CHAPTER 14 Dynamic DNS Setup

This chapter discusses how to configure your ZyXEL Device to use Dynamic DNS.

14.1 Dynamic DNS Overview

Dynamic DNS allows you to update your current dynamic IP address with one or many dynamic DNS services so that anyone can contact you (in NetMeeting, CU-SeeMe, etc.). You can also access your FTP server or Web site on your own computer using a domain name (for instance myhost.dhs.org, where myhost is a name of your choice) that will never change instead of using an IP address that changes each time you reconnect. Your friends or relatives will always be able to call you even if they don't know your IP address.

First of all, you need to have registered a dynamic DNS account with www.dyndns.org. This is for people with a dynamic IP from their ISP or DHCP server that would still like to have a domain name. The Dynamic DNS service provider will give you a password or key.

14.1.1 DYNDNS Wildcard

Enabling the wildcard feature for your host causes *.yourhost.dyndns.org to be aliased to the same IP address as yourhost.dyndns.org. This feature is useful if you want to be able to use, for example, www.yourhost.dyndns.org and still reach your hostname.

If you have a private WAN IP address, then you cannot use Dynamic DNS.

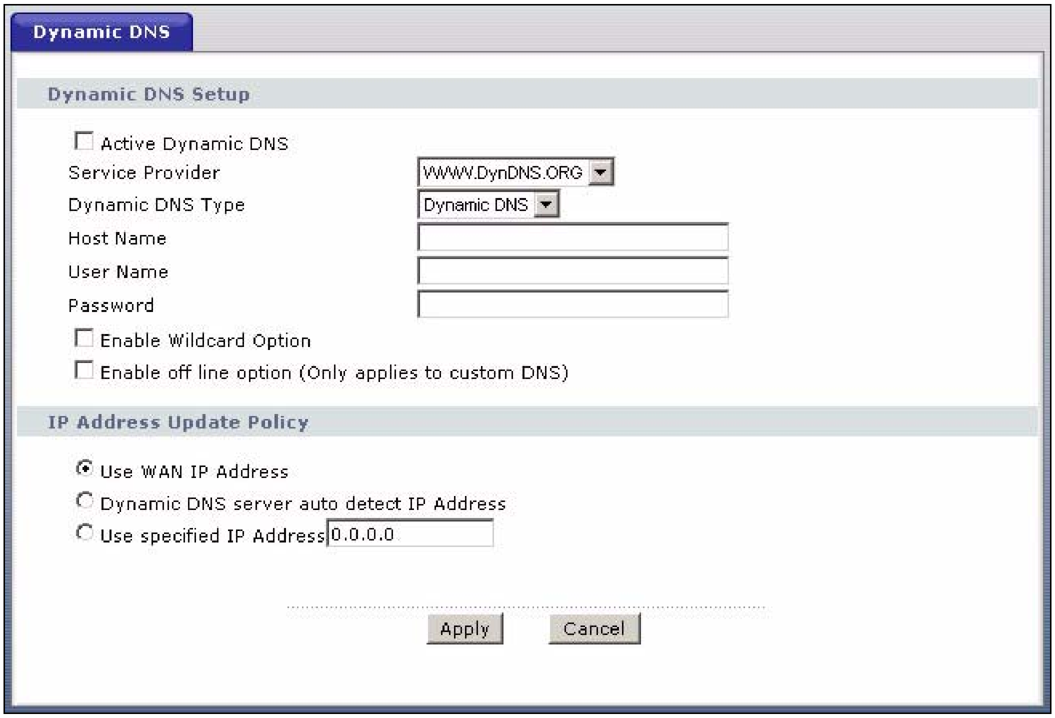
See Section 14.2 on page 198 for configuration instruction.

14.2 Configuring Dynamic DNS

To change your ZyXEL Device’s DDNS, click **Advanced > Dynamic DNS**. The screen appears as shown.

See Section 14.1 on page 198 for more information.

Figure 109 Dynamic DNS



Dynamic DNS Setup

□ Active Dynamic DNS

Service Provider WWW.DynDNS.ORG

Dynamic DNS Type Dynamic DNS

Host Name

User Name

Password

□ Enable Wildcard Option

□ Enable off line option (Only applies to custom DNS)

IP Address Update Policy

● Use WAN IP Address

○ Dynamic DNS server auto detect IP Address

○ Use specified IP Address 0.0.0.0

The following table describes the fields in this screen.

Table 79 Dynamic DNS

LABEL	DESCRIPTION
Dynamic DNS Setup	
Active Dynamic DNS	Select this check box to use dynamic DNS.
Service Provider	This is the name of your Dynamic DNS service provider.
Dynamic DNS Type	Select the type of service that you are registered for from your Dynamic DNS service provider.
Host Name	Type the domain name assigned to your ZyXEL Device by your Dynamic DNS provider. You can specify up to two host names in the field separated by a comma (",").
User Name	Type your user name.
Password	Type the password assigned to you.
Enable Wildcard Option	Select the check box to enable DynDNS Wildcard.
Enable off line option	This option is available when **Custom DNS** is selected in the **DDNS Type** field. Check with your Dynamic DNS service provider to have traffic redirected to a URL (that you can specify) while you are off line.
IP Address Update Policy	
Use WAN IP Address	Select this option to update the IP address of the host name(s) to the WAN IP address.

Table 79 Dynamic DNS (continued)

LABEL	DESCRIPTION
Dynamic DNS server auto detect IP Address	Select this option only when there are one or more NAT routers between the ZyXEL Device and the DDNS server. This feature has the DDNS server automatically detect and use the IP address of the NAT router that has a public IP address. **Note:** The DDNS server may not be able to detect the proper IP address if there is an HTTP proxy server between the ZyXEL Device and the DDNS server.
Use specified IP Address	Type the IP address of the host name(s). Use this if you have a static IP address.
Apply	Click **Apply** to save your changes back to the ZyXEL Device.
Cancel	Click **Cancel** to begin configuring this screen afresh.

CHAPTER 15 Remote Management Configuration

This chapter provides information on configuring remote management.

15.1 Remote Management Overview

Remote management allows you to determine which services/protocols can access which ZyXEL Device interface (if any) from which computers.

Note: When you configure remote management to allow management from the WAN, you still need to configure a firewall rule to allow access.

You may manage your ZyXEL Device from a remote location via:

- Internet (WAN only)
- ALL (LAN and WAN)
- LAN only,
- Neither (Disable).

Note: When you choose **WAN** only or **LAN & WAN**, you still need to configure a firewall rule to allow access.

To disable remote management of a service, select **Disable** in the corresponding **Access Status** field.

You may only have one remote management session running at a time. The ZyXEL Device automatically disconnects a remote management session of lower priority when another remote management session of higher priority starts. The priorities for the different types of remote management sessions are as follows.

1 Telnet

2 HTTP

15.1.1 Remote Management Limitations

Remote management over LAN or WAN will not work when:

- You have disabled that service in one of the remote management screens.

- The IP address in the **Secured Client IP** field does not match the client IP address. If it does not match, the ZyXEL Device will disconnect the session immediately.
- There is already another remote management session with an equal or higher priority running. You may only have one remote management session running at one time.
- There is a firewall rule that blocks it.

15.1.2 Remote Management and NAT

When NAT is enabled:

- Use the ZyXEL Device's WAN IP address when configuring from the WAN.
- Use the ZyXEL Device's LAN IP address when configuring from the LAN.

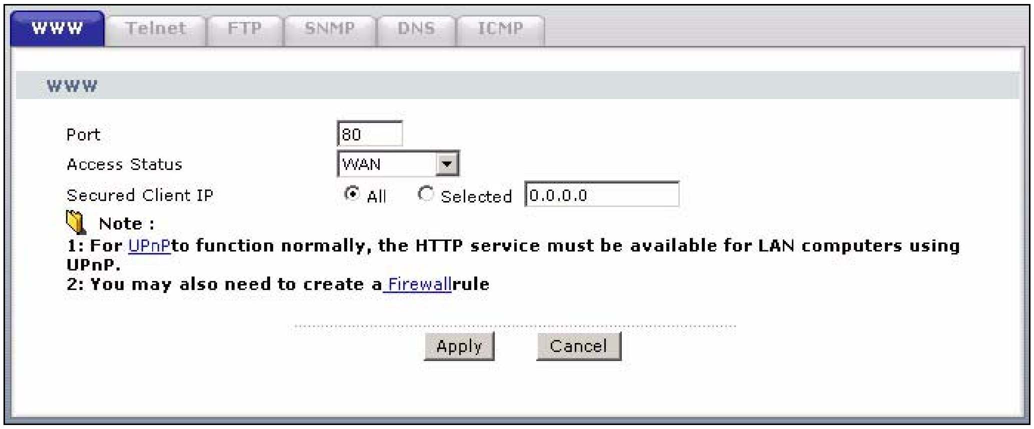
15.1.3 System Timeout

There is a default system management idle timeout of five minutes (three hundred seconds). The ZyXEL Device automatically logs you out if the management session remains idle for longer than this timeout period. The management session does not time out when a statistics screen is polling.

15.2 WWW

To change your ZyXEL Device's World Wide Web settings, click **Advanced > Remote MGMT** to display the **WWW** screen.

Figure 110 Remote Management: WWW



WWW

Port	80
Access Status	WAN
Secured Client IP	● All ○ Selected 0.0.0.0

Note :

1: For UPnP**to function normally, the HTTP service must be available for LAN computers using UPnP.**

2: You may also need to create a Firewall**rule**

The following table describes the labels in this screen.

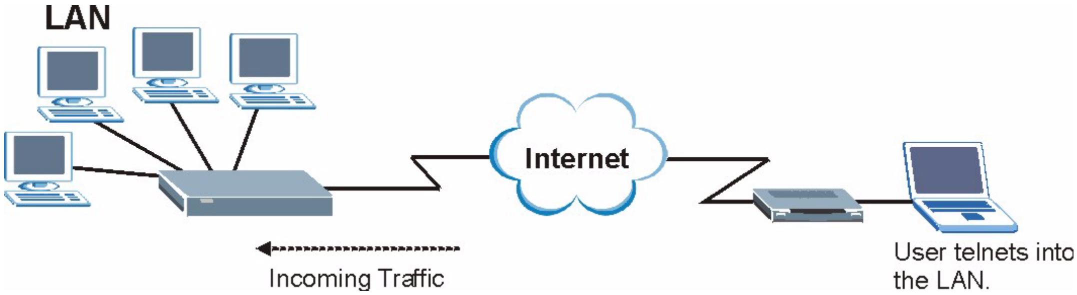
Table 80 Remote Management: WWW

LABEL	DESCRIPTION
Port	You may change the server port number for a service if needed, however you must use the same port number in order to use that service for remote management.
Access Status	Select the interface(s) through which a computer may access the ZyXEL Device using this service.
Secured Client IP	A secured client is a “trusted” computer that is allowed to communicate with the ZyXEL Device using this service. Select **All** to allow any computer to access the ZyXEL Device using this service. Choose **Selected** to just allow the computer with the IP address that you specify to access the ZyXEL Device using this service.
Apply	Click **Apply** to save your settings back to the ZyXEL Device.
Cancel	Click **Cancel** to begin configuring this screen afresh.

15.3 Telnet

You can configure your ZyXEL Device for remote Telnet access as shown next. The administrator uses Telnet from a computer on a remote network to access the ZyXEL Device.

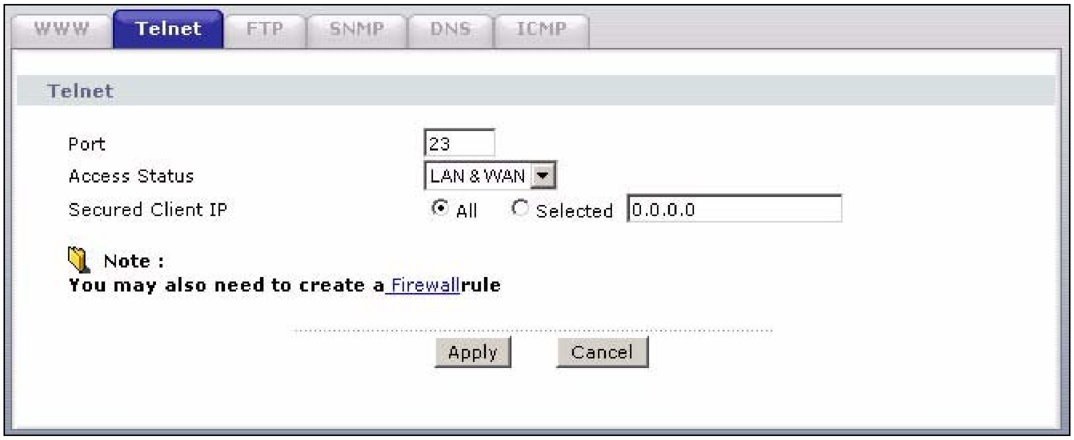
Figure 111 Telnet Configuration on a TCP/IP Network



15.4 Configuring Telnet

Click **Advanced > Remote MGMT** > **Telnet** tab to display the screen as shown.

Figure 112 Remote Management: Telnet



Telnet

Port 23

Access Status LAN & WAN

Secured Client IP ● All ○ Selected 0.0.0.0

Note :
You may also need to create a Firewall rule

The following table describes the labels in this screen.

Table 81 Remote Management: Telnet

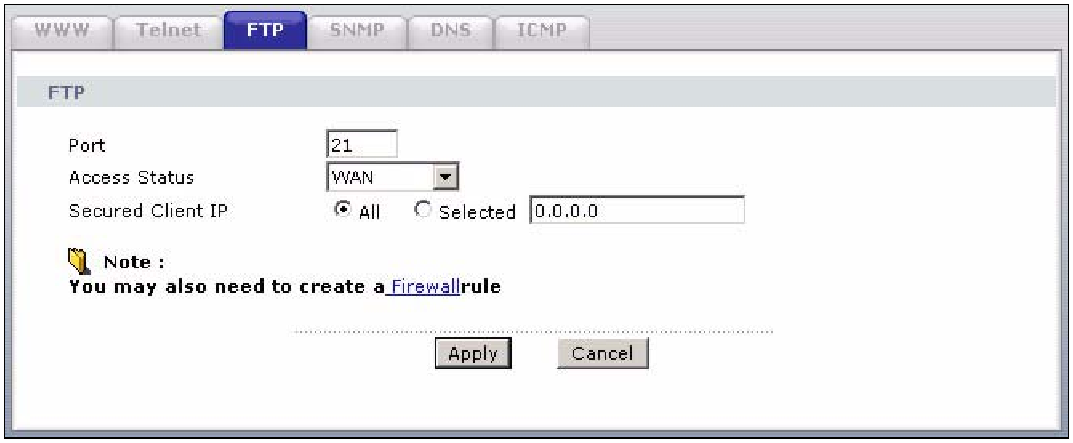
LABEL	DESCRIPTION
Port	You may change the server port number for a service if needed, however you must use the same port number in order to use that service for remote management.
Access Status	Select the interface(s) through which a computer may access the ZyXEL Device using this service.
Secured Client IP	A secured client is a "trusted" computer that is allowed to communicate with the ZyXEL Device using this service. Select **All** to allow any computer to access the ZyXEL Device using this service. Choose **Selected** to just allow the computer with the IP address that you specify to access the ZyXEL Device using this service.
Apply	Click **Apply** to save your customized settings and exit this screen.
Cancel	Click **Cancel** to begin configuring this screen afresh.

15.5 Configuring FTP

You can upload and download the ZyXEL Device's firmware and configuration files using FTP, please see the chapter on firmware and configuration file maintenance for details. To use this feature, your computer must have an FTP client.

To change your ZyXEL Device's FTP settings, click **Advanced > Remote MGMT** > **FTP** tab. The screen appears as shown.

Figure 113 Remote Management: FTP



FTP

Port 21

Access Status WAN

Secured Client IP ● All ○ Selected 0.0.0.0

Note :
You may also need to create a Firewall rule

The following table describes the labels in this screen.

Table 82 Remote Management: FTP

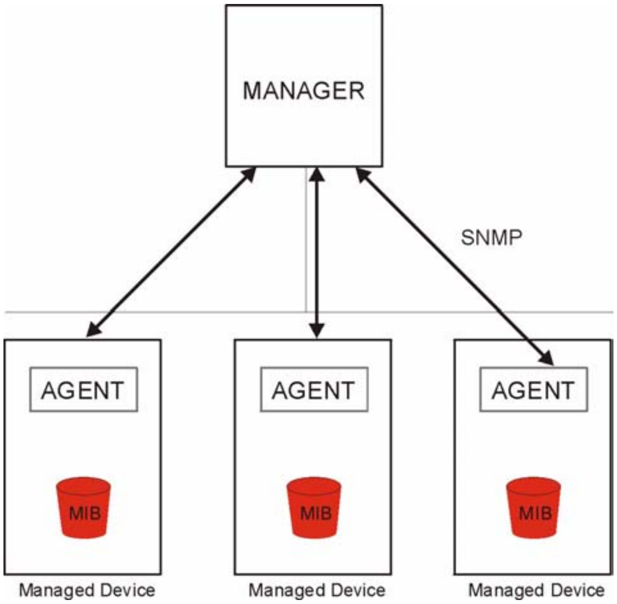
LABEL	DESCRIPTION
Port	You may change the server port number for a service if needed, however you must use the same port number in order to use that service for remote management.
Access Status	Select the interface(s) through which a computer may access the ZyXEL Device using this service.
Secured Client IP	A secured client is a “trusted” computer that is allowed to communicate with the ZyXEL Device using this service. Select **All** to allow any computer to access the ZyXEL Device using this service. Choose **Selected** to just allow the computer with the IP address that you specify to access the ZyXEL Device using this service.
Apply	Click **Apply** to save your customized settings and exit this screen.
Cancel	Click **Cancel** to begin configuring this screen afresh.

15.6 SNMP

Simple Network Management Protocol (SNMP) is a protocol used for exchanging management information between network devices. SNMP is a member of the TCP/IP protocol suite. Your ZyXEL Device supports SNMP agent functionality, which allows a manager station to manage and monitor the ZyXEL Device through the network. The ZyXEL Device supports SNMP version one (SNMPv1) and version two (SNMPv2). The next figure illustrates an SNMP management operation.

Note: SNMP is only available if TCP/IP is configured.

Figure 114 SNMP Management Model



An SNMP managed network consists of two main types of component: agents and a manager.

An agent is a management software module that resides in a managed device (the ZyXEL Device). An agent translates the local management information from the managed device into a form compatible with SNMP. The manager is the console through which network administrators perform network management functions. It executes applications that control and monitor managed devices.

The managed devices contain object variables/managed objects that define each piece of information to be collected about a device. Examples of variables include such as number of packets received, node port status etc. A Management Information Base (MIB) is a collection of managed objects. SNMP allows a manager and agents to communicate for the purpose of accessing these objects.

SNMP itself is a simple request/response protocol based on the manager/agent model. The manager issues a request and the agent returns responses using the following protocol operations:

- Get - Allows the manager to retrieve an object variable from the agent.
- GetNext - Allows the manager to retrieve the next object variable from a table or list within an agent. In SNMPv1, when a manager wants to retrieve all elements of a table from an agent, it initiates a Get operation, followed by a series of GetNext operations.
- Set - Allows the manager to set values for object variables within an agent.
- Trap - Used by the agent to inform the manager of some events.

15.6.1 Supported MIBs

The ZyXEL Device supports MIB II that is defined in RFC-1213 and RFC-1215. The focus of the MIBs is to let administrators collect statistical data and monitor status and performance.

15.6.2 SNMP Traps

The ZyXEL Device will send traps to the SNMP manager when any one of the following events occurs:

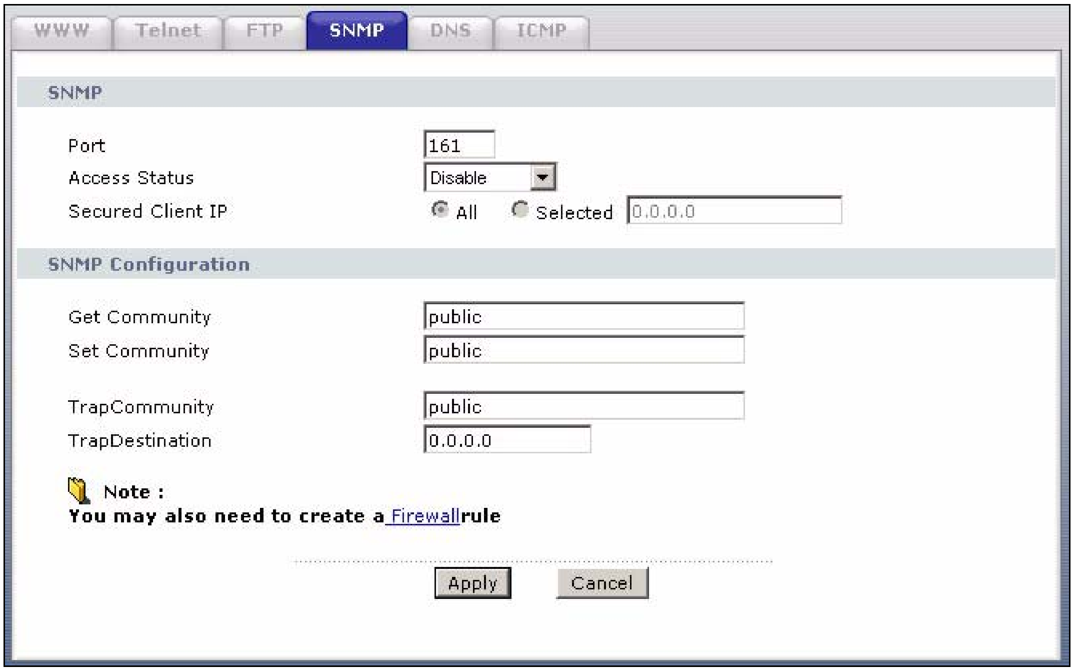
Table 83 SNMP Traps

TRAP #	TRAP NAME	DESCRIPTION
0	coldStart (defined in *RFC-1215*)	A trap is sent after booting (power on).
1	warmStart (defined in *RFC-1215*)	A trap is sent after booting (software reboot).
6	whyReboot (defined in ZYXEL-MIB)	A trap is sent with the reason of restart before rebooting when the system is going to restart (warm start).
6a	For intentional reboot:	A trap is sent with the message "System reboot by user!" if reboot is done intentionally, (for example, download new files, CI command "sys reboot", etc.).
6b	For fatal error:	A trap is sent with the message of the fatal code if the system reboots because of fatal errors.

15.6.3 Configuring SNMP

To change your ZyXEL Device's SNMP settings, click **Advanced > Remote MGMT** > **SNMP**. The screen appears as shown.

Figure 115 Remote Management: SNMP



SNMP

Port	161
Access Status	Disable
Secured Client IP	● All ○ Selected 0.0.0.0

SNMP Configuration

Get Community	public
Set Community	public
TrapCommunity	public
TrapDestination	0.0.0.0

Note :
You may also need to create a Firewall rule

The following table describes the labels in this screen.

Table 84 Remote Management: SNMP

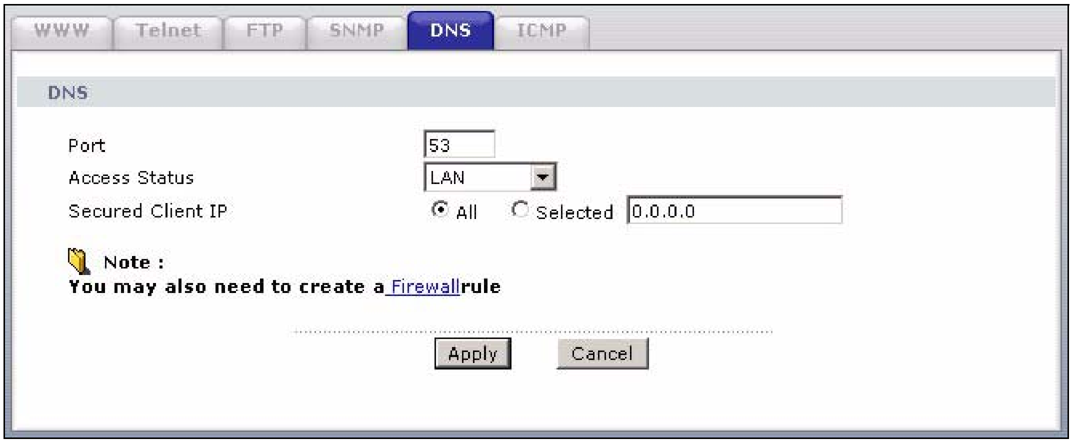
LABEL	DESCRIPTION
SNMP	
Port	You may change the server port number for a service if needed, however you must use the same port number in order to use that service for remote management.
Access Status	Select the interface(s) through which a computer may access the ZyXEL Device using this service.
Secured Client IP	A secured client is a “trusted” computer that is allowed to communicate with the ZyXEL Device using this service. Select **All** to allow any computer to access the ZyXEL Device using this service. Choose **Selected** to just allow the computer with the IP address that you specify to access the ZyXEL Device using this service.
SNMP Configuration	
Get Community	Enter the **Get Community**, which is the password for the incoming Get and GetNext requests from the management station. The default is public and allows all requests.
Set Community	Enter the **Set community**, which is the password for incoming Set requests from the management station. The default is public and allows all requests.
Trap	
Community	Type the trap community, which is the password sent with each trap to the SNMP manager. The default is public and allows all requests.
Destination	Type the IP address of the station to send your SNMP traps to.
Apply	Click **Apply** to save your customized settings and exit this screen.
Cancel	Click **Cancel** to begin configuring this screen afresh.

15.7 Configuring DNS

Use DNS (Domain Name System) to map a domain name to its corresponding IP address and vice versa. Refer to the chapter on LAN for background information.

To change your ZyXEL Device’s DNS settings, click **Advanced > Remote MGMT** > **DNS**. The screen appears as shown. Use this screen to set from which IP address the ZyXEL Device will accept DNS queries and on which interface it can send them your ZyXEL Device’s DNS settings.

Figure 116 Remote Management: DNS



Port 53
Access Status LAN
Secured Client IP ● All ○ Selected 0.0.0.0

Note :
You may also need to create a Firewall rule

The following table describes the labels in this screen.

Table 85 Remote Management: DNS

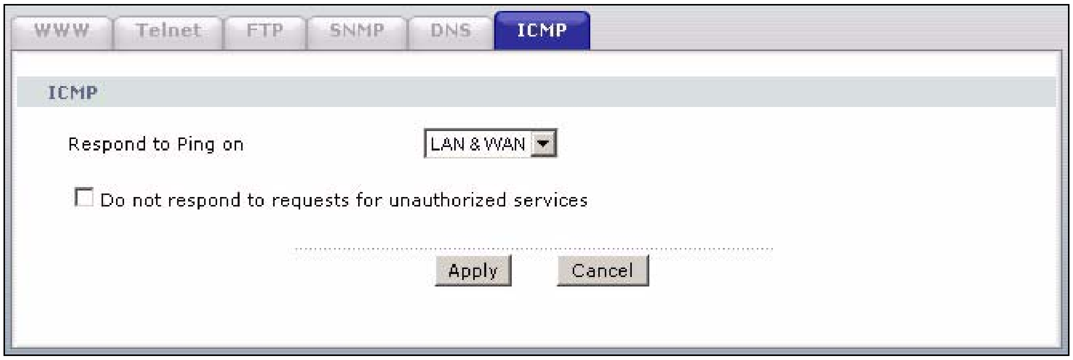
LABEL	DESCRIPTION
Port	The DNS service port number is 53.
Access Status	Select the interface(s) through which a computer may send DNS queries to the ZyXEL Device.
Secured Client IP	A secured client is a "trusted" computer that is allowed to send DNS queries to the ZyXEL Device. Select **All** to allow any computer to send DNS queries to the ZyXEL Device. Choose **Selected** to just allow the computer with the IP address that you specify to send DNS queries to the ZyXEL Device.
Apply	Click **Apply** to save your customized settings and exit this screen.
Cancel	Click **Cancel** to begin configuring this screen afresh.

15.8 Configuring ICMP

To change your ZyXEL Device's security settings, click **Advanced > Remote MGMT** > **ICMP**. The screen appears as shown.

If an outside user attempts to probe an unsupported port on your ZyXEL Device, an ICMP response packet is automatically returned. This allows the outside user to know the ZyXEL Device exists. Your ZyXEL Device supports anti-probing, which prevents the ICMP response packet from being sent. This keeps outsiders from discovering your ZyXEL Device when unsupported ports are probed.

Figure 117 Remote Management: ICMP



Respond to Ping on: LAN & WAN

□ Do not respond to requests for unauthorized services

The following table describes the labels in this screen.

Table 86 Remote Management: ICMP

LABEL	DESCRIPTION
ICMP	Internet Control Message Protocol is a message control and error-reporting protocol between a host server and a gateway to the Internet. ICMP uses Internet Protocol (IP) datagrams, but the messages are processed by the TCP/IP software and directly apparent to the application user.
Respond to Ping on	The ZyXEL Device will not respond to any incoming Ping requests when **Disable** is selected. Select **LAN** to reply to incoming LAN Ping requests. Select **WAN** to reply to incoming WAN Ping requests. Otherwise select **LAN & WAN** to reply to both incoming LAN and WAN Ping requests.
Do not respond to requests for unauthorized services	Select this option to prevent hackers from finding the ZyXEL Device by probing for unused ports. If you select this option, the ZyXEL Device will not respond to port request(s) for unused ports, thus leaving the unused ports and the ZyXEL Device unseen. By default this option is not selected and the ZyXEL Device will reply with an ICMP Port Unreachable packet for a port probe on its unused UDP ports, and a TCP Reset packet for a port probe on its unused TCP ports. Note that the probing packets must first traverse the ZyXEL Device's firewall mechanism before reaching this anti-probing mechanism. Therefore if the firewall mechanism blocks a probing packet, the ZyXEL Device reacts based on the corresponding firewall policy to send a TCP reset packet for a blocked TCP packet or an ICMP port-unreachable packet for a blocked UDP packets or just drop the packets without sending a response packet.
Apply	Click **Apply** to save your customized settings and exit this screen.
Cancel	Click **Cancel** to begin configuring this screen afresh.

15.9 TR-069

TR-069 is a protocol that defines how your ZyXEL Device can be managed via a management server such as ZyXEL's Vantage CNM Access.

An administrator can use CNM Access to remotely set up the ZyXEL device, modify settings, perform firmware upgrades as well as monitor and diagnose the ZyXEL device. All you have to do is enable the device to be managed by CNM Access and specify the CNM Access IP address or domain name and username and password.

Follow the procedure below to configure your ZyXEL Device to be managed by CNM Access. See the Command Interpreter appendix for information on the command structure and how to access the CLI (Command Line Interface) on the ZyXEL Device.

Note: In this example **a.b.c.d** is the IP address of CNM Access. You must change this value to reflect your actual management server IP address or domain name. See Table 87 on page 212 for detailed descriptions of the commands.

Figure 118 Enabling TR-069

```
ras> wan tr069 load
ras> wan tr069 acsUrl a.b.c.d
Auto-Configuration Server URL: http://a.b.c.d
ras> wan tr069 periodicEnable 1
ras> wan tr069 informInterval 2400
TR069 Informinterval 2400
ras> wan tr069 active 1
ras> wan tr069 save
```

The following table gives a description of TR-069 commands.

Table 87 TR-069 Commands

Root	Command or Subdirectory	Command	Description
`wan`	`tr069`		All TR-069 related commands must be preceded by `wan tr069`.
		`load`	Start configuring TR-069 on your ZyXEL Device.
		`active [0:no/ 1:yes]`	Enable/disable TR-069 operation.
		`acsUrl <URL>`	Set the IP address or domain name of CNM Access.
		`username [maxlength:15]`	Username used to authenticate the device when making a connection to CNM Access. This username is set up on the server and must be provided by the CNM Access administrator.
		`password [maxlength:15]`	Password used to authenticate the device when making a connection to CNM Access. This password is set up on the server and must be provided by the CNM Access administrator.
		`periodicEnable [0:Disable/ 1:Enable]`	Whether or not the device must periodically send information to CNM Access. It is recommended to set this value to `1` in order for the ZyXEL Device to send information to CNM Access.
		`informInterval [sec]`	The duration in seconds of the interval for which the device MUST attempt to connect with CNM Access to send information and check for configuration updates. Enter a value between 30 and 2147483647 seconds.
		`save`	Save the TR-069 settings to your ZyXEL Device.

CHAPTER 16 Universal Plug-and-Play (UPnP)

This chapter introduces the UPnP feature in the web configurator.

16.1 Introducing Universal Plug and Play

Universal Plug and Play (UPnP) is a distributed, open networking standard that uses TCP/IP for simple peer-to-peer network connectivity between devices. A UPnP device can dynamically join a network, obtain an IP address, convey its capabilities and learn about other devices on the network. In turn, a device can leave a network smoothly and automatically when it is no longer in use.

See Section 16.2.1 on page 215 for configuration instructions.

16.1.1 How do I know if I'm using UPnP?

UPnP hardware is identified as an icon in the Network Connections folder (Windows XP). Each UPnP compatible device installed on your network will appear as a separate icon. Selecting the icon of a UPnP device will allow you to access the information and properties of that device.

16.1.2 NAT Traversal

UPnP NAT traversal automates the process of allowing an application to operate through NAT. UPnP network devices can automatically configure network addressing, announce their presence in the network to other UPnP devices and enable exchange of simple product and service descriptions. NAT traversal allows the following:

- Dynamic port mapping
- Learning public IP addresses
- Assigning lease times to mappings

Windows Messenger is an example of an application that supports NAT traversal and UPnP.

See the NAT chapter for more information on NAT.

16.1.3 Cautions with UPnP

The automated nature of NAT traversal applications in establishing their own services and opening firewall ports may present network security issues. Network information and configuration may also be obtained and modified by users in some network environments.

When a UPnP device joins a network, it announces its presence with a multicast message. For security reasons, the ZyXEL Device allows multicast messages on the LAN only.

All UPnP-enabled devices may communicate freely with each other without additional configuration. Disable UPnP if this is not your intention.

16.2 UPnP and ZyXEL

ZyXEL has achieved UPnP certification from the Universal Plug and Play Forum UPnP™ Implementers Corp. (UIC). ZyXEL's UPnP implementation supports Internet Gateway Device (IGD) 1.0.

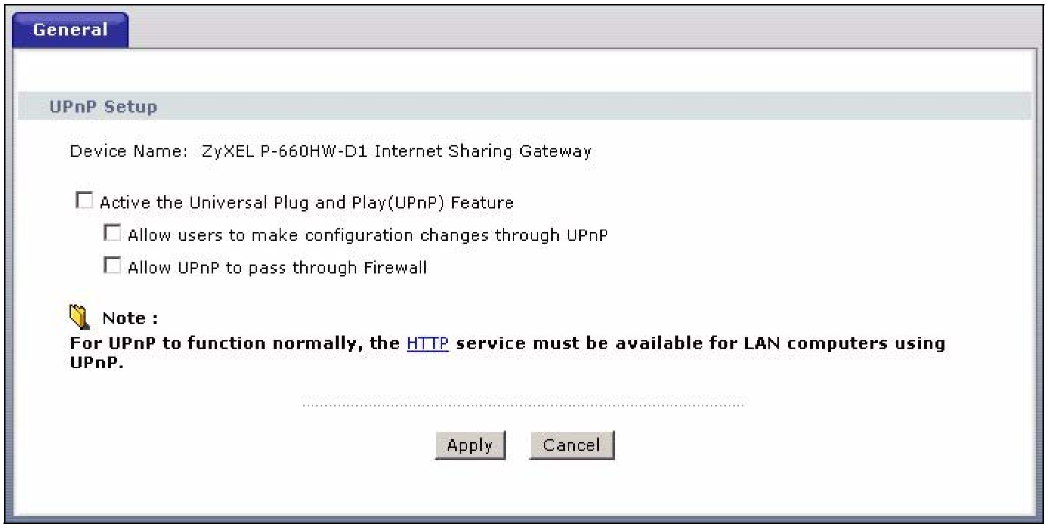
See the following sections for examples of installing and using UPnP.

16.2.1 Configuring UPnP

Click **Advanced** > **UPnP** to display the screen shown next.

See Section 16.1 on page 214 for more information.

Figure 119 Configuring UPnP



UPnP Setup

Device Name: ZyXEL P-660HW-D1 Internet Sharing Gateway

□ Active the Universal Plug and Play(UPnP) Feature

□ Allow users to make configuration changes through UPnP

□ Allow UPnP to pass through Firewall

Note :
For UPnP to function normally, the HTTP service must be available for LAN computers using UPnP.

The following table describes the fields in this screen.

Table 88 Configuring UPnP

LABEL	DESCRIPTION
Active the Universal Plug and Play (UPnP) Feature	Select this check box to activate UPnP. Be aware that anyone could use a UPnP application to open the web configurator's login screen without entering the ZyXEL Device's IP address (although you must still enter the password to access the web configurator).
Allow users to make configuration changes through UPnP	Select this check box to allow UPnP-enabled applications to automatically configure the ZyXEL Device so that they can communicate through the ZyXEL Device, for example by using NAT traversal, UPnP applications automatically reserve a NAT forwarding port in order to communicate with another UPnP enabled device; this eliminates the need to manually configure port forwarding for the UPnP enabled application.
Allow UPnP to pass through Firewall	Select this check box to allow traffic from UPnP-enabled applications to bypass the firewall. Clear this check box to have the firewall block all UPnP application packets (for example, MSN packets).
Apply	Click **Apply** to save the setting to the ZyXEL Device.
Cancel	Click **Cancel** to return to the previously saved settings.

16.3 Installing UPnP in Windows Example

This section shows how to install UPnP in Windows Me and Windows XP.

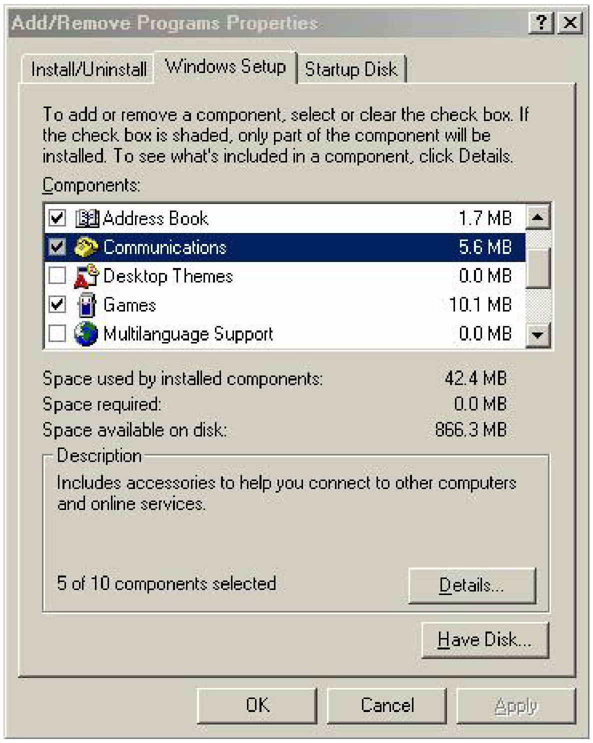
16.3.1 Installing UPnP in Windows Me

Follow the steps below to install the UPnP in Windows Me.

1 Click **Start** and **Control Panel**. Double-click **Add/Remove Programs**.

2 Click on the **Windows Setup** tab and select **Communication** in the **Components** selection box. Click **Details**.

Figure 120 Add/Remove Programs: Windows Setup: Communication



Add/Remove Programs Properties

Install/Uninstall | Windows Setup | Startup Disk

To add or remove a component, select or clear the check box. If the check box is shaded, only part of the component will be installed. To see what's included in a component, click Details.

Components:

☑ Address Book	1.7 MB
☑ Communications	5.6 MB
☐ Desktop Themes	0.0 MB
☑ Games	10.1 MB
☐ Multilanguage Support	0.0 MB

Space used by installed components:	42.4 MB
Space required:	0.0 MB
Space available on disk:	866.3 MB

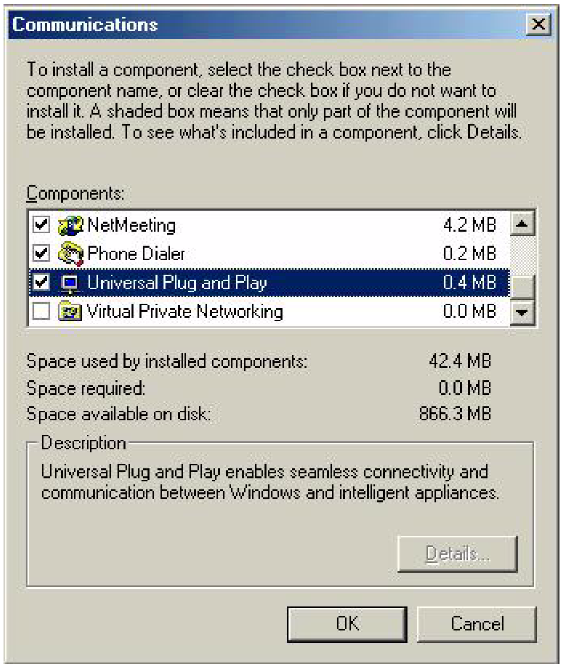
Description

Includes accessories to help you connect to other computers and online services.

5 of 10 components selected

3 In the **Communications** window, select the **Universal Plug and Play** check box in the **Components** selection box.

Figure 121 Add/Remove Programs: Windows Setup: Communication: Components



Communications

To install a component, select the check box next to the component name, or clear the check box if you do not want to install it. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.

Components:

☑ NetMeeting	4.2 MB
☑ Phone Dialer	0.2 MB
☑ Universal Plug and Play	0.4 MB
☐ Virtual Private Networking	0.0 MB

Space used by installed components:	42.4 MB
Space required:	0.0 MB
Space available on disk:	866.3 MB

Description

Universal Plug and Play enables seamless connectivity and communication between Windows and intelligent appliances.

4 Click **OK** to go back to the **Add/Remove Programs Properties** window and click **Next**.

5 Restart the computer when prompted.

16.3.2 Installing UPnP in Windows XP

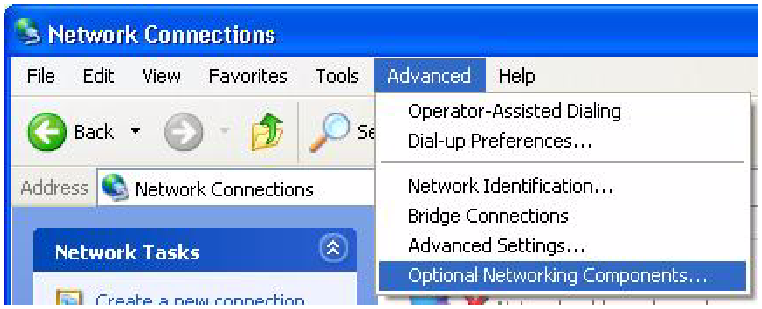
Follow the steps below to install the UPnP in Windows XP.

1 Click **start** and **Control Panel**.

2 Double-click **Network Connections**.

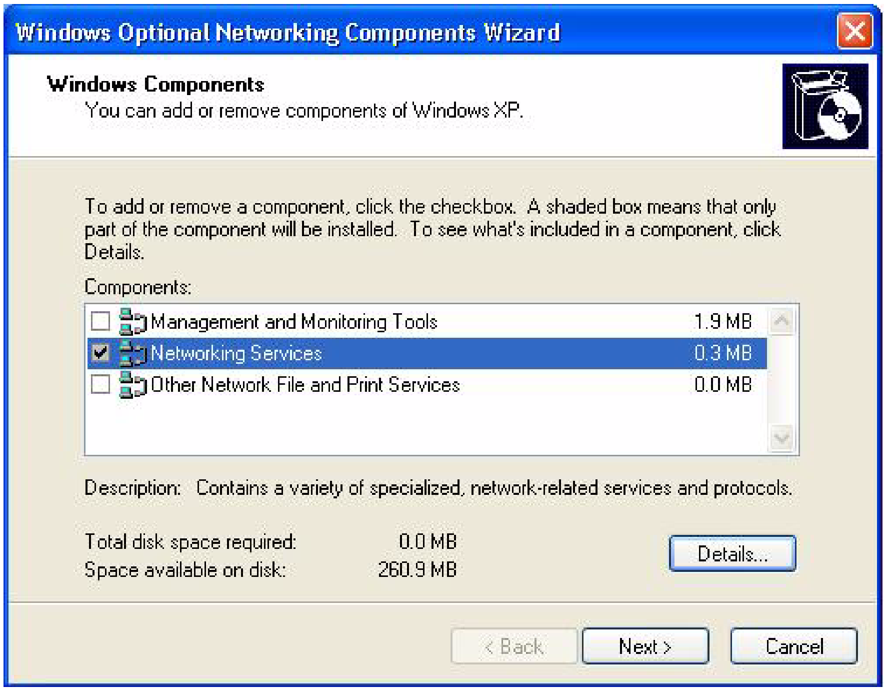
3 In the **Network Connections** window, click **Advanced** in the main menu and select **Optional Networking Components ….**

Figure 122 Network Connections



4 The **Windows Optional Networking Components Wizard** window displays. Select **Networking Service** in the **Components** selection box and click **Details**.

Figure 123 Windows Optional Networking Components Wizard


Windows Optional Networking Components Wizard

Windows Components

You can add or remove components of Windows XP.

To add or remove a component, click the checkbox. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.

Components:

□ Management and Monitoring Tools	1.9 MB
☑ Networking Services	0.3 MB
□ Other Network File and Print Services	0.0 MB

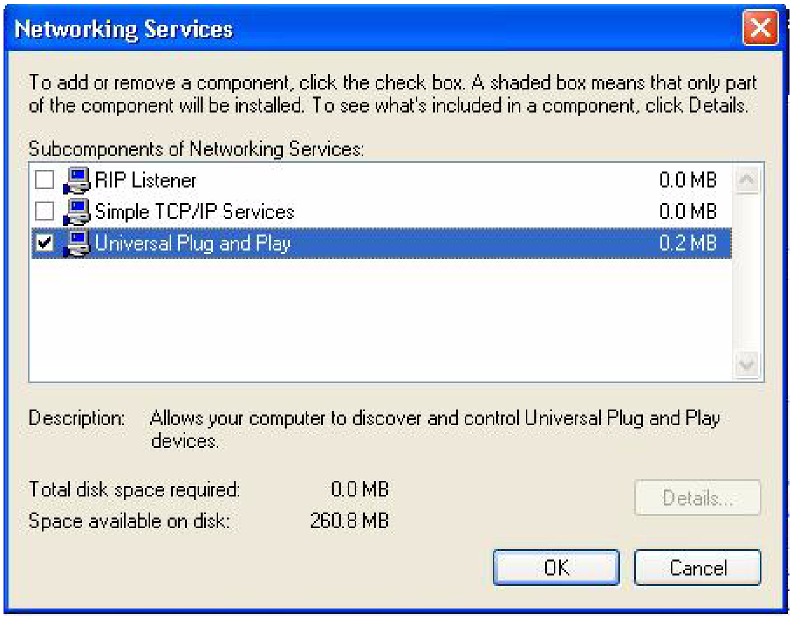
Description: Contains a variety of specialized, network-related services and protocols.

Total disk space required: 0.0 MB

Space available on disk: 260.9 MB

5 In the **Networking Services** window, select the **Universal Plug and Play** check box.

Figure 124 Networking Services



To add or remove a component, click the check box. A shaded box means that only part of the component will be installed. To see what's included in a component, click Details.

Subcomponents of Networking Services:

☐	RIP Listener	0.0 MB
☐	Simple TCP/IP Services	0.0 MB
☑	Universal Plug and Play	0.2 MB

Description: Allows your computer to discover and control Universal Plug and Play devices.

Total disk space required: 0.0 MB

Space available on disk: 260.8 MB

6 Click **OK** to go back to the **Windows Optional Networking Component Wizard** window and click **Next**.

16.4 Using UPnP in Windows XP Example

This section shows you how to use the UPnP feature in Windows XP. You must already have UPnP installed in Windows XP and UPnP activated on the ZyXEL Device.

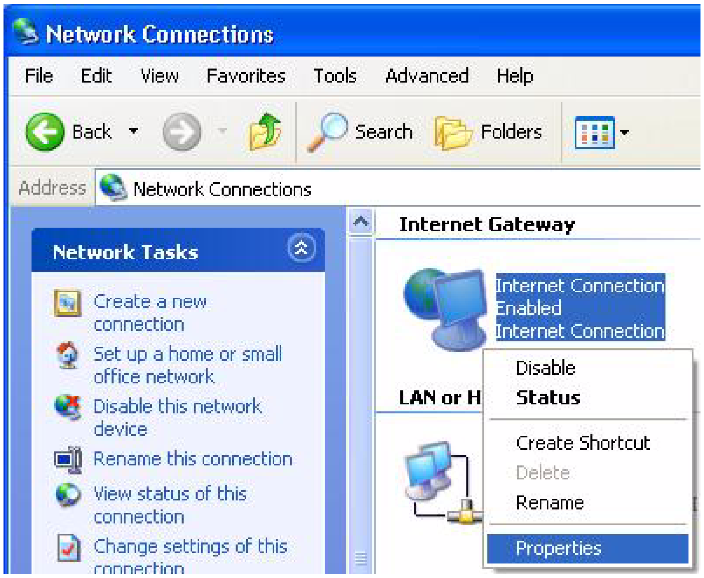
Make sure the computer is connected to a LAN port of the ZyXEL Device. Turn on your computer and the ZyXEL Device.

16.4.1 Auto-discover Your UPnP-enabled Network Device

1 Click **start** and **Control Panel**. Double-click **Network Connections**. An icon displays under Internet Gateway.

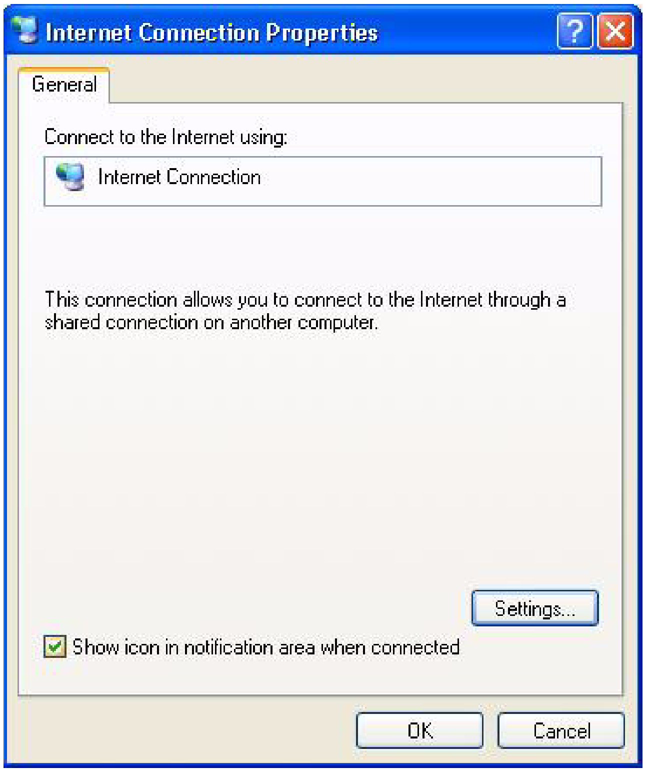
2 Right-click the icon and select **Properties**.

Figure 125 Network Connections



3 In the **Internet Connection Properties** window, click **Settings** to see the port mappings there were automatically created.

Figure 126 Internet Connection Properties



Connect to the Internet using:

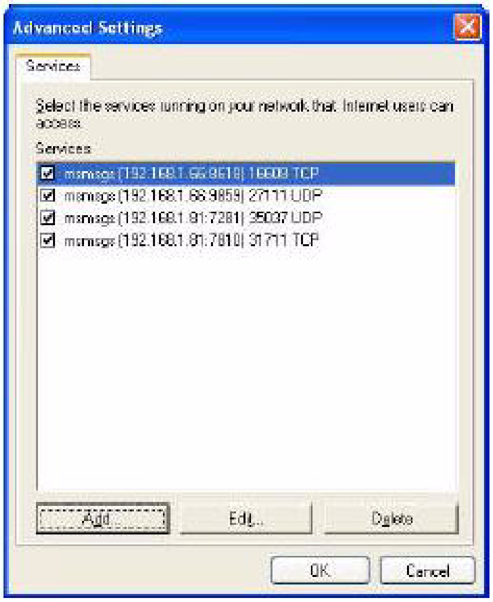
Internet Connection

This connection allows you to connect to the Internet through a shared connection on another computer.

☑ Show icon in notification area when connected

4 You may edit or delete the port mappings or click **Add** to manually add port mappings.

Figure 127 Internet Connection Properties: Advanced Settings



Advanced Settings

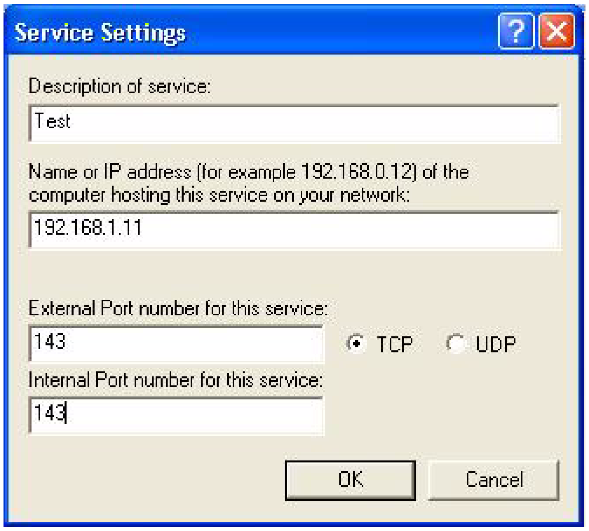
Services

Select the services running on your network that Internet users can access.

Services

☑ msmsgs (192.168.1.66:8618) 16608 TCP
☑ msmsgs (192.168.1.66:9859) 27111 UDP
☑ msmsgs (192.168.1.81:7281) 35037 UDP
☑ msmsgs (192.168.1.81:7810) 31711 TCP

Figure 128 Internet Connection Properties: Advanced Settings: Add



Service Settings

Description of service:
Test

Name or IP address (for example 192.168.0.12) of the computer hosting this service on your network:
192.168.1.11

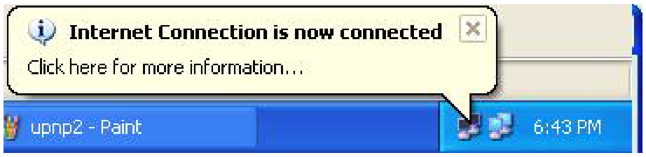
External Port number for this service:
143 ● TCP ○ UDP

Internal Port number for this service:
143

Note: When the UPnP-enabled device is disconnected from your computer, all port mappings will be deleted automatically.

5 Select **Show icon in notification area when connected** option and click **OK**. An icon displays in the system tray.

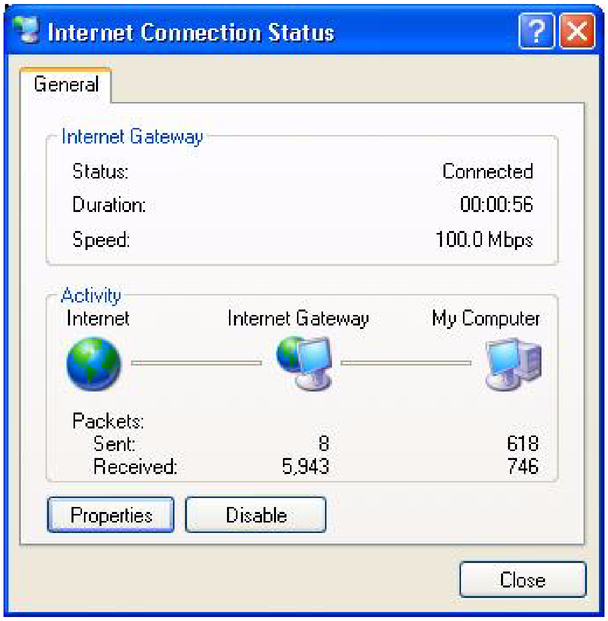
Figure 129 System Tray Icon



Internet Connection is now connected
Click here for more information...

6 Double-click on the icon to display your current Internet connection status.

Figure 130 Internet Connection Status



Internet Gateway

Status: Connected

Duration: 00:00:56

Speed: 100.0 Mbps

Activity

	Internet	Internet Gateway	My Computer
Packets:			
Sent:		8	618
Received:		5,943	746

16.4.2 Web Configurator Easy Access

With UPnP, you can access the web-based configurator on the ZyXEL Device without finding out the IP address of the ZyXEL Device first. This comes helpful if you do not know the IP address of the ZyXEL Device.

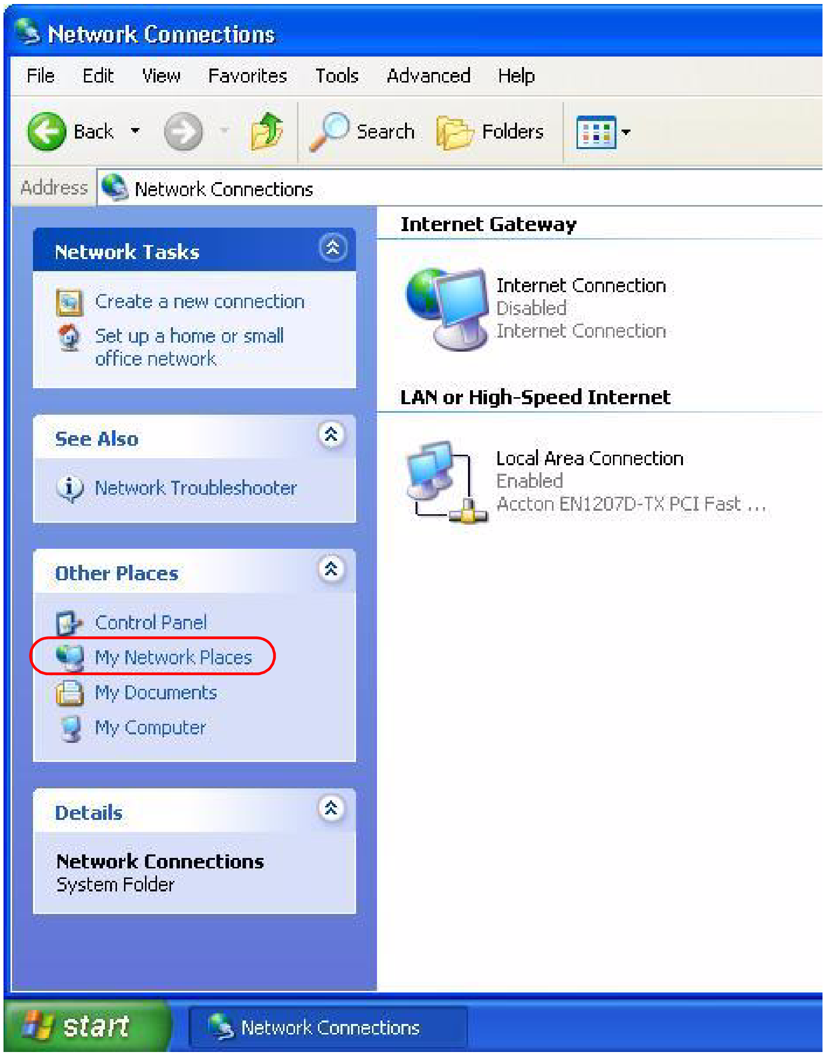
Follow the steps below to access the web configurator.

1 Click **Start** and then **Control Panel**.

2 Double-click **Network Connections**.

3 Select **My Network Places** under **Other Places**.

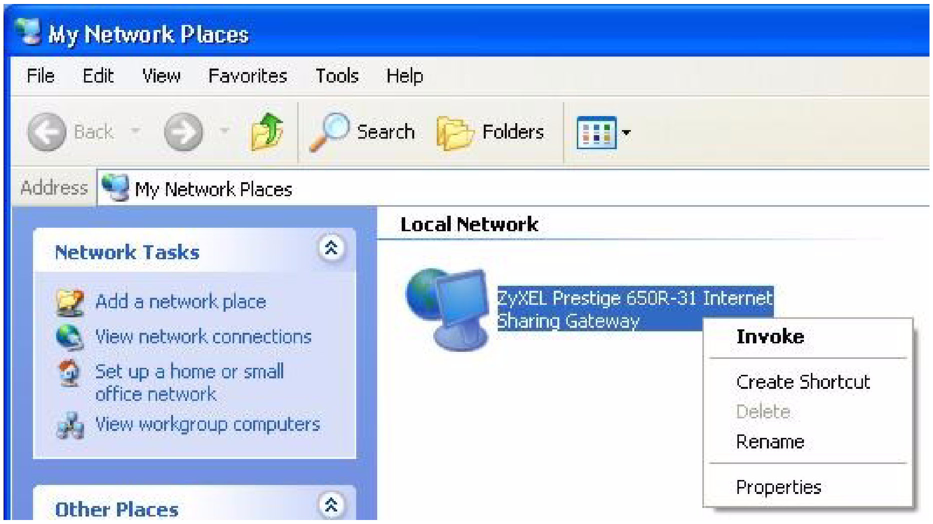
Figure 131 Network Connections



4 An icon with the description for each UPnP-enabled device displays under **Local Network**.

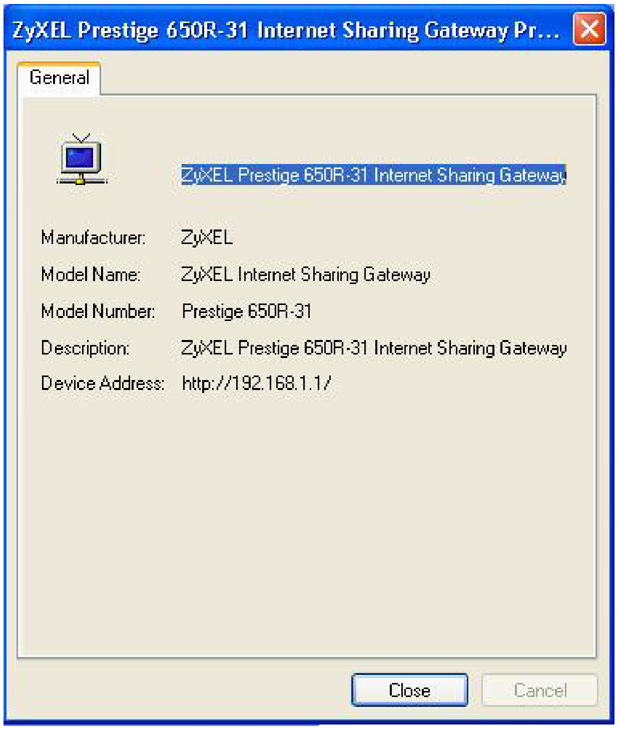
5 Right-click on the icon for your ZyXEL Device and select **Invoke**. The web configurator login screen displays.

Figure 132 Network Connections: My Network Places



6 Right-click on the icon for your ZyXEL Device and select **Properties**. A properties window displays with basic information about the ZyXEL Device.

Figure 133 Network Connections: My Network Places: Properties: Example


ZyXEL Prestige 650R-31 Internet Sharing Gateway Pr...
General
ZyXEL Prestige 650R-31 Internet Sharing Gateway
Close
Cancel

Manufacturer: ZyXEL
Model Name: ZyXEL Internet Sharing Gateway
Model Number: Prestige 650R-31
Description: ZyXEL Prestige 650R-31 Internet Sharing Gateway
Device Address: http://192.168.1.1/

CHAPTER 17
System

Use this screen to configure the ZyXEL Device's time and date settings.

17.1 General Setup

17.1.1 General Setup and System Name

General Setup contains administrative and system-related information. **System Name** is for identification purposes. However, because some ISPs check this name you should enter your computer's "Computer Name".

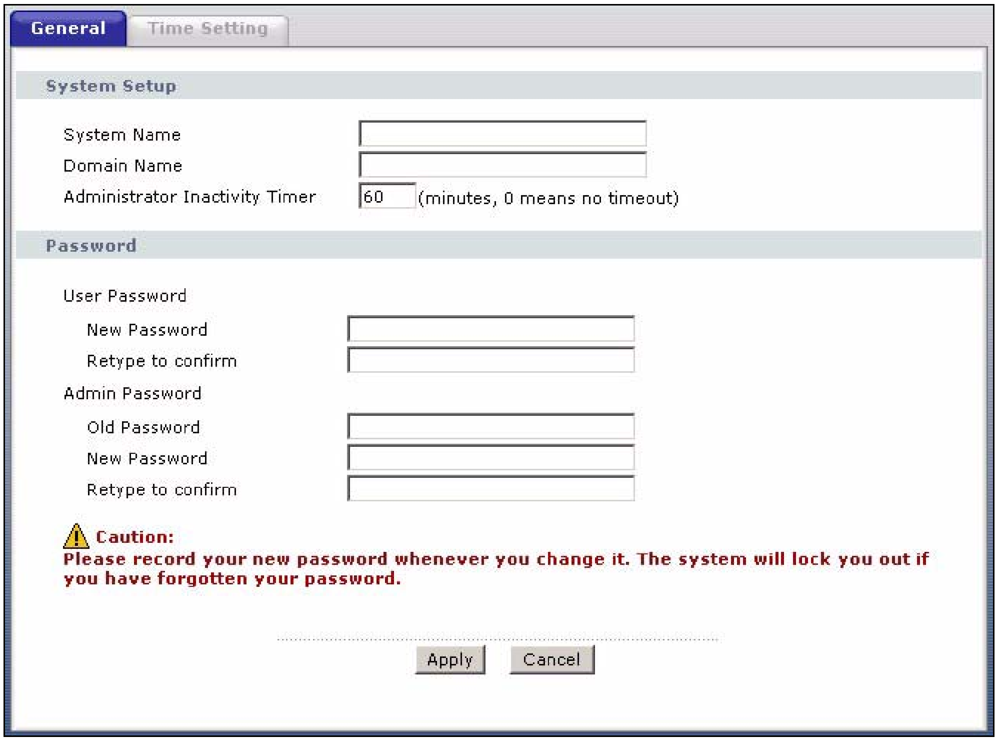
- In Windows 95/98 click **Start**, **Settings**, **Control Panel**, **Network**. Click the Identification tab, note the entry for the **Computer Name** field and enter it as the **System Name**.
- In Windows 2000, click **Start**, **Settings**, **Control Panel** and then double-click **System**. Click the **Network Identification** tab and then the **Properties** button. Note the entry for the **Computer name** field and enter it as the **System Name**.
- In Windows XP, click **start**, **My Computer**, **View system information** and then click the **Computer Name** tab. Note the entry in the **Full computer name** field and enter it as the ZyXEL Device **System Name**.

17.1.2 General Setup

The **Domain Name** entry is what is propagated to the DHCP clients on the LAN. If you leave this blank, the domain name obtained by DHCP from the ISP is used. While you must enter the host name (System Name), the domain name can be assigned from the ZyXEL Device via DHCP.

Click **Maintenance > System** to open the **General** screen.

Figure 134 System General Setup



System Setup

System Name
Domain Name
Administrator Inactivity Timer 60 (minutes, 0 means no timeout)

Password

User Password
New Password
Retype to confirm
Admin Password
Old Password
New Password
Retype to confirm

Caution:
Please record your new password whenever you change it. The system will lock you out if you have forgotten your password.

The following table describes the labels in this screen.

Table 89 System General Setup

LABEL	DESCRIPTION
General Setup	
System Name	Choose a descriptive name for identification purposes. It is recommended you enter your computer’s “Computer name” in this field. This name can be up to 30 alphanumeric characters long. Spaces are not allowed, but dashes “-” and underscores "_" are accepted.
Domain Name	Enter the domain name (if you know it) here. If you leave this field blank, the ISP may assign a domain name via DHCP. The domain name entered by you is given priority over the ISP assigned domain name.
Administrator Inactivity Timer	Type how many minutes a management session can be left idle before the session times out. The default is 5 minutes. After it times out you have to log in with your password again. Very long idle timeouts may have security risks. A value of "0" means a management session never times out, no matter how long it has been left idle (not recommended).
Password	
User Password	If you log in with the user password, you can only view the ZyXEL Device status. The default user password is **user**.
New Password	Type your new system password (up to 30 characters). Note that as you type a password, the screen displays a (*) for each character you type. After you change the password, use the new password to access the ZyXEL Device.
Retype to Confirm	Type the new password again for confirmation.

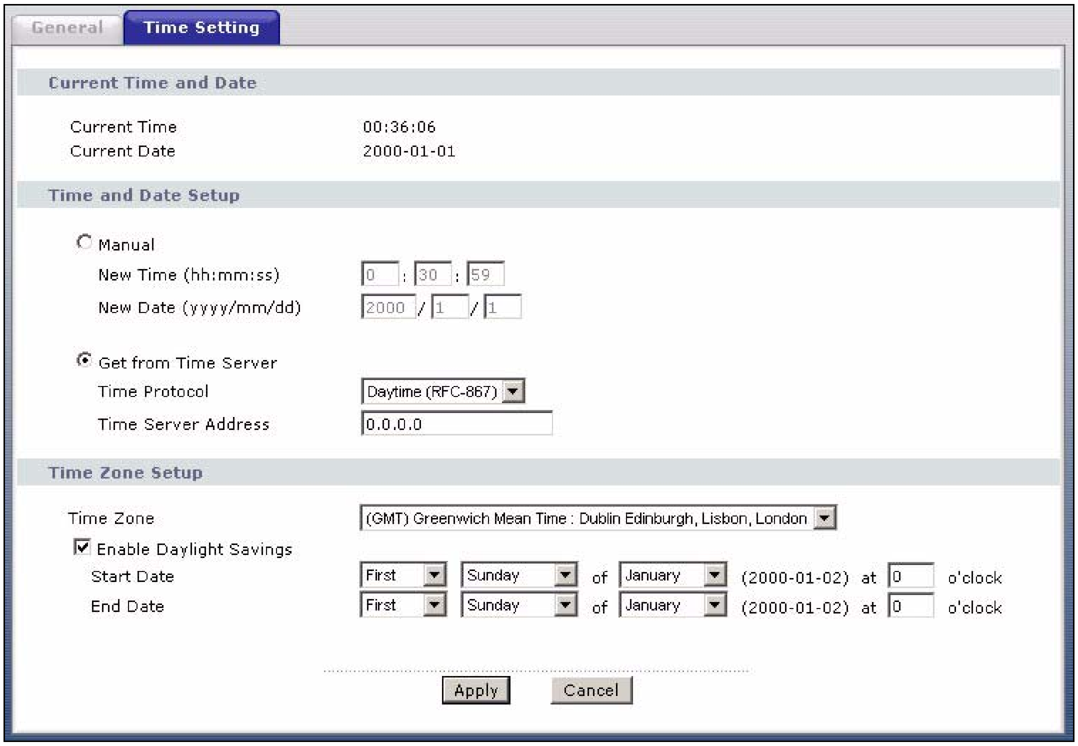
Table 89 System General Setup

LABEL	DESCRIPTION
Admin Password	If you log in with the admin password, you can configure the advanced features as well as the wizard setup on the ZyXEL Device.
Old Password	Type the default admin password (**1234**) or the existing password you use to access the system for configuring advanced features.
New Password	Type your new system password (up to 30 characters). Note that as you type a password, the screen displays a (*) for each character you type. After you change the password, use the new password to access the ZyXEL Device.
Retype to Confirm	Type the new password again for confirmation.
Apply	Click **Apply** to save your changes back to the ZyXEL Device.
Cancel	Click **Cancel** to begin configuring this screen afresh.

17.2 Time Setting

To change your ZyXEL Device’s time and date, click **Maintenance > System > Time Setting**. The screen appears as shown. Use this screen to configure the ZyXEL Device’s time based on your local time zone.

Figure 135 System Time Setting



Current Time and Date

Current Time	00:36:06
Current Date	2000-01-01

Time and Date Setup

○ Manual

New Time (hh:mm:ss)	0 : 30 : 59
New Date (yyyy/mm/dd)	2000 / 1 / 1

● Get from Time Server

Time Protocol	Daytime (RFC-867)
Time Server Address	0.0.0.0

Time Zone Setup

Time Zone: (GMT) Greenwich Mean Time : Dublin Edinburgh, Lisbon, London

☑ Enable Daylight Savings

Start Date	First	Sunday	of	January	(2000-01-02)	at	0	o'clock
End Date	First	Sunday	of	January	(2000-01-02)	at	0	o'clock

The following table describes the fields in this screen.

Table 90 System Time Setting

LABEL	DESCRIPTION
Current Time and Date	
Current Time	This field displays the time of your ZyXEL Device. Each time you reload this page, the ZyXEL Device synchronizes the time with the time server.
Current Date	This field displays the date of your ZyXEL Device. Each time you reload this page, the ZyXEL Device synchronizes the date with the time server.
Time and Date Setup	
Manual	Select this radio button to enter the time and date manually. If you configure a new time and date, Time Zone and Daylight Saving at the same time, the new time and date you entered has priority and the Time Zone and Daylight Saving settings do not affect it.
New Time (hh:mm:ss)	This field displays the last updated time from the time server or the last time configured manually. When you set **Time and Date Setup** to **Manual**, enter the new time in this field and then click **Apply**.
New Date (yyyy/mm/dd)	This field displays the last updated date from the time server or the last date configured manually. When you set **Time and Date Setup** to **Manual**, enter the new date in this field and then click **Apply**.
Get from Time Server	Select this radio button to have the ZyXEL Device get the time and date from the time server you specified below.
Time Protocol	Select the time service protocol that your time server uses. Not all time servers support all protocols, so you may have to check with your ISP/network administrator or use trial and error to find a protocol that works. The main difference between them is the format. **Daytime (RFC 867)** format is day/month/year/time zone of the server. **Time (RFC 868)** format displays a 4-byte integer giving the total number of seconds since 1970/1/1 at 0:0:0. The default, **NTP (RFC 1305)**, is similar to Time (RFC 868).
Time Server Address	Enter the IP address or URL (up to 20 extended ASCII characters in length) of your time server. Check with your ISP/network administrator if you are unsure of this information.
Time Zone Setup	
Time Zone	Choose the time zone of your location. This will set the time difference between your time zone and Greenwich Mean Time (GMT).
Enable Daylight Savings	Daylight saving is a period from late spring to early fall when many countries set their clocks ahead of normal local time by one hour to give more daytime light in the evening. Select this option if you use Daylight Saving Time.

Table 90 System Time Setting (continued)

LABEL	DESCRIPTION
Start Date	Configure the day and time when Daylight Saving Time starts if you selected **Enable Daylight Saving**. The **o'clock** field uses the 24 hour format. Here are a couple of examples: Daylight Saving Time starts in most parts of the United States on the first Sunday of April. Each time zone in the United States starts using Daylight Saving Time at 2 A.M. local time. So in the United States you would select **First**, **Sunday**, **April** and type 2 in the **o'clock** field. Daylight Saving Time starts in the European Union on the last Sunday of March. All of the time zones in the European Union start using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select **Last**, **Sunday**, **March**. The time you type in the **o'clock** field depends on your time zone. In Germany for instance, you would type 2 because Germany's time zone is one hour ahead of GMT or UTC (GMT+1).
End Date	Configure the day and time when Daylight Saving Time ends if you selected **Enable Daylight Saving**. The **o'clock** field uses the 24 hour format. Here are a couple of examples: Daylight Saving Time ends in the United States on the last Sunday of October. Each time zone in the United States stops using Daylight Saving Time at 2 A.M. local time. So in the United States you would select **Last**, **Sunday**, **October** and type 2 in the **o'clock** field. Daylight Saving Time ends in the European Union on the last Sunday of October. All of the time zones in the European Union stop using Daylight Saving Time at the same moment (1 A.M. GMT or UTC). So in the European Union you would select **Last**, **Sunday**, **October**. The time you type in the **o'clock** field depends on your time zone. In Germany for instance, you would type 2 because Germany's time zone is one hour ahead of GMT or UTC (GMT+1).
Apply	Click **Apply** to save your changes back to the ZyXEL Device.
Cancel	Click **Cancel** to begin configuring this screen afresh.

CHAPTER 18
Logs

This chapter contains information about configuring general log settings and viewing the ZyXEL Device's logs. Refer to the appendix for example log message explanations.

18.1 Logs Overview

The web configurator allows you to choose which categories of events and/or alerts to have the ZyXEL Device log and then display the logs or have the ZyXEL Device send them to an administrator (as e-mail) or to a syslog server.

18.1.1 Alerts and Logs

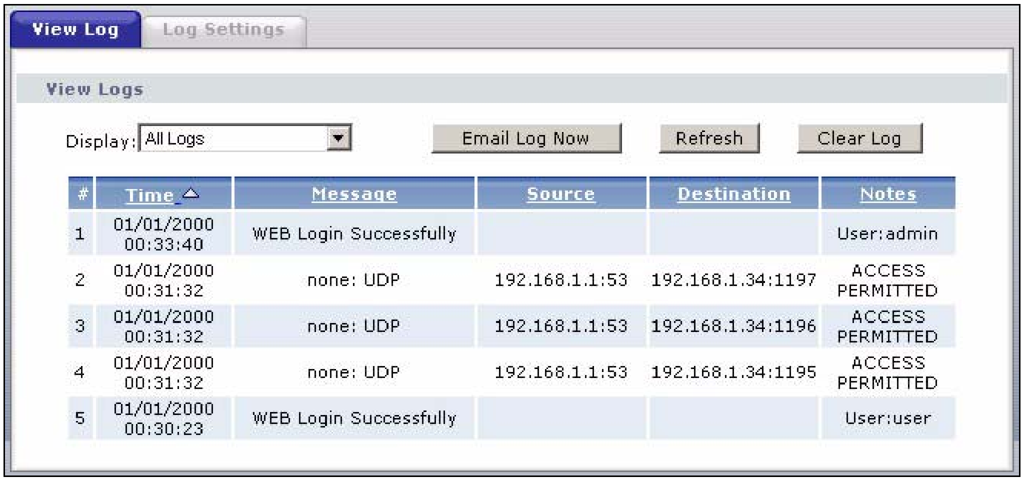
An alert is a type of log that warrants more serious attention. They include system errors, attacks (access control) and attempted access to blocked web sites. Some categories such as **System Errors** consist of both logs and alerts. You may differentiate them by their color in the **View Log** screen. Alerts display in red and logs display in black.

18.2 Viewing the Logs

Click **Maintenance > Logs** to open the **View Log** screen. Use the **View Log** screen to see the logs for the categories that you selected in the **Log Settings** screen (see Section 18.3 on page 233).

Log entries in red indicate alerts. The log wraps around and deletes the old entries after it fills. Click a column heading to sort the entries. A triangle indicates ascending or descending sort order.

Figure 136 View Log



Display: All Logs

#	Time	Message	Source	Destination	Notes
1	01/01/2000 00:33:40	WEB Login Successfully			User:admin
2	01/01/2000 00:31:32	none: UDP	192.168.1.1:53	192.168.1.34:1197	ACCESS PERMITTED
3	01/01/2000 00:31:32	none: UDP	192.168.1.1:53	192.168.1.34:1196	ACCESS PERMITTED
4	01/01/2000 00:31:32	none: UDP	192.168.1.1:53	192.168.1.34:1195	ACCESS PERMITTED
5	01/01/2000 00:30:23	WEB Login Successfully			User:user

The following table describes the fields in this screen.

Table 91 View Log

LABEL	DESCRIPTION
Display	The categories that you select in the **Log Settings** screen display in the drop-down list box. Select a category of logs to view; select **All Logs** to view logs from all of the log categories that you selected in the **Log Settings** page.
Time	This field displays the time the log was recorded.
Message	This field states the reason for the log.
Source	This field lists the source IP address and the port number of the incoming packet.
Destination	This field lists the destination IP address and the port number of the incoming packet.
Notes	This field displays additional information about the log entry.
Email Log Now	Click **Email Log Now** to send the log screen to the e-mail address specified in the **Log Settings** page (make sure that you have first filled in the **E-mail Log Settings** fields in **Log Settings**).
Refresh	Click **Refresh** to renew the log screen.
Clear Log	Click **Clear Log** to delete all the logs.

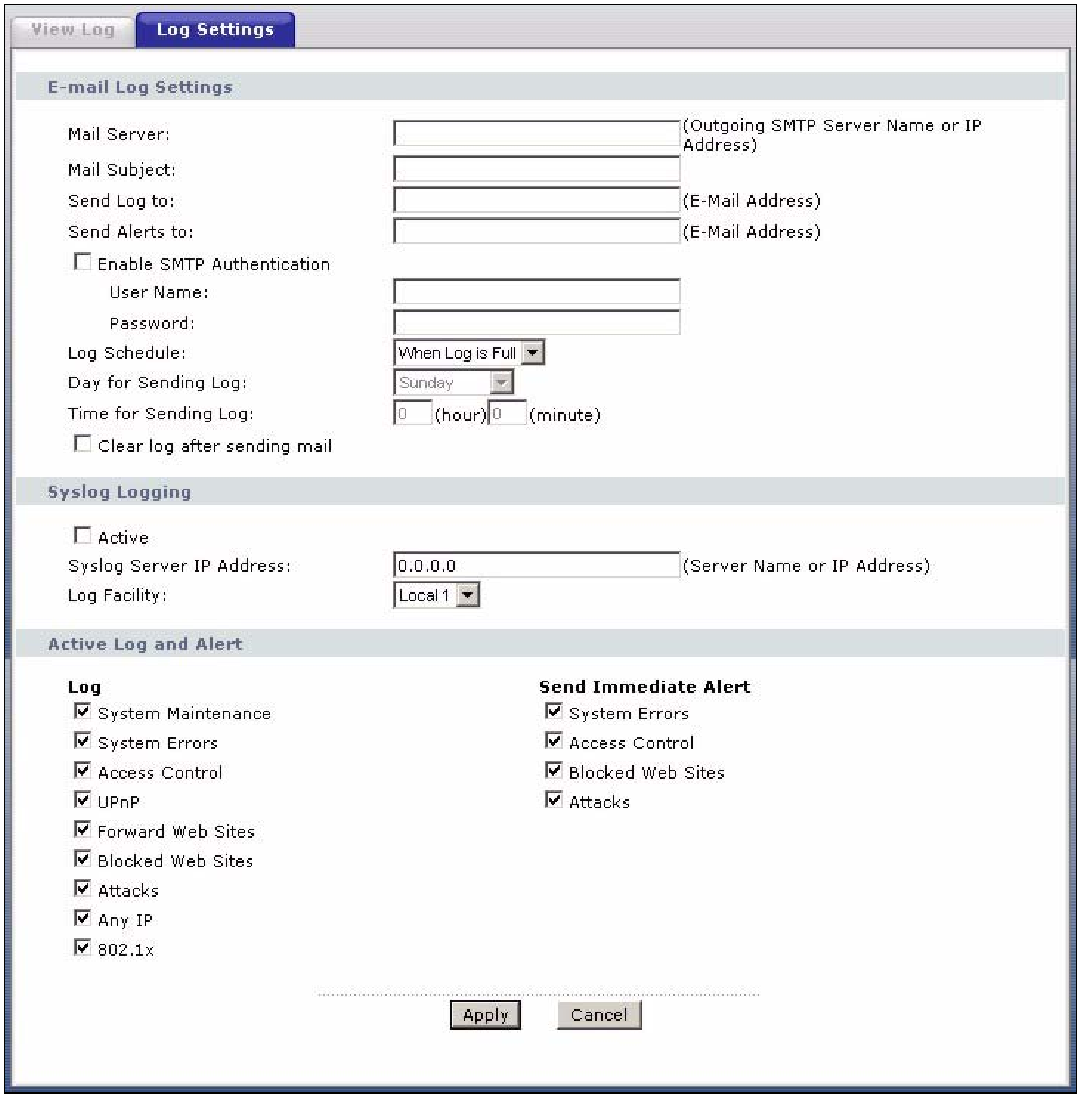
18.3 Configuring Log Settings

Use the **Log Settings** screen to configure to where the ZyXEL Device is to send logs; the schedule for when the ZyXEL Device is to send the logs and which logs and/or immediate alerts the ZyXEL Device is to record. See Section 18.1 on page 232 for more information.

To change your ZyXEL Device's log settings, click **Maintenance > Logs** > **Log Settings**. The screen appears as shown.

Alerts are e-mailed as soon as they happen. Logs may be e-mailed as soon as the log is full. Selecting many alert and/or log categories (especially **Access Control**) may result in many e-mails being sent.

Figure 137 Log Settings



E-mail Log Settings

Mail Server: (Outgoing SMTP Server Name or IP Address)

Mail Subject:

Send Log to: (E-Mail Address)

Send Alerts to: (E-Mail Address)

□ Enable SMTP Authentication

User Name:

Password:

Log Schedule: When Log is Full

Day for Sending Log: Sunday

Time for Sending Log: 0 (hour) 0 (minute)

□ Clear log after sending mail

Syslog Logging

□ Active

Syslog Server IP Address: 0.0.0.0 (Server Name or IP Address)

Log Facility: Local 1

Active Log and Alert

Log	Send Immediate Alert
☑ System Maintenance	☑ System Errors
☑ System Errors	☑ Access Control
☑ Access Control	☑ Blocked Web Sites
☑ UPnP	☑ Attacks
☑ Forward Web Sites	
☑ Blocked Web Sites	
☑ Attacks	
☑ Any IP	
☑ 802.1x	

The following table describes the fields in this screen.

Table 92 Log Settings

LABEL	DESCRIPTION
E-mail Log Settings	
Mail Server	Enter the server name or the IP address of the mail server for the e-mail addresses specified below. If this field is left blank, logs and alert messages will not be sent via E-mail.
Mail Subject	Type a title that you want to be in the subject line of the log e-mail message that the ZyXEL Device sends. Not all ZyXEL models have this field.

Table 92 Log Settings

LABEL	DESCRIPTION
Send Log To	The ZyXEL Device sends logs to the e-mail address specified in this field. If this field is left blank, the ZyXEL Device does not send logs via e-mail.
Send Alerts To	Alerts are real-time notifications that are sent as soon as an event, such as a DoS attack, system error, or forbidden web access attempt occurs. Enter the E-mail address where the alert messages will be sent. Alerts include system errors, attacks and attempted access to blocked web sites. If this field is left blank, alert messages will not be sent via E-mail.
Enable SMTP Authentication	SMTP (Simple Mail Transfer Protocol) is the message-exchange standard for the Internet. SMTP enables you to move messages from one e-mail server to another. Select the check box to activate SMTP authentication. If mail server authentication is needed but this feature is disabled, you will not receive the e-mail logs.
User Name	Enter the user name (up to 31 characters) (usually the user name of a mail account).
Password	Enter the password associated with the user name above.
Log Schedule	This drop-down menu is used to configure the frequency of log messages being sent as E-mail: • **Daily** • **Weekly** • **Hourly** • **When Log is Full** • **None**. If you select **Weekly** or **Daily**, specify a time of day when the E-mail should be sent. If you select **Weekly**, then also specify which day of the week the E-mail should be sent. If you select **When Log is Full**, an alert is sent when the log fills up. If you select **None**, no log messages are sent.
Day for Sending Log	Use the drop down list box to select which day of the week to send the logs.
Time for Sending Log	Enter the time of the day in 24-hour format (for example 23:00 equals 11:00 pm) to send the logs.
Clear log after sending mail	Select the checkbox to delete all the logs after the ZyXEL Device sends an E-mail of the logs.
Syslog Logging	The ZyXEL Device sends a log to an external syslog server.
Active	Click **Active** to enable syslog logging.
Syslog Server IP Address	Enter the server name or IP address of the syslog server that will log the selected categories of logs.
Log Facility	Select a location from the drop down list box. The log facility allows you to log the messages to different files in the syslog server. Refer to the syslog server manual for more information.
Active Log and Alert	
Log	Select the categories of logs that you want to record.
Send Immediate Alert	Select log categories for which you want the ZyXEL Device to send E-mail alerts immediately.
Apply	Click **Apply** to save your customized settings and exit this screen.
Cancel	Click **Cancel** to return to the previously saved settings.