Chapter 3

Using the Graphical User Interface (GUI)

Introduction

You can set up, manage, monitor, and troubleshoot the router using the command line interface (CLI) or the web-based GUI. The GUI includes the commonly-required functions for a number of protocols. You can access the GUI using HTTP, for local or remote access or HTTPS, for secure remote access

This section describes the basic functionality of the GUI, including:

■   What is the GUI?

  •   an introduction to the Graphical User Interface

■   Accessing the router via the GUI:

  •   browser and PC setup, including interaction with HTTP proxy servers

  •   establishing a connection to your router, including information about configuring SSL for secure access

  •   the System Status page, the first GUI page you see

  •   diagnosing and solving connection problems

■   Using the GUI: navigation and features:

  •   an overview of the menus

  •   using configuration pages, with a description of key elements of GUI pages

  •   combining GUI and CLI configuration

See Chapter 1, Getting Started for information about

■   changing your password

■   using the context sensitive online help

■   saving your configuration

What is the GUI?

The GUI (Graphical User Interface) is a web-based device management tool designed to make it easier to configure and monitor the router. The GUI provides an alternative to the CLI (Command Line Interface). Its purpose is to make complicated tasks simpler and regularly performed tasks quicker.

The GUI relies on an HTTP server that runs on the router, and a web browser on the host PC. When you use the GUI to configure the router, the GUI sends commands to the router and the router sends the results back to your browser, all via HTTP.

The tasks you may perform using the GUI are not as comprehensive as the command set available on the CLI, but for some protocols, a few clicks of the mouse are adequate. An example is the ease with which you can configure an ISDN link.

The GUI is stored on the router as an embedded resource file, with the .rsc file extension. Resource files are model-specific, with the model and version encoded in the file name.

Accessing the Router via the GUI

To use the GUI to configure the router, you use a web browser to open a connection to the router's HTTP server. Therefore, you need a PC, a web browser and the router. Supported browsers and operating systems, and the settings you need on your PC and browser, are detailed in the following section. Router setup is detailed in "Establishing a Connection to the Router" on page 3-5.

Browser and PC Setup

The GUI requires a web browser installed on a PC. Table 3-1 shows supported combinations of operating system and browser.

Table 3-1: Supported browsers and operating systems

	IE 5.0	IE 5.5	IE 6.0	NS 6.2.2	NS 6.2.3
Windows 95	✓				
Windows 98	✓	✓	✓		
Windows ME	✓	✓	✓	✓	✓
Windows 2000	✓	✓	✓	✓	✓
Windows XP	✓	✓	✓	✓	✓

JavaScript must be enabled. To enable JavaScript in Internet Explorer:

1. From the Tools menu, select Internet Options.

2. Select the Security tab.

3. Click the Custom Level button.

4. Under the Scripting section, ensure that "Active scripting" is enabled.

To enable JavaScript in Netscape 6.2.*x*:

1. From the Edit menu, select Preference.

2. Select the Advanced menu option.

3. Ensure that the "Enable JavaScript for Navigator" checkbox is checked.

The minimum screen resolution on the PC is 800x600.

Pop-up Windows

Pop-up windows must be allowed. If you are using a toolbar or plug-in on your browser to block pop-ups, disable it while using the GUI. The GUI displays detailed configuration options and information in pop-up windows.

Either turn the toolbar off or specify that pop-ups are allowed for the IP address of the router. To turn off a toolbar on Internet Explorer 6, select Toolbars from the View menu and make sure the toolbar is not checked.

HTTP Proxy Servers

An HTTP proxy server provides a security barrier between a private network's PCs and the Internet. The PCs send HTTP requests (and other web traffic) to the server, which then forwards the requests appropriately. Similarly, the server receives incoming HTTP traffic addressed to a PC on the private network, and forwards it to the appropriate PC. Proxy servers can be used to block traffic from undesirable web sites, to log traffic flows, and to disallow cookies.

If your browser is configured to use a proxy server, and the router is on your side of the proxy server, you must set the browser to bypass proxy entries for the IP address of the appropriate interface on the router. See "Establishing a Connection to the Router" on page 3-5 for information about giving router interfaces IP addresses.

Caution To ensure that your network's security settings are not compromised, see your network administrator for information about bypassing the proxy server on your system.

To bypass the proxy server on Internet Explorer, if your browser administration does not use a script, and the PC and the router are in the same subnet:

1.   From the Tools menu, select Internet Options.

2.   Select the Connections tab and click the LAN Settings button.

3.   Check the "Bypass proxy server for local addresses" checkbox.

4.   If necessary, click the Advanced button and enter a list of local addresses.
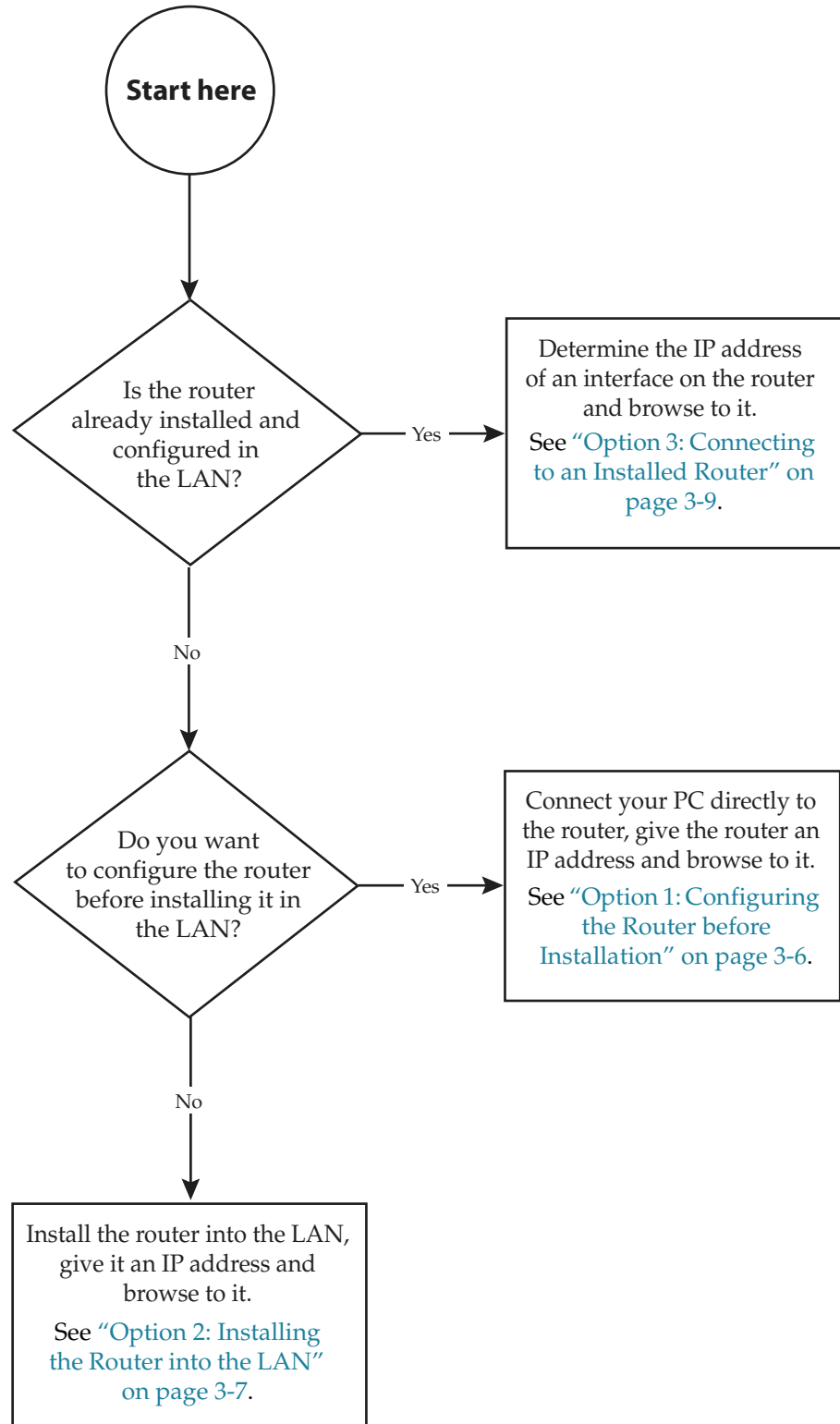
To bypass the proxy server on Netscape, if your browser does not use a script:

1.   From the Edit menu, select Preferences.

2.   Click the Advanced menu option to expand it.

3.   Select the Proxies menu option.

4.   Enter the router's IP address in the "No Proxy for" list.

Establishing a Connection to the Router

Before you start, consider how the router fits into your network. If you are installing a new router, consider whether you want to configure it before deploying it into the LAN, or want to configure it *in situ*. If you want to access a router that has already been configured, consider the relative positions of the PC and the router. The flow chart below summarises this process, and the procedures that follow take you through each possibility in detail.

Figure 3-1: A summary of the process for establishing a connection via the GUI.

```
                    ┌─────────────┐
                    │  Start here │
                    └─────────────┘
                           │
                           ▼
          ◇ Is the router                     ┌────────────────────────────┐
            already installed and      Yes    │ Determine the IP address   │
            configured in        ──────────▶  │ of an interface on the     │
            the LAN? ◇                         │ router and browse to it.   │
                           │                   │ See "Option 3: Connecting  │
                          No                   │ to an Installed Router" on │
                           │                   │ page 3-9.                  │
                           ▼                   └────────────────────────────┘

          ◇ Do you want                        ┌────────────────────────────┐
            to configure the router    Yes     │ Connect your PC directly to│
            before installing it in ──────────▶│ the router, give the router│
            the LAN? ◇                         │ an IP address and browse   │
                           │                   │ to it.                     │
                          No                   │ See "Option 1: Configuring │
                           │                   │ the Router before          │
                           ▼                   │ Installation" on page 3-6. │
          ┌────────────────────────┐           └────────────────────────────┘
          │ Install the router into│
          │ the LAN, give it an IP │
          │ address and browse to  │
          │ it.                    │
          │ See "Option 2:         │
          │ Installing the Router  │
          │ into the LAN" on       │
          │ page 3-7.              │
          └────────────────────────┘
```

Option 1: Configuring the Router before Installation

Use this procedure if:

- you want to configure the router before installing it in your LAN

- you want to install the router at a remote office or a customer site and want to configure it first

- you want a dedicated management PC permanently connected to the router

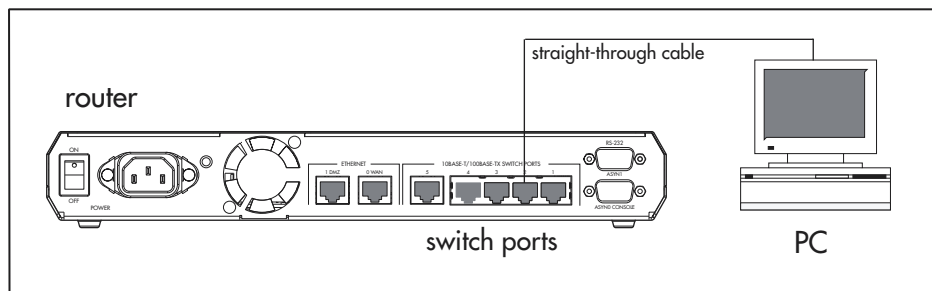1. **Select a PC to browse to the router from.**

   You can browse to the router from any PC that is running a supported operating system with a supported browser installed. See "Browser and PC Setup" on page 3-3 for more information.

   You need to know the subnet of the PC.
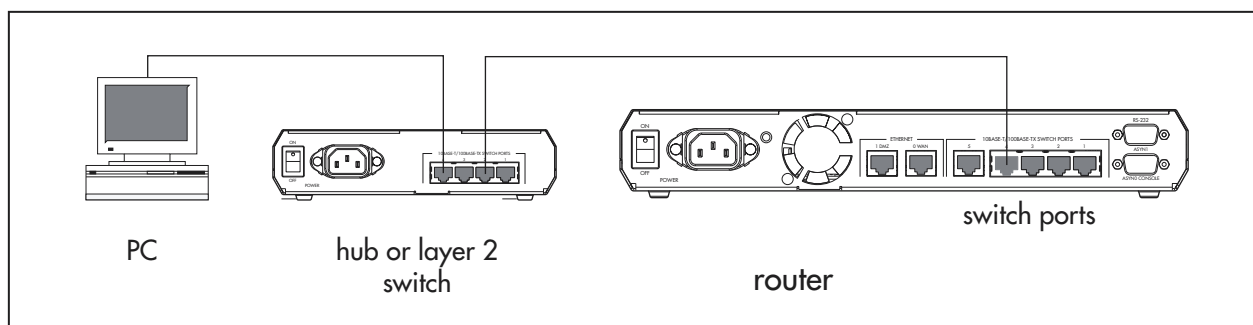
2. **Connect the PC to the router.**

   Use a straight-through Ethernet cable to connect an Ethernet card on the PC to any one of the switch ports (see Figure 3-2).

Figure 3-2: Connecting a PC directly to the router

Important You can browse to the router through any VLAN or ETH port, as long as you give that interface an IP address (below). We recommend LAN interface vlan1, and these instructions assume you are using this interface. All switch ports belong to vlan1 by default.

3. **Access the router's command line interface.**

   Access the CLI from the PC, as described in your Installation and Safety Guide or Quick Install Guide.

4. **Enable IP.**

   ```
   enable ip
   ```

5. **Assign the vlan1 interface an IP address in the same subnet as the PC.**

   ```
   add ip interface=vlan1 ip=ipaddress mask=mask
   ```

6. **Save the configuration and set the router to use it on bootup.**

   ```
   create config=your-name.cfg
   set config=your-name.cfg
   ```

7. **On the PC, bypass the HTTP proxy server if necessary.**

   See "HTTP Proxy Servers" on page 3-4 for more information.

8. **Point your web browser at the LAN interface's IP address.**

9. **At the login prompt, enter the user name and password.**

    The default username is manager:

    > User Name: **manager**
    >
    > Password: **friend**

    The Configuration Wizards or System Status page is displayed (Figure 3-5 on page 3-11). Select a wizard or an option from the sidebar menu to configure and manage the router.

Option 2: Installing the Router into the LAN

Use this procedure if:

■ You want to install the router into the LAN before you configure it.

1. **Select a PC to browse to the router from.**

    You can browse to the router from any PC that is running a supported operating system with a supported browser installed, with JavaScript enabled. See "Browser and PC Setup" on page 3-3 for more information.

    You need to know the PC's subnet.

2. **Plug the router into the LAN.**

    To install the router into the same subnet as the PC:

    Use an Ethernet cable to connect one of the switch ports to a device on the LAN segment, for example, a hub, router or switch (see Figure 3-3).

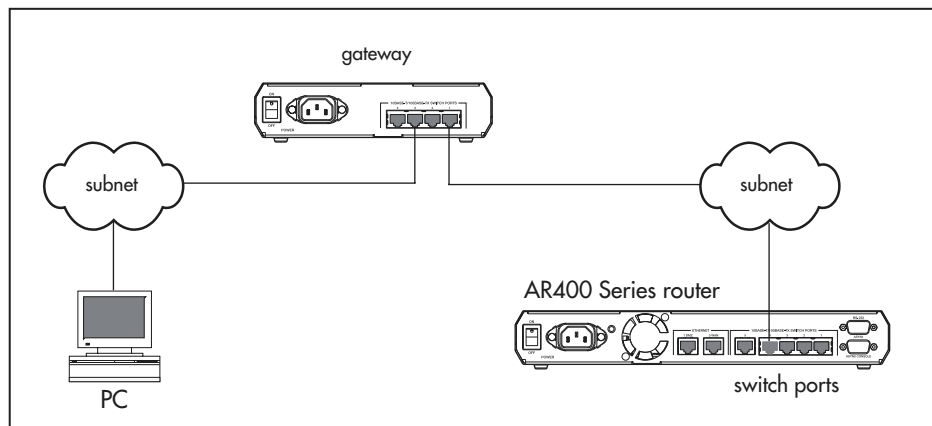Figure 3-3: Connecting the router into the same LAN segment as the PC.

To install the router into a different subnet than the PC:

Use an Ethernet cable to connect any one of the switch ports to a device on the LAN segment in which you require the router to work, for example, a hub, router or switch (see Figure 3-4).

Use an Ethernet cable to connect any one of the switch ports to a device on the LAN segment in which you require the router to work, for example, a hub, router, or switch (see Figure 3-4).

Figure 3-4: Configuring the router from a PC in another subnet

Important You can browse to the router through any VLAN or ETH port, as long as you give that interface an IP address (below). The recommended LAN interface is vlan1, and these instructions assume you use vlan1 as the LAN interface. The switch ports all belong to vlan1 by default.

3. **Access the router's command line interface.**

    Access the CLI from the PC, as described in your Installation and Safety Guide or Quick Install Guide.

4. **Enable IP.**

    ```
    enable ip
    ```

5. **Assign the vlan1 interface an IP address.**

    ```
    add ip interface=vlan1 ip=ipaddress mask=mask
    ```

    If you use DHCP to assign IP addresses to devices on your LAN, and you want to manage the router within this DHCP regime, we recommend that you set your DHCP server to always assign the same IP address to the router. This lets you access the GUI by browsing to that IP address, and also lets you use the router as a gateway device for your LAN. If you need the router's MAC address for this, you can display it with the command **show switch** or **show eth=x macaddress**. To set the interface to obtain its IP address by DHCP, use the commands:

    ```
    add ip interface=vlan1 ipaddress=dhcp
    ```

    ```
    enable ip remoteassign
    ```

6. **If the PC you want to browse from is in a different subnet from the router, give the router a route to the PC.**

    ```
    add ip route=pc-subnet interface=vlan1
        nexthop=gateway-ipaddress
    ```

    where:

    •   *PC-subnet* is the IP subnet address of the PC. For example, if the PC has an IP address of 192.168.6.1 and a mask of 255.255.255.0, its subnet address is 192.168.6.0.

    •   *gateway-ipaddress* is the IP address of the gateway device that connects the PC's subnet with the router's subnet (Figure 3-4 on page 3-8).

7. **If you want to be able to browse to the GUI securely, configure SSL (Secure Sockets Layer).**

    For a step-by-step example, see "Configuration Example" on page 45-7 of Chapter 45, Secure Sockets Layer (SSL).

8. **Save the configuration and set the router to use it on bootup.**

    ```
    create config=filename.cfg

    set config=filename.cfg
    ```

9. **On the PC, bypass the HTTP proxy server, if necessary.**

    See "HTTP Proxy Servers" on page 3-4 for more information.

10. **Point your web browser at the LAN interface's IP address.**

    For normal access, point your web browser to

    ```
    http://ip-address
    ```

    For secure access, point your web browser to

    ```
    https://ip-address
    ```

    where *ip-address* is the interface's IP address.

    For more information about secure access, see "Configuration Example" on page 45-7 of Chapter 45, Secure Sockets Layer (SSL).

11. **At the login prompt, enter the user name and password.**

    The default username is *manager*:

    ```
    User Name: manager

    Password: friend
    ```

    The Configuration Wizards or System Status page is displayed (Figure 3-5 on page 3-11). Select a wizard or an option from the sidebar menu to configure and manage the router.

Option 3: Connecting to an Installed Router

Use this procedure if at least one interface on the router already has an IP address, and the router is already installed in a LAN.

1. **Find out the IP address of the router's interface.**

    Ask your system administrator. Alternatively, access the CLI, as described in your Installation and Safety Guide or Quick Install Guide, and enter the command:

    ```
    show ip interface
    ```

Important You can browse to the router through any VLAN or ETH port, as long as you give that interface an IP address (below). The recommended LAN interface is vlan1, and these instructions assume you use vlan1 as the LAN interface. The switch ports all belong to vlan1 by default.

2. **Select a PC.**

    You can browse to the GUI from any PC that:

    •   has an IP address in the same subnet as the router, or that the router has a route to

    •   is running a supported operating system

    •   has a supported browser installed, with JavaScript enabled

    See "Browser and PC Setup" on page 3-3 for more information.

3. **If necessary, bypass the HTTP proxy server.**

    See "HTTP Proxy Servers" on page 3-4 for more information.

4. **Browse to the router**

    For normal access, point your web browser to

        http://*ip-address*

    where *ip-address* is the interface's IP address.

    To access the router securely if SSL (Secure Sockets Layer) has been configured on the interface, point your web browser to

        https://*ip-address*

    For more information about secure access, see "Configuration Example" on page 45-7 of Chapter 45, Secure Sockets Layer (SSL).

5. **At the login prompt, enter the user name and password**

    The default username is manager:

        User Name: **manager**

        Password: **friend**

    The Configuration Wizards or System Status page is displayed (Figure 3-5 on page 3-11). Select a wizard or an option from the sidebar menu to configure and manage the router.

⚠️ **Caution** If you have already configured the firewall and/or VPN (IPSec) on the router using the CLI, this configuration may conflict with the GUI. Do not try to modify existing CLI firewall or VPN configurations with the GUI.

Secure Access

You can optionally browse to the router using Secure Sockets Layer (SSL). This means that sensitive data including passwords and email addresses can not be accessed by malicious parties.
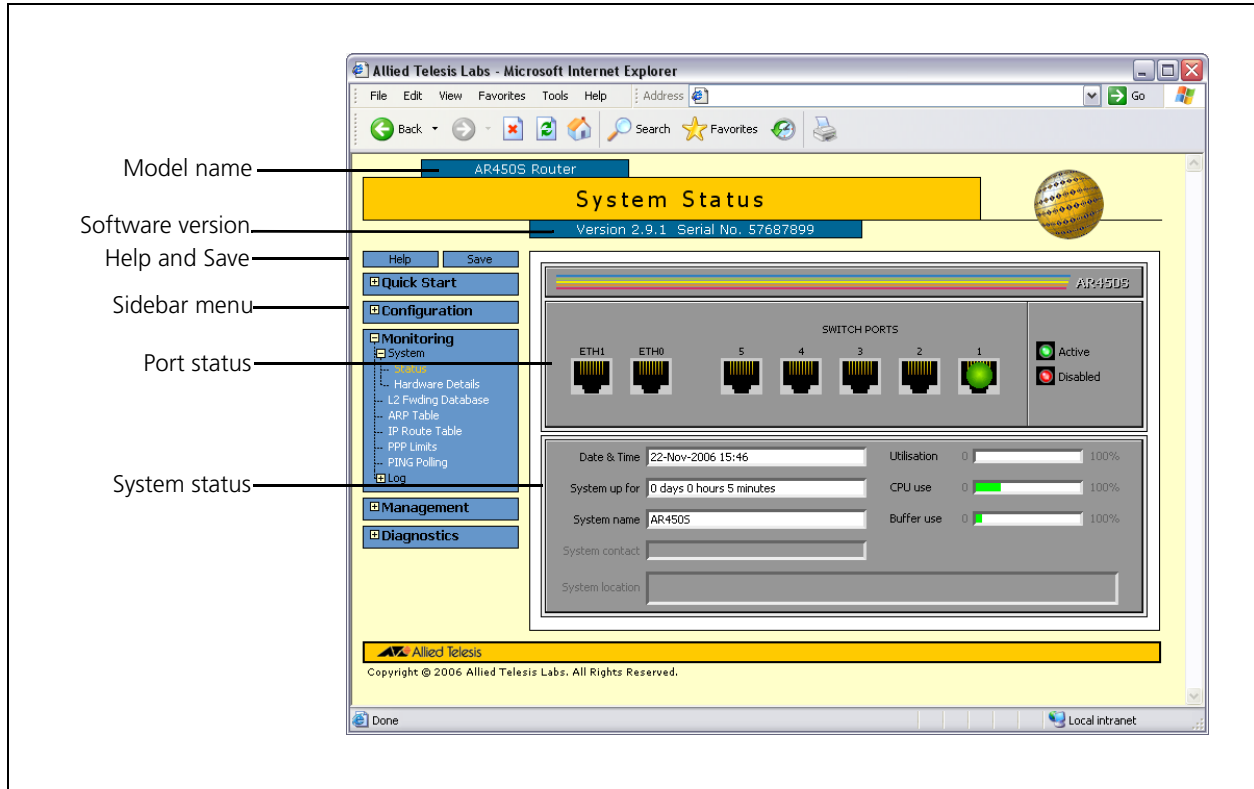
A detailed step-by-step example is in "Configuration Example" on page 45-7 of Chapter 45, Secure Sockets Layer (SSL).

System Status Details

The GUI opens to display the configuration wizards or the system status. Figure 3-5 shows the system status page for an AR450S router, and points out key information contained on the page.

Figure 3-5: The System Status page of the AR450S

Using the GUI: Navigation and Features

The GUI consists of a large number of *pages*, which you navigate between using the *menu* on the left of the browser window. This section describes how to use the GUI, and gives an overview of its functionality.

Wizards (AR44xS and AR415S)

Wizards

This button opens the Wizards page. Wizards provide simple step by step configuration of particular, often complex, functions of the router. Available wizards include:

■ basic setup

■ site-to-site VPN

■ remote access VPN

The Quick Start Menu (AR450S)

The Quick Start options offer one-page configuration of your WAN or LAN connection.

Quick Start
WAN
LAN

■ The WAN option provides a single page to simply specify your WAN interface and choose between a PPPoE connection, a static IP address, or using DHCP to dynamically assign an IP address. Your ISP can supply information about the appropriate settings. You can also enter DNS servers here.

■ The LAN page lets you change the IP address and/or mask of the default VLAN (vlan1).

Configuration
  System
    General
    Time
    Triggers
    PING polling
    SNMP
  Port
    Settings
    QOS
  Layer 2
    VLANs
    PPPoE
  Internet Protocol
    General
    Interfaces
    Routes
    RIP
    Multicast
    VPN
    OSPF
  DHCP Server
    Configuration
    Server IP Allocation
  Firewall
    Interfaces
    NAT
    Traffic Rules
    Events

The Configuration Menu

You can use the GUI to configure:

• the system identity and mail server

• the system time, or NTP (Network Time Protocol)

• triggers, to automatically run scripts at a time you specify or in response to events you specify

• ping polling, to monitor device reachability and respond to changes in reachability

• SNMP (Simple Network Management Protocol)

• switch port settings

• 802.1x port security

• Quality of Service, to prioritise packets and manage bandwidth

• speed and duplex setting of the Eth ports

• PPPoE connections

• Advanced DSL settings on AR44x Series routers

• PPP dial-up connections over ISDN, and leased-line connections over synchronous interfaces, when a suitable PIC is installed

• Internet Protocol: interfaces, static routes, the preferences of dynamic routes, RIP, multicasting, and OSPF

- Virtual Private Networks (VPNs). However, we recommend you use the VPN wizards instead. To access the VPN wizards, click on the Wizard button in the menu.

- the DHCP server, to dynamically assign IP addresses to hosts in your LAN

- the firewall, to protect your LAN and public servers from attack. Firewall configuration includes options for logging and alerts

Using Configuration Pages

Most protocols are configured by creating or adding an entry - an IP route, a PIM interface, and so on. For such protocols, configuration with the GUI is based on sets of three pages: first you see a "summary" page, and from that you access an "add" page and a "modify" page. Complex protocols are sub-divided into different tabs, each with their own summary, add and modify pages.

Note Only one person can configure a particular router with the GUI at a time, to avoid clashes between configurations. Monitoring and diagnostics pages can be viewed by more than one user at a time.

Note Use the menus and buttons on the GUI pages to navigate, not your browser's buttons, to ensure that the configuration settings are saved correctly.

The summary page displays a *selection table* of existing items and information about them (for example, existing PIM interfaces; see Figure 3-6 on page 3-14). Below the selection table is a row of buttons, labelled Add, Modify and Remove.

To add a new item, click the Add button. This opens the popup "add" page, which lets you create a new item (for example, configure a new PIM interface; see Figure 3-7 on page 3-14).

To modify an existing item, select it by clicking on the option button at the beginning of its entry in the selection table. Then click the Modify button. This opens the popup "modify" page, which lets you expand or change the configuration (for example, change the Hello interval for a PIM interface; see Figure 3-8 on page 3-15).

To delete or destroy an item, select it by clicking on the option button at the beginning of its entry in the selection table. Then click the Remove button.

Figure 3-6: An example of a configuration page with a selection table
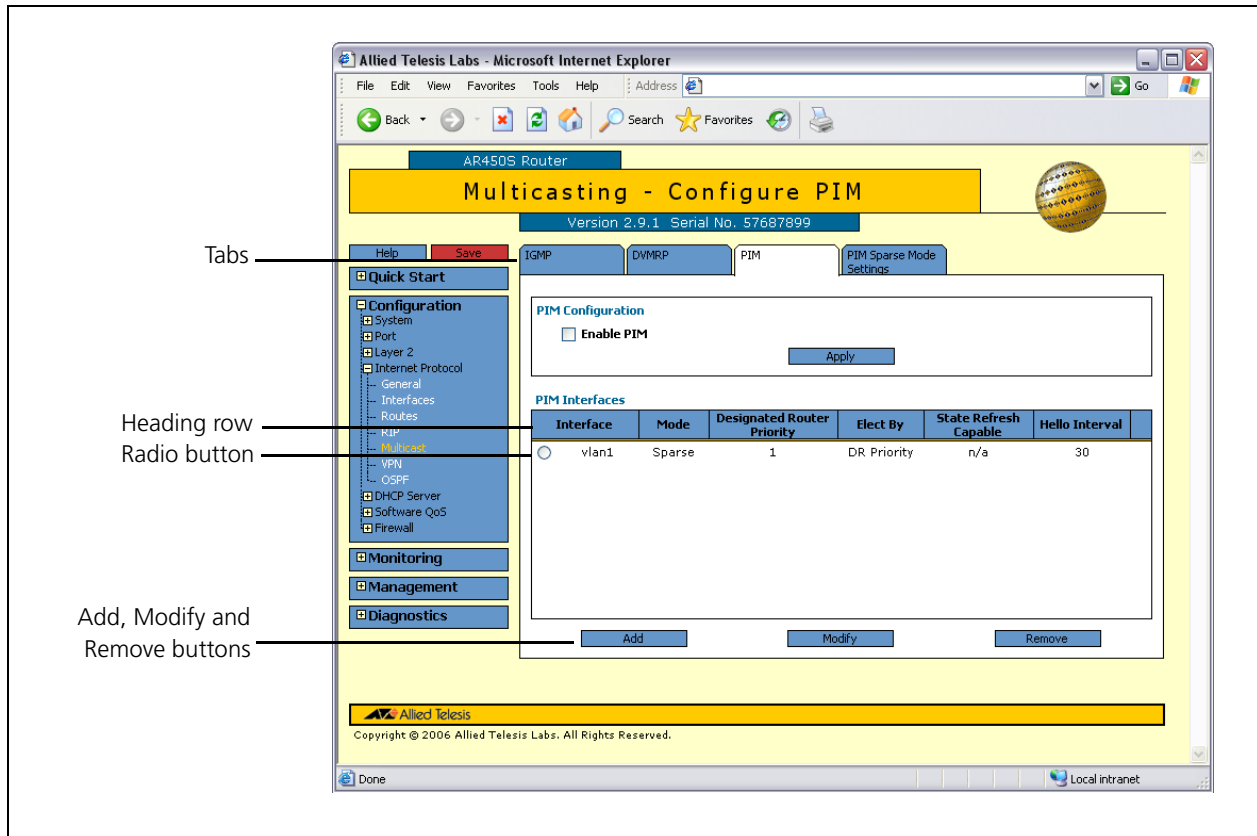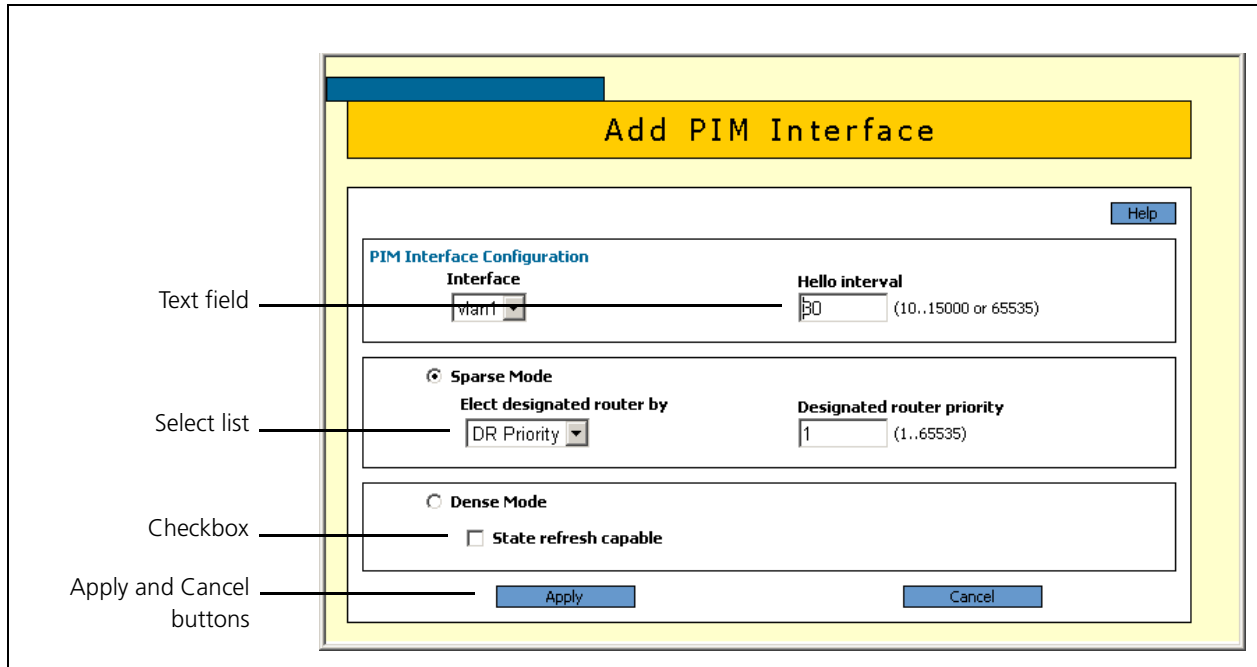

Figure 3-7: An example of a popup "add" page

Figure 3-8: An example of a popup "modify" page

Editable Fields

GUI pages allow you to enter values or select options through a range of field types. These include:

- text fields to enter character strings or numbers, especially for fields where there are few limits on the entries (such as names). See the online help for valid characters and field length.

- select lists to select one option from a small number of possibilities. Only valid options are listed. For example, if you are asked to select an IP interface from a drop-down list, the only interfaces displayed are those to which you have assigned an IP address.

- radio button lists to choose one of a set of mutually-exclusive options.

- checkboxes to enable or disable features.
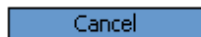
Ports Graphic

Pages on which you can select switch ports use a Ports graphic - a visual representation of the switch ports. To toggle through the selection options, click the icon representing the port you want to select or deselect.
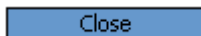
Apply Button

Apply

An Apply button applies the configuration settings on the page or the section of the page. The new settings take effect immediately, but are not automatically saved. To save the settings after clicking Apply, click the Save button above the menu.

Cancel Button

Cancel

A Cancel button closes a popup page without making any changes to the configuration.
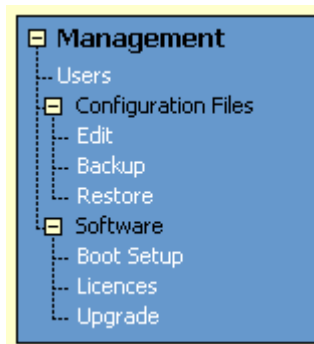
Close Button

Close

A Close button closes a popup page, and conserves any changes that you made to the settings on the page by clicking on buttons like Add, Modify, Remove or Apply. Changes you made to editable fields are not conserved when you click Close (unless you first clicked Apply).
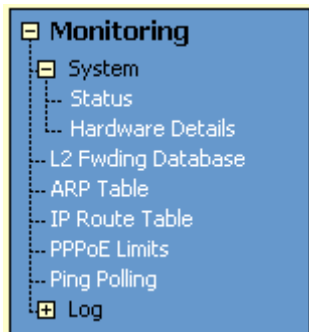
The Management Menu

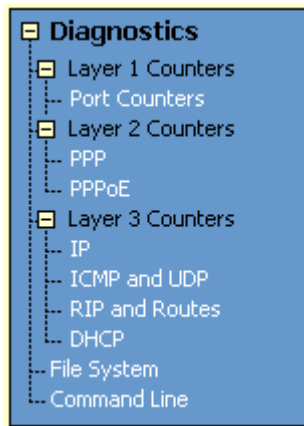You can use the GUI to manage the router itself, including:

- creating user accounts and enabling system security
- creating and editing files
- backing files up to the router's Flash memory or to a PC or TFTP server
- restoring the router's configuration from backup
- specifying which software and configuration files the router uses on bootup, and displaying the currently-used files
- enabling software version and feature licences
- upgrading the router's software

The Monitoring Menu

You can use the GUI to check:

- system and port status
- the Layer 2 Forwarding Database, which shows the MAC addresses that the switch ports have learned, and out which port the device switches traffic to each MAC address
- information about Address Resolution Protocol (ARP) entries
- the IP route table
- the current PPPoE limits. You can also reset limits
- information about the state of ping polling, including counters
- the log messages that the router automatically generates. You can also set up filters to determine where messages are saved to and which messages are saved.

The Diagnostics Menu

The GUI's diagnostics pages enable you to troubleshoot network problems and observe traffic flow, including:

- displaying the number of good and bad packets received and transmitted over each switch port

- displaying the number of frames related to 802.1x port authentication received and transmitted over each authenticator and supplicant

- displaying the number and type of PPP packets received and transmitted

- displaying the number and type of packets received and transmitted by IP, and discarded by the IP gateway

- displaying the number and type of ICMP and UDP packets received and transmitted

- displaying the number and type of RIP packets received and transmitted; and the octets received and transmitted over each IP route

- displaying the number and type of IPX packets received and transmitted; and the bytes received and transmitted over each IPX route

- displaying the number and type of DHCP messages received and transmitted by the DHCP server

- displaying UPnP counters

- displaying Quality of Service counters

- displaying the contents of the router's file system and how much memory is used and available. You can also delete files

- an interface to the router's command line interface, allowing you to enter CLI commands.

Combining GUI and CLI Configuration

The GUI makes it easier to configure some features, by using wizards or by basing the configuration on a pre-determined scenario. For these features, the GUI requires that some configuration parameters use particular values (for example, policy names). In particular, you need to be very careful if you configure the following features using the CLI and modify them using the GUI:

- VPN tunnels

- Firewall

For other features and protocols, you can alternate between the GUI and the CLI without difficulty. Note that GUI pages do not automatically refresh to reflect changes in the CLI configuration; you must reload the relevant page (for example, by clicking the Refresh button on your browser).

Troubleshooting

The GUI resource file has a name with the .rsc file extension. To check which resource files are on the router, use the command:

```
show file
```

To see which GUI resource file the router is currently using, and which it will use on bootup, use the command:

```
show install
```

To display information about the GUI resource file that is currently installed, use the command:

```
show gui
```

In particular, this command lets you check the file's validity. If the file is invalid or damaged, download a new file.

To display information about the router's HTTP server, use the commands:

```
show http server

show http server session
```

Enabling and Disabling the GUI

The GUI is enabled by default. To enable or disable the GUI, use the following commands:

```
enable gui

disable gui
```

When enabled, the GUI works when a valid resource file for the hardware model is present in flash memory and when the HTTP server is enabled (see "Using HTTP" on page 5-9).

Deleting Temporary Files

Browsers store local copies of web pages as temporary files. If you upgrade to a new GUI resource file, or if you encounter problems in browsing to the GUI, you may need to delete these files (clear the cache). To clear the cache in Internet Explorer:

1. From the Tools menu, select Internet Options.

2. On the General tab, click the Delete Files button.

3. The Delete Files dialog box opens. Click the OK button.

To clear the cache in Netscape 6.2.*x*:

1. From the Edit menu, select Preferences.

2. Click the Advanced menu option to expand it.

3. Select the Cache menu option.

4. Click the Clear Memory Cache and Clear Disk Cache buttons.

Accessing the Router via the GUI

Problem   You cannot browse to the router.

Diagnosis   Check if you can ping the router's interface from your PC. If you get a response, this indicates that the interface's IP address is valid, and that your PC has a route to it. Note that you do not get a response if **Respond to ping** is unchecked on the Firewall Policy Options page (Configuration > Firewall > Interfaces > Policy options). This option is checked by default.

Solution   ■   If you cannot ping the router's interface:

- check that your PC's gateway is correct, so that your PC has a route to the router.

- the IP address of the router's interface may be incorrect. To correct this, access the CLI and use the **ipaddress** parameter of **set ip interface** command.

- the IP address of the router's default gateway may be incorrect, so that the router does not have a route back to your PC's gateway. To correct this, access the CLI and use the **nexthop** parameter of the **add ip route** or **set ip route** command.

■   If the router should be dynamically assigned an IP address, check that the DHCP server can reach the router, by pinging the router from the DHCP server. Note that you do not get a response if **Respond to ping** is unchecked on the Firewall Policy Options page (Configuration > Firewall > Interfaces > Policy options tab). This option is checked by default.

■   If your PC accesses the Internet through a proxy server, you may need to set your browser to bypass the proxy when browsing to the router's IP address range. See "HTTP Proxy Servers" on page 3-4 for more information.

■   If you cannot access the GUI because your username or password fails, check that you are spelling them correctly. The username "manager" is always valid. Its default password is "friend". Note that passwords are case sensitive.

Problem   The GUI is behaving inconsistently, or you cannot access some pages.

Solution   ■   Delete your browser's temporary files (see "Deleting Temporary Files" on page 3-18) and try again.

■   Check that JavaScript is enabled.

■   If you are using a toolbar or plug-in on your browser to block pop-ups, disable it while using the GUI. The GUI displays detailed configuration options and information in pop-up windows.

Either turn the toolbar off or specify that pop-ups are allowed for the IP address of the router. To turn off a toolbar on Internet Explorer 6, select Toolbars from the View menu and make sure the toolbar is not checked.

■   Check that you are trying to access the GUI from a supported operating system and browser combination. See "Browser and PC Setup" on page 3-3 for more information.

Problem **The GUI does not seem to configure the router correctly.**

Solution

■ Use the buttons on the GUI pages to navigate, not your browser's Back, Forward or Refresh buttons. The GUI's navigation buttons perform aspects of the configuration.

■ If you have enabled the firewall, check that your firewall access rules are valid.

■ If you are using a toolbar or plug-in on your browser to block pop-ups, disable it while using the GUI. The GUI displays detailed configuration options and information in pop-up windows.

Either turn the toolbar off or specify that pop-ups are allowed for the IP address of the router. To turn off a toolbar on Internet Explorer 6, select Toolbars from the View menu and make sure the toolbar is not checked.

Problem **The GUI does not seem to configure the router correctly.**

Command Reference

This section describes the commands available on the router to support day-to-day operational and management activities.

The shortest valid command is denoted by capital letters in the Syntax section. See "Conventions" on page lxv of About this Software Reference for details of the conventions used to describe command syntax. See Appendix A, Messages for a complete list of messages and their meanings.

disable gui

Syntax   `DISable GUI`

Description   This command disables the web-based graphical user interface. If a GUI is installed, it is enabled by default.

The GUI resource file that the router is currently set to use can be deleted when the GUI is disabled. GUI resource files have a .rsc extension. Use the **show install** command and check the "Current Install" section to see which resource file is currently set.

Related Commands   enable gui
reset gui
show gui
show install

enable gui

Syntax   `ENAble GUI`

Description   This command enables the web-based graphical user interface. If a GUI is installed, it is enabled by default. Even when enabled, the GUI only works when:

■   there is a valid resource file for the hardware model being used.

■   the HTTP server is enabled.

Related Commands   disable gui
reset gui
show gui

reset gui

Syntax RESET GUI

Description This command is used after a new GUI resource file has been loaded so that the router reads the updated file without the user rebooting the router.

Example To use details from the GUI resource file that has just been loaded onto the router, use the command:

        reset gui

Related Commands disable gui
enable gui
load in Chapter 5, Managing Configuration Files and Software Versions
set install in Chapter 5, Managing Configuration Files and Software Versions
show gui

show gui

Syntax   SHow GUI

Description   This command displays information about the GUI status and the GUI
resource file. The resource file contains the HTML pages that make up the GUI
(Figure 3-9, Table 3-2).

Figure 3-9: Example output from the **show gui** command

```
GUI Configuration
-------------------
Module Status         : Enabled

Resource File
-----------------------
Name                  : 9924_291-00_en_d.rsc
Status                : Good

Header Info
-----------------------
Type                  : Device
Model                 : AT-9924
Gui Builder Version   : 3.3
Resource File Format  : 1
Language              : English
Version               : 2.9.1-00
File Creation Date    : 14/12/2006
Build Type            : CUSTOMER
File Size             : 3122687
```

Table 3-2: Parameters in the output of the **show gui** command

Parameter	Meaning
Module Status	Whether the GUI is enabled.
Name	Filename of the GUI resource file.
Status	State of the resource file; either Good (no errors in the file) or Error. If the state is Error, a line is displayed below the status indicating the nature of the error.
Type	Type of GUI.
Model	The model the resource file has been produced to run on. Resource files are model-dependent, so this must be the same model as the router.
GUI Builder Version	Version of the Allied Telesis GUI creation program that this resource file was built with.
Language	Language in which the GUI is displayed.
Version	Version of the GUI.
File Creation Date	Date in day/month/year format when the resource file was created.
Build Type	The status of this build. "Production" indicates a build that has been released for use.
File size	Byte size of the resource file.

Example   To display information about the GUI, use the command:

```
sh gui
```

Related Commands   disable gui
                        enable gui
                        reset gui