Connection Up: VersaLink is operating correctly and has obtained synchronization with the opposing network device. |
| | Connection down: VersaLink is operating correctly, but has not synchronized with the opposing device. |
| PPPoE | Indicates that a PPPoE session is or is not established. |
| | Possible Responses: |
| | Session Up: A valid PPPoE session has been detected. |
| | No Session: Currently there is no active PPPoE session established. |
| | Initiating Session: A PPP session must be connected from the home page. |



| VersaLink Wireless | Gatewav (Model 7500) | User Guide |
|--|--|--|
| PPP | Indicates that a PPPoE or PPPoA session must already be established. Possible Responses: Connection Up: VersaLink has established a connection No Connection: There is no PPP connection Initiating Connection: The PPP connection process has been initiated Connection Halted: A successful PPP connection was halted Cannot Connect: A PPP connection could not be made because of a PPPo Authorization Failure: The user name or password is incorrect. Link Control Protocol Failed: Reestablish the session (from the home pa | |
| | Test Description / Test Results | <u> </u> |
| Self Test | Performs an integrity check of certain internal components of VersaLink | Χ. |
| PING ISP's Router | Performs an IP network check (i.e., an IP Ping) of the service provider's verifies that VersaLink can exchange IP traffic with an entity on the othe Possible Responses: Success: VersaLink has detected an IP Remote Router connection. No Response: The IP Remote Router does not answer the IP Ping. Could not test: The test could not be executed due to Router settings. Che your PPP session. You must have both a DSL link and a PPP connection | r side of the DSL line. eck your DSL link or |
| | PING. | |
| DNS | Performs a test to try to resolve the name of a particular host. The host na input box. Possible Responses: Success: VersaLink has successfully obtained the resolved address. The below the host name input box. No Response: VersaLink has failed to obtain the resolved address. Host not found: The DNS Server was unable to find an address for the gi No data, enter host name: No host name is specified. Could not test: The test could not be executed due to VersaLink settings. or your PPP session. You must have both a DSL link and a PPP connecti execute a PING. | IP address is shown ven host name. Check your DSL link |
| IP Address | IP Address of the Host Name. | |
| PING (via IP Address or Host Name) | Performs an IP connectivity check to a remote computer either within or provider's network. You can PING a remote computer via the IP address your PING fails, try a different IP or DNS address. Possible Responses: Success: The Remote Host computer was detected. No Response: There was no response to the Ping from the remote compu No name or address to PING: No host name or IP address was specified. Could not test: The test could not be executed due to Router settings. Che your PPP session. You must have both a DSL link and a PPP connection PING. | or the DNS address. If nter. eck your DSL link or |
| Trace Route | Determines the route taken to destination by sending Internet Control Me echo packets with varying IP Time-To-Live (TTL) values to the destination to determine where the packet is stopped on the network. | |

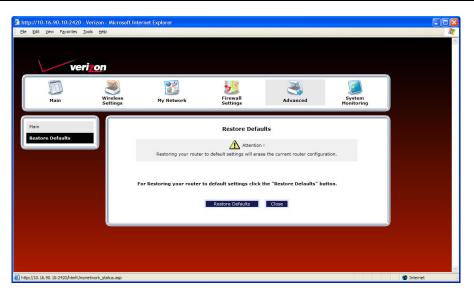


VersaLink Wireless Gateway (Model 7500)

16.2 Restore Defaults

In the Advanced screen, click Restore Defaults. This screen allows you to restore the Router to its factory default settings. To restore the Router, click the Restore Defaults button.

IMPORTANT: If you click **Restore Defaults**, any settings that you have configured in the Router will be erased, and any data that the Router has reported will be lost.



If you clicked **Restore Defaults**, the following screen will appear. Please wait a brief moment while the Router resets.

| 🗃 Resetting Modem - Microsoft Internet Explorer | |
|--|---|
| File Edit View Favorites Tools Help | A |
| | 1 |
| | |
| | |
| | |
| | |
| | |
| verizon | |
| | |
| Resetting Modem Please Wait | |
| | |
| The modern is resetting in order for the requested changes to take effect. | |
| the requested changes to take effect. Your page will be reloaded shortly. | |
| | |
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| | |

After the Router has reset, the **Router Secure** screen will be displayed. Follow the instructions explained in section 8.1, "Logging on to the Router," to log on to your Router.



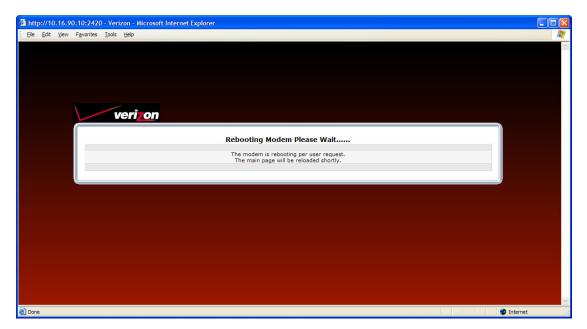
VersaLink Wireless Gateway (Model 7500)

16.3 Reboot Gateway

In the Advanced screen, click **Reboot Gateway.** This screen allows you to reboot your Router without losing any customized settings that you have made in the Router. Click **OK** to reboot your Router.

| http://10.16.90.10:2420 - \ | /erizon - Microsoft Inter | net Explorer | | | | |
|--|---------------------------|--------------|-----------------------------|----------------------|----------------------|------------|
| Eile Edit <u>V</u> iew F <u>a</u> vorites <u>T</u> o | ols <u>H</u> elp | | | | | <u></u> |
| | | | | | | |
| veri | non | | | | | |
| ET A | | 22 | 53 | X | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | |
| Main | | | Restart | | | |
| Reboot Gateway | | Are you | sure you want to reboot you | ur Wireless Gateway? | | |
| | | | OK Canc | el | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | <u>.</u> |
| 🕘 Done | | | | | | 🔮 Internet |

If you clicked **OK**, the following screen will appear. Please wait a brief moment while the Router reboots.





VersaLink Wireless Gateway (Model 7500)

16.4 Users

In the Advanced screen, click Users. The following User Settings screen allows you to change the administrator's user name and password. Type the desired values in the fields provided, and then click Apply to allow the settings to take effect. Refer to section 8.2, "Changing the Password," for details on this feature.

NOTE:

- 1. If the Router is password protected and you are not an authorized user, you will not be able to change the values in this screen. (The Router cannot be configured unless an authorized user is logged on.) Contact your network administrator for further instructions.
- 2. The values typed in the password fields will be masked for security purposes.
- 3. This feature changes the Administrator's password, not the PPP password.

| http://10.16.90.10:2420 | - Verizon - Microsoft Inter | net Explorer | | | | |
|----------------------------------|-----------------------------|-----------------------------|----------------------|-------------------|----------------------|------------|
| <u>File Edit View Favorites</u> | <u>T</u> ools <u>H</u> elp | | | | | |
| ve | rizon | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main User Settings | | | User Setting | 5 | | |
| L | | General Full Name: | | Administrator | | |
| | | User Name (case sensitive): | | Aurini iisti atoi | | |
| | | New Password: | | | | |
| | | Retype New Password: | | | | |
| | | | | | | |
| | | | Apply Can | cel | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| http://10.16.90.10:2420/htmlV/fv | v_security_general.asp | | | | | 🔮 Internet |

| User Settings | | | | |
|---------------------|---|--|--|--|
| Full Name | Displays the Administrator name. This field will be dimmed and unavailable for changes. | | | |
| User Name | Type the Administrators user name. (This field is case sensitive.) | | | |
| New Password | Type the administrator's new password. | | | |
| Retype New Password | Confirm the administrator's new password | | | |



User Guide

16.5 QOS

In the **Advanced** screen, click **QOS**. This screen allows you to configure Quality of Service parameters in the Router. Select the desired Quality of Service settings, and then click **Apply** to allow the setting to take effect.

| veri | 7 on | | | | |
|------------------|----------------------|--------------------------------|--|----------------------|--|
| Main | Wireless Settings | My Network Fire | wall Advanced | System Monitoring | |
| Main Advanced | | The following Quality Of Serv | QOS ice Parameters are for advanced users only. | | |
| | - | General Settings: | | | |
| | | Enable QOS | | | |
| | | Turbo TCP Enable | | | |
| | | QoS Filter Enable | | | |
| | | QoS Classification | Best Effort (BE) | | |
| | | Peak Information Rate (%) | 100 | | |
| | | Committed Information Rate (%) | 0 | | |
| | | | | | |
| | | Peak Burst Size (ms) | 1000 | | |
| | | Committed Burst Size (ms) | 1000 | | |
| | | Max Queue Size: | 300 | | |
| | | Latency Measurements: | | _ | |
| | | Latency Boundary | Boundary 1: 0 ms | _ | |
| | | Latency Threshold (ms) | 0 | | |
| | | Fragmentation Settings: | | | |
| | | IP Fragmentation Enable | | | |
| | | IP Fragment Size | 244 💌 | | |



16.6 Remote Administration

In the **Advanced** screen, click **Remote Administration**. This screen allows you to configure your Router so that it can be accessed remotely via a URL. Configure this feature to allow maintenance or troubleshooting for your Router.

WARNING: With Remote Administration enabled, your network will be at risk from outside attacks.

To enable Remote Administration, do the following:

- 1. Type the desired user name.
- 2. Type the desired password.

NOTE: The password should be at least 4 characters long and should not exceed 32 characters. Do not type a blank space or asterisks in the **Password** field. The password is case sensitive.

3. Enter the number of minutes after which remote access will disconnect, if it is idle.

NOTE: If you click the **Disable Timeout** check box (a check mark will appear in the box), this will override the preceding timeout minutes, and remote access will remain activated once you enable it.

- 4. Click the Enable Remote Access check box (a check mark will appear in the box).
- 5. Click **Apply** to allow the settings to take effect.

| Ele Edit View Figurantes Iools Help 🔇 Back • 🕲 - 😰 | A |
|---|-----------|
| | ^ |
| | |
| verizon | |
| Image: Main Image: Wireless Settings Image: Wireless Sett | |
| Main General Remote Administration | |
| Port Forwarding DMZ Host With Remote Administration enabled, your network will be at risk from outside | 3 |
| Remote Administration attacks. Static NAT | |
| Security Log Remote Access is currently Enabled, Timeout is Disabled | |
| User Name admin | |
| Password | |
| Timeout 20 | |
| Disable Timeout | |
| Enable Remote Access | |
| URL: http://10.16.90.10:2420 | |
| 2 Done | nternet . |



User Guide

| Remote Administration | | | | | | | | |
|-----------------------|---|--|--|--|--|--|--|--|
| User Name | Default = admin | | | | | | | |
| | The name used for the Remote Administration session. The only valid characters are (a- | | | | | | | |
| | z, A-Z, 0-9). The user name must be at least 6 characters and must not exceed 12 | | | | | | | |
| | characters long. | | | | | | | |
| Password | The password used for the remote administration session. Do not use spaces or double- | | | | | | | |
| | quotes in the password field. The user name must be at least 6 characters and must not | | | | | | | |
| | exceed 12 characters long. | | | | | | | |
| Timeout | Default = 20 minutes | | | | | | | |
| | The interval (in minutes) after which the remote access will disconnect, if it is idle. | | | | | | | |
| Disable Timeout | Default = deactivated | | | | | | | |
| | To activate the Disable Timeout feature, click this box (a check mark will appear). | | | | | | | |
| | Clear the box to deactivate this feature. | | | | | | | |
| Enable Remote Access | Default = deactivated | | | | | | | |
| | Click this box (a check mark will appear) to activate Enable Remote Access. | | | | | | | |
| | Clear the box to deactivate this feature. | | | | | | | |
| Remote URL | Displays the URL for the remote access session. | | | | | | | |

16.7 ALG

In the Advanced screen, click ALG. This screen allows you to configure your Router so that it can be accessed remotely via a URL. Configure this feature to allow maintenance or troubleshooting for your Router. This page enables you to configure application-level gateway (ALG) services for your Gateway. Click on the box of each service that you want to enable (a check mark will appear in the box). After you have configured the desired settings, click Save to save the settings.

Enabling an ALG service opens the IP ports associated with the corresponding service. For example, if you have an IPSec client running on a LAN-side PC attached to the TriLink, it is necessary to enable the IPSec ALG. Enabling IPSec opens the default ports used by IPSec, 500 and 1500 so that traffic to and from the IPSec client may pass through.

NOTE: When the firewall level is set to "High," some services may not be configurable.

| 🗿 http://10.16.90.10:2420 - | Verizon - Microsoft Int | ernet Explorer | | | | |
|-----------------------------|-------------------------|----------------------|----------------------|----------|----------------------|----------|
| Ele Edit View Favorites I | ools <u>H</u> elp | | | | | |
| | | | | | | |
| ver | ri <mark>zon</mark> | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main ALG | | | ALG | | | |
| e | - | FTP | V | | | |
| | | H323 | | | | |
| | | TFTP | | | | |
| | | РРТР | | | | |
| | | Direct X ver 8 | | | | |
| | | IPSec | | | | |
| | | Windows Media Player | | | | |
| | | SIP | | | | |
| | | | Apply Cano | | | |
| Ì | | | | | | Internet |



User Guide

16.8 Detect WAN Configuration

In the Advanced screen, click Detect WAN Configuration. This screen displays the details of your WAN connection.

NOTE: If you have not established and DSL connection with Verizon's equipment and have not established an Internet connection with Verizon, the Router will report **Detection Disabled**. Confirm that you have Internet connection with Verizon. If problems persist, contact Verizon.

To check your WAN connection, click Detect Configuration. The Router will be reset.

| 🗿 http://10.16.90.10:2420 - Ver | | et Explorer | | | | |
|--|---------------|----------------|-------------------|--------------------------|------------|---|
| <u>File Edit View Favorites T</u> ools | Help | | | | | |
| | | | | | | ^ |
| | | | | | | |
| veriz | on | | | | | |
| | Wireless | 22 | Firewall | A | System | |
| Main | Settings | My Network | Settings | Advanced | Monitoring | |
| | | | | | | |
| Main | | | Detect WAN Config | guration | | |
| Detect WAN Configuration | | | Results | | | |
| | | | | | | |
| | DHCP Results | | | | | |
| | PPPoE Results | | | | | |
| | Last VC Teste | d (VPI / VCI): | | | | |
| | | Detect Cor | nfiguration Er | nable Continuous Retries | | |
| | | | | | _ | |
| | <u> </u> | | | | | |
| | | | | | | |
| | | | | | | ~ |
| 🕘 Done | | | | | 🥑 Internet | |



User Guide

If no connection is detected, the following screen will appear. Click **Enable Continuous Retries**. The Router will automatically continue to check the WAN connection. After a WAN connection is detected, the Router will report the results.

| VersaLink Wireless Gateway | y - Microsoft Internet I | xplorer | | | | |
|---|--------------------------|------------------|-------------------|-----------------|----------------------|----------|
| File Edit View Favorites Ti | ools Help | | | | | * |
| | | | | | | |
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| veri | on | | | | | |
| | | 2 | | | | |
| Main | Wireless | My Network | Firewall | Advanced | System Monitoring | |
| L | Settings | | Settings | | Monitoring | |
| Main | | | | | | |
| Detect WAN Configuratio | | | Detect WAN Config | guration | | |
| Detect war configurate | | | Status | | | |
| | | | | | | |
| | Please Cor | nnect a DSL Line | | | | |
| | | Cancel | | Enable Continuo | us Retries | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | - 00 | | | |
| http://192.168.1.1/wan_autodisc.h | itm# | | | | 🔮 Int | ernet |

If you clicked Enable Continuous Retries, the following pop-up screen will appear. Click OK to continue.





User Guide

If you clicked **OK**, the following screen will appear. If want to disable continuous retries, click **Disable Continuous Retries.**

| 🗿 VersaLink Wireless Gateway - | Microsoft Interr | net Explorer | | | | |
|----------------------------------|---|-----------------|----------------------|----------|----------------------|--------|
| File Edit View Favorites Too | ls Help | | | | | A. |
| veriz | on | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Detect WAN Configuration | | | Detect WAN Config | guration | | |
| | Detect | ion In Progress | Disable Continuous I | Retries | | |
| | | | | | | |
| < | | | in - | | | |
| | 🕘 Downloading picture http://192.168.1.1/firewall.jpg | | | | | ternet |



User Guide

16.9 Dynamic DNS Configuration

In the **Advanced** screen, click **Dynamic DNS Configuration**. Dynamic DNS is a dynamic IP address that can aliased to a static hostname, allowing a computer on the network to be more easily accessible from the Internet.

| 🖄 http://10.16.90.10:2420 - V | erizon - Microsoft In | ternet Explorer | | | | | | |
|--|--|--------------------|----------------------|----------|----------------------|----------|--|--|
| Ele Edit View Favorites Too | ols <u>H</u> elp | | | | | <i></i> | | |
| veri | 7 0n | | | | | <u>^</u> | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | | | |
| Main Dynamic DNS Port Forwarding | Dynamic DNS Configuration Setup Dynamic DNS (Domain Name Server). Dynamic DNS is a dynamic IP address to be aliased to a static hostname, allowing a computer on the network to be more easily accessible from the Internet. | | | | | | | |
| | | Domain Name | | | | | | |
| | | Key Name | | | | | | |
| | | Security Key | | | Browse | | | |
| | | Last Update Status | DDNS Update is disa | bled | | | | |
| | | | Apply Can | cel | | | | |
| 🙆 Done | | | | | 🔮 Intern | et | | |

| Dynamic DNS Configuration | | | | |
|---------------------------|--|--|--|--|
| Domain Name | This is the domain name with which the dynamic DNS client is registered. | | | |
| Key Name | Provided by your service provider. | | | |
| Security Key | Provided by your service provider. | | | |
| Last Update Status | Provided by your service provider. | | | |



User Guide

16.10 DNS Server

In the **Advanced** screen, click **DNS Server**. The following screen will appear. Your Router contains a built-in DNS server. When an IP address is assigned, the Router will interrogate the new device for a machine name using several well-known networking protocols. Any names learned will dynamically be added to the DNS server's table of local hosts.

Do any of the following:

- To rename the Domain Name, type a domain in the **Domain Name** field and then click **Set**.
- To add a host name, click Add DNS Entry

| | Verizon - Microsoft Inter | rnet Explorer | | | | |
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| VOR | i <mark>zon</mark> | | | | | |
| Ven | | | | | | |
| | | 222 | 55 | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Į | Settings | • | Settings | | Monitoring | |
| | | | | | | |
| Main | | | DNS Serve | er | | |
| DNS Server | | | | _ | _ | |
| | | Domain Name | westell.com | | Set | |
| | | | | | | |
| | | Host Name | IP Ad | | Set | |
| | | dslrouter launchmodem | 192.1 | | Set Set | |
| | | deviceweb | 192.1 | | | |
| | | SmartDevice | 192.10 | | <u>é</u> | |
| | | Add DNS Entry | | | | |
| | | | | | | |
| | | Discovered Local D | evices | | | |
| | | Host Name | IP Ad | dress | | |
| | | * | | i8.1.42 | | |
| | | • | 192.16 | 8.1.18 | | |
| | | | | | | |
| | | | Cancel | | | |
| | | | | | | |
| | | | | | | |
| http://10.16.90.10:2420/htmlV/web | comeMain.htm | | | | 😮 Internet | × |

| Domain Name | This field allows you to enter a Domain Name for your Router | | | | | |
|--|--|--|--|--|--|--|
| | To add a Domain Name, in the field under User Assigned DNS, type in your new | | | | | |
| NOTE: Some ISP's may | domain name and click Set. | | | | | |
| require the name for | | | | | | |
| identification purposes. | | | | | | |
| Host Name | This field allows you to enter a HOST name for Router. | | | | | |
| | | | | | | |
| | To add a new Host name, in the field under Static Host Assignment, type in the Host | | | | | |
| | Name and the IP address and click Set. | | | | | |
| IP Address | Displays the IP address that is assigned to the Host Name. | | | | | |
| | Discover Local Devices | | | | | |
| This field displays a list of | This field displays a list of the computers on the LAN that were assigned a DHCP Address. The DNS name and | | | | | |
| IP address entry of each discovered device is displayed. (The values in this field will be displayed barring any | | | | | | |
| propagation delays. If 'No | propagation delays. If 'No Discovered Devices' is displayed, manually refresh the screen.) | | | | | |



User Guide

If you clicked **ADD DNS Entry**, the following screen will appear. Type the **Host Name** and **IP Address** in the fields provided. Then, click **Apply** to continue.

| 🚰 http://10.16.90.10:2420 - Ver | izon - Microsoft Interne | t Explorer | | | | |
|---------------------------------|--------------------------|---------------------------|----------------------|----------|----------------------|----------|
| Eile Edit View Favorites Tools | Help | | | | | |
| veriz | on | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main DNS Entry | | | DNS Entry | | | |
| | | Host Name: IP Address: | 0.0.0.0 | | | |
| | | | Apply Can | cel | | |
| | | | | | | |
| ê | | | | | 🔮 Internet | . |

For example, the following screen shows DNS values in the fields. Click Apply.

| a http://10.16.90.10:2420 | - Verizon - Microsoft Inter | rnet Explorer | | | | |
|---|-----------------------------|---------------|----------------------|----------|----------------------|----|
| <u>File E</u> dit <u>V</u> iew F <u>a</u> vorites | <u>T</u> ools <u>H</u> elp | | | | | |
| | | | | | | |
| ve | rizon | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | |
| Main | | | DNS Entry | | | |
| DNS Entry | | Host Name: | Modem | 1 | | |
| | | IP Address: | 192.168 | 8.1.1 | | |
| | | | | | | |
| | | | Apply Can | cel | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
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| ē | | | | | 🥥 Internet | .: |



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If you clicked **Apply**, the following screen will be displayed. This screen shows that the **Host Name** and **IP Address** have been added to the DNS server. If you want to delete a DNS entry, click the delete icon Rest to the Host Name and IP address that you want to delete.

| http://10.16.90.10:2420 - Verizon - Mi | icrosoft Internet Explorer | | | | X |
|--|----------------------------|----------------------|----------|----------------------|----------|
| Ele Edit View Favorites Tools Help | | | | | R |
| verizon | | | | | ~ |
| Main Wirel | less My Network | Firewall Settings | Advanced | System Monitoring | |
| Main DNS Server | | DNS Server | | | |
| | Domain Name | westell.com | Se | t | |
| | Host Name | IP Addr | ess Ac | tion | |
| | dslrouter | 192.168 | .1.1 | Set | |
| | launchmodem | 192.168 | .1.1 | ⊋ | 1 |
| | deviceweb | 192.168 | .1.1 | 7 | |
| | SmartDevice | 192.168 | .1.1 | R | |
| | Modem 1 | 192.168 | .1.1 | 🗙 | |
| | Add DNS Entry | | E | <u>.</u> | |
| | Discovered Local | Devices | | | |
| | Host Name | IP Addr | | | |
| | * | 192.168. 192.168. | | | |
| | | 192.108. | 1.10 | | |
| | | Cancel | | | |
| | | | | 💓 Internet | ~ |



User Guide

VersaLink Wireless Gateway (Model 7500)

16.11 Configuration File

In the Advanced screen, click Configuration File. This screen allows you to save and load configuration files, which are used to back up and restore the Router's current configuration.

NOTE: Backup settings are stored in a separate area of flash, not to an external backup source.

Do one of the following:

- Click Save Configuration File to back up the Router's current configuration.
- Click Load Configuration File to load a previously backed up configuration file.

IMPORTANT: Loading a previously backed up configuration file will overwrite the Router's current configuration, and any data the Router has reported will be lost.

| VersaLink Wireless Gateway - | | i Explorer | | | | |
|--------------------------------|--------------|--|-------------------------------|------------------------------|-----------------------|-----|
| File Edit View Favorites Tool: | s Help | | | | | |
| | | | | | | |
| verizo | on | | | | | |
| (Sector 1 | (<u>(</u>) | 1 | <u>st</u> e | R | | |
| | Wireless | | Firewall | Advanced | System | |
| Main | Settings | My Network | Settings | Advanced | Monitoring | |
| Main | | | O | - 11 - | | |
| Configuration File | • 110 | e the Router's Configuration File | Configuration I | | re used to backup and | |
| | • Us re: | store the Router's current config store the Router's current config | guration. | connguration mes, which a | re used to backup and | |
| | To tak | e Back up of the Router's cu | rrent configuration, clic | k the "Save Configurat | ion File" button. | |
| | | | | - | | |
| | | Save Configuration File | L | | | |
| | To Loa | d a previously backed up co | onfiguration file, click th | e "Load Configuration | File" button. | |
| | Note: L | oading a previously backed up | configuration file will overw | vrite the current configurat | ion of the router. | |
| | | Load Configuration File | | | | |
| | | | | | | |
| | | | Cancel | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| < | | | | | | > |
| 🙆 Done | | | | | 🌍 Internet | .:: |



User Guide

VersaLink Wireless Gateway (Model 7500)

16.12 Firmware Upgrade

In the **Advanced** screen, click **Firmware Upgrade.** This screen is used to update the firmware that controls the operation of your Router. The updated firmware may be loaded from a CD-ROM, from a file stored on a local hard drive within your network, or from an update file stored on an Internet server.

IMPORTANT: The configurable settings of your Router may be erased during the upgrade process.

Do any of the following:

- Click change to edit the path of the firmware update file. The path will appear in the Check at URL field.
- Click **check for web updates** to retrieve the firmware update file and display any available update information. You must be connected to the Internet to use this option. **NOTE:** If you click **check for web updates** and the page returns "bug information not available," this indicates that the firmware update file is not available.
- Click **update from web now** to download the firmware update file and to automatically update the Router firmware if an update is available and applicable. You must be connected to the Internet to use this option.
- Click **upgrade now** to retrieve the firmware update file from a local hard drive or CD-ROM on your Network. Internet connection is not required for this option.

| http://10.16.90.10:2420 - Ele Edit View Favorites In | | ernet Explorer | | | | |
|---|----------------------|---|-----------------------------------|-----------------------------|----------------------|--|
| ver | ion | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Nain Firmware Upgrade | | Upgrade From the Inte Check at URL Update Status Und Current Version: Newer Version: Status: Issue/Errata: Bug/Errata is | Change mown VER:5.00.00.01A | and information, | | |
| | | Upgrade From a Comp Select an updat network. Upgrade f | ed firmware file from the cor | mputer's hard drive or CD (| in the | |
| | | | | | | |



User Guide

If you clicked Upgrade Now, the following screen will appear.

IMPORTANT: Once the transfer has started, do not turn off your Router's power, and do not navigate to other Web pages until the upload has completed.

| - | | | | | | |
|---|----------------------|--------------------------|--|----------------------|----------------------|---|
| Upgrade Software - Microsoft File Edit View Favorites Tor | | | | | | |
| veriz | | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Software Upgrade | | Select the upgrade file: | Software Up <u>c</u> | - | Browse | |
| | | | Once the transfer has sta power to your modem or web pages until the uploa | rted do not turn off | | |
| | | | | | | |
| K (| | | | | | > |
| Done | | | | | 🔮 Intern | |

Click **Browse** and then navigate to the location of the upgrade file; the path will appear in the window. Next, click **Upload file** to begin the upload to your Router.

IMPORTANT: Once the transfer has started, do not turn off your Router's power, and do not navigate to other Web pages until the upload has completed.

| http://10.16.90.10:2420 - \ | | ternet Explorer | | | | |
|-----------------------------|----------------------|--------------------------|--|-----------------------|----------------------|-------|
| Ele Edit View Favorites To | ols <u>H</u> elp | | | | | |
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| ver | on | | | | | |
| | ۱ | 22 | | 2 | 2 | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | | | | | |
| Main | | | Firmware Upg | rade | | |
| Firmware Upgrade | | Select the upgarde file: | C:\upgrade file\A99-750015-07.uj | pg | Browse | |
| | | | | | | |
| | | 0 Or | transfer by clicking the "Upl ice the transfer has started, | do not turn off nower | | |
| | | ∠ to the | your modem or navigate to e upload has completed. | other web pages until | | |
| | | | Upload File | Cancel | | |
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User Guide

After the upload has completed, the following screen will appear. Please wait a brief moment while your Router is being reset.

| Dpgrade Software - Microsoft Internet Explorer | |
|--|----------|
| File Edit View Favorites Tools Help | * |
| | |
| verizon | |
| Software Upgrade Completed Successfully | |
| Your modern will reset automatically. | |
| | |
| | |
| | |

After the Router has been reset, the home page will appear. Confirm that you have a DSL link and that the PPP Status displays **UP.** (If necessary, click **Connect** to establish your PPP session.)



16.13 VPN

In the Advanced screen, click VPN. This feature allows you to select the VPN options for your Router.

| 🙆 http://1 | 0.16.90.10:2420 - | Verizon - Microsoft Int | ernet Explorer | | | | |
|-------------------|--|-------------------------|----------------|----------------------|----------|----------------------|-----------------|
| <u>Eile E</u> dit | <u>V</u> iew F <u>a</u> vorites <u>I</u> | ools <u>H</u> elp | | | | | |
| | | | | | | | |
| | | | | | | | |
| | ver | ri <mark>zon</mark> | | | | | |
| | Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | | Settings | | Settings | | Homeoring | |
| Main | | | | | | | |
| VPN | | | | VPN | | | |
| | | | PPTP PassThru | | | | |
| | | | L2TP PassThru | | | | |
| | | | IPSec PassThru | | | | |
| | | | | | | | |
| | | | | Apply C | ancel | | |
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| - | | | | | | | ✓ |
| ど Done | | | | | | 🥥 Interne | t _{ai} |

| | VPN | | | | |
|-------------------|--|--|--|--|--|
| PPTP Passthrough | Factory Default = Enabled | | | | |
| | If enabled (a check mark will appear in the box), PPTP will work through the | | | | |
| | Gateway's NAT function. | | | | |
| L2TP Passthrough | Factory Default = Enabled | | | | |
| | If enabled, IPSec using ESP and L2TP can be supported via an ALG. | | | | |
| IPSec Passthrough | Factory Default = Enabled | | | | |
| | If enabled, IPSec using ESP can be supported via an ALG. IPSec using AH cannot | | | | |
| | be supported through NAT. | | | | |



User Guide

16.14 Universal Plug and Play

In the Advanced screen, click Universal Plug and Play. This feature advertises the presence of your Router on the LAN.

To enable UPnP in your Router, do the following:

- 1. Click the **UPNP Enable** box (a check mark will appear in the box).
- 2. Click **Apply** to allow the change to take effect.
- 3. Click **OK** in the pop-up screen to reset the Router.

NOTE: By factory default UPnP is disabled. If you have previously enabled UPNP and now want to disable it, click the **UPnP Enable** box to remove the check mark, and then click **Apply**.

| 🕙 http://10.16.90.10:2420 - \ | /erizon - Microsoft Int | ernet Explorer | | | | |
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| <u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> o | ols <u>H</u> elp | | | | | // |
| veri | on | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Universal Plug and Play | | Universal Plug a Settings: UPNP Enable | Universal Plug Ar nd Play advertises the prese | nd Play ance of this device on the LAI | v. | |
| | | | Apply Ca | ncel | | |
| | | | | | | |
| | | | | | | |
| ë | | | | | 🌍 Internet | .:: |



16.15 Time

In the Advanced screen, click Time. This feature allows you to set the date and time values on your Router. Enter the desired settings, and then click Apply.

| http://10.16.90.10:2 Ele Edit View Favorit | | oft Internet Explorer | | | | |
|--|-----------------------|-----------------------|-----------------------------|-----------|----------------------|---|
| ; Die Edit Vew Havon | tes Tools Teb | | | | | ^ |
| | | | | | | |
| | veri <mark>o</mark> n | | | | | |
| Main | Wireless | My Network | Firewall | Advanced | System Monitoring | |
| | Settings | ny network | Settings | Advanced | Monitoring | |
| Main | | | Date and Tir | | | |
| Date and Time | | Localization | Date and Th | ne | | |
| | | Local Time: | Tue Sep 11 17:06:35 2007 | | | |
| | | | | | | |
| | | | | | | |
| | | Daylight Saving Time | | | | |
| | | Enabled | | | | |
| | | DST: | US 2007- V US 1986-2006 | | | |
| | | Start: | US 2007- EU 02 : 00 | | | |
| | | End: | Custom Nov 🗸 4 🗸 02 : 00 | | | |
| | | Automatic Time Update | | | | |
| | | Enabled | | | | |
| | | Time Server | | Action | | |
| | | tock.usno.navy.mil | | * | | |
| | | Add | | 25 | | |
| | | | | | | |
| | | | Apply Ca | ncel | | |
| | | | | | | |
| | | | | | | ~ |
| é | | | | | 🔮 Interne | t |

For example, if you selected **Custom** from the **DST** drop-down menu, the following screen will appear. Place a check mark in the **Daylight Saving Time** check box, and then enter the desired Start and End values in the fields provided. Click **Apply** to save the settings.

| Veri Main | Vireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
|---------------|----------------------|-----------------------|--------------------------|----------|----------------------|--|
| Main | Settings | | Date and Tir | ne | Honitoring | |
| Date and Time | | Localization | | | | |
| | - | Local Time: | Tue Sep 11 17:06:35 2007 | | | |
| | | Time Zone: | Central_Time (GMT-06:00) | | | |
| | | Daylight Saving Time | | | | |
| | | Enabled | | | | |
| | | | Custom | | | |
| | | DST: | | | | |
| | | Start: | Mar 💙 11 💙 02 : 00 | | | |
| | | End: | Nov 💌 4 💌 02 : 00 | | | |
| | | Automatic Time Update | | | | |
| | | Enabled | | | | |
| | | Time Server | | Action | | |
| | | tock.usno.navy.mil | | 5 | | |
| | | Add | | 2 | | |
| | | | Apply Ca | ncel | | |



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To edit the time server settings, in the **Date and Time** screen, click the adjacent edit icon. The following screen will appear. Next, enter the IP address or domain name of the server you want to use. After you have entered the desired value, click **Apply** to save the settings.

| http://10.16.90.10:2420 - | Verizon - Microsoft Inte | rnet Explorer | | | | | | |
|-------------------------------|--------------------------|---------------|---|-------------|----------------------|-----|--|--|
| i Eile Edit View Favorites Io | ools <u>H</u> elp | | | | | A 1 | | |
| ver | i - on | | | | | < | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | | | |
| Main Time Server Settings | | | Time Server Settings Enter server IP address or domain name: | | | | | |
| | | Time Server: | tock.us | no navy mil | | | | |
| | | | | | | | | |
| 🕘 Done | | | | | 🥥 Internet | .:: | | |

To add a time server entry, at the **Date and Time** screen, click **Add**. The following screen will appear. Next, enter the IP address or domain name of the server you want to use. After you have entered the desired value, click **Apply** to save the settings.

| 🕙 http://10.16.90.10:2420 - | Verizon - Microsoft Intern | et Explorer | | | | |
|------------------------------|----------------------------|----------------------|----------------------|----------|----------------------|----------|
| Eile Edit View Favorites | [ools Help | | | | | N |
| vei | rizon | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Time Server Settings | | Time Server Settings | | | | |
| | | Time Server: | Apply Can | cel | | |
| Done 201 | | | | | Internet | |



16.16 Routing

In the Advanced screen, click Routing. The Routing table maintains the routes or paths of where specific types of data will be routed across a network.

To add a new static route in the Router, click New Route.

| ver | izon | | | | | | | |
|-----------------|----------------------|----------------------------|-------------|-----------------|----------|-----|----------------------|-------------------|
| Main | Wireless Settings | My Network | Firewa | all gs | Advanced | | S ^a Mo | ystem nitoring |
| Main Routing | • This page | ge provides the ability to | | Routing | | | | |
| | Routing T | able | | | | | | |
| | Interface | Destination | Gateway | NetMask | Metric | Rip | Туре | Action |
| | ppp0 | 0.0.0 | 10.16.90.1 | 0.0.0.0 | 0 | N/A | Network | |
| | br0 | 192.168.1.0 | 0.0.0.0 | 255.255.255.0 | 0 | N/A | Network | |
| | br1 | 192.168.2.0 | 0.0.0.0 | 255.255.255.0 | 0 | N/A | Network | |
| | br2 | 192.168.5.0 | 0.0.0.0 | 255.255.255.0 | 0 | N/A | Network | |
| | br0 | 127.0.0.1 | 192.168.1.1 | 255.255.255.255 | 0 | N/A | Host | |
| | br0 | 239.255.255.250 | 192.168.1.1 | 255.255.255.255 | 0 | N/A | Host | |
| | ppp0 | 10.16.90.1 | 0.0.0.0 | 255.255.255.255 | 0 | N/A | Host | |
| | New Rout | e | | | | | | |
| | | | | Close | | | | |

| Routing | | | | | | | |
|------------------------------|---|--|--|--|--|--|--|
| IP Interfaces | The list of active interfaces on the Router and their IP and Subnet mask address. | | | | | | |
| | eth0 is the local LAN interface. | | | | | | |
| | lo0 is the loopback interface. | | | | | | |
| mainPPP is the WAN interface | | | | | | | |
| Destination | The IP address or subnet of the Route. | | | | | | |
| Gateway | Indicates were to send the packet if it matches this route. | | | | | | |
| Netmask | If the Route is a Network route, Subnet Mask is used to specify the subnet address. | | | | | | |
| INCUMASK | If the Route is a Host route, then the Host Route check box should be selected. | | | | | | |
| Metric | The RIP metric to be assigned to this route if and when it is advertised using RIP. | | | | | | |
| RIP | Indicates whether a static route should be advertised via RIP. | | | | | | |
| Туре | Indicates the type of route: Network route or Host route. | | | | | | |



| http://10.16.90.10:2420 | - Verizon - Microsoft Int | ernet Explorer | | | | | |
|-------------------------|---------------------------|-------------------|---------------------------|----------|----------------------|---|----------|
| Ele Edit View Favorites | Iools Help | | | | | | . |
| ve | rizon | | | | | | 1 |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | | |
| Main Route Settings | | | Route Setting | | | | |
| l. | | Gateway: | 0.0.0.0 OR Select Interfa | 10e 🗸 | | | |
| | | Destination Type: | Host 💌 | | | | |
| | | Destination: | 0.0.0.0 | | | | |
| | | Netmask: | 255.255.255.255 | | | | |
| | | Metric: | 1 | | | | |
| | | RIP Advertised: | | | | | |
| | | Save To Flash: | | | | | |
| | | | Apply Car | ncel | | | |
| 🙆 Done | | | | | Internet | t | |

If you clicked **New Route**, the following screen will appear. Enter the appropriate values in the fields, and then click **Apply**.

16.17 IP Address Distribution

In the **Advanced** screen, click **IP Address Distribution.** The following screen will appear. IP Address Distribution allows you to configure the Router's DHCP server to automatically assign IP address to local devices connected to your LAN.

| 🕘 http://10.16.90.10:2420 - Ver | izon - Microsoft Intern | et Explorer | | | | |
|---------------------------------|-------------------------|--|----------------------|------------------------------------|------------|--------------------|
| Ele Edit View Favorites Tools | Help | | | | | |
| veri | on I | | 52 | | | ^ |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System | |
| | Settings | • | Settings | | Monitoring |) |
| Main IP Address Distribution | | | IP Address Dis | tribution | | |
| | | Service | | | | |
| | | IP Address Distribution | n: Pri | vate LAN 🐱 | | |
| | | Private LAN DHCP S DHCP Start Address | | 2.168.1.15 | | |
| | | | | | | |
| | | DHCP End Address | | 2.168.1.47 | | |
| | | Lease Time | 1 Da | : 0 : 0 : 0 ys Hours Minutes Se | | |
| | | | Da | ys nours minutes Se | conus | |
| | | | Apply Reset | Cancel | | |
| | | | | | | |
| 避 Done | | | | | Internet | <mark>.</mark> |



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VersaLink Wireless Gateway (Model 7500)

| | ID Address Distribution |
|------------------|--|
| | IP Address Distribution |
| IP Address | Factory Default = Private LAN |
| Distribution | This setting allows VersaLink to automatically assign IP addresses to local devices |
| | connected to the LAN. |
| | Off = DHCP Server is disabled |
| | Private LAN = DHCP addresses will be issued from the Private LAN DHCP server. |
| Start IP Address | Factory Default = 192.168.1.15 |
| | This field displays the first IP address that the DHCP server will provide. The DHCP |
| | Start Address must be within the IP address and lower than the DHCP End Address. |
| | You can use any number from 0 to 254 in this address. |
| End IP Address | Factory Default = 192.168.1.47 |
| | This field displays the last IP address that the DHCP server will provide. The DHCP |
| | End Address must be within the IP address and higher than the DHCP Start Address. |
| | You can use any number from 0 to 254 in this address. |
| DHCP Lease Time | Factory Default = 01:00:00:00 |
| | Displays the amount of time the provided addresses will be valid, after which the DHCP |
| | client will usually resubmit a request. |
| | Note: This value must be greater than 10 seconds. Seconds must be between 0 and 59, |
| | minutes must be between 0 and 59, and hours must be between 0 and 23. |

By default Private LAN is already enabled. To disable the Private LAN DHCP server, select **Off** from the **IP Address Distribution** drop-down menu.

| VersaLink Wireless Gateway - File Edit View Favorites Tools | | rnet Explorer | | | | |
|--|----------------------|-------------------------------------|-------------------------------------|----------|----------------------|---|
| verizo | on | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main IP Address Distribution | | | IP Address Distri | bution | | |
| | | Service IP Address Distribution: | Private LAN V Dif Private LAN | | | |
| | | Private LAN DHCP Settings | | | | |
| | | Start IP Address: | 192.168.1.15 | | | |
| | | End IP Address: | 192.168.1.47 | | | |
| | | DHCP Lease Time: | 1 : 0 | : 0 : 0 | | |
| | | | Apply Reset | Cancel | | |
| | | | | | | |
| | | | | | | |
| Done | | | | | 🔮 Internel | > |



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If you selected **Off**, the following screen will appear. Click **Apply** to save the settings. If you click **Reset**, the screen will refresh, and the previously saved settings will remain active.

IMPORTANT:

- 1. Whenever you change the settings in a screen, the screen will display the changes; however, you must click **Apply** to allow the changes to take effect in the Router. (**Private LAN** is the default for **DHCP Server**.)
- 2. After you disable the Private LAN DHCP server, reboot your computer to allow the changes to take effect.

| a 1 | /ersaLink Wi | reless Gatew | ay - Micr | osoft Inte | rnet Explorer | | | | | | |
|------------|---------------------------------|--------------|--------------------|----------------------|---------------|-------|----------------------|------------------|---------------------|------------|---|
| F | ile Edit Vie | w Favorites | Tools H | elp | | | | | | | - |
| | | ver | i <mark>zon</mark> | | | | | | | | ~ |
| | Ma | in | ¥ | Vireless settings | My Network | | Firewall Settings | Advanced | System Monitorin | g | |
| | Main 1P Address Distribution | | | | Service | IP | Address Dis | tribution Off | | | |
| | | | | | | Apply | Reset | Cancel | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| < | | | | | | | | | | | > |
| ۵ |)one | | | | | | | | | 🤨 Internet | |



16.18 Private LAN—Configuring NAT

In the Advanced screen, click Private LAN. The following screen will appear. Private LAN allows you to set up a network behind your Router.

If you change the settings in this screen, click **Apply.** If you click **Reset**, the screen will refresh and the previously saved settings will remain active.

IMPORTANT: Whenever you change the settings in a screen, the screen will display the changes; however, you must click **Apply** to allow the changes to take effect in the Router. (**Private LAN** is the default setting for VersaLink.)

| http://10.16.90.10:2420 - Verizon - Microsoft Internet | t Explorer | | | |
|--|---------------------------------|------------------------|----------------------|---------|
| Ele Edit View Favorites Iools Help | | | | <u></u> |
| | | | | ^ |
| verizon | | | | |
| Main Wireless Settings | My Network Firewall Settings | Advanced | System Monitoring | |
| Main Private LAN | Priv | ate LAN | | |
| | Private LAN DHCP Server Enable | \checkmark | | |
| | Private LAN Enable | \checkmark | | |
| | Modem IP Address | 192.168.1.1 | | |
| | Subnet Mask | 255.255.255.0 | | |
| | DHCP Start Address | | | |
| | DHCP End Address | | | |
| | Lease Time | 0 : 0 : 0 : 0 | | |
| | | Days Hours Minutes Sec | onds | |
| | | | | |
| | Apply | Reset Back | | |
| | | | | |
| | | | | |
| Done | | | Internet | ✓ |

| | Private LAN | | |
|---|---|--|--|
| Private LAN DHCP Server Enable | Default = Enabled | | |
| | If this box contains a check mark, this enables DHCP addresses to be | | |
| | served from the Private LAN pool. | | |
| Private LAN Enable | Default = Enabled | | |
| | If this box contains a check mark, this enables the addresses from the | | |
| | Private LAN to use the NAT interface. | | |
| Modem IP Address | Displays the Router's IP address. | | |
| Subnet Mask | Displays the Subnet Mask, which determines what portion of an IP | | |
| | address is controlled by the network and which portion is controlled by the | | |
| | host. | | |
| DHCP Start Address | Displays the first IP address that the DHCP server will provide. | | |
| DHCP End Address | Displays the last IP address that the DHCP server will provide. | | |
| DHCP Lease Time | Displays the amount of time the provided addresses will be valid, after | | |
| which the DHCP client will usually resubmit a request. | | | |
| Note: The DHCP Lease Time value must be greater than 10 seconds. The default = 01:00:00:00. Seconds must be | | | |
| between 0 and 59, minutes must be be | etween $\overline{0}$ and 59, and hours must be between 0 and 23. | | |



If the settings you have entered in the **Private LAN Configuration** screen are incorrect, the following warning messages may be displayed in pop-up screens. If this occurs, check the settings in the **Private LAN Configuration** screen.

| Warning Message | Check Private LAN DHCP Settings |
|--|--|
| Start Address is not part of the Subnet | Check the value in the DHCP Start Address field |
| End Address is not part of the Subnet | Check the value in the DHCP End Address field |
| End Address is below the Start Address | Check the value in the DHCP End Address field |
| Lease time must be greater than 10 seconds | Check the values in the DHCP Lease Time fields |
| Seconds must be between 0 and 59 | Check the Seconds value in the DHCP Lease Time field |
| Minutes must be between 0 and 59 | Check the Minutes value in the DHCP Lease Time field |
| Hours must be between 0 and 23 | Check the Hours value in the DHCP Lease Time field |

16.19 Public LAN—Multiple IP Address Passthrough

In the **Advanced** screen, click **Private LAN**. The following screen will appear. The Public LAN feature allows VersaLink to use LAN IP addresses that are accessible from the WAN. Public LAN allows your computer to have global address ability.

NOTE: To utilize the Public LAN feature in your VersaLink, Verizon must support Public LAN and Static IP. If you have questions about the feature, contact Verizon for details.

If you change the settings in this screen, click **Apply.** If you click **Reset**, the screen will refresh and the previously saved settings will remain active.

IMPORTANT: Whenever you change the Private LAN settings, the screen will display the changes; however, you must click **Apply** to allow the changes to take effect in the Router. (**Private LAN** is the default setting for VersaLink.)

To enable Public LAN, click the Public LAN DHCP Server Enable box (a check mark will appear in the box).

| 🕙 http://10.16.90.10:2420 - V | /erizon - Microsoft In | ternet Explorer | | | | |
|-------------------------------|------------------------|---------------------------|-------------|----------|----------------------|-----|
| Elle Edit View Favorites Ion | ols <u>H</u> elp | | | | | |
| | | | | | | ^ |
| veri | on | | | | | |
| Main | Wireless Settings | My Network | Firewall | Advanced | System Monitoring | |
| Ham | Settings | Hy Network | Settings | Advanced | Monitoring | |
| Main | | | | | | |
| Public LAN | | | Public LAN | | | 3 |
| | | Enable DHCP Server | | | | |
| | | Public LAN Enable | | | | |
| | | Modem's Public IP Address | 192.168 | 3.2.1 | | |
| | | Subnet Mask | 255.255 | 5.255.0 | | |
| | | | | | | |
| | | | Apply Reset | Back | | |
| | | | | | |) – |
| | | | | | | |
| | | | | | | |
| | | | | | | ~ |
| ど Done | | | | | 🔮 Internet | .á |



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| Public LAN | | | | | |
|---|--|--|--|--|--|
| Public LAN DHCP Server Enable Default = Disabled (deselected) | | | | | |
| | If this box contains a check mark, this enables DHCP addresses to be | | | | |
| | served from the Public LAN pool. | | | | |
| Public LAN Enable | Default = Disabled (deselected) | | | | |
| | If this box contains a check mark, this enables the addresses from the | | | | |
| | Public LAN to bypass the NAT interface. | | | | |
| Public LAN IP Address | Provides a Public IP Address if the service provider does not | | | | |
| | automatically provide one. | | | | |
| Public LAN Subnet Mask | Provides a Public Subnet Mask if the service provider does not | | | | |
| | automatically provide one. | | | | |

If you clicked the **Public LAN DHCP Server Enable** box, the following screen will appear. Click the **Public LAN Enable** box (a check mark will appear in the box).

WARNING: By enabling the Public LAN DHCP Server, you automatically disable the Router's Private LAN DHCP Server. (**Private LAN DHCP** is the default setting for VersaLink.)

| http://10.16.90.10:2420 - Ele Edit View Favorites I | | nternet Explorer | | | | |
|--|----------------------|-----------------------------|----------------------|----------|----------------------|----|
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Public LAN | | | Public LAN | | | |
| <i>د</i> | | Enable DHCP Server | V | | | |
| | | Public LAN Enable | | | | |
| | | Modem's Public IP Address | 192.168 | .2.1 | | |
| | | Subnet Mask | 255.255 | .255.0 | | |
| | | Start Address | 192.168 | .2.15 | | |
| | | End Address | 192.168 | .2.215 | | |
| | | Lease Time (Day:hr:min:sec) | 1 | 0:0:0 | | |
| | | Aj | oply Reset | Back | | |
| http://10.16.90.10:2420/htmlV/fw | security general asp | | | | 😵 Intern | o+ |



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If you clicked the **Public LAN Enable** box, the following screen will appear. After you have made changes to this screen, click **Apply** to allow the settings to take effect.

| 🕘 h | tp://10.16.90.10:2420 - Veri | izon - Microsoft In | nternet Explorer | | | | |
|------|--|----------------------|-----------------------------|----------------------|----------|----------------------|----------|
| E B | e <u>E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools | Help | | | | | . |
| | veriz | on | | | | | <u>^</u> |
| | Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| | Main Public LAN | | | Public LAN | | | ≡ |
| | | | Enable DHCP Server | ⊻ | | | |
| | | | Public LAN Enable | V | | | |
| | | | Modem's Public IP Address | 192.16 | 8.2.1 | | |
| | | | Subnet Mask | 255.25 | 5.255.0 | | |
| | | | Start Address | 192.16 | 8.2.15 | | |
| | | | End Address | 192.16 | 8.2.215 | | |
| | | | Lease Time (Day:hr:min:sec) | 1 | 0:0:0 | | |
| | | | | pply Reset | Back | | |
| e) D | | | | | | 🔮 Interne | <u>∼</u> |
| E D | ne | | | | | Jnterne | a |

If the settings you have entered in the **Public LAN Configuration** screen are incorrect, the following warning messages may be appear in pop-up screens. If this occurs, check the **Public LAN Configuration** settings.

| Warning Message | Check Public LAN DHCP Settings | | | |
|---|---|--|--|--|
| Start Address is not part of the Subnet | Check the value in the DHCP Start Address field | | | |
| End Address is not part of the Subnet | Check the value in the DHCP End Address field | | | |
| End Address is below the Start Address | Check the value in the DHCP End Address field | | | |
| Lease time must be greater than 10 seconds | Check the values in the DHCP Lease Time fields | | | |
| Seconds must be between 0 and 59 | Check the Seconds field at DHCP Lease Time | | | |
| Minutes must be between 0 and 59 | Check the Minutes field at DHCP Lease Time | | | |
| Hours must be between 0 and 23 Check the Hours field at DHCP Lease Time | | | | |
| Note: The DHCP Lease Time value must be greater than 10 seconds. The default = 01:00:00:00. Seconds must be | | | | |
| between 0 and 59, minutes must be between 0 and 59, and | d hours must be between 0 and 23. | | | |

If you clicked Apply in the Public LAN screen, a warning screen will display the following message:

Warning: Enabling Public LAN will disable Private LAN. Your Modem will reboot automatically due to IP address modifications. After the reboot, you may need to release and renew your IP address to communicate with the modem.

Click **OK** to allow the modem to reboot. After the modem has rebooted, confirm that you have a DSL link and that your PPP Status displays **UP**.





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16.20 RIP Configuration

In the Advanced screen, click RIP Configuration. The following screen will appear.

RIP (Routing Interface Protocol) is a dynamic inter-network routing protocol primarily used in interior routing environments. A dynamic routing protocol, as opposed to a static routing protocol, automatically discovers routes and builds routing tables.

If you change any settings in this screen, click **Save** to save the settings. If you click **Reset**, this screen will refresh and display the previously saved RIP settings.

| 🕘 http://10.16.90.10:2420 - Ve | erizon - Microsoft Internet | Explorer | | | | |
|--|-------------------------------|--------------|----------------------|----------|----------------------|----------|
| <u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ool | ls <u>H</u> elp | | | | | A |
| veri | on | | | | | <u> </u> |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Rip Configuration | | | Rip Configura | tion | | |
| | RIP LAN Enable | | | | | |
| | Interface Type: | | LAN | | | |
| | Receive: | | RIPv2 RIPv2 | | | |
| | Transmit: RIPv2 Authentica | tion Medal | None | ~ | | |
| | | | Advanced | | | |
| | Default Gateway | | | | | |
| | RIP Timer Rate | | 1 | | | |
| | RIP Supply Inter | val | 30 | | | |
| | RIP Expire Time | | 180 | | | |
| | RIP Garbage Co | lection Time | 300 | | | |
| | | | Apply Reset | Close | | |
| | | | | | | |
| é | | | | | 🔮 Internet | |

| | RIP Configuration | | | |
|--|--|--|--|--|
| RIP Global Enable Factory Default = Disabled | | | | |
| | If this box is checked, RIP will be Enabled (activated). | | | |
| | LAN: Select this if you are configuring RIP for the LAN side. | | | |
| Interface Type | WAN: Select this if you are configuring RIP for the WAN side. (WAN side is | | | |
| | receive only.) | | | |
| Receive | The version of RIP to be accepted. | | | |
| | Possible Responses: | | | |
| | None | | | |
| | RIPv1 | | | |
| | RIPv2 | | | |



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| | RIPv1 or RIPv2 |
|-----------------------------|---|
| Transmit | The version of RIP to be transmitted. (WAN side RIP never transmits) |
| | Possible Responses: |
| | None |
| | RIPv1 |
| | RIPv1 Compatible |
| | RIPv2 |
| RIPv2 Authentication Mode | If using RIP V2, you must select the type of authentication to use. |
| | Possible Responses: |
| | None |
| | Clear Text |
| | MD5 (If MD5 authentication, the password) |
| | Advanced |
| Default Gateway | Factory Default = Disabled |
| - | If this box is check (Enabled), this feature will determine whether the modem |
| | advertises itself as the default Gateway (i.e., the default route) |
| RIP Timer Rate | Indicates how often to update the local routing table. |
| RIP Supply Interval | Indicates how often to advertise routes to neighbors. |
| RIP Expire Time | Indicates how long routes received from neighbors become invalid, if no refresh |
| Ĩ | of the route is received. |
| RIP Garbage Collection Time | Indicates how long to advertise invalid routes after they have expired. |

After you have enabled RIP and clicked **Save**, the following pop-up screen will be displayed. Click **OK** to save and configure RIP.





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17. SYSTEM MONITORING

If you click System Monitoring in the top navigational menu, a warning screen will display the following message:

Any changes made in this section may affect your device's performance and configuration. Do you want to proceed?

Click Yes to proceed.

| VersaLink Wireless Gatewa | ay - Microsoft Internet I | xplorer | | | | |
|---------------------------|---------------------------|--------------------------|----------------------|----------------------------|----------------------|----------|
| File Edit View Favorites | Tools Help | | | | | |
| veri | 7 0n | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main | | Any changes made in this | Do you want to pr | levices performance and co | nfiguration. | |
| ٢ | | | ш | | | |
| 🕘 Done | | | | | | Internet |



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17.1 Gateway Status

If you clicked **Yes** in the warning screen, the following **Gateway Status** screen will appear. This screen allows you to view details about your Router.

| Main | Vireless Settings | My Network | Firewall Settings | Advanced | System Monitoring |
|------------------------|----------------------|------------------------------|----------------------|-------------------|----------------------|
| Main Gateway Status | | | Gatewa | y Status | |
| Advanced Status | | Software Version: | | VER:5.00.00.01 | |
| Auvanceu Status | | Transceiver Revision: | | A2pB020b3.d19d | |
| | | Model Name: | | A90-750015-07 | |
| | | Serial Number: | | 07B408938227 | |
| | | Broadband Connection Status: | | Connected | |
| | | Broadband IP Address: | | 10.16.90.10 | |
| | | Broadband MAC Address: | | 00:18:3A:77:15:A9 | |
| | | Broadband Connection Type: | | PPPoE | |
| | | Active Status: | | 0:04:17:31 | |
| | | Configuration: | | 096-900186-00 A | |

| | Gateway Status |
|-----------------------------|---|
| Software Version | VersaLink's software version. |
| Transceiver Revision | VersaLink's transceiver version. |
| Model Name | VersaLink manufacturer's model name. |
| Serial Number | VersaLink's serial number. |
| Broadband Connection Status | The status of your Internet connection. |
| | Up = Internet connection established |
| | Down = No Internet connection established |
| Broadband IP Address | VersaLink's WAN IP Address, assigned or provided by Verizon. |
| Broadband MAC Address | Media Access Controller (MAC) i.e., hardware address of this device, assigned |
| | by the manufacturer. |
| Broadband Connection Type | The protocol used to establish an Internet connection with Verizon. |
| Active Status | The duration that VersaLink has been in use (measured in hours: minutes: |
| | seconds). |
| Configuration | Proprietary configuration number for VersaLink. |



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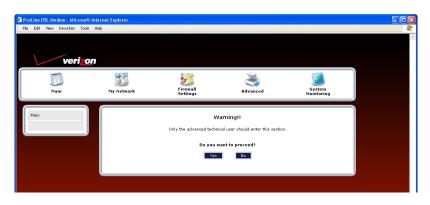
VersaLink Wireless Gateway (Model 7500)

17.2 Advanced Status

If you select **System Monitoring** in the top navigational menu, and then click **Advanced Status** in the menu options at the left of the screen, a warning screen will display the following message:

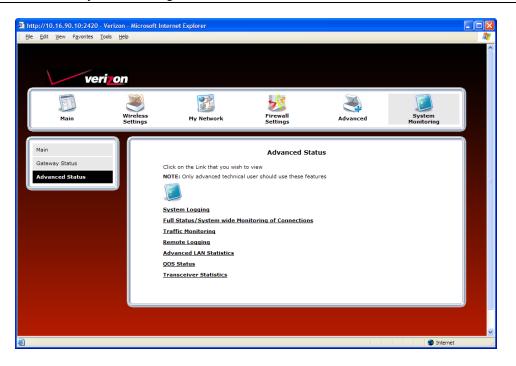
Any changes made in this section may affect your device's performance and configuration. Do you want to proceed?

Click Yes to proceed.



If you clicked **Yes**, in the **Warning** screen, the following screen will appear. From this screen, you can access various logging and monitoring information recorded by your Router. Click the desired link to go to that screen.

NOTE: Only advanced users should use these features. If you need to reset the Router to factory default settings, press the reset button on the rear of the Router. Or follow the instructions in section 16.2, "Restore Defaults," to restore the Router to factory default settings.





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17.2.1 System Logging

In the Advanced Status screen, click System Logging. The following screen will be displayed.

At the **Logs** drop-down menu, do any of the following:

- Select All to list both Connection and System logs.
- Select **Connection** to list all events related to connection activity (any traffic on the USB, Ethernet, or DSL ports).
- Select System to list all events related to system activity (Time, Errors, Boot Information, etc.)
- Select **Diagnostic Tests** to list all events related to the diagnostic logs
- Select **Wireless** to list all events related to the voice event logs

| http://10.16.90.10:2420 | - Verizon - Microsoft Inte | ernet Explorer | | | | |
|-------------------------|----------------------------|--|--|------------------|----------------------|-----|
| Ele Edit View Favorites | <u>T</u> ools <u>H</u> elp | | | | | |
| ve | rizon | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main System Log | | | System Log lear Log Printab ass the Refresh button to u | le Format Refres | h | E C |
| | | Current | t Date and Time: Thu Sep | 13 15:51:08 2007 | | |
| | | Logs User ID: DSL State: Connection Mode: Connection State: Ethernet WAN: | Select a LC Sviect a LC Connection System Diagnostic Wyreless Down | net | | |
| Done | | | | | Internet | |
| and house | | | | | Unterne 🔮 | n |



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If you selected **All** from the **Logs** drop-down menu, the following screen will appear. You may need to scroll down to the bottom of the logs screen to view all the logged events. After you have viewed the logs, do any of the following:

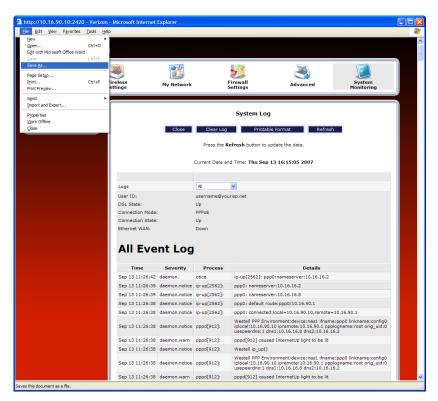
- Click Close to close the logs page and to return to the Advanced Status screen.
- Click Clear Log to clear the logs screen.
- Click **Printable Format** to save a copy of the logs to a location on your computer.
- Click **Refresh** to update the logs screen so that it displays the most current information.

| http://10.16.90.10:2420 - Verizo | on - Microsoft Internet | Explorer | | | | | | X |
|--|-------------------------|---------------|--------------|--|---------------------------|---|---|---|
| <u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>F</u> | <u>H</u> elp | | | | | | 4 | H |
| veri | n | | | 1.1.1. | 6 | | | |
| Main | Wireless Settings | My Network | | Firewall Settings | Advanced | System Monitoring | | |
| Main System Log | | Close | Clear Log | System Log Printable Fe | ormat Refres | h | | |
| | | | | efresh button to upda nd Time: Thu Sep 13 | | | | |
| | | | | | | | | |
| | Logs | | Al | ~ | | | | |
| | User ID: | | username@you | | | | | |
| | DSL State: | | Up | | | | | |
| | Connection Mode | : | PPPoE | | | | | |
| | Connection State | | Up | | | | | |
| | Ethernet WAN: | | Down | | | | | |
| | All Eve | _ | | | | | | |
| | Time | Severity | Process | | Details | | | |
| | Sep 13 11:26:42 | | otice | | nameserver:10.16.16.2 | | | |
| | Sep 13 11:26:39 | | | ppp0: nameserver: | | | | |
| | Sep 13 11:26:39 | | ip-up[2562]: | ppp0: nameserver: | | | | |
| | Sep 13 11:26:38 | | | ppp0: default route: | | | | |
| | Sep 13 11:26:38 | daemon.notice | ip-up[2562]: | | cal=10.16.90.10,remote= | | | |
| | Sep 13 11:26:38 | daemon.notice | pppd[912]: | iplocal:10.16.90.10 | | e:ppp0 linkname:config0 ologname:root orig_uid:0 .6.2 | | |
| | Sep 13 11:26:38 | daemon.warn | pppd[912]: | pppd[912] caused I | nternetUp light to be lit | | | |
| | Sep 13 11:26:38 | daemon.notice | pppd[912]: | Westell ip_up() | | | | |
| | Sep 13 11:26:38 | daemon.notice | pppd[912]: | iplocal:10.16.90.10 | | e:ppp0 linkname:config0 ologname:root orig_uid:0 .6.2 | | |
| | Sep 13 11:26:38 | daemon.warn | pppd[912]: | pppd[912] caused I | nternetUp light to be lit | | | ~ |
| ê | | | | | | Internet | | |



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To save a copy of the logs to a location on your computer, in the **System Log** page, click **Printable Format.** The following screen will appear. Click **File > Save As** from the menu options, and then save the file to the desired location.



At the **Save Web Page** dialog box, select a destination for your log file from the **Save in** drop-down menu. Next, enter a name for your log file in the field labeled **File name**, and then click **Save** to save the log file.

| Save Web Page |) | | | | | ? 🔀 |
|----------------|--------------------|-----------------------------|---------|-----|-----|--------|
| Save in: | 🚞 Diagnostic Log | gs | ~ | G 🦻 | ۳ 📂 | |
| Content Recent | | | | | | |
| Desktop | | | | | | |
| My Documents | | | | | | |
| My Computer | | | | | | |
| S | File <u>n</u> ame: | Log File Name | | | ~ | Save |
| My Network | Save as type: | Web Page, complete (*.htm;* | •.html) | | * | Cancel |
| | Encoding: | Western European (Window | s) | | * | |



User Guide

17.2.2 Full Status/System-wide Monitoring of Connections

In the Advanced Status screen, click Full Status/System-wide Monitoring of Connection. The following screen will be displayed. After viewing the details of your Router's connection, you can do any of the following:

- Click the **Broadband Connection** link to go to the VersaPort page and edit your broadband settings. Refer to section 14.2.3 for additional details on this feature.
- Click the **Network (Home/Office)** link to go to the Private LAN DHCP page and edit your Private LAN DHCP settings. Refer to section 16.18 for additional details on this feature.
- Click **Wireless Access Point** link to go to the Basic Security Settings page and edit your wireless settings. Refer to section 13.3 for additional details on this feature.
- Click the **WAN PPPoE** link to go to the Advanced DSL Configuration page and edit your connection settings. Refer to section 14.2.2 for additional details on this feature.
- Click the **DHCP Server** link to go to the Private LAN page and edit your Private LAN DHCP Server settings. Refer to section 16.17 for additional details on this feature.
- Click the Close button to return to the Advanced Status screen.
- Click the Automatic Refresh Off/On button to turn on or turn off the screen's automatic refresh feature.
- Click the **Refresh** button to manually refresh the screen.

NOTE: When the Automatic Refresh button displays **Automatic Refresh Off**, this means that the auto-refresh feature is turned Off. Click the Automatic Refresh button to turn on automatic refresh. When the button displays **Automatic Refresh On**, the page will refresh automatically.

| | Help | | | | |
|--|-----------------------------|------------------------------------|---------------------------|---|----------------------|
| Veri C Main | DON Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring |
| Main Full Status/System wide Monitoring of Connections | NOTE: Only ad | Full Status/S | - | itoring of Connections | |
| | Name | Broadband Connection (Ethernet) | Network (Home/Office) | Wireless Access Point | WAN PPPoE |
| | Status | Disabled | Enabled | Enabled | Enabled |
| | Network | Ethernet | Ethernet | Mixed: accepts 802.11b and 802.11g connections | xDSL |
| | Connection Type | PPP | Hardware Ethernet Port | Wireless Access Point | PPP |
| | MAC Address | 00:18:3A:77:15:A9 | 00:18:3A:77:15:A9 | 00:18:3a:77:15:af | |
| | IP Address | PPP Down | 192.168.1.1 | 192.168.1.1 | 10.16.90.10 |
| | Subnet Mask | | 255.255.255.0 | 255.255.255.0 | |
| | IP Address Distribution | WAN | DHCP Server | DHCP Server | WAN |
| | | My Connection | | | My Connection |
| | User Name | username@yourisp.net | | | username@yourisp.net |
| | Received | 0 | 210950 | 0 | 4962240 |
| | Packets Sent Packets | 0 | 306042 | 20030 | 19923648 |
| | Time Span | | | | 0:04:54:01 |
| | Channel | | | 6 | |
| | | | | | |
| | | Close | Automatic Refres | h Off Refresh | |
| | | | | | |



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VersaLink Wireless Gateway (Model 7500)

Full Status/System-wide Monitoring of Connections Name A descriptor used to identify the Router's connection type Network (Home/Office)-Displays information about the Routers LAN connection WAN PPPoE-Displays information about the Router's WAN/Braodband connection Status The status of the connection (Enabled/Disabled) Ethernet- The the interface used to connect the Router to your LAN Network xDSL - The interface used to connect to the Router to the WAN Hardware Ethernet Port- The physical connection type; the hardware used for the LAN Connection Type connection PPP the virtual connection type; the protocol use for WAN/Braodband connection The Media Access Controller; the hardware address assigned to the deviced by the MAC Address manufacturer IP Address The Router's LAN and WAN/Braodband IP Addresses Subnet Mask Displays the Router's Subnet Mask, which determines what portion of an IP address is controlled by the network and which portion is controlled by the host IP Address Distribution The method by which IP address are allocated to devices on your LAN The connection profile name to used to establish your Internet connection Service Name User Name The user name (Account ID) used to identify you to Verizon and to establish your Internet connection, provided by Verizon **Received Packets** The number of packets received in to the Router's LAN and WAN interfaces Sent Packets The number of packets sent out from the Router's LAN and WAN interfaces Time Span The duration your PPP session has been connected (measured in hours: minutes: seconds) The channel of the wireless access point. Channel



17.2.3 Traffic Monitoring

In the **Advanced Status** screen, click **Traffic Monitoring.** The following screen will be displayed. After viewing your Router's traffic details, you can do any of the following:

- Click the **ATM** link to go to the Advanced DSL Configuration page and edit your connection settings. Refer to section 14.2.2 for additional details on this feature.
- Click the **Ethernet** link to go to the Private LAN DHCP page and edit your Private LAN DHCP settings. Refer to section 16.18 for additional details on this feature.
- Click the **Wireless** link to go to the Basic Security Settings page and edit your wireless settings. Refer to section 13.3 for additional details on this feature.
- Click the Close button to return to the Advanced Status screen.
- Click the Automatic Refresh Off/On button to turn on or turn off the screen's automatic refresh feature.
- Click the **Refresh** button to manually refresh the screen.

NOTE: When the Automatic Refresh button displays **Automatic Refresh Off**, this means that the auto-refresh feature is turned off. Click the Automatic Refresh button to turn on automatic refresh. When the button displays **Automatic Refresh On**, the page will refresh automatically.

| Main | Wireless Settings | My Netv | | Fire | wall tings | | Advanc | ed | System Monitoring |
|----------------------------|----------------------|--------------------|-----------------|-----------|--------------------------|-----------|-----------|---------------|----------------------|
| Main Traffic Monitoring | NOTE: | Only advanced tech | nnical users st | | i ffic Mor | itoring | | | |
| | Stats | | ATM | Ethernet | Ethernet | Ethernet | Ethernet | USB | Wireless |
| | | nformation for: | PVC1 | Port 0 | Port 1 | Port 2 | Port 3 | | SSID-07B408938227 |
| | мти | | | 1500 | 1500 | 1500 | 1500 | | |
| | VPI / V | 21 | 0 /35 | | | | | | |
| | | | | | | | | | |
| | In Erro | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | rd Packets | 0 | 0 | 0 | 0 | 0 | | 0 |
| | | Unicast Packets | 23619 | 0 | 0 | 0 | 0 | 0 | 0 |
| | In Octe | | 4973088 | 0 | 210978 | 0 | 0 | • | 0 |
| | | - | | | | - | | | - |
| | Out Ern | ors | o | 0 | 0 | 0 | 0 | 0 | 0 |
| | Out Dis | ard Packets | 0 | 0 | 0 | 0 | 0 | | 0 |
| | Out Nor | -Unicast Packets | | 0 | 0 | 0 | 0 | | |
| | Out Uni | ast Packets | 26271 | 0 | 0 | 0 | 0 | 0 | |
| | Out Oct | ets | 20010624 | 0 | 306246 | 0 | 0 | | 1394872 |
| | | | | | | | | | |
| | Interfac | e Description | PPP | EtherPort | EtherPort | EtherPort | EtherPort | USB | Wireless |
| | Interfac | e Description | PPP Close | | EtherPort matic Refre | | | USB efresh | Wireless |



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| | Traffic Monitoring |
|-------------------------|---|
| Stats | Represents the statistics for each interface type: ATM, Ethernet, or USB |
| Packet Information for | The packet information for the interface. |
| VPI/VCI | The VPI/VCI values obtained from Verizon. |
| In Errors | The number of error packets received on the interface. |
| In Discard Packets | The number of discarded packets received on the interface. |
| In Non Unicast Packets | The number of non-Unicast packets received on the interface. |
| In Unicast Packets | The number of Unicast packets received on the interface. |
| In Octets | The number of bytes received on the interface. |
| Out Errors | The number of outbound packets that could not be transmitted due to errors. |
| Out Discard Packets | The number of outbound packets discarded. |
| Out Non Unicast Packets | The number of non-Unicast packets transmitted on the interface. |
| Out Unicast Packets | The number of Unicast packets transmitted on the interface. |
| Out Octets | The number of bytes transmitted on the interface. |
| Interface Description | A description field that refers to the interface type. |

17.2.4 Remote Logging

In the **Advanced Status** screen, click **Remote Logging.** The following screen will be displayed. Remote diagnostics logging allows the diagnostics logs to be sent to a machine running a syslog server.

To save the diagnostics logs, click the **Enable** box (a check mark will appear in the box). Next, type the IP address of the syslog server in the **Remote IP Address** field. Click **Save** to save the settings.

| http://10.16.90.10:2420 Elle Edit View Favorites | | rnet Explorer | | | | |
|--|----------------------|---|---|---|----------------------|-------|
| | rizon | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Remote Logging | | Remote diagnostics log a syslog server. If savi should be enabled and | Remote I ging allows the diagn- ing of the diagnostics the IP address of the | Logging ostics logs to be sent to a machine logs is desired, remote diagnostics syslog server must be configured | running logging | |
| | | Enable Remote IP Address | | 192.168.1.47 | | |
| | | | Save | Cancel | | |
| Done | | | | | 🍯 Internet | ▼ |



User Guide

17.2.5 Advanced LAN Statistics

In the Advanced Status screen, click Advanced LAN Statistics. The following screen will be displayed. After you have viewed the details in this page, click Close to return to the Advanced Status screen.

| 🗿 http://10.16.90.10:2420 - Verizo | n - Microsoft I | nternet Explorer | | | | |
|------------------------------------|----------------------|--------------------|---------------------------------------|---|----------------------|--|
| Eile Edit View Favorites Tools H | elp | | | | | |
| verizo | n | | | | | |
| | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring | |
| Main Advanced LAN Statistics | | | Advanced LAN S | Statistics | | |
| | | Connection Rate | (Down/Up): | 8060 Kbps / 10 | 23 Kbps | |
| | | Connection Status | In Packets Out Packets | 4994928 20175024 | | |
| | | | In Error Packets Out Error Packets | 0 | | |
| | | IP Network Address | PPP Primary DNS Secondary DNS | 10.16.90.10 10.16.16.2 10.16.16.8 | | |
| | | Ethernet Status | In Packets Out Packets | 211068 306665 | | |
| | | ATM NetworkAddress | VPI VCI | 0 35 | | |
| | | Firewall Status | Passed Dropped | In: 0 Out: 0 In: 0 Out: 0 | | |
| | | | Connection Info | armation | | |
| | | Connection Name | Connection Duration | | f Reconnects | |
| | | My Connection | 0:05:03:45 | UP 3 | reconnects | |
| | | | | | | |
| | | | Close | | | |
| | | | Close | | | |
| | L | | | | | |
| | | | | | | |
| Done | | | | | Internet | |

| | DSL Connection Information |
|----------------------|---|
| Connection Rate | This field will let you know if you have a DSL signal and the DSL rate at which you are |
| | connected. |
| Connection Status | This field will show how much information was received (IN) or sent (OUT) in packets. |
| IP Network Address | PPP = An IP address identifies your device on the Internet |
| | Primary DNS = Provided by your Service Provider |
| | Secondary DNS = Provided by your Service Provider |
| Ethernet Status | This field will display your Ethernet information that was received (IN) or sent (OUT) in |
| | packets on your Ethernet port. |
| ATM Network Address | This field will display your VPI and VCI values, which are provided by your ISP. |
| Firewall Status | This field will display your firewall traffic in packets. |
| | Passed: Monitors information traffic that was successfully received (IN) or transmitted |
| | (OUT) in packets. |
| | Dropped: Monitors information traffic that was not successfully received (IN) or |
| | transmitted (OUT) due to your firewall settings. |
| | PPP Connection Information |
| Connection Name | This is from the connection profile that you established in section 8. |
| Connection Duration | This field will display how long your PPP session has been connected. |
| Status | This field will display the status of your PPP session. |
| | UP=Connected |
| | DOWN=Disconnected |
| Number of Reconnects | This field will display the number of attempts that were made to establish a PPP session. |



User Guide

17.2.6 QOS Status

In the Advanced Status screen, click QOS Status. The following screen will be displayed. Click the Clear button to clear all counts and statistics (not just latency counts). Clicking Clear does not affect the Router's configuration. (QOS must be enabled on the Router for this table to be populated.) After you have viewed the details in this page, click Close to return to the Advanced Status screen.

| Main Wireless Settings My Network Firewall Settings Advanced Main QOS Status QUALITY OF Service Metrics. Qos Status Quality Of Service Metrics. Packet Counters: Queue Number Queue Number Max Queue Size Total Dropped Total Sent Total Overlimit | Status ervice Metrics. | | |
|--|---|--|--|
| QoS Status Quality Of Service Metrics. Packet Counters: Quality Of Service Metrics. Total Dropped Total Sent Total Overlimit Total | Total Sent Total Overlimit Total Requeued | | |
| QoS Status Quality Of Service Metrics. Packet Counters: Ourum Number May Ourum Sine Total Dropped Total Sent Total Overlimit Total | Total Sent Total Overlimit Total Requeued | Main Wireless My Network Firewall Advanced System Settings My Network Settings Monitoring | Main Wireless My Network Firewall Settings Advanced System Monitoring |
| QoS Status Quality Of Service Metrics. Packet Counters: Ourup Number May Ourup Size Total Dropped Total Sent Total Overlimit Total | Total Sent Total Overlimit Total Requeued | Main Wireless My Network Firewall Advanced System Settings My Network Settings Advanced Monitoring | Main Wireless My Network Firewall Advanced System Settings My Network Settings Advanced Monitoring |
| Quality Of Service Metrics. Packet Counters: Ourse Number Mark Ourses First Total Dropped Total Sent Total Overlimit Total | Total Sent Total Overlimit Total Requeued | Frain Settings Fry Network Settings Advanced Monitoring | Plain Settings Pry Network Settings Advanced Monitoring |
| Packet Counters: | Total Sent Total Overlimit Total Requeued | in Settings Pry Network Settings Advanced Monitoring | in |
| Queue Number Max Queue Size Total Dropped Total Sent Total Overlimit To | | Settings Py Network Settings Advanced Monitoring | in QOS Status |
| Queue Number Max Queue Size Total Dropped Total Sent Total Overlimit To Packets Packets Packets | | sin Status S | in QOS Status Status |
| | | Advanced Monitoring | in S Status QOS Status Quality Of Service Metrics. Packet Counters: |
| 0 300 0 0 0 | 0 0 0 | Settings Py Network Settings Advanced Monitoring | in QOS Status Quality Of Service Metrics. Packet Counters: Oursee Number Marc Quang Size Total Dropped Total Sent Total Overlimit Total Requeued |
| 1 300 0 0 0 | 0 0 0 | Advanced Monitoring Mo | in <u>QOS Status</u> Settings Hy Network <u>Settings</u> Advanced <u>Monitoring</u> Monitoring <u>QUality Of Service Metrics</u> . Packet Counters: <u>Queue Number Max Queue Size Total Dropped Total Sent Packets</u> <u>Total Overlimit</u> <u>Total Requeued Packets</u> |
| 2 300 0 0 0 | 0 0 0 | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in <u>QOS Status</u> Settings Hy Network <u>Settings</u> Advanced <u>Monitoring</u> Monitoring <u>QUality Of Service Metrics</u> . Packet Counters: <u>Queue Number Max Queue Size Total Dropped Packets</u> <u>Total Overlimit</u> <u>Total Requeued Packets</u> 0 300 0 0 0 0 0 0 |
| 3 300 0 0 0 | | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in SS Status Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 0 0 1 300 0 0 0 0 0 0 |
| | 0 0 0 | Advanced Monitoring Monitorin | Advanced Monitoring Monitoring Status Status Status Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring |
| 4 300 0 0 0 | 0 0 0 0 0 0 | Advanced Monitoring Monitorin | Advanced Monitoring Monitoring Status Status Monitoring |
| 4 300 0 0 0 5 300 0 0 0 0 | 0 0 0 | Pain Settings Hy Network Settings Advanced Monitoring sin >S Status QOS Status QUality Of Service Metrics. Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Oropped Total Sent Total Overlimit Total Requeued 0 300 0 0 0 0 1 300 0 0 0 0 2 300 0 0 0 0 3 300 0 0 0 0 4 300 0 0 0 0 | Paim Settings Province of the settings Advance of the settings Monitoring sin NS Status QOS Status QUality Of Service Metrics. Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Orer Metrics. Total Overlimit Total Requeued Packets 0 300 0 0 0 0 1 300 0 0 0 0 2 300 0 0 0 0 3 300 0 0 0 0 4 300 0 0 0 0 |
| | | Pain Settings Hy Network Settings Advanced Monitoring sin os Status QOS Status QOS Status Quality Of Service Metrics. SS Status Packet Counters: Queue Number Max Queue Size Total Droph Total Sent Total Overlimit Total Requeued 0 300 0 0 0 0 0 1 300 0 0 0 0 2 300 0 0 0 0 | Paim Settings Pry Network Settings Advanced Monitoring sin No Status QOS Status QOS Status Quality Of Service Metrics. S Status Packet Counters: Queue Number Max Queue Size Total Orophed Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 1 300 0 0 0 0 2 300 0 0 0 0 |
| 4 300 0 0 0 | | Advanced Monitoring Monitorin | Advanced Monitoring Monitoring Status Status Monitoring |
| | 0 0 0 | Pain Settings Hy Network Settings Advanced Monitoring sin >S Status QOS Status QUality Of Service Metrics. Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Oropped Total Sent Total Overlimit Total Requeued 0 300 0 0 0 0 1 300 0 0 0 0 2 300 0 0 0 0 3 300 0 0 0 0 4 300 0 0 0 0 | Paim Settings Province of the settings Advance of the settings Monitoring sin NS Status QOS Status QUality Of Service Metrics. Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Orer Metrics. Total Overlimit Total Requeued Packets 0 300 0 0 0 0 1 300 0 0 0 0 2 300 0 0 0 0 3 300 0 0 0 0 4 300 0 0 0 0 |
| | 0 0 0 0 0 0 | Pain Settings Privation Private Privation Private Pri | Paim Settings Provention of the settings Advanced Monitoring sin NS Status QOS Status QUality Of Service Metrics. Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Organization Total Overlimit Total Requeued 0 300 0 0 0 0 1 300 0 0 0 0 2 300 0 0 0 0 3 300 0 0 0 0 4 300 0 0 0 0 5 300 0 0 0 0 |
| 3 300 0 0 0 | | Pain Settings Hy network Settings Advanced Monitoring Status QOS Status Quality of Service Metrics. Quality of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Sent Total Overlimit Total Requeued Packets 0 300 0 0 0 0 1 300 0 0 0 | Pain Settings Pry Network Settings Advanced Monitoring Status QOS Status Quality of Service Metrics. Quality of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Sent Packets Total Overlimit Packets Total Requeued Packets 0 300 0 0 0 0 1 300 0 0 0 |
| 3 300 0 0 0 | | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in SS Status Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 0 0 1 300 0 0 0 0 0 0 |
| 3 300 0 0 0 | | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in SS Status Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 0 0 1 300 0 0 0 0 0 0 |
| 3 300 0 0 0 | | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in SS Status Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 0 0 1 300 0 0 0 0 0 0 |
| | | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in SS Status Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 0 0 1 300 0 0 0 0 0 0 |
| | | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in SS Status Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 0 0 1 300 0 0 0 0 0 0 |
| | | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in SS Status Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 0 0 1 300 0 0 0 0 0 0 |
| | | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in SS Status Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 0 0 1 300 0 0 0 0 0 0 |
| 2 300 0 0 0 | 0 0 0 | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in SS Status Quality Of Service Metrics. Packet Counters: Queue Number Max Queue Size Total Dropped Packets Total Overlimit Total Requeued Packets 0 300 0 0 0 0 0 0 1 300 0 0 0 0 0 0 |
| 2 300 0 0 0 | 0 0 0 | Advanced Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring Monitoring | in <u>QOS Status</u> Settings Hy Network <u>Settings</u> Advanced <u>Monitoring</u> Monitoring <u>QUality Of Service Metrics</u> . Packet Counters: <u>Queue Number Max Queue Size Total Dropped Packets</u> <u>Total Overlimit</u> <u>Total Requeued Packets</u> 0 300 0 0 0 0 0 0 |
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| Ouene Number Max Ouene Size Total Dropped Total Sent Total Overlimit To | | Advanced Monitoring | in OOS Status |
| Quality Of Service Metrics. Packet Counters: Output Size Total Dropped Total Sent Total Overlimit To | Total Sent Total Overlimit Total Requeued | riain Settings riv Network Settings Advanced Monitoring | Plain Settings Pry Network Settings Advanced Monitoring |
| Quality Of Service Metrics. Packet Counters: Output Size Total Dropped Total Sent Total Overlimit To | Total Sent Total Overlimit Total Requeued | Main Wireless My Network Firewall Advanced System Settings My Network Settings Advanced Monitoring | Main Wireless My Network Firewall Advanced System Settings My Network Settings Advanced Monitoring |
| OS Status Quality Of Service Metrics. Packet Counters: Outring Numbers Man Quant Size Total Dropped Total Sent Total Overlimit Total | Total Sent Total Overlimit Total Requeued | Main Wireless My Network Firewall Advanced System Settings My Network Settings Monitoring | Main Wireless My Network Firewall Advanced System Settings My Network Settings Advanced Monitoring |
| OS Status QOS Status Quality Of Service Metrics. Packet Counters: Quanto Number Marc Quanto Size Total Dropped Total Sent Total Overlimit Total | Total Sent Total Overlimit Total Requeued | Main Wireless My Network Firewall Advanced System Settings My Network Settings Monitoring | Main Wireless My Network Firewall Advanced System Settings My Network Settings Advanced Monitoring |
| S Status QOS Status Quality Of Service Metrics. Packet Counters: Ourse Number New Ourse Size Total Dropped Total Sent Total Overlimit Total | Total Sent Total Overlimit Total Requeued | Main Wireless My Network Firewall Advanced System | Main Wireless My Network Firewall Advanced System |
| ain oS Status QOS Status Quality Of Service Metrics. Packet Counters: Orango Numbes Man Ousgo Size Total Dropped Total Sent Total Overlimit To | Status iervice Metrics. Total Sent Total Overlimit Total Requeued | | |
| ain SS Status Packet Counters: Orano Number Man Oueno Size Total Dropped Total Sent Total Overlimit Total Sent Total Overlimit Total Sent Sent Sent Sent Sent Sent Sent Sent | Status iervice Metrics. | | |

| QOS Status | | |
|-------------------------|--|--|
| Queue Number | Indicates the DiffServ Queue. | |
| | Queue Number Descriptions: | |
| | 0 = Best Effort (BE) | |
| | 1 = Assured Forwarding 1 (AF1) | |
| | 2 = Assured Forwarding 2 (AF2) | |
| | 3 = Assured Forwarding 2 (AF3) | |
| | 4 = Assured Forwarding 2 (AF4) | |
| | 5 = Expedited Forwarding (EF) | |
| | 6 = Routing Protocols (DiffServ priorities 6 and 7) | |
| Max Queue Size | The maximum number of packets that can be queued for this priority. | |
| Total Dropped Packets | Indicates how many packets of this priority have been dropped by QOS due to | |
| | lack of buffer space or filtering rules. | |
| Total Sent Packets | Displays the number of packets, destined for the WAN, that have been received. | |
| Total Overlimit Packets | Displays the current number of overlimit packets. | |
| Total Requeued Packets | Displays the most number of packets that have been requeued for this priority. | |



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17.2.7 Transceiver Statistics

In the Advanced Status screen, click Transceiver Statistics. The following screen will be displayed. After you have viewed the details in this page, click Close to return to the Advanced Status screen.

| e <u>E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> o | ols <u>H</u> elp | | | | |
|---|----------------------|-------------------------|----------------------|----------------|----------------------|
| | | | | | |
| veri | on | | | | |
| | | | | | |
| Main | Wireless Settings | My Network | Firewall Settings | Advanced | System Monitoring |
| | | | | | |
| Main | | | | | |
| Transceiver Stats | | | Transceiver Sta | tistics | |
| | - | Transceiver Revision | A2pB0 | 020b3.d19d | |
| | | Vendor ID Code | 4D54 | | |
| | | Line Mode | ADSL | _2plus | |
| | | Data Path | FAST | | |
| | | Transceiver Information | Down Stream Path | Up Stream Path | _ |
| | | DSL Speed (Kbits/Sec) | 8060 | 1023 | |
| | | Margin (dB) | 30.3 | 14.3 | |
| | | Line Attenuation (dB) | 2.0 | 0.0 | |
| | | Transmit Power (dBm) | 5.9 | 11.4 | |
| | | | | | |
| | | | Close | | |
| | | | | | |
| | | | | | |

| Transceiver Statistics | | |
|--|---|--|
| Transceiver Revision | The transceiver software version number. | |
| Vendor ID Code | The CPE Vendor's ID code for their chipset. | |
| Line Mode | The operational mode. Modes supported are No Mode, Multi Mode, T1.413 | |
| | Mode, G.DMT Mode, and G.LITE Mode. | |
| Data Path | The data path used (either Fast or Interleaved). | |
| Transceiver Information-Down Stream/Up Stream Path | | |
| DSL Speed (Kbits/Sec) | The transmission rate that is provided by your service provider. | |
| SNR Margin (dB) | The Signal-to-Noise Ratio (S/N) where 0 db = 1×10^{-7} , which inhibits your DSL | |
| | speed. | |
| Line Attenuation (dB) | The DSL line loss. | |
| Transmit Power (dBm) | The transmitted signal strength. | |



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18. PORT FORWARDING SERVICES

For your convenience, VersaLink supports protocols for Applications, Games, and VPN-specific programs. The following chart provides port/protocol information for the supported services.

NOTE: To configure the Router for a service or application, follow the steps in section 15.3.3, "Configuring Port Forwarding Services," of this User Guide.

| Applications/Games/VPN Support | | |
|-----------------------------------|--|--|
| Application/Game | Port/Protocol | |
| Aliens vs. Predator | 80 UDP, 2300 UDP, 8000-8999 UDP | |
| Age of Empires II: The | 6073 UDP, 47624 TCP, 2300-2400 TCP/UDP | |
| Conquerors | This service will open up ports for both traffic directions. | |
| Americas Army | TCP – 20045 | |
| 5 | UDP – 1716 to 1718, 8777, 27900 | |
| America Online | 5190 TCP/UDP | |
| Anarchy Online | TCP/UDP - 7012,7013, 7500 - 7505 | |
| AOL Instant Messenger | 4099 TCP, 5190 TCP | |
| Asheron's Call | 9000-9013 UDP, 28800-29000 TCP | |
| Battlecom | 2300-2400 TCP/UDP, 47624 TCP/UDP | |
| Battlefield 1942 | UDP - 14567, 22000, 23000 to 23009, 27900, 28900 | |
| Black and White | 2611-2612 TCP, 6667 TCP, 6500 UDP, 27900 UDP | |
| Blizzard Battle.net (Diablo II) | 4000 TCP, 6112 TCP/UDP | |
| Buddy Phone | 700, 701 UDP | |
| Bungie.net, Myth, Myth II Server | 3453 TCP | |
| Calista IP Phone | 3000 UDP, 5190 TCP | |
| Citrix Metaframe | 1494 TCP | |
| Client POP/IMAP | 110 TCP | |
| Client SMTP | 25 TCP | |
| Counter Strike | 27015 TCP/UDP, 27016 TCP/UDP | |
| Dark Reign 2 | 26214 TCP/UDP | |
| Delta Force (Client and Server) | 3568 UDP, 3100-3999 TCP/UDP | |
| Delta Force 2 | 3568-3569 UDP | |
| DeltaForce: Land Warrior | UDP 53 | |
| | TCP 21 | |
| | TCP 7430 | |
| | TCP 80 | |
| | UDP 1029 | |
| | UDP 1144 | |
| | UDP 65436 | |
| | UDP 17478 | |
| DNS | 53 UDP | |
| Elite Force | 2600 UDP, 27500 UDP, 27910 UDP, 27960 UDP | |
| Everquest | 1024-7000 TCP/UDP | |
| F-16, Mig 29 | 3863 UDP | |
| F-22 Lightning 3 | 4660-4670 TCP/UDP, 3875 UDP, 4533-4534 UDP, 4660-4670 UDP | |
| F-22 Raptor | 3874-3875 UDP | |
| Fighter Ace II | 50000-50100 TCP/UDP | |
| Fighter Ace II for DX play | 50000-50100 TCP/UDP, 47624 TCP, 2300-2400 TCP/UDP | |
| FTP | 20 TCP, 21 TCP | |



| GameSpy Online | UDP 3783 |
|-----------------------------------|---|
| | UDP 6515 |
| | TCP 6667 |
| | UDP 12203 |
| | TCP/UDP 13139 |
| | UDP 27900 |
| | UDP 28900 |
| | UDP 29900 |
| | UDP 29901 |
| Ghost Recon | TCP 80 |
| | UDP 1038 |
| | UDP 1032 |
| | UDP 53 |
| | UDP 2347 |
| | UDP 2346 |
| GNUtella | 6346 TCP/UDP, 1214 TCP |
| Half Life Server | 27005 UDP(client only) |
| | 27015 UDP |
| Heretic II Server | 28910 TCP |
| Heren II | 26900 (+1) each player needs their own port. Increment by one for |
| пехен п | each person. |
| Hotline Server | 5500, 5503 TCP 5499 UDP |
| HTTPS | 443 TCP/UDP |
| | |
| ICMP Echo | 4 ICMP |
| ICQ OLD | 4000 UDP, 20000-20019 TCP |
| ICQ 2001b | 4099 TCP, 5190 TCP |
| ICUII Client | 2000-2038 TCP, 2050-2051 TCP, 2069 TCP, 2085 TCP, 3010-3030 |
| | ТСР |
| ICUII Client Version 4.xx | 1024-5000 TCP, 2050-2051 TCP, 2069 TCP, 2085 TCP, 3010-3030 |
| | TCP, 2000-2038 TCP6700-6702 TCP, 6880 TCP, 1200-16090 TCP |
| IMAP | 119 TCP/UDP |
| IMAP v.3 | 220 TCP/UDP |
| Internet Phone | 22555 UDP |
| IPSEC ALG | IPSEC ALG |
| IPSEC ESP | PROTOCOL 50 |
| IPSEC IKE | 500 UDP |
| Ivisit | 9943 UDP, 56768 UDP |
| JKII:JO (Jedi Knight II: Jedi | UDP - 28070 (default) |
| Outcast) | UDP- 27000 to 29000 |
| KALI, Doom & Doom II | 2213 UDP, 6666 UDP (EACH PC USING KALI MUST USE A |
| , | DIFFERENT PORT NUMBER STARTING WITH 2213 + 1) |
| KaZaA | 1214 TCP/UDP |
| Limewire | 6346 TCP/UDP, 1214 TCP |
| Medal Of Honor: Allied Assault | TCP 80 |
| inicial of fiction. Third Tisbuar | UDP 53 |
| | UDP 2093 |
| | UDP 12201 |
| | TCP 12300 |
| | UDP 2135 |
| | UDP 2139 |
| | TCP/UDP 28900 |
| mIRC Chat | 6660-6669 TCP |
| Motorhead Server | 16000 TCP/UDP, 16010-16030 TCP/UDP |
| wowneau Server | 10000 101/001, 10010-10030 107/007 |



| MSN Game Zone | 6667 TCP, 28800-29000 TCP |
|---------------------------------|--|
| MSN Game Zone (DX 7 & 8 play) | 6667 TCP, 6073 TCP, 28800-29000 TCP, 47624 TCP, 2300-2400 |
| WSIV Game Zone (DX / & o play) | TCP/UDP This service will open up ports for both traffic directions. |
| MSN Messenger | 6891-6900 TCP, 1863 TCP/UDP, 5190 UDP, 6901 TCP/UDP |
| Napster | 6699 TCP |
| Need for Speed 3, Hot Pursuit | 1030 TCP |
| Need for Speed 9, Hot Fulsatt | 9442 UDP |
| Net2Phone | 6801 UDP |
| NNTP | 119 TCP/UDP |
| Operation FlashPoint | 47624 UDP, 6073 UDP, 2300-2400 TCP/UDP, 2234 TCP |
| Outlaws | 47824 0DP, 6073 0DP, 2300-2400 TCP/0DP, 2234 TCP 5310 TCP/UDP |
| Pal Talk | 2090-2091 TCP/UDP, 2095 TCP, 5001 TCP, 8200-8700 TCP/UDP, |
| Fai Taik | 1025-2500 UDP |
| na Anuruhara hast | 5631 TCP, 5632 UDP, 22 UDP |
| pcAnywhere host Phone Free | |
| | 1034-1035 TCP/UDP, 9900-9901 UDP, 2644 TCP, 8000 TCP |
| Quake 2 | 27910 UDP |
| Quake 3 | 27660 UDP |
| | Each computer playing QuakeIII must use a different port number, |
| | starting at 27660 and incrementing by 1. You'll also need to do the following: |
| | following: 1. Right click on the QIII icon |
| | 2. Choose "Properties" |
| | 3. In the Target field you'll see a line like "C:\Program Files\Quake |
| | III Arena\quake3.exe" |
| | 4. Add the Quake III net port command to specify a unique |
| | communication port for each system. The complete field should look |
| | like this: "C:\Program Files\Quake III Arena\quake3.exe" +set |
| | net port 27660 |
| | 5. Click OK. |
| | 6. Repeat for each system behind the NAT, adding one to the |
| | net_port selected (27660,27661,27662) |
| Quicktime 4/Real Audio | 6970-32000 UDP, 554 TCP/UDP |
| Rainbow Six & Rogue Spear | 2346 TCP |
| RealOne Player | TCP - 554, 7070 to 7071 |
| Realone Thayer | UDP - 6970 to 7170 |
| Real Audio | 6970-7170 UDP |
| Return To Castle Wolfenstein | Default -27960 TCP/UDP |
| Return 10 Castle Wonenstein | UDP - 27950 to 27980 |
| Roger Wilco | TCP/UDP 3782 |
| Roger whee | UDP 3783 (BaseStation) |
| SIP ALG | SIP ALG |
| ShoutCast Server | 8000-8005 TCP |
| Spinner Radio/Netscape Music | TCP - 554 |
| SSH Secure Shell | 22 TCP/UDP |
| Starcraft | 2346 TCP |
| Starfleet Command | 2300-2400 TCP/UDP, 47624 TCP/UDP |
| SOF/SOFII (Soldier of Fortune / | UDP - 28910 to 28915 |
| Soldier of Fortune II) | 0101 - 20910 W 20915 |
| Telnet | 23 TCP |
| Tiberian Sun & Dune 2000 | 1140-1234, 4000 TCP/UDP |
| Tribes2 | TCP - 15104, 15204, 15206, 6660 to 6699 |
| 1110652 | UDP - 27999 to 28002 |
| Ultima Online | 5001-5010 TCP, 7775-7777 TCP, 8800-8900 TCP, 9999 UDP, 7875 |
| Omina Omine | JUUI-JUIU ICF, ///J-//// ICF, 8800-8900 ICF, 9999 UDP, /8/5 |



| | UDP | |
|--------------------------------|---|--|
| Unreal Tournament server | 7777 (default gameplay port) | |
| | 7778 (server query port) | |
| | 7779,7779+ are allocated dynamically for each helper UdpLink | |
| | objects, including UdpServerUplin objects. Try starting with 7779- | |
| | 7781 and add ports if needed. | |
| | 27900 server query, if master server uplink is enabled. Home master | |
| | servers use other ports like 27500. | |
| | Port 8080 is for UT Server Admin. In the [UWeb.WebServer] | |
| | section of the server.ini file, set the ListenPort to 8080 and | |
| | ServerName to the IP assigned to the Gateway from Verizon. | |
| USENET News Service | 143 TCP | |
| VNC, Virtual Network Computing | 5500 TCP, 5800 TCP, 5900 TCP | |
| Westwood Online, C&C | 4000 TCP/UDP, 1140-1234 TCP/UDP | |
| World Wide Web (HTTP) | 80 TCP | |
| | 443 TCP (SSL) | |
| | 8008 or 8080 TCP (PROXY) | |
| Xbox Live | 88 TCP/UDP, 3074 TCP/UDP | |
| Yahoo Messenger Chat | 5000-5001 TCP | |
| Yahoo Messenger Phone | 5055 UDP | |
| NAT/VPN Support | | |
| IPSec Encryption | IPSec using AH can not be supported through NAT. IPSec using | |
| | ESP and L2TP can be supported via an ALG | |
| L2TP | IPSec using ESP and L2TP can be supported via an ALG. | |
| PPTP | Works through NAT. | |



19. TECHNICAL SUPPORT INFORMATION

Contact your Internet service provider for technical support.

20. PRODUCT SPECIFICATIONS

System Requirements for 10/100 Base-T/Ethernet

- Pentium[®] or equivalent class machines or higher
- Microsoft[®] Windows[®] (Vista[™], XP, 2000, ME, NT 4.0, 98 SE) Macintosh[®] OS X, or Linux installed
- 64 MB RAM (128 MB recommended)
- 10 MB of free hard drive space
- 10/100 Base-T Network Interface Card (NIC)
- Internet Explorer 5.5 or higher or Netscape Navigator 7.x or higher
- Computer Operating System CD-ROM

System Requirements for USB

- Pentium[®] or equivalent class machines or higher
- Microsoft® Windows® (Vista[™], XP, 2000, ME, 98 SE) installed
- 64 MB RAM (128 MB recommended)
- 10 MB of free hard drive space
- USB Version 1.1 or higher compliant bus
- Internet Explorer 5.5 or higher or Netscape Navigator 7.x or higher
- Computer operating system CD-ROM

System Requirements for Wireless

- Pentium[®] or equivalent class machines or higher
- Microsoft® Windows® (Vista™, XP, 2000, ME, 98 SE) installed
- 64 MB RAM (128 MB recommended)
- 10 MB of free hard drive space
- USB Version 1.1 or higher compliant bus
- Internet Explorer 5.5 or higher or Netscape Navigator 7.x or higher
- Computer operating system CD-ROM
- IEEE 802.11b/g PC adapter

LEDs

- Power
- E1, E2, E3, E4
- Wireless
- USB
- DSL
- Internet

Connectors

- DSL: 6-pin RJ-11 modular jack-DSL
- USB: 4-pin Type B connector
- Ethernet: 8-pin RJ-45 modular jack
- Power: Barrel connector

Power

- Power Supply: External 120 VAC (10%) to 12 VDC wall-mount power supply
- Power Consumption: Less than 8 watts typical, from 120 VAC

Dimensions

- Height: 1.3 in. (3.30 cm)
- Width: 7.0 in (17.78 cm)
- Depth: 4.9 in. (12.44 cm)

Weight

• Approx. 1 lb (0.45 kg)

Environmental

- Ambient Operating Temperature: +32 to +104 °F (0 to +40 °C)
- Relative Humidity: 5 to 95%, non-condensing

EMC/Safety/Regulatory Certifications

- FCC Part 15, Class B
- ANSI/UL Standard 60950-1
- CAN/CSA Standard C22.2 No. 60950-01 First Edition dated
- UL, CSA, ACTA 968-A-3
- Industry Canada CS03



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8. Severability. Should any term of this License Agreement be declared void or unenforceable by any court of competent jurisdiction, such declaration shall have no effect on the remaining terms hereof.

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22. PUBLICATION INFORMATION

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