Symmetricom

GoWide 9.2
G.shdsl Bridge/Router
User Manual

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FCC Regulatory Notice

According to Federal Communications Commission (FCC) Rules regarding radio frequency emissions, the GoWide complies with FCC Part 15 for Class B computing devices. The following paragraph is required by the FCC.

This equipment generates, uses and can radiate radio frequency energy and if not used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures may be necessary to correct the interference.

If this equipment does cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by one or more of the following measures:

- Turn the equipment "OFF" and "ON".
- Re-orient or relocate the receiving antenna.
- Increase distance between equipment and receiver.
- Connect the equipment to an outlet on a circuit different from which the receiver is connected.

Note: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

Canadian D.O.C.

This product conforms with Canadian Class A Emissions Regulations.

Approvals

Safety: FCC Part 68, EN60950, UL 1950, C/UL to CSA 22.2 No.950, TUV, IC CS03

Emissions: FCC Part 15 Class B, EN55022/CISPR22 Class B

Immunity: EN55024

Warning: Use a minimum of 26AWG line cord for the DSL connection.

Introduction

The GoWide Broadband Intelligent Business Gateway (BIBG) is an emerging new class of CPE device that grows with small to mid-sized networks without requiring service providers to change their DSL provisioning. It provides symmetric high-speed data services to small to mid-sized businesses. The GoWide enables service providers to provision DSL service reliably over 30,000 feet and saves costs during deployment with faster service deployment, less truck rolls, and will generate significant new revenue for high-speed data access.

It has demonstrable advantages, such as unrivaled rate/reach and tolerance to noise and bridged taps, all of which will enable service providers to provide increased end user satisfaction. The interactive GUI for Windows provides easy setup or change of configuration for either local or remote administration and maintenance.

FOR TROUBLESHOOTING, PLEASE REFER TO THE TECHNICAL MANUAL.

Packing List

- One GoWide 9.2 G.shdsl Bridge/Router
- One Power cord
- One CD with documentation
- Four DSL cables (RJ-11)
- One Ethernet cable (RJ-45)

Chapter 1 Product Description

Chapter 2 Installation

Chapter 3 Bridge Mode Configuration

Chapter 3 Bridge Mode Configuration (cont'd)

Chapter 4 Router Mode Configuration

Chapter 5 Gateway Mode Configuration

Chapter 6 Support and Warranty Information

Appendix A TCP/IP Protocol Installation

Appendix B Interface Pin Assignments

Chapter 1

Product Description

This chapter provides a description of the GoWide 9.2.

1

GoWide 9.2 Feature Specifications

G.shdsl Features

- Standard ITU-T G.shdsl (G.991.2)
- Signal format: TC-PAM
- Data rate: 64 kbps to 9.2 Mbps
- Connector: RJ-11
- Impedance: 135 ohms

ATM Features

- RFC1483 encapsulation (IP, Bridging, and Encapsulated Routing)
- PPP over ATM (LLC and VC multiplexing) (RFC2364)
- Classical IP (RFC1577)
- Inverse Multiplexing over ATM (IMA)
- Traffic shaping
- Supports up to 8 PVCs
- OAM (I.610) support
- PPPoE Relay
- PPPoE Client

LAN Features

- DHCP Server
- DHCP Client
- DHCP Relay
- DNS Relay

Routing Features

- Dynamic Routing with RIP
- Static Routing

Security Features

- Firewall
  - Packet Filtering
  - NAT
  - NAPT
- VPN
  - PPTP support
- Password-protected configuration access
- User authentication (PAP/CHAP) with PPP

Management Features

- Plug and Play installation
- Local and Remote Management (in band)
- Web-based configuration
- Console port for local management
- Telnet configuration
- Command line interface
- Firmware upload via TFTP/BOOTP and Web-based management
- Alarm status and power indicators
- Event logging

System Requirements

- TCP/IP router, hub, and other network devices with Ethernet 10BaseT intefaces
- Computers with an Ethernet 10BaseT
- Operating systems that support Ethernet with an IP stack

GoWide 9.2 Hardware Specifications

Physical Description

- G.shdsl Router with a four-port auto-sensing 10/100BaseT Ethernet hub with automatic MDI/MDIX
- WAN/LAN Status, Power, and Ethernet LEDs
- Dimensions: 44.4 mm x 304.8 mm x 213.3 mm
  (1.75 in. x 12.0 in. x 8.4 in.) (H x W x D)
- Weight: 1.3 kg (3 lbs)
- Color: Gray

Operating Environment

- Temperature: 0 °C to 40 °C (32 °F to 104 °F)
- Humidity: 5% to 90% RH, non-condensing

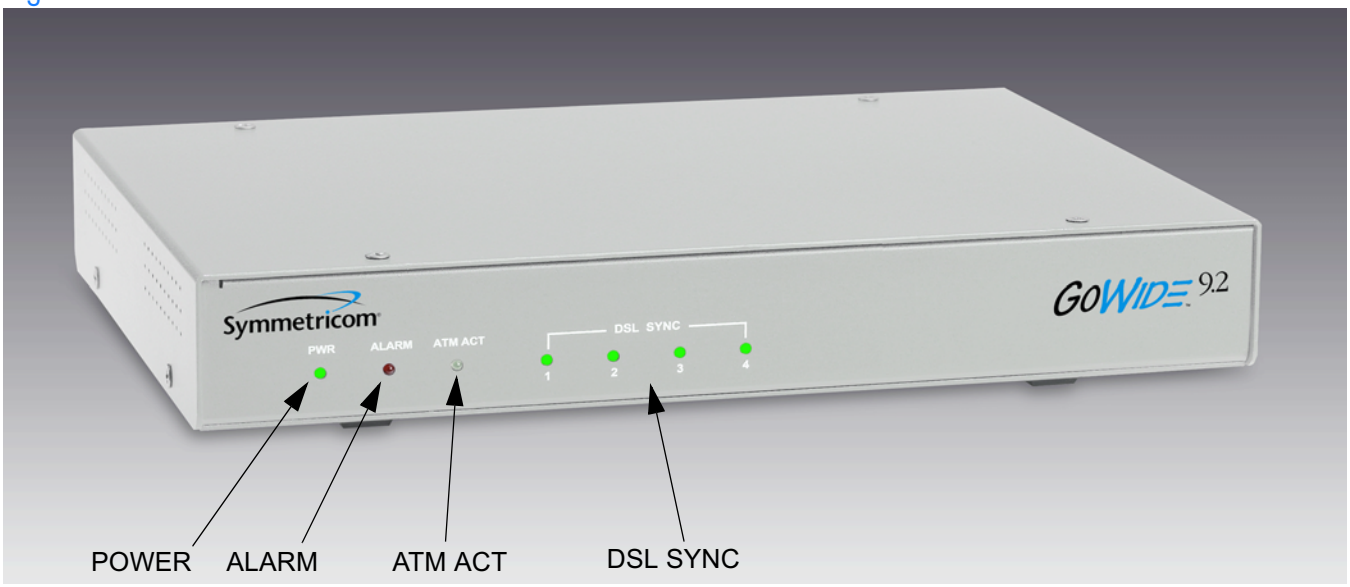
Power

- 100 V AC to 240 V AC
- 50 Hz to 60 Hz
- Auto ranging

GoWide 9.2 Front Panel

Figure 1 shows the GoWide 9.2 front panel.

Figure 1. GoWide 9.2 Front Panel



The GoWide 9.2 front panel includes four status indicators as described in Table A.

Table A. Front Panel Status Indicators

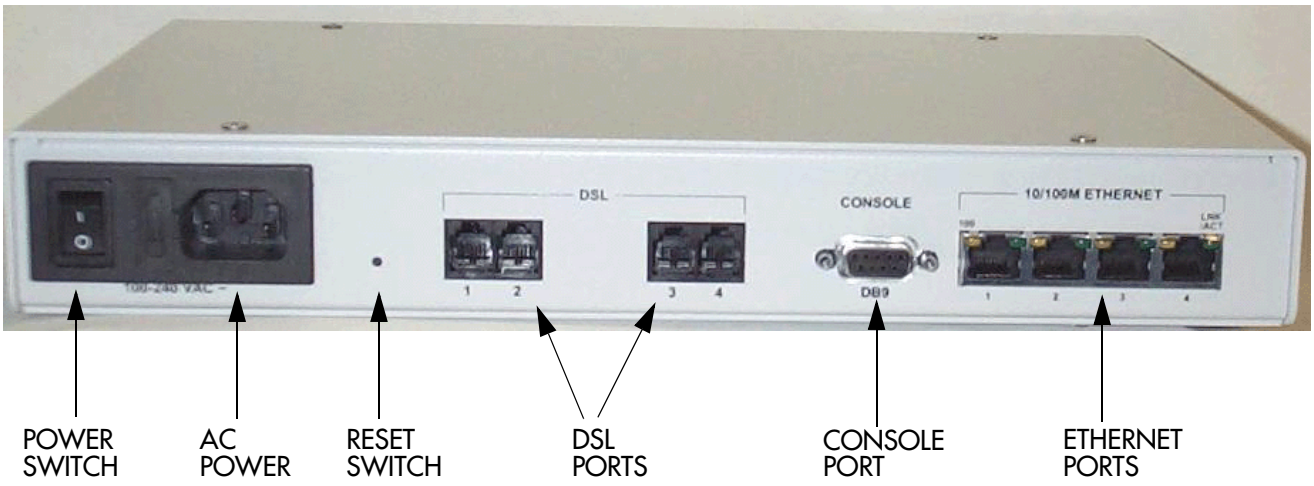
LEDs	COLOR	EXPLANATION
POWER	GREEN	ON: Device has power
		OFF: Device has no power
ALARM	RED	ON: Device has DSL synchronization problem
		OFF: No alarm
ATM ACT	GREEN	ON: Device has ATM activity
		OFF: Device has no ATM activity
DSL SYNC	GREEN*	ON: DSL is synchronized
		OFF: DSL is disabled

*When DSL SYNC LED is blinking, DSL is in handshake mode.

GoWide 9.2 Rear Panel

Figure 2 shows the GoWide 9.2 Rear Panel.

Figure 2. GoWide 9.2 Rear Panel



The GoWide 9.2 rear panel connectors and switches are described in Table B.

Table B. Rear Panel Connectors and Switches

Nomenclature	Explanation
POWER SWITCH	Allows GoWide to be turned ON or OFF.
AC POWER	A receptacle for the power cord.
RESET SWITCH	Returns GoWide to factory settings.
DSL PORTS	RJ-11 ports for DSL connection which require RJ-11 cables (provided).
CONSOLE PORT	For administrative use only.
ETHERNET PORTS	Allows GoWide to establish a connection directly to a computer from any of its four ports. An RJ-45 straight cable is provided and the modem has auto-crossing capability. Therefore, connection to a computer or a hub can be made without changing the RJ-45 cable. Each of the four ports has two LEDs. The green LED remains on when linked to an active Ethernet port and will blink when there is traffic. The yellow LED indicates the speed utilized by GoWide. It will be lit when the speed is at 100 Mb/s and will be off when the speed is 10 Mb/s.

Parameters from Service Provider

The following parameters are an example of what may be provided by the Service Provider (ISP) for configuring the PC or Bridge/Router.

Example service provider parameters are shown as follows:

- IP Address 192 . 168 . 001 . 100
- Subnet Mask Address 255 . 255 . 255 . 0
- Gateway Address 192 . 168 . 001 . 1
- DNS Primary IP Address 202 . 023 . 035 . 75
- DNS Secondary IP Address 202 . 023 . 035 . 85
- Domain Address 010 . 010 . 012 . 40
- VCI value (default: vci=35) 35
- VPI value (default: vpi=0) 0
- Domain Name
- Host Name

Worksheet

PLEASE HAVE THIS INFORMATION BEFORE YOU PROCEED:

- IP Address ___ . ___ . ___ . ___
- Subnet Mask Address ___ . ___ . ___ . ___
- Gateway Address ___ . ___ . ___ . ___
- DNS Primary IP Address ___ . ___ . ___ . ___
- DNS Secondary IP Address ___ . ___ . ___ . ___
- Domain Address ___ . ___ . ___ . ___
- VCI value (default: vci=35) ___
- VPI value (default: vpi=0) ___
- Domain Name _____
- Host Name _____

Note: If VCI/VPI values are the same as the default values, no changes are required in the bridge mode.

Note: An extra copy of this page is provided on the last page of this manual.

Default Settings

System Module

- IP Address : 10.0.0.1
- Password : password (minimum 4 alphabetic characters)
- Language : English

ATM Module

- VPI : 0
- VCI : 35
- Encapsulation type : LLC
- Encapsulation protocol : RFC1483 (Bridged)

Chapter 2

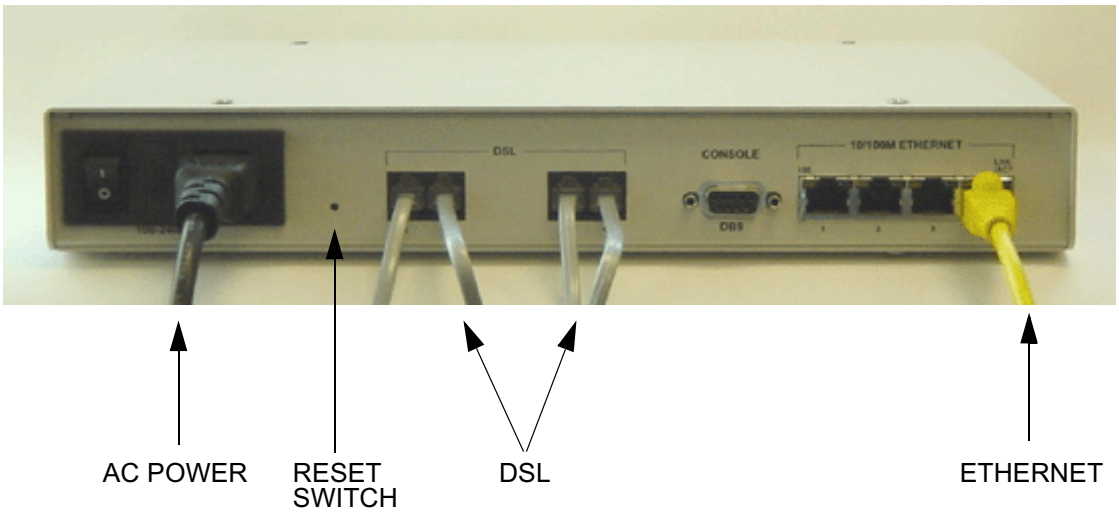
Installation

This chapter provides installation information for the GoWide 9.2.

Hardware Installation

Figure 3 shows the cable connections to the GoWide 9.2 rear panel. Connecting the PC to the Ethernet port is described in Procedure A.

Figure 3. GoWide 9.2 Rear Panel Cable Connections



Procedure A. PC Connection to the Ethernet Port

Step	Procedure
1	Check that the Ethernet card and the TCP/IP protocol are installed on the PC before beginning installation. (If the TCP/IP protocol is not installed, go to Appendix A for the installation procedures.)
2	Connect the Ethernet cable from any of the four GoWide 9.2 Ethernet ports to the PC NIC card or the server NIC card.
3	Connect one end of the DSL cable to the DSL wall jack and the other end to the "DSL RJ-11" receptacle on the back of the GoWide 9.2.
4	Connect one end of the power cord to the wall jack and the other end to the "AC POWER" receptacle on the GoWide 9.2.
5	Turn on the GoWide 9.2 by placing the ON/OFF switch in the back of the device to the ON position. The Power LED must be a steady green. The Sync LED will initially be a blinking green and will become a steady *green* once the connection is established.

End of Procedure

PC Configuration

To configure the PC to communicate with the GoWide 9.2, refer to the appropriate mode configuration chapter. These chapters are as follows:

- Chapter 3, Bridge Mode Configuration
- Chapter 4, Router Mode Configuration
- Chapter 5, Gateway Mode Configuration

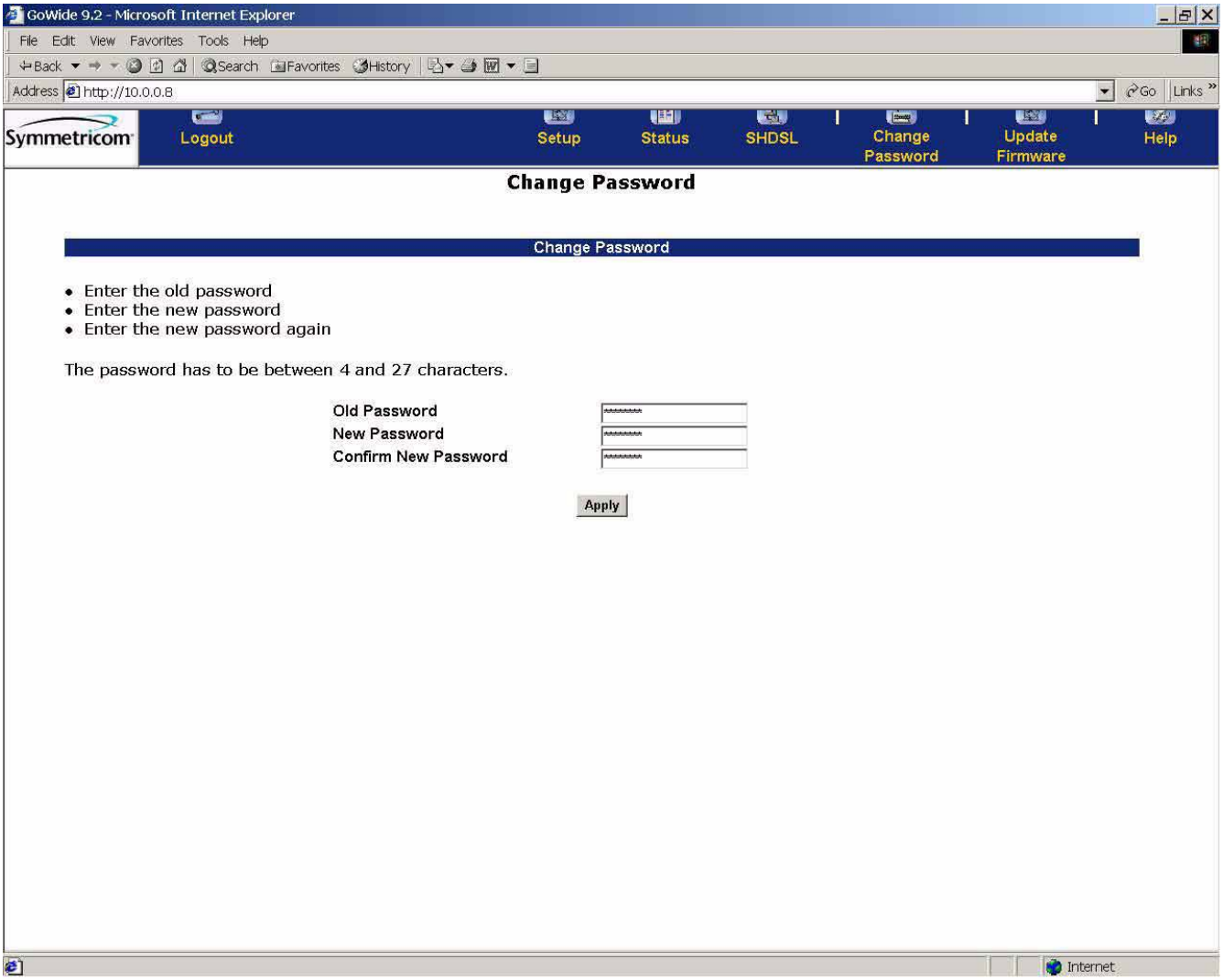
Note: If any problems are encountered with PC configuration, please refer to the troubleshooting section of the appropriate mode configuration chapter.

Change Password

To change the password used to access GoWide 9.2, do the following:

1. Click **Change Password** on the GoWide 9.2 screen toolbar.
2. The Change Password screen (Figure 4) is displayed.
3. Follow the directions on the Change Password screen and click the **Apply** button.

Figure 4. Change Password Screen



Setting Factory Defaults

The GoWide 9.2 can be set to the Factory Default settings via the reset switch on the unit's rear panel (see Figure 2).

To reset the GoWide 9.2, press the reset button and hold down for 5 seconds while the unit is on.

Once the reset button is released, the unit will restart and the settings will revert to the factory default settings.

Note: The mode of operation for the unit, the password, and the unit IP address will all be changed to the default settings. If you want to reboot or restart the GoWide 9.2, DO NOT use the reset switch. Use the ON/OFF switch instead.

Bridge Mode Configuration

Chapter 3

This chapter provides information on the bridge mode configuration.

Introduction

This chapter provides information on configuring the GoWide 9.2 in Bridge mode.

PC Configuration

Note: Ensure that an Ethernet card is installed in the PC.

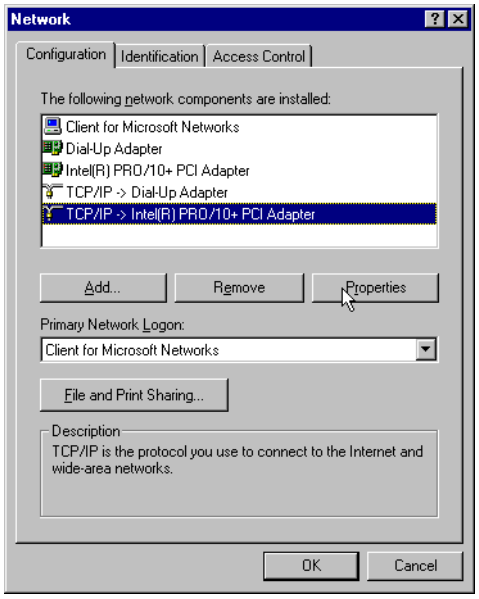
Note: The figures illustrating PC configuration are Windows 98 screen captures. For Windows 95/NT 4.0/2000/XP, please refer to the appropriate user manual.

To configure a PC to communicate with the GoWide 9.2, do the following:

1. Establish a TCP/IP connection to the GoWide 9.2. This is done by clicking the **Start** button and selecting **Settings**, **Control Panel**, and **Network**.

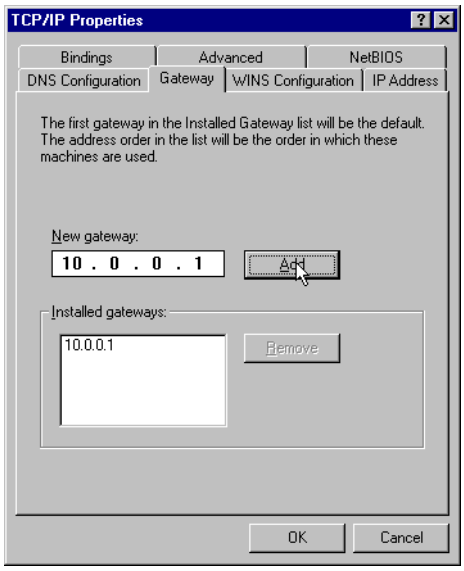
2. Click the Network **Configuration** tab, select the TCP/IP protocol, and click **OK** (Figure 5).

Figure 5. TCP/IP Properties Screen



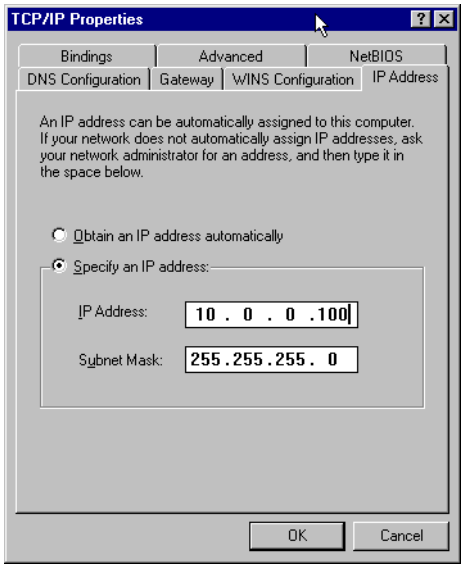
3. In the TCP/IP Properties page, enter the Gateway IP address. See Figure 6.

Figure 6. Gateway IP Address



4. Click the IP Address tab and enter the IP Address and Subnet Mask values. See Figure 7.

Figure 7. IP Address and Subnet Mask Values



5. Click **OK**. The PC is now configured to communicate with the GoWide 9.2.

Note: For Windows 2000, simply click **OK**. The PC will be configured to communicate with the GoWide 9.2.

GoWide 9.2 Configuration

GoWide 9.2 Login

Procedure B describes the method for logging in to the GoWide 9.2.

Procedure B. GoWide 9.2 Login

Step	Procedure
1	Power up the computer (if not already powered up). Open the Internet Explorer Web browser. *Note:* Ensure that both the **Automatically detect settings** box and the **Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections)** box are not selected. See Figure 8.
2	Enter 10.0.0.1 for the IP address in the **Address** field.
3	The GoWide initial screen (Figure 9) is now displayed. Click **Login**.
4	Enter the password in the **Password** window (default is *password*). To change the password, refer to the Change Password section in Chapter 2.
5	Press Enter. The GoWide 9.2 status screen (Figure 10) is now displayed.
	End of Procedure

Figure 8. Web Browser LAN Settings

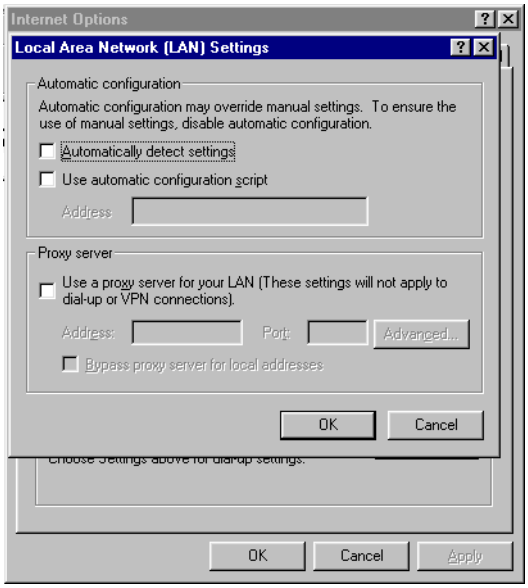


Figure 9. GoWide 9.2 Initial Screen

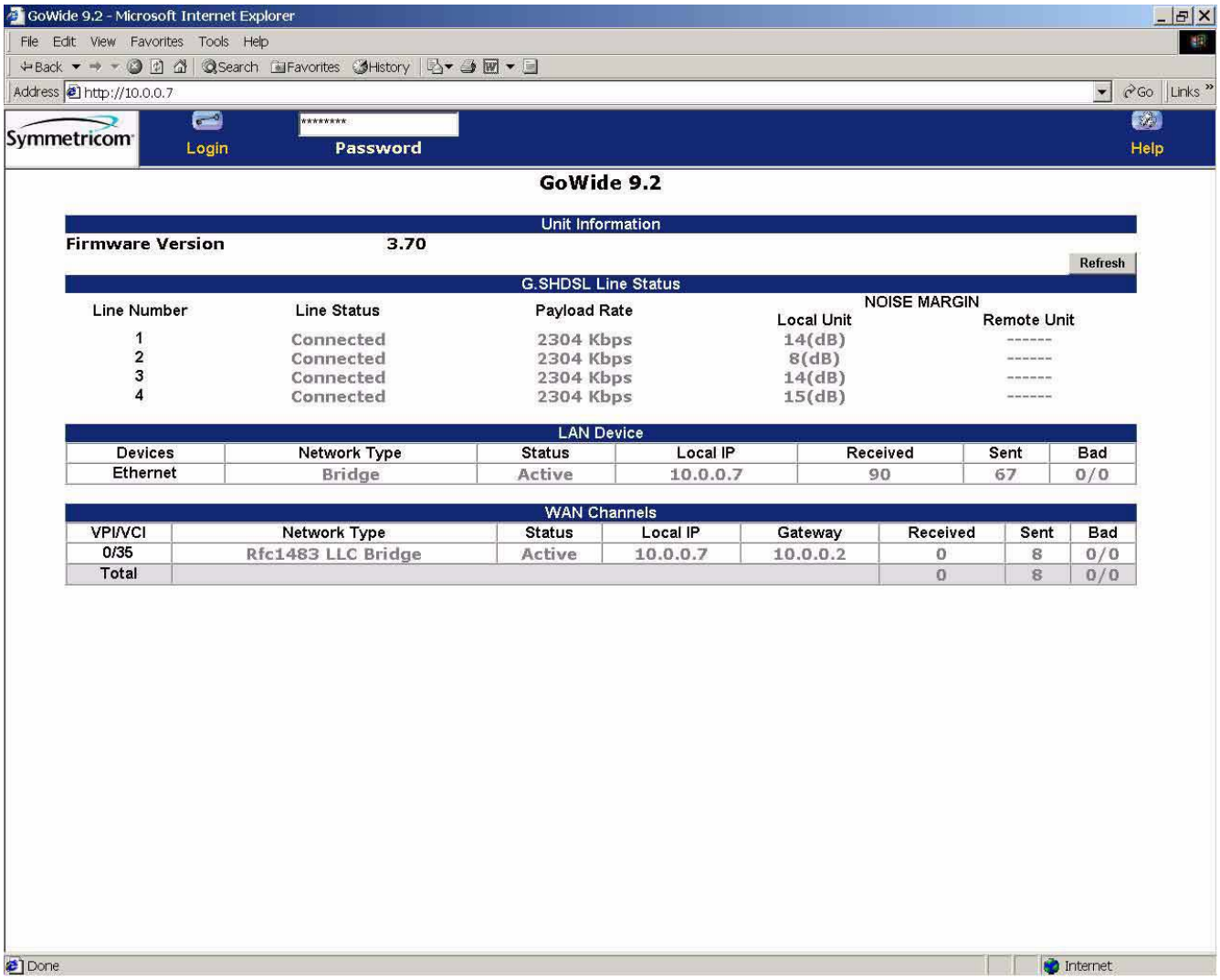


Figure 10. GoWide 9.2 Status Screen

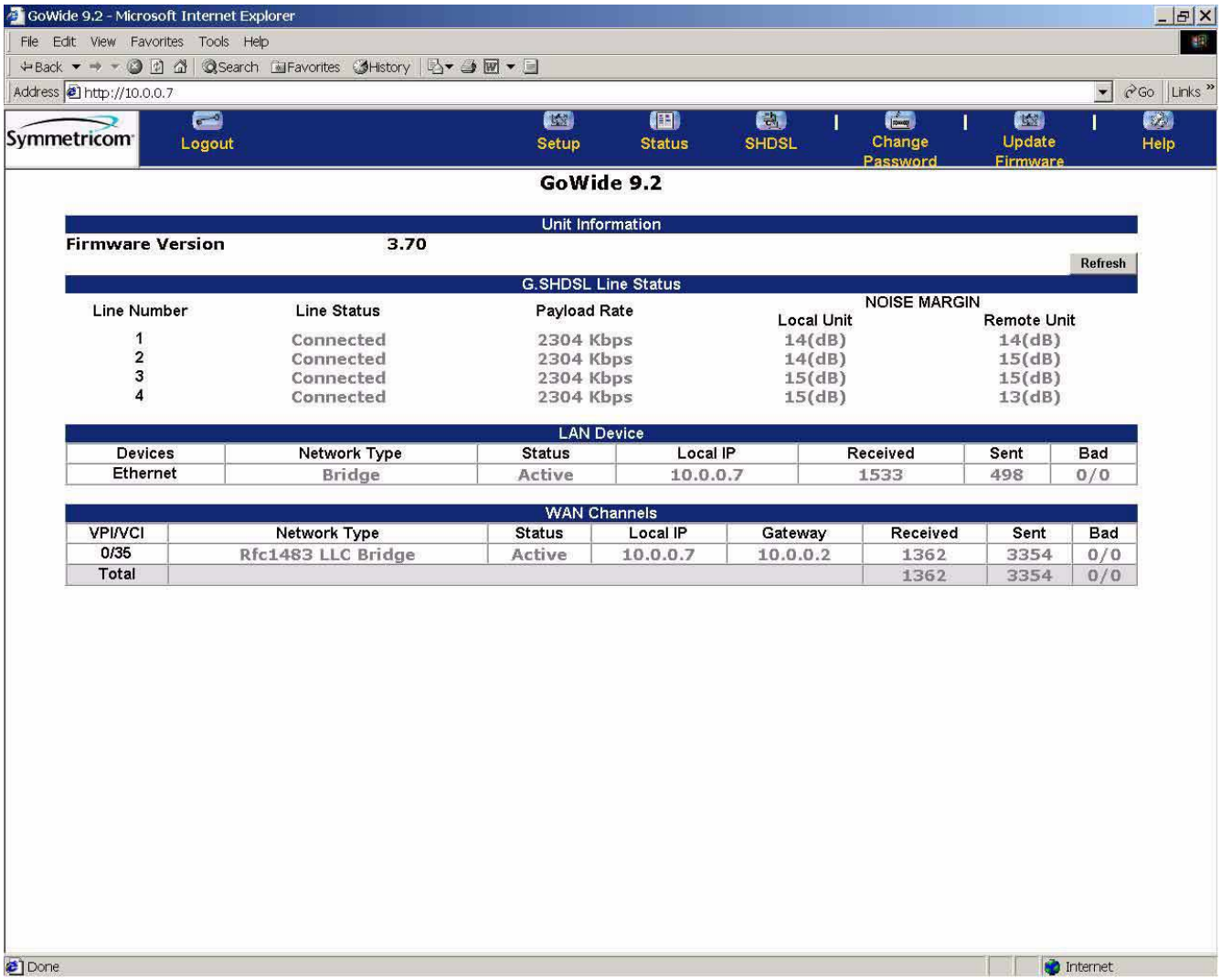
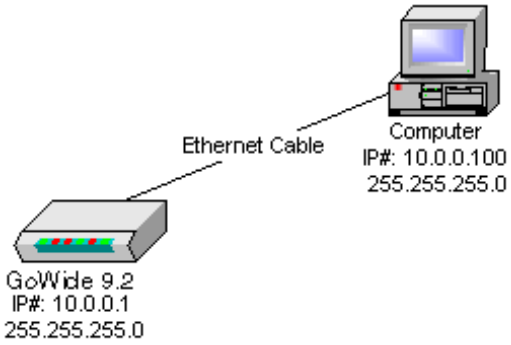


Figure 11 shows a default configuration setup between a PC and the GoWide 9.2.

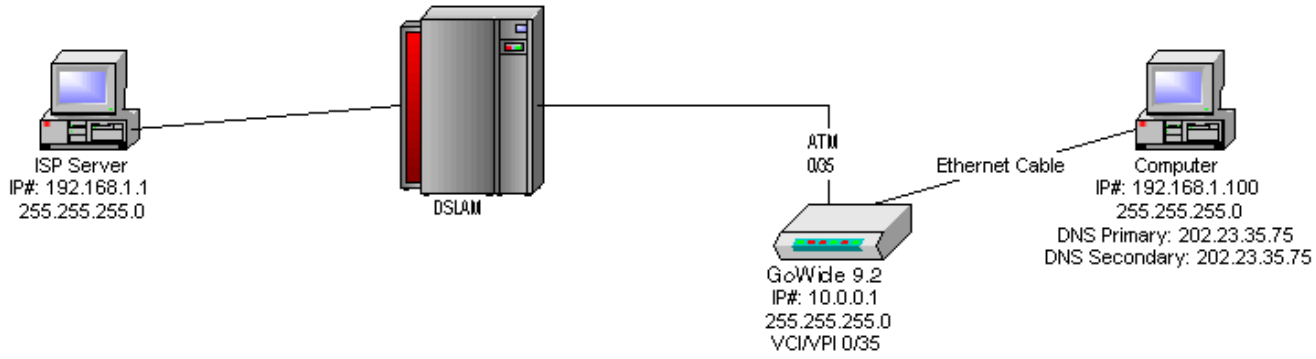
Figure 11. GoWide 9.2 Default Configuration



Sample Configuration

Figure 12 shows a sample configuration setup for GoWide 9.2 bridge mode.

Figure 12. GoWide 9.2 Bridge Mode Configuration



System Screen

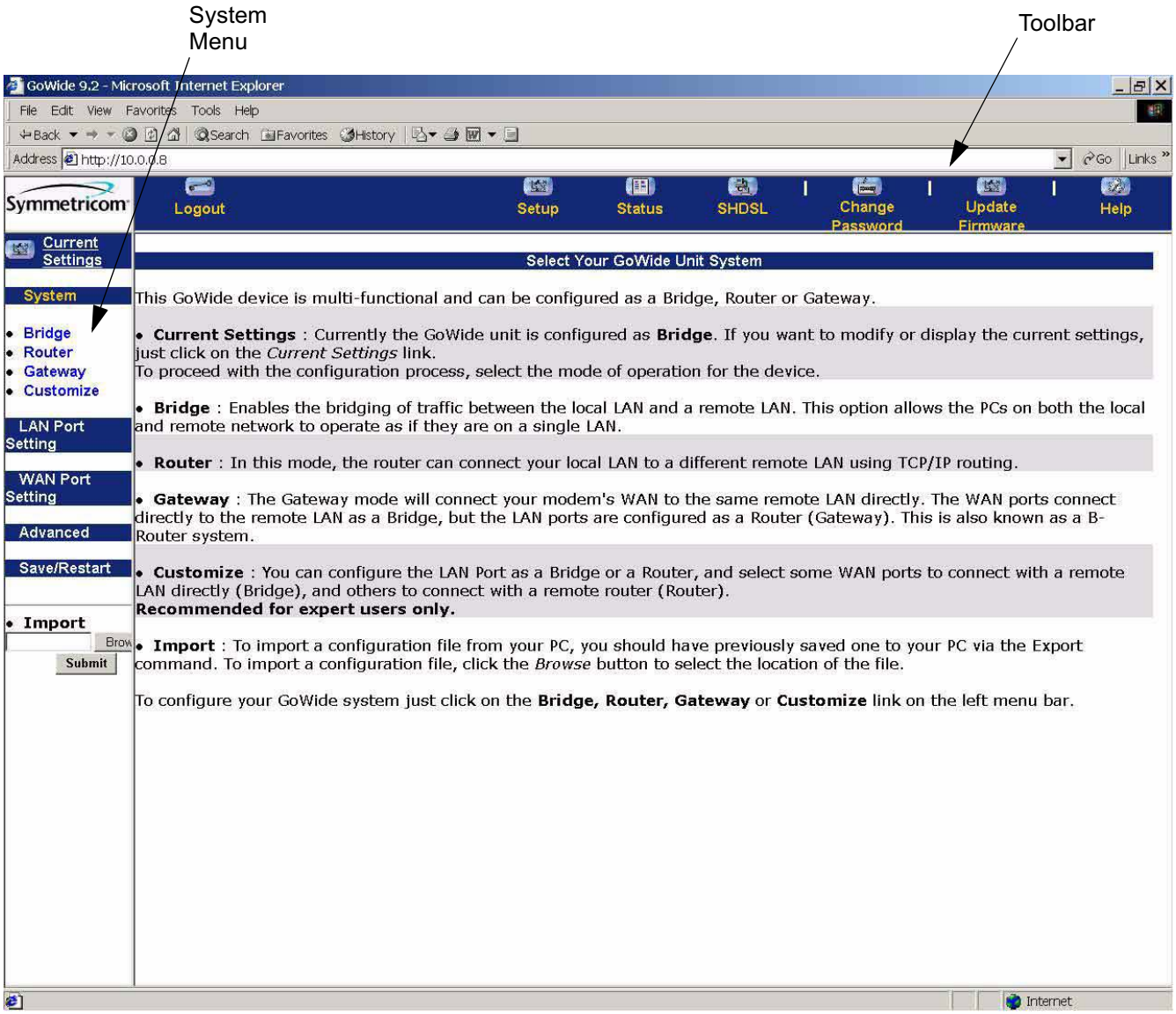
Bring up the System bridge mode configuration screen as described in Procedure C.

Procedure C. System Screen

Step	Procedure
1	Login to the GoWide 9.2.
2	Select **Setup** from the GoWide 9.2 toolbar. The System screen (Figure 13) is now displayed.
3	Click the **Bridge** hyperlink in the System Menu.

End of Procedure

Figure 13. System Screen



LAN Port Configuration

Clicking the **Bridge** hyperlink brings up the Configure LAN Port screen (Figure 14). Procedure D describes the method for configuring the LAN Port.

Procedure D. Configuring LAN Port

Step	Procedure
1	Select the **Ethernet** hyperlink in the System Menu (Figure 14).
2	Enter the values for **Local IP** and **Subnet Mask** in the respective fields (Figure 15).
3	Click the **Apply** button if all data is correct.

End of Procedure

Figure 14. Configure LAN Port Screen

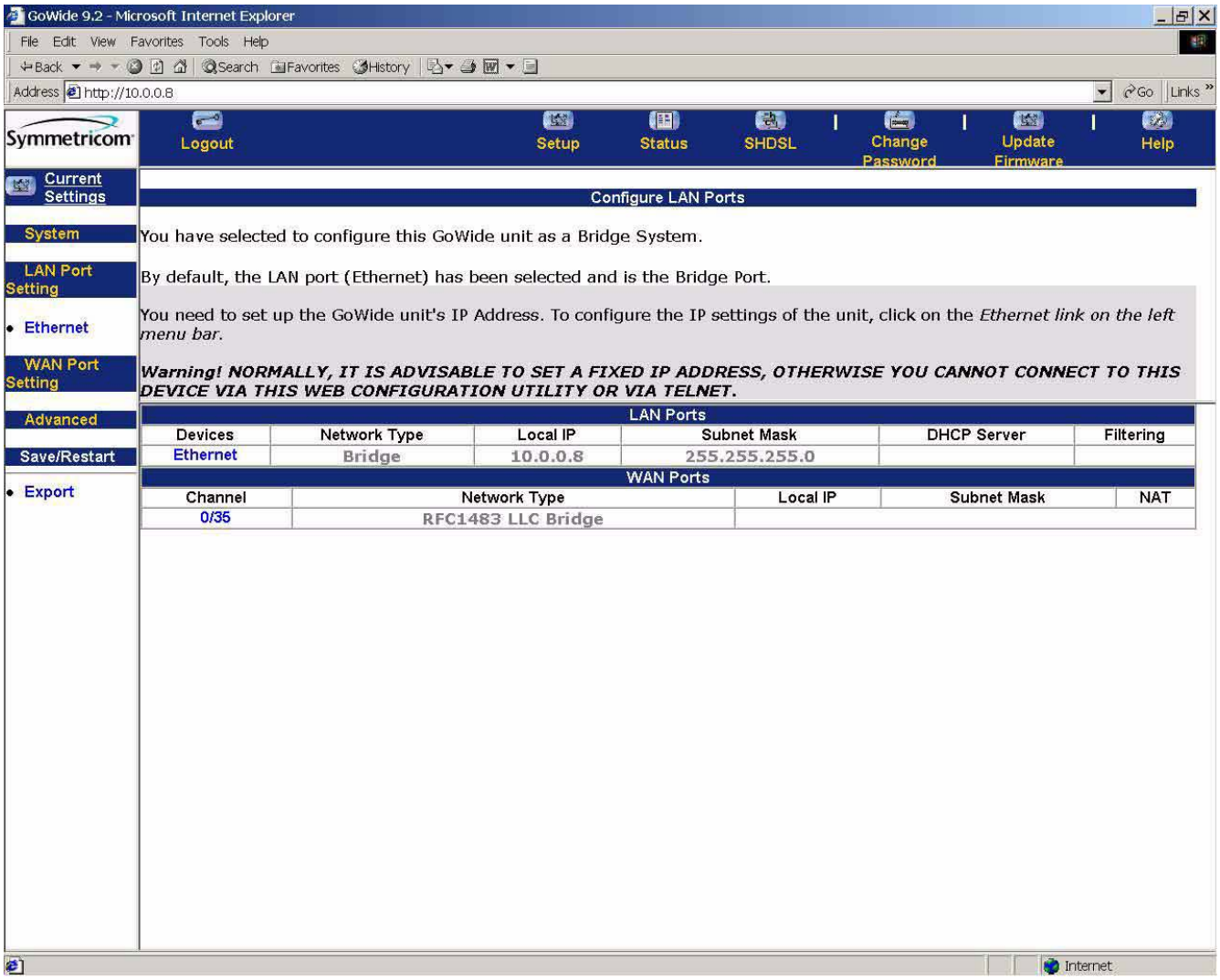
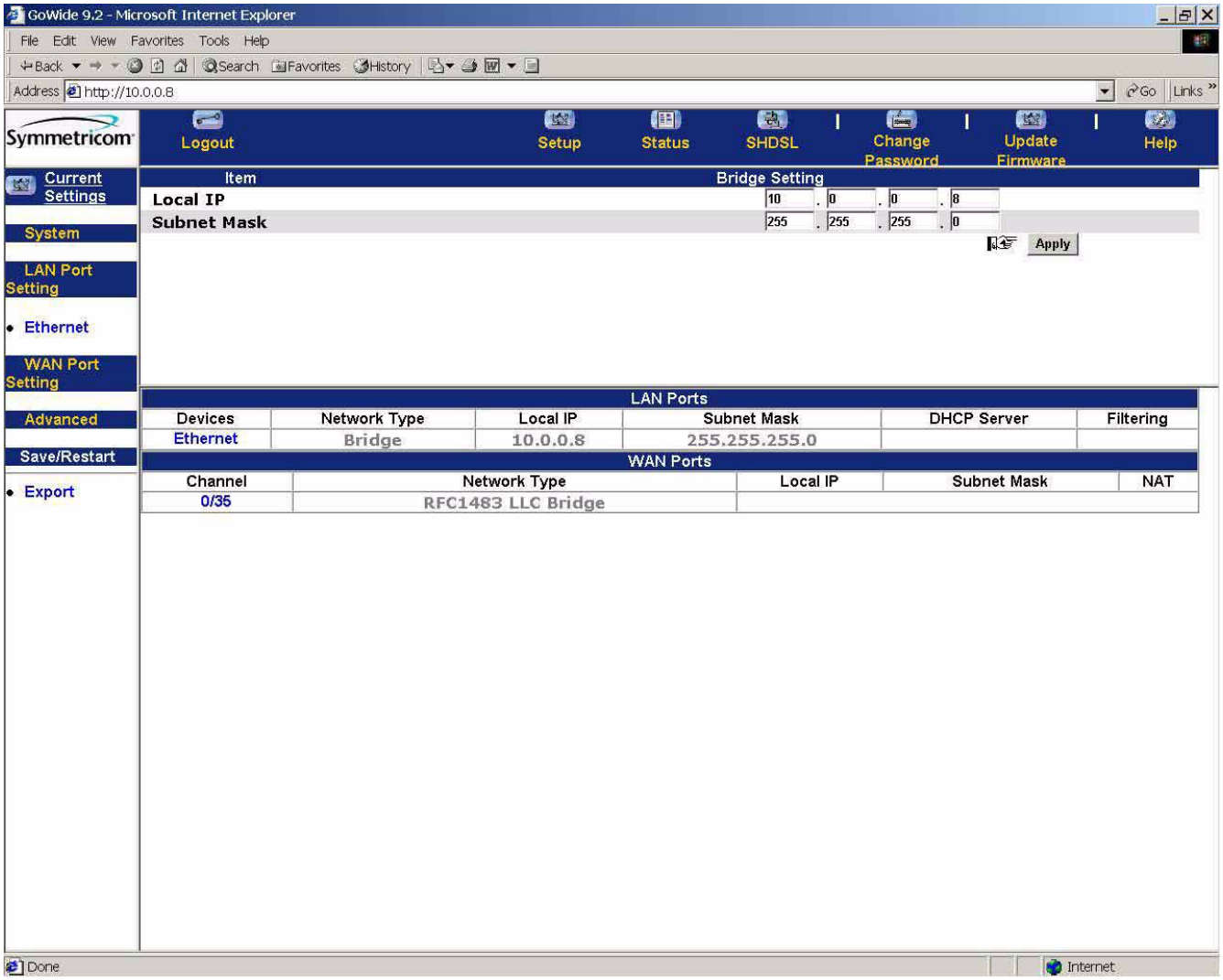


Figure 15. LAN Port Settings Screen



WAN Port Configuration

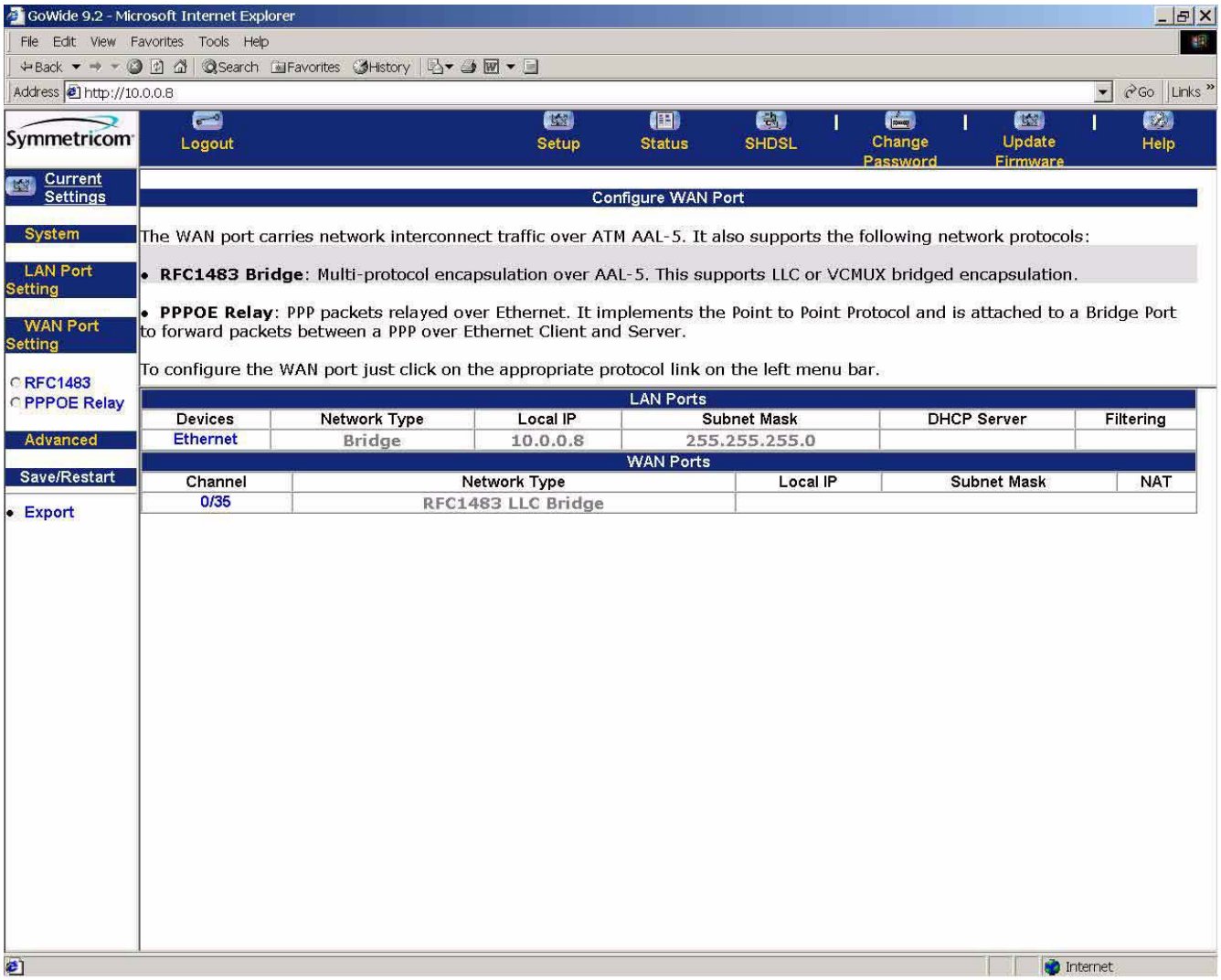
Clicking the **WAN Port Setting** hyperlink brings up the Configure WAN Port screen (Figure 16). Procedure E describes the method for configuring the WAN Port using RFC1483. Procedure F describes the method for configuring the WAN Port using PPPoE Relay.

Quality of Service Setup

To set up Quality of Service (QoS) under WAN Port configuration, click on the desired QoS format (UBR, CBR or VBR) in the appropriate screen. The formats are as follows:

- UBR (Unspecified Bit Rate) – the user has the option of specifying the Peak Cell Rate (PCR).
- CBR (Constant Bit Rate) – the user must specify the PCR.
- VBR (Variable Bit Rate) – the user must specify the PCR, Sustainable Cell Rate (SCR), Burst Tolerance, and the maximum burst size.

Figure 16. Configure WAN Port Screen



WAN Port Configuration using RFC1483

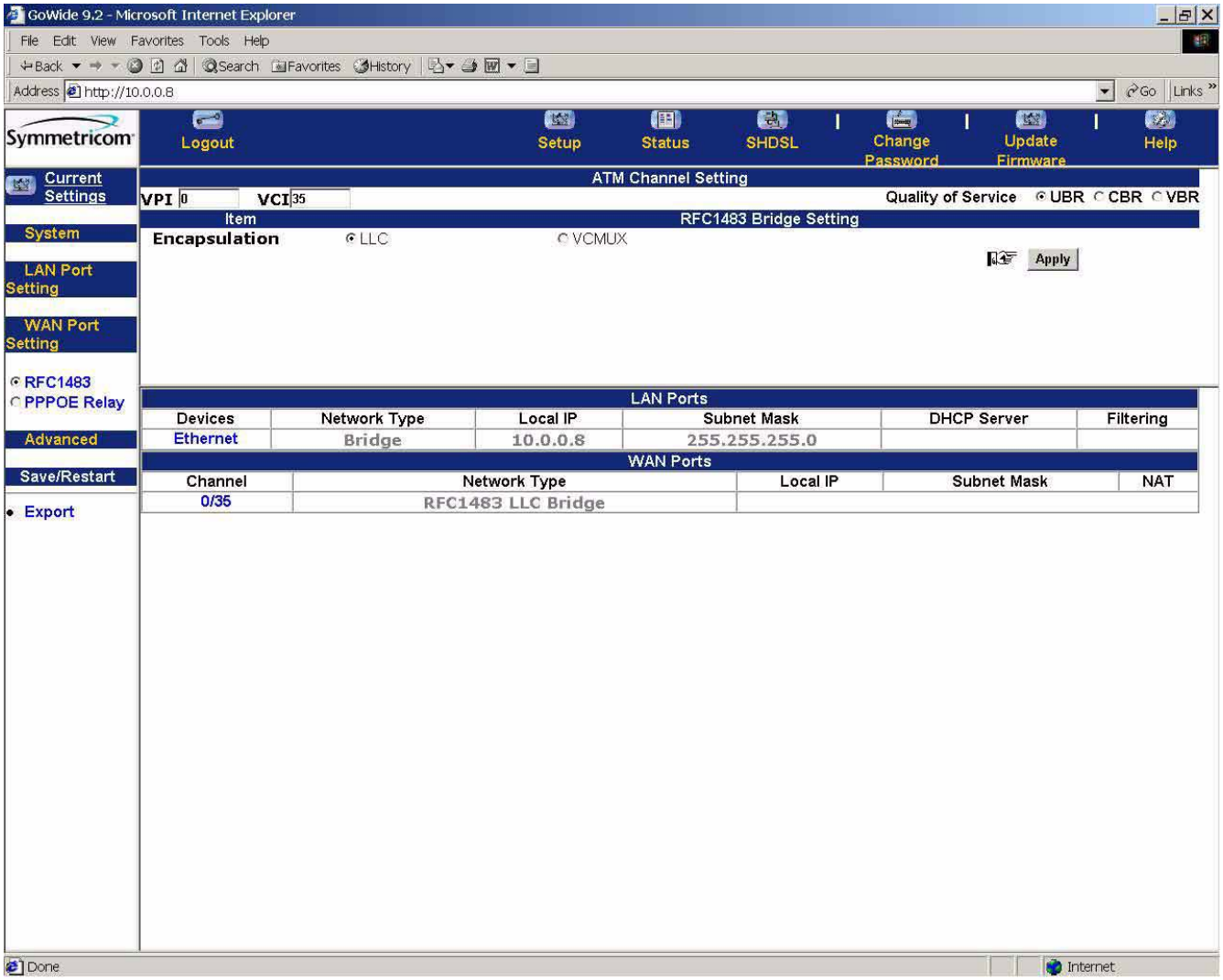
Refer to Procedure E for information on configuring the WAN Port using RFC1483.

Procedure E. Configuring WAN Port Using RFC1483

Step	Procedure
1	Select **RFC1483** in the System Menu (Figure 17).
2	Enter the VPI value in the **VPI** field.
3	Enter the VCI value in the **VCI** field.
4	Select the **Quality of Service** type: **UBR** (default setting), **CBR**, or **VBR**. A pop-up screen appears. Enter the appropriate information.
5	Select the **Encapsulation** type: **LLC** (default setting) or **VCMUX**.
6	Click the **Apply** button if all data is correct.

End of Procedure

Figure 17. RFC1483 Configuration Screen



WAN Port Configuration using PPPoE Relay

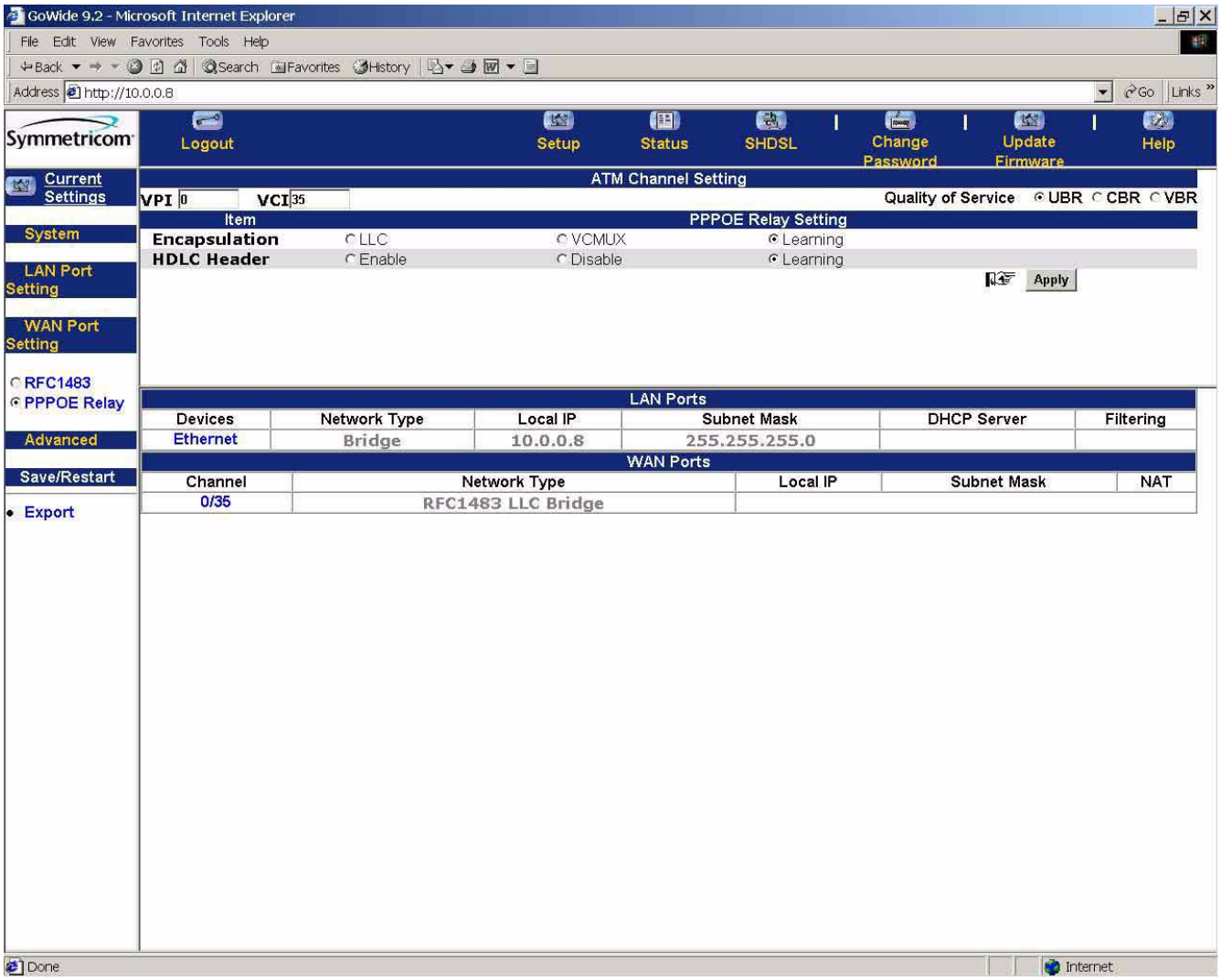
Refer to Procedure F for information on configuring the WAN Port using PPPoE Relay.

Procedure F. Configuring WAN Port Using PPPoE Relay

Step	Procedure
1	Select **PPPoE Relay** in the System Menu (Figure 18).
2	Enter the VPI value in the **VPI** field.
3	Enter the VCI value in the **VCI** field.
4	Select the **Quality of Service** type: **UBR** (default setting), **CBR**, or **VBR**. A pop-up screen appears. Enter the appropriate information.
5	Select the **Encapsulation** type: **LLC**, **VCMUX**, or **Learning** (default setting).
6	Select the **HDLC Header** type: **Enable**, **Disable**, or **Learning** (default setting).
7	Click the **Apply** button if all data is correct.

End of Procedure

Figure 18. PPPoE Relay Configuration Screen



Advanced Configuration

Clicking the **Advanced** hyperlink brings up the Advanced Configuration screen (Figure 19). This option allows a user to restrict which hosts have access to the GoWide 9.2 via Telnet, FTP, and a Web browser. The user will use a host's IP address to give them access. If a host is not specified, all hosts have access.

Procedure G describes the method to configure the Access Manager.

Procedure G. Advanced Configuration Screen

Step	Procedure
1	Select the **Access Manager** hyperlink in the System Menu (Figure 19).
2	Enter the Host IP address or addresses (up to six) in the **Host IP Address** field (Figure 20).
3	Click the **Apply** button if all data is correct.

End of Procedure

Figure 19. Advanced Configuration Screen

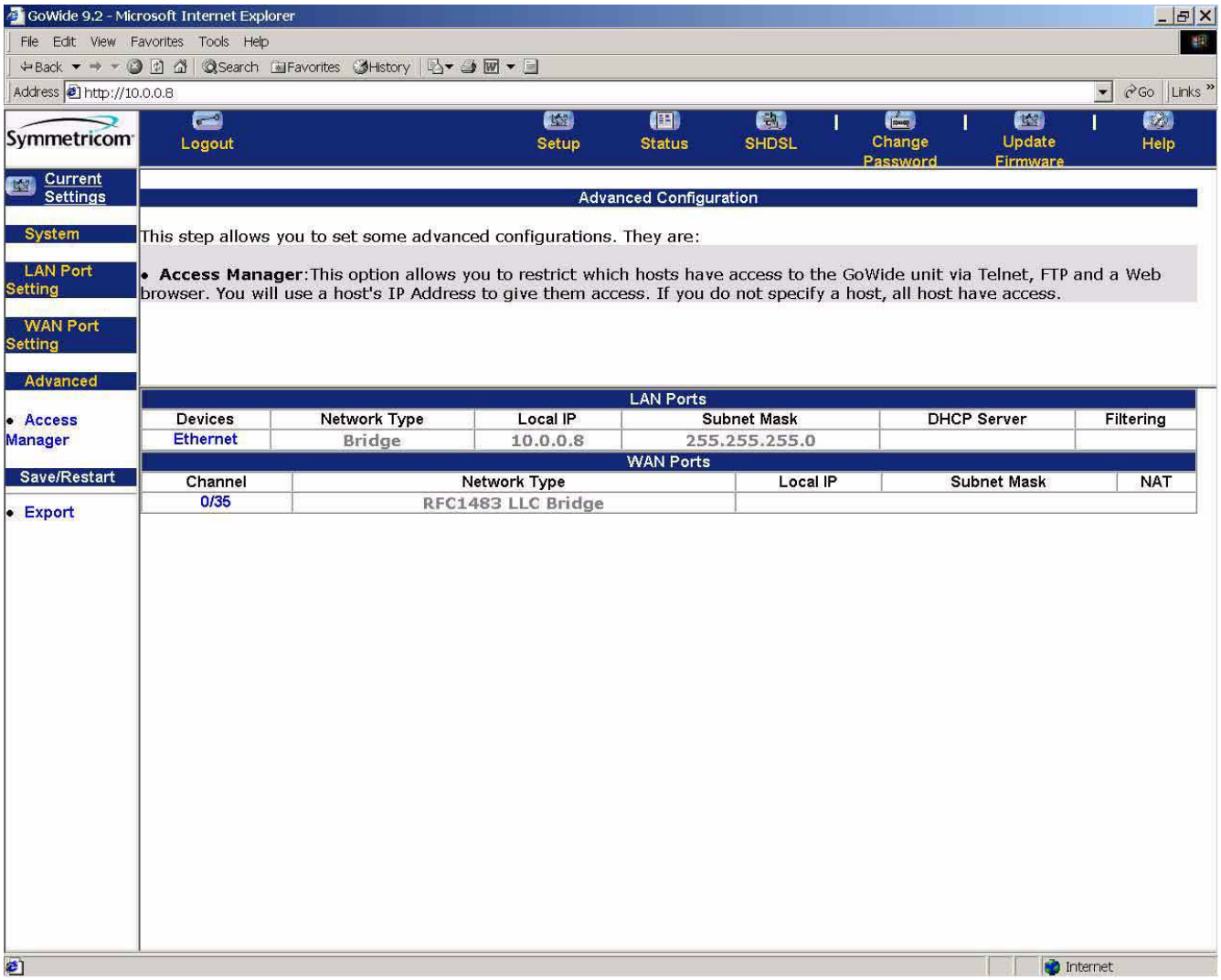
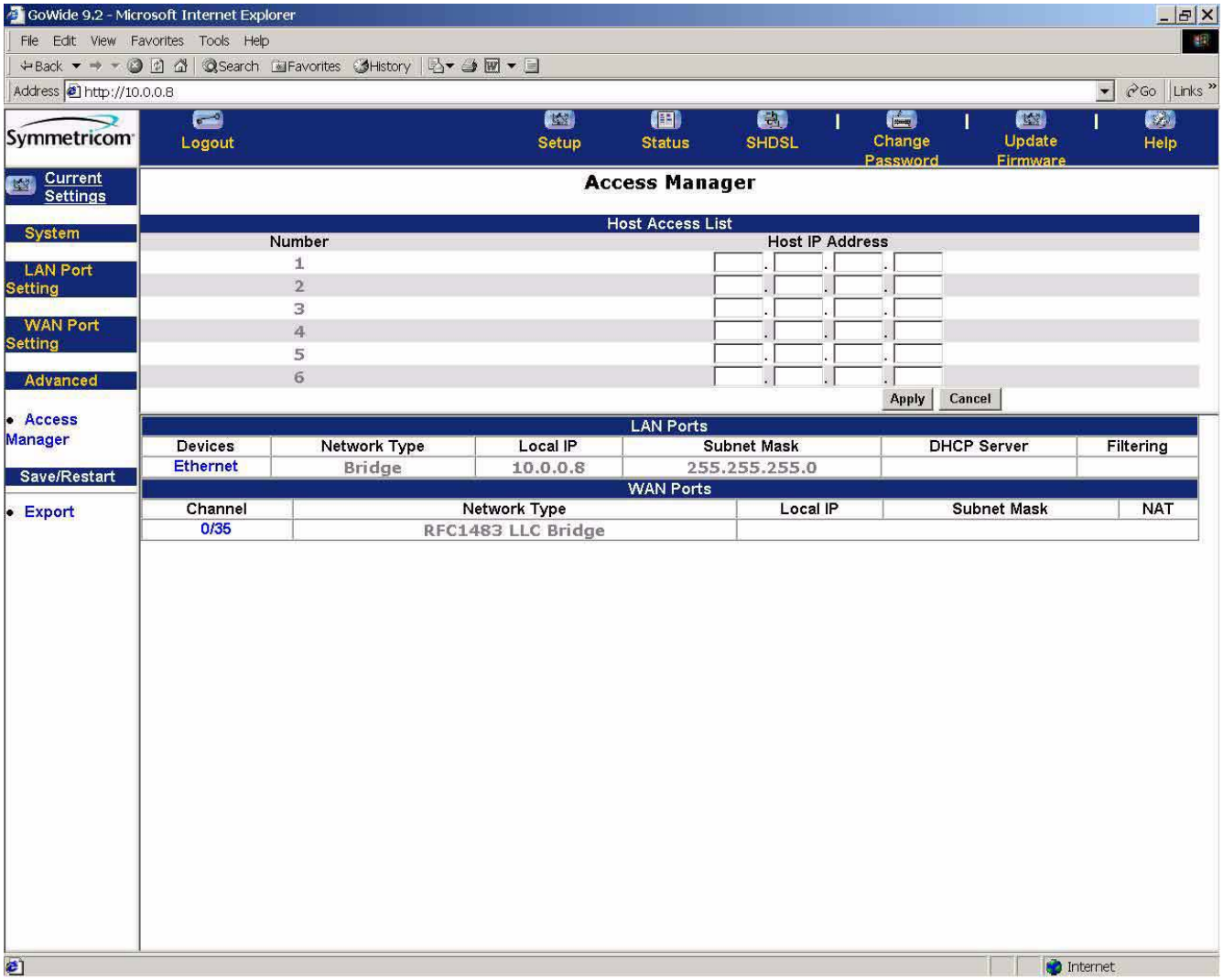


Figure 20. Access Manager Configuration Screen



Save/Restart Configuration

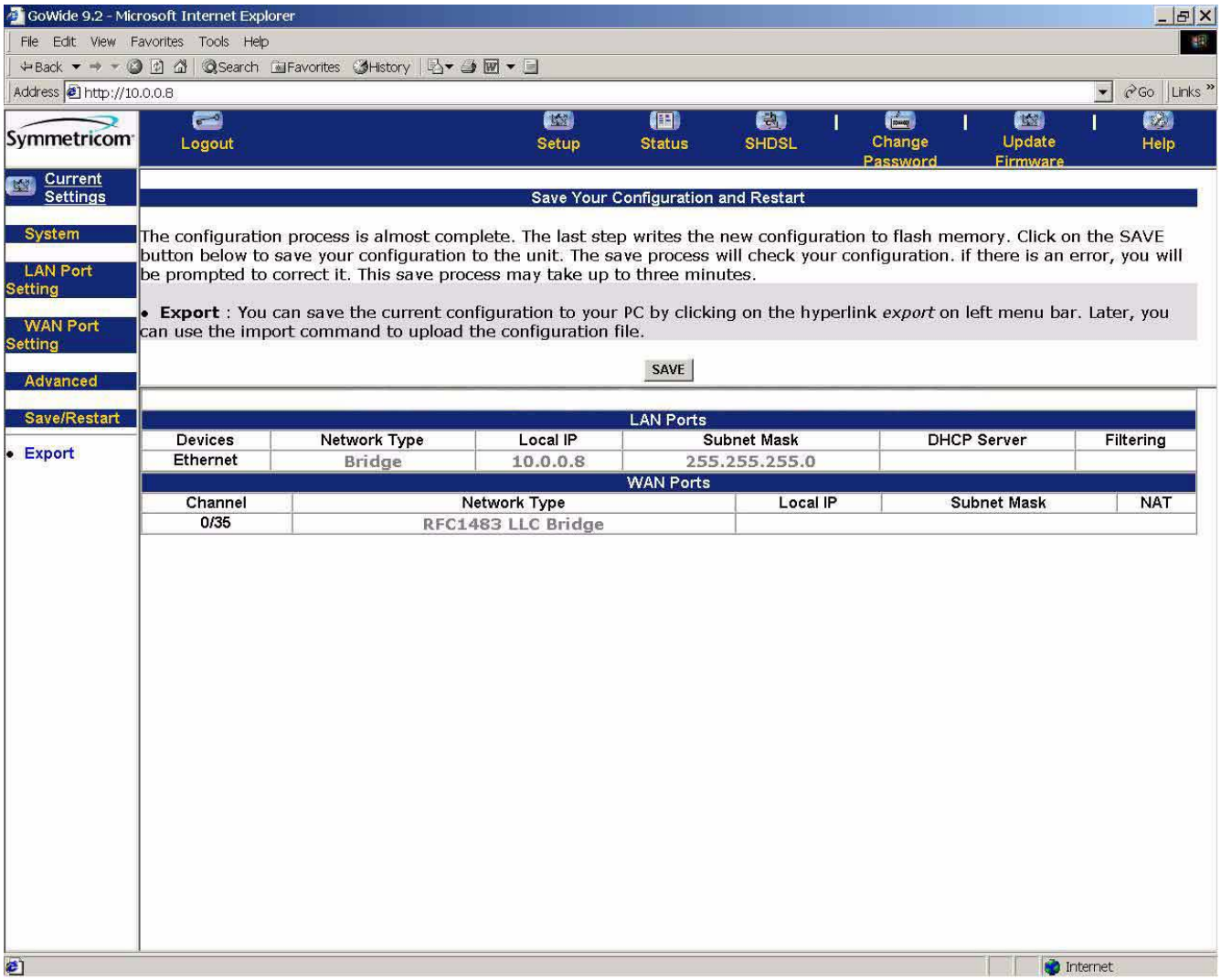
Clicking the **Save/Restart** hyperlink brings up the Save Your Configuration and Restart screen (Figure 21). Procedure H describes the method for saving a bridge mode configuration and restarting the GoWide 9.2.

Procedure H. Save/Restart Screen

Step	Procedure
1	Ensure that all displayed settings are correct.
2	Click the **SAVE** button to save the bridge configuration.

End of Procedure

Figure 21. Save Your Configuration and Restart Screen



Clicking the **SAVE** button displays a dialog box (Figure 22) stating that the bridge mode configuration will be written to flash memory.

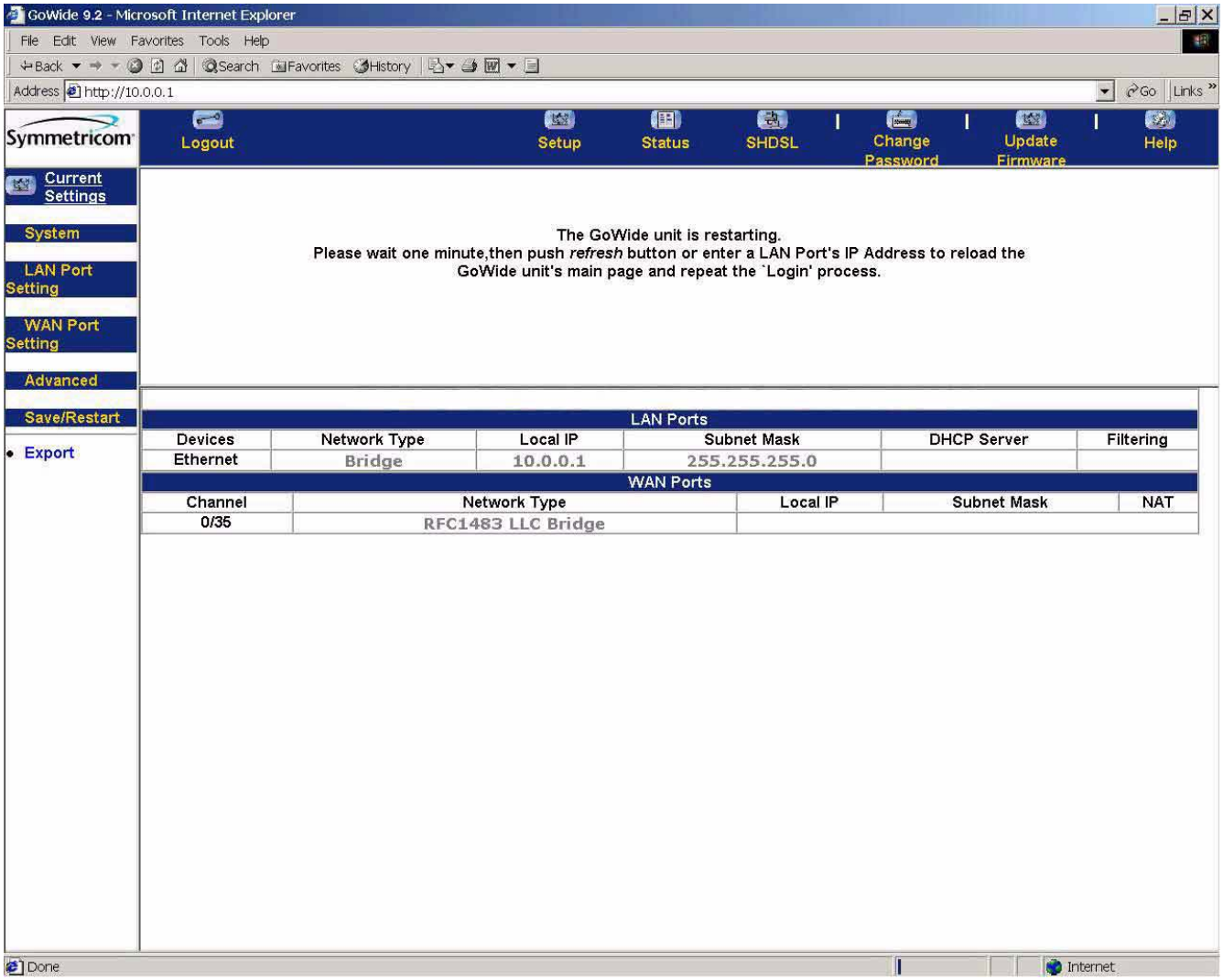
Figure 22. Flash Memory Dialog Box

Click the **OK** button to save the configuration.

Once the configuration is saved, a restart screen (Figure 23) is displayed. Either click the refresh button or enter a LAN port IP address to reload the GoWide 9.2 main page and repeat the login process.

Note: Entering a LAN port IP address is required only if the IP address has been changed.

Figure 23. Restart Screen

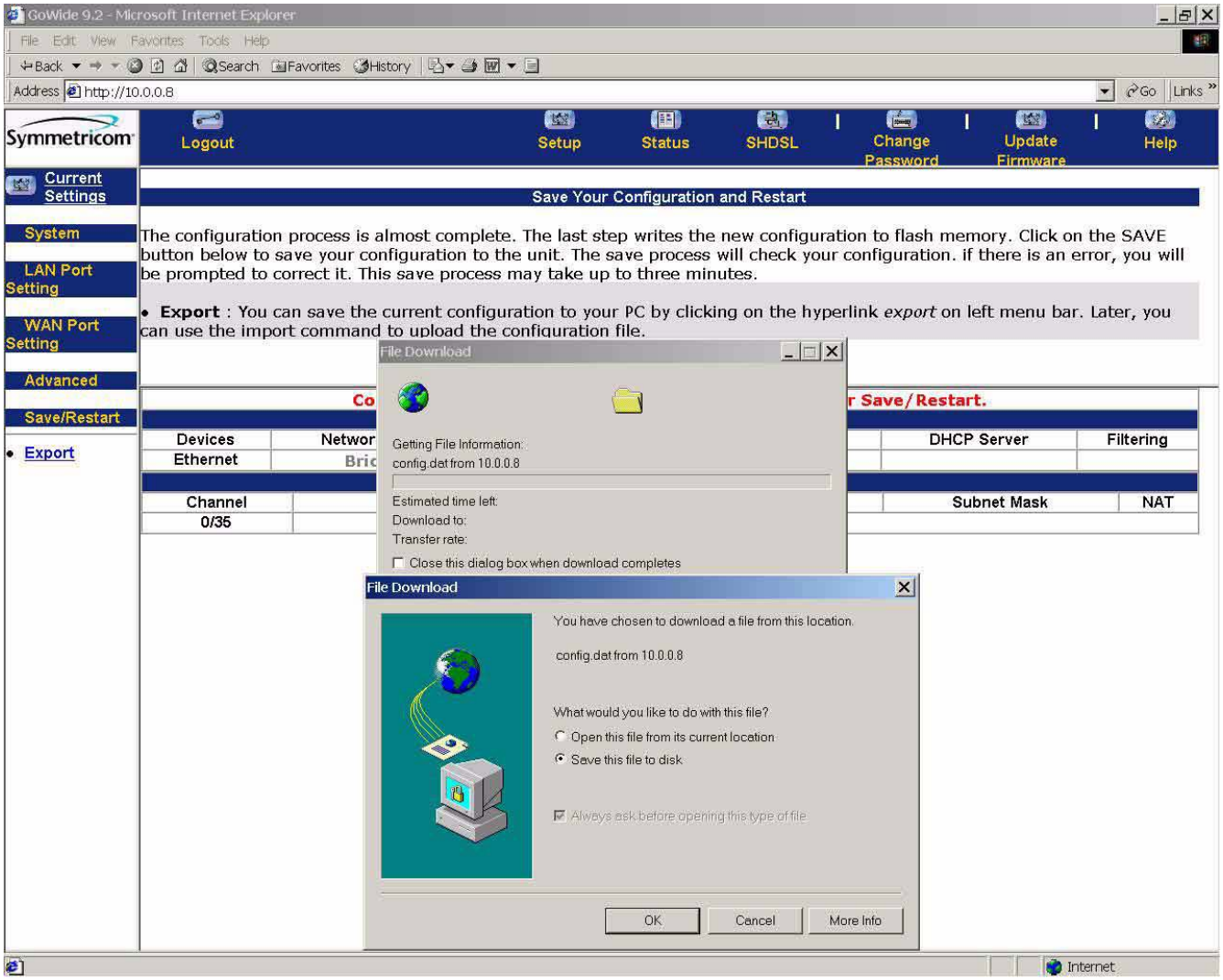


Export/Import Configuration

If the same settings are required on several GoWide 4.6 units, the Export/Import function can be used.

The settings must be configured and saved on one unit first. Use the Export hyperlink on the System Menu to export the configuration file to a hard drive or floppy disk. See Figure 24.

Figure 24. Export Configuration Screen



This configuration file can then be used with the Import button on another GoWide 4.6 to quickly and accurately replicate the settings from the previous unit to the current unit.

Click on the Browse button on the left to choose the configuration file that will be used.

After the configuration file is chosen, click on the Import button to upload the configuration file to the unit.

The unit will then save the configuration and restart, with the configuration file settings taking effect.

Internet Access Configuration

Note: The figures illustrating Internet access configuration are Windows 98 screen captures. For Windows 95/NT 4.0/2000/XP, please refer to the appropriate user manual.

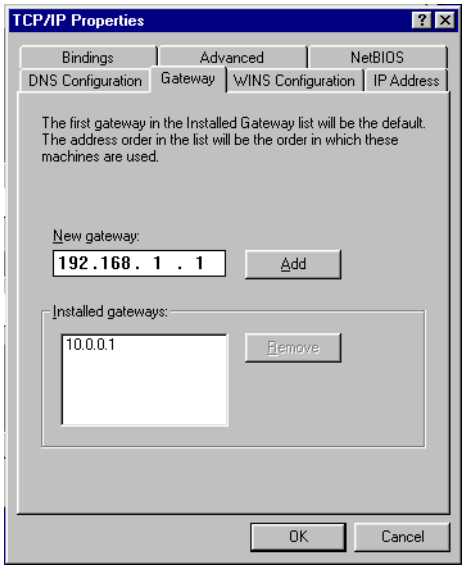
To configure a PC to access the Internet, do the following:

1. Ensure that there is still a TCP/IP connection to the GoWide 9.2. If not, refer to the PC Configuration section.

2. Using the TCP/IP Properties page, enter the new Gateway IP address (or leave blank if DHCP will be used). See Figure 25.

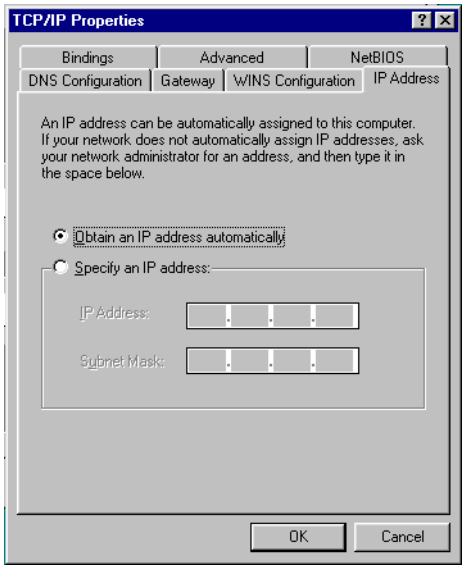
Note: The new Gateway IP address is provided by the Service Provider.

Figure 25. New Gateway IP Address



3. Click the **IP Address** tab and select **Obtain an IP address automatically**. See Figure 26.

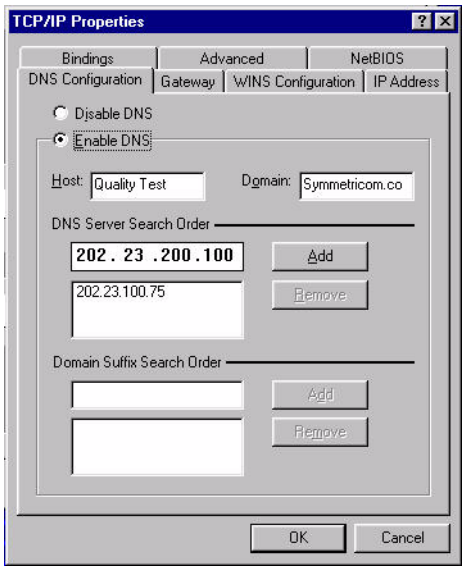
Figure 26. IP Address and Subnet Mask Values



4. Click the DNS Configuration tab. Select Enable DNS. Enter the Host name and Domain name. Enter the DNS Server Search Order Value. See Figure 27.

Note: These parameters are provided by the Service Provider.

Figure 27. DNS Configuration

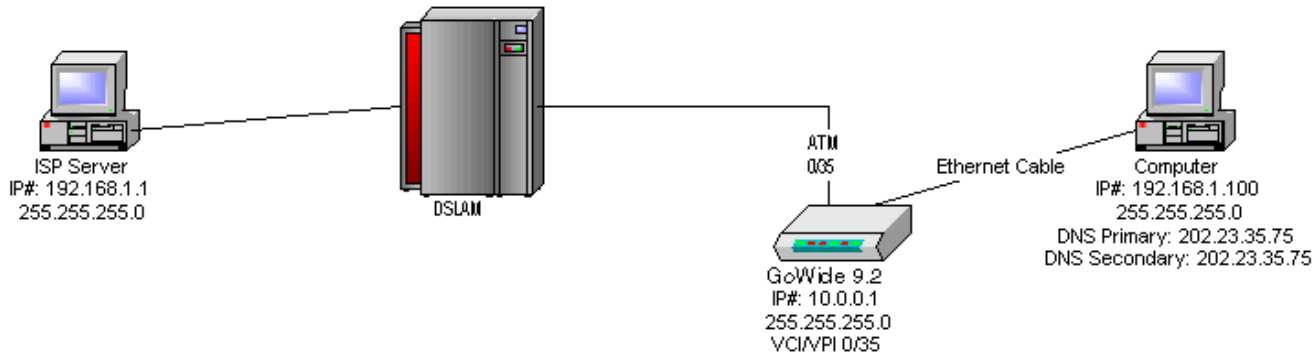


5. Click **OK** and re-start the PC. The PC is now re-configured to communicate with the GoWide 9.2.

Note: For Windows 2000, simply click **OK**. The PC will be re-configured to communicate with the GoWide 9.2.

Figure 28 shows the new configuration setup for GoWide 9.2 bridge mode.

Figure 28. GoWide 9.2 Bridge Mode Configuration



To access the modem again, change the PC settings as shown in the PC Configuration section.

Troubleshooting

This section provides information for troubleshooting the bridge mode configuration process.

Problem	Corrective Action
Power LED is off	• Ensure that the power cable is securely plugged into the unit. Also ensure that the other end of the power cable is plugged into a power outlet that is supplied with 90-250V AC. • Ensure that the ON/OFF switch is in the ON position. • Try a different power outlet.
Sync LED is flashing	• Ensure that the DSL line is plugged into the DSL port of the GoWide 9.2. • Verify that the Service Provider has activated the DSL line. • Ensure that the DSL line length is within the distance specifications.
Sync LED is off	• Go to the SHDSL Line Status screen using the Web browser and click the **Connect** button.
Alarm LED is on	• Ensure that the DSL line is plugged into the DSL port of the GoWide 9.2. • Verify that the Service Provider has activated the DSL line. • Ensure that the DSL line length is within the distance specifications. • Ensure that the Line 1, Line 2, Line 3, and Line 4 status in the SHDSL Line Status screen displays a **Connected** result. The **Disconnect** button should be displayed, but if the **Connect** button is displayed, click the button once to make a connection.
Cannot access the GoWide 9.2's Web page	• Ensure that the PC is plugged into one of the GoWide 9.2's Ethernet ports. • If the PC is connected directly to the GoWide 9.2, ensure that a straight-through Ethernet cable is being used (similar to the yellow ones provided with the unit). A solid green LED on the right side of the Ethernet port in use indicates that a link has been detected with the PC. • Since the GoWide 9.2's default IP address is 10.0.0.1, the PC must be part of the same subnet and have an IP address between the range of 10.0.0.2 to 10.0.0.254. The PC subnet mask should be 255.255.255.0. • Verify that the PC Internet options are set correctly to access the GoWide 9.2. Start by opening an Internet Explorer window and go to the **Tools** --> **Internet Options** page. Go to the **Connections** tab and click the **LAN Settings** button. In LAN Settings, make sure that the boxes for **Automatically detect settings** and **Use a proxy server** are not selected. If these boxes are selected, cancel the selections and click the LAN Settings **OK** button. Click the Internet Options **OK** button to exit.
Lost password	• Reset the GoWide 9.2 to the original factory defaults by pressing the reset button for 5 seconds. The password will default to the factory setting of password, thus enabling unit access and configuration.

Router Mode Configuration

This chapter provides information on the router mode configuration.

Chapter 4

Introduction

This chapter provides information on configuring the GoWide 9.2 in Router mode.

PC Configuration

Note: Ensure that an Ethernet card is installed in the PC.

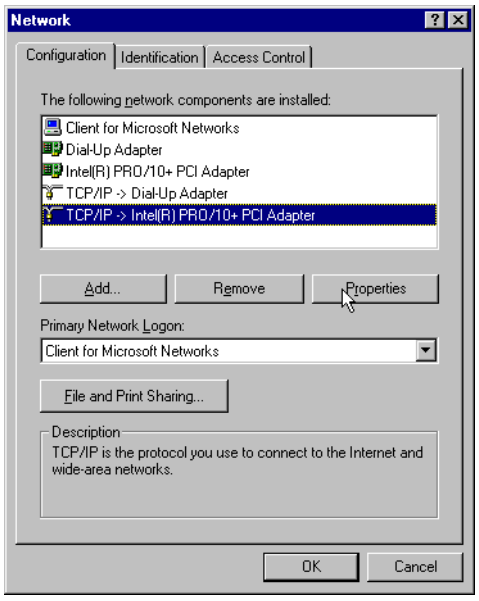
Note: The figures illustrating PC configuration are Windows 98 screen captures. For Windows 95/NT 4.0/2000/XP, please refer to the appropriate user manual.

To configure a PC to communicate with the GoWide 9.2, do the following:

1. Establish a TCP/IP connection to the GoWide device. This is done by clicking the **Start** button and selecting **Settings**, **Control Panel**, and **Network**.

2. Click the Network **Configuration** tab, select the TCP/IP protocol, and click **OK** (Figure 29).

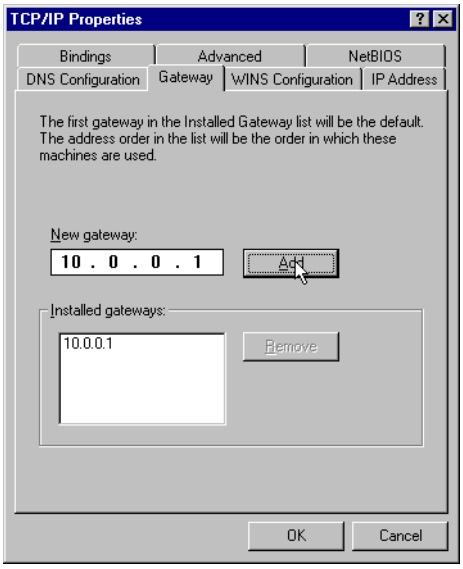
Figure 29. TCP/IP Connection



3. In the TCP/IP Properties page, enter the Gateway IP address. See Figure 30.

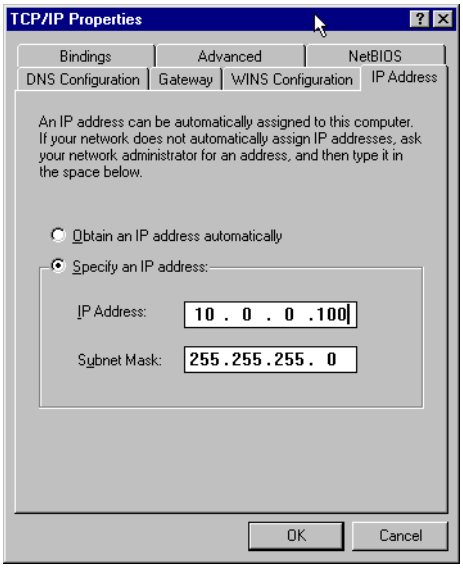
Note: In Router mode, the Gateway IP address is the same as the GoWide 9.2 LAN port address.

Figure 30. Gateway IP Address



4. Click the IP Address tab and enter the IP Address and Subnet Mask values. See Figure 31.

Figure 31. IP Address and Subnet Mask Values



5. Click OK. The PC is now configured to communicate with the GoWide 9.2.

Note: For Windows 2000, simply click **OK**. The PC will be configured to communicate with the GoWide 9.2.

GoWide 9.2 Configuration

GoWide 9.2 Login

Procedure I describes the method for logging in to the GoWide 9.2.

Procedure I. GoWide 9.2 Login

Step	Procedure
1	Power up the computer (if not already powered up). Open the Internet Explorer Web browser. *Note:* Ensure that both the **Automatically detect settings** box and the **Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections)** box are not selected. See Figure 32.
2	Enter 10.0.0.1 for the IP address in the **Address** field.
3	The GoWide initial screen (Figure 33) is now displayed. Click **Login**.
4	Enter the password in the **Password** window (default is *password*). To change the password, refer to the Change Password section in Chapter 2.
5	Press Enter. The GoWide device status screen (Figure 34) is now displayed.

End of Procedure

Figure 32. Web Browser LAN Settings

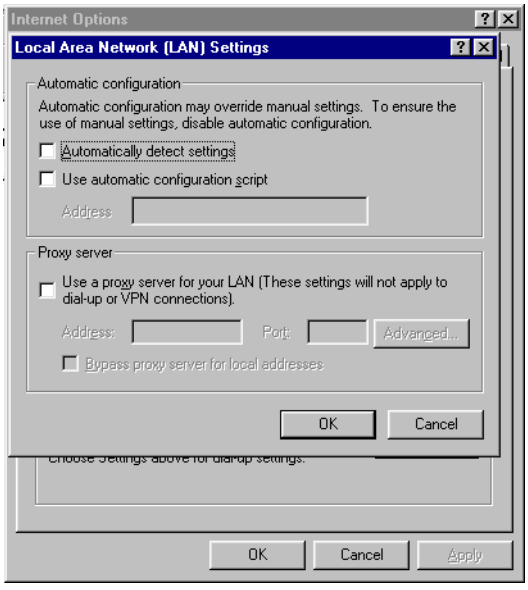


Figure 33. GoWide 9.2 Initial Screen

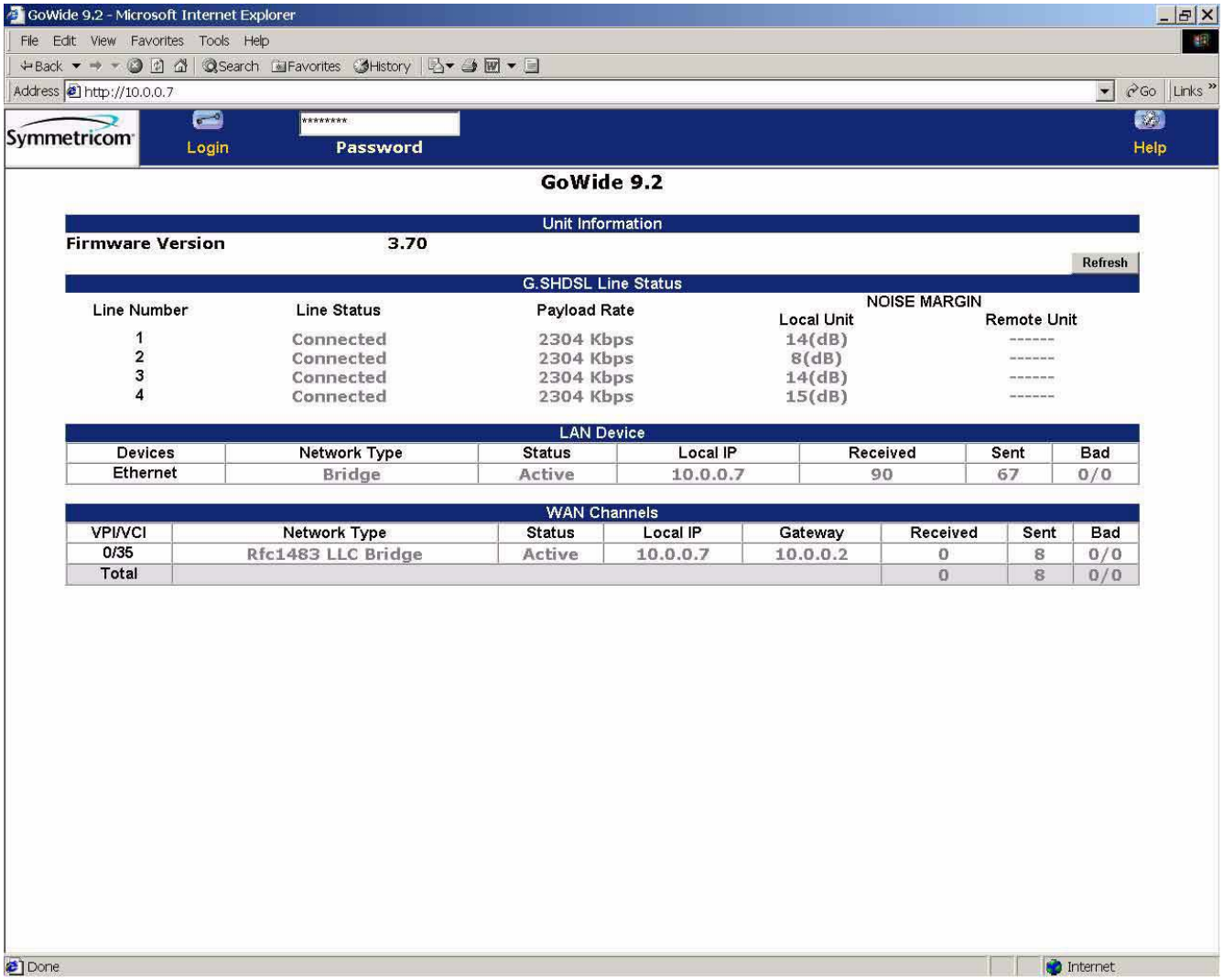


Figure 34. GoWide 9.2 Status Screen

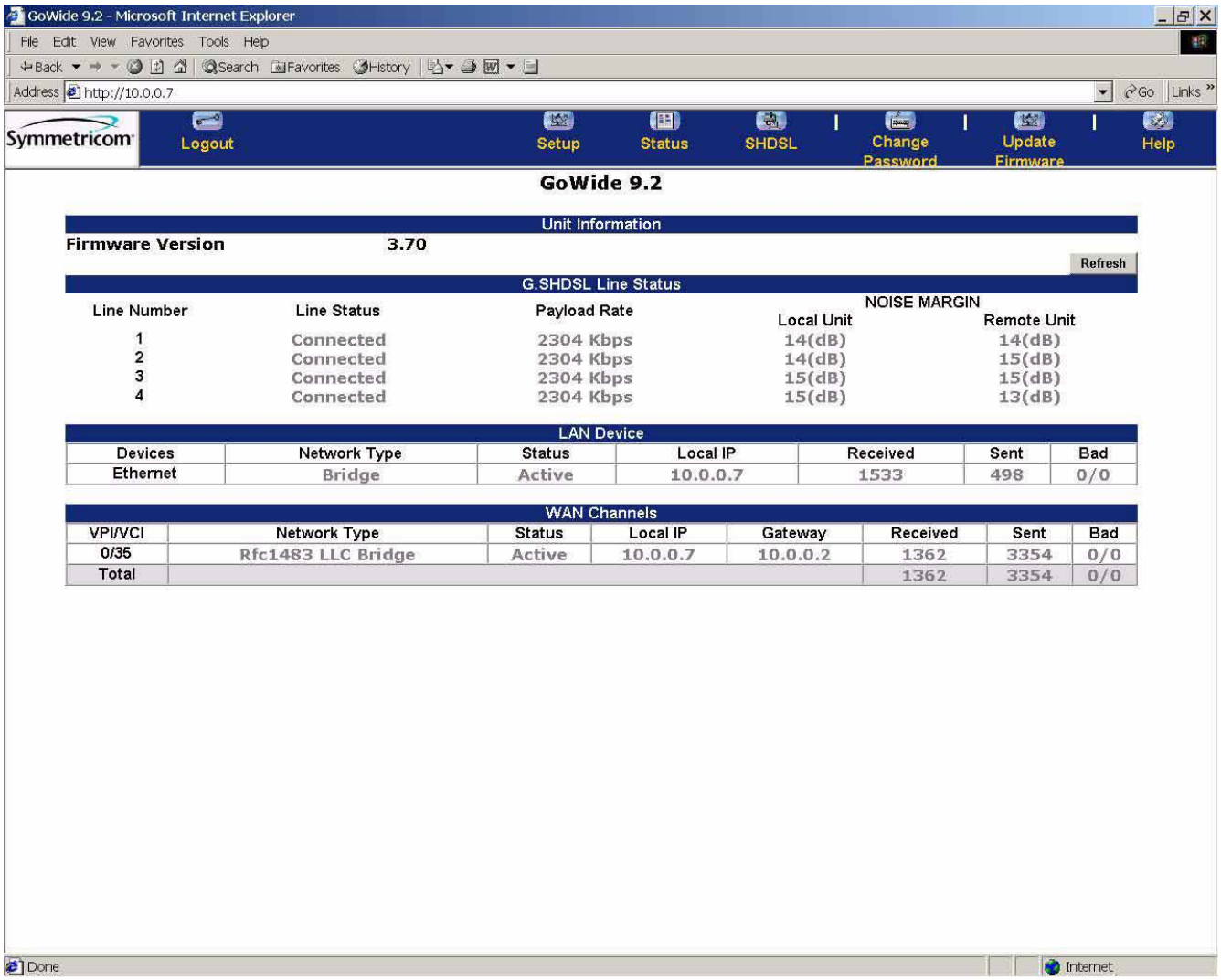
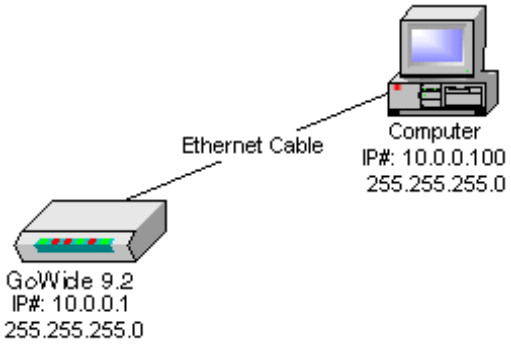


Figure 35 shows a default configuration setup between a PC and the GoWide 9.2.

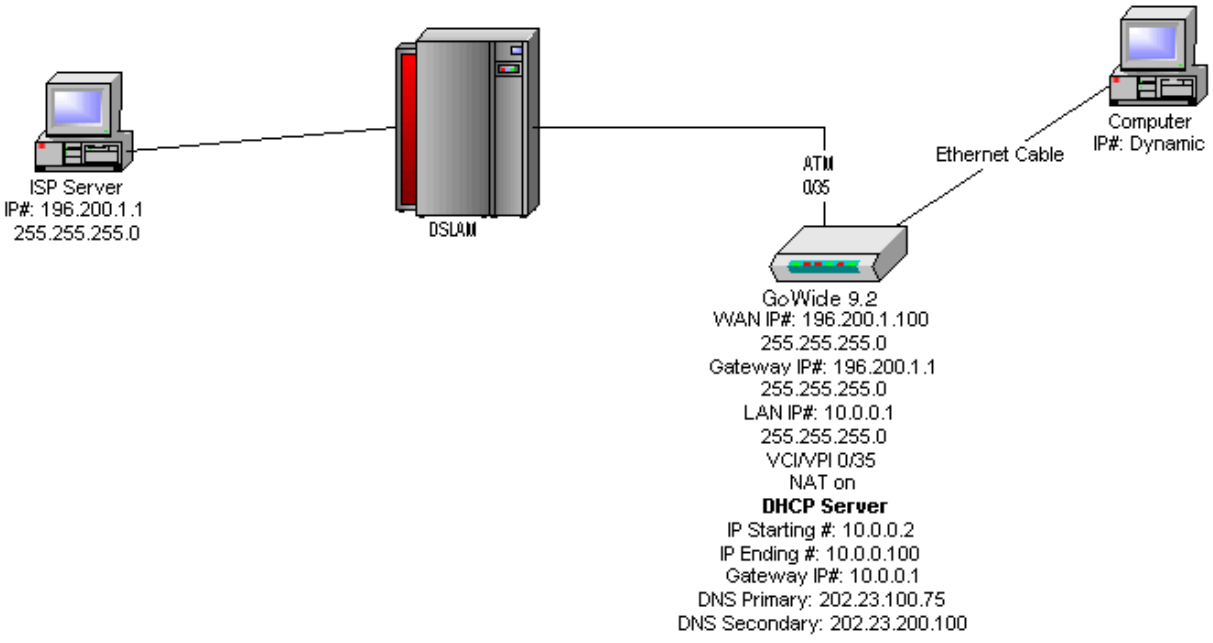
Figure 35. GoWide 9.2 Default Configuration



Sample Configuration

Figure 36 shows a sample configuration setup for GoWide 9.2 router mode.

Figure 36. GoWide 9.2 Router Mode Configuration



System Screen

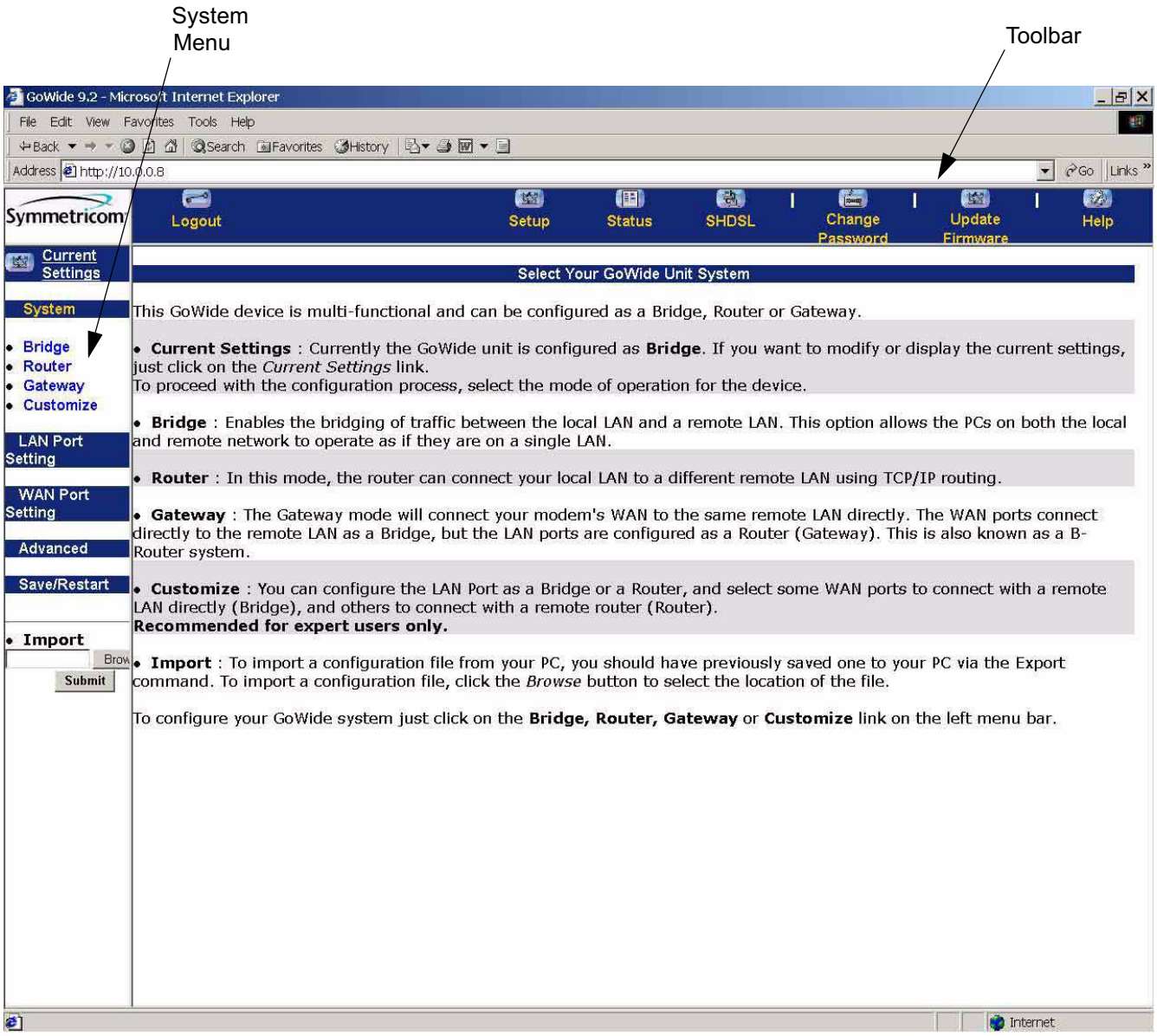
Bring up the System router mode configuration screen as described in Procedure J.

Procedure J. System Screen

Step	Procedure
1	Login to the GoWide 9.2.
2	Select **Setup** from the GoWide 9.2 toolbar. The System screen (Figure 37) is now displayed.
3	Click the **Router** hyperlink in the System Menu.

End of Procedure

Figure 37. System Screen



LAN Port Configuration

Clicking the **Router** hyperlink brings up the Configure LAN Port screen (Figure 38). Procedure K describes the method for configuring the LAN Port.

Procedure K. Configuring LAN Port

Step	Procedure
1	Select the **Ethernet** hyperlink in the System Menu (Figure 38). *Note:* Refer to Figure 39 for steps 2 through 6.
2	Enter the values for **Local IP** and **Subnet Mask** in the respective fields.
3	If **RIP** is not desired under **Routing Table**, deselect the box (**RIP Allowed** is the default setting).
4	Select either **DHCP Server**, **DHCP Relay**, or **Outbound Filtering** under **Advanced**.
5	Enter the value for **DNS Relay** in the provided field.
6	Click the **Apply** button if all data is correct.

End of Procedure

Figure 38. Configure LAN Port Screen

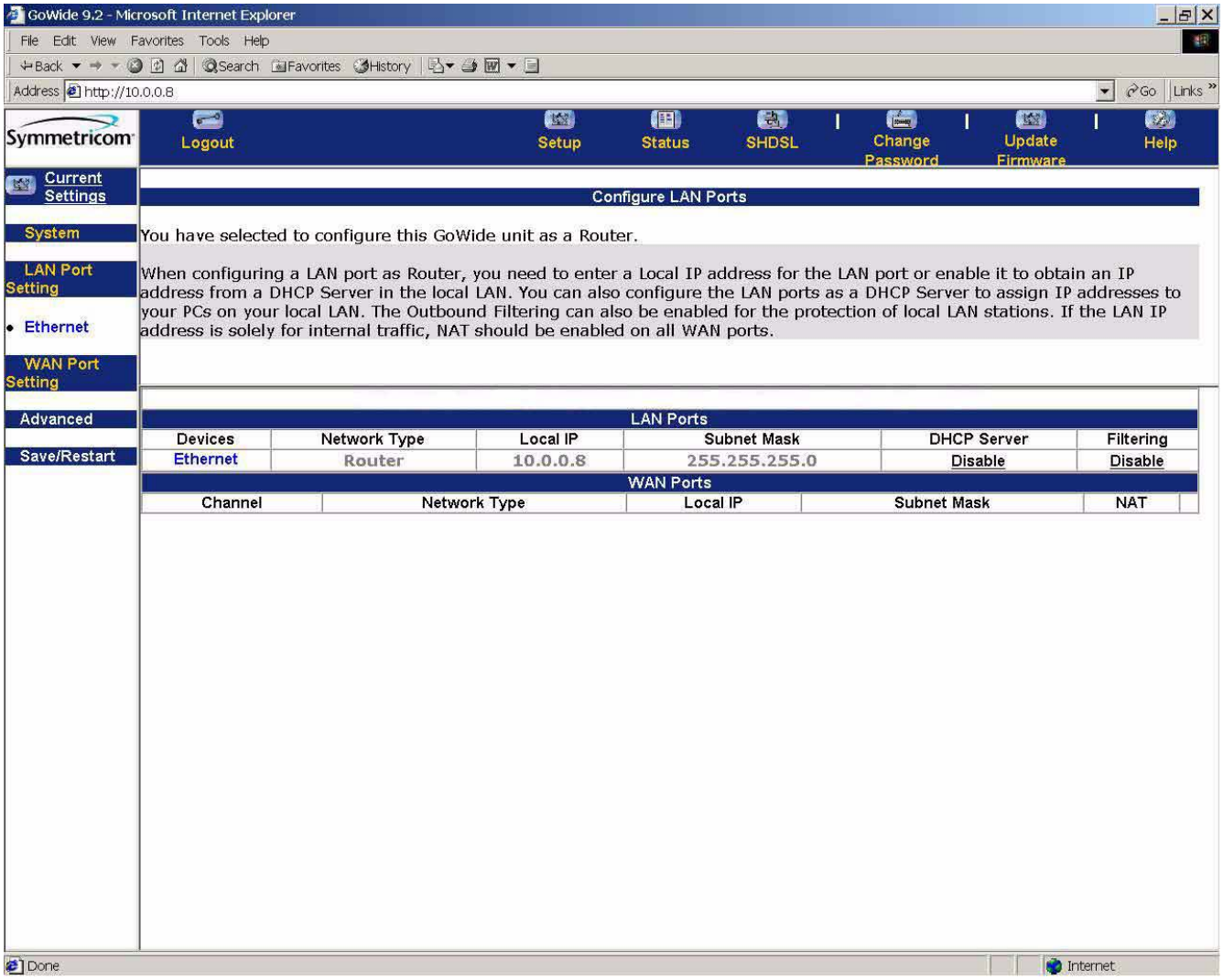
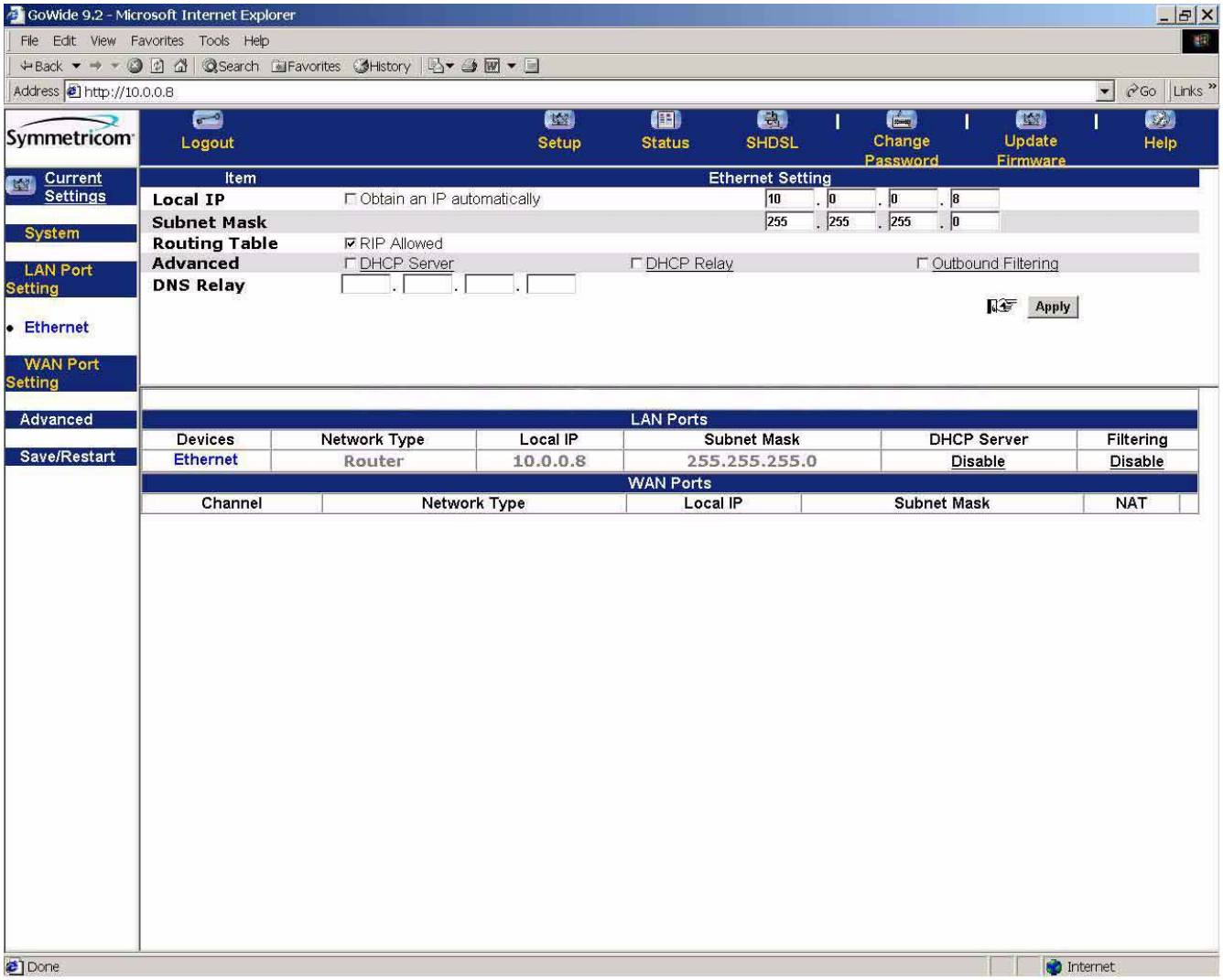


Figure 39. LAN Port Settings Screen



WAN Port Configuration

Clicking the **WAN Port Setting** hyperlink brings up the Configure WAN Port screen (Figure 40). Procedure L describes the method for configuring the WAN Port using IPOA. Procedure M describes the method for configuring the WAN Port using RFC1483. Procedure N describes the method for configuring the WAN Port using PPPoA Client. Procedure O describes the method for configuring the WAN Port using PPPoE Client.

Note: To use NAT in the WAN Port configuration, do the following:

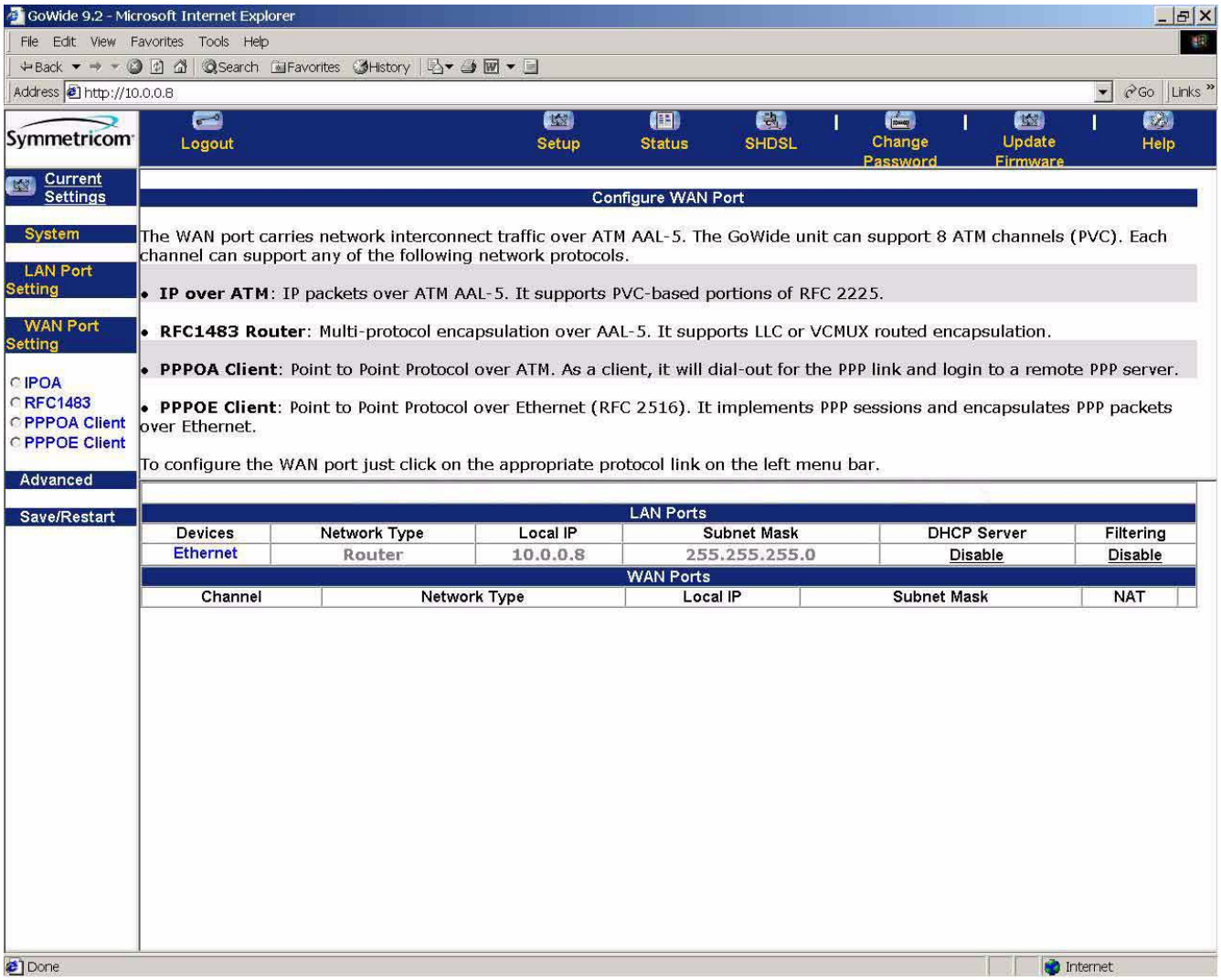
- Click on the **NAT** box
- Click **Edit Inbound**
- Enter the WAN Port IP address and the Telnet or Web port to allow remote configuration of the GoWide 9.2 using Telnet or HTTP
- Apply, save, and restart

Quality of Service Setup

To set up Quality of Service (QoS) under WAN Port configuration, click on the desired QoS format (UBR, CBR or VBR) in the appropriate screen. The formats are as follows:

- UBR (Unspecified Bit Rate) – the user has the option of specifying the Peak Cell Rate (PCR).
- CBR (Constant Bit Rate) – the user must specify the PCR.
- VBR (Variable Bit Rate) – the user must specify the PCR, Sustainable Cell Rate (SCR), Burst Tolerance, and the maximum burst size.

Figure 40. Configure WAN Port Screen



WAN Port Configuration using IPOA

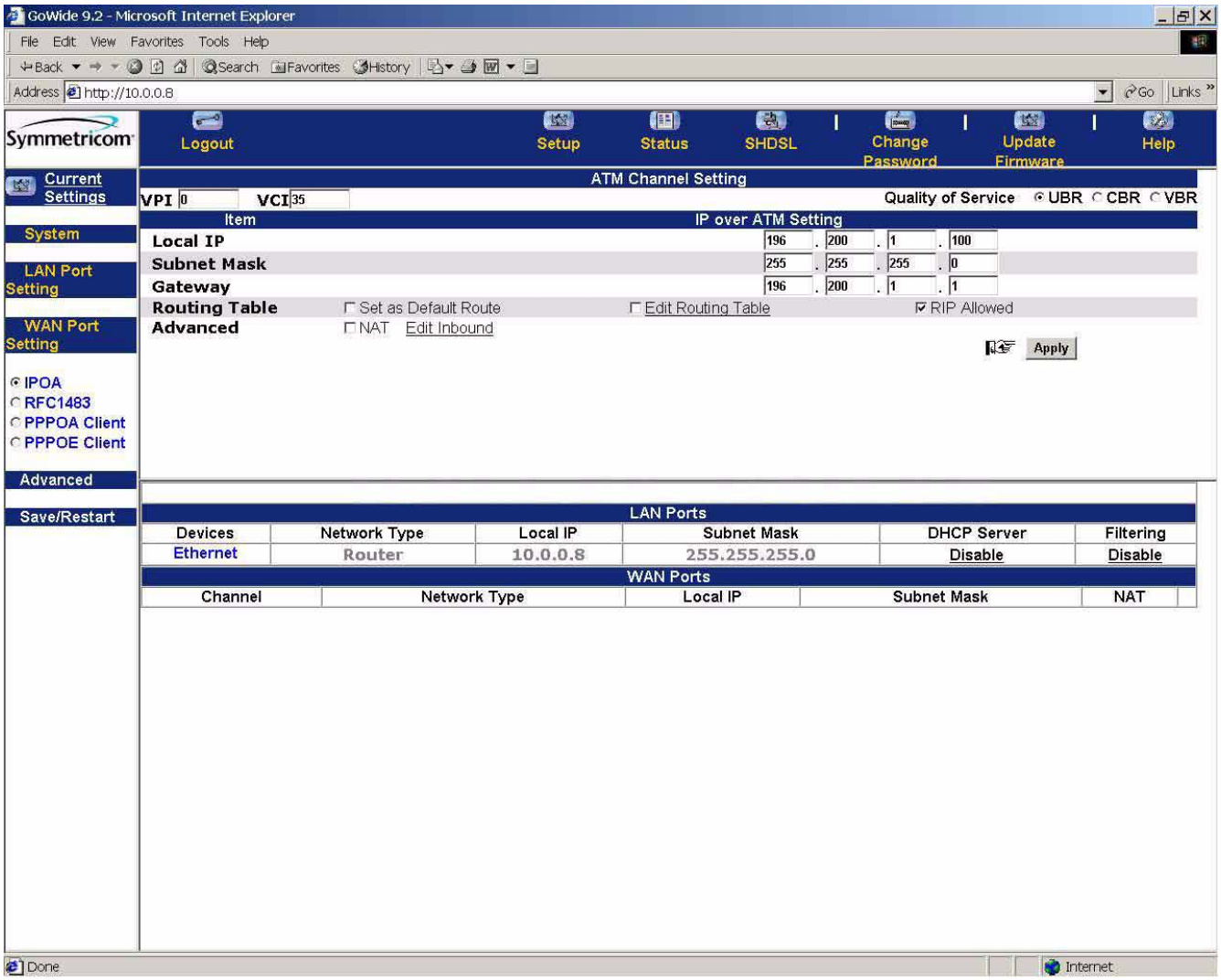
Refer to Procedure L for information on configuring the WAN Port for IPOA.

Procedure L. Configuring WAN Port Using IPOA

Step	Procedure
1	Select **IPOA** in the System Menu (Figure 41).
2	Enter the VPI value in the **VPI** field.
3	Enter the VCI value in the **VCI** field.
4	Select the **Quality of Service** type: **UBR** (default setting), **CBR**, or **VBR**. A pop-up screen appears. Enter the appropriate information.
5	Enter the values for **Local IP**, **Subnet Mask**, and **Gateway** in the respective fields.
6	Select either **Set as Default Route**, **Edit Routing Table**, or **RIP** under **Routing Table** (**RIP Allowed** is the default setting).
7	If NAT is desired, click the **NAT** box under **Advanced**.
8	Click the **Apply** button if all data is correct.

End of Procedure

Figure 41. IPOA Configuration Screen



WAN Port Configuration using RFC1483

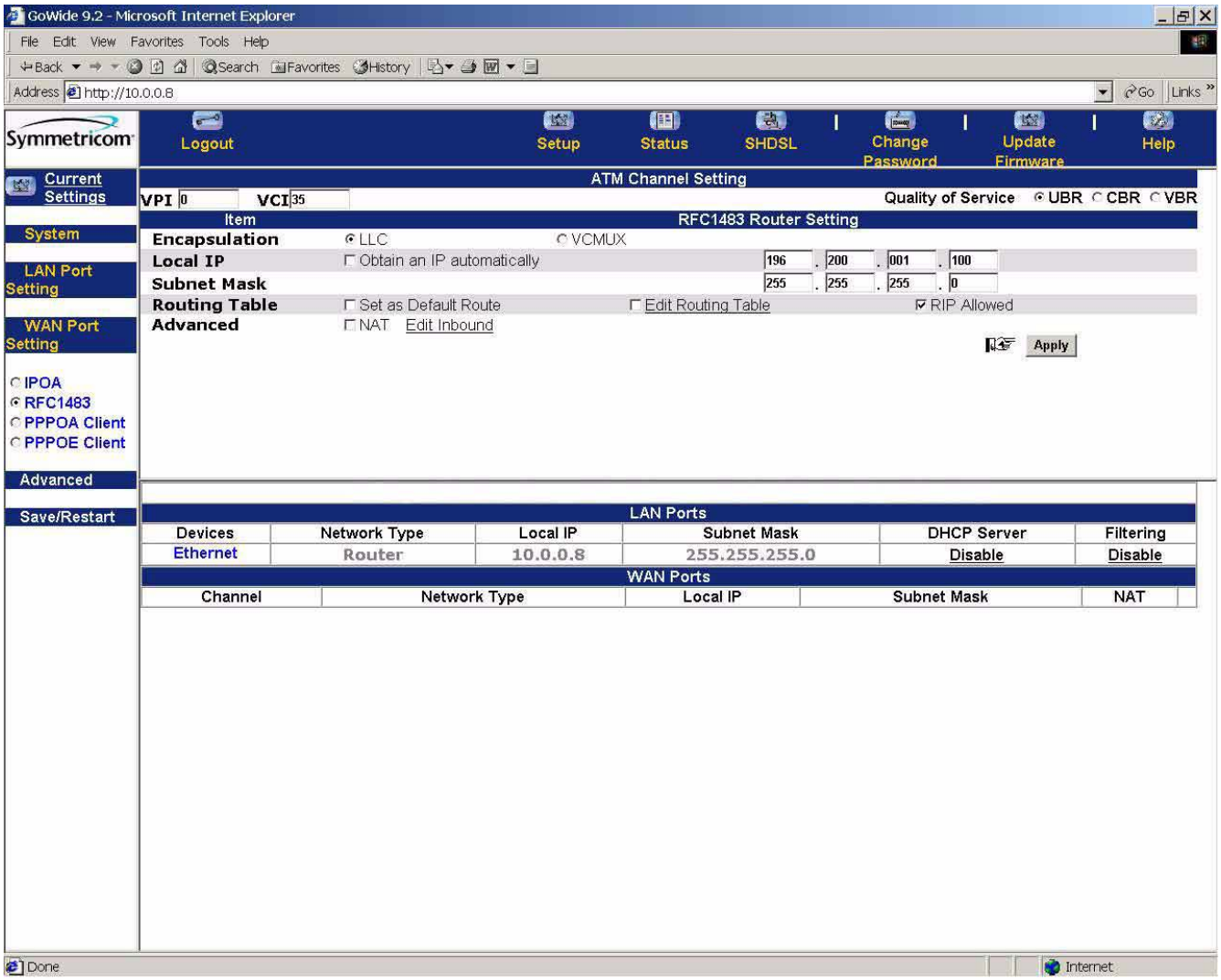
Refer to Procedure M for information on configuring the WAN Port using RFC1483.

Procedure M. Configuring WAN Port Using RFC1483

Step	Procedure
1	Select **RFC1483** in the System Menu (Figure 42).
2	Enter the VPI value in the **VPI** field.
3	Enter the VCI value in the **VCI** field.
4	Select the **Quality of Service** type: **UBR** (default setting), **CBR**, or **VBR**. A pop-up screen appears. Enter the appropriate information.
5	Select the **Encapsulation** type: **LLC** (default setting) or **VCMUX**.
6	If obtaining an IP automatically is desired under Local IP, click the **Obtain an IP automatically** box. Otherwise, enter the value for the Local IP in the **Local IP** field.
7	Enter the value for the Subnet Mask in the **Subnet Mask** field.
8	Select either **Set as Default Route**, **Edit Routing Table**, or **RIP** under **Routing Table** (**RIP Allowed** is the default setting).
9	If NAT is desired, click the **NAT** box under **Advanced**.
10	Click the **Apply** button if all data is correct.

End of Procedure

Figure 42. RFC1483 Configuration Screen



WAN Port Configuration using PPPoA Client

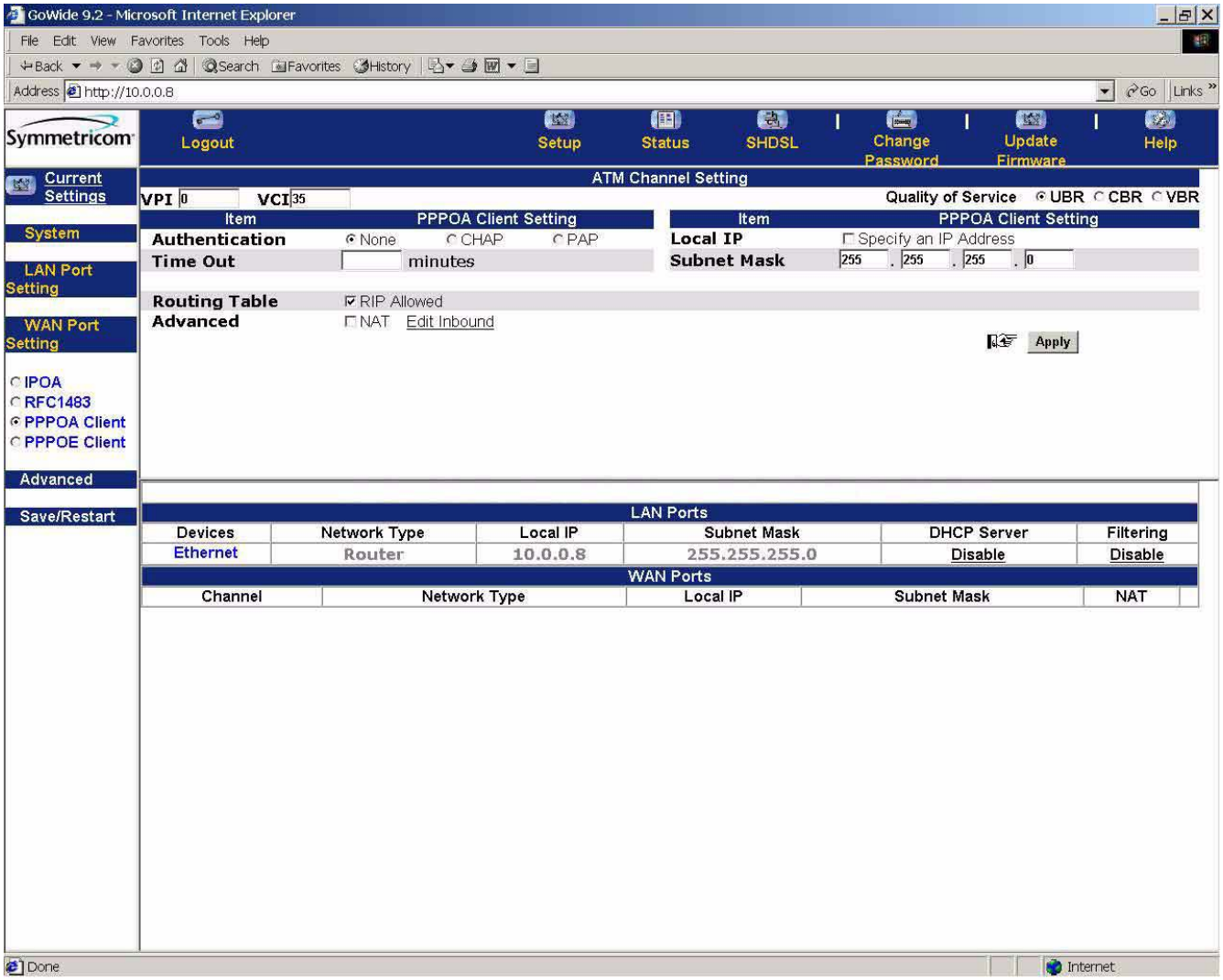
Refer to Procedure N for information on configuring the WAN Port using PPPoA Client.

Procedure N. Configuring WAN Port Using PPPoA Client

Step	Procedure
1	Select **PPPoA Client** in the System Menu (Figure 43).
2	Enter the VPI value in the **VPI** field.
3	Enter the VCI value in the **VCI** field.
4	Select the **Quality of Service** type: **UBR** (default setting), **CBR**, or **VBR**. A pop-up screen appears. Enter the appropriate information.
5	Select either **None**, **CHAP**, or **PAP** under Authentication (default is **None**).
6	Enter a numerical value in the **Time Out** field.
7	If specifying a local IP address is desired, click the **Specify an IP Address** box under **Local IP**.
8	Enter a value in the **Subnet Mask** field.
9	If **RIP** is not desired under **Routing Table**, deselect the box (**RIP Allowed** is the default setting).
10	If NAT is desired, click the **NAT** box under **Advanced**.
11	Click the **Apply** button if all data is correct.

End of Procedure

Figure 43. PPPoA Client Configuration Screen



WAN Port Configuration using PPPoE Client

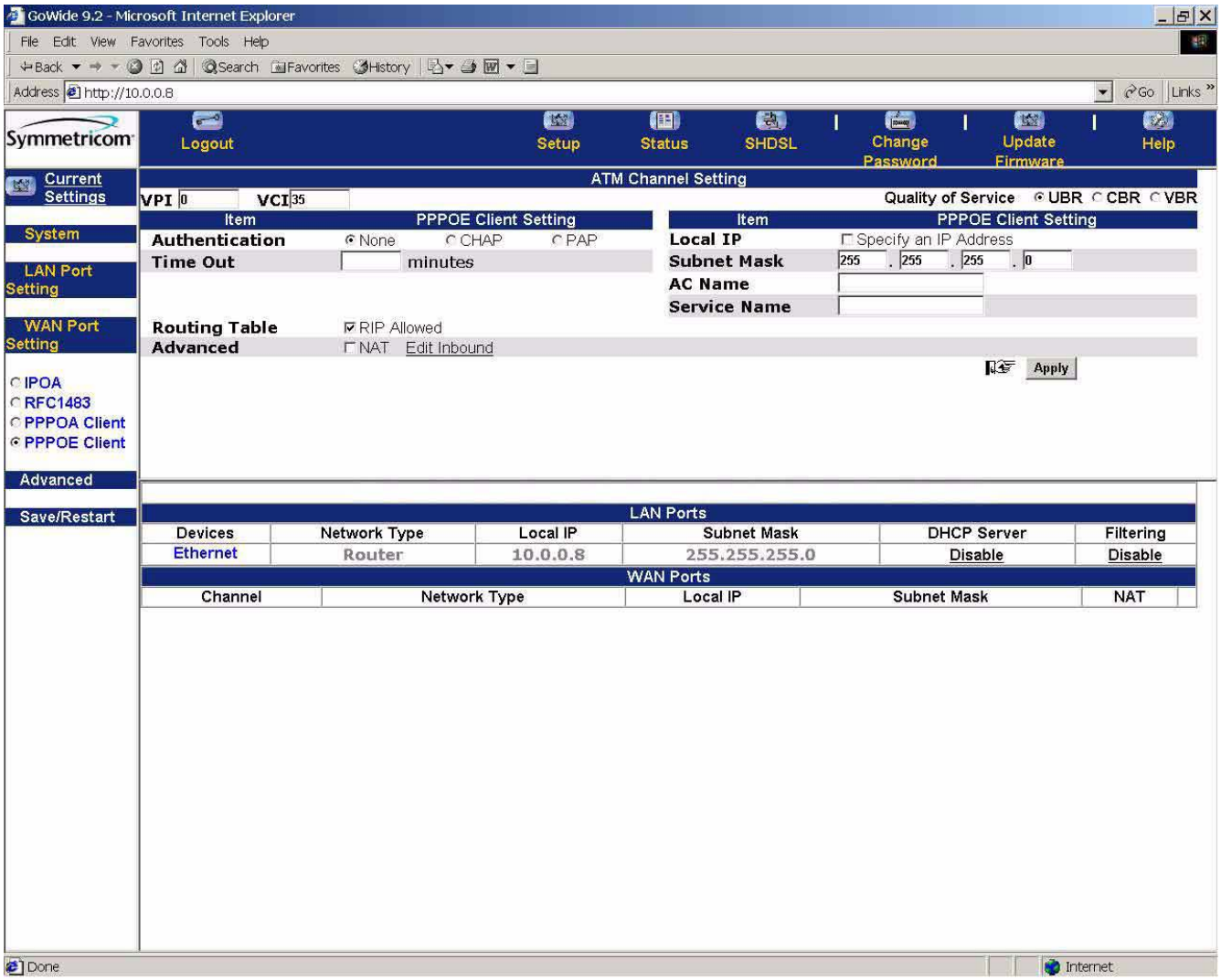
Refer to Procedure O for information on configuring the WAN Port using PPPoE Client.

Procedure O. Configuring WAN Port Using PPPoE Client

Step	Procedure
1	Select **PPPoE Client** in the System Menu (Figure 44).
2	Enter the VPI value in the **VPI** field.
3	Enter the VCI value in the **VCI** field.
4	Select the **Quality of Service** type: **UBR** (default setting), **CBR**, or **VBR**. A pop-up screen appears. Enter the appropriate information.
5	Select either **None**, **CHAP**, or **PAP** under Authentication (default is **None**).
6	Enter a numerical value in the **Time Out** field.
7	If specifying a local IP address is desired, click the **Specify an IP Address** box under **Local IP**.
8	Enter a value in the **Subnet Mask** field.
9	Enter a value in the **AC Name** field.
10	Enter a value in the **Service Name** field.
11	If **RIP** is not desired under **Routing Table**, deselect the box (**RIP Allowed** is the default setting).
12	If NAT is desired, click the **NAT** box under **Advanced**.
13	Click the **Apply** button if all data is correct.

End of Procedure

Figure 44. PPPoE Client Configuration Screen



Advanced Configuration

Clicking the **Advanced** hyperlink brings up the Advanced Configuration screen (Figure 45). This option allows a user to restrict which hosts have access to the GoWide 9.2 via Telnet, FTP, and a Web browser. The user will use a host's IP address to give them access. If a host is not specified, all hosts have access.

Procedure P describes the method to configure the Access Manager.

Procedure P. Advanced Configuration Screen

Step	Procedure
1	Select the **Access Manager** hyperlink in the System Menu (Figure 45).
2	Enter the Host IP address or addresses (up to six) in the **Host IP Address** field (Figure 46).
3	Click the **Apply** button if all data is correct.

End of Procedure

Figure 45. Advanced Configuration Screen

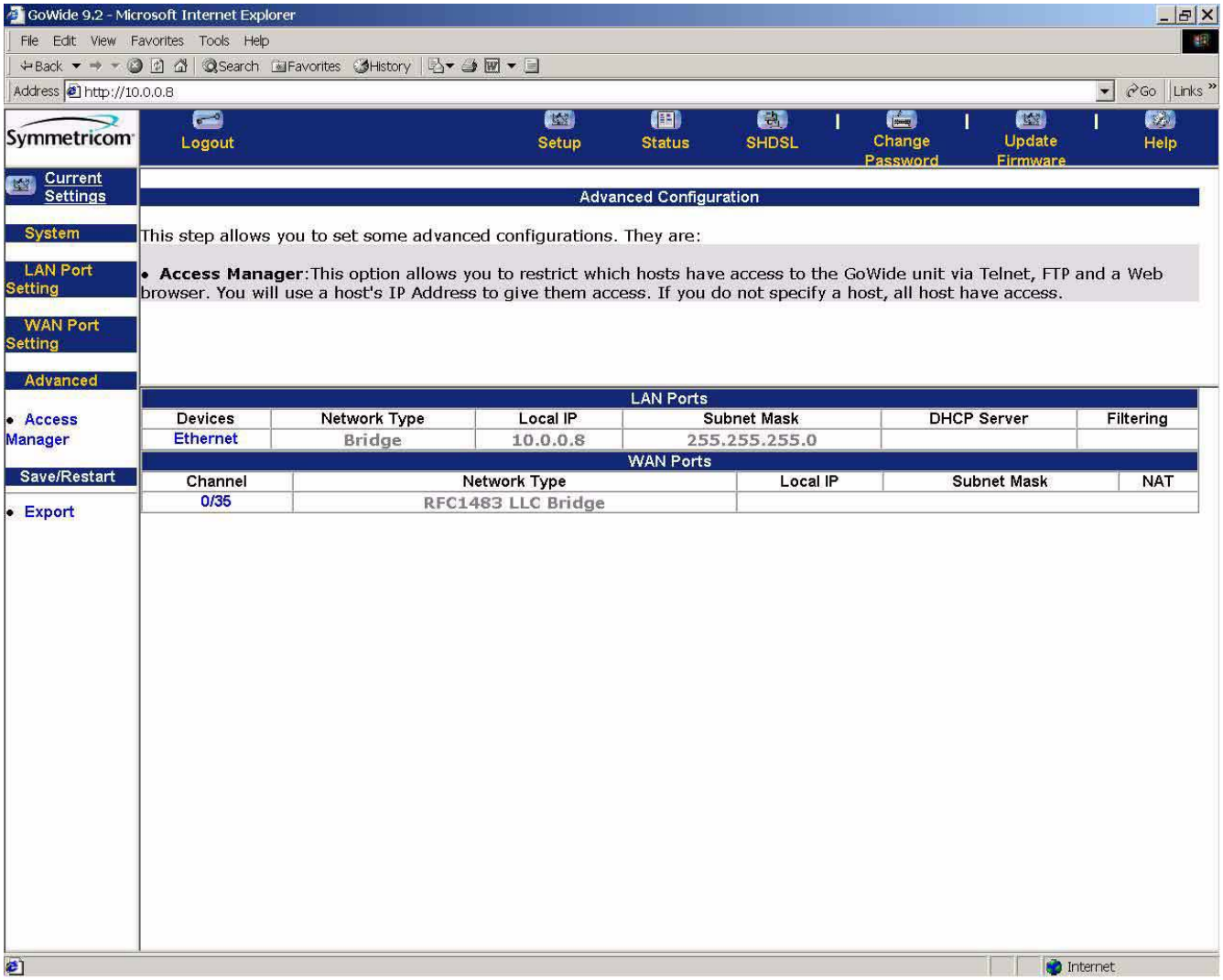
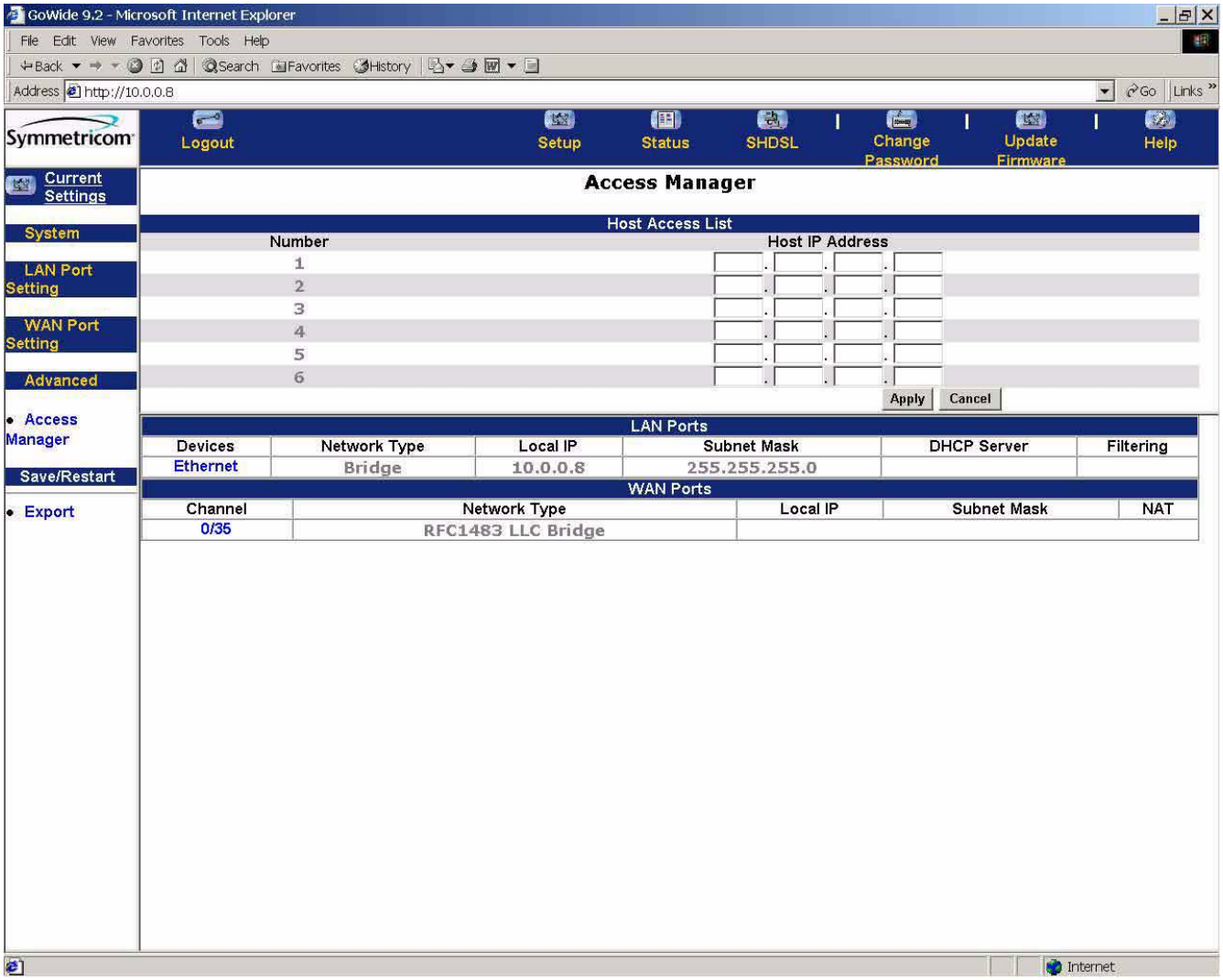


Figure 46. Access Manager Configuration Screen



Save/Restart Configuration

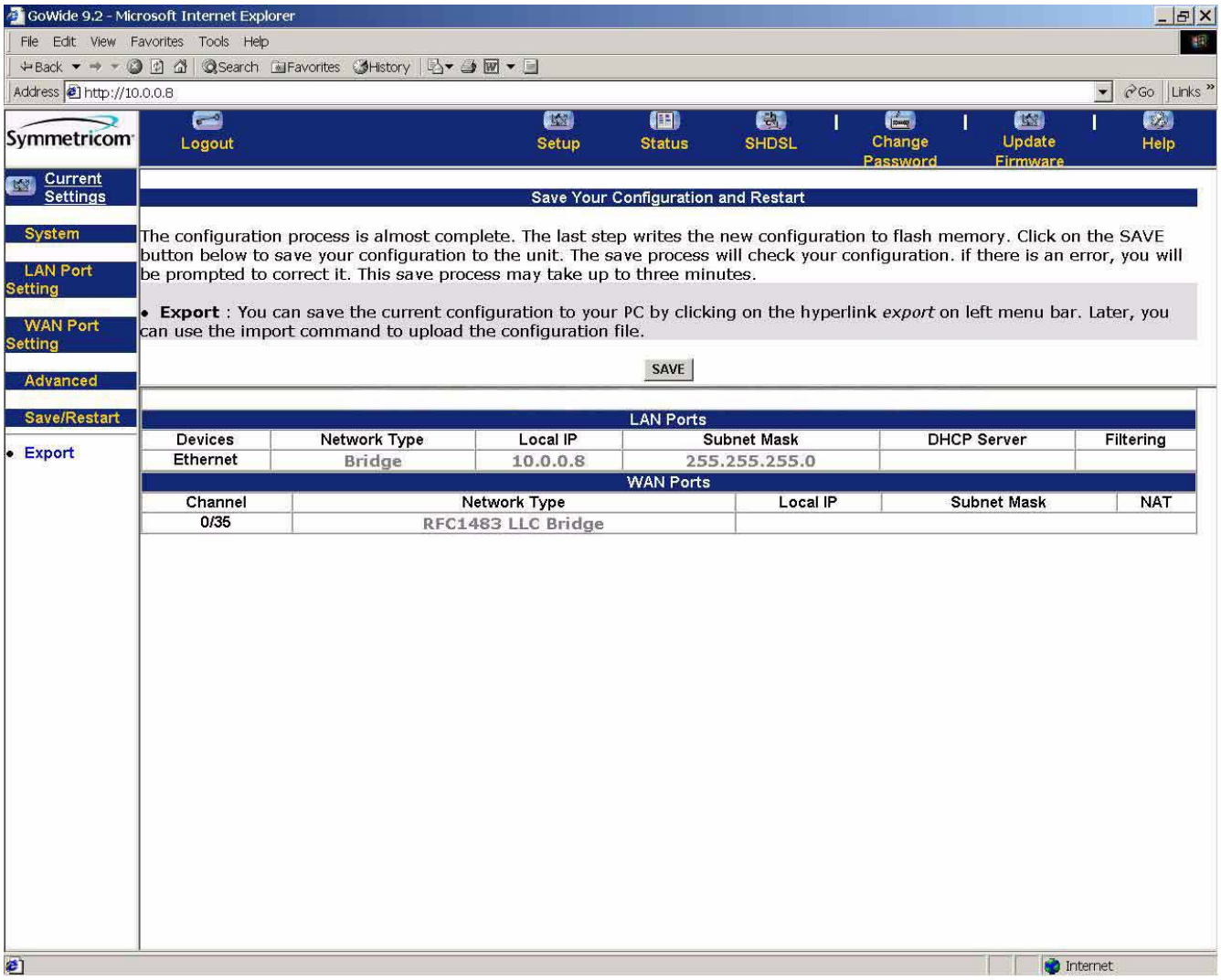
Clicking the **Save/Restart** hyperlink brings up the Save Your Configuration and Restart screen (Figure 47). Procedure Q describes the method for saving a router mode configuration and restarting the GoWide 9.2.

Procedure Q. Save/Restart Screen

Step	Procedure
1	Ensure that all displayed settings are correct.
2	Click the **SAVE** button to save the router configuration.

End of Procedure

Figure 47. Save Your Configuration and Restart Screen



Clicking the **SAVE** button displays a dialog box (Figure 48) stating that the router mode configuration will be written to flash memory.

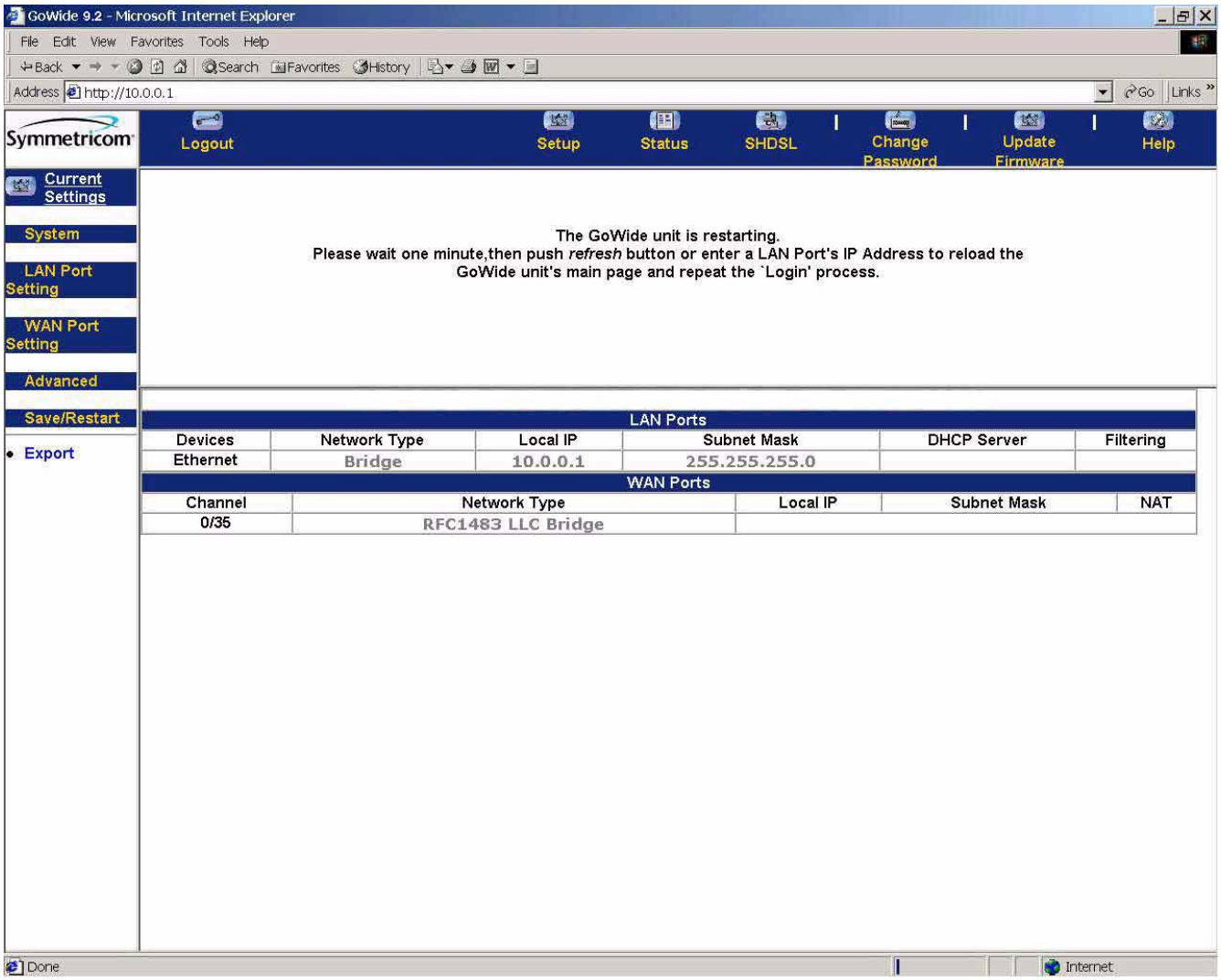
Figure 48. Flash Memory Dialog Box

Click the **OK** button to save the configuration.

Once the configuration is saved, a restart screen (Figure 49) is displayed. Either click the refresh button or enter a LAN port IP address to reload the GoWide 9.2 main page and repeat the login process.

Note: Entering a LAN port IP address is required only if the IP address has been changed.

Figure 49. Restart Screen

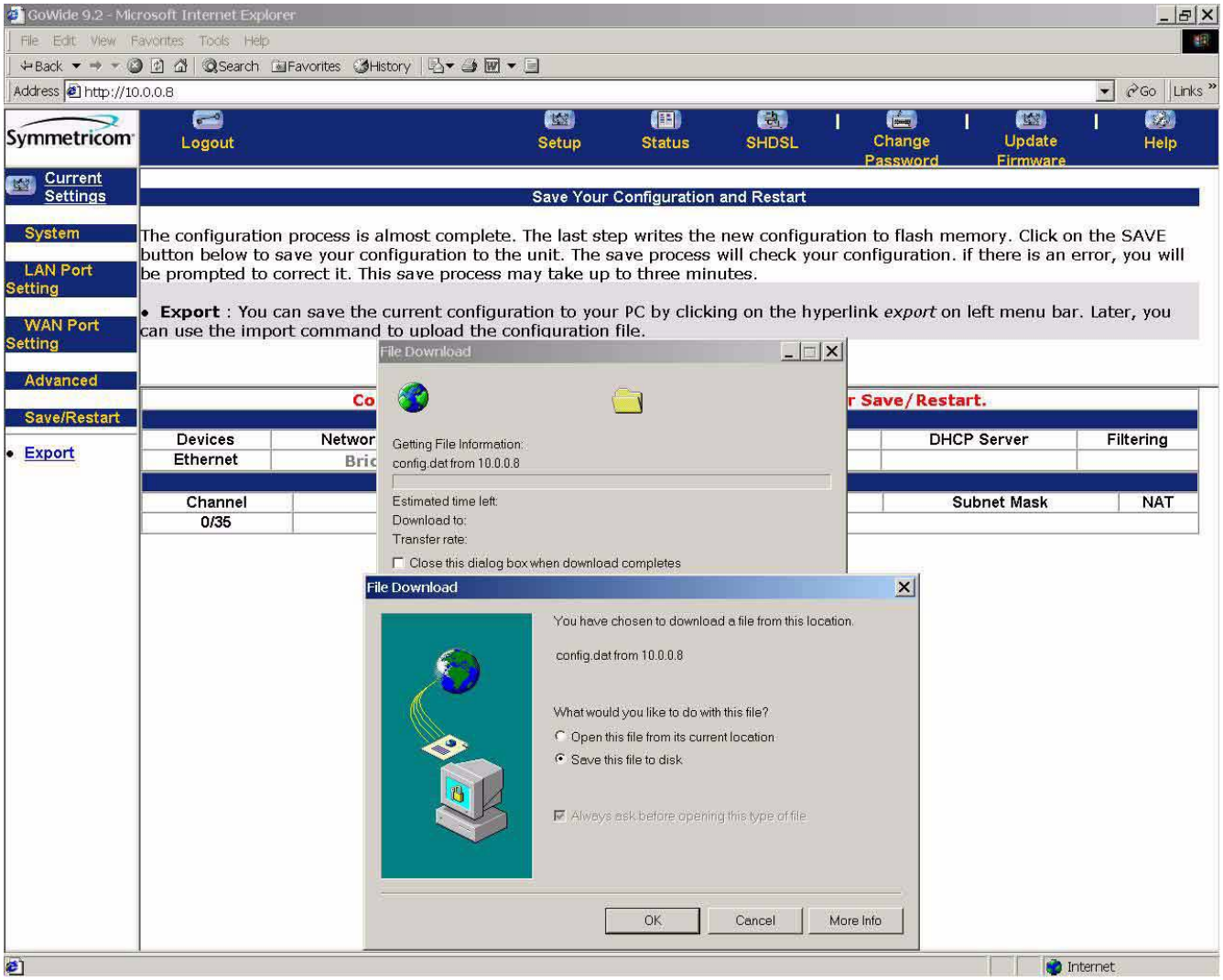


Export/Import Configuration

If the same settings are required on several GoWide 4.6 units, the Export/Import function can be used.

The settings must be configured and saved on one unit first. Use the Export hyperlink on the System Menu to export the configuration file to a hard drive or floppy disk. See Figure 50.

Figure 50. Export Configuration Screen



This configuration file can then be used with the Import button on another GoWide 4.6 to quickly and accurately replicate the settings from the previous unit to the current unit.

Click on the Browse button on the left to choose the configuration file that will be used.

After the configuration file is chosen, click on the Import button to upload the configuration file to the unit.

The unit will then save the configuration and restart, with the configuration file settings taking effect.

Internet Access Configuration

Note: The figures illustrating Internet access configuration are Windows 98 screen captures. For Windows 95/NT 4.0/2000/XP, please refer to the appropriate user manual.

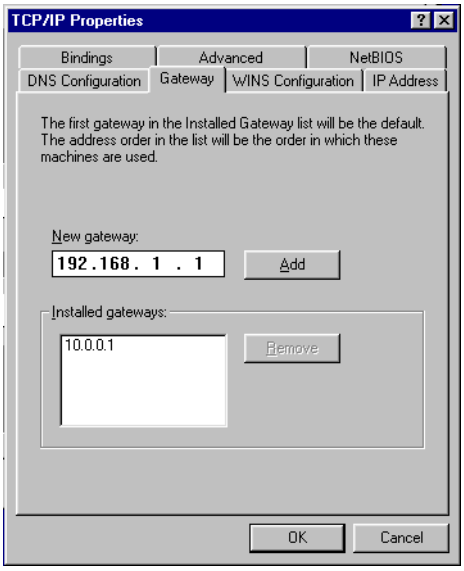
To configure a PC to access the Internet, do the following:

1. Ensure that there is still a TCP/IP connection to the GoWide 9.2. If not, refer to the PC Configuration section.

2. Using the TCP/IP Properties page, check that the installed Gateway address has not changed. See Figure 51.

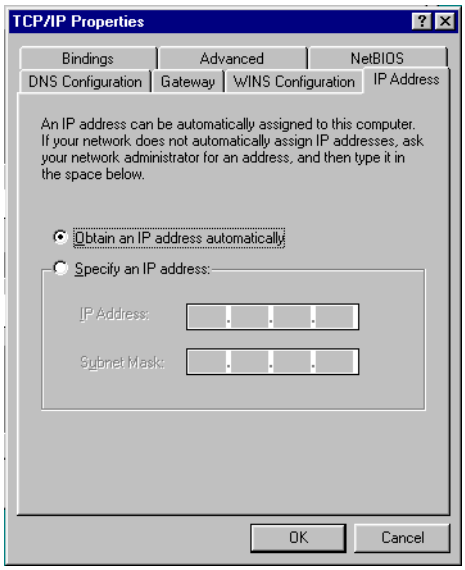
Note: In Router mode, the Gateway IP address is the same as the GoWide 9.2 LAN port IP address.

Figure 51. Installed Gateway IP Address



3. Click the **IP Address** tab and select **Obtain an IP address automatically**. See Figure 52.

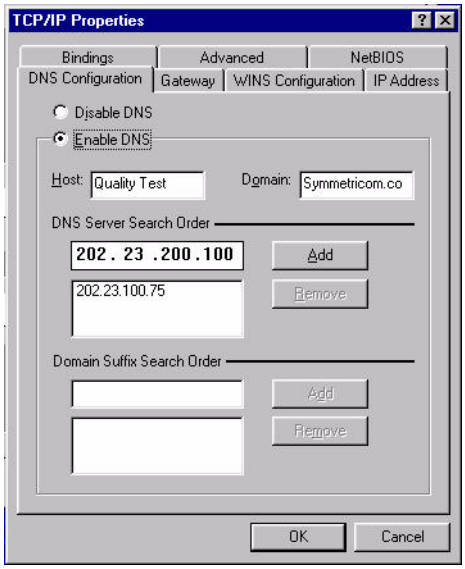
Figure 52. IP Address and Subnet Mask Values



4. Click the DNS Configuration tab. Select Enable DNS. Enter the Host name and Domain name. Enter the DNS Server Search Order Value. See Figure 53.

Note: These parameters are provided by the Service Provider.

Figure 53. DNS Configuration



5. Click **OK** and re-start the PC. The PC is now re-configured to communicate with the GoWide 9.2.

Note: For Windows 2000, simply click **OK**. The PC will be re-configured to communicate with the GoWide 9.2.

To access the modem again, change the PC settings as shown in the PC Configuration section.

Troubleshooting

This section provides information for troubleshooting the router mode configuration process.

Problem	Corrective Action
Power LED is off	• Ensure that the power cable is securely plugged into the unit. Also ensure that the other end of the power cable is plugged into a power outlet that is supplied with 90-250V AC. • Ensure that the ON/OFF switch is in the ON position. • Try a different power outlet.
Sync LED is flashing	• Ensure that the DSL line is plugged into the DSL port of the GoWide 9.2. • Verify that the Service Provider has activated the DSL line. • Ensure that the DSL line length is within the distance specifications.
Sync LED is off	• Go to the SHDSL Line Status screen using the Web browser and click the **Connect** button.
Alarm LED is on	• Ensure that the DSL line is plugged into the DSL port of the GoWide 9.2. • Verify that the Service Provider has activated the DSL line. • Ensure that the DSL line length is within the distance specifications. • Ensure that the Line 1, Line 2, Line 3, and Line 4 status in the SHDSL Line Status screen displays a **Connected** result. The **Disconnect** button should be displayed, but if the **Connect** button is displayed, click the button once to make a connection.
Cannot access the GoWide 9.2's Web page	• Ensure that the PC is plugged into one of the GoWide 9.2's Ethernet ports. • If the PC is connected directly to the GoWide 9.2, ensure that a straight-through Ethernet cable is being used (similar to the yellow ones provided with the unit). A solid green LED on the right side of the Ethernet port in use indicates that a link has been detected with the PC. • Since the GoWide 9.2's default IP address is 10.0.0.1, the PC must be part of the same subnet and have an IP address between the range of 10.0.0.2 to 10.0.0.254. The PC subnet mask should be 255.255.255.0. • Verify that the PC Internet options are set correctly to access the GoWide 9.2. Start by opening an Internet Explorer window and go to the **Tools** --> **Internet Options** page. Go to the **Connections** tab and click the **LAN Settings** button. In LAN Settings, make sure that the boxes for **Automatically detect settings** and **Use a proxy server** are not selected. If these boxes are selected, cancel the selections and click the LAN Settings **OK** button. Click the Internet Options **OK** button to exit.
Lost password	• Reset the GoWide 9.2 to the original factory defaults by pressing the reset button for 5 seconds. The password will default to the factory setting of password, thus enabling unit access and configuration.

Gateway Mode Configuration

This chapter provides information on the gateway mode configuration.

Chapter 5

Introduction

This chapter provides information on configuring the GoWide 9.2 in Gateway mode.

PC Configuration

Note: Ensure that an Ethernet card is installed in the PC.

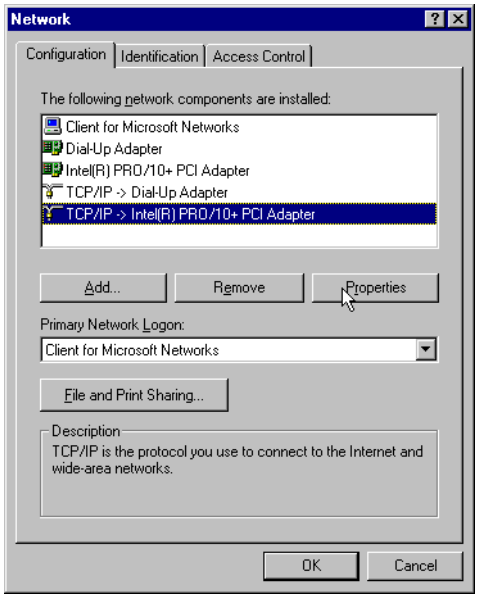
Note: The figures illustrating PC configuration are Windows 98 screen captures. For Windows 95/NT 4.0/2000/XP, please refer to the appropriate user manual.

To configure a PC to communicate with the GoWide 9.2, do the following:

1. Establish a TCP/IP connection to the GoWide device. This is done by clicking the **Start** button and selecting **Settings**, **Control Panel**, and **Network**.

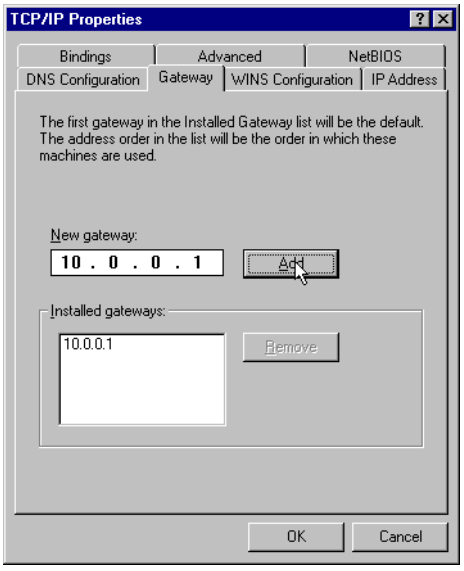
2. Click the Network **Configuration** tab, select the TCP/IP protocol, and click **OK** (Figure 54).

Figure 54. TCP/IP Connection



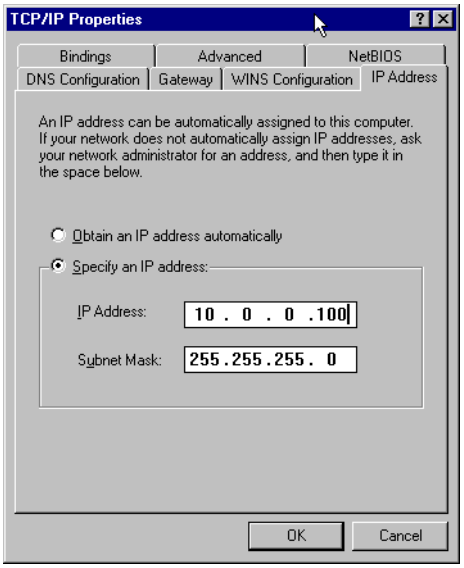
3. In the TCP/IP Properties page, enter the Gateway IP address. See Figure 55.

Figure 55. Gateway IP Address



4. Click the IP Address tab and enter the IP Address and Subnet Mask values. See Figure 56.

Figure 56. IP Address and Subnet Mask Values



5. Click **OK**. The PC is now configured to communicate with the GoWide 9.2.

Note: For Windows 2000, simply click **OK**. The PC will be configured to communicate with the GoWide 9.2.

GoWide 9.2 Configuration

GoWide 9.2 Login

Procedure R describes the method for logging in to the GoWide 9.2.

Procedure R. GoWide 9.2 Login

Step	Procedure
1	Power up the computer (if not already powered up). Open the Internet Explorer Web browser. *Note:* Ensure that both the **Automatically detect settings** box and the **Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).** box are not selected. See Figure 57.
2	Enter 10.0.0.1 for the IP address in the **Address** field.
3	The GoWide initial screen (Figure 58) is now displayed. Click **Login**.
4	Enter the password in the **Password** window (default is *password*). To change the password, refer to the Change Password section in Chapter 2.
5	Press Enter. The GoWide 9.2 status screen (Figure 59) is now displayed.

End of Procedure

Figure 57. Web Browser LAN Settings

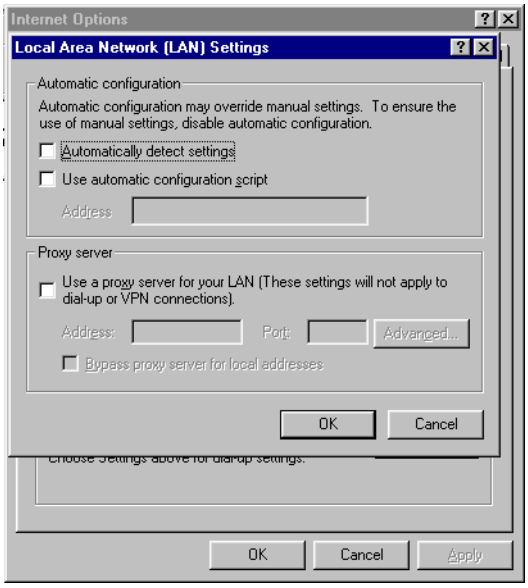


Figure 58. GoWide 9.2 Initial Screen

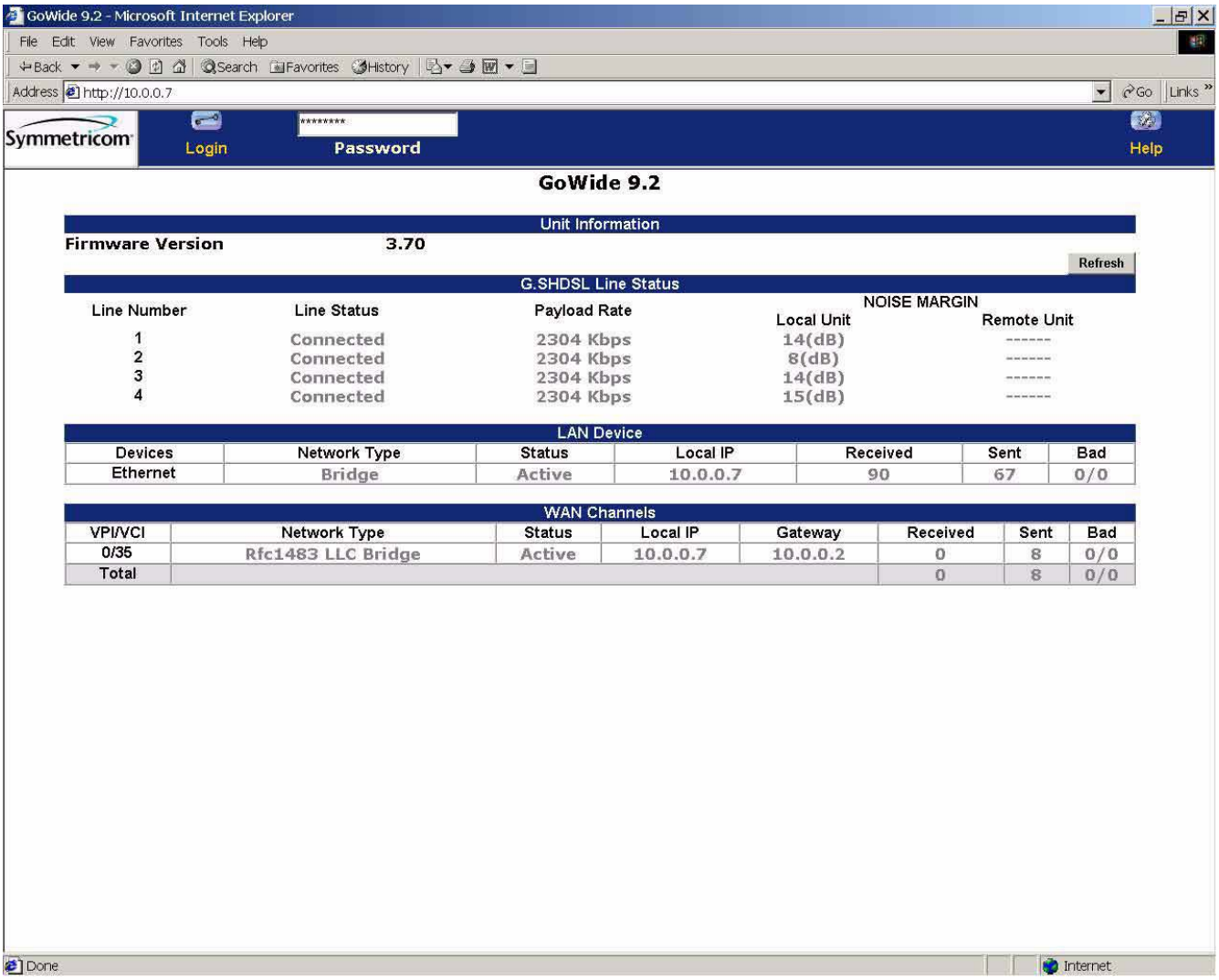


Figure 59. GoWide 9.2 Status Screen

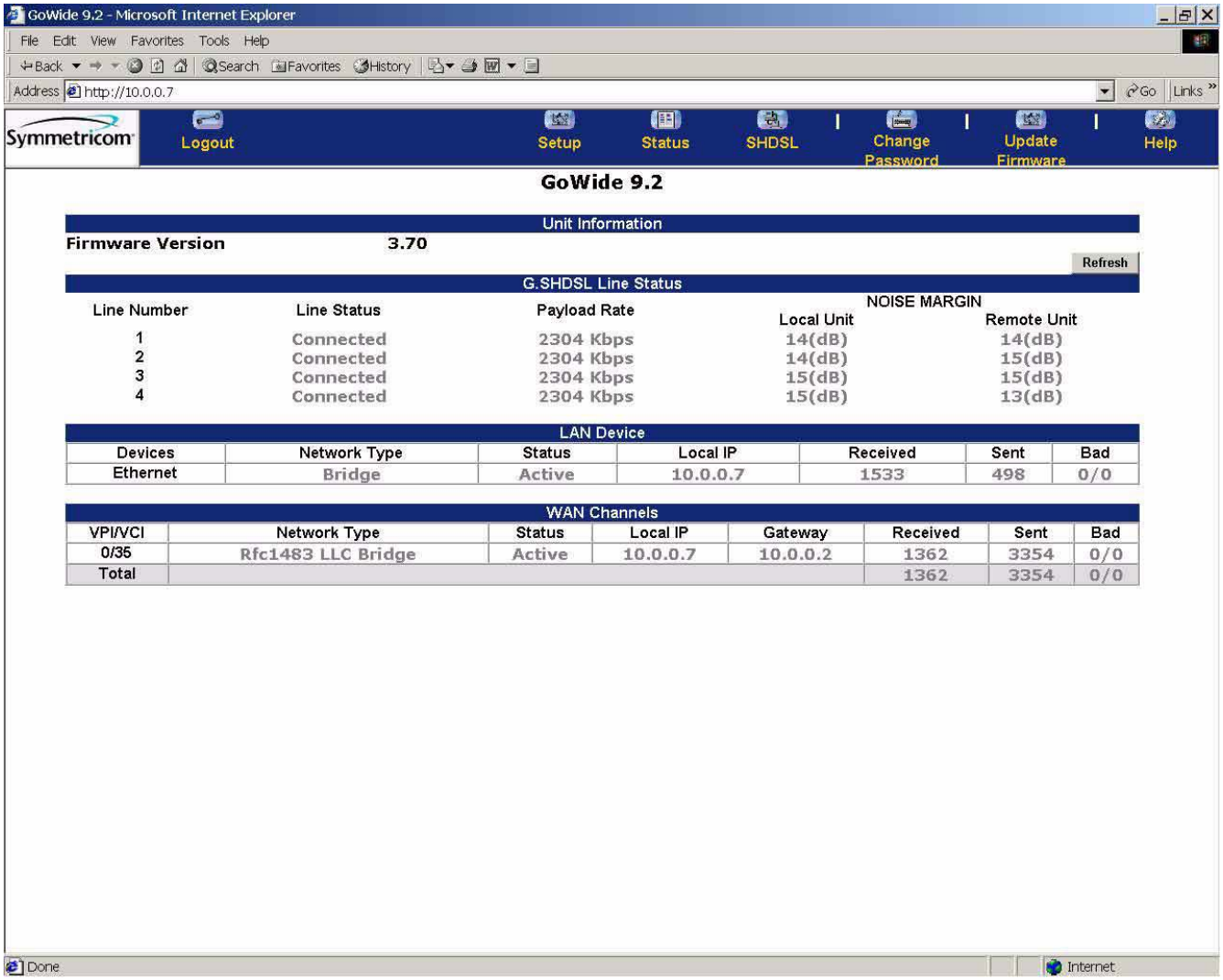
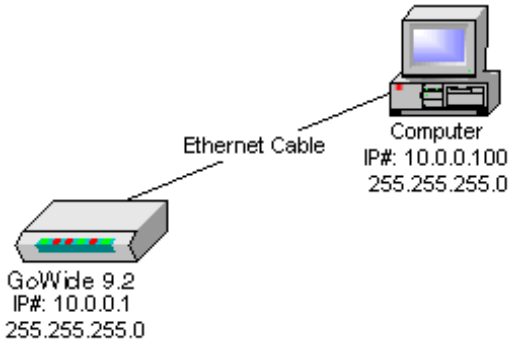


Figure 60 shows a default configuration between a PC and the GoWide 9.2.

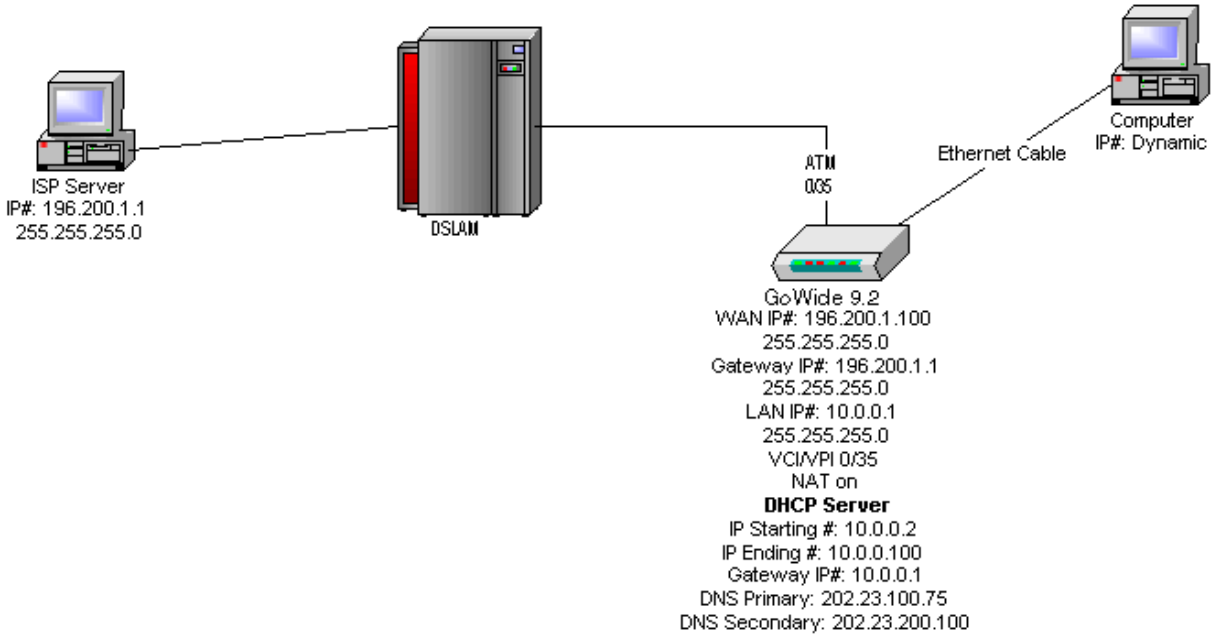
Figure 60. GoWide 9.2 Default Configuration



Sample Configuration

Figure 61 shows a sample configuration setup for GoWide 9.2 gateway mode.

Figure 61. GoWide 9.2 Gateway Mode Configuration



System Screen

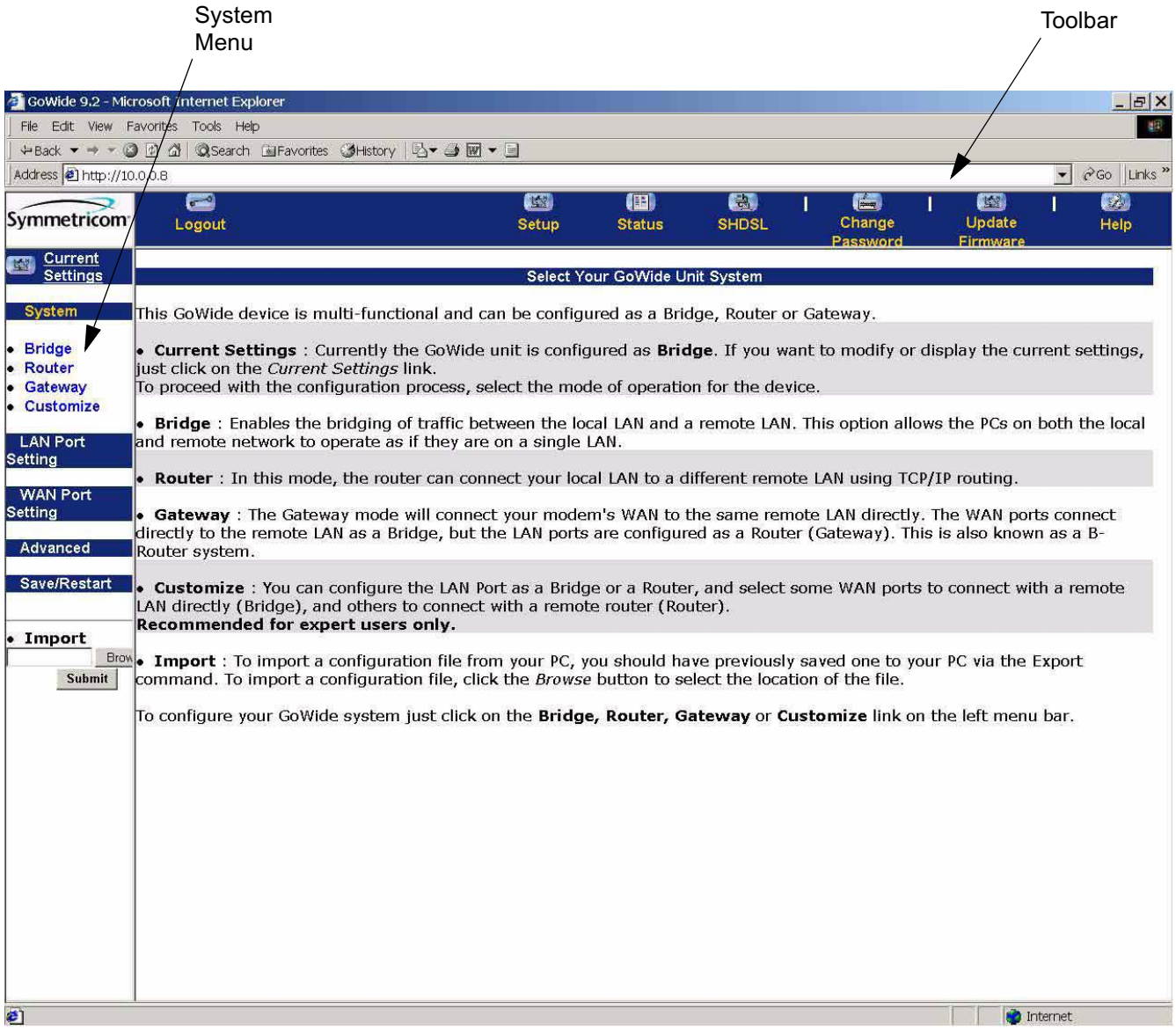
Bring up the System gateway mode configuration screen as described in Procedure S.

Procedure S. System Screen

Step	Procedure
1	Login to the GoWide 9.2.
2	Select **Setup** from the GoWide 9.2 toolbar. The System screen (Figure 62) is now displayed.
3	Click the **Gateway** hyperlink in the System Menu.

End of Procedure

Figure 62. System Screen



LAN Port Configuration

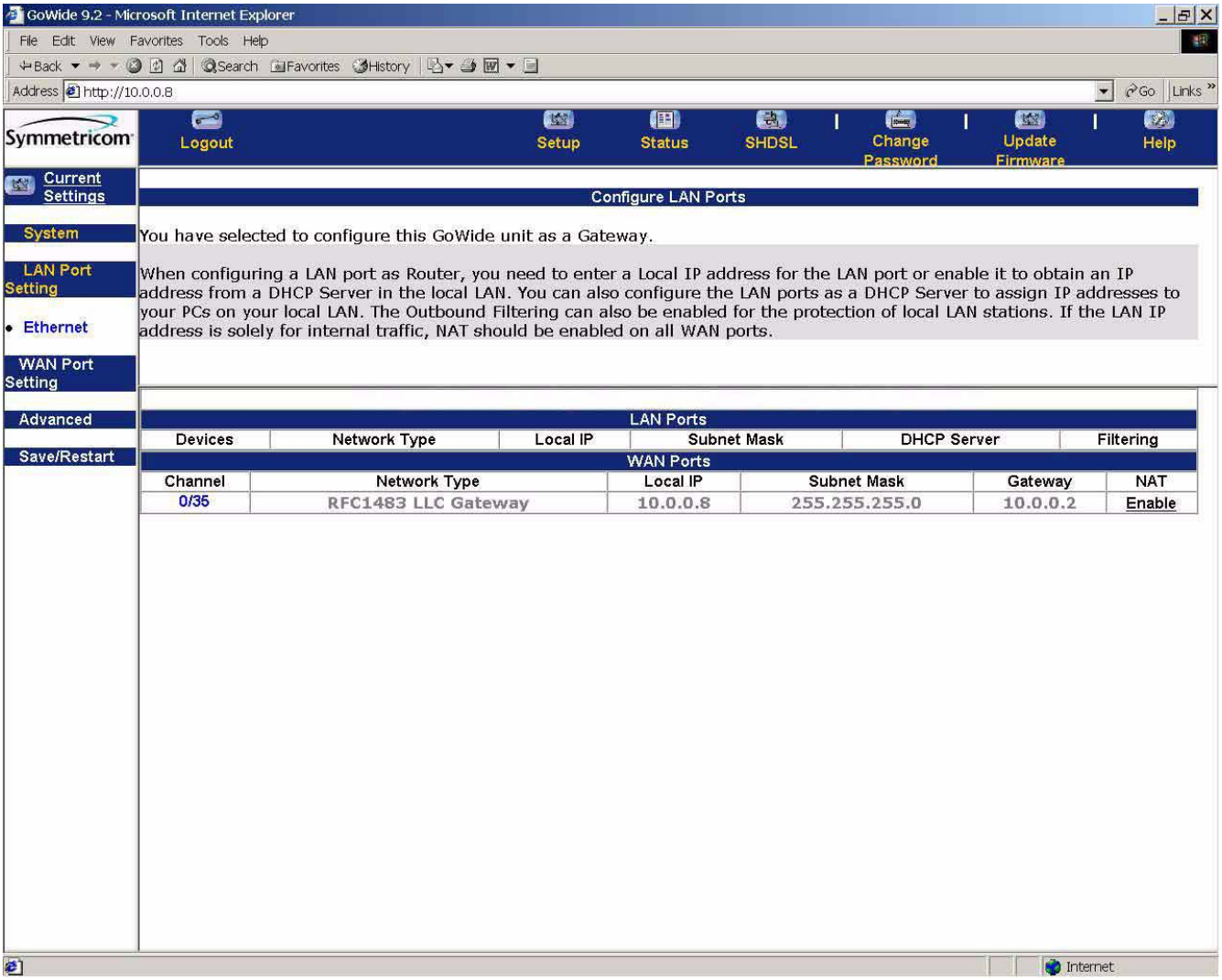
Clicking the **Gateway** hyperlink brings up the Configure LAN Port screen (Figure 63). Procedure T describes the method for configuring the LAN Port.

Procedure T. Configuring LAN Port

Step	Procedure
1	Select **Ethernet** hyperlink in the System Menu (Figure 64).
2	If obtaining an IP automatically is desired, click the **Obtain an IP automatically** box under **Local IP**. Otherwise, enter a value for the **Local IP** in the provided field.
3	Enter a value for the **Subnet Mask** in the provided field.
4	If **RIP** is not desired under **Routing Table**, deselect the box (**RIP Allowed** is the default setting).
5	Select either **DHCP Server**, **DHCP Relay**, or **Outbound Filtering** under **Advanced**.
6	Enter the value for **DNS Relay** in the provided field.
7	Click the **Apply** button if all data is correct.

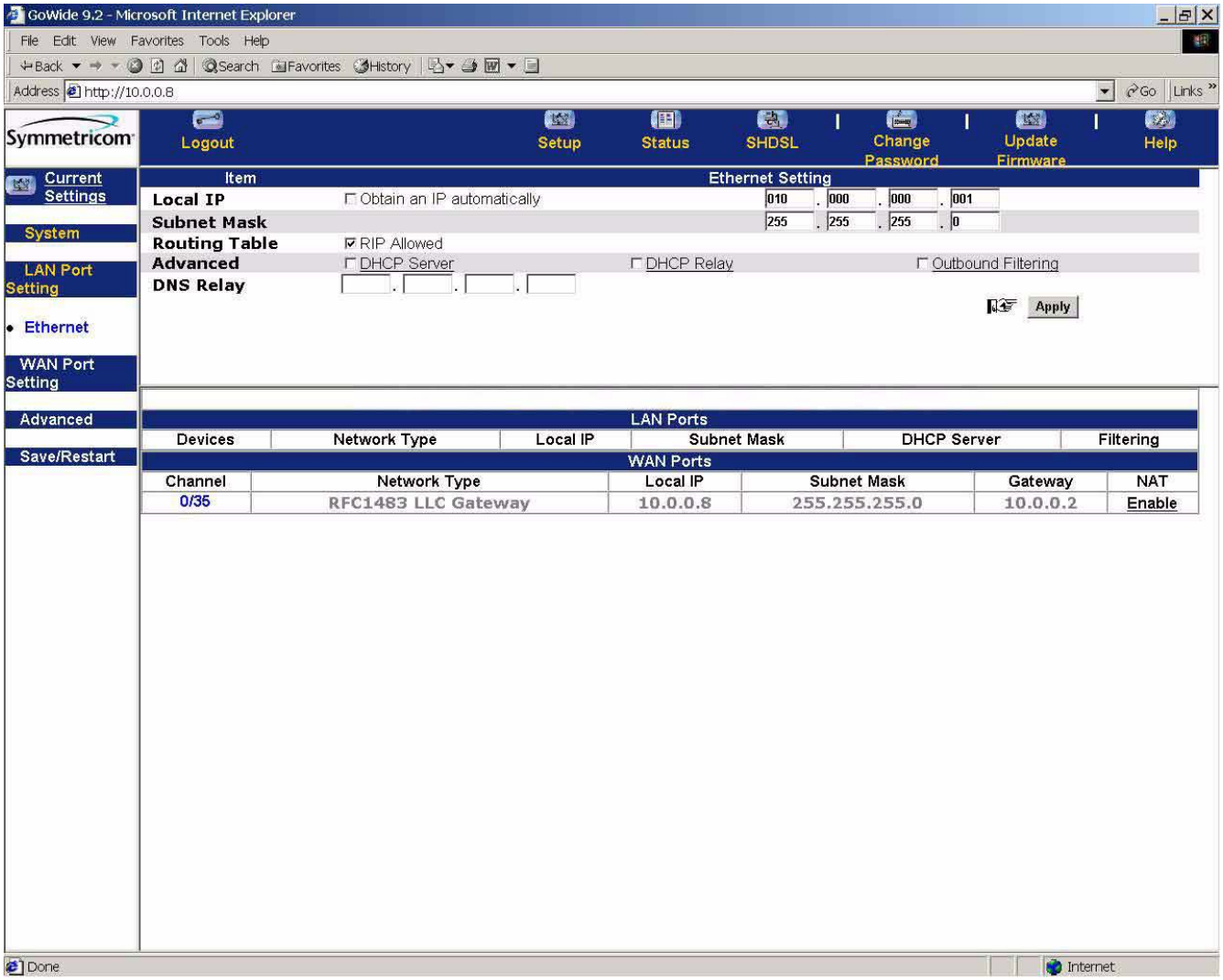
End of Procedure

Figure 63. Configure LAN Port Screen



5

Figure 64. LAN Port Settings Screen



WAN Port Configuration

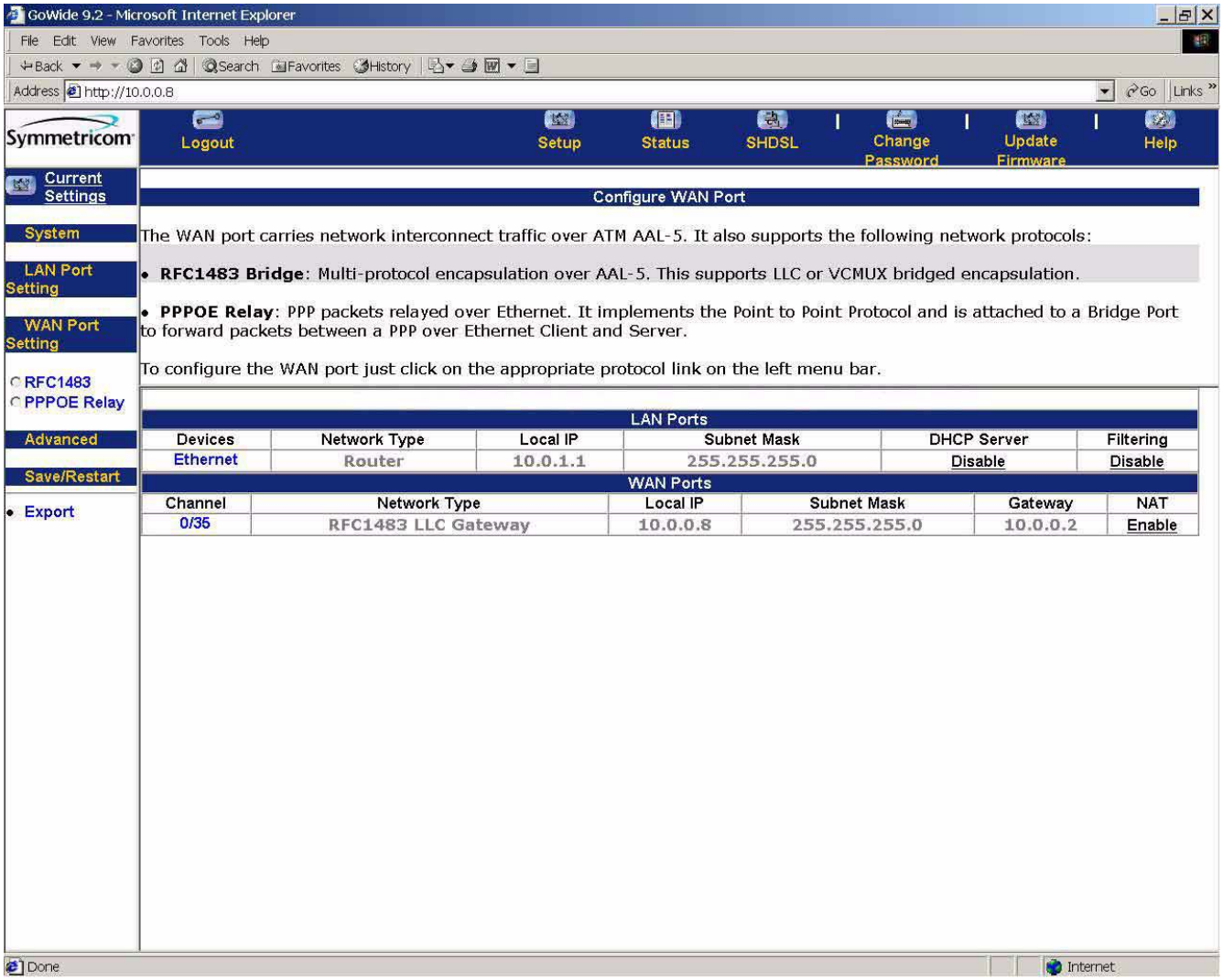
Clicking the **WAN Port Setting** hyperlink brings up the Configure WAN Port screen (Figure 65). Procedure U describes the method for configuring the WAN Port using RFC1483. Procedure V describes the method for configuring the WAN Port using PPPoE Relay.

Quality of Service Setup

To set up Quality of Service (QoS) under WAN Port configuration, click on the desired QoS format (UBR, CBR or VBR) in the appropriate screen. The formats are as follows:

- UBR (Unspecified Bit Rate) – the user has the option of specifying the Peak Cell Rate (PCR).
- CBR (Constant Bit Rate) – the user must specify the PCR.
- VBR (Variable Bit Rate) – the user must specify the PCR, Sustainable Cell Rate (SCR), Burst Tolerance, and the maximum burst size.

Figure 65. Configure WAN Port Screen



WAN Port Configuration using RFC1483

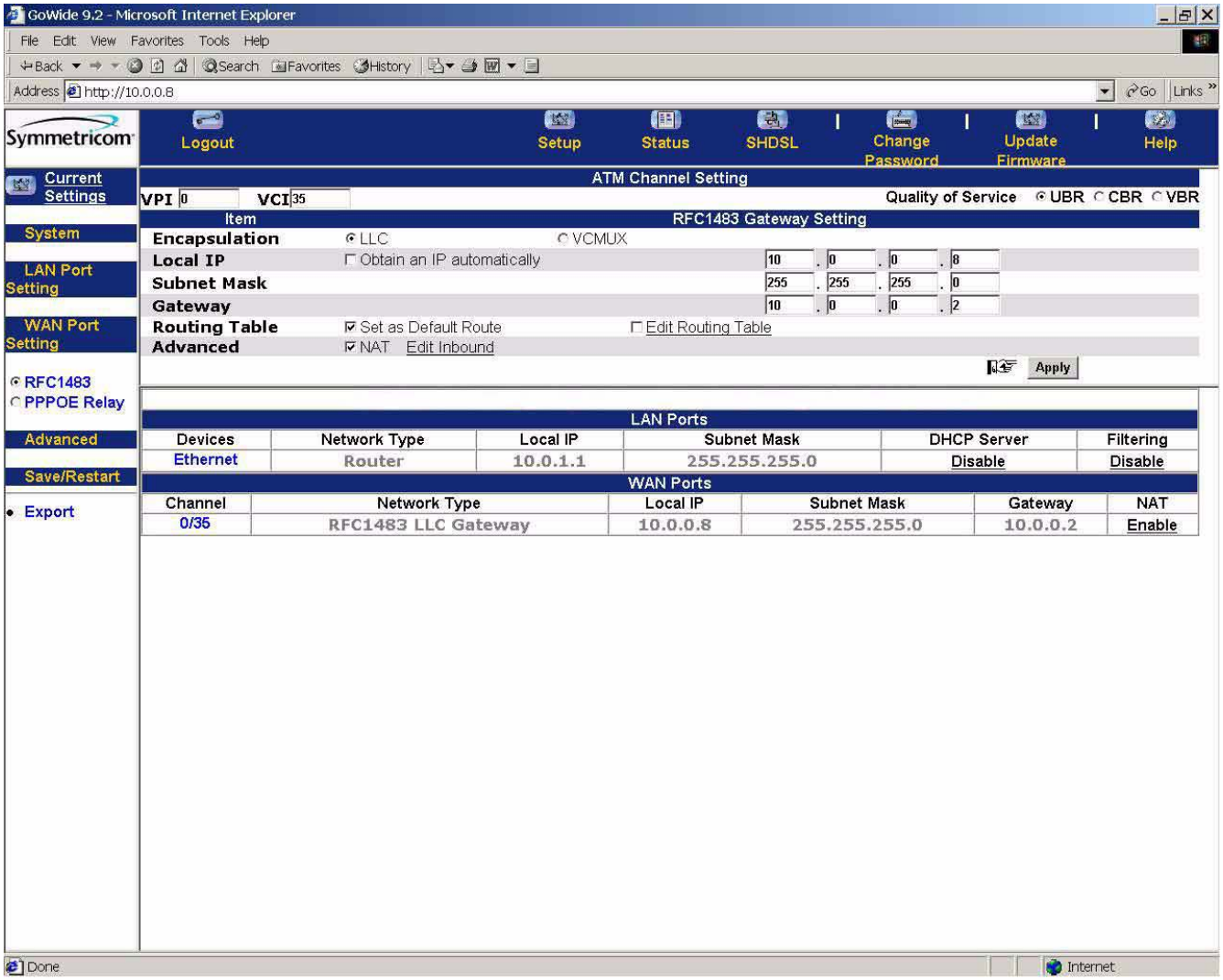
Refer to Procedure U for information on configuring the WAN Port using RFC1483.

Procedure U. Configuring WAN Port Using RFC1483

Step	Procedure
1	Select **RFC1483** in the System Menu (Figure 66).
2	Enter the VPI value in the **VPI** field.
3	Enter the VCI value in the **VCI** field.
4	Select the **Quality of Service** type: **UBR** (default setting), **CBR**, or **VBR**. A pop-up screen appears. Enter the appropriate information.
5	Select the **Encapsulation** type: **LLC** (default setting) or **VCMUX**.
6	If obtaining an IP automatically is desired, click the **Obtain an IP automatically** box under **Local IP**. Otherwise, enter a value for the **Local IP** in the provided field.
7	Enter the values for **Subnet Mask** and **Gateway** in the provided fields.
8	Select either **Set as Default Route** or **Edit Routing Table** under **Routing Table** (**Set as Default Route** is the default setting).
9	If NAT is desired, click the **NAT** box under **Advanced**.
10	Click the **Apply** button if all data is correct.

End of Procedure

Figure 66. RFC1483 Configuration Screen



WAN Port Configuration using PPPoE Relay

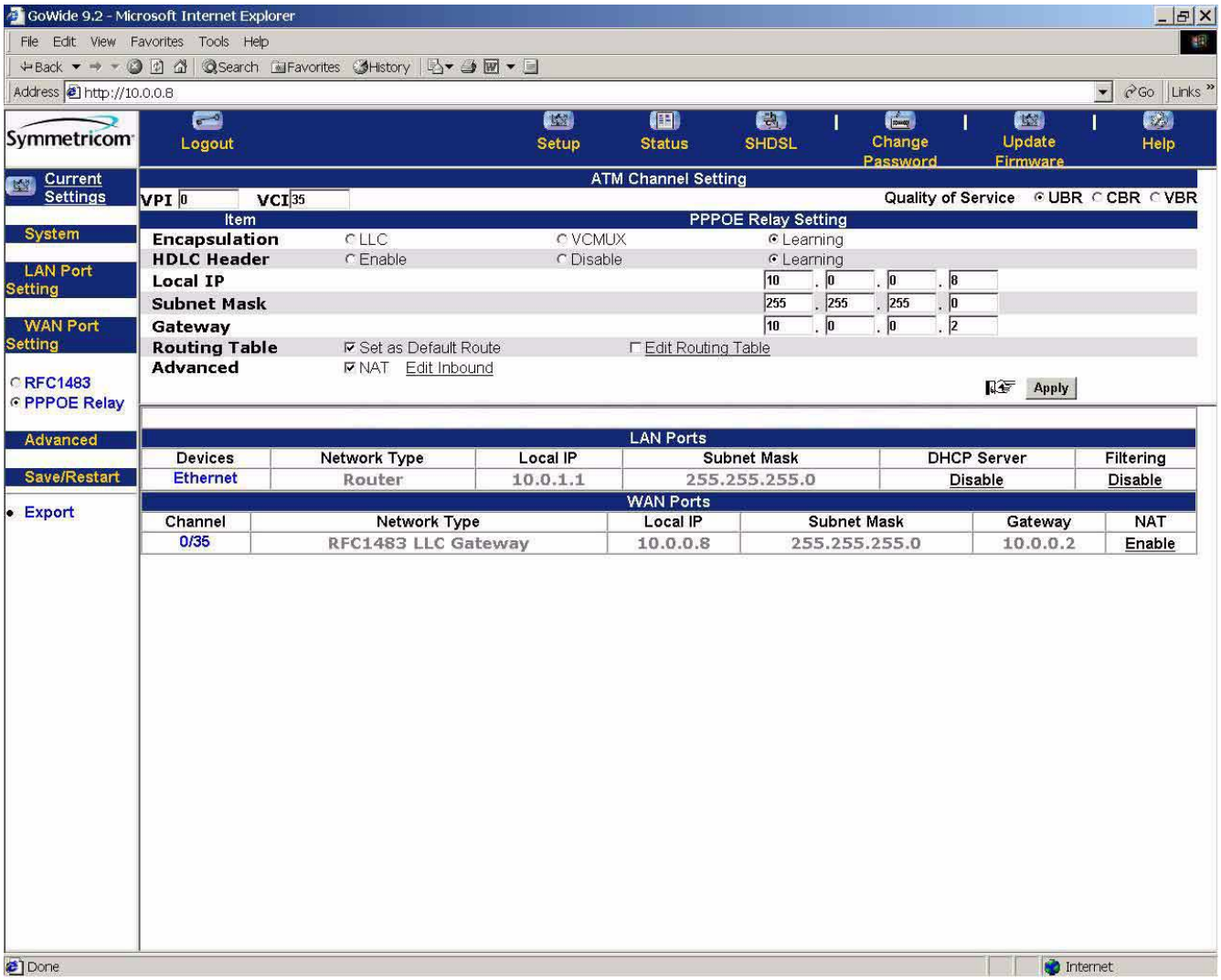
Refer to Procedure V for information on configuring the WAN Port using PPPoE Relay.

Procedure V. Configuring WAN Port Using PPPoE Relay

Step	Procedure
1	Select **PPPoE Relay** in the System Menu (Figure 67).
2	Enter the VPI value in the **VPI** field.
3	Enter the VCI value in the **VCI** field.
4	Select the **Quality of Service** type: **UBR** (default setting), **CBR**, or **VBR**. A pop-up screen appears. Enter the appropriate information.
5	Select the **Encapsulation** type: **LLC**, **VCMUX**, or **Learning** (**Learning** is the default setting).
6	Select the **HDLC Header** type: **Enable**, **Disable**, or **Learning** (**Learning** is the default setting).
7	Enter the values for **Local IP**, **Subnet Mask**, and **Gateway** in the provided fields.
8	Select either **Set as Default Route** or **Edit Routing Table** under **Routing Table** (**Set as Default Route** is the default setting).
9	If NAT is desired, click the **NAT** box under **Advanced**.
10	Click the **Apply** button if all data is correct.

End of Procedure

Figure 67. PPPoE Relay Configuration Screen



Advanced Configuration

Clicking the **Advanced** hyperlink brings up the Advanced Configuration screen (Figure 68). This option allows a user to restrict which hosts have access to the GoWide 9.2 via Telnet, FTP, and a Web browser. The user will use a host's IP address to give them access. If a host is not specified, all hosts have access.

Procedure W describes the method to configure the Access Manager.

Procedure W. Advanced Configuration Screen

Step	Procedure
1	Select the **Access Manager** hyperlink in the System Menu (Figure 68).
2	Enter the Host IP address or addresses (up to six) in the **Host IP Address** field (Figure 69).
3	Click the **Apply** button if all data is correct.

End of Procedure

Figure 68. Advanced Configuration Screen

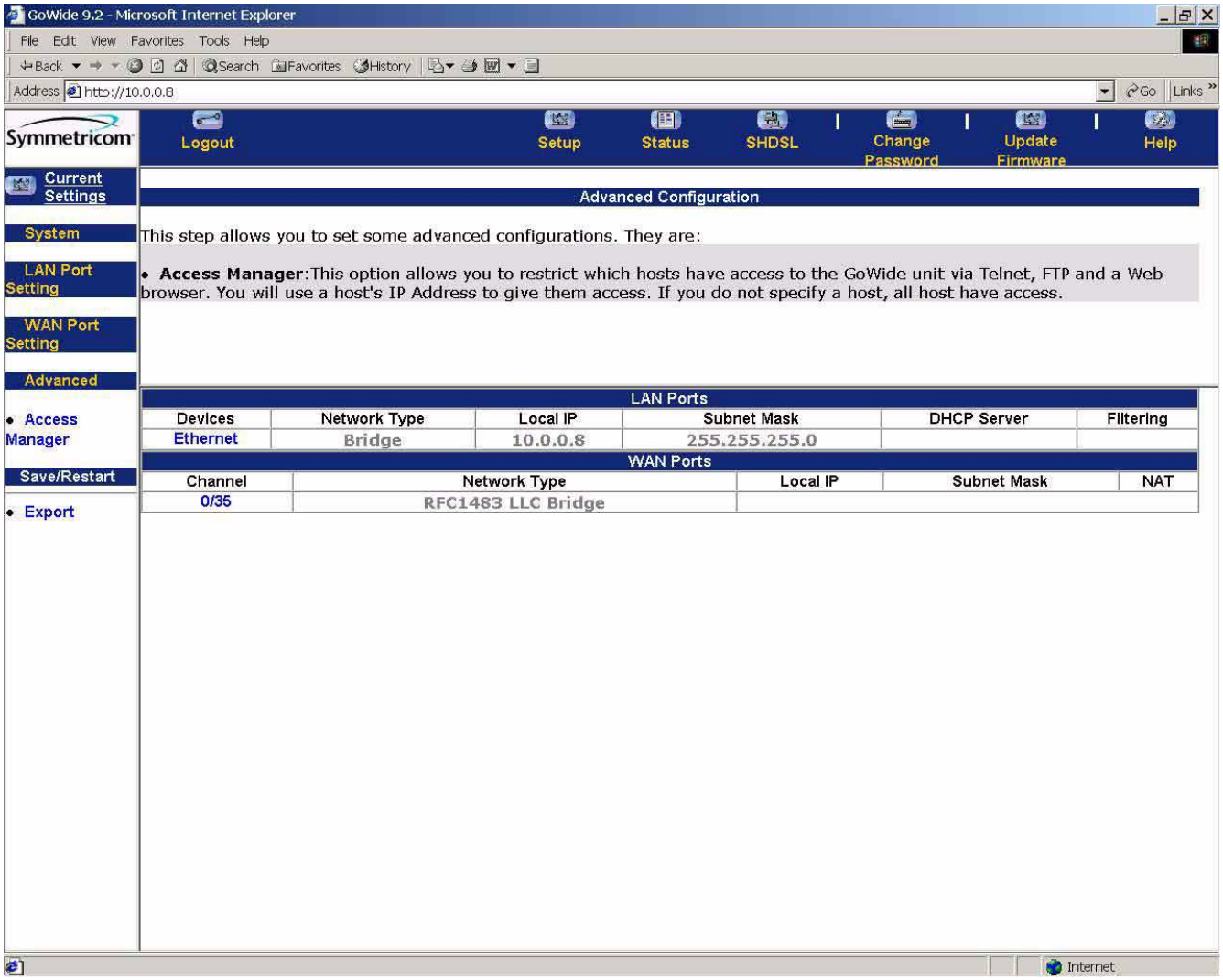
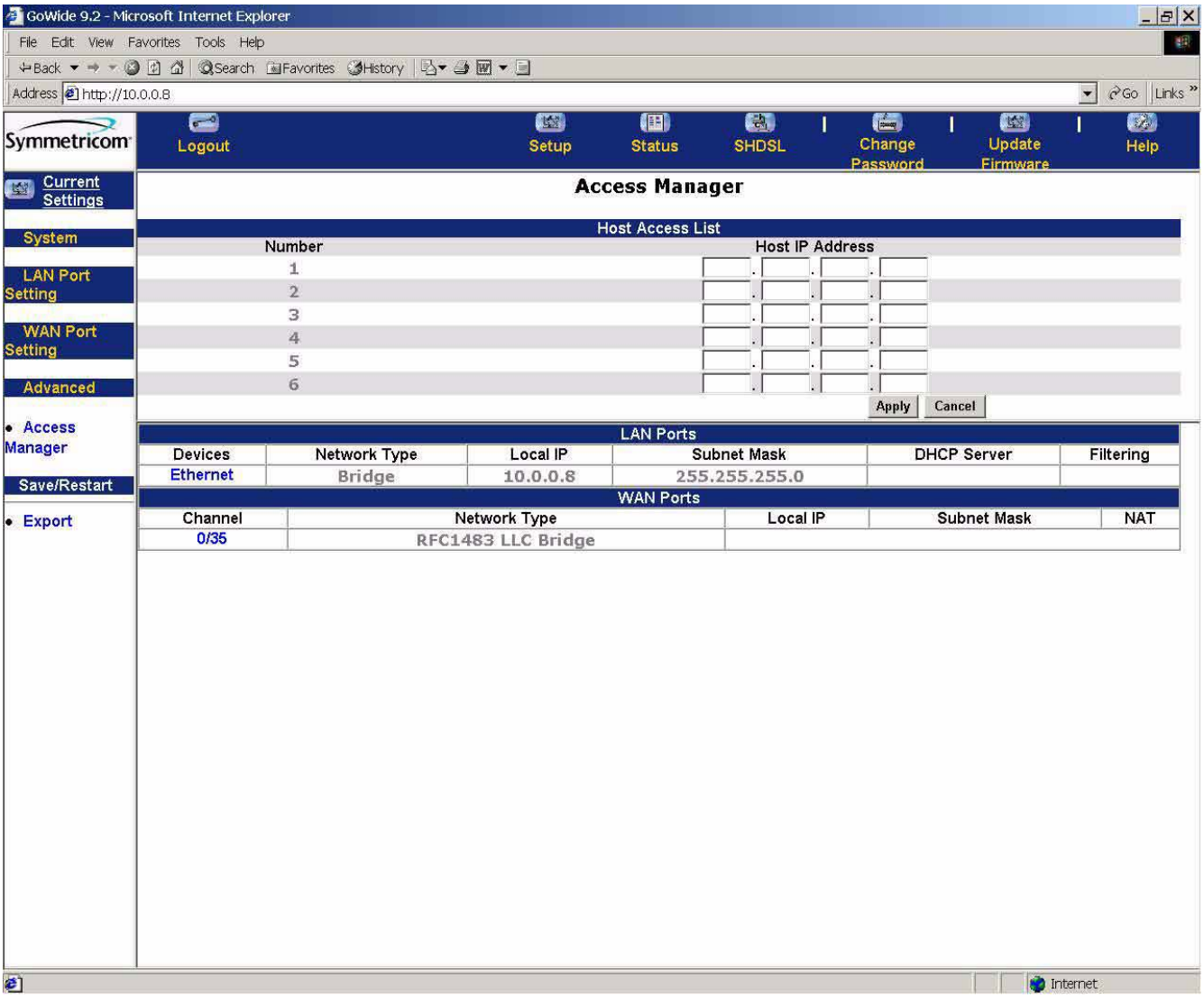


Figure 69. Access Manager Configuration Screen



Save/Restart Configuration

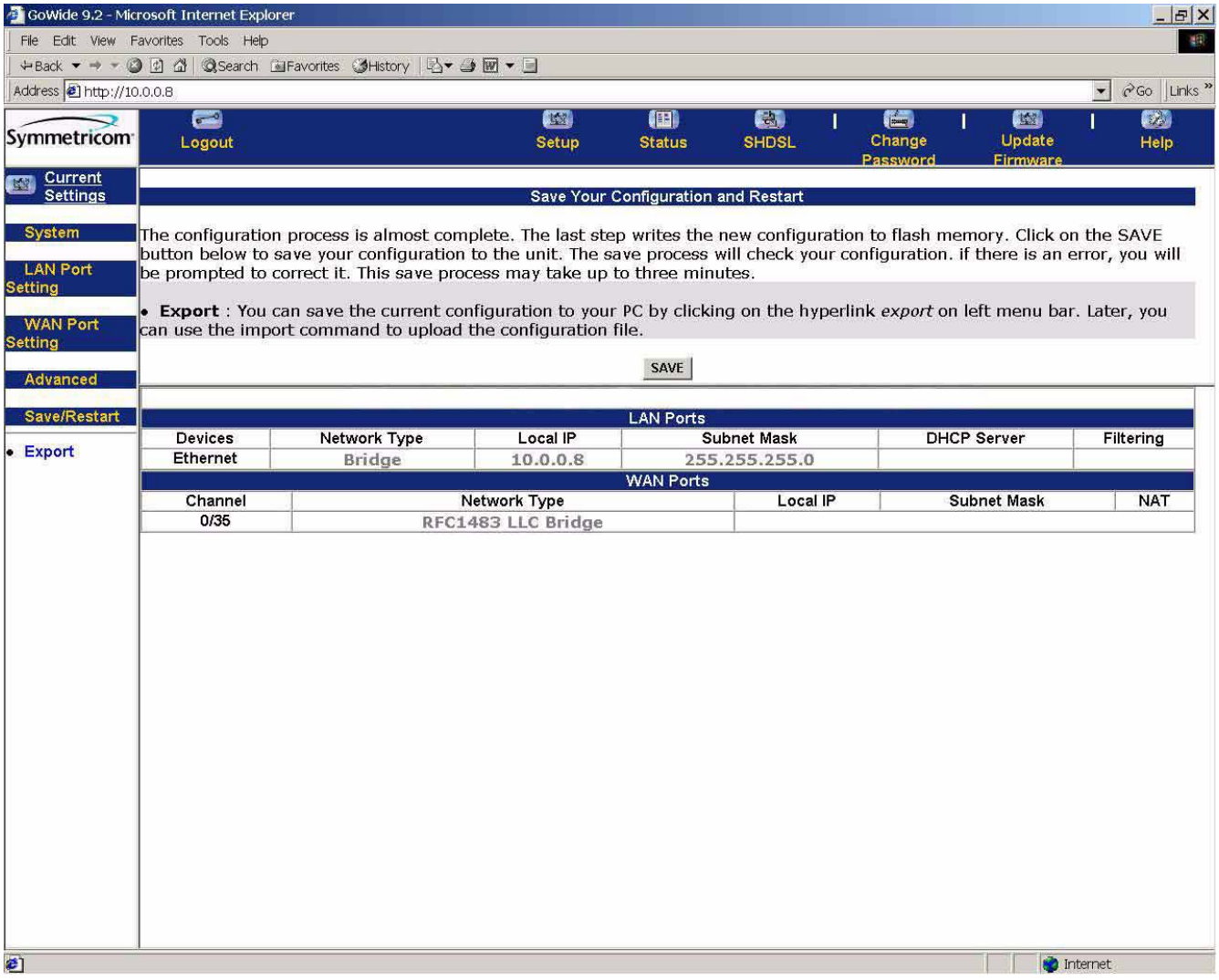
Clicking the **Save/Restart** hyperlink brings up the Save Your Configuration and Restart screen (Figure 70). Procedure X describes the method for saving a gateway mode configuration and restarting the GoWide 9.2.

Procedure X. Save/Restart Screen

Step	Procedure
1	Ensure that all displayed settings are correct.
2	Click the **SAVE** button to save the gateway configuration.

End of Procedure

Figure 70. Save Your Configuration and Restart Screen



Clicking the **SAVE** button displays a dialog box (Figure 71) stating that the gateway mode configuration will be written to flash memory.

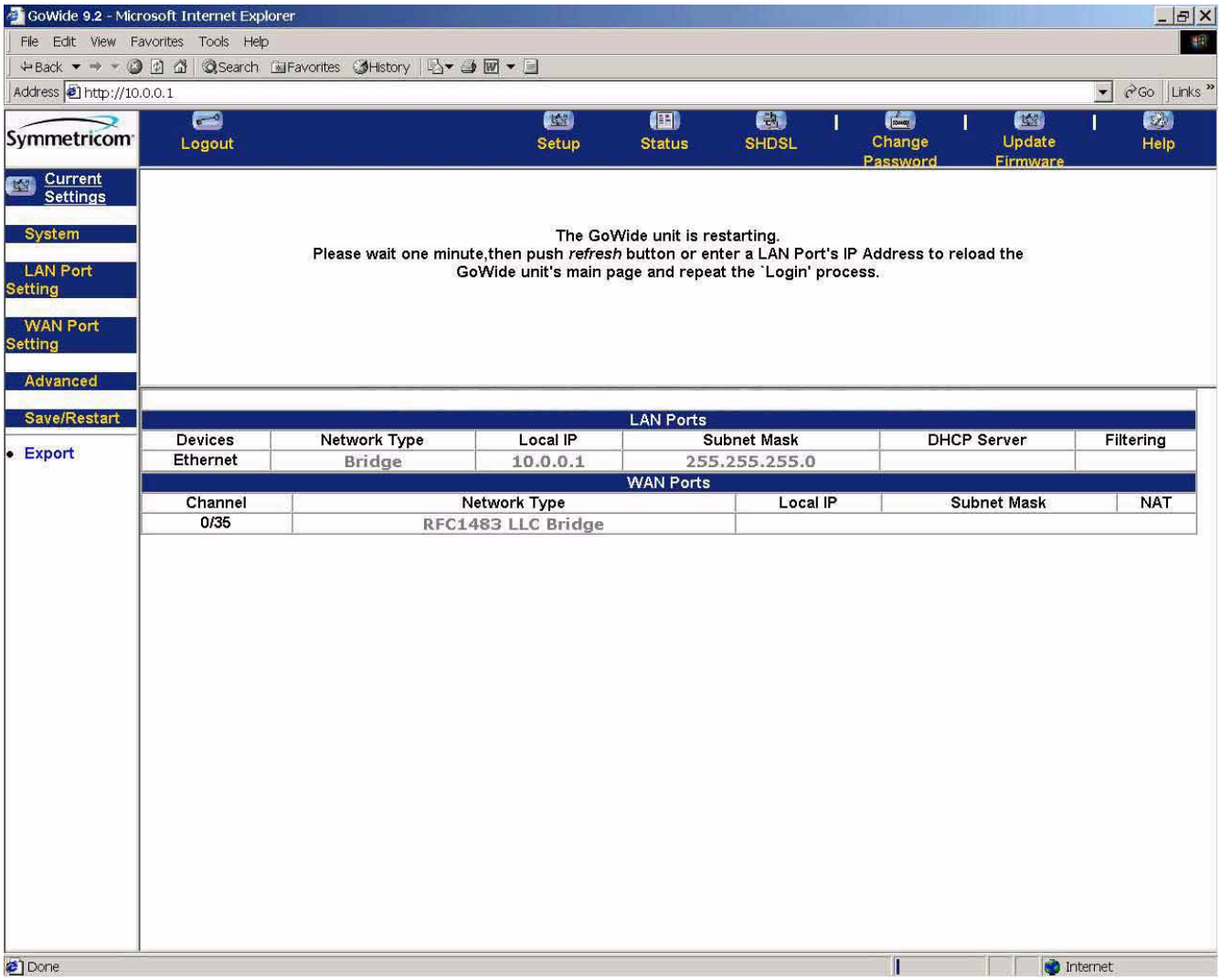
Figure 71. Flash Memory Dialog Box

Click the **OK** button to save the configuration.

Once the configuration is saved, a restart screen (Figure 72) is displayed. Either click the refresh button or enter a LAN port IP address to reload the GoWide 9.2 main page and repeat the login process.

Note: Entering a LAN port IP address is required only if the IP address has been changed.

Figure 72. Restart Screen

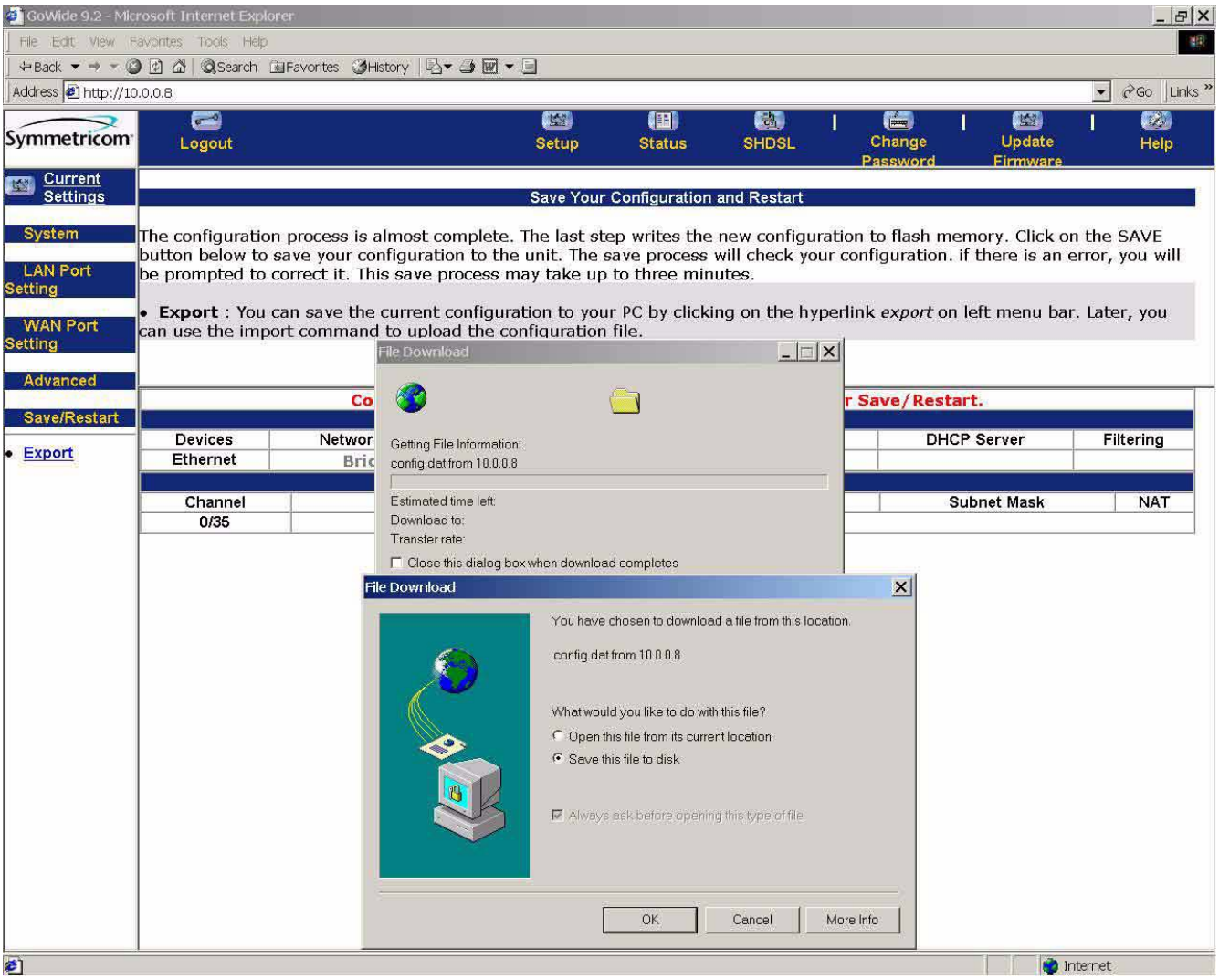


Export/Import Configuration

If the same settings are required on several GoWide 4.6 units, the Export/Import function can be used.

The settings must be configured and saved on one unit first. Use the Export hyperlink on the System Menu to export the configuration file to a hard drive or floppy disk. See Figure 73.

Figure 73. Export Configuration Screen



This configuration file can then be used with the Import button on another GoWide 4.6 to quickly and accurately replicate the settings from the previous unit to the current unit.

Click on the Browse button on the left to choose the configuration file that will be used.

After the configuration file is chosen, click on the Import button to upload the configuration file to the unit.

The unit will then save the configuration and restart, with the configuration file settings taking effect.

Internet Access Configuration

Note: The figures illustrating Internet access configuration are Windows 98 screen captures. For Windows 95/NT 4.0/2000/XP, please refer to the appropriate user manual.

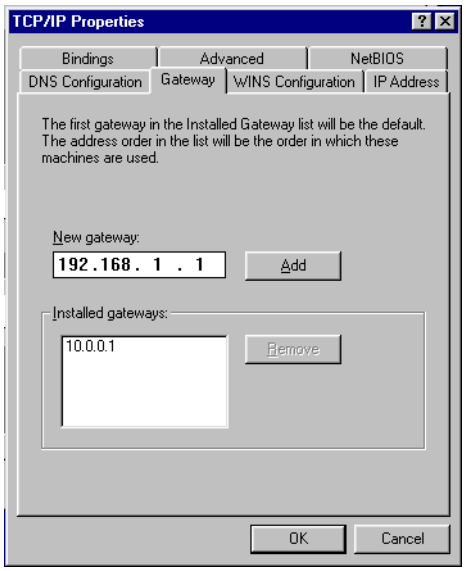
To configure a PC to access the Internet, do the following:

1. Ensure that there is still a TCP/IP connection to the GoWide 9.2. If not, refer to the PC Configuration section.

2. Using the TCP/IP Properties page, check that the installed Gateway IP address has not changed. See Figure 74.

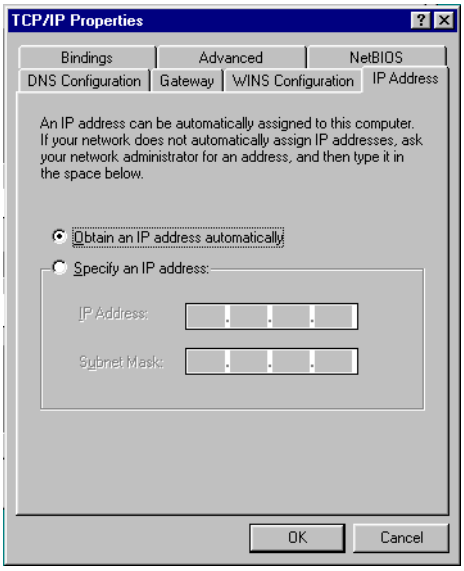
Note: In Gateway mode, the Gateway IP address is the same as the GoWide 9.2 LAN port IP address.

Figure 74. Installed Gateway IP Address



3. Click the **IP Address** tab and select **Obtain an IP address automatically**. See Figure 75.

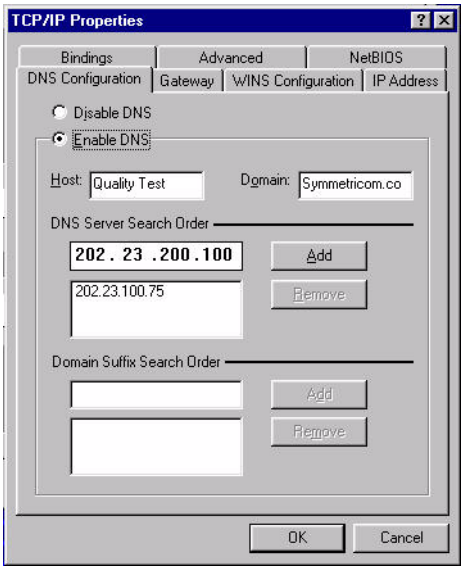
Figure 75. IP Address and Subnet Mask Values



4. Click the DNS Configuration tab. Select Enable DNS. Enter the Host name and Domain name. Enter the DNS Server Search Order Value. See Figure 76.

Note: These parameters are provided by the Service Provider.

Figure 76. DNS Configuration



5. Click **OK** and re-start the PC. The PC is now re-configured to communicate with the GoWide 9.2.

Note: For Windows 2000, simply click OK. The PC will be re-configured to communicate with the GoWide 9.2.

To access the modem again, change the PC settings as shown in the PC Configuration section.

Troubleshooting

This section provides information for troubleshooting the gateway mode configuration process.

Problem	Corrective Action
Power LED is off	• Ensure that the power cable is securely plugged into the unit. Also ensure that the other end of the power cable is plugged into a power outlet that is supplied with 90-250V AC. • Ensure that the ON/OFF switch is in the ON position. • Try a different power outlet.
Sync LED is flashing	• Ensure that the DSL line is plugged into the DSL port of the GoWide 9.2. • Verify that the Service Provider has activated the DSL line. • Ensure that the DSL line length is within the distance specifications.
Sync LED is off	• Go to the SHDSL Line Status screen using the Web browser and click the **Connect** button.
Alarm LED is on	• Ensure that the DSL line is plugged into the DSL port of the GoWide 9.2. • Verify that the Service Provider has activated the DSL line. • Ensure that the DSL line length is within the distance specifications. • Ensure that the Line 1, Line 2, Line 3, and Line 4 status in the SHDSL Line Status screen displays a **Connected** result. The **Disconnect** button should be displayed, but if the **Connect** button is displayed, click the button once to make a connection.
Cannot access the GoWide 9.2's Web page	• Ensure that the PC is plugged into one of the GoWide 9.2's Ethernet ports. • If the PC is connected directly to the GoWide 9.2, ensure that a straight-through Ethernet cable is being used (similar to the yellow ones provided with the unit). A solid green LED on the right side of the Ethernet port in use indicates that a link has been detected with the PC. • Since the GoWide 9.2's default IP address is 10.0.0.1, the PC must be part of the same subnet and have an IP address between the range of 10.0.0.2 to 10.0.0.254. The PC subnet mask should be 255.255.255.0. • Verify that the PC Internet options are set correctly to access the GoWide 9.2. Start by opening an Internet Explorer window and go to the **Tools** --> **Internet Options** page. Go to the **Connections** tab and click the **LAN Settings** button. In LAN Settings, make sure that the boxes for **Automatically detect settings** and **Use a proxy server** are not selected. If these boxes are selected, cancel the selections and click the LAN Settings **OK** button. Click the Internet Options **OK** button to exit.
Lost password	• Reset the GoWide 9.2 to the original factory defaults by pressing the reset button for 5 seconds. The password will default to the factory setting of password, thus enabling unit access and configuration.

Support and Warranty Information

This chapter provides support and warranty information on the GoWide 4.6.

Chapter 6

Overview

Symmetricom Global Services offers a variety of service products to support your GoWide product. Whether you need technical support, installation services or maintenance services, we can customize a product to fit your needs. Call, fax, or e-mail us for detailed coverage information and pricing.

Customer Assistance

For customer assistance, contact the following:

Symmetricom Global Services
2300 Orchard Parkway
San Jose, CA 95131

U.S.A. Customer Assistance Center:
888-367-7966 (from inside U.S.A. only – toll-free)
1-408-428-7907 (worldwide)

Europe, Middle East, and Africa (EMEA) Customer Assistance Center:
+44 (0) 1189 699 799

Fax: 1-408-428-7998

E-mail: info@symmetricom,com

Internet: http://www.symmetricom.com

Technical Support

Telephone technical support can be provided through Symmetricom's Customer Assistance Center 24 hours a day. Phone support is available by the hour, in multi-hour blocks, or on a contract basis.

Extended Warranty

Annual or multi-year extended warranty contracts are available for hardware repair and software updates to the latest software version for your GoWide product. Extended warranty coverage can include telephone technical support at your option.

Configuration and Installation Support

Service providers who will be configuring multiple units may consider having that work done in Symmetricom's factory prior to shipment. Symmetricom can pre-

configure units to meet your standard requirement(s). Installation Services are also available.

Maintenance and Spares

Support programs are available to provide you with prompt delivery of spare units and labor to effect replacement in the field. Spares support services, with delivery times matched to your needs, can be provided on a standalone basis, or combined with on-site repair services.

Training

Product training courses are available at Symmetricom's training centers in San Jose, California or Winnersh (near London), England. Courses can also be conducted at the customer site. For some products, CD training programs are available.

Warranty Information

The GoWide product is covered by a Symmetricom return-to-factory warranty that provides for hardware repair and software upgrades to the latest released version during the warranty term. Warranty periods vary depending on the product model and agreements with your company or provider (if applicable). For information regarding your warranty period call the Customer Assistance Center at 1-408-428-7907. To obtain repair service, contact the Symmetricom Customer Assistance Center. You will need to provide the following information to receive a Return Materials Authorization (RMA) number:

- Product model number and serial number
- Company name and address (if applicable)
- Name and phone number of customer contact for further information
- Brief description of the equipment malfunction

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App. A

TCP/IP Protocol Installation

This appendix provides information on TCP/IP protocol installation.

A

TCP/IP Protocol Installation

Before installing the TCP/IP protocol, check that the Ethernet card has been installed in the PC.

Procedure Y applies to PCs running Windows 95/98.

Note: For PCs running Windows NT 4.0/2000/XP, please refer to the TCP/IP protocol setup section in the user manual.

Procedure Y. TCP/IP Protocol Installation

Step	Procedure
Note: Steps 1 through 4 in this procecdure reference Figure 77. Step 5 references Figure 78. Steps 6 and 7 reference Figure 79. Steps 8 and 9 reference Figure 80.	
1	Click **Start** on the PC task bar. Select **Settings** and **Control Panel**.
2	Double-click the **Network** icon.
3	Select the **Configuration** tab.
4	Click on the **Add** button.
5	Select **Protocol** on the **Select Network Component Type** screen. Click the **Add** button.
6	Select the manufacturer's name in the **Manufacturer:** window of the **Select Network Protocol** screen. Double-click **TCP/IP** in the **Network Protocols:** window.
7	The PC displays the main network window. Check that **TCP/IP Protocol** is displayed in the list of installed network components.
8	Click the **OK** button. Windows may ask for the Windows 95/98 CD or the original installation files (i.e., D:/win95, D:/win98, or c:\windows\options\cabs).
9	Click the **OK** button. Follow the instructions to restart the PC.

End of Procedure

Figure 77. Network Screen

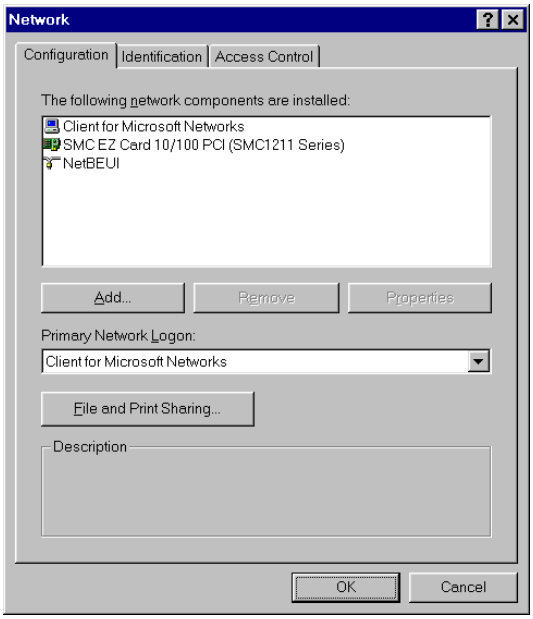


Figure 78. Select Network Component Type Screen

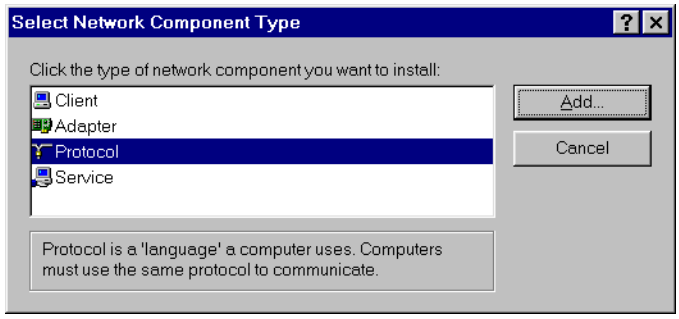


Figure 79. Select Network Protocol Screen

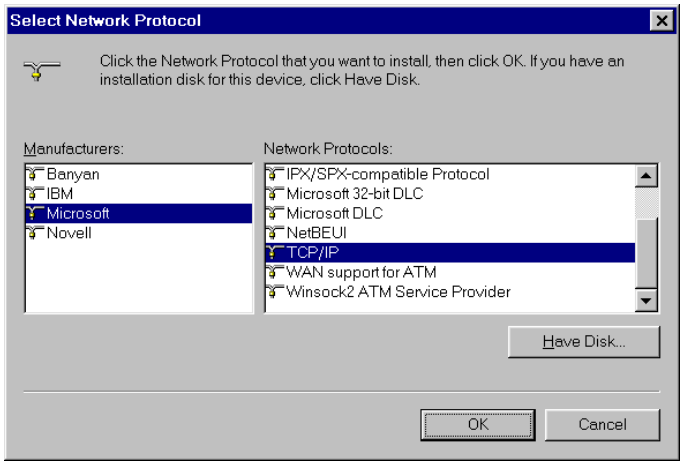
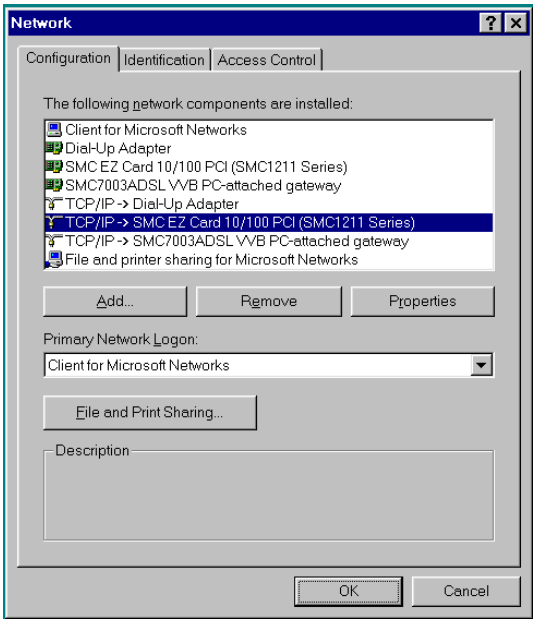


Figure 80. Main Network Screen



App. B

Interface Pin Assignments

This appendix provides information on GoWide 9.2 interface pin assignments.

Interface Pin Assignments

The console port interface pin assignments are listed in Table C.

Table C. Console Port Signals/Converter Cable to COM Port Interface Pin Assignments

Signal Name	Pin
TXD	3
RXD	2
GND	5

The digital subscriber line (RJ-11) interface pin assignments are listed in Table D.

Table D. Digital Subscriber Line (RJ-11) Interface Pin Assignments

Signal Name	Pin
NC	1
Tip 2	2
Tip 1	3
Ring 1	4
Ring 2	5
NC	6

The Ethernet (RJ-45) interface pin assignments are listed in Table E.

Table E. Ethernet (RJ-45) Interface Pin Assignments

Signal Name	Pin
RD +	1
RD –	2
TD +	3
TD –	6

Update GoWide 9.2 Firmware

App. C

This appendix provides information on upgrading the GoWide 9.2 firmware.

Update GoWide 9.2 Firmware

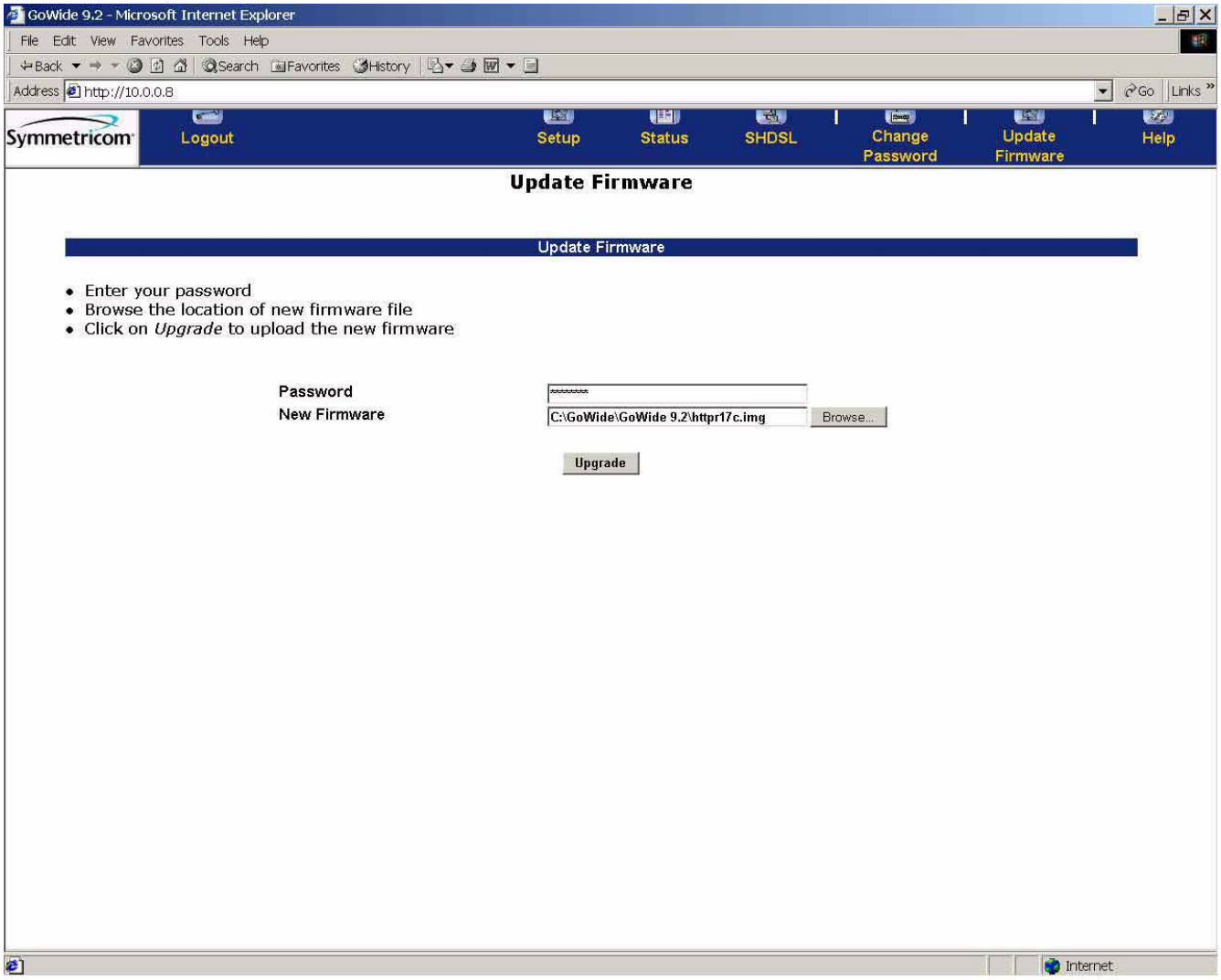
To update GoWide 9.2 firmware to the latest version, do the following:

1. Click **Update Firmware** on the GoWide 9.2 screen toolbar.

2. The Update Firmware screen (Figure 81) is displayed.

3. Follow the directions on the Update Firmware screen and click the Upgrade button.

Figure 81. Update Firmware Screen



C

G.shdsl Configuration

This appendix provides information on specific instances of G.shdsl configuration.

App. D

G.shdsl Configuration

Only expert users should change the settings in the G.shdsl Setting page. The default settings arem shown in Table F.

Table F. G.shdsl Default Settings

Item	Setting
Unit Type	CPE
Standard	Auto
Asymmetric PSD	Disable
Power Backoff	Enable

The Unit Type is set as Customer Premise Equipment (CPE), which enables the unit to be connected to a Central Office (CO) unit, usually a DSLAM. If the user will be using two GoWide 9.2s in a back-to-back configuration, then one of the GoWide 9.2s needs to be set to CO Unit Type.

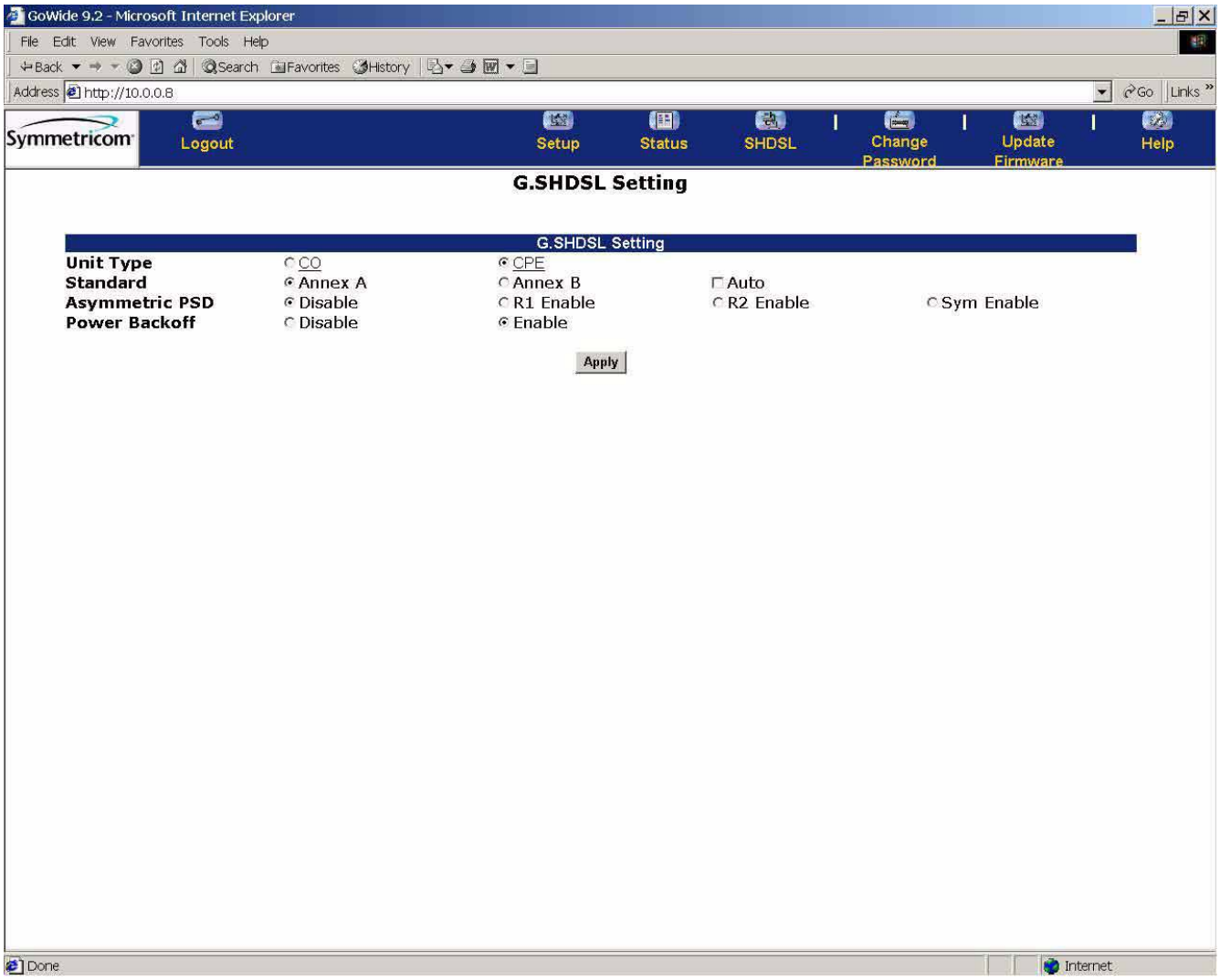
The Standard is set to Auto, but can be manually changed to either Annex A or B.

The Asymmetric PSD (Power Spectral Density) allows the selection of what type of power spectral density mask the transceiver will use. The possible values are R1 (768 kbps for Annex A), R2 (1544 kbps for Annex A) or Disable (use symmetric PSD).

The Power Backoff is set to Enable, which allows the transmit power on the DSL link to be reduced by 6 dB when the estimated power loss is 6 dB or less.

Figure 82 shows the G.shdsl Configuration screen.

Figure 82. G.shdsl Configuration Screen



D

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Service Parameters and Worksheet

Parameters from Service Provider

The following parameters are an example of what may be provided by the Service Provider (ISP) for configuring the PC or Bridge/Router.

Example shown below:

- IP Address 192 . 168 . 001 . 100
- Subnet Mask Address 255 . 255 . 255 . 0
- Gateway Address 192 . 168 . 001 . 1
- DNS Primary IP Address 202 . 023 . 003 . 75
- DNS Secondary IP Address 202 . 023 . 003 . 85
- Domain Address 010 . 010 . 012 . 40
- VCI value (default: vci=35) 35
- VPI value (default: vpi=0) 0

Worksheet

PLEASE HAVE THIS INFORMATION BEFORE YOU PROCEED:

- IP Address ___ . ___ . ___ . ___
- Subnet Mask Address ___ . ___ . ___ . ___
- Gateway Address ___ . ___ . ___ . ___
- DNS Primary IP Address ___ . ___ . ___ . ___
- DNS Secondary IP Address ___ . ___ . ___ . ___
- Domain Address ___ . ___ . ___ . ___
- VCI value (default: vci=35) ___
- VPI value (default: vpi=0) ___
- Domain Name _____
- Host Name _____

Note: If VCI/VPI values are the same as the default values, no changes are required in bridge mode.