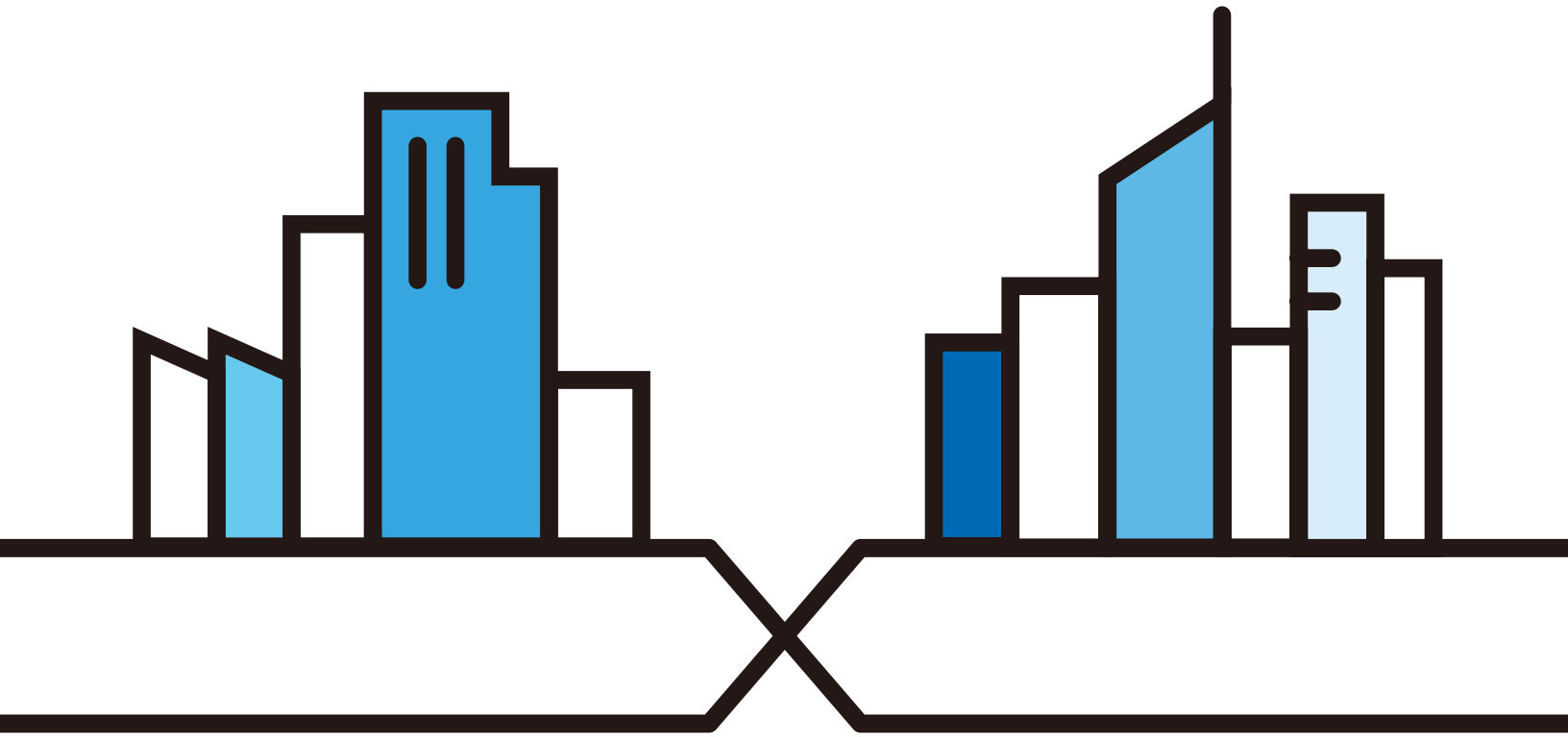
ZYXEL
COMMUNICATIONS

User's Guide

EE/PE Series

Default Login Details	
LAN IP Address	http://192.168.1.1
Login	admin
Password	See the device label

Version 5.15-5.70 Ed 1, 11/2024



IMPORTANT!

READ CAREFULLY BEFORE USE.

KEEP THIS GUIDE FOR FUTURE REFERENCE.

This is a User's Guide for a series of products. Not all products support all firmware features. Screenshots and graphics in this book may differ slightly from your product due to differences in product features or Web Configurator brand style. Every effort has been made to ensure that the information in this manual is accurate.

Related Documentation

- Quick Start Guide

  The Quick Start Guide shows how to connect the Zyxel Device.

- Zyxel One app. Download the Zyxel One app from Google Play or Apple Store to manage the Zyxel Device using a smartphone or tablet. To view Zyxel One app tutorials, please go to *https://service-provider.zyxel.com/app-help/ZyxelOne/FLA/LAN*

- More Information

  Go to ***https://service-provider.zyxel.com/global/en/tech-support*** to find other information on Zyxel Device.

Document Conventions

Warnings and Notes

These are how warnings and notes are shown in this guide.

> **Warnings tell you about things that could harm you or your Zyxel Device.**

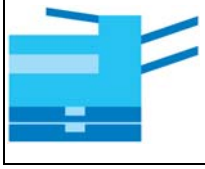
Note: Notes tell you other important information (for example, other things you may need to configure or helpful tips) or recommendations.

Syntax Conventions

- Product labels, screen names, field labels and field choices are all in **bold** font.
- A right angle bracket (>) within a screen name denotes a mouse click. For example, **Network Setting** > **Routing** > **DNS Route** means you first click **Network Setting** in the navigation panel, then the **Routing** submenu, and then finally the **DNS Route** tab to get to that screen.

Icons Used in Figures

Figures in this user guide may use the following generic icons. The Zyxel Device icon is not an exact representation of your Zyxel Device.

Zyxel Device 	Generic Router 	Switch 
Server 	Firewall 	USB Storage Device 
Printer 	4G LTE/5G NR Base Station 	

Contents Overview

Table of Contents

PART I
User's Guide

CHAPTER 1
Introducing the Zyxel Device

1.1 Overview

The Zyxel Device refers to the models listed in the tables.

1.1.1 EE Series

The EE Series are Ethernet gateways that provide Internet access through the Ethernet WAN port or an SFP port.

The following table describes the feature differences of the EE Series by model. For more details about the ports panel, please refer to Section 2.3.1 on page 33 and Section 2.3.2 on page 35.

Table 1 Zyxel Device Comparison Table for EE Series

	EE6510-10	EE6601-00
WiFi 7 Wireless Standard	YES With MLO	YES With MLO
Supported Frequency Bands	2.4 GHz 5 GHz 6 GHz	2.4 GHz 5 GHz 6 GHz
Cellular Backup	YES	YES
Parental Control Schedule	NO	YES
Parental Control URL Filter	NO	NO
Phone Port (VoIP)	USB 3.0 Cellular Backup, File Sharing and Media Server not available	YES
Wall Mount	NO	YES
App Management	Zyxel One	Zyxel One

1.1.2 PE Series

The PE Series are PON (Passive Optical Network) gateways that connect to the Internet though a fiber cable.

The following table describes the feature differences of the PE Series by model. For more details about the ports panel, please refer to Table 2.3.3 on page 37.

Table 2 Zyxel Device Comparison Table for PE Series

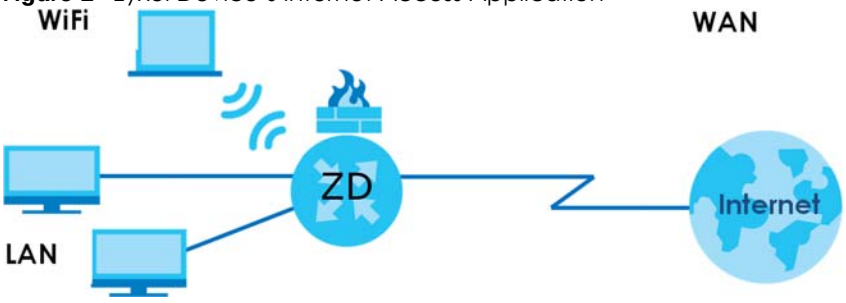
	PE5301-00
WiFi 7 Wireless Standard	YES With MLO
Supported Frequency Bands	2.4 GHz 5 GHz
Cellular Backup	YES
Parental Control Schedule	YES
Parental Control URL Filter	NO
Phone Port (VoIP)	YES
Wall Mount	YES
App Management	Zyxel One

1.2 Example Applications

This section shows a few examples of using the Zyxel Device in various network environments. Note that the Zyxel Device in the figure is just an example Zyxel Device and not your actual Zyxel Device.

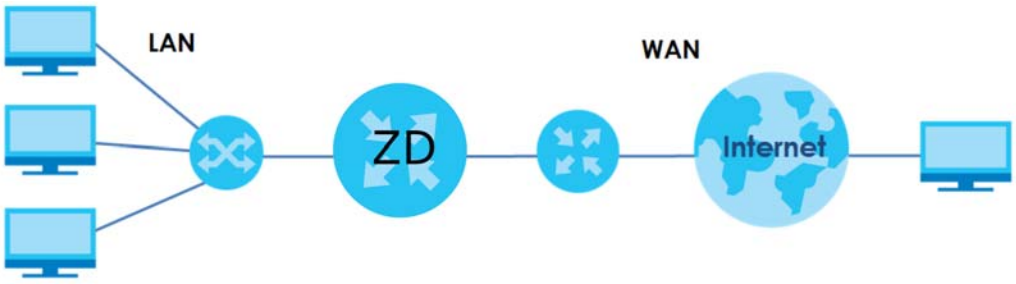
Connect the WAN port to the Internet. Connect computers to the Zyxel Device's LAN ports, or wirelessly, and access the Internet simultaneously.

Figure 1 Zyxel Device's Internet Access Application



You can also configure Firewall on the Zyxel Device for secure Internet access. When the Firewall is on, all incoming traffic from the Internet to your network is blocked by default unless it is initiated from your network. This means that probes from the outside to your network are not allowed, but you can safely browse the Internet and download files.

Figure 2 Zyxel Device's Internet Access Application: Ethernet WAN



1.2.1 WAN Priority

The WAN connection priority is as follows:

1. XGS PON WAN
2. SFP
3. Ethernet WAN
4. DSL
5. Cellular WAN (3G/4G)
   See Section 1.2.6 on page 26 for more information about Cellular backup.

1.2.2 Dual-Band WiFi

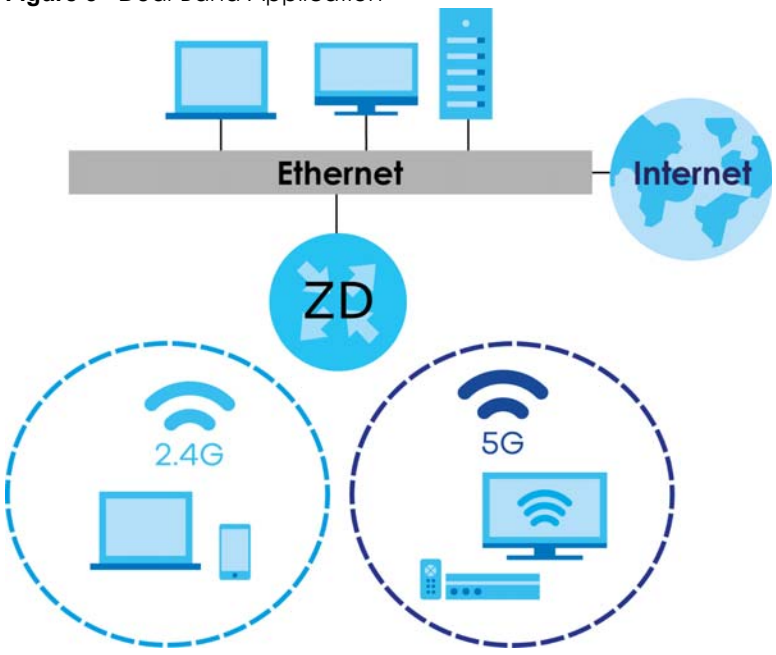
Note: Check Section 1.1 on page 19 to see if your Zyxel Device supports dual-band WiFi.

When WiFi is enabled on the Zyxel Device, IEEE 802.11a/b/g/n/ac/ax compliant clients, such as notebooks, tablets, and smartphones can wirelessly connect to the Zyxel Device to access network resources.

With dual-band, the Zyxel Device is a gateway that can use both 2.4G and 5G WiFi networks at the same time. WiFi clients could use the 2.4 GHz band for regular Internet surfing and downloading while using the 5 GHz band for time sensitive traffic like high-definition video, music, and gaming.

The Zyxel Device supports WiFi6 that is most suitable in areas with a high concentration of users.

Figure 3 Dual-Band Application



1.2.3 Triple-Band WiFi

Note: Check Section 1.1 on page 19 to see if your Zyxel Device supports triple-band WiFi.

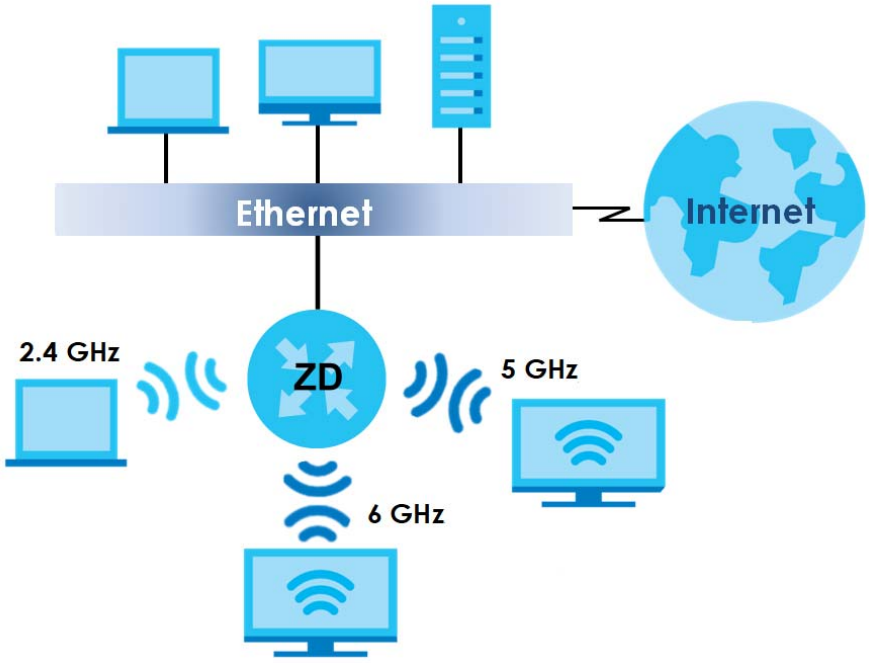
With triple-band, the Zyxel Device can use 2.4 G Hz/5 GHz/6 GHz bands to operate simultaneously.

The 6 GHz band provides less coverage but has the highest amount of channels among the three frequency bands. Use the 6 GHz band for the most congestion-free transmission if your client devices supports WiFi 6E.

Note: Due to each country's regulations on frequency band usage, the available bands (2.4 GHz, 5 GHz, and 6 GHz) may differ by countries or markets the Zyxel Device products are sold to.

WiFi clients could use the 2.4 GHz band for regular Internet surfing and downloading while using the 5 GHz or 6 GHz band for time sensitive traffic like high-definition video, music, and gaming.

Figure 4 Triple-Band Application



WiFi 7 (IEEE802.11be)

WiFi 7 (802.11be) is backwards compatible with WiFi 6 and WiFi 6E. WiFi 7 is a WiFi standard that supports 2.4 GHz, 5 GHz and 6 GHz frequency bands with the following improvements over WiFi 6 and WiFi 6E.

Table 3 WiFi 6, WiFi 6E and WiFi 7 Comparison

FEATURES	WiFi 6	WiFi 6E	WiFi 7
Theoretical Maximum Speed (Up-to)	The same (9.6 Gbps).		46 Gbps
Supported Frequency Bands	2.4 GHz/5 GHz	2.4 GHz/5 GHz/6 GHz	2.4 GHz/5 GHz/6 GHz
Supported Channel Bandwidth	20/40/80/160 MHz	20/40/80/160 MHz	20/40/80/160/320 MHz

Table 3 WiFi 6, WiFi 6E and WiFi 7 Comparison

FEATURES		WiFi 6	WiFi 6E	WiFi 7
Total Spectrum (Up-to)	2.4 GHz	80 MHz		80 MHz
	5 GHz	500 MHz		500 MHz
	6 GHz	Not supported.	1200 MHz	1200 MHz
Other Features (OFDMA/BSS Coloring/TWT/Two-Way MU-MIMO/ Beamforming/1024-QAM)		The same (WiFi 6E inherits all the features from WiFi 6).		WiFi 7 inherits all the features from WiFi 6 and WiFi 6E, with the addition of multi-link operation and preamble puncturing.

Faster Data Transmission

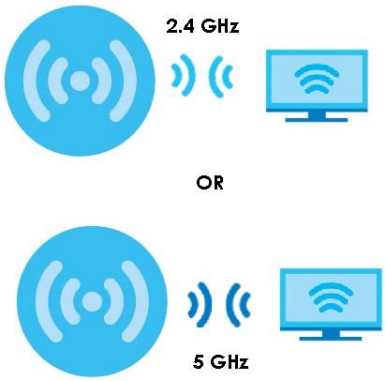
WiFi 7 allows faster data transmission using:

- 4096 QAM (Quadrature Amplitude Modulation) – enhances the amount of data transmitted over the available bandwidth.
- 320 MHz Channel Bandwidth – enlarges the supported channel bandwidth to 320 MHz, allowing higher data throughput.
- Multiple Resource Units (RUs) – allows an AP to allocate multiple RUs to a WiFi client.

Multi-Link Operation (MLO)

An AP can support multiple frequency bands (2.4 GHz, 5 GHz and 6 GHz), but a WiFi client can only connect to the AP using one of these frequency bands. The other frequency bands are unused. The client's data transmission speed depends on the frequency band they are connected to.

Figure 5 Without Multi-Link Operation



WiFi 7 MLO allows a WiFi client to connect to the AP using multiple frequency bands simultaneously. This increases speed and improves reliability of the WiFi connection. MLO makes WiFi 7 ideal for streaming 4K/8K videos, using augmented reality (AR), virtual reality (VR) applications and playing online games.

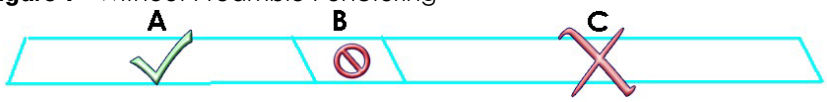
To use MLO, both the AP and the WiFi client have to support MLO.

Figure 6 Multi-Link Operation Example

Preamble Puncturing

In WiFi 6 and earlier, any interference would cause the entire WiFi channel to become unavailable. In the figure below, if part of the WiFi channel (**B**) experiences interference, the rest of the WiFi channel (**C**) becomes unavailable.

Figure 7 Without Preamble Puncturing



WiFi 7 preamble puncturing allows you to block the specific portion of the channel that is experiencing interference while continuing to use the rest of the WiFi channel. In the figure below, if part of the WiFi channel (**B**) experiences interference, the rest of the WiFi channel (**C**) is still available.

Figure 8 Preamble Puncturing Example

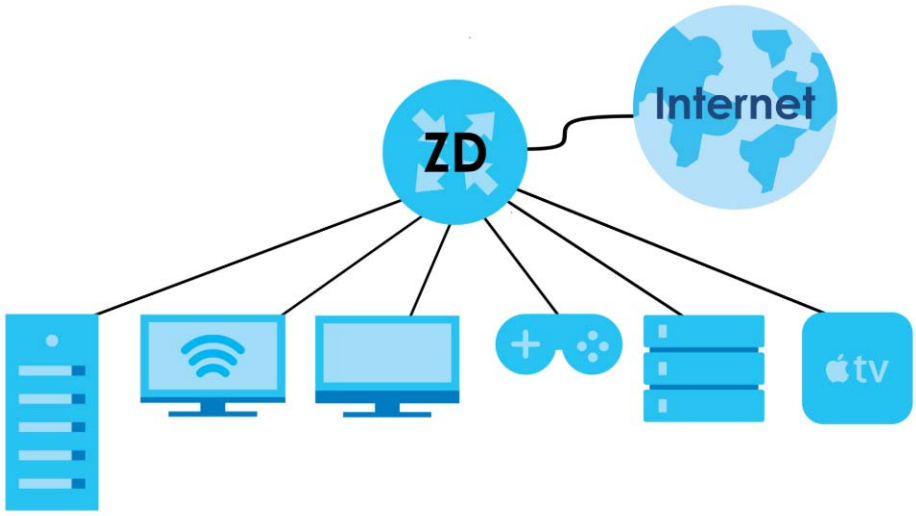
1.2.4 Multi-Gigabit Ethernet

Multi-Gigabit Ethernet supports network speeds of 1 Gbps, 2.5 Gbps, 5 Gbps, and 10 Gbps. See Section 2.3 on page 32 for the speeds your Zyxel Device supports. This technology bridges the gap between low-speed and high-speed connectivity. Multi-Gigabit Ethernet utilizes the existing cable infrastructure (Cat 5e or Cat 6 cables) to reduce the need for costly re-cabling. Use the appropriate Ethernet cable type for each supported speed. See Table 4 on page 25 for the correct Ethernet cable type.

Some network devices, such as gaming computers, servers, NAS devices, or access points, support 2.5 Gbps or 5 Gbps connectivity. The Multi-Gigabit Ethernet technology enables Zyxel Device to automatically detect the required speed of the connected network device.

The speed of connectivity depends on the capability of the connected device and cable. For example, if a network device such as an Access Point (AP) only supports 1 Gigabit connectivity, then the maximum speed is 1 Gbps.

Figure 9 Multi-Gigabit Application



See the following table for the cables required and distance limitation to attain the corresponding speed.

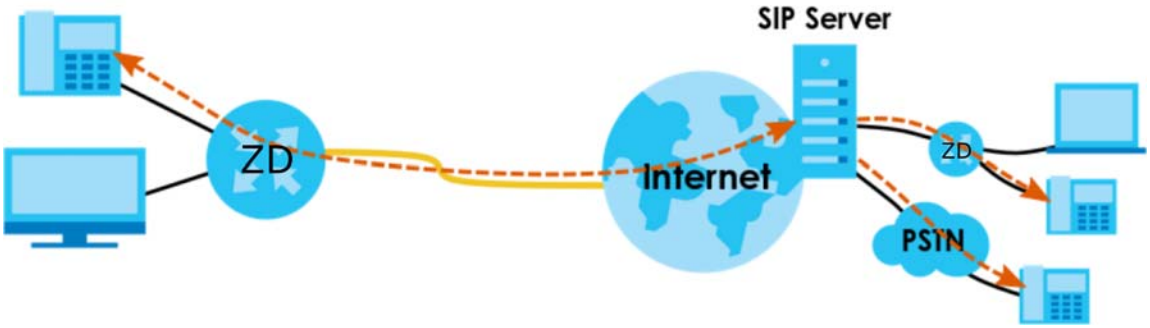
Table 4 Ethernet Cable Types

CABLE	TRANSMISSION SPEED	MAXIMUM DISTANCE	BANDWIDTH CAPACITY
Category 5	100M	100 m	100 MHz
Category 5e or better	1G / 2.5G / 5G*	100 m	100 MHz
Category 6	5G / 10G	100 m / 55 m	250 MHz
Category 6a	10G	100 m	500 MHz
Category 7	10G	100 m	600 MHz
* A high quality Category 5e cable can support 5 Gbps and up to 100 m with no electromagnetic interference.			

1.2.5 VoIP Applications

The Zyxel Device's VoIP function allows you to register up to eight SIP (Session Initiation Protocol) accounts and use the Zyxel Device to make and receive VoIP telephone calls. The Zyxel Device sends your call to a VoIP service provider's SIP server which forwards the calls to either VoIP or PSTN phones.

Figure 10 VoIP Application



1.2.6 Zyxel Device's USB Support

The USB port of the Zyxel Device is used for cellular WAN backup, file-sharing, and media server.

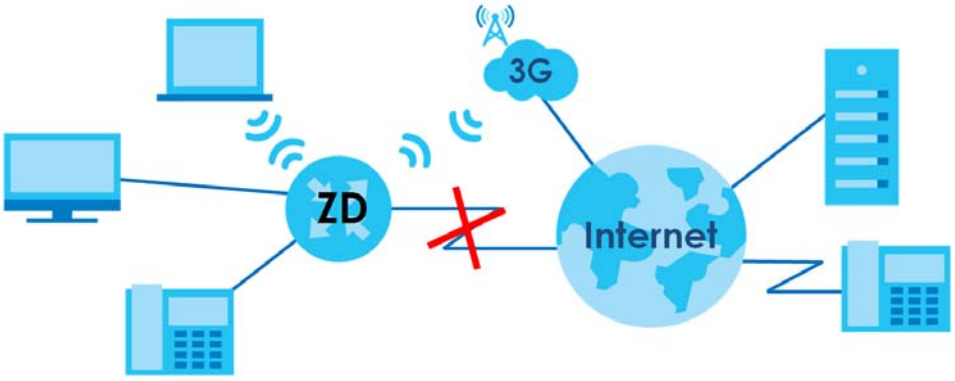
Cellular WAN Backup

Connect a supported cellular USB dongle with an active SIM card to the USB port. This adds a second WAN interface and allows the Zyxel Device to wirelessly access the Internet via a cellular network. The cellular WAN connection is a backup in case the DSL/Ethernet/Fiber connection fails.

To set up a cellular connection, click **Network** > **Broadband** > **Cellular Backup**.

To update the supported cellular USB dongle list, download the latest WWAN package from the Zyxel website and upload it to the Zyxel Device using the **Maintenance** > **Firmware Upgrade** screen.

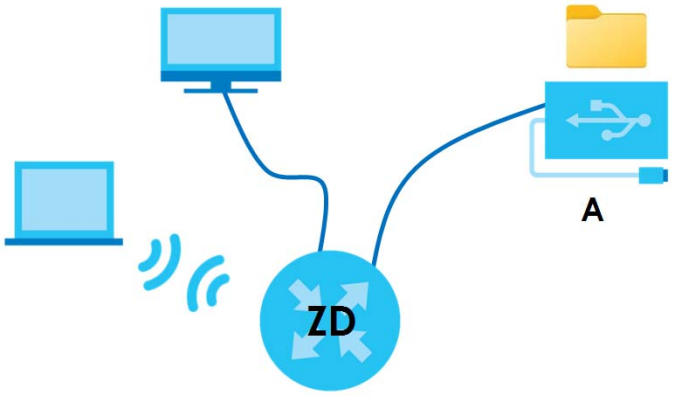
Figure 11 Internet Access Application: Cellular WAN



File Sharing

Use the built-in USB 3.0 port to share files on a USB memory stick or a USB hard drive (**A**).

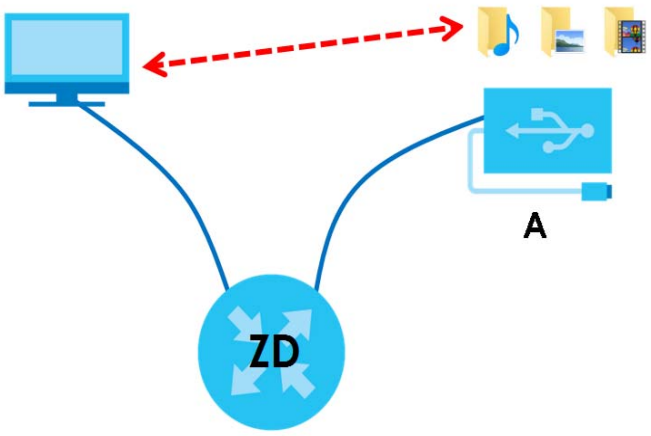
Figure 12 USB File Sharing Application



Media Server

You can also use the Zyxel Device as a media server. This lets anyone on your network play video, music, and photos from a USB device (**A**) connected to the Zyxel Device's USB port (without having to copy them to another computer).

Figure 13 USB Media Server Application



1.3 Ways to Manage the Zyxel Device

Use any of the following methods to manage the Zyxel Device.

- Simple Network Management Protocol (SNMP). Use to monitor and/or manage the Zyxel Device by an SNMP manager.
- Secure Shell (SSH), Telnet. Use for troubleshooting the Zyxel Device by qualified personnel.
- Zyxel One app. Download the Zyxel One app from Google Play or Apple Store to manage the Zyxel Device using a smartphone or tablet. To view Zyxel One app tutorials, please go to *https://service-provider.zyxel.com/app-help/ZyxelOne/FLA/LAN*

1.4 Good Habits for Managing the Zyxel Device

Do the following things regularly to make the Zyxel Device more secure and to manage the Zyxel Device more effectively.

- Change the WiFi and Web Configurator passwords. Use a password that is not easy to guess and that consists of different types of characters, such as numbers and letters.
- Write down the passwords and put it in a safe place.

- Back up the configuration (and make sure you know how to restore it). Restoring an earlier working configuration may be useful if the device becomes unstable or even crashes. If you forget your password, you will have to reset the Zyxel Device to its factory default settings. If you backed up an earlier configuration file, you would not have to totally re-configure the Zyxel Device. You could simply restore your last configuration.

CHAPTER 2
Hardware

2.1 Hardware

This section describes the front and rear panels for each model. If your model is not shown here, refer to the Zyxel Device's Quick Start Guides to see the product drawings and how to make the hardware connections.

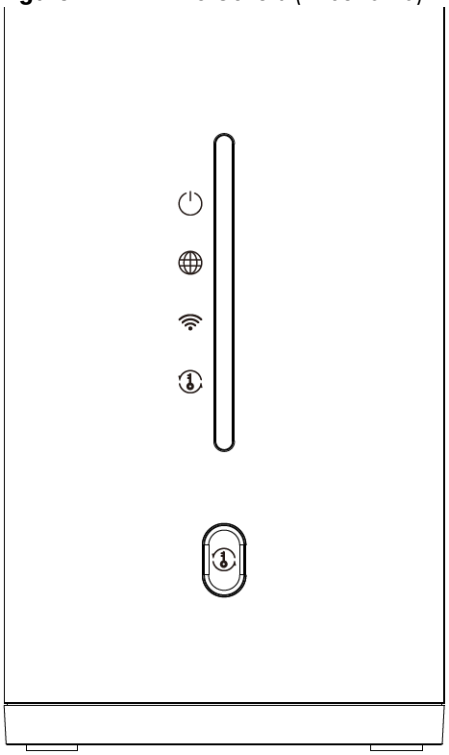
2.2 LED Indicators Panel

The following shows the Zyxel Device LED indicators panel and the LED behaviors.

None of the LEDs are on if the Zyxel Device is not receiving power.

2.2.1 EE6510-10

Figure 14 LED Indicators (EE6510-10)



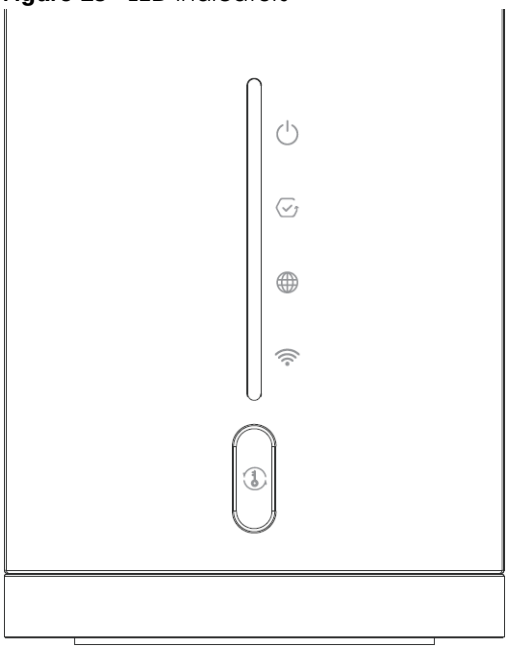
The following are the LED descriptions for your EE6510-10.

Table 5 LED Descriptions (EE6510-10)

LED	COLOR	STATUS	DESCRIPTION
POWER	Green	On	The Zyxel Device is receiving power and ready for use.
		Blinking	The Zyxel Device is booting up.
	Red	On	The Zyxel Device detects an error while self-testing, or there is a device malfunction.
		Blinking	The Zyxel Device is upgrading firmware.
		Off	The Zyxel Device is not receiving power.
INTERNET	Green	On	The Zyxel Device has a WAN IP address (either static or assigned by a DHCP server) and the Internet connection is up.
		Blinking	The Zyxel Device is sending or receiving Internet data.
		Off	There is no Internet connection or the Zyxel Device is in **Bridge** mode.
	Red	On	The Zyxel Device attempted to obtain an WAN IP address but failed. Possible causes are no response from a DHCP server, no PPPoE response, PPPoE authentication failed.
WiFi	Green	On	The 2.4 GHz, 5 GHz or 6 GHz WiFi connection is activated.
		Blinking	The Zyxel Device is sending or receiving data.
		Off	The 2.4 GHz, 5 GHz, and 6 GHz WiFi network is not ready or failed.
WPS	Green	On	The MPro Mesh network is ready for use.
		Blinking	The WPS process is in progress.
		Off	The MPro Mesh network is not ready.
	Amber	Blinking	The IPTV WiFi network WPS is in progress. See Section 2.3.5 on page 41 for more information about the IPTV WiFi network.

2.2.2 EE6601-00

Figure 15 LED Indicators



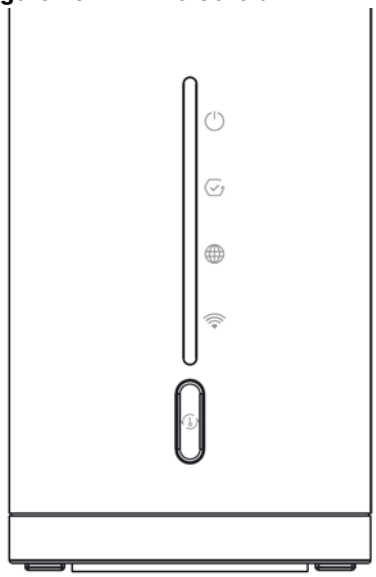
The following are the LED descriptions for your EE6601-00.

Table 6 LED Descriptions (EE6601-00)

LED	COLOR	STATUS	DESCRIPTION
Status	Green	On	All phone ports are on-hook. An SIP account is registered for at least one phone port, and there is no voice message in the corresponding SIP account.
		Blinking	At least one telephone connected to one of the phone ports has its receiver off the hook or there is an incoming call. There is no voice message in the corresponding SIP account.
	Amber	On	All phone ports are on-hook. SIP account registration failed.
		Off	All phone ports are on-hook. The VoIP function is disabled, or there is no registered SIP account defined for any of the phone ports.
INTERNET	Green	On	The Zyxel Device has a WAN IP address (either static or assigned by a DHCP server) and the Internet connection is up.
		Blinking	The Zyxel Device is sending or receiving traffic.
		Off	There is no Internet connection or the gateway is in bridged mode.
	Red	On	The Zyxel Device attempted to obtain an WAN IP but failed. Possible causes are no response from a DHCP server, no PPPoE response, PPPoE authentication failed.
WiFi	Green	On	The WiFi is activated.
		Blinking	The Zyxel Device is communicating with WiFi clients.
	Amber	Blinking	The Zyxel Device is setting up a WPS connection with a WiFi client.
		Off	The WiFi network is not activated.

2.2.3 PE5301-00

Figure 16 LED Indicators



The following are the LED descriptions for your PE5301-00.

Table 7 LED Descriptions (PE5301-00)

LED	COLOR	STATUS	DESCRIPTION
Status	Green	On	All phone ports are on-hook. An SIP account is registered for at least one phone port, and there is no voice message in the corresponding SIP account. PON registration is successful.
		Blinking	At least one telephone connected to one of the phone ports has its receiver off the hook or there is an incoming call. There is no voice message in the corresponding SIP account.
	Amber	On	All phone ports are on-hook. SIP account registration failed.
		Blinking	PON registration is in progress.
	Off		All phone ports are on-hook. The VoIP function is disabled, or there is no registered SIP account defined for any of the phone ports.
INTERNET	Green	On	The Zyxel Device has a WAN IP address (either static or assigned by a DHCP server) and the Internet connection is up.
		Blinking	The Zyxel Device is sending or receiving traffic.
	Red	On	The Zyxel Device attempted to obtain an WAN IP but failed. Possible causes are no response from a DHCP server, no PPPoE response, PPPoE authentication failed.
	Off		There is no Internet connection or the gateway is in bridged mode.
WiFi / WPS	Green	On	The WiFi is activated.
		Blinking	The Zyxel Device is communicating with WiFi clients.
	Amber	Blinking	The Zyxel Device is setting up a WPS connection with a WiFi client.
	Off		The WiFi network is not activated. The WPS process was expired or successful.

2.3 Ports Panel

The following shows the Zyxel Device ports panel and connection ports.

2.3.1 EE6510-10

Figure 17 Rear Panel

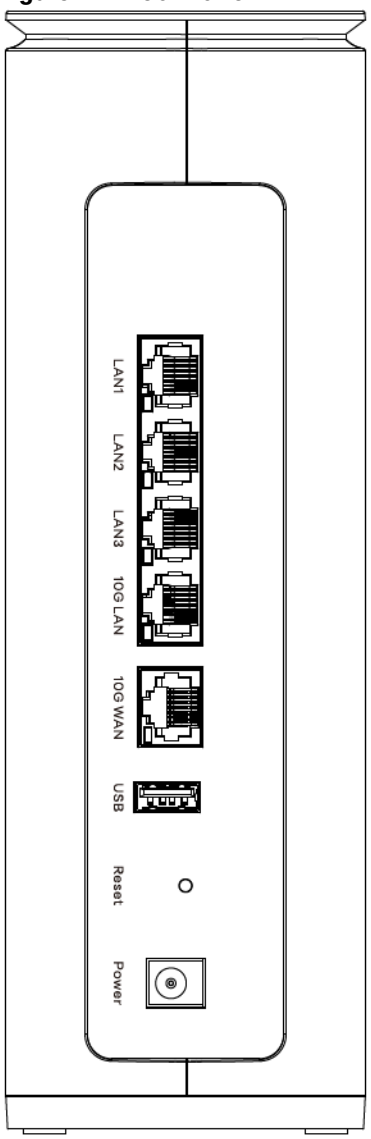
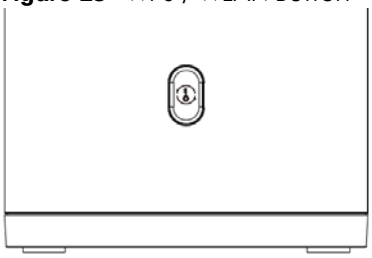


Figure 18 WPS / WLAN Button



The following table describes the items on the ports panels of EE6510-10.

Table 8 Panel Ports and Buttons

LABEL	DESCRIPTION
10G WAN	The 10G WAN port is a multi-gigabit Ethernet port that supports connection speeds of 1 Gbps, 2.5 Gbps, and 10 Gbps. Connect an Ethernet cable to the **10G WAN** port for an (up to) 10 Gbps Ethernet connection.
10G LAN	The 10G LAN port is a multi-gigabit Ethernet port that supports connection speeds of 1 Gbps, 2.5 Gbps, and 10 Gbps. Connect computers or other Ethernet devices to the **10G LAN** port for Internet access with speed up to 10 Gbps.
LAN1–3	LAN1 – LAN3 are 1G ports supporting speeds of 100/1000 Mbps. Connect computers or other Ethernet devices to Ethernet ports for Internet access.
USB	The USB port is used for cellular WAN backup, file-sharing, and media server.
Reset	Press the button for more than 5 seconds to return the Zyxel Device to the factory defaults.
Power	Connect the power adapter and press the **ON/OFF** button to start the device.
WPS	Press the **WPS** button once more than 1 second to quickly setup a secure WiFi connection between the device and a WPS-compatible client.

2.3.2 EE6601-00

Figure 19 Rear Panel

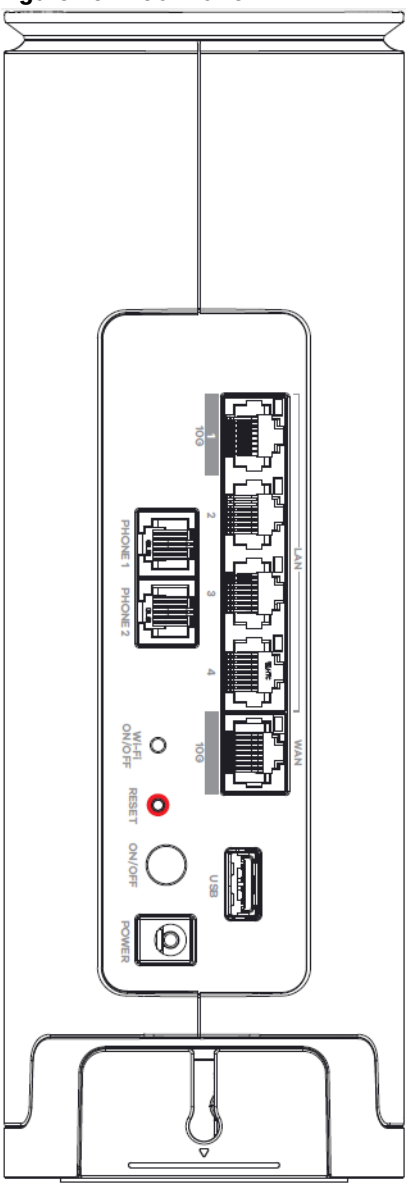
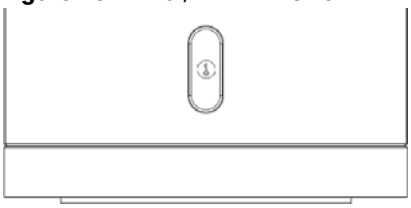


Figure 20 WPS / WLAN Button



The following table describes the items on the ports panels of EE6601-00.

Table 9 Panel Ports and Buttons

LABEL	DESCRIPTION
10G WAN	The 10G WAN port is a multi-gigabit Ethernet port that supports connection speeds of 1 Gbps, 2.5 Gbps, 5 Gbps, and 10 Gbps. Connect an Ethernet cable to the **10G WAN** port for an (up to) 10 Gbps Ethernet connection.
10G LAN (LAN1)	The 10G LAN port is a multi-gigabit Ethernet port that supports connection speeds of 1 Gbps, 2.5 Gbps, 5 Gbps, and 10 Gbps. Connect computers or other Ethernet devices to the **10G LAN** port for Internet access with speed up to 10 Gbps.
LAN2 – LAN4	LAN2 – LAN4 are 1G ports supporting speeds of 100/1000 Mbps. Connect computers or other Ethernet devices to Ethernet ports for Internet access.
USB	The USB port is used for cellular WAN backup, file-sharing, and media server.
PHONE1/2	Connect analog phones to the **PHONE** ports with RJ-11 cables for VoIP services.
Wi-Fi ON/ OFF	Press the **Wi-Fi ON/OFF** button for more than 2 seconds to enable the WiFi function.
RESET	Press the button for more than 5 seconds to return the Zyxel Device to the factory defaults.
POWER	Connect the power adapter and press the **ON/OFF** button to start the device.
WPS	Press the **WPS** button once within 3 seconds to quickly setup a secure WiFi connection between the device and a WPS-compatible client.

2.3.3 PE5301-00

Figure 21 Rear Panel

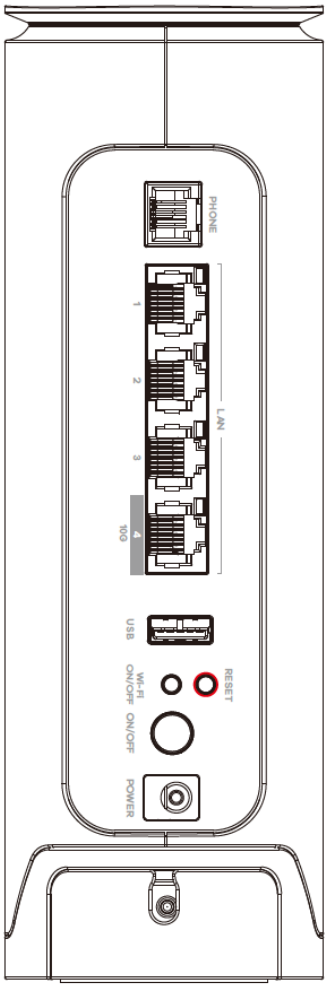


Figure 22 Rear Panel (PON port)

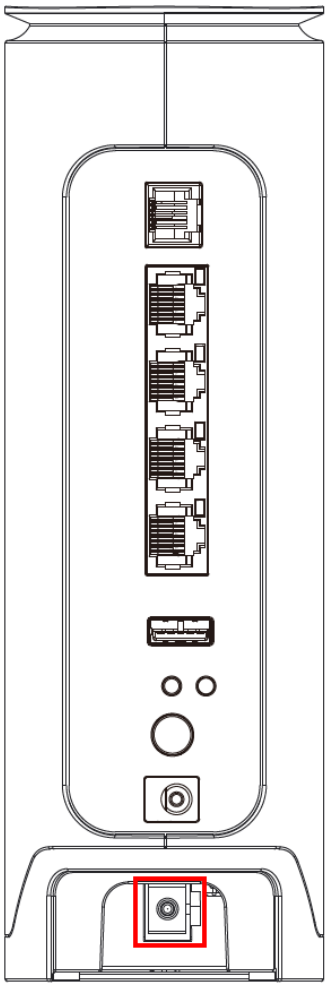
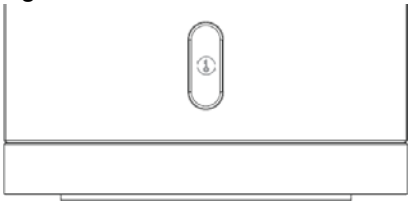


Figure 23 WPS / WLAN Button



The following table describes the items on the port panels of PE5301-00.

Table 10 Panel Ports and Buttons

LABEL	DESCRIPTION
POWER	Connect the power adapter and press the **ON/OFF** button to start the device.
USB	The USB port is used for cellular WAN backup, file-sharing, and media server.
LAN1–3	Connect computers or other Ethernet devices to Ethernet ports for Internet access.
10G LAN (LAN 4)	The 10G LAN port is a multi-gigabit Ethernet port that supports connection speeds of 1 Gbps, 2.5 Gbps, 5 Gbps, and 10 Gbps. Connect computers or other Ethernet devices to the **10G LAN** port for Internet access with speed up to 10 Gbps.
PHONE	Connect analog phones to the **PHONE** ports with RJ-11 cables for VoIP services.

Table 10 Panel Ports and Buttons (continued)

LABEL	DESCRIPTION
Wi-Fi ON/ OFF	Press the **Wi-Fi ON/OFF** button for more than 2 seconds to enable the WiFi function.
WPS	Press the **WPS** button once within 3 seconds to quickly setup a secure WiFi connection between the device and a WPS-compatible client.
RESET	Press the button for more than 5 seconds to return the Zyxel Device to the factory defaults.
PON	Connect the fiber optic cable to the PON (Passive Optical Network) port for Internet access.

2.3.4 Transceiver Installation/Removal

Transceiver Installation

Use the following steps to install an SFP transceiver.

1. Attach an ESD preventive wrist strap to your wrist and to a bare metal surface.
2. Align the transceiver in front of the slot opening.
3. Make sure the latch is in the lock position (latch styles vary), then insert the transceiver into the slot with the exposed section of PCB board facing down.
4. Press the transceiver firmly until it clicks into place.
5. The Zyxel Device automatically detects the installed transceiver. Check the LEDs to verify that it is functioning properly.
6. Remove the dust plugs from the transceiver and cables (dust plug styles vary).
7. Identify the signal transmission direction of the fiber optic cables and the transceiver. Insert the fiber optic cable into the transceiver.

Figure 24 Latch in the Lock Position

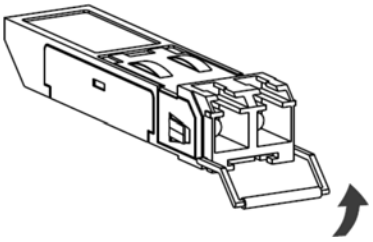


Figure 25 Transceiver Installation Example

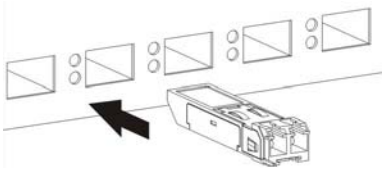
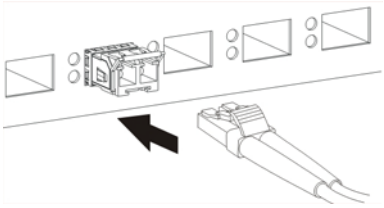


Figure 26 Connecting the Fiber Optic Cables



Transceiver Removal

Use the following steps to remove an SFP transceiver.

1 Attach an ESD preventive wrist strap to your wrist and to a bare metal surface on the chassis.

2 Remove the fiber optic cables from the transceiver.

3 Pull out the latch and down to unlock the transceiver (latch styles vary).

Note: Make sure the transceiver's latch is pushed all the way down, so the transceiver can be pulled out successfully.

4 Pull the latch, or use your thumb and index finger to grasp the tabs on both sides of the transceiver, and carefully slide it out of the slot.

Note: Do NOT pull the transceiver out by force. You could damage it. If the transceiver will not slide out, grasp the tabs on both sides of the transceiver with a slight up or down motion and carefully slide it out of the slot. If unsuccessful, contact Zyxel Support to prevent damage to your Zyxel Device and transceiver.

5 Insert the dust plug into the ports on the transceiver and the cables.

Figure 27 Removing the Fiber Optic Cables

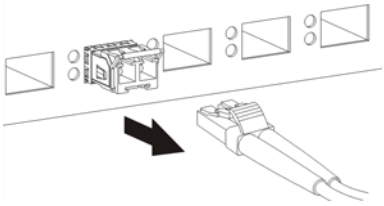


Figure 28 Opening the Transceiver's Latch Example

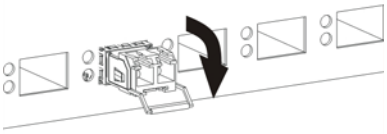
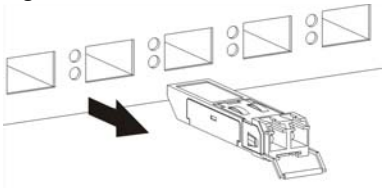


Figure 29 Transceiver Removal Example



2.3.5 WPS Button

You can use the **WPS** button to quickly set up a secure WiFi connection between the Zyxel Device and a WPS-compatible client by adding one device at a time.

To Activate WPS

1. Make sure the **POWER** LED is on and not blinking.
2. Press the **WPS** button once within 3 seconds (see the ports panel table of each Zyxel Device model in Section 2.3 on page 32 for more information) and release it.
3. Press the **WPS** button on another WPS-enabled device within range of the Zyxel Device (within 120 seconds). The **WPS** LED flashes green while the Zyxel Device sets up a WPS connection with the other wireless device.
4. Once the connection is successfully made, the **WPS** LED will light off.

2.3.6 RESET Button

If you forget your password or cannot access the Web Configurator, you will need to use the **RESET** button to reload the factory-default configuration file. This means that you will lose all configurations that you had previously. The password will be reset to the factory default (see the device label), and the LAN IP address will be "192.168.1.1".

1. Make sure the **POWER** LED is on (not blinking).
2. To set the device back to the factory default settings, press the **RESET** button for more than 5 seconds or until the **POWER** LED begins to blink and then release it. When the **POWER** LED begins to blink, the defaults have been restored and the device restarts.

CHAPTER 3
Web Configurator

3.1 Overview

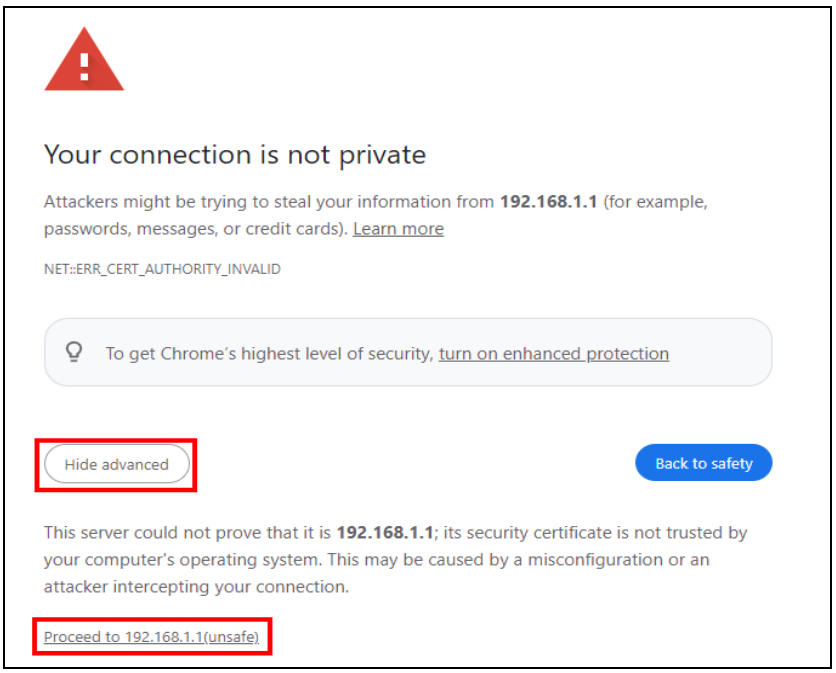
The Web Configurator is an HTML-based management interface that allows easy system setup and management through Internet browser. Use a browser that supports HTML5, such as Microsoft Edge, Mozilla Firefox, or Google Chrome. The recommended minimum screen resolution is 1024 by 768 pixels.

In order to use the Web Configurator you need to allow:

- Web browser pop-up windows from your computer.
- JavaScript (enabled by default).
- Java permissions (enabled by default).

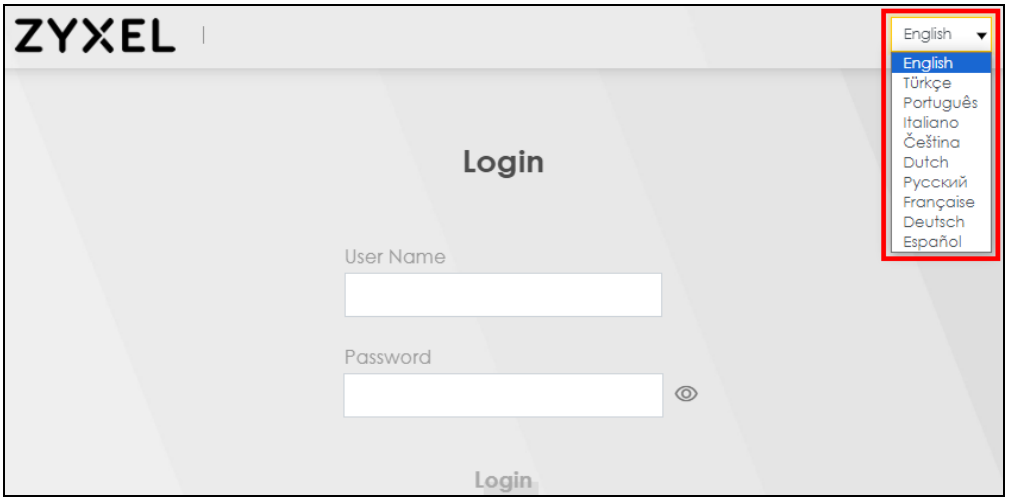
3.1.1 Access the Web Configurator

1. Make sure your Zyxel Device hardware is properly connected (refer to the Quick Start Guide).
2. Make sure your computer has an IP address in the same subnet as the Zyxel Device.
3. Launch your web browser. Type https://192.168.1.1 in your browser address bar.
4. If a "Your connection is not private" message appears, click **Advanced**, then click **Proceed to 192.168.1.1(unsafe)** to go to the login screen.



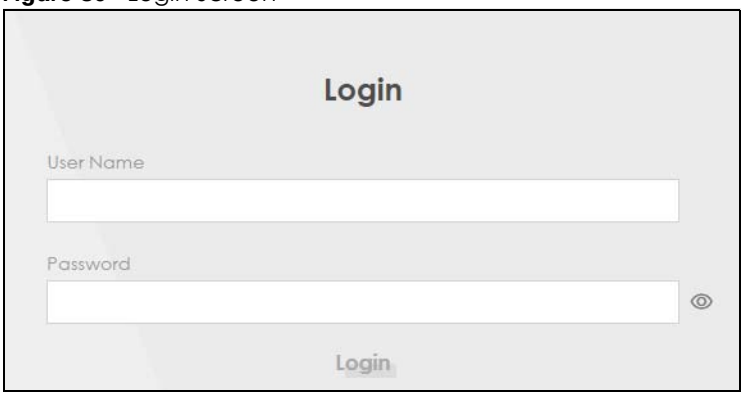
Note: If you see this warning page, it indicates that your browser has failed to verify the Secure Sockets Layer (SSL) certificate, which opens an encrypted connection. You can ignore this message and proceed to 192.168.1.1.

5 A login screen displays. Select the language you prefer (upper right).



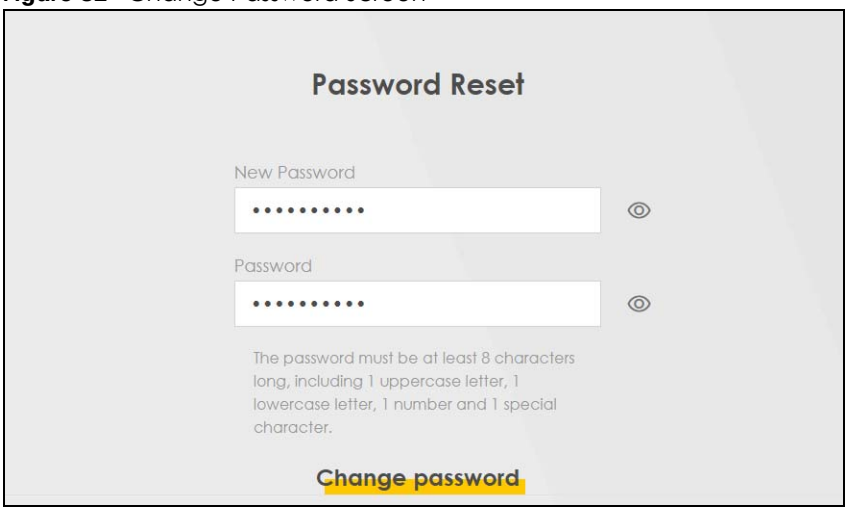
6 To access the administrative Web Configurator and manage the Zyxel Device, enter the default user name **admin** and the randomly assigned default password (see the Zyxel Device label) in the **Login** screen and click **Login**. If you have changed the password, enter your password and click **Login**.

Figure 30 Login Screen



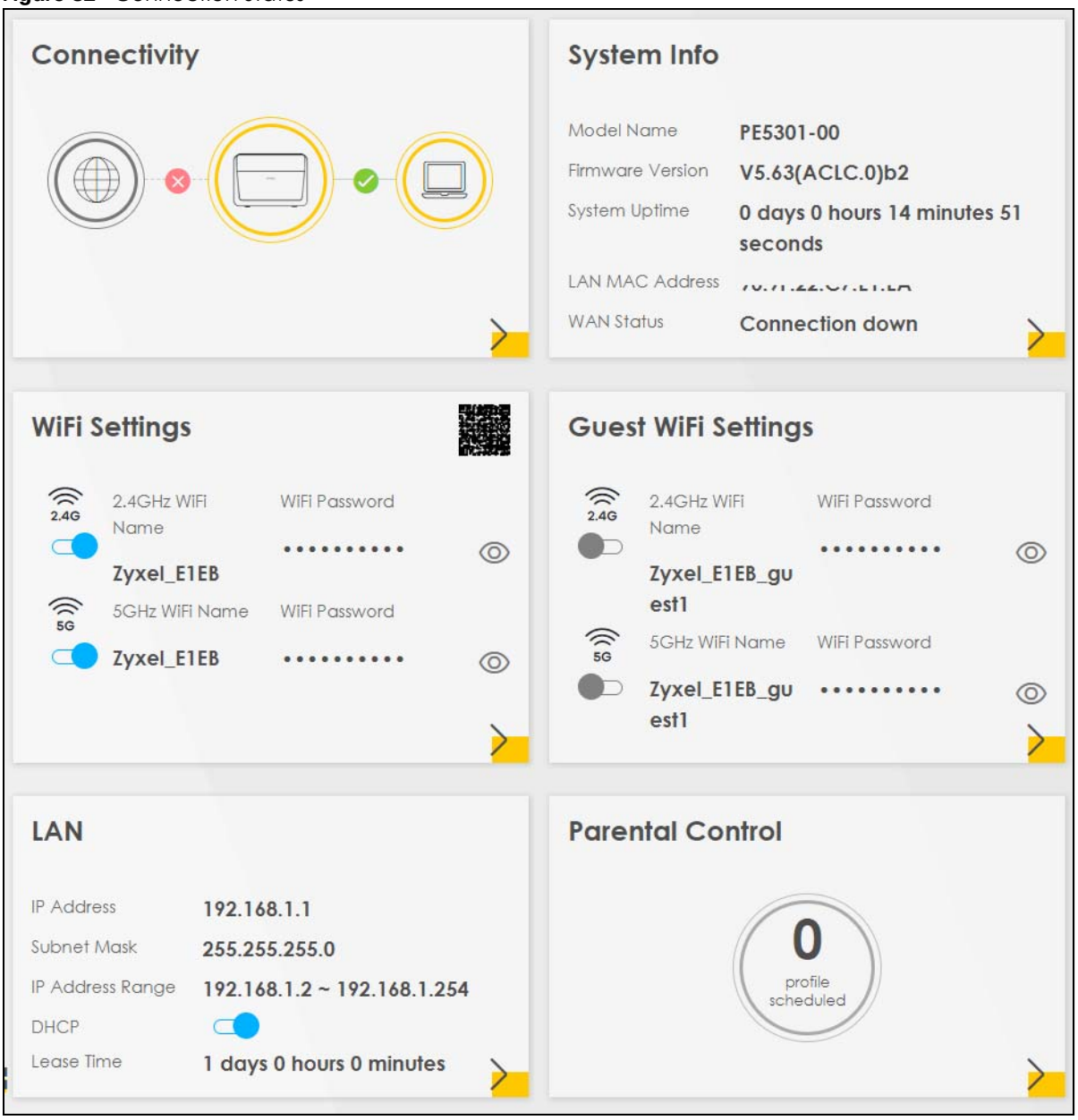
Note: The first time you enter the password, you will be asked to change it. Make sure the new password must be at least 8 characters, must contain at least one uppercase letter, one lowercase letter, one number, and one special character. For some models, the password must contain at least one English character and one number. Please see the password requirement displayed on the screen.

Figure 31 Change Password Screen



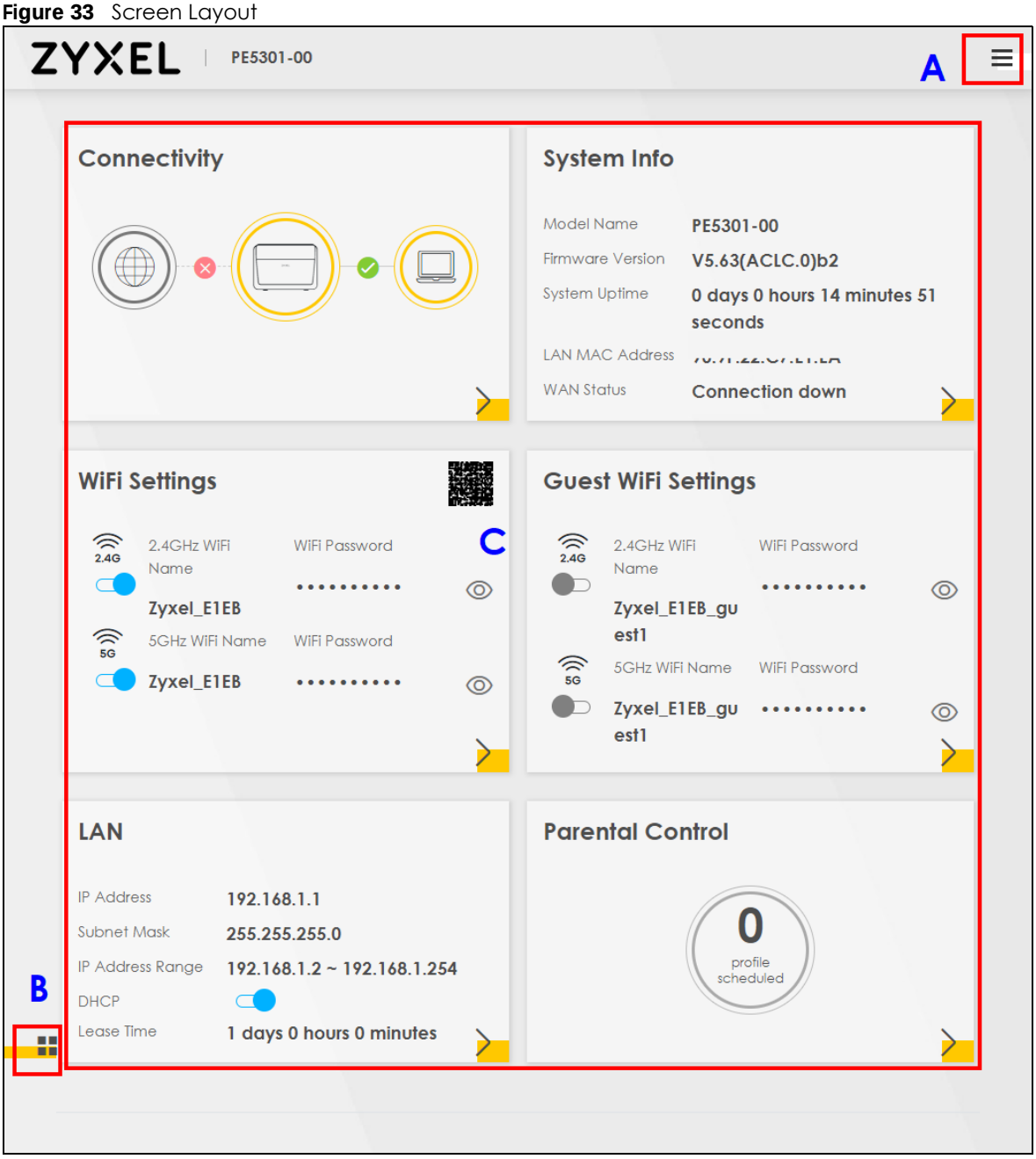
7 The **Connection Status** screen appears. Use this screen to configure basic Internet access and WiFi settings.

Figure 32 Connection Status



3.2 Web Configurator Layout

Figure 33 Screen Layout



As illustrated above, the main screen is divided into these parts:

- **A** – Settings Icon (Navigation Panel and Side Bar)
- **B** – Layout Icon
- **C** – Main Window

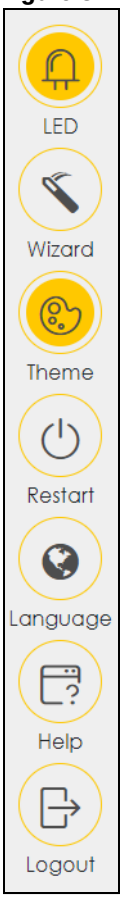
3.2.1 Settings Icon

Click this icon ( ) to see the side bar and navigation panel.

3.2.1.1 Side Bar

The side bar provides some icons on the right hand side.

Figure 34 Side Bar

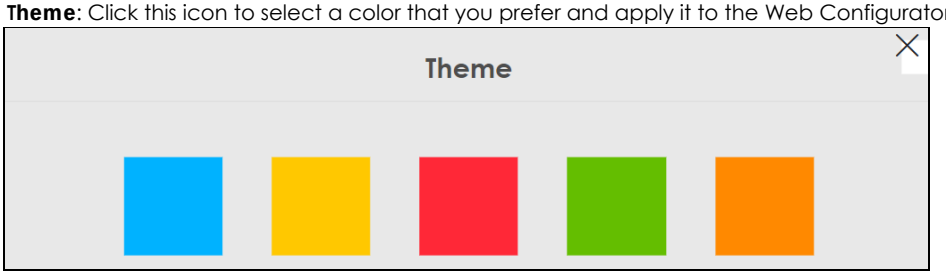


The icons provide the following functions.

Table 11 Web Configurator Icons in the Title Bar

ICON	DESCRIPTION
	**LED**: Click this icon to turn off/on
	**Wizard**: Click this icon to open scree

Table 11 Web Configurator Icons in the Title Bar (continued)

ICON	DESCRIPTION
	**Theme**: Click this icon to select a color that you prefer and apply it to the Web Configurator. 
	**Language**: Select the language you prefer.
	**Help:** Click this link to display web help pages. The help pages provide descriptions for all of the configuration screens.
	**Restart**: Click this icon to reboot the Zyxel Device without turning the power off.
	**Logout**: Click this icon to log out of the Web Configurator.

3.2.1.2 Navigation Panel

Click the menu icon ( ) to display the navigation panel that contains configuration menus and icons (quick links). Click **X** to close the navigation panel.

Use the menu items on the navigation panel to open screens to configure Zyxel Device features. The following tables describe each menu item.

Figure 35 Navigation Panel

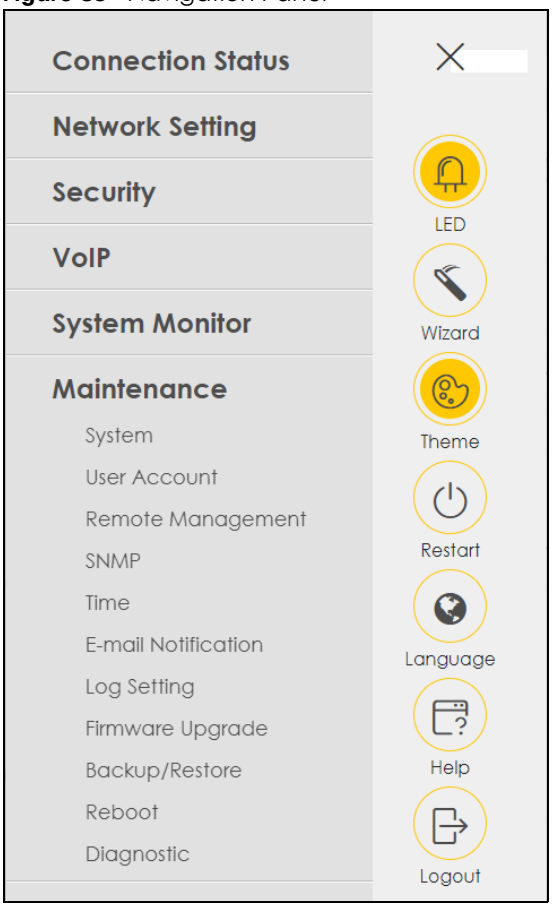


Table 12 Navigation Panel Summary

LINK	TAB	FUNCTION
Connection Status		Use this screen to configure basic Internet access, wireless settings, and parental control settings. This screen also shows the network status of the Zyxel Device and computers/devices connected to it.
Network Setting		
Broadband	Broadband	Use this screen to view and configure ISP parameters, WAN IP address assignment, and other advanced properties. You can also add new WAN connections.
	Cellular Backup	Use this screen to configure a cellular WAN connection as a backup to keep you online if the primary WAN connection fails.
Wireless	General	Use this screen to configure the WiFi settings and WiFi authentication or security settings.
	Guest/More AP	Use this screen to configure multiple BSSs on the Zyxel Device.
	MAC Authentication	Use this screen to block or allow wireless traffic from wireless devices of certain SSIDs and MAC addresses to the Zyxel Device.
	WPS	Use this screen to configure and view your WPS (WiFi Protected Setup) settings.
	WMM	Use this screen to enable or disable WiFi MultiMedia (WMM).
	Others	Use this screen to configure advanced WiFi settings.
	Channel Status	Use this screen to scan WiFi channel noises and view the results.
	MESH	Use this screen to enable or disable Mesh.

Table 12 Navigation Panel Summary (continued)

LINK	TAB	FUNCTION
Home Networking	LAN Setup	Use this screen to configure LAN TCP/IP settings, and other advanced properties.
	Static DHCP	Use this screen to assign specific IP addresses to individual MAC addresses.
	UPnP	Use this screen to turn UPnP and UPnP NAT-T on or off.
	Additional Subnet	Use this screen to configure IP alias and public static IP.
	STB Vendor ID	Use this screen to configure the Vendor IDs of the connected Set Top Box (STB) devices, which have the Zyxel Device automatically create static DHCP entries for the STB devices when they request IP addresses.
	Wake on LAN	Use this screen to remotely turn on a device on the local network.
	TFTP Server Name	Use DHCP option 66 to identify a TFTP server name.
Routing	Static Route	Use this screen to view and set up static routes on the Zyxel Device.
	DNS Route	Use this screen to forward DNS queries for certain domain names through a specific WAN interface to its DNS servers.
	Policy Route	Use this screen to configure policy routing on the Zyxel Device.
	RIP	Use this screen to configure Routing Information Protocol to exchange routing information with other routers.
NAT	Port Forwarding	Use this screen to make your local servers visible to the outside world.
	Port Triggering	Use this screen to change your Zyxel Device's port triggering settings.
	DMZ	Use this screen to configure a default server which receives packets from ports that are not specified in the **Port Forwarding** screen.
	ALG	Use this screen to enable the ALGs (Application Layer Gateways) in the Zyxel Device to allow applications to operate through NAT.
	Address Mapping	Use this screen to change your Zyxel Device's IP address mapping settings.
	Sessions	Use this screen to configure the maximum number of NAT sessions each client host is allowed to have through the Zyxel Device.
	PCP	Use this screen to configure PCP (Port Control Protocol) to allow devices such as web or file sharing servers behind the Zyxel Device to receive incoming traffic.
DNS	DNS Entry	Use this screen to view and configure DNS routes.
	Dynamic DNS	Use this screen to allow a static hostname alias for a dynamic IP address.
VLAN Group	VLAN Group	Use this screen to group and tag VLAN IDs to outgoing traffic from the specified interface.
Interface Grouping	Interface Grouping	Use this screen to map a port to create multiple networks on the Zyxel Device.
USB Service	File Sharing	Use this screen to enable file sharing through the Zyxel Device.
	Media Server	Use this screen to use the Zyxel Device as a media server.
Security		
Firewall	General	Use this screen to configure the security level of your firewall.
	Protocol	Use this screen to add Internet services and configure firewall rules.
	Access Control	Use this screen to enable specific traffic directions for network services.
	DoS	Use this screen to activate protection against Denial of Service (DoS) attacks.
MAC Filter	MAC Filter	Use this screen to block or allow traffic from devices of certain MAC addresses to the Zyxel Device.

Table 12 Navigation Panel Summary (continued)

LINK	TAB	FUNCTION
Home Security	Connected Home Security	Use this screen to set up a URL filter that blocks users on your network from accessing certain websites.
Parental Control	Parental Control	Use this screen to define time periods and days during which the Zyxel Device performs parental control and/or block web sites with the specific URL.
Scheduler Rule	Scheduler Rule	Use this screen to configure the days and times when a configured restriction (such as parental control) is enforced.
Certificates	Local Certificates	Use this screen to view a summary list of certificates and manage certificates and certification requests.
	Trusted CA	Use this screen to view and manage the list of the trusted CAs.
VoIP		
SIP	SIP Account	Use this screen to set up information about your SIP account and configure audio settings such as volume levels for the phones connected to the Zyxel Device.
	SIP Service Provider	Use this screen to configure the SIP server information, and other SIP settings, such as QoS for VoIP calls, outbound proxy, DTMF mode and SIP timers.
	SIP TLS Common	Use this screen to change the default TLS local port if you need to, and select a local certificate for the SIP server to verify the Zyxel Device.
Phone	Phone Device	Use this screen to control which SIP accounts each phone uses to handle outgoing and incoming calls.
	Region	Use this screen to select your location and call service mode.
Call Rule	Call Rule	Use this screen to configure speed dial for SIP phone numbers that you often call.
Call History	Call History	Use this screen to view detailed information for each outgoing call you made or each incoming call from someone calling you. You can also view a summary list of received, dialed and missed calls.
System Monitor		
Log	System Log	Use this screen to view the status of events that occurred to the Zyxel Device. You can export or email the logs.
	Security Log	Use this screen to view all security related events. You can select the level and category of the security events in their proper drop-down list window. Levels include: • Emergency • Alert • Critical • Error • Warning • Notice • Informational • Debugging Categories include: • Account • Attack • Firewall • MAC Filter
Traffic Status	WAN	Use this screen to view the status of all network traffic going through the WAN port of the Zyxel Device.

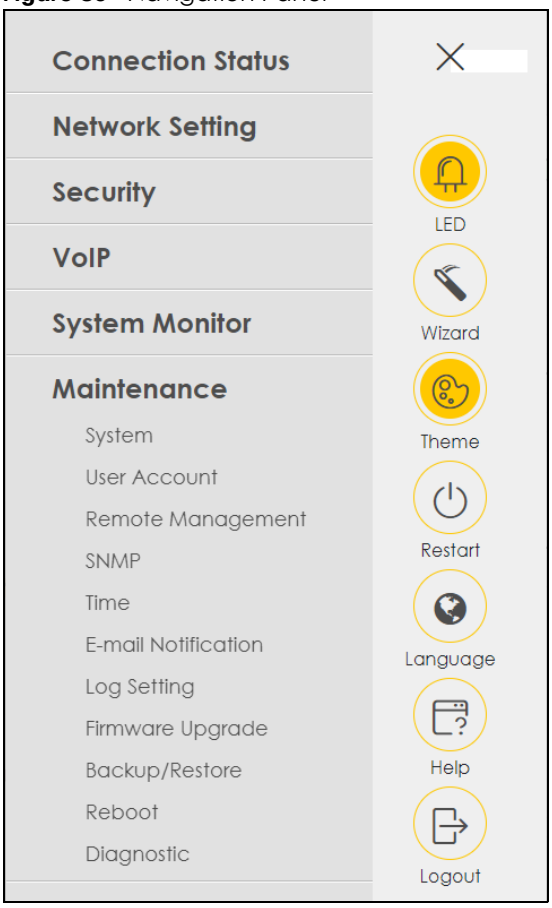
Table 12 Navigation Panel Summary (continued)

LINK	TAB	FUNCTION
	LAN	Use this screen to view the status of all network traffic going through the LAN ports of the Zyxel Device.
	NAT	Use this screen to view NAT statistics for connected hosts.
VoIP Status	VoIP Status	Use this screen to view VoIP registration, current call status and phone numbers for the phone ports.
ARP Table	ARP Table	Use this screen to view the ARP table. It displays the IP and MAC address of each DHCP connection.
Routing Table	Routing Table	Use this screen to view the routing table on the Zyxel Device.
WLAN Station Status	WLAN Station Status	Use this screen to view the wireless stations that are currently associated to the Zyxel Device's WiFi.
Cellular Statistics	Cellular Statistics	Use this screen to look at the cellular Internet connection status.
Optical Signal Status	Optical Signal Status	Use this screen to view the optical fiber transceiver's TX power and RX power level and its temperature.
Maintenance		
System	System	Use this screen to set the Zyxel Device name and Domain name.
User Account	User Account	Use this screen to change the user password on the Zyxel Device.
Remote Management	MGMT Services	Use this screen to enable specific traffic directions for network services.
	Trust Domain	Use this screen to view a list of public IP addresses which are allowed to access the Zyxel Device through the services configured in the **Maintenance** > **Remote Management** screen.
Power Monitor	Power Monitor	Use this screen to view the current and past amount of power consumed by the Zyxel Device.
Time	Time	Use this screen to change your Zyxel Device's time and date.
E-mail Notification	E-mail Notification	Use this screen to configure up to two mail servers and sender addresses on the Zyxel Device.
Log Setting	Log Settings	Use this screen to change your Zyxel Device's log settings.
Firmware Upgrade	Firmware Upgrade	Use this screen to upload firmware to your Zyxel Device.
Backup/Restore	Backup/Restore	Use this screen to backup and restore your Zyxel Device's configuration (settings) or reset the factory default settings.
Reboot	Reboot	Use this screen to reboot the Zyxel Device / Zyxel Mesh system without turning the power off.
Diagnostic	Diagnostic	Use this screen to identify problems with the Internet connection. You can use Ping, Ping 6, TraceRoute, TraceRoute 6, or Nslookup to help you identify problems.

3.2.1.3 Dashboard

Use the menu items in the navigation panel on the right to open screens to configure the Zyxel Device's features.

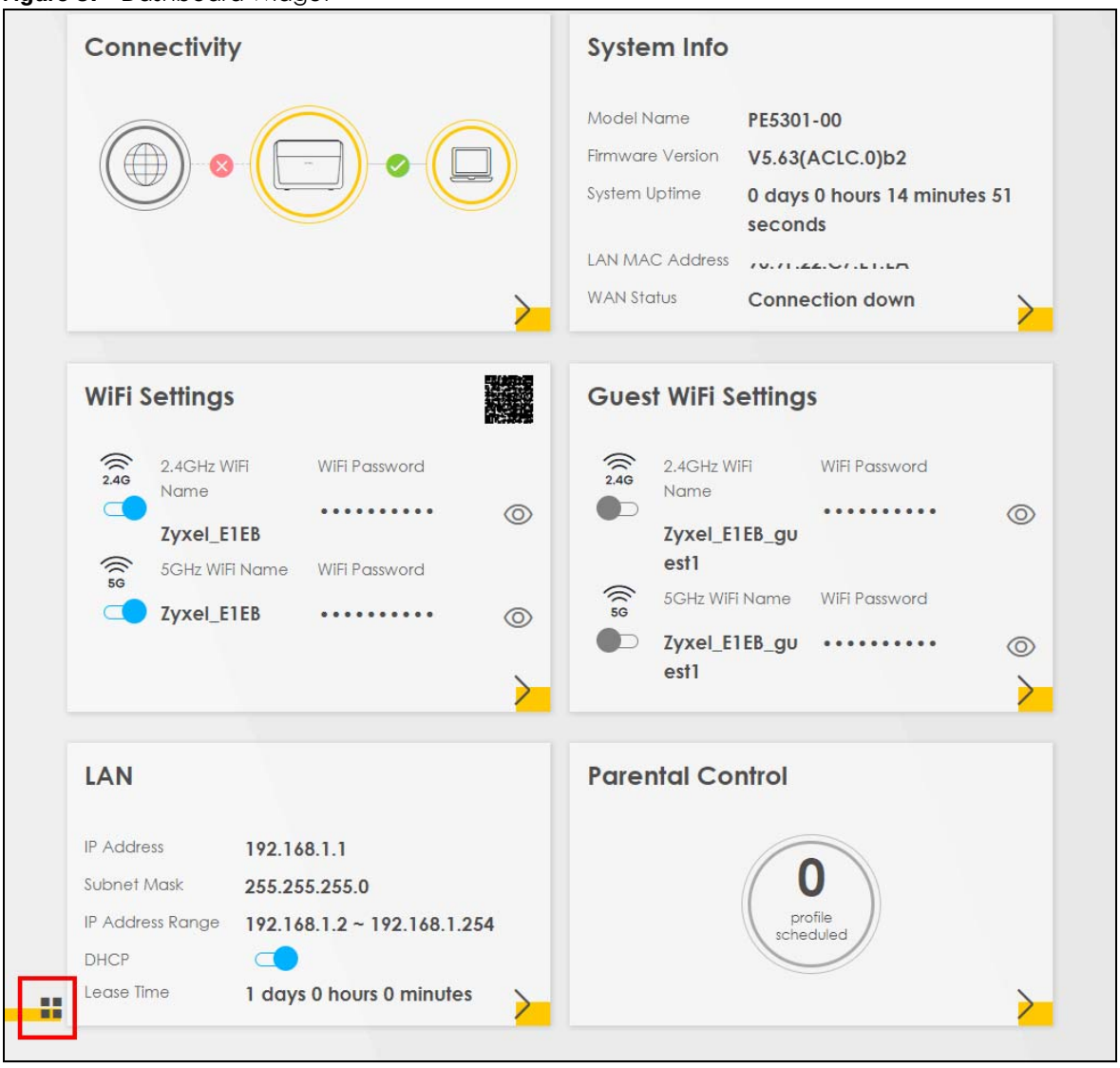
Figure 36 Navigation Panel



3.2.2 Widget Icon

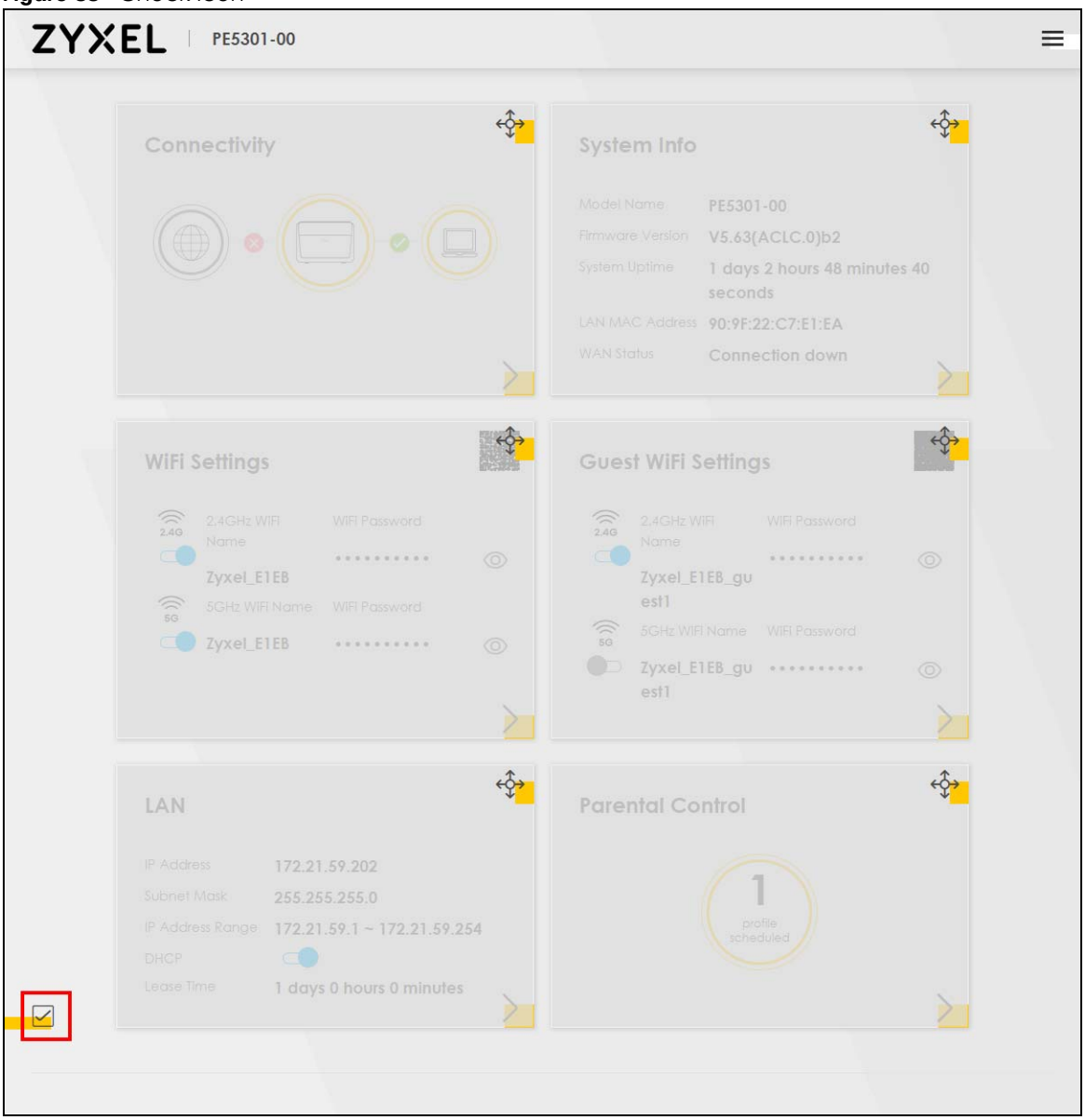
Click the Widget icon ( ) in the lower left corner to arrange the screen order.

Figure 37 Dashboard Widget



The following screen appears. Select a block and hold it to move around. Click the Check icon ( ) in the lower left corner to save the changes.

Figure 38 Check Icon



CHAPTER 4
Quick Start

4.1 Quick Start Overview

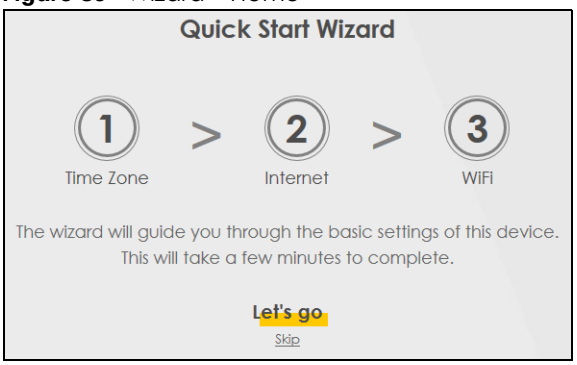
Use the **Wizard** screens to configure the Zyxel Device's time zone and WiFi settings.

Note: See the technical reference chapters for background information on the features in this chapter.

4.2 Quick Start Setup

You can click the **Wizard** icon in the side bar to open the **Wizard** screens. After you click the **Wizard** icon, the following screen appears. Click **Let's go** to proceed with settings on time zone and WiFi networks. It will take you a few minutes to complete the settings on the **Wizard** screens. You can click **Skip** to leave the **Wizard** screens.

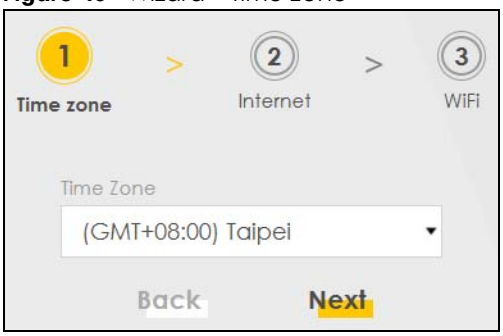
Figure 39 Wizard – Home



4.3 Quick Start Setup – Time Zone

Select the time zone of the Zyxel Device's location. Click **Next**.

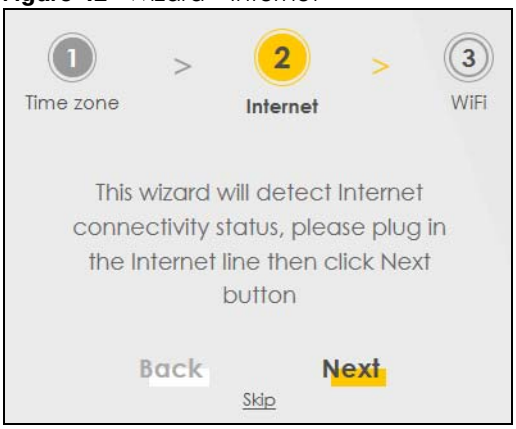
Figure 40 Wizard – Time Zone



4.4 Quick Start Setup – Internet Connection

The Zyxel Device detects your Internet connection status. Click **Next** to continue.

Figure 41 Wizard – Internet



4.4.1 Successful Internet Connection

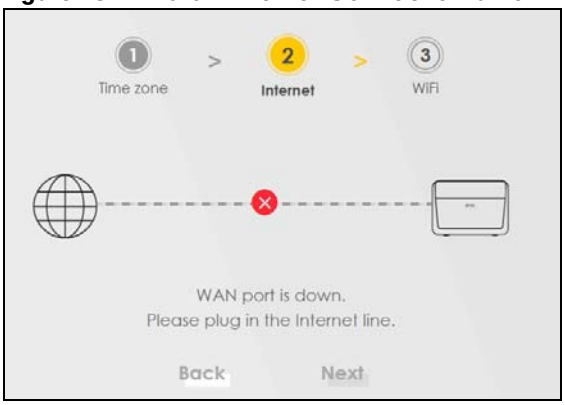
The Zyxel Device has Internet access.

Figure 42 Wizard – Successful Internet Connection

4.4.2 Unsuccessful Internet Connection

The Zyxel Device did not detect a WAN connection. See Section 45.4 on page 427 for troubleshooting the Zyxel Device WAN connection.

Figure 43 Wizard – Internet Connection is Down

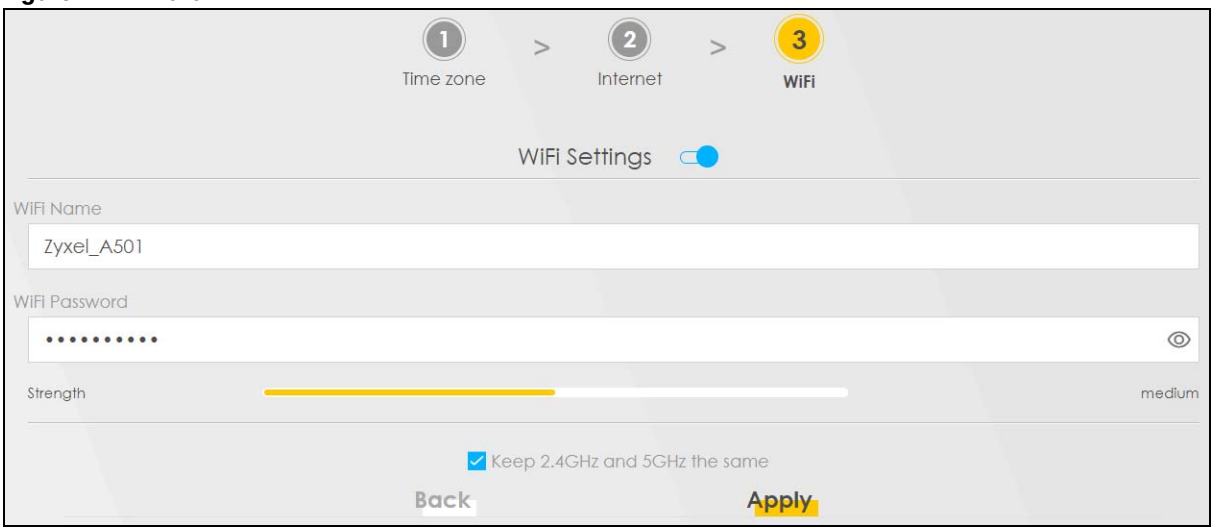


4.5 Quick Start Setup – WiFi

Turn WiFi on or off. If you keep it on, record the **WiFi Name** and **Password** in this screen so you can configure your WiFi clients to connect to the Zyxel Device. If you want to show or hide your WiFi password, click the Eye icon ( ).

Select **Keep 2.4G and 5G the same** to use the same SSID for 2.4G and 5G WiFi networks. Otherwise, clear the checkbox to have two different SSIDs for 2.4G and 5G WiFi networks. The screen and fields to enter may vary when you select or clear the checkbox.
You have to disable **MPro Mesh** in the **Network** > **Wireless** > **MESH** screen to clear the **Keep 2.4G and 5G the same** checkbox. Click **Done**.

Figure 44 Wizard – WiFi



4.6 Quick Start Setup – Finish

Your Zyxel Device saves and applies your settings.

CHAPTER 5
Web Interface Tutorials

5.1 Web Interface Overview

This chapter shows you how to use the Zyxel Device's various features.

- Wired Network Setup
- WiFi Network Setup
- USB Applications
- Network Security
- Internet Calls
- Device Maintenance

5.2 Wired Network Setup

This section shows you how to set up a PONDSL or Ethernet Internet connection with the **Broadband** screens. The screens vary by the connection mode, encapsulation type and IP mode (IPv6 or IPv4) you select.

Set the Zyxel Device to **Routing** mode or **Bridge** mode on this connection as follows:

- Use **Routing** mode if you want the Zyxel Device to use routing mode functions such as **NAT**, **Firewall**, or **DHCP Server**. You will need to reconfigure your network if you have an existing router.
- Use **Bridge** mode to pass the ISP-assigned IP address(es) to your devices connected to the LAN port. All traffic from the Internet passes through the Zyxel Device directly to devices connected to the LAN port. Use this mode if you already have a router with complete routing functions in your network.

5.2.1 Setting Up a GPON Connection

If you connect to the Internet through a GPON connection, you need to connect a broadband modem or router with Internet access to the WAN GPON port on the Zyxel Device. You need to configure the Internet settings from the broadband modem or router on the Zyxel Device. First, make sure you have Internet access through the broadband modem or router by connecting directly to it.

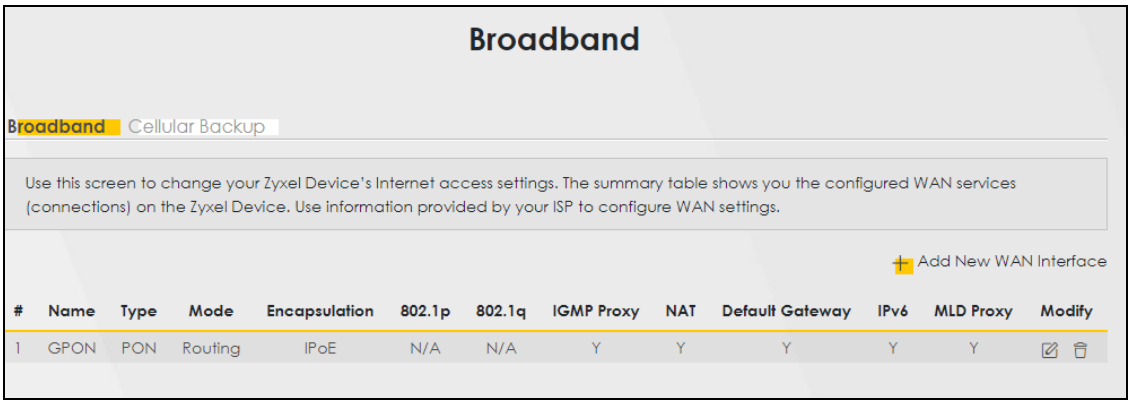
1. Make sure you have the GPON WAN port connect to a modem or router.
2. Register the GPON serial number on the back label of the Zyxel Device (ONT, Optical Network Terminal) with your Internet service provider (OLT, Optical Line Terminal). The LED indicator will show the status of the registration. The GPON registration process includes the states below for the Zyxel Device:

Table 13 GPON registration process

STATE	DESCRIPTION
O1	Initial State: Check if the GPON port of the Zyxel Device(ONT) is enabled and ready to connect to the Internet service provider (OLT).
O2	Standby State: The Zyxel Device(ONT) is trying to receive signals sent by the Internet service provider (OLT) and is responding.
O3	Serial Number State：The Internet service provider (OLT) is sending a serial number request for the Zyxel Device (ONT). The Zyxel Device (ONT) replies with the GPON serial number found on the back label of the Zyxel Device.
O4	Ranging State: The Internet service provider (OLT) is sending a ranging request to the Zyxel Device (ONT) and is asking for a response.
O5	Operation State：The GPON connection is established between the Zyxel Device (ONT) and the Internet service provider (OLT).

See Table 7 on page 32 for more information about the LED of GPON registration.

3 Go to **Network Setting** > **Broadband** and then the following screen appears. Click **Add New WAN Interface**.



4 To set the Zyxel Device to **Routing** mode, see Section on page 61.
To set the Zyxel Device to **Bridge** mode, see Section on page 64.

Routing Mode

1 In this routing mode example, the PON WAN connection has the following information.

General	
Name	GPON-1
Type	GPON
Connection Mode	Routing
Encapsulation	IPoE

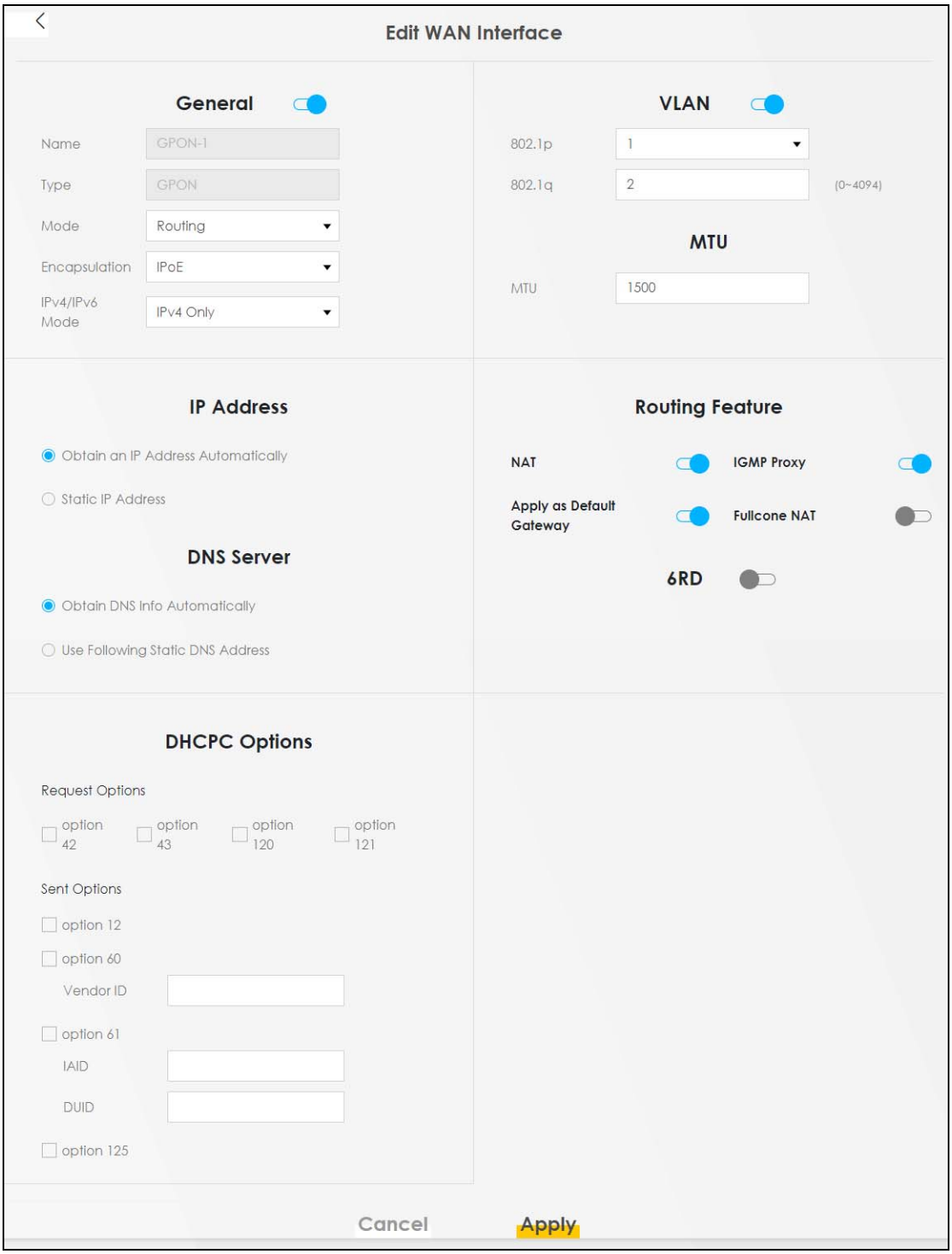
IPv6/IPv4 Mode	IPv4 Only
Others	NAT: Enabled IGMP Multicast Proxy: Enabled Apply as Default Gateway: Enabled VLAN: Enabled

2 Enter the **General** settings as provided above.
- Enter a **Name** to identify your WAN connection.
- Set the **Type** to **GPON**.
- Set the **Mode** to **Routing**.
- Choose the **Encapsulation** specified by your GPON service provider.
- Set the **IPv4/IPv6 Mode** to **IPv4 Only**.

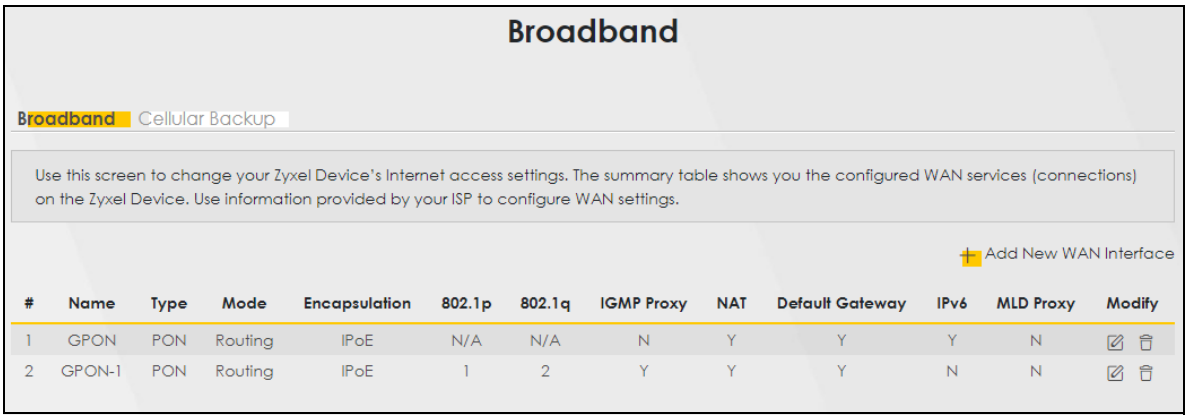
3 Under **Routing Feature**, enable **NAT** and **Apply as Default Gateway.**

4 For the rest of the fields, use the default settings.

5 Click **Apply** to save your settings.



6 Try to connect to a website to see if you have correctly set up your Internet connection. Go to the **Network Setting > Broadband** screen to view the established Ethernet connection. The new connection is displayed on the **Broadband** screen



The new connection is displayed on the **Broadband** screen.

Bridge Mode

1 In this bridge mode example, the GPON WAN connection has the following information.

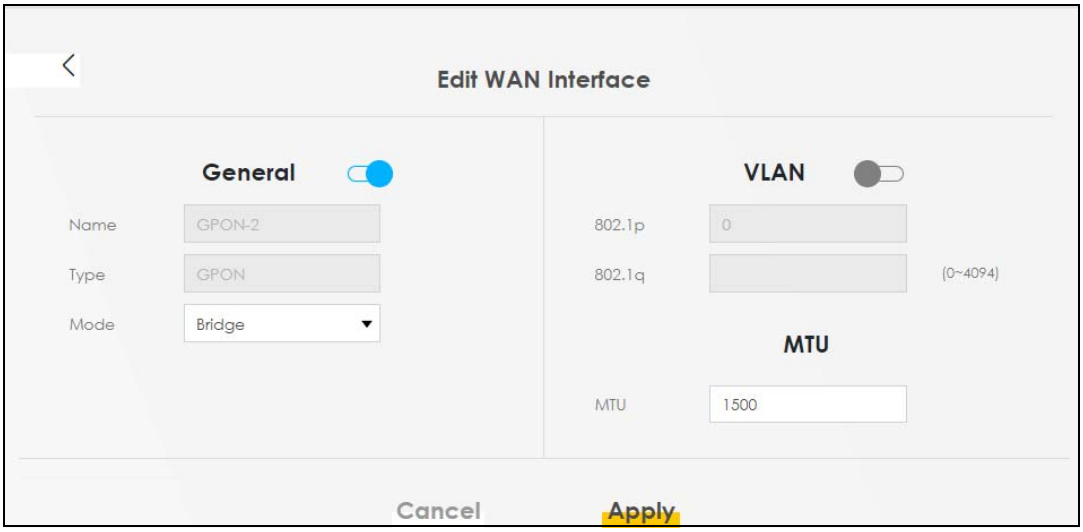
General	
Name	GPON-2
Type	GPON
Connection Mode	Bridge

2 Enter the **General** settings provided by your Internet service provider.

- Enter a **Name** to identify your WAN connection.
- Set the **Type** to **GPON**.
- Set your GPON connection **Mode** to **Bridge**.

3 For the rest of the fields, use the default settings.

4 Click **Apply** to save your settings.

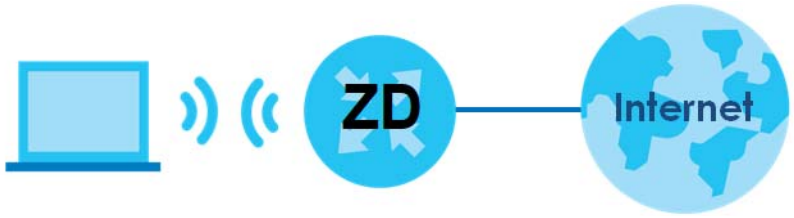


5.3 WiFi Network Setup

For Zyxel Devices that support MPro Mesh, you can use the app to configure your WiFi network. See Section 1.1 on page 19 for the app you can use to manage the Zyxel Devices.

In this example, you want to set up a WiFi network so that you can use your notebook to access the Internet. In this WiFi network, the Zyxel Device is an access point (AP), and the notebook is a WiFi client. The WiFi client can access the Internet through the AP.

Figure 45 WiFi Network Setup



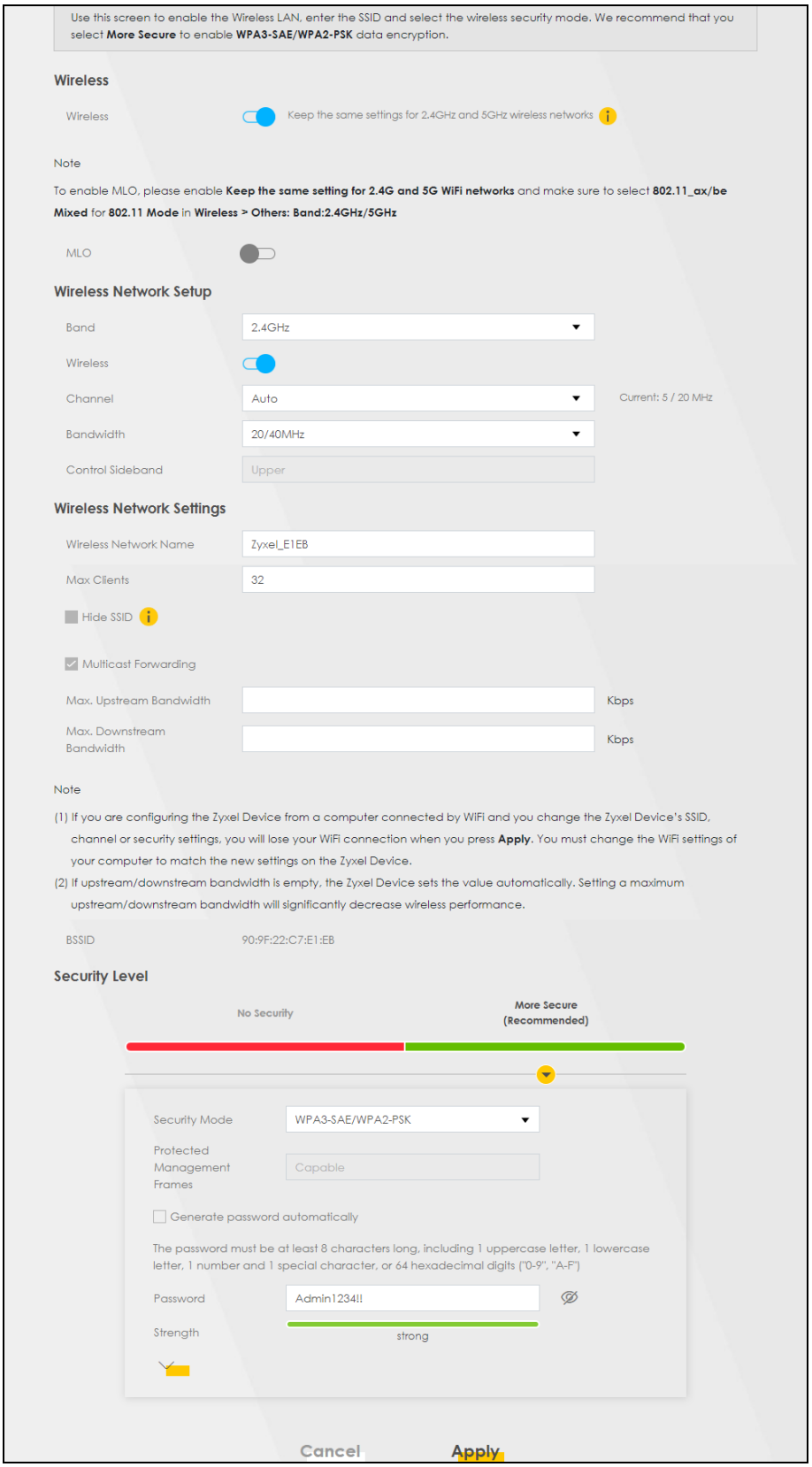
See the label on the Zyxel Device for the WiFi network settings and then connect manually to the Zyxel Device. Alternatively, you can connect to the Zyxel Device WiFi network using WPS. See Section 5.3.2.1 on page 67.

5.3.1 Changing Security on a WiFi Network

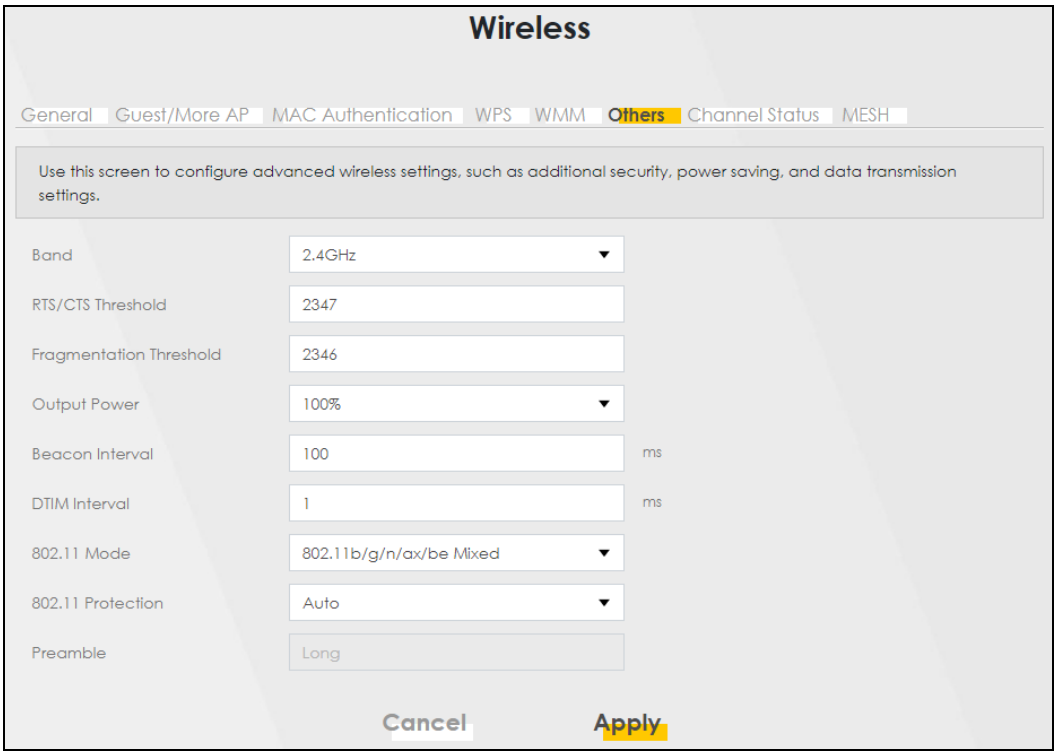
This example changes the default security settings of a WiFi network to the following:

SSID	Zyxel_E1EB
Pre-Shared Key	Admin1234!!
802.11 Mode	802.11b/g/n Mixed

1 Go to the **Network Setting** > **Wireless** > **General** screen. Select **More Secure** as the security level and **WPA3-SAE/WPA2-PSK** as the security mode. Configure the screen using the provided parameters. Click **Apply**.


Use this screen to enable the Wireless LAN, enter the SSID and select the wireless security mode. We recommend that you select More Secure to enable WPA3-SAE/WPA2-PSK data encryption.
Wireless
Wireless
Keep the same settings for 2.4GHz and 5GHz wireless networks
Note
To enable MLO, please enable Keep the same setting for 2.4G and 5G WiFi networks and make sure to select 802.11_ax/be Mixed for 802.11 Mode in Wireless > Others: Band:2.4GHz/5GHz
MLO
Wireless Network Setup
Band
2.4GHz
Wireless
Channel
Auto
Current: 5 / 20 MHz
Bandwidth
20/40MHz
Control Sideband
Upper
Wireless Network Settings
Wireless Network Name
Zyxel_E1EB
Max Clients
32
Hide SSID
Multicast Forwarding
Max. Upstream Bandwidth
Kbps
Max. Downstream Bandwidth
Kbps
Note
(1) If you are configuring the Zyxel Device from a computer connected by WiFi and you change the Zyxel Device's SSID, channel or security settings, you will lose your WiFi connection when you press Apply. You must change the WiFi settings of your computer to match the new settings on the Zyxel Device.
(2) If upstream/downstream bandwidth is empty, the Zyxel Device sets the value automatically. Setting a maximum upstream/downstream bandwidth will significantly decrease wireless performance.
BSSID
90:9F:22:C7:E1:EB
Security Level
No Security
More Secure (Recommended)
Security Mode
WPA3-SAE/WPA2-PSK
Protected Management Frames
Capable
Generate password automatically
The password must be at least 8 characters long, including 1 uppercase letter, 1 lowercase letter, 1 number and 1 special character, or 64 hexadecimal digits ("0-9", "A-F")
Password
Admin1234!!
Strength
strong
Cancel
Apply

2 Go to the **Wireless** > **Others** screen. Set **802.11 Mode** to **802.11b/g/n /ax/be Mixed**, and then click **Apply**.



You can now use the WPS feature to establish a WiFi connection between your notebook and the Zyxel Device (see Section 5.3.2.1 on page 67). Now use the new security settings to connect to the Internet through the Zyxel Device using WiFi.

5.3.2 Connecting to the Zyxel Device's WiFi Network Using WPS

This section shows you how to connect a WiFi device to the Zyxel Device's WiFi network using WPS. WPS (Wi-Fi Protected Setup) is a security standard that allows devices to connect to a router securely without you having to enter a password. There is one method:

- **Push Button Configuration (PBC)** – Connect to the WiFi network by pressing a button. This is the simplest method.
- **PIN Configuration** – Connect to the WiFi network by entering a PIN (Personal Identification Number) from a WiFi-enabled device in the Zyxel Device's Web Configurator. This is the more secure method, because one device can authenticate the other.

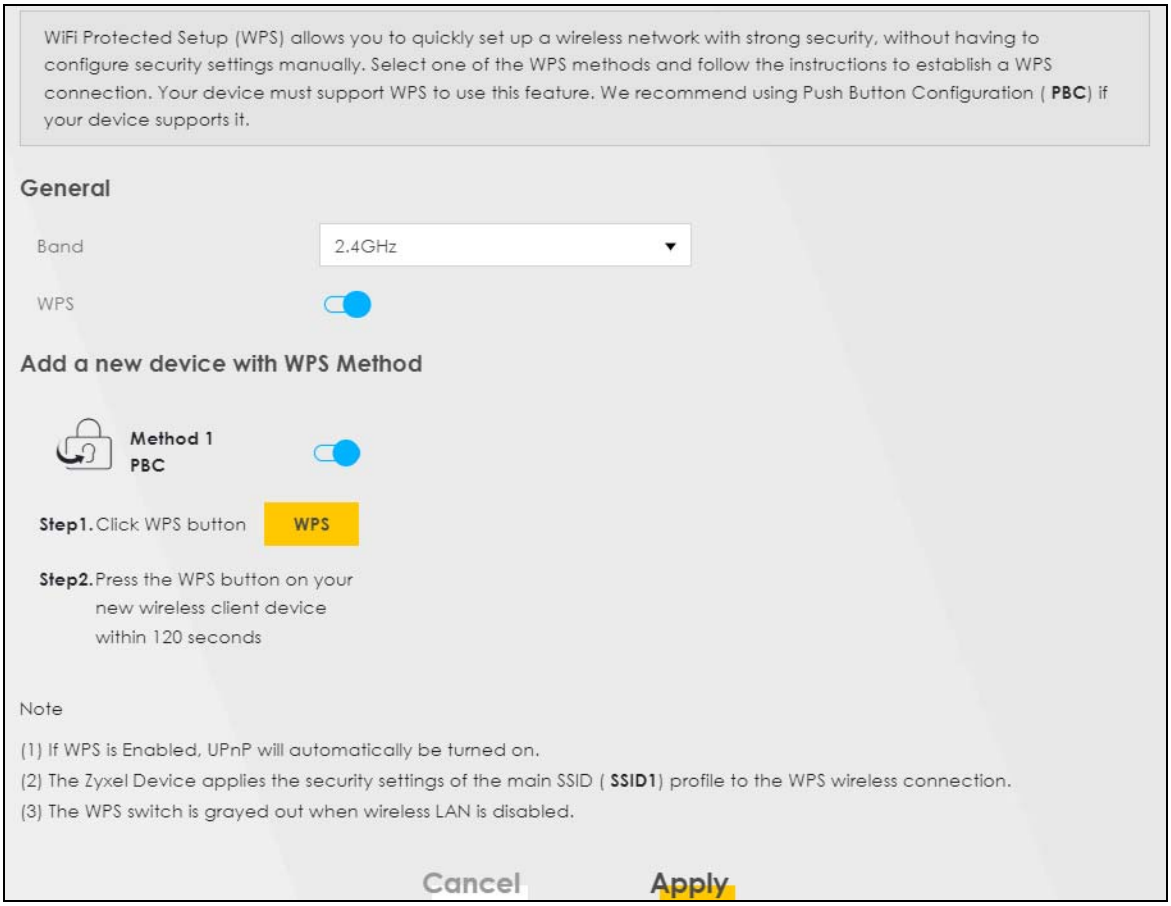
5.3.2.1 WPS Push Button Configuration (PBC)

This example shows how to connect to the Zyxel Device's WiFi network from a notebook computer running Windows 10.

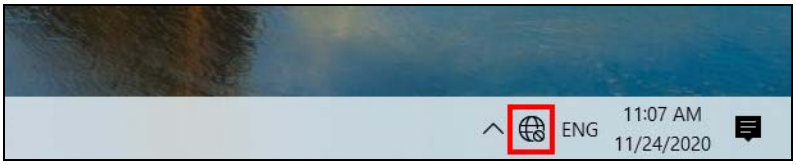
1 Make sure that your Zyxel Device is turned on, and your notebook is within range of the Zyxel Device's WiFi signal.

2 Push and hold the **WPS** button located on the Zyxel Device until the **WiFi** or **WPS** LED starts blinking slowly. Alternatively, log into the Zyxel Device's Web Configurator, and then go to the **Network Setting** > **Wireless** > **WPS** screen. Enable **WPS** and **Method 1 PBC**, click **Apply**, and then click the **WPS button**.

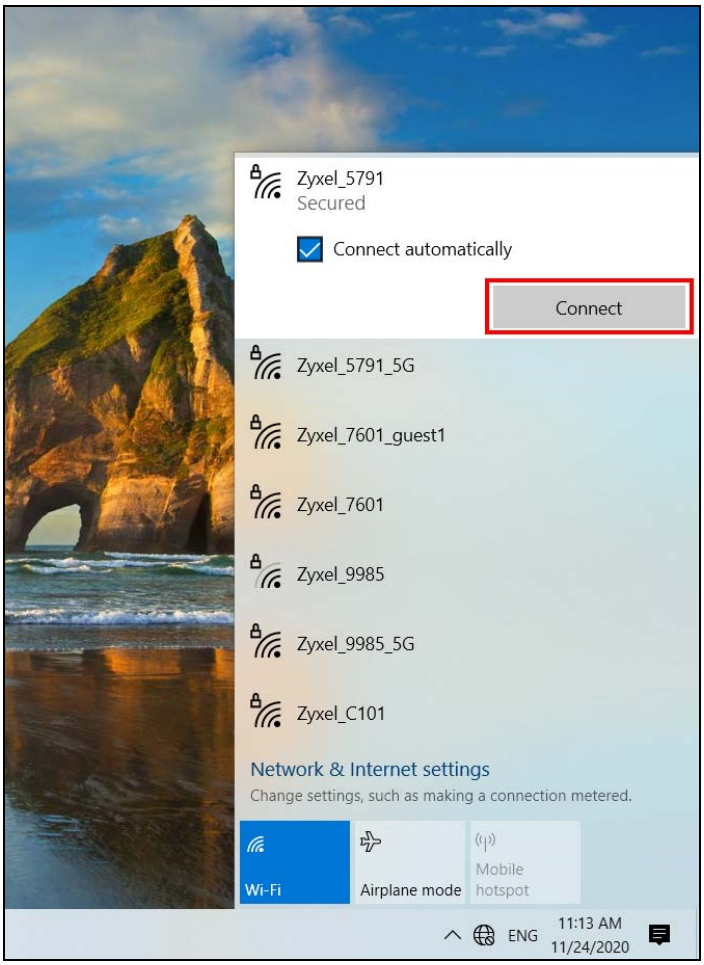
3 Log into the Zyxel Device's Web Configurator, and then go to the **Network Setting** > **Wireless** > **WPS** screen. Enable **WPS** and **Method 1 PBC**, click **Apply**, and then click the **WPS button**.



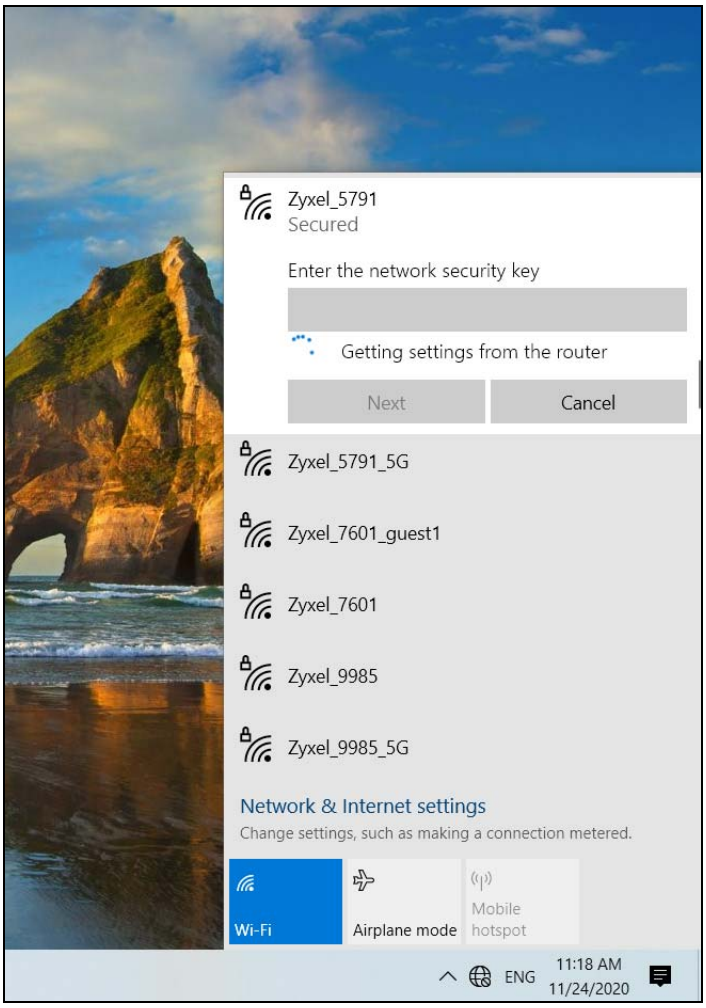
4 In Windows 10, click on the Network icon in the system tray to open the list of available WiFi networks.



5 Locate the WiFi network of the Zyxel Device. The default WiFi network name is "Zyxel_XXXX" (2.4G) or "Zyxel_XXXX_5G" (5G). Then click **Connect**.



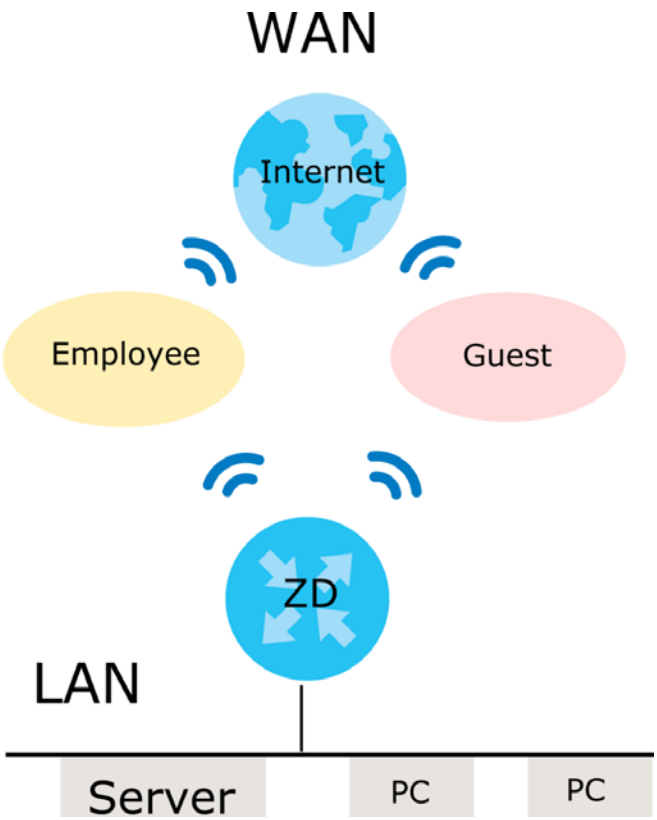
The Zyxel Device sends the WiFi network settings to Windows using WPS. Windows displays "Getting settings from the router".



The WiFi device is then able to connect to the WiFi network securely.

5.3.3 Setting Up a Guest Network

The Zyxel Device authenticates the WiFi device using the PIN, and then sends the WiFi network settings to the device using WPS. This process may take up to 2 minutes. The WiFi device is then able to connect to the WiFi network securely.A company wants to create two WiFi networks for different groups of users as shown in the following figure. Each WiFi network has its own SSID and security mode. Both networks are accessible on both 2.4G and 5G WiFi bands.

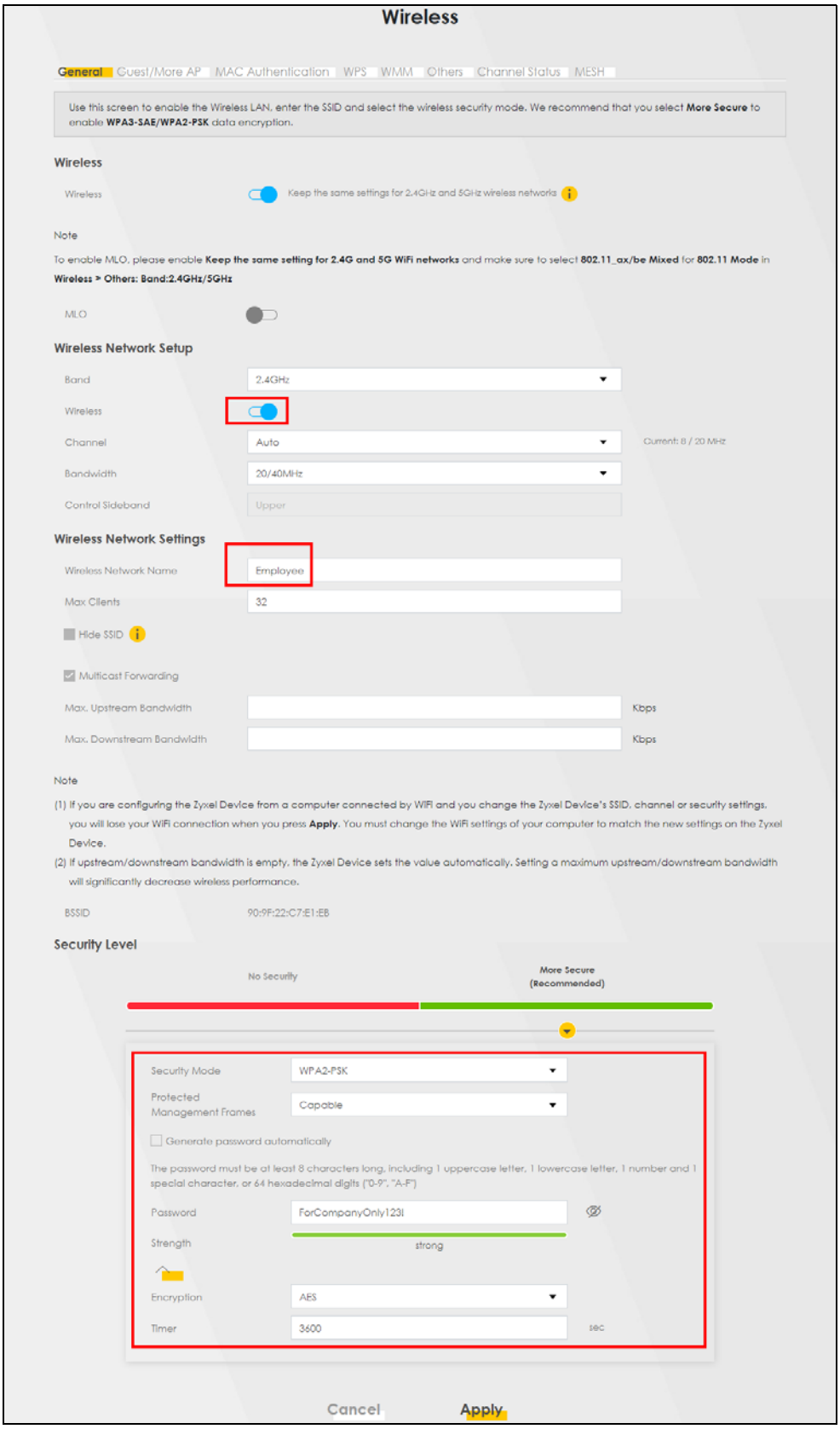


- Employees using the **General** WiFi network group will have access to the local network and the Internet.
- Visitors using the **Guest** WiFi network group with a different SSID and password will have access to the Internet only.

Use the following parameters to set up the WiFi network groups.

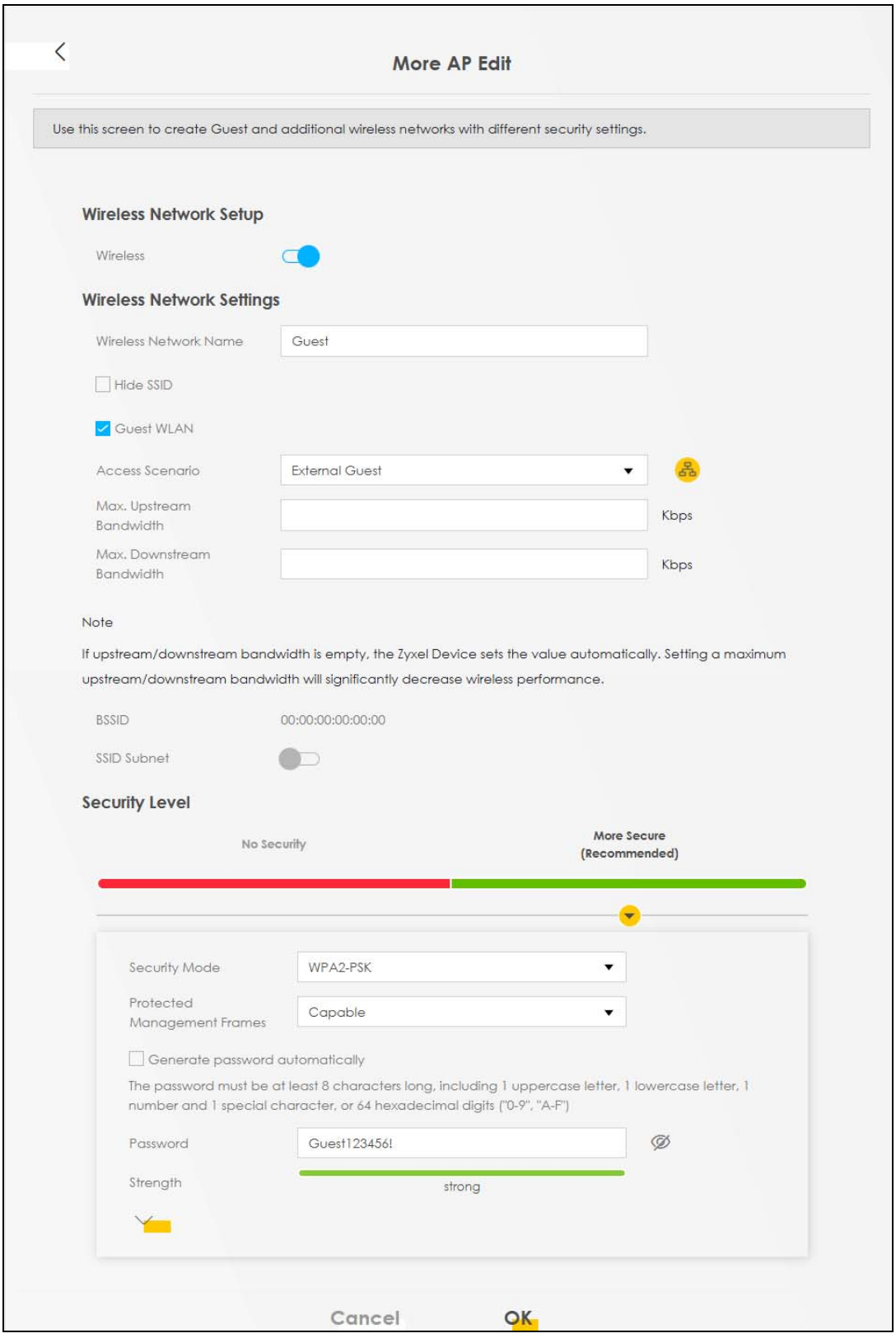
	GENERAL	GUEST
2.4/5G SSID	Employee	Guest
Security Level	More Secure	More Secure
Security Mode	WPA2-PSK	WPA2-PSK
Pre-Shared Key	ForCompanyOnly123!	Guest123456!

Go to the **Network Setting** > **Wireless** > **General** screen. Use this screen to set up the company's general WiFi network group. Configure the screen using the provided parameters and click **Apply**. Note that if you have employees using 2.4G and 5G devices, enable **Keep the same settings for 2.4G and 5G wireless networks** to use the same SSID and password. Clear it if you want to configure different SSIDs and passwords for 2.4G and 5G bands.


Wireless
General
Guest/More AP
MAC Authentication
WPS
WMM
Others
Channel Status
MESH
Use this screen to enable the Wireless LAN, enter the SSID and select the wireless security mode. We recommend that you select More Secure to enable WPA3-SAE/WPA2-PSK data encryption.
Wireless
Wireless
Keep the same settings for 2.4GHz and 5GHz wireless networks
Note
To enable MLO, please enable Keep the same setting for 2.4G and 5G WiFi networks and make sure to select 802.11_ax/be Mixed for 802.11 Mode in Wireless > Others: Band:2.4GHz/5GHz
MLO
Wireless Network Setup
Band
2.4GHz
Wireless
Channel
Auto
Current: 8 / 20 MHz
Bandwidth
20/40MHz
Control Sideband
Upper
Wireless Network Settings
Wireless Network Name
Employee
Max Clients
32
Hide SSID
Multicast Forwarding
Max. Upstream Bandwidth
Kbps
Max. Downstream Bandwidth
Kbps
Note
(1) If you are configuring the Zyxel Device from a computer connected by WiFi and you change the Zyxel Device's SSID, channel or security settings, you will lose your WiFi connection when you press Apply. You must change the WiFi settings of your computer to match the new settings on the Zyxel Device.
(2) If upstream/downstream bandwidth is empty, the Zyxel Device sets the value automatically. Setting a maximum upstream/downstream bandwidth will significantly decrease wireless performance.
BSSID
90:9F:22:C7:E1:EB
Security Level
No Security
More Secure (Recommended)
Security Mode
WPA2-PSK
Protected Management Frames
Capable
Generate password automatically
The password must be at least 8 characters long, including 1 uppercase letter, 1 lowercase letter, 1 number and 1 special character, or 64 hexadecimal digits ("0-9", "A-F")
Password
ForCompanyOnly123!
Strength
strong
Encryption
AES
Timer
3600
sec
Cancel
Apply

6 Go to the **Network Setting** > **Wireless** > **Guest/More AP** screen. Click the **Modify** icon to configure the second WiFi network group.

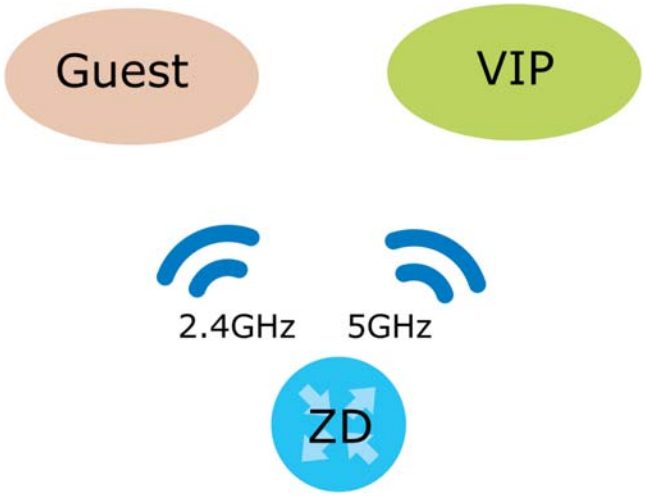
7 On the **Guest/More AP** screen, click the **Modify** icon to configure the other Guest WiFi network group. Configure the screen using the provided parameters and click **OK.**



8 Check the status of **Guest** in the **Guest/More AP** screen. A yellow bulb under **Status** means the SSID is active and ready for WiFi access.

5.3.4 Setting Up Two Guest WiFi Networks on Different WiFi Bands

In this example, a company wants to create two Guest WiFi networks: one for the **Guest** group and the other for the **VIP** group as shown in the following figure. Each network will have its SSID and security mode to access the internet.



- The **Guest** group will use the 2.4G band.
- The **VIP** group will use the 5G band.

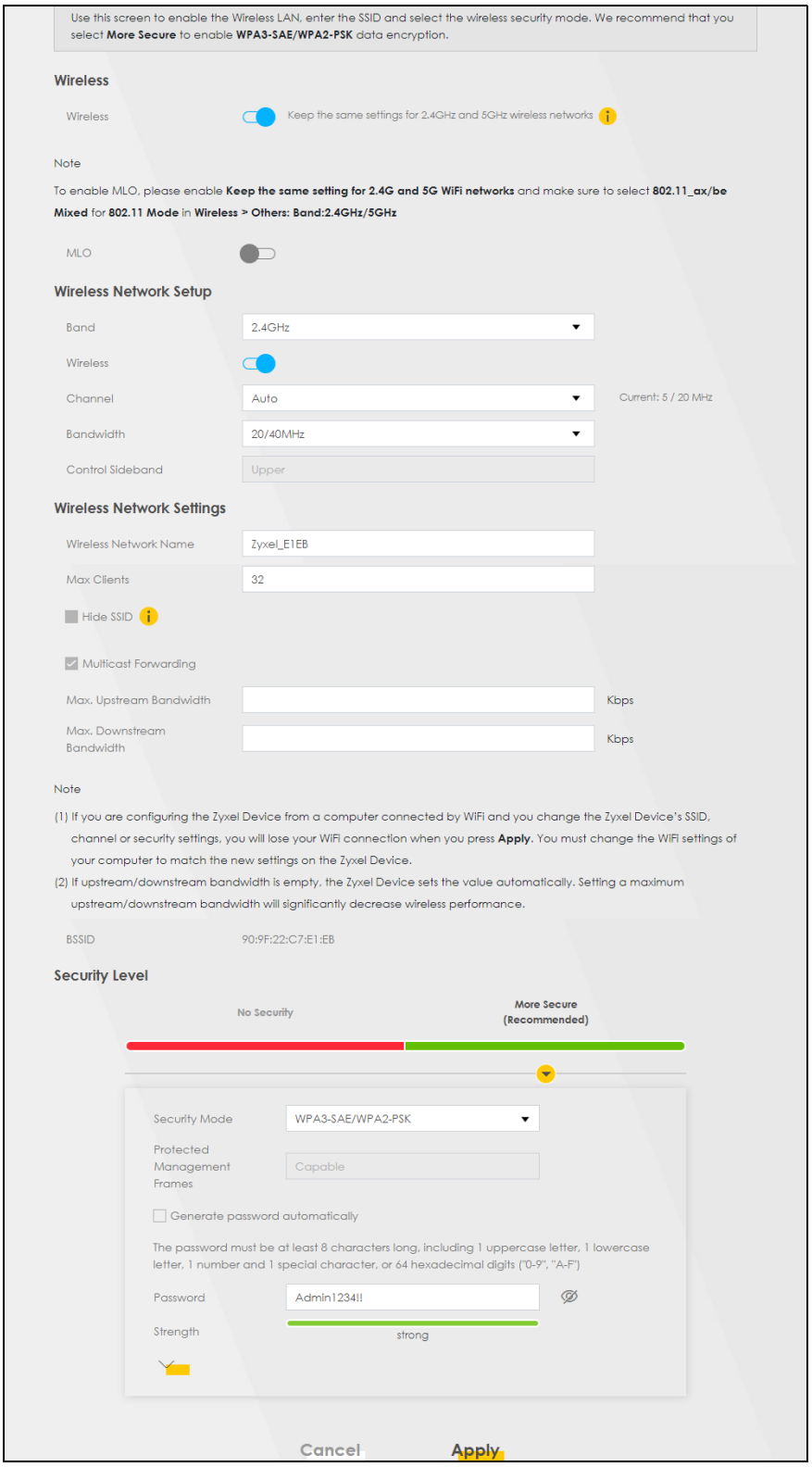
The Company will use the following parameters to set up the WiFi network groups.

Table 14 WiFi Settings Parameters Example

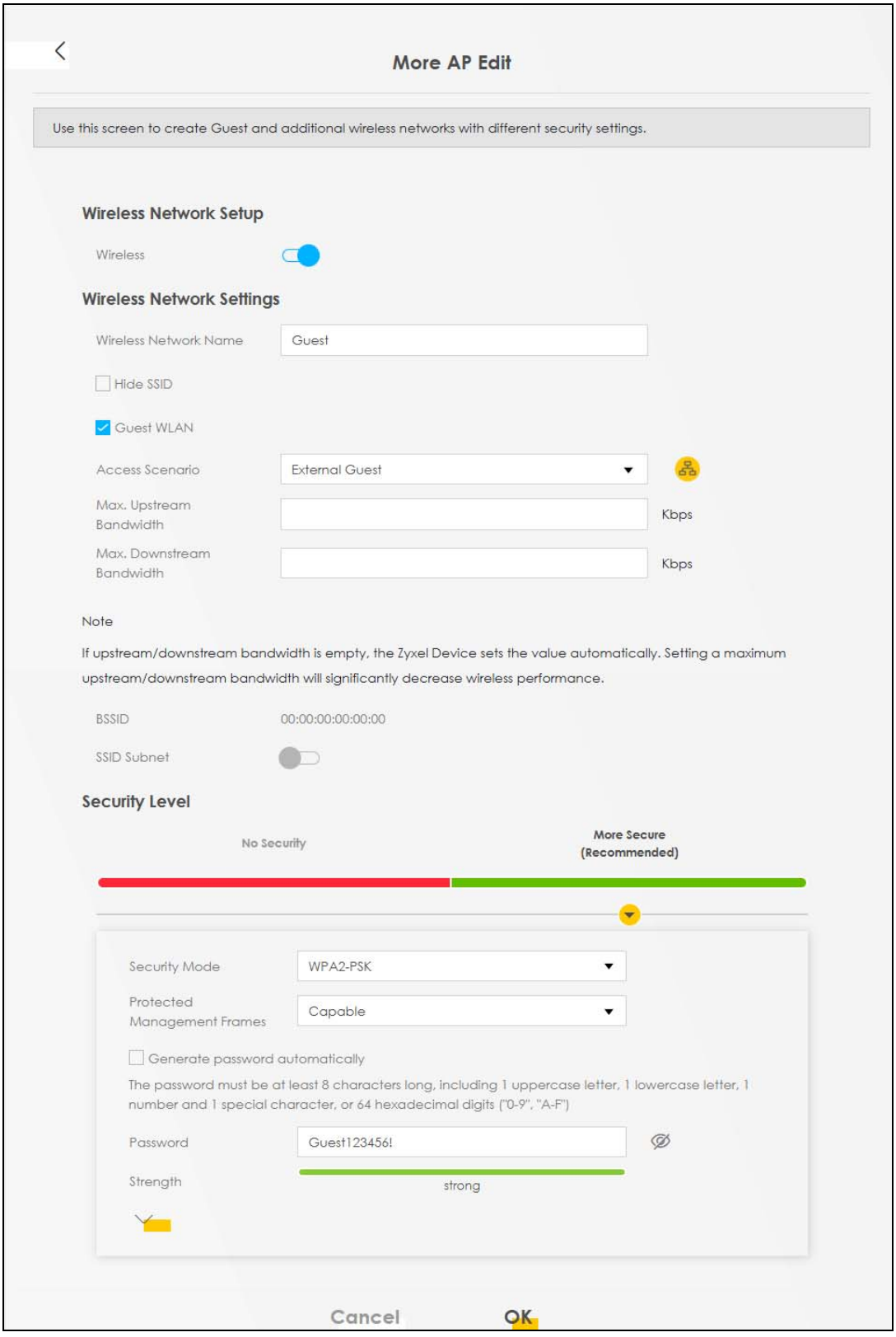
BAND	2.4G	5G
SSID	Guest	VIP
Pre-Shared Key	Guest123456!	Zyxel1234@@!

1 Go to the **Wireless** > **General** screen and set **Band** to **2.4GHz** to configure 2.4G Guest WiFi settings for **Guest**. Click **Apply**.

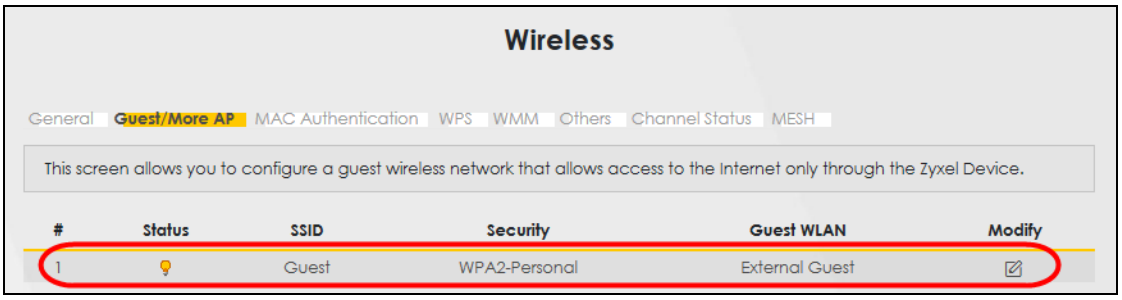
Note: You will not be able to configure the 2.4G and 5G Guest WiFi settings separately if **Keep the same settings for 2.4G and 5G wireless network** is enabled.



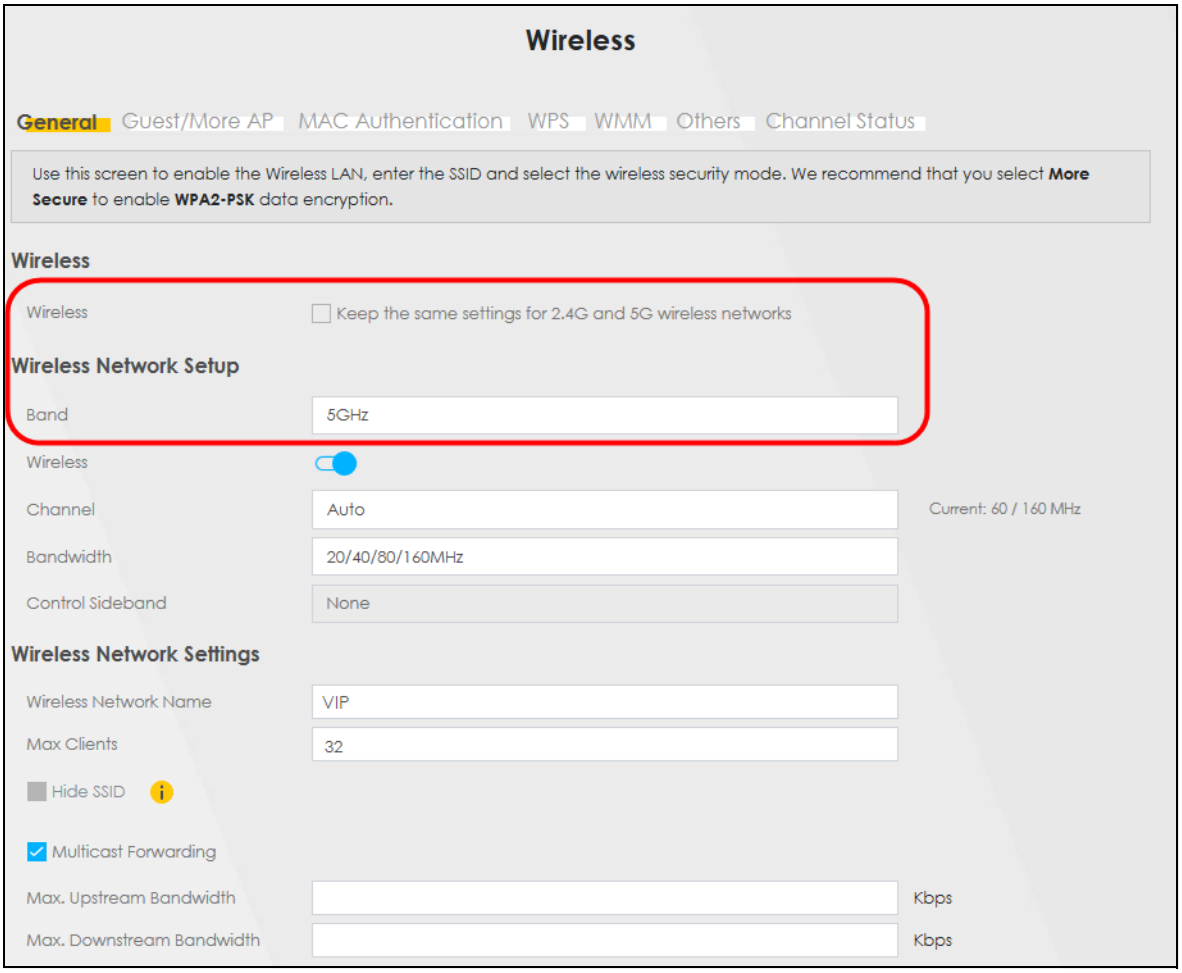
2 Go to the **Wireless** > **Guest/More AP** screen and click the **Modify** icon. The following screen appears. Configure the **Security Mode** and **Password** using the provided parameters and click **OK**.



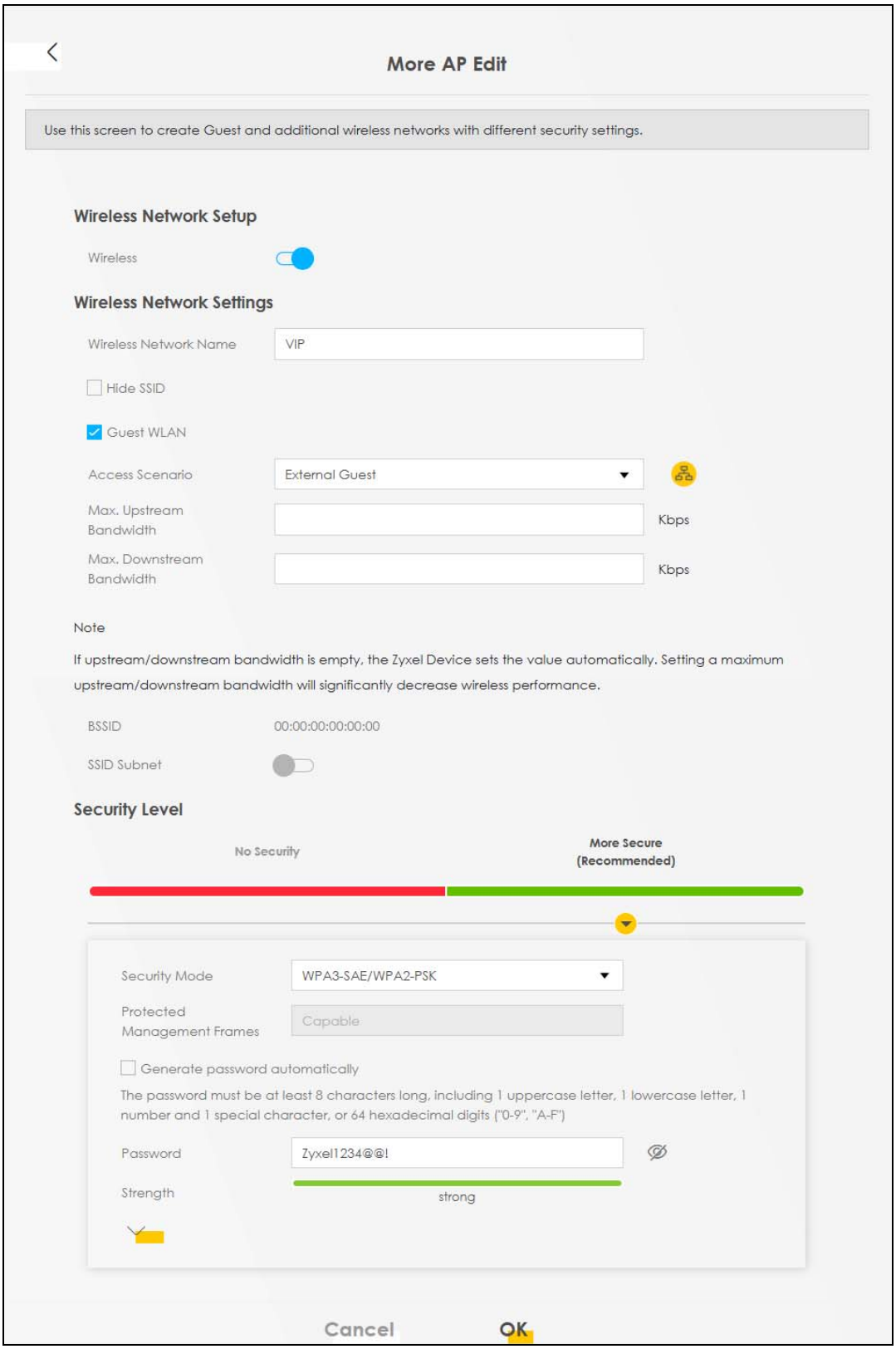
The 2.4 GHz **Guest** WiFi network is now configured.



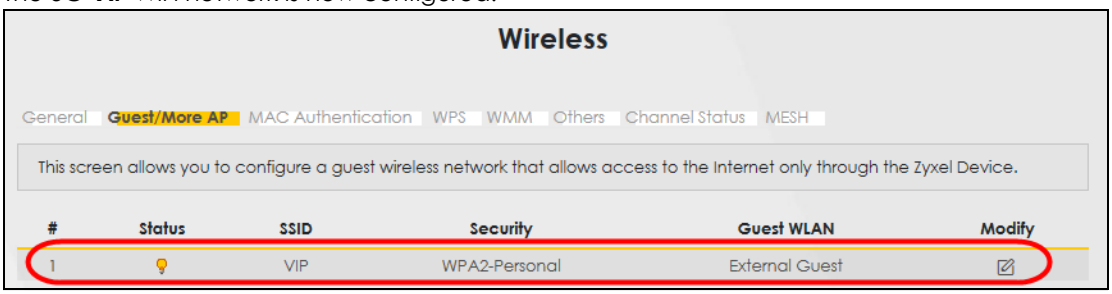
3 Go to the **Wireless** > **General** screen and set **Band** to **5GHz** to configure the 5G Guest WiFi settings for **VIP**. Click **OK**.



4 Go to the **Wireless** > **Guest/More AP** screen and click the **Modify** icon. The following screen appears. Configure the **Security Mode** and **Password** using the provided parameters and click **OK**.


More AP Edit
Use this screen to create Guest and additional wireless networks with different security settings.
Wireless Network Setup
Wireless
Wireless Network Settings
Wireless Network Name
VIP
Hide SSID
Guest WLAN
Access Scenario
External Guest
Max. Upstream Bandwidth
Kbps
Max. Downstream Bandwidth
Kbps
Note
If upstream/downstream bandwidth is empty, the Zyxel Device sets the value automatically. Setting a maximum upstream/downstream bandwidth will significantly decrease wireless performance.
BSSID
00:00:00:00:00:00
SSID Subnet
Security Level
No Security
More Secure (Recommended)
Security Mode
WPA3-SAE/WPA2-PSK
Protected Management Frames
Capable
Generate password automatically
The password must be at least 8 characters long, including 1 uppercase letter, 1 lowercase letter, 1 number and 1 special character, or 64 hexadecimal digits ("0-9", "A-F")
Password
Zyxel1234@@!
Strength
strong
Cancel
OK

The 5G **VIP** WiFi network is now configured.



5.4 USB Applications

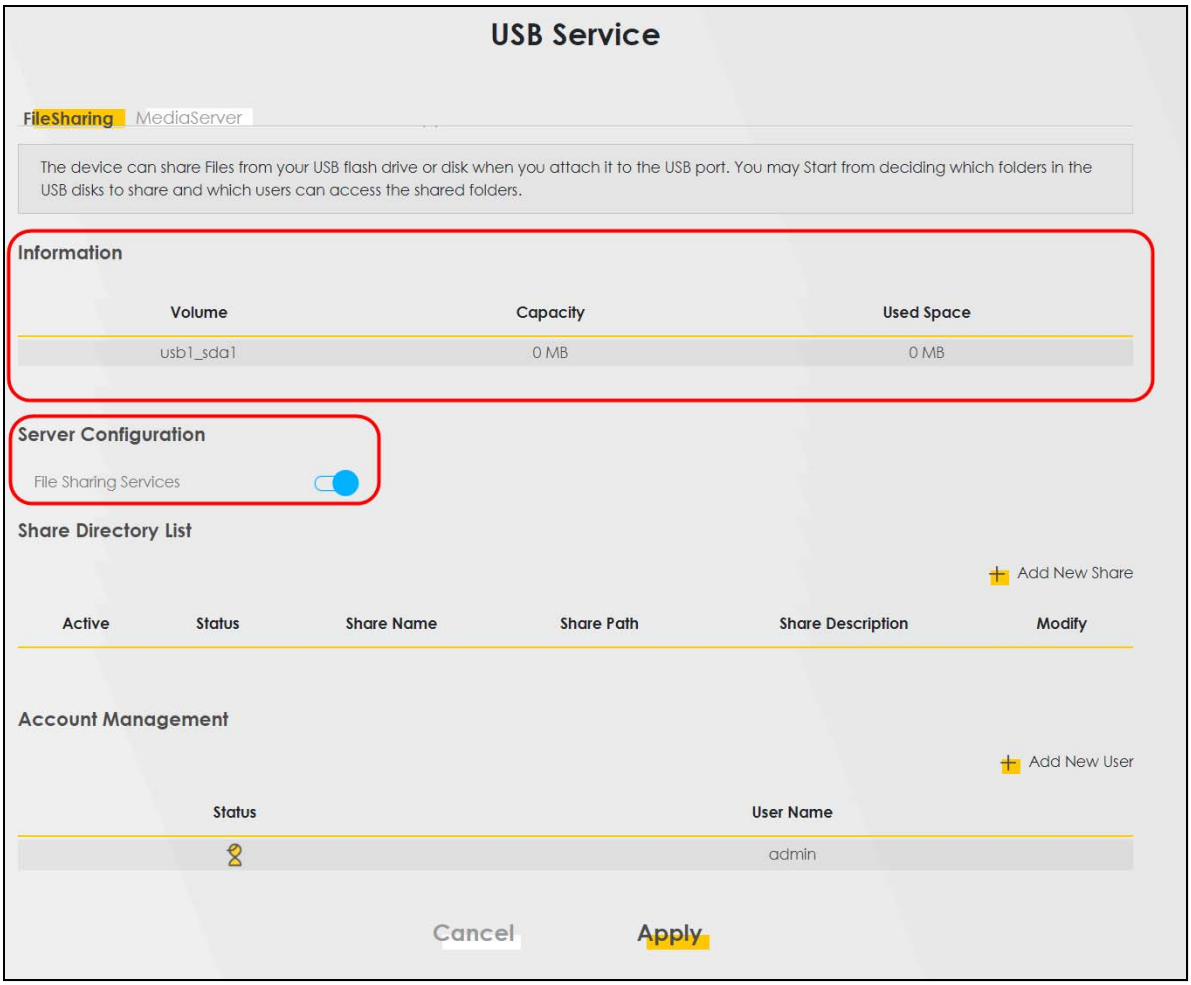
This section shows you how to set up a cellular backup network, access shared folders and play files through Window Media using a USB device.

5.4.1 File Sharing

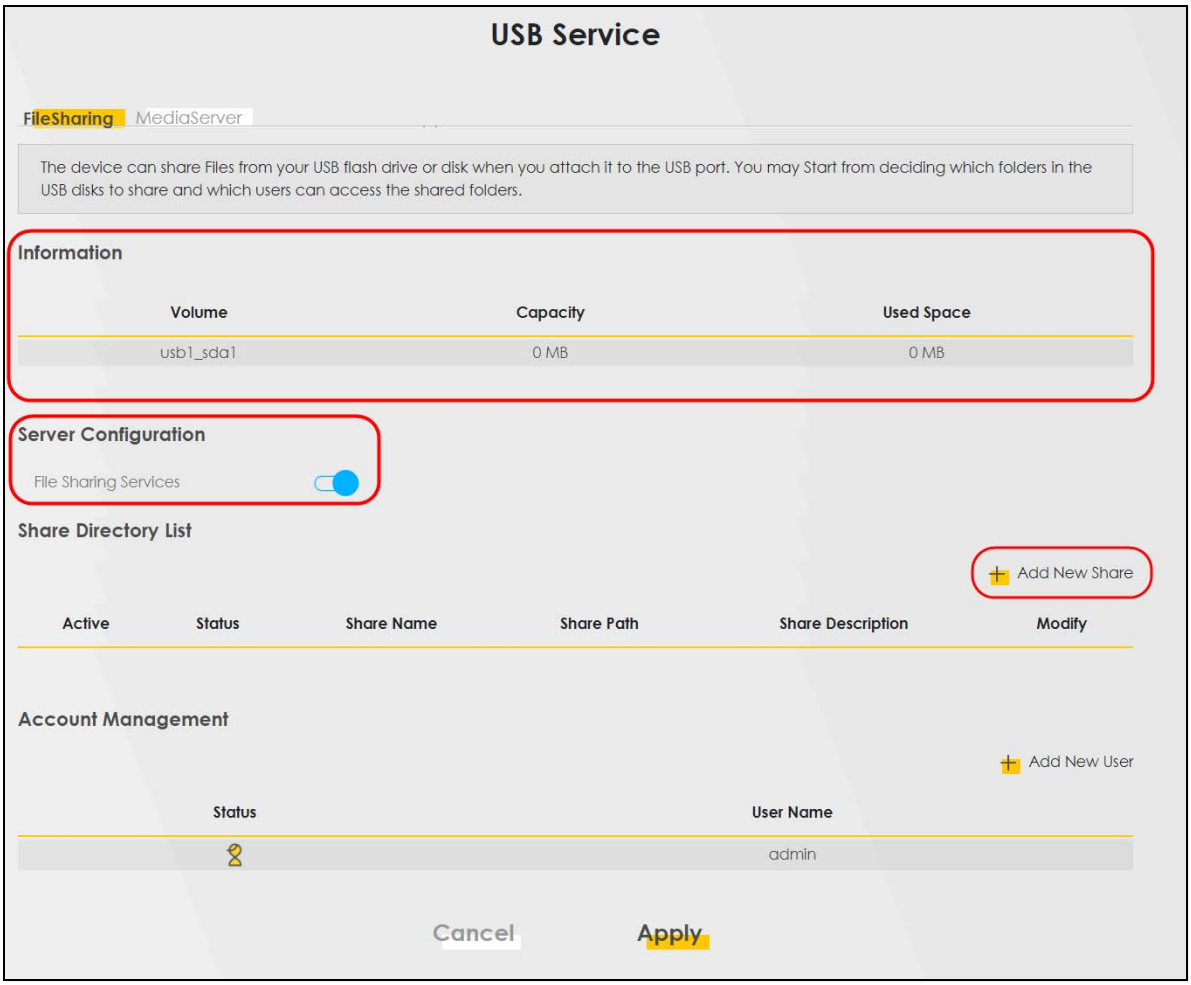
This section shows you how to create a shared folder on your Zyxel Device through a USB device and allow others to access the shared folder with File Sharing services.

5.4.1.1 Setting up File Sharing on Your Zyxel Device

1. Before enabling file sharing in the Zyxel Device, please set up your shared folders beforehand in your USB device.
2. Connect your USB device to the USB port of the Zyxel Device.
3. Go to the **Network Setting** > **USB Service** > **File Sharing** screen. Enable **File Sharing Services** and click **Apply** to activate the file sharing function. The Zyxel Device automatically adds your USB device to the **Information** table.

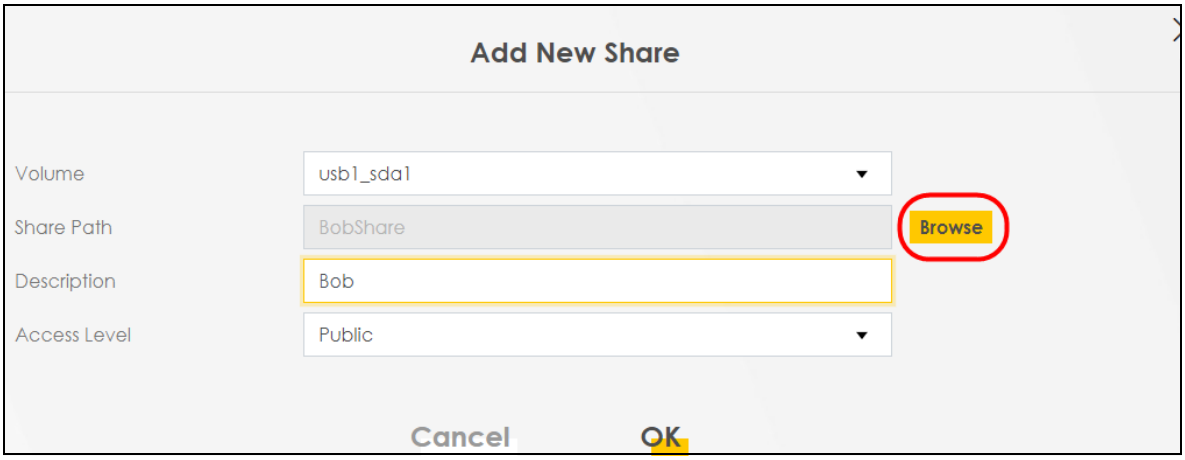


4 Click **Add New Share** to add a new share.

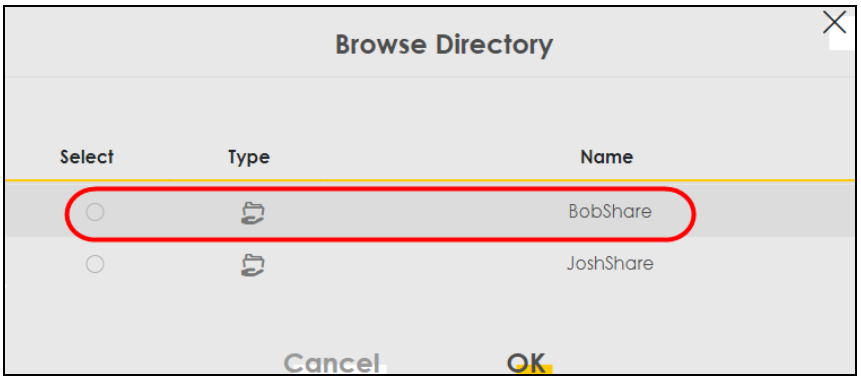


5 The **Add New Share** screen appears.

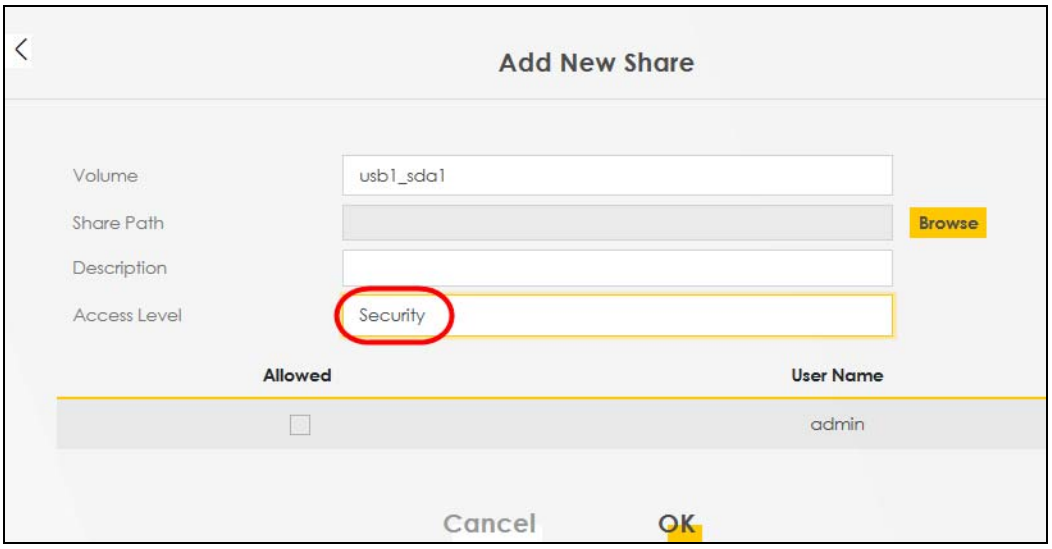
- Select your USB device from the **Volume** drop-down list box.
- Enter a **Description** name for the added share to identify the device.
- Click **Browse** and the **Browse Directory** screen appears.



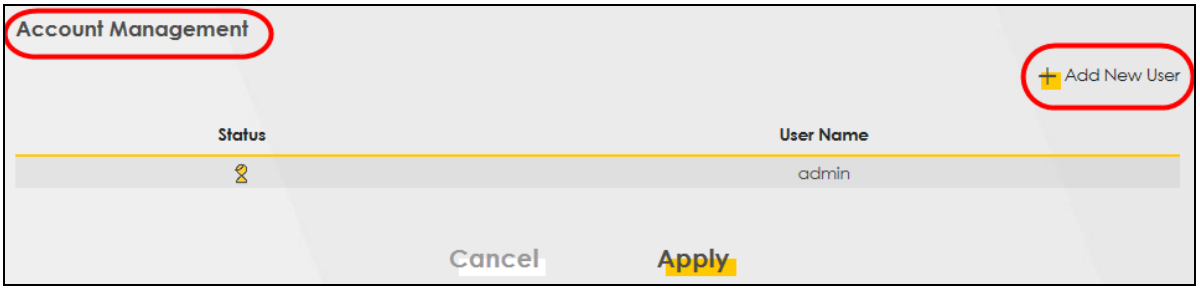
- On the **Browse Directory** screen, select the folder that you want to add as a share. In this example, select **BobShare** and then click **OK**.



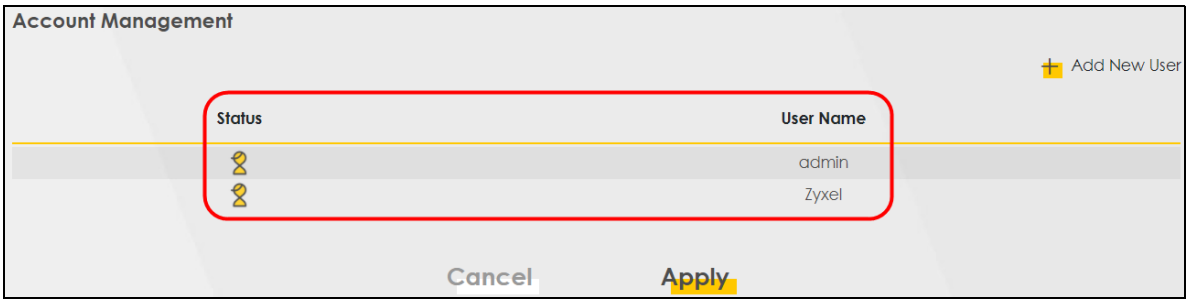
- In **Access Level,** select **Public** to let the share to be accessed by all users connected to the Zyxel Device. Otherwise, select **Security** to let the share to be accessed by specific users to access only. Click **OK** to save the settings.



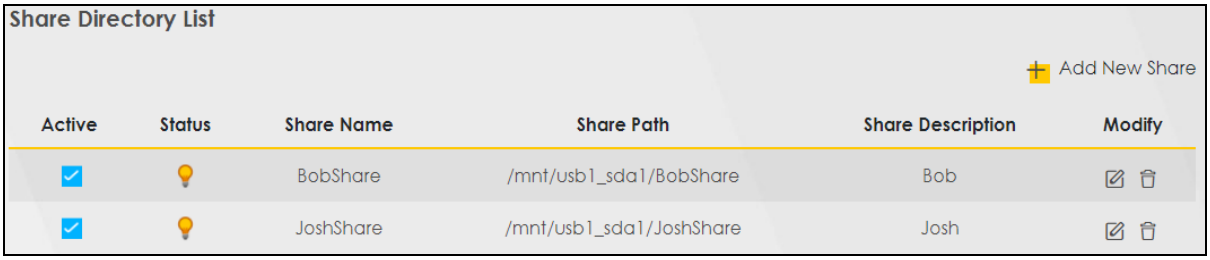
6 To set **Access level** to **Security**, you need to create one or more users accounts. Under **Account Management**, click **Add New User** to open the **User Account** screen.



7 After you create a new user account, the screen looks like the following.



8 File sharing is now configured. You can see the USB storage device listed in the table below.



5.4.1.2 Accessing Your Shared Files From a Computer

You can use Windows Explorer to access the USB storage devices connected to the Zyxel Device.

Note: This example shows you how to use Microsoft Windows 10 to browse shared files in a share called (usb1_sda)Zoeys file. Refer to your operating system's documentation for how to browse your file structure.

1 Open Windows Explorer.

2 In the Windows Explorer's address bar, enter a double backslash "\\" followed by the IP address of the Zyxel Device (the default IP address of the Zyxel Device is 192.168.1.1

3 Double-click on **(usb1_sda)Zoeys file**, and then enter the share's username and password if prompted.

4 After you access **(usb1_sda)Zoeys file** through your Zyxel Device, you do not have to log in again unless you restart your computer.

5.4.2 Media Server

Use the media server feature to play files on a computer or on your television.

This section shows you how the media server feature works using the following:

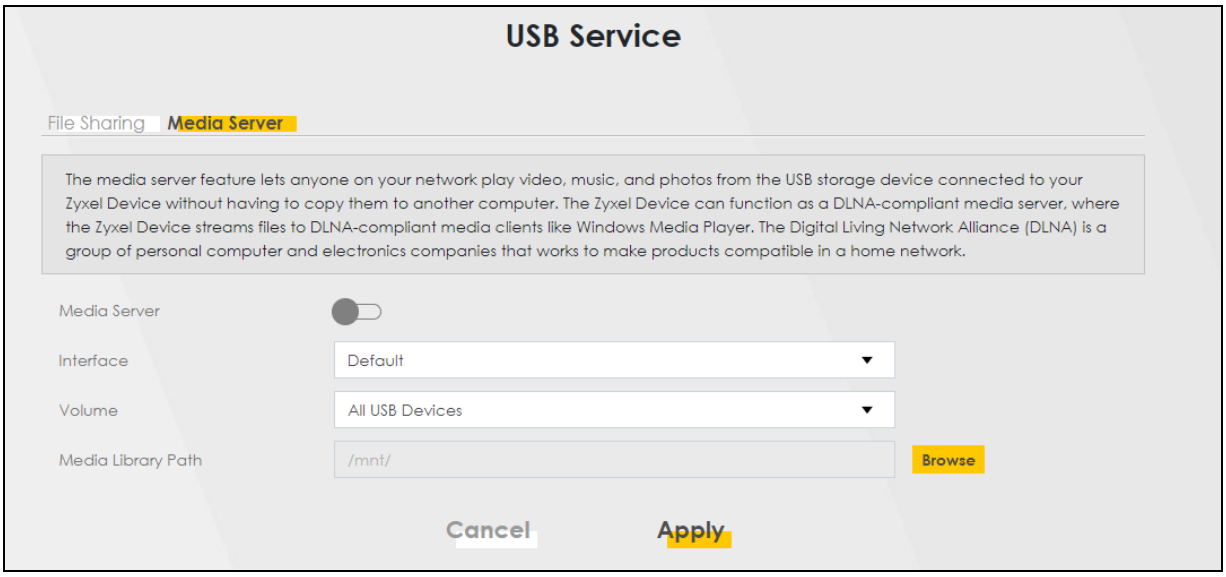
- Microsoft (MS) Windows Media Player
  Media Server works with Windows 10. Make sure your computer is able to play media files (music, videos and pictures).
- A digital media adapter
  You need to set up the media adapter to work with your television (TV).

Before you begin, connect the USB storage device containing the media files you want to play to the USB port of your Zyxel Device.

5.4.2.1 Configuring the Zyxel Device

To use your Zyxel Device as a media server, follow the steps below.

1 Go to the **Network Setting** > **USB Service** > **Media Server** screen.



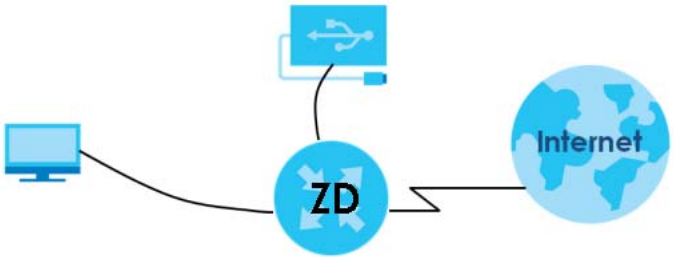
2 Enable **Media Server**, and then select an interface on which you want to enable the media server function.

3 Enter the path clients use to access the media files on a USB storage device connected to the Zyxel Device, and click **Apply**.

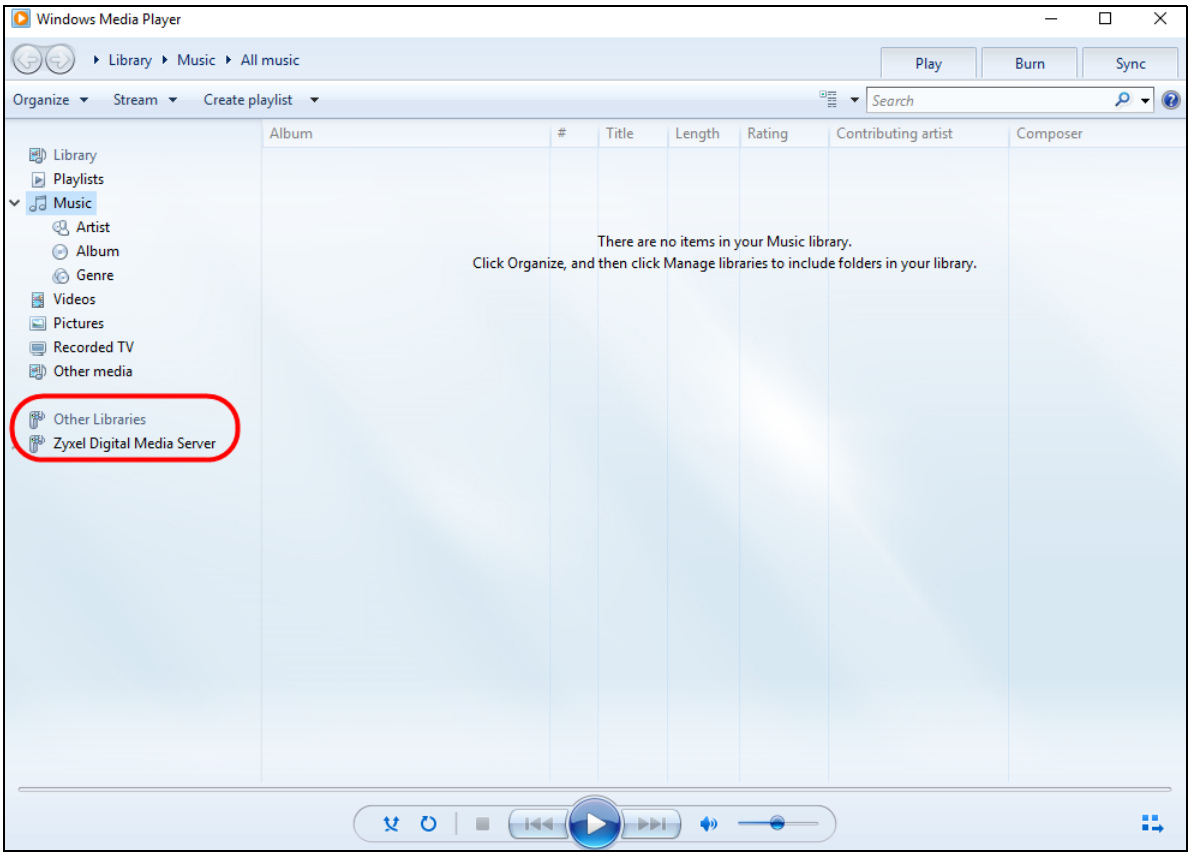
This enables DLNA-compliant media clients to play the video, music and image files in your USB storage device.

5.4.2.2 Playing Media Using Windows Media Player on Windows 10

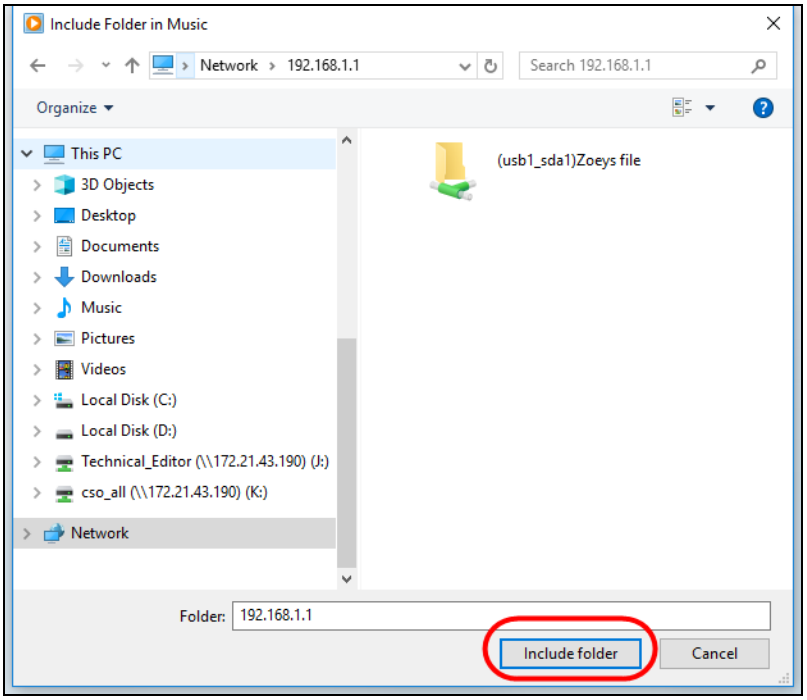
This section shows you how to play the media files on the USB storage device connected to your Zyxel Device using Windows Media Player.



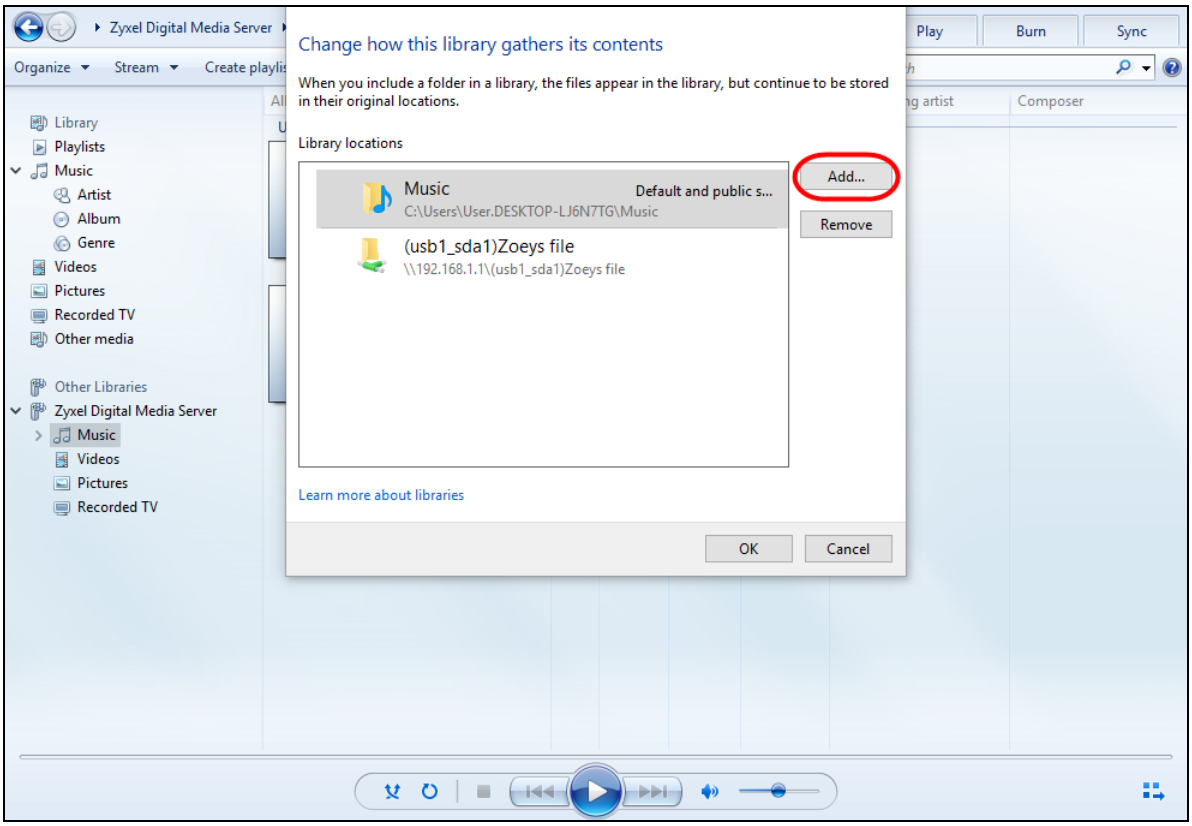
1 Open Windows Media Player. It automatically detects the Zyxel Device.



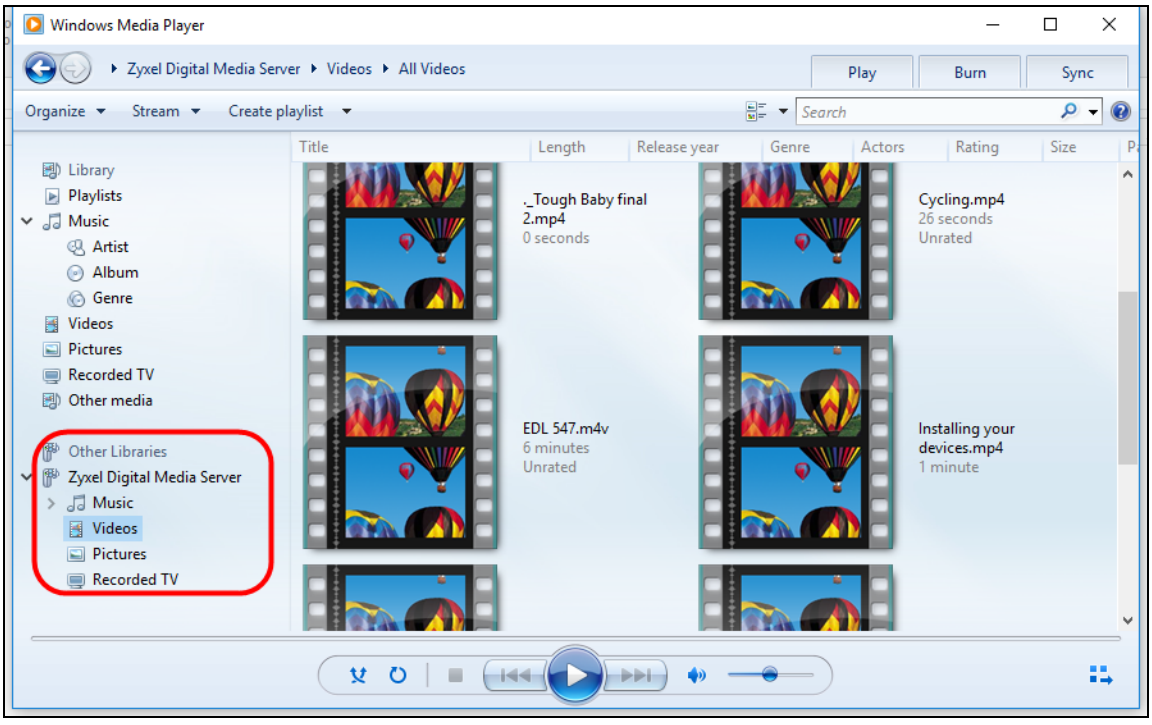
2 If you cannot see the Zyxel Device in the left panel as shown above, go to **Organize** > **Manage Libraries** > **Music** > **Add** on the Windows Media Player Home screen. In the Windows Explorer's address bar, enter **\\192.168.1.1**. The following screen appears. Select the folder containing the media you wish to upload to Windows Media Player, and then click **Include Folder**.



3 Select the shared folder, and then click **Add** to add it to your Media Library. Click **OK** to save the settings.



4 In the right panel, you can browse and play the files available in the USB storage device based on the category (**Music**, **Video**, **Pictures**, **Recorded TV**) you selected.

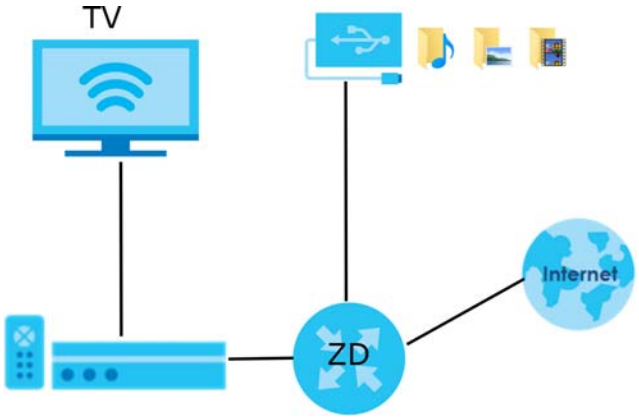


5.4.2.3 Using a Digital Media Player

This section shows you how you can use the Zyxel Device with a hardware digital media player to play media files stored in the USB storage device on your TV screen.

Note: For this tutorial, your digital media player is already connected to the TV.

1 Connect the digital media player to an available LAN port on your Zyxel Device.



2 Turn on the TV and wait for the digital media player **Home** screen to appear. Select the Zyxel Device as your media server.

3 The screen shows you the list of available media files in the USB storage device. Select the file you want to open and push the **Play** button on the remote control.

5.5 Network Security

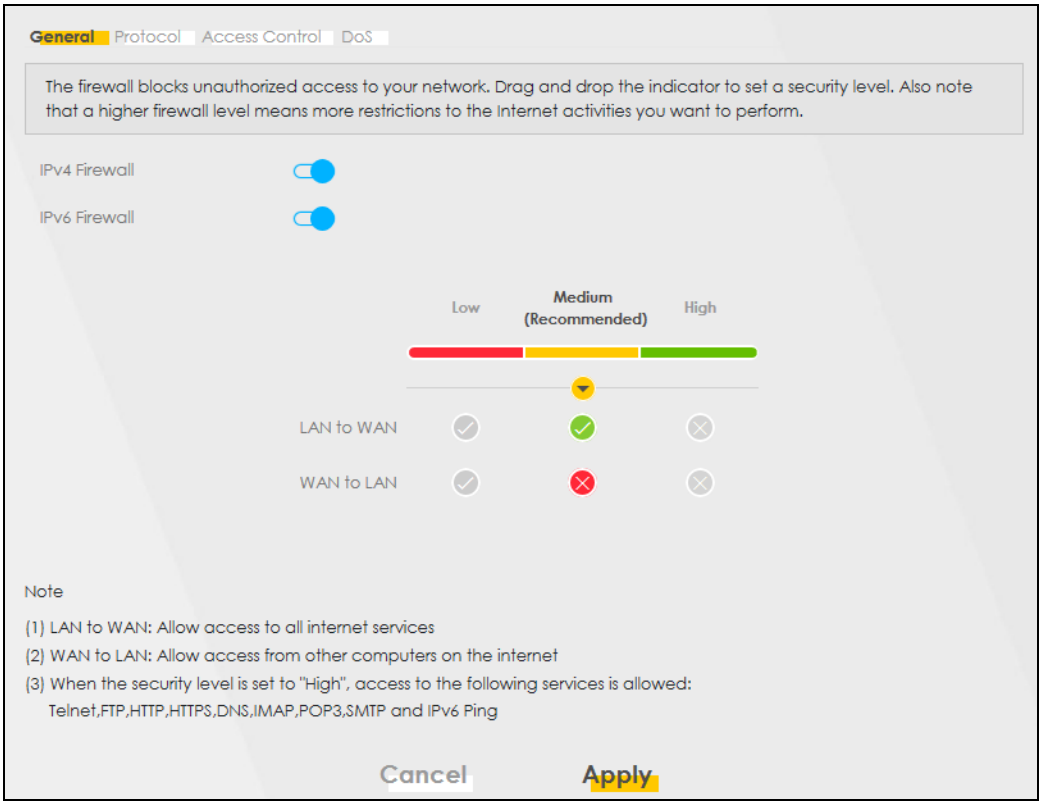
This section shows you how to configure a Firewall rule, Parental Control rule, and MAC Filter rule.

5.5.1 Configuring a Firewall Rule

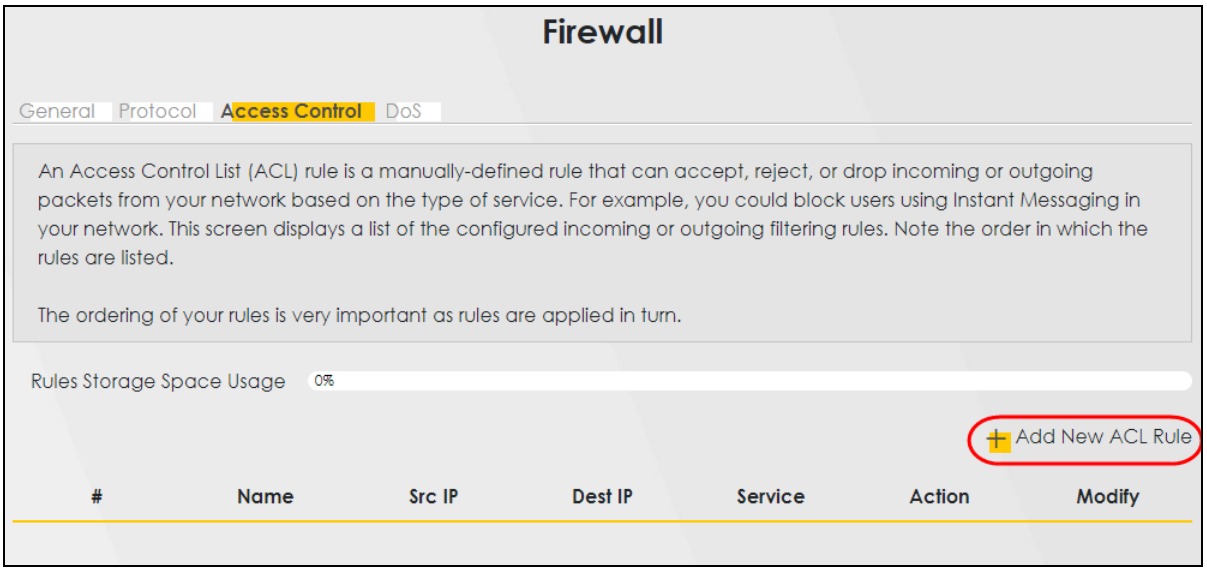
You can enable the firewall to protect your LAN computers from malicious attacks from the Internet.

1 Go to the **Security** > **Firewall** > **General** screen.

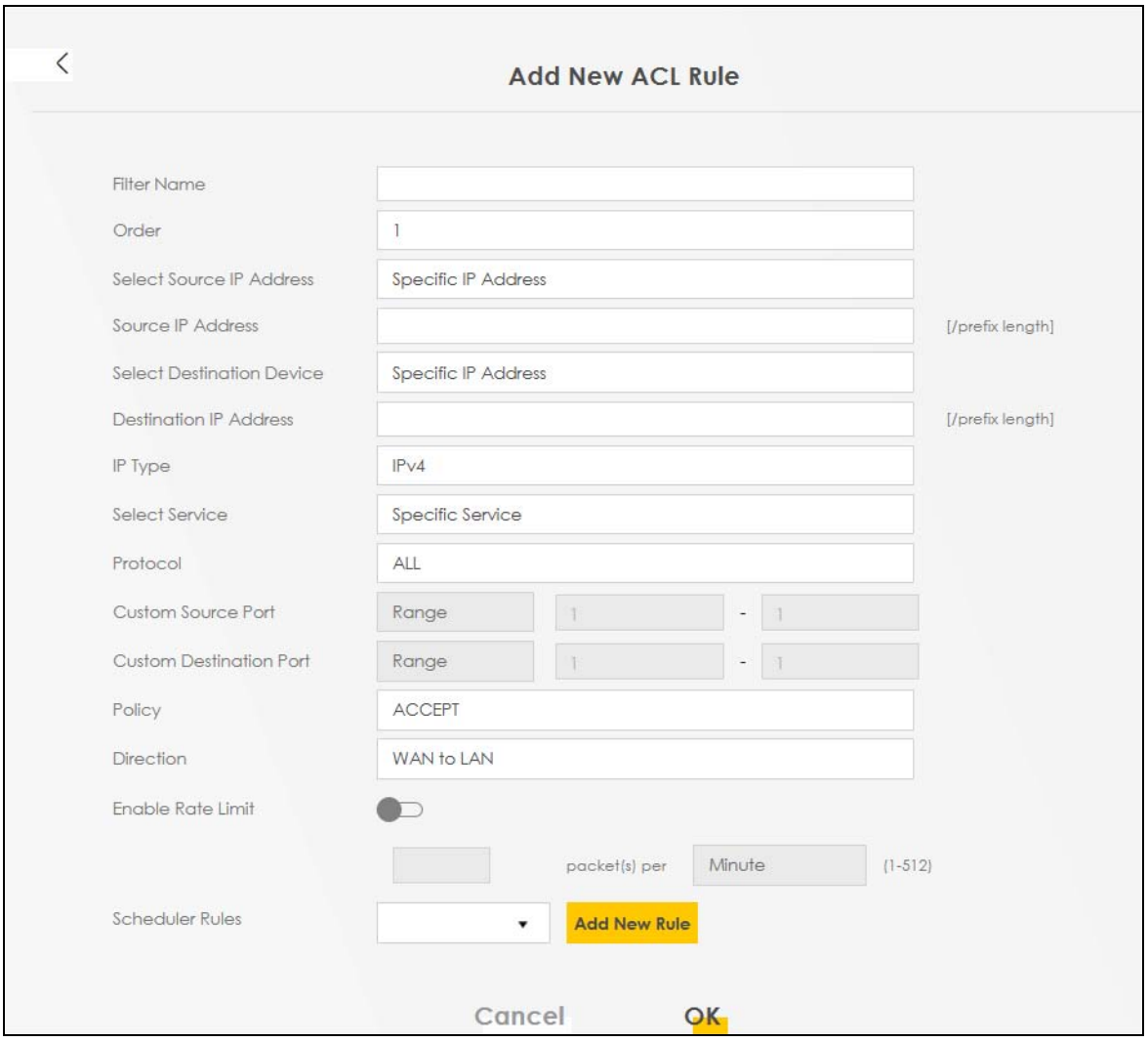
2 Select **IPv4 Firewall**/**IPv6 Firewall** to enable the firewall, and then click **Apply**.



3 Open the **Access Control** screen, click **Add New ACL Rule** to create a rule.



4 Use the following fields to configure and apply a new ACL (Access Control List) rule.



- **Filter Name**: Enter a name to identify the firewall rule.:
- **Source IP Address**: Enter the IP address of the computer that initializes traffic for the application or service.
- **Destination IP Address**: Enter the IP address of the computer to which traffic for the application or service is entering.
- **Protocol**: Select the protocol (**ALL**, **TCP/UDP**, **TCP**, **UDP**, **ICMP** or **ICMPv6**) used to transport the packets.
- **Policy**: Select whether to (**ACCEPT**, **DROP**, or **REJECT**) the packets.
- **Direction**: Select the direction (**WAN to LAN**, **LAN to WAN**, **WAN to ROUTER**, or **LAN to ROUTER**) of the traffic to which this rule applies.

5 Select **Enable Rate Limit** to activate the rules you created. Click **OK**.

5.5.2 Parental Control

This section shows you how to configure rules for accessing the Internet using parental control.

Note: The style and features of your parental control vary depending on the Zyxel Device you are using.

5.5.2.1 Configuring Parental Control Schedule and Filter

Parental Control Profile (**PCP**) allows you to set up a rule for:

- Internet usage scheduling.
- Websites and URL keyword blocking.

Use this feature to:

- Limit the days and times a user can access the Internet.
- Limit the websites a user can access on the Internet.

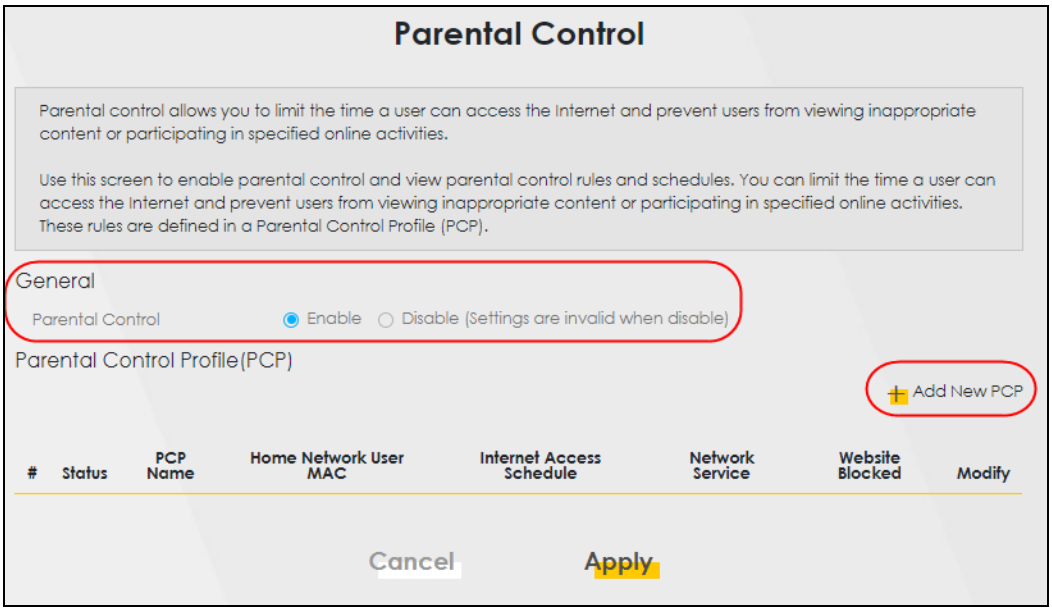
This example shows you how to block a user from accessing the Internet during time for studying. It also shows you how to stop a user from accessing specific websites.

Use the parameters below to configure a schedule rule and a URL keyword blocking rule.

PROFILE NAME	INTERNET ACCESS SCHEDULE	NETWORK SERVICE	SITE/URL KEYWORD
Study	**Day**: Monday to Friday **Time**: 8:00 to 11:00 13:00 to 17:00	**Network Service Setting**: Block **Service Name**: HTTP **Protocol**: TCP **Port**: 80	**Block or Allow the Web Site**: Block the web URLs **Website**: gambling

Parental Control Screen

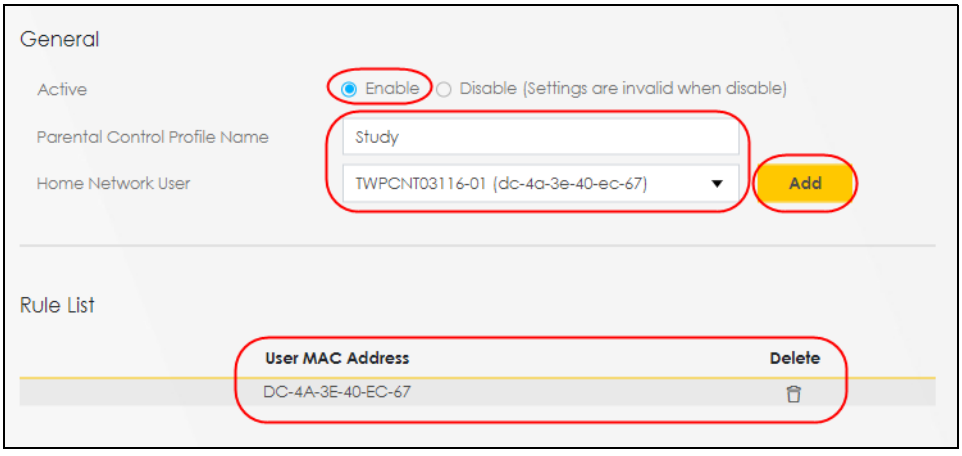
Open the **Parental Control** screen. Select **Enable** under **General** to enable parental control. Then click **Add New PCP** to add a rule.



Add New PCP Screen

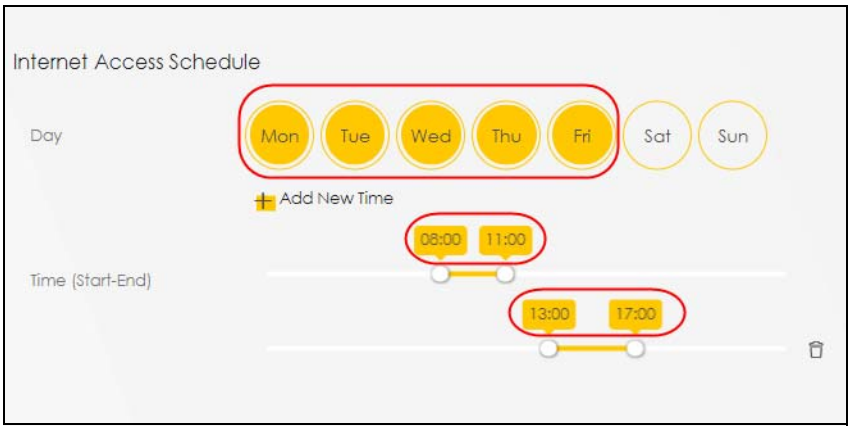
1 Go to **Parental Control** > **Add New PCP**. Under **General**:

- Select **Enable** to enable the rule you are configuring.
- Enter the **Parental Control Profile Name** given in the above parameter.
- Select an user this rule applies to in **Home Network User**, then click **Add**. You will see the MAC address of the user you just select in **Rule List**.



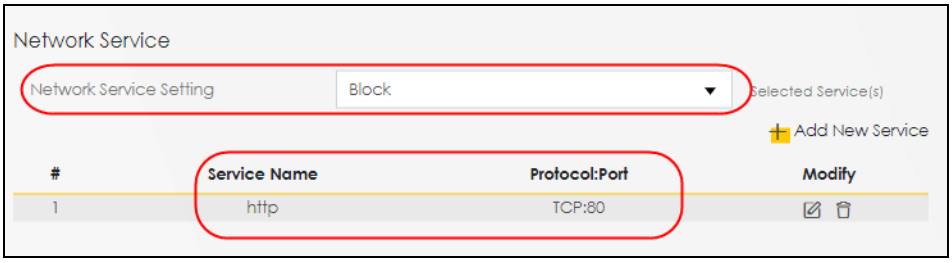
2 Under **Internet Access Schedule**:

- Click **Add New Time** to add a second schedule.
- Use the parameter given above to configure the time settings of your schedule.



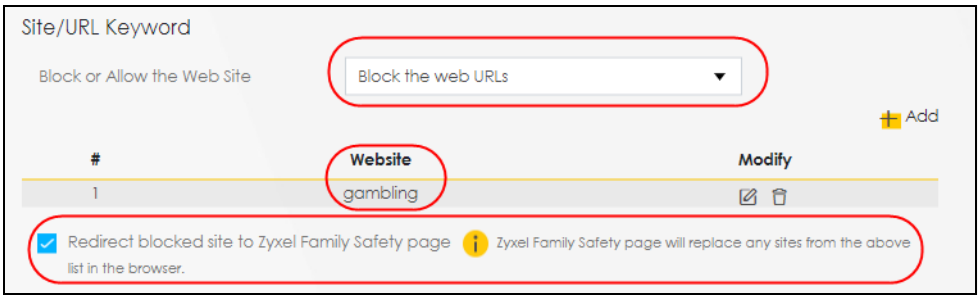
3 Under **Network Service**:

- In **Network Service Setting,** select **Block**.
- Click **Add New Service**, then use the parameter given above to configure settings for the Internet service you are blocking.



4 Under **Site / URL Keyword**:

- Select **Block the web URLs** in **Block or Allow the Web Site**.
- Click **Add**, then use the parameter given above to configure settings for the URL keyword you are blocking.
- Select **Redirect blocked site to Zyxel Family Safety page** to redirect the web browser to the Zyxel Family Safety page if he or she tries to access a website with the blocked URL keyword.



5 Click **OK** to save your settings.

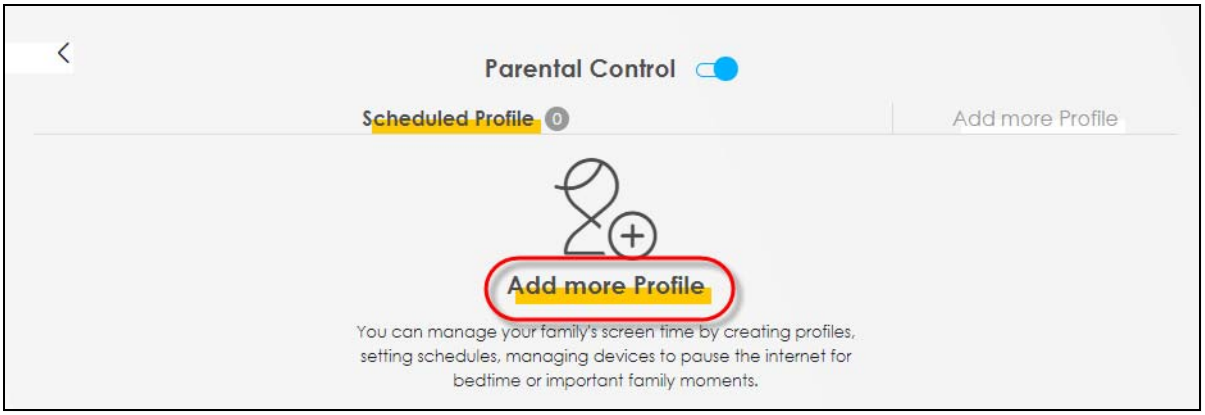
5.5.2.2 Configuring a Parental Control Schedule

Parental Control Profile allows you to set up a schedule rule for Internet usage. Use this feature to limit the days and times a user can access the Internet.

This example shows you how to block an user from accessing the Internet during time for studying. Use the parameter below to configure a schedule rule.

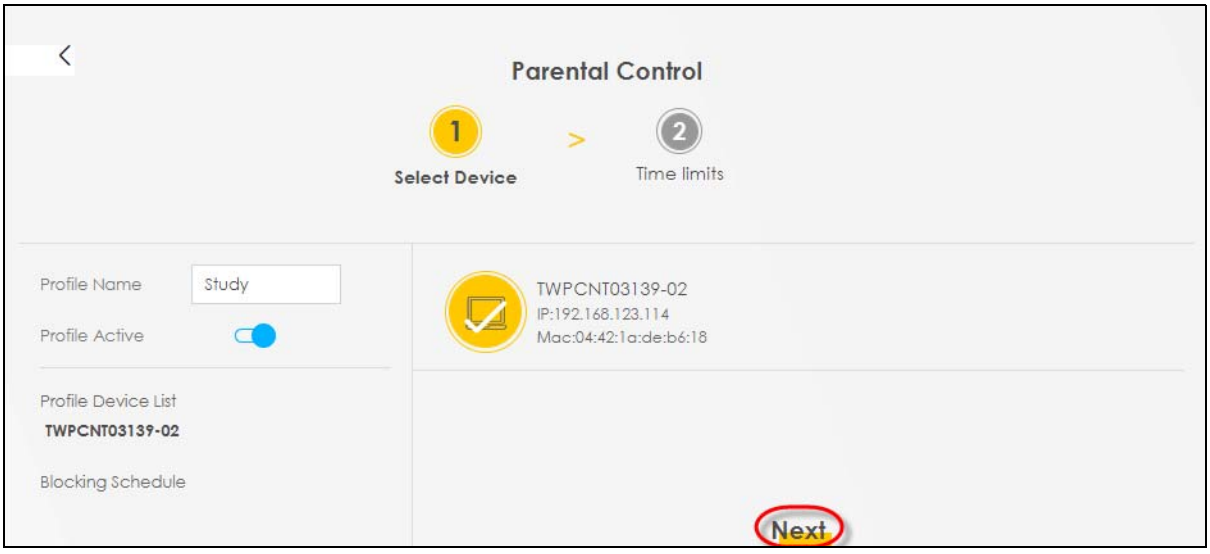
PROFILE NAME	START BLOCKING	END BLOCKING	REPEAT ON
Study	8:00 am	11:00 am	from Monday to Friday
	1:00 pm	5:00 pm	from Monday to Friday

1 Click **Add more Profile** to open the **Parental Control** screen.



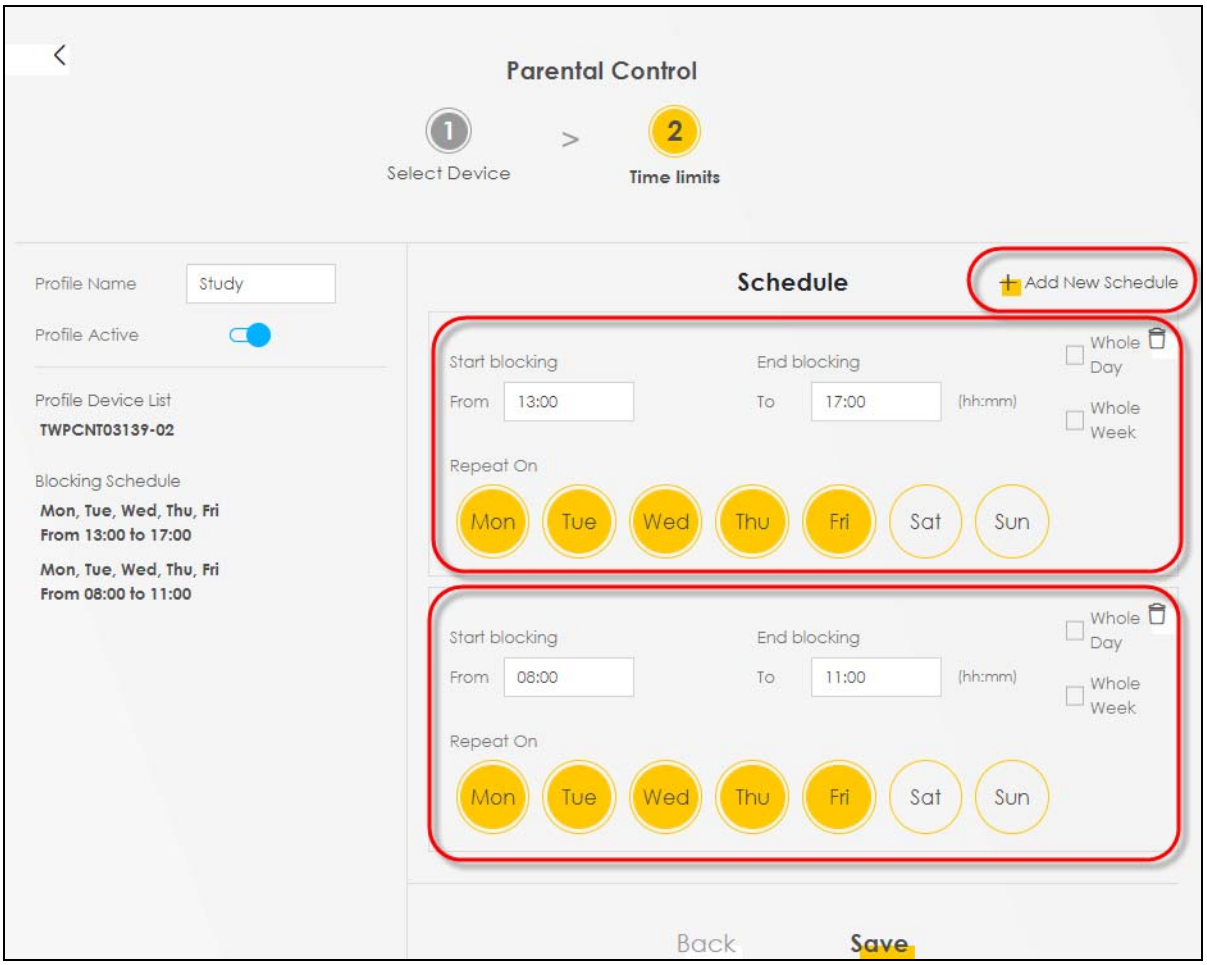
2 Use this screen to add a Parental Control rule.

- Enter the **Profile Name** given in the above parameter.
- Click on the switch to enable **Profile Active**.
- Select a device, and then click **Next** to proceed.



3 Use this screen to edit the Parental Control schedule.

- Click **Add New Schedule** to add a second schedule.
- Use the parameter given above to configure the time settings of your schedules.
- Click **Save** to save the settings.

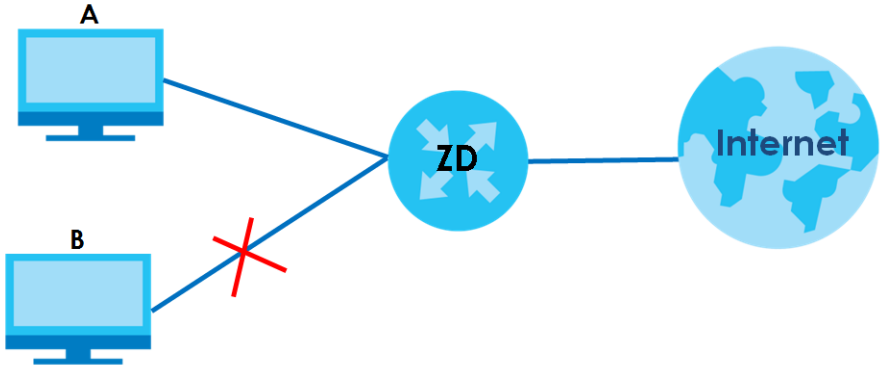


5.5.3 Configuring a MAC Address Filter for Wired LAN Connections

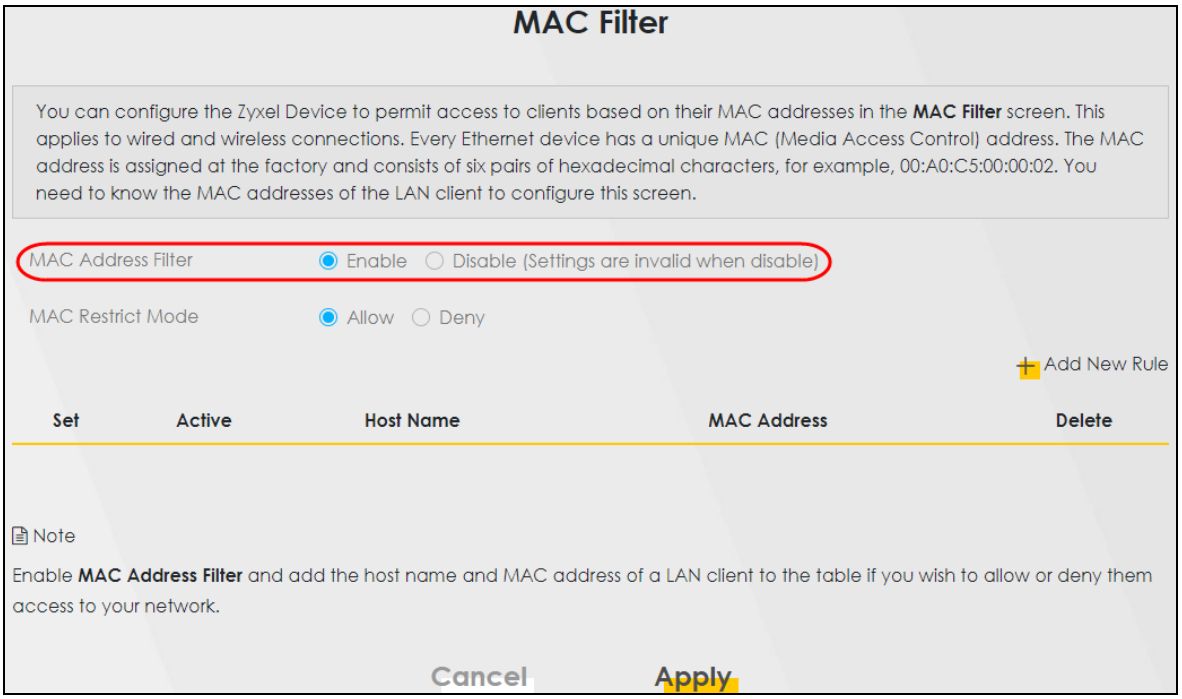
You can use a MAC address filter to exclusively allow or permanently block someone from the wired LAN network.

This example shows that computer B is not allowed access to the wired LAN network.

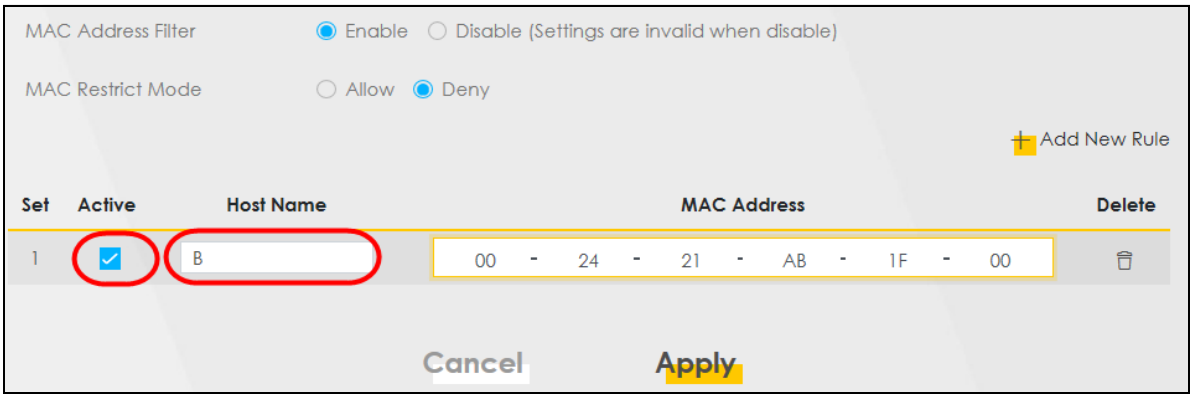
Figure 46 Configure a MAC Address Filter Example



1 Go to the **Security** > **MAC Filter** > **MAC Filter** screen. Under **MAC Address Filter**, select **Enable**.



2 Click **Add New Rule** to add a new entry. Select **Active,** and then enter the **Host Name** and **MAC Address** of computer B. Click **Apply**.



5.6 Internet Calls

This section shows you how to make Internet calls.

5.6.1 Configuring VoIP

To make voice calls over the Internet, you must set up a Session Initiation Protocol (SIP) provider and SIP account on the Zyxel Device. You should have an account with a SIP service provider already set up.

5.6.2 Adding a SIP Service Provider

Follow the steps below to add a SIP service provider.

1 Make sure your Zyxel Device is connected to the Internet.

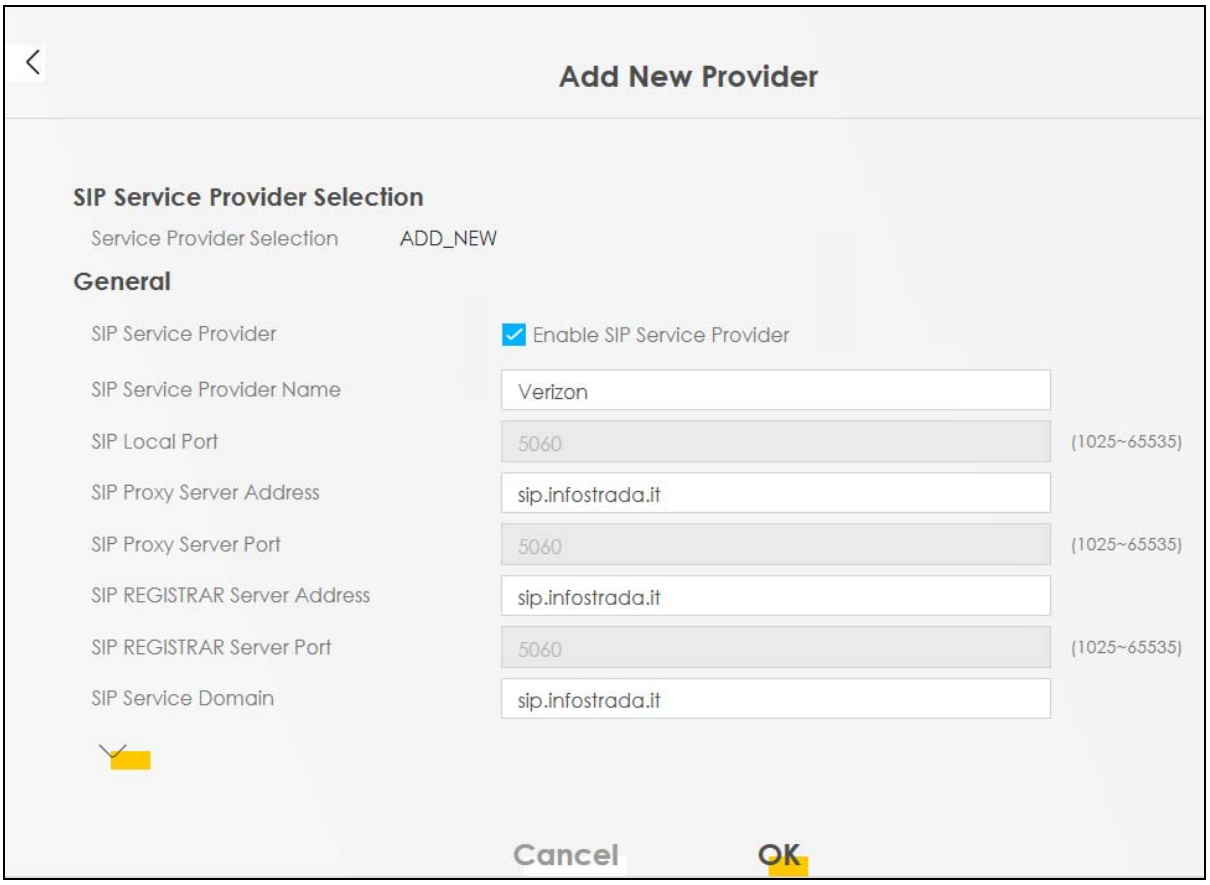
2 Open the Web Configurator.

3 Go to the **VoIP** > **SIP** > **SIP Service Provider** screen. Click the **Add New Provider** button to add the SIP Service Provider.

4 On the **Add New Provider** screen, select **Enable SIP Service Provider**.

5 Enter the **SIP Service Provider Name** of up to 64 printable characters except ["], [`], ['], [<], [>], [^], [$], [|], [&], or [;].

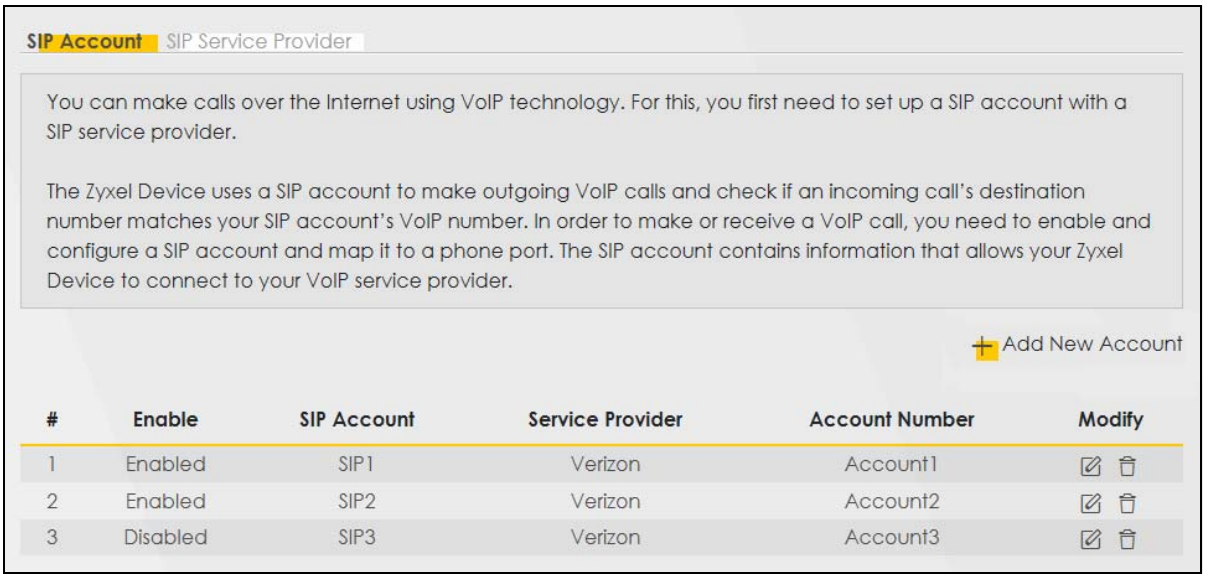
6 Enter **SIP Proxy Server Address**, **SIP REGISTRAR Server Address**, and **SIP Service Domain** provided by your SIP service provider. Click **OK** to save your settings.



5.6.3 Adding a SIP Account

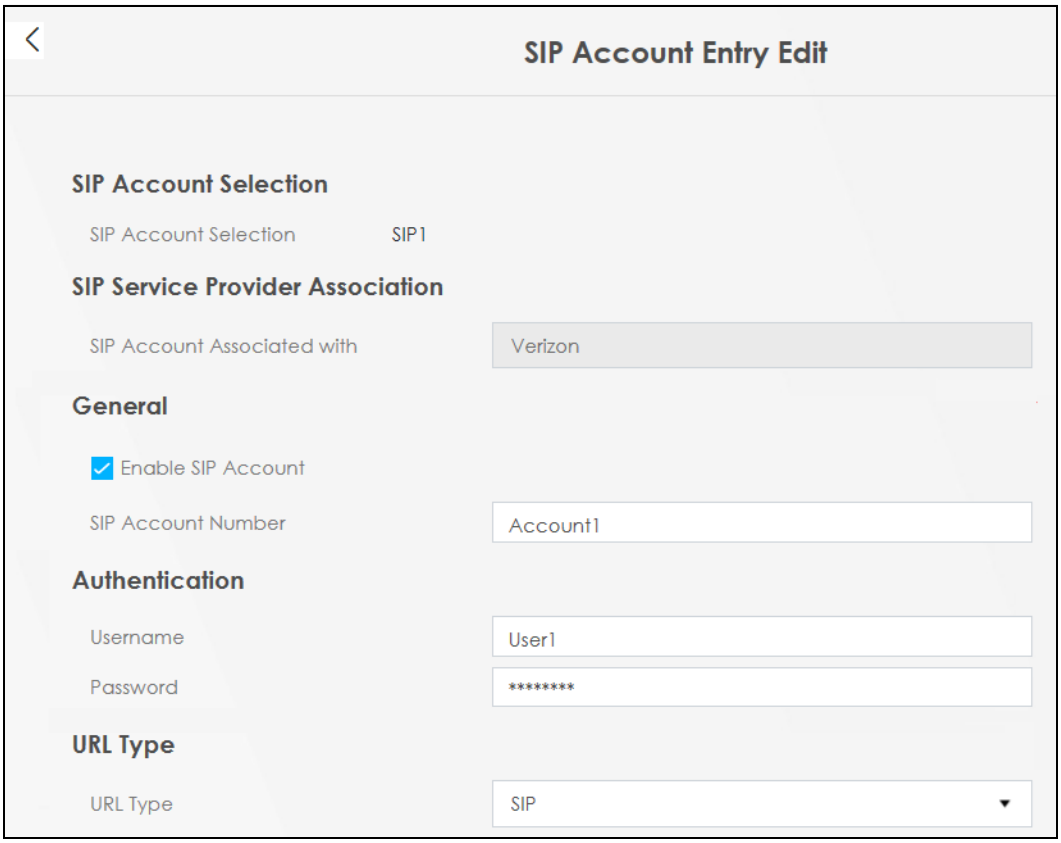
The SIP account must be associated with the SIP service provider configured above. You may configure several SIP accounts for the same service provider. Follow the steps below to set up your SIP account:

1. Make sure your Zyxel Device is connected to the Internet.
2. Open the Web Configurator.
3. Go to the **VoIP** > **SIP** > **SIP Account** screen.
4. Click the **Add New Account** button on the **SIP Account** screen to add a SIP account and map it to a phone port.



5 Under **General,** select **Enable SIP Account**, and then enter the **SIP Account Number**.

6 Under **Authentication,** enter **Username** and **Password**. Leave the other settings as default. Click **OK** to save your settings.

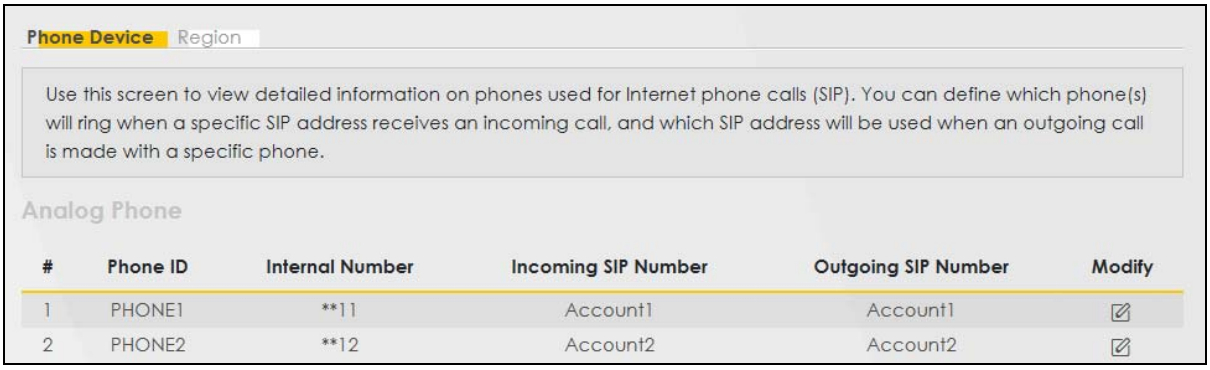


5.6.4 Configuring a Phone

You must now configure the phone port to use the SIP account you just configured.

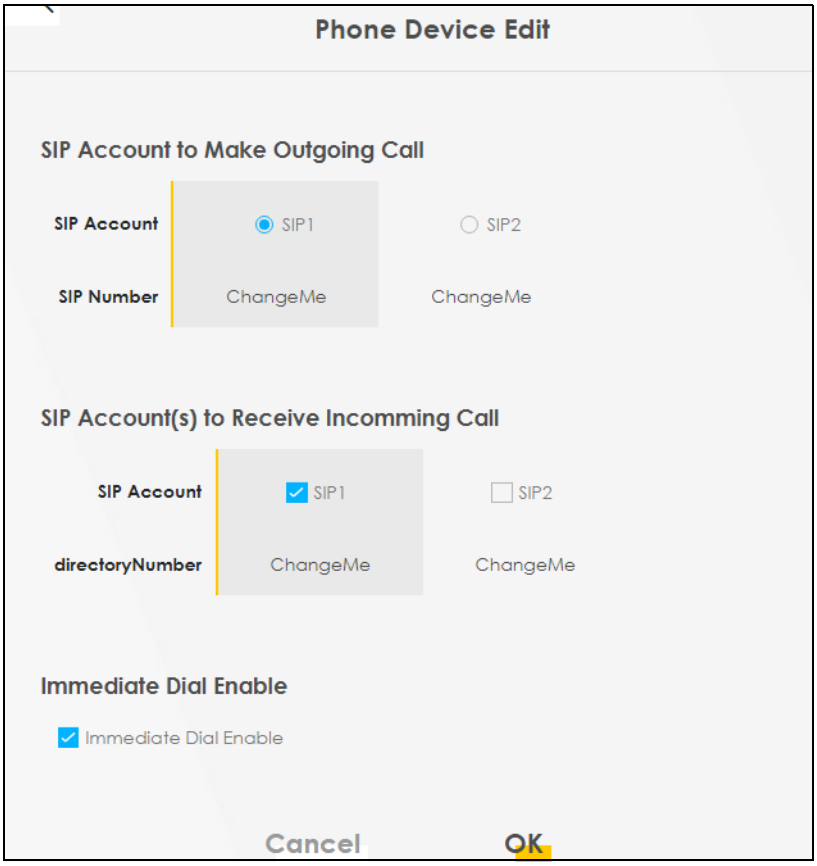
1 Go to the **VoIP** > **Phone** > **Phone Device** screen.

2 Click the **Modify** icon of **PHONE1** to configure PHONE1 on your Zyxel Device. The following screen appears.



3 Under **SIP1 SIP Account to Make Outgoing Call,** select **SIP1** to have the phone connected to the first phone port use the registered SIP1 account to make outgoing calls.

4 Under **SIP Account(s) to Receive Incoming Call,** select **SIP1** to have the phone connected to the first phone port receive phone calls for the SIP1 account. Click **OK** to save your changes.



5.6.5 Making a VoIP Call

Follow these steps to make a phone call using Voice over IP (VoIP).

1. Make sure you connect a telephone to phone port 1 on the Zyxel Device.
2. Make sure the Zyxel Device is turned on and connected to the Internet.
3. Pick up the phone receiver.
4. Dial the VoIP phone number you want to call.

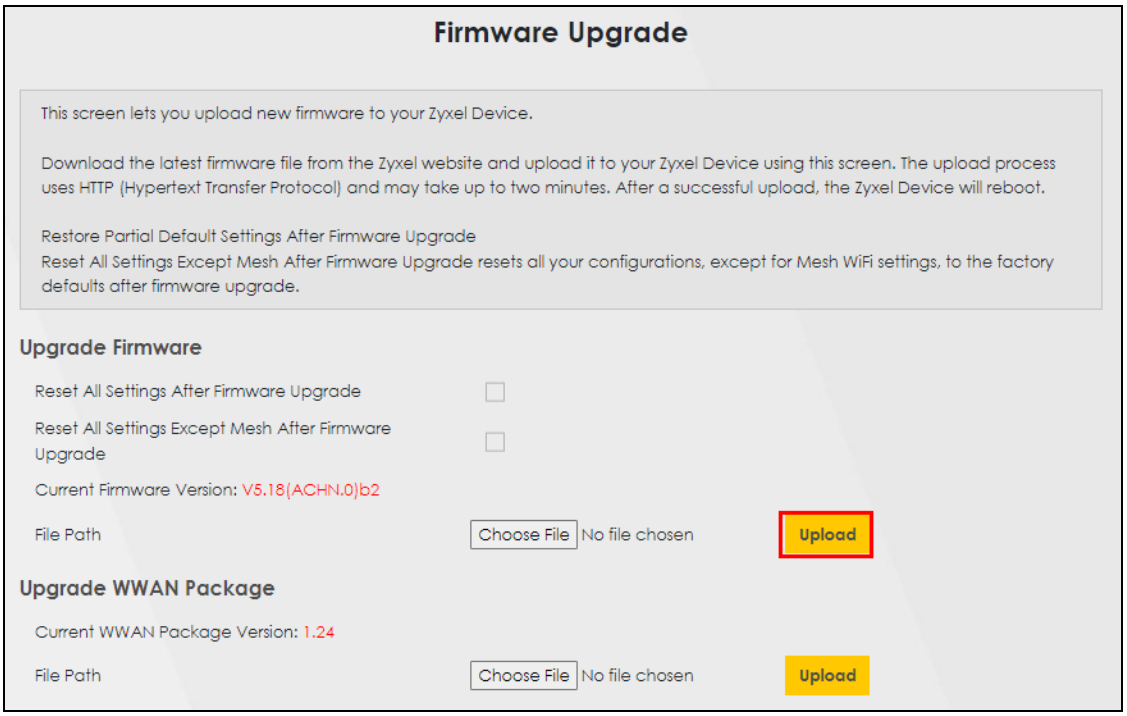
5.7 Device Maintenance

This section shows you how to upgrade the Zyxel Device firmware, back up the configuration and restore the Zyxel Device to its previous or default settings.

5.7.1 Upgrading the Firmware

Upload the latest firmware to the Zyxel Device for feature enhancements.

1. To download the latest firmware of your Zyxel Device, go to *https://www.zyxel.com/service-provider* and search for your model. The latest firmware will be available under the **Downloads & resources** tab. The model code for the Zyxel Device in this example is v5.13(ABLZ.1). Note the model code for your Zyxel Device.
2. Unzip the file.
3. Go to the **Maintenance** > **Firmware Upgrade** screen.
4. Click **Browse**/**Choose File** and select the file with a ".bin" extension to upload. Click **Upload**.



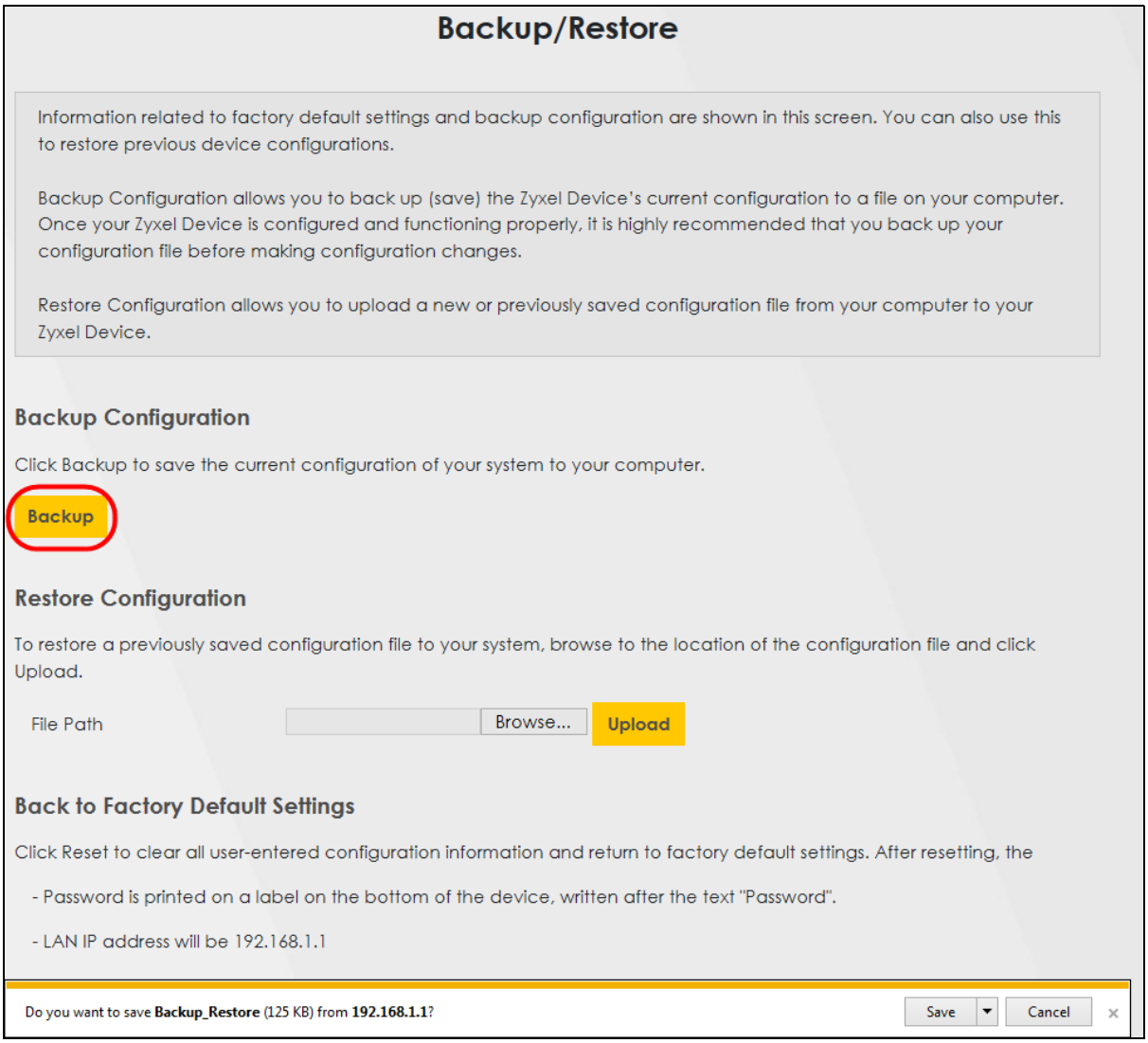
5 This process may take up to 2 minutes to finish. After 2 minutes, log in again and check your new firmware version in the **Connection Status** screen.

5.7.2 Backing up the Device Configuration

Back up a configuration file allows you to return to your previous settings.

1 Go to the **Maintenance** > **Backup/Restore** screen.

2 Under **Backup Configuration,** click **Backup.** A configuration file is saved to your computer. In this case, the **Backup/Restore** file is saved.

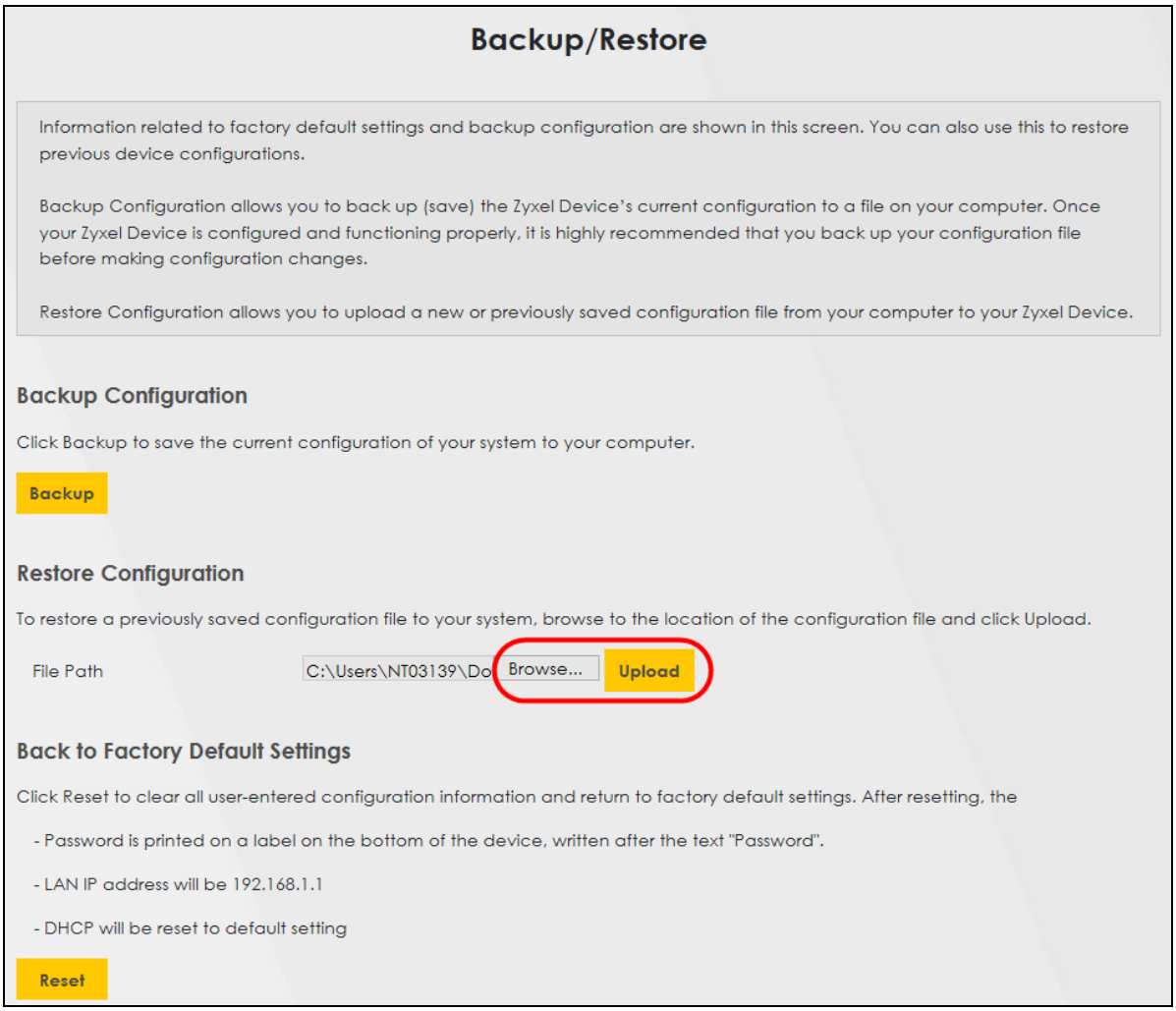


5.7.3 Restoring the Device Configuration

This section shows you how to restore a previously-saved configuration file from your computer to your Zyxel Device.

1 Go to the **Maintenance** > **Backup/Restore** screen.

2 Under **Restore Configuration,** click **Browse**/**Choose File**, and then select the configuration file that you want to upload. Click **Upload**.



3 The Zyxel Device automatically restarts after the configuration file is successfully uploaded. Wait for one minute before logging into the Zyxel Device again. Go to the **Connection Status** page to check the firmware version after the reboot.

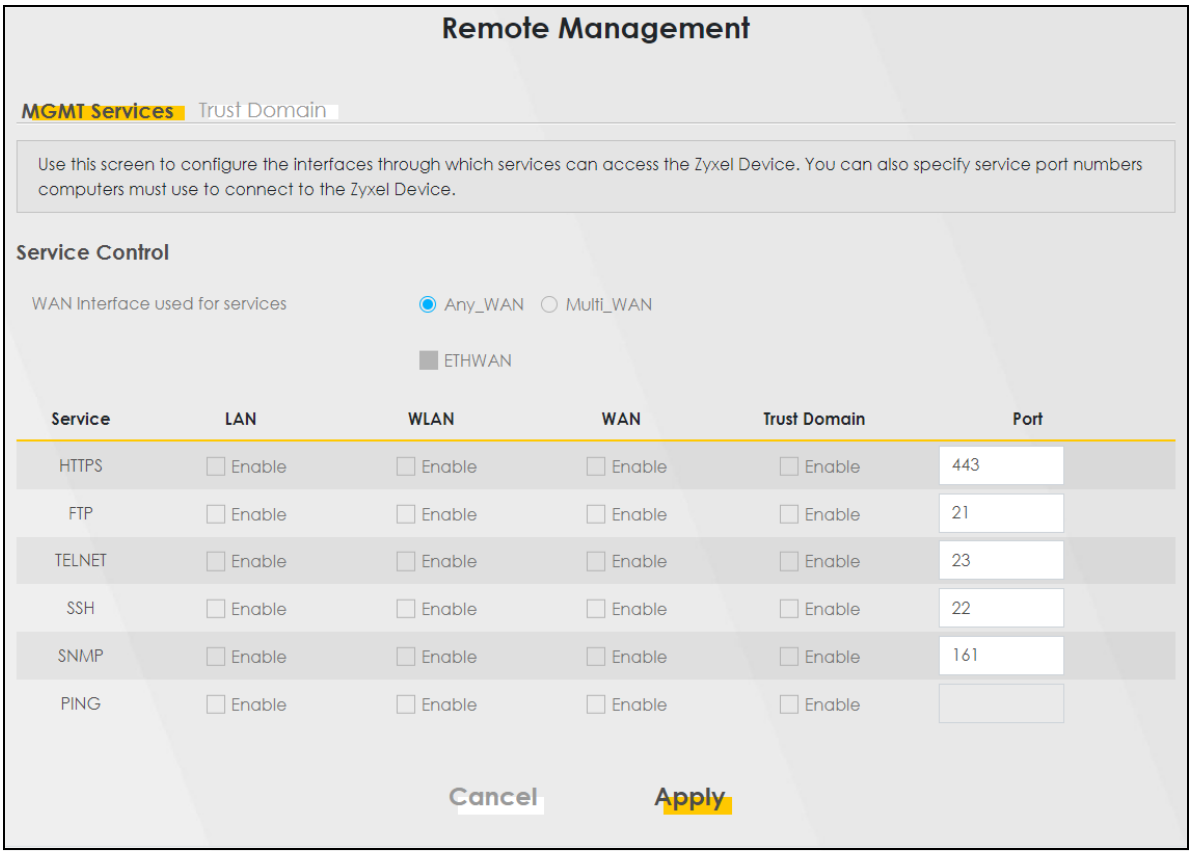
5.8 Remote Access from WAN

This section shows you how to configure WAN access for a specific trusted computer through HTTPS, SSH to the Zyxel Device. Remote management determines which interface and web services are allowed to access the Zyxel Device.

5.8.1 Configure Access to Your Zyxel Device

Perform the following to configure access to your Zyxel Device:

1 Go to the **Maintenance** > **Remote Management** > **MGMT Services** screen. Select the WAN interface and services allowed to access the Zyxel Device remotely.



These are the different ways to access the Zyxel Device remotely.

ACCESS TYPE	LABEL	DESCRIPTION
LAN / WLAN (WiFi)	**LAN** / **WLAN**	This allows access of the selected **Service** from the local LAN.
WAN	WAN	This allows access of the selected **Service** from the WAN connections.
Trust Domain	Trust Domain	This allows access of the selected **Service** only from the trusted IPv4 / IPv6 addresses configured under **Trust Domain**.

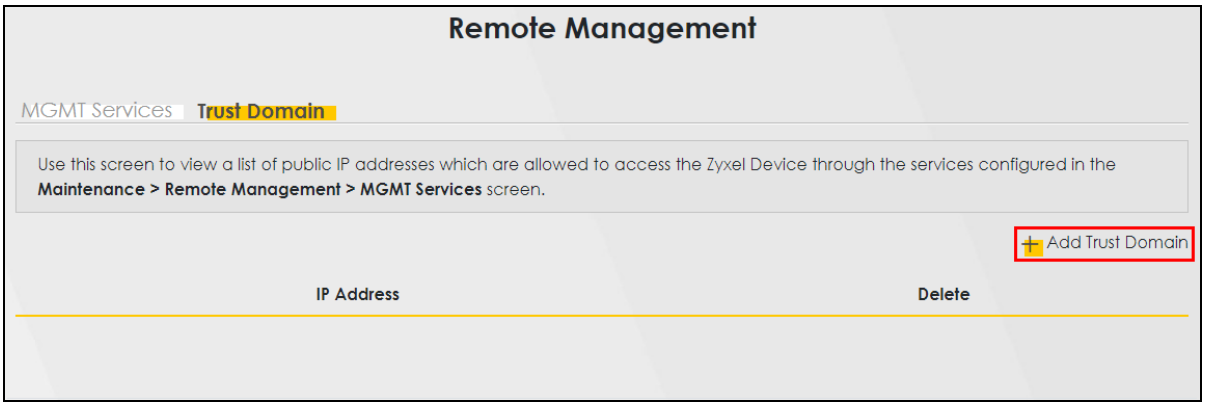
2 Select how you want to access the Zyxel Device remotely.

3 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.

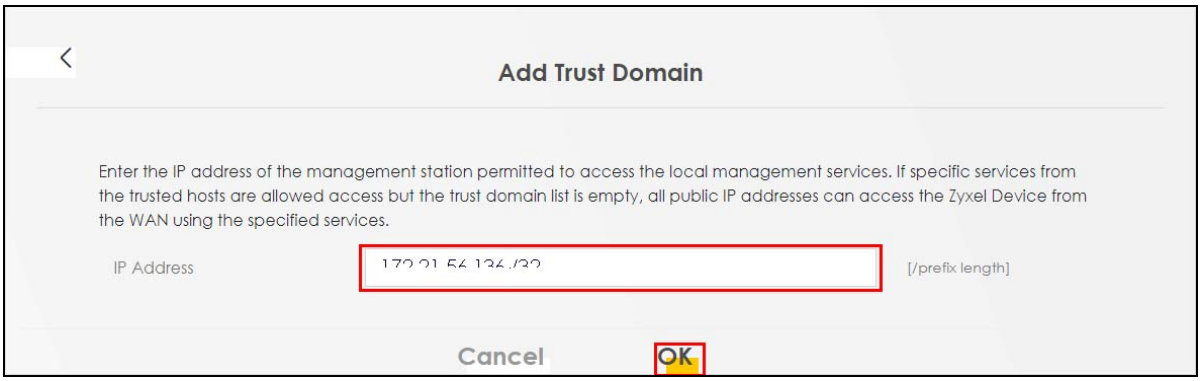
5.8.2 Configure the Trust Domain

Perform the following to configure the Trust Domain on your Zyxel Device:

1 Go to the **Maintenance** > **Remote Management** > **Trust Domain** screen. Click **+ Add Trust Domain** to go to the **Add Trust Domain** screen to add a trusted host IPv4 / IPv6 address.



2 Enter a public IPv4 / IPv6 IP address which is allowed to access the service on the Zyxel Device from the WAN. Then click **OK**.



PART II
Technical Reference

CHAPTER 6
Connection Status

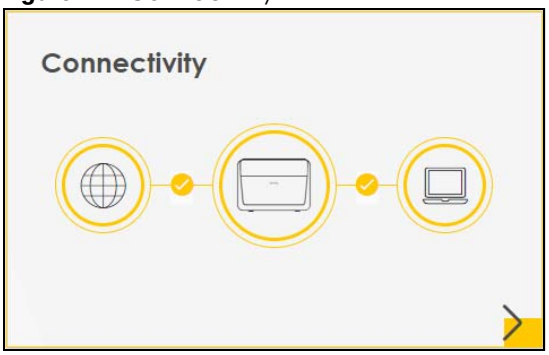
6.1 Connection Status Overview

After you log into the Web Configurator, the **Connection Status** screen appears. You can configure basic Internet access and WiFi settings in this screen. It also shows the network status of the Zyxel Device and computers or devices connected to it.

6.1.1 Connectivity

Use this screen to view the network connection status of the Zyxel Device and its clients.

Figure 47 Connectivity



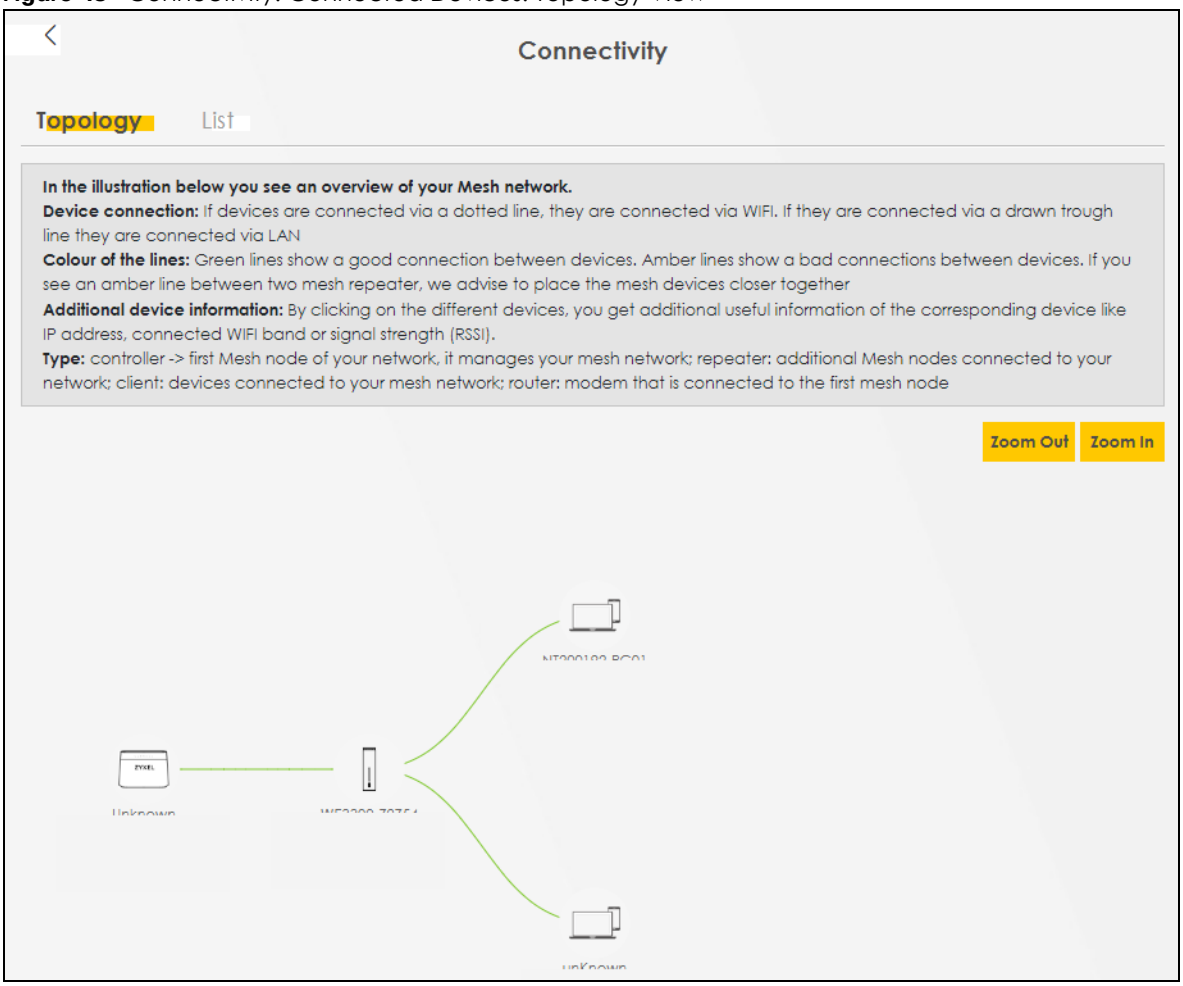
Click the Arrow icon ( ) to view IP addresses and MAC addresses of the wireless and wired devices connected to the Zyxel Device.

You can change the icon and name of a connected device. Place your mouse within the device block, and an Edit icon ( ) will appear. Click the Edit icon, and you will see there are several icon choices for you to select. Enter a name in the **Device Name** field for a connected device. Click to enable ( ) **Internet Blocking** for a connected WiFi client.

The following screen appears when you enable **MPro Mesh** in the **Network Setting** > **Wireless** > **MESH** screen. Check Section 1.1 on page 19 to see if your Zyxel Device supports Mesh.

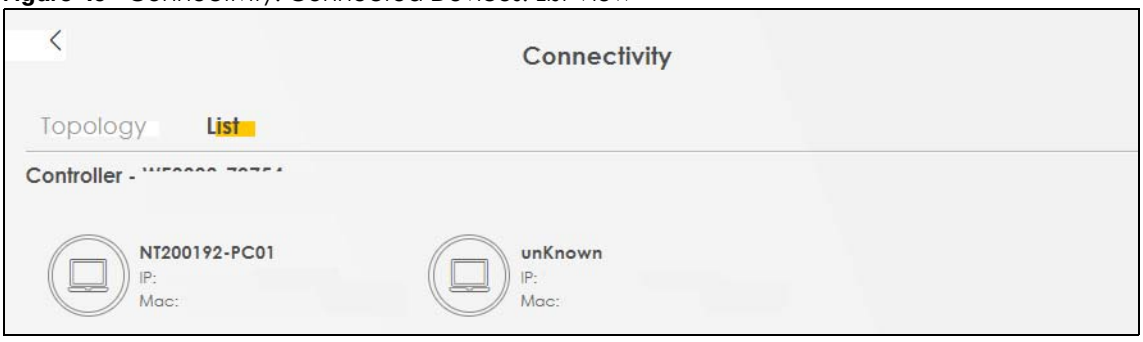
Use the **Topology** view screen to display an overview of your Mesh network.

Figure 48 Connectivity: Connected Devices: Topology View



Use the **List** view screen to view IP addresses and MAC addresses of the WiFi and wired devices connected to the Zyxel Device. Place your mouse within the device block, and an **Edit** icon ( ) will appear. Click the **Edit** icon to change the icon and name of a connected device.

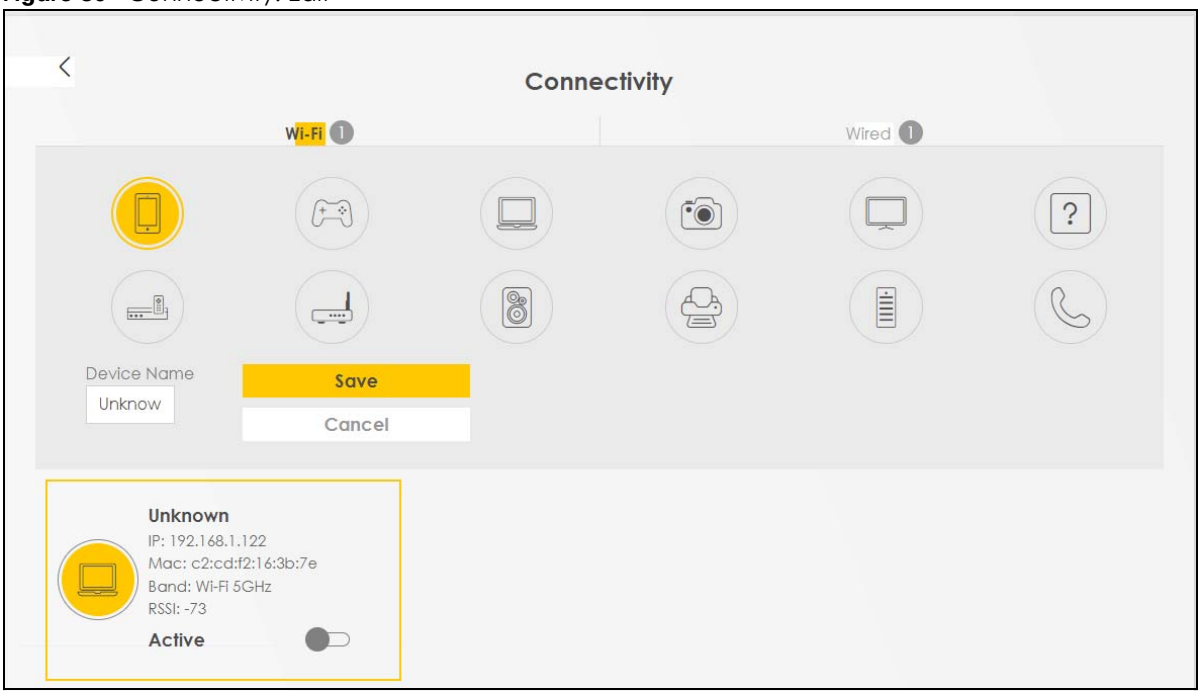
Figure 49 Connectivity: Connected Devices: List View



6.1.2 Icon and Device Name

Select an icon and/or enter a name in the **Device Name** field for a connected device. Click to enable ( ) **Internet Blocking** (or **Active**) for a connected WiFi client. Click **Save** to save your changes.

Figure 50 Connectivity: Edit



6.1.3 System Info

Use this screen to view the basic system information of the Zyxel Device.

Figure 51 System Info

Click the Arrow icon ( ) to view more information on the status of your firewall and interfaces (WAN, LAN, and WLAN).

Figure 52 System Info: Detailed Information

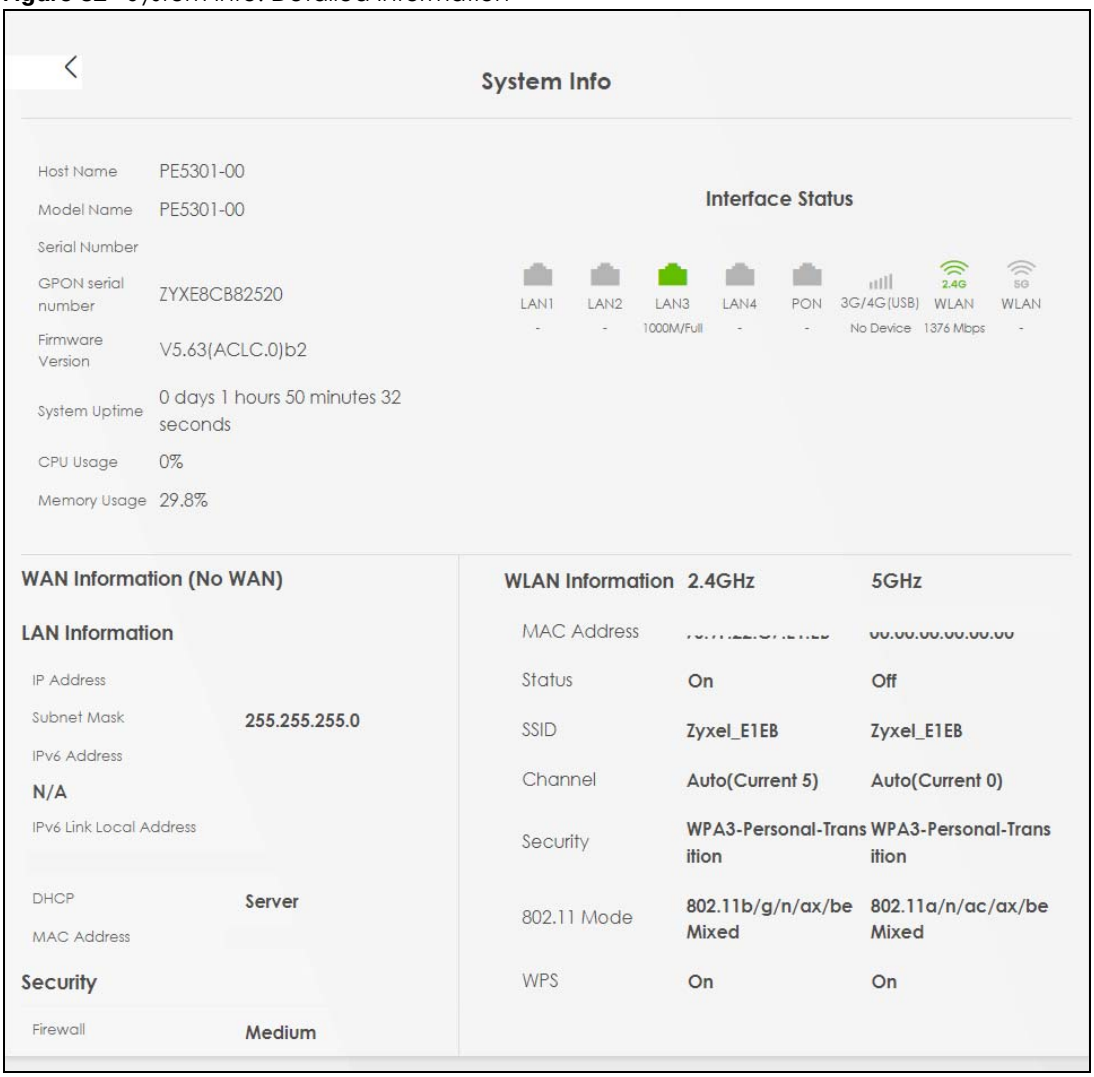
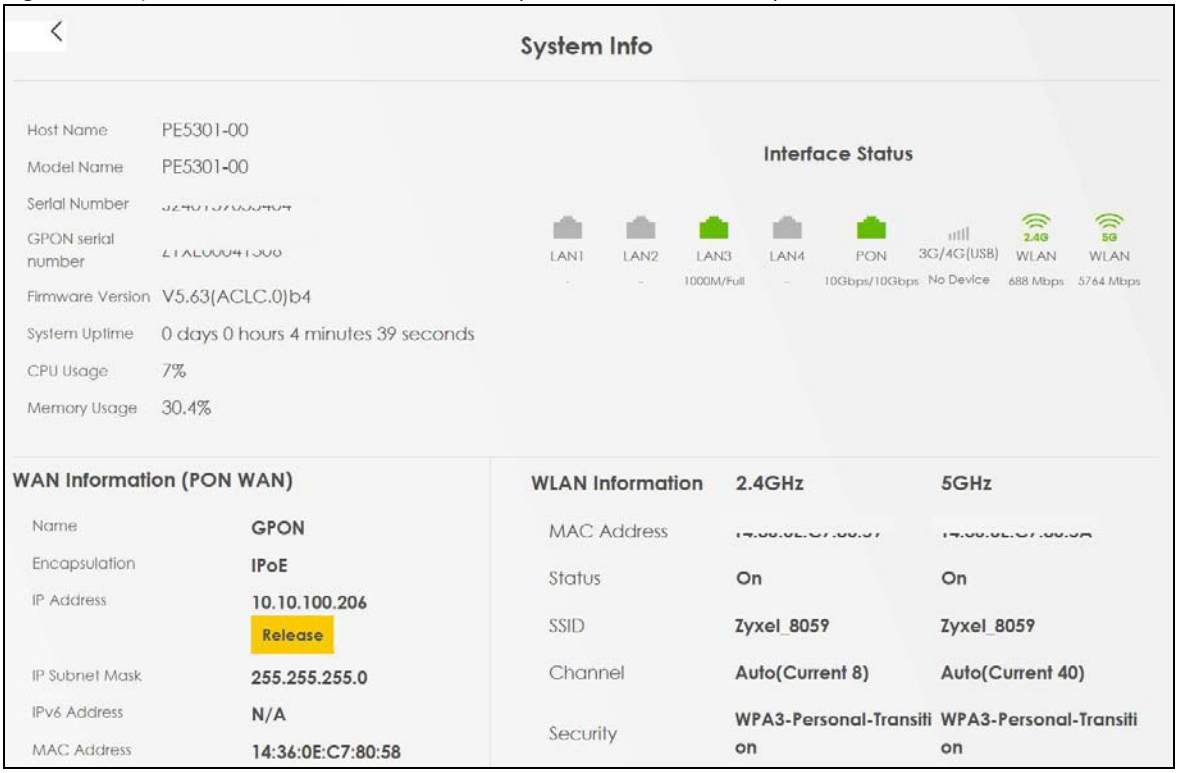


Figure 53 System Info: Detailed Information (with PON connection)



Each field is described in the following table.

Table 15 System Info: Detailed Information

LABEL	DESCRIPTION
Host Name	This field displays the Zyxel Device system name. It is used for identification.
Model Name	This shows the model number of your Zyxel Device.
Serial Number	This field displays the serial number of the Zyxel Device.
GPON serial number	This field displays the unique GPON serial number of the GPON port on the Zyxel Device. Use this serial number to register the Zyxel Device (ONT, Optical Network Terminal) with the OLT (Optical Line Terminal) server.
Firmware Version	This is the current version of the firmware inside the Zyxel Device.
System Uptime	This field displays how long the Zyxel Device has been running since it last started up. The Zyxel Device starts up when you plug it in, when you restart it (**Maintenance** > **Reboot**), or when you reset it.
WAN Information (These fields display when you have a WAN connection.)	
Name	This field displays the name given to the Internet connection.
Encapsulation	This field displays the current encapsulation method.
IP Address	This field displays the current IP address of the Zyxel Device in the WAN. Click the **Release**/ **Renew** button if you want to release/renew your WAN IP address.
IP Subnet Mask	This field displays the current IPv4 subnet mask of the Zyxel Device in the WAN.
IPv6 Address	This field displays the current IPv6 address of the Zyxel Device in the WAN.
MAC Address	This field displays the WAN Ethernet adapter MAC (Media Access Control) address of your Zyxel Device.
Primary DNS server	This field displays the first DNS server address assigned by the ISP.

Table 15 System Info: Detailed Information (continued)

LABEL	DESCRIPTION
Secondary DNS server	This field displays the second DNS server address assigned by the ISP.
Primary DNSv6 server	This field displays the first DNS server IPv6 address assigned by the ISP.
Secondary DNSv6 server	This field displays the second DNS server IPv6 address assigned by the ISP.
LAN Information	
IP Address	This is the current IP address of the Zyxel Device in the LAN.
Subnet Mask	This is the current subnet mask in the LAN.
IPv6 Address	This is the current IPv6 address of the Zyxel Device in the LAN.
IPv6 Link Local Address	This field displays the current link-local address of the Zyxel Device for the LAN interface. A link-local address is a special type of the IP address that is only valid for communication within the local network segment or broadcast domain of the device. Typically, link-local addresses are used for automatic address configuration and neighbor discovery protocols.
DHCP	This field displays what DHCP services the Zyxel Device is providing to the LAN. The possible values are: **Server** – The Zyxel Device is a DHCP server in the LAN. It assigns IP addresses to other computers in the LAN. **Relay** – The Zyxel Device acts as a surrogate DHCP server and relays DHCP requests and responses between the remote server and the clients. **Disable** – The Zyxel Device is not providing any DHCP services to the LAN.
Security	
Firewall	This displays the firewall's current security level (**High**, **Medium**, **Low**, or **Disabled**).
WLAN Information	
MAC Address	This shows the WiFi adapter MAC (Media Access Control) Address of the WiFi interface.
Status	This displays whether the WLAN is activated.
SSID	This is the descriptive name used to identify the Zyxel Device in a WLAN.
Channel	This is the channel number currently used by the WiFi interface.
Security	This displays the type of security mode the WiFi interface is using in the WLAN.
802.11 Mode	This displays the type of 802.11 mode the WiFi interface is using in the WLAN.
WPS	This displays whether WPS is activated on the WiFi interface.

6.1.4 WiFi Settings

Use this screen to enable or disable the main WiFi network. When the switch turns blue, the function is enabled. You can use this screen or the QR code on the upper right corner to check the SSIDs (WiFi network name) and passwords of the main WiFi networks. If you want to show or hide your WiFi passwords, click the Eye icon ( ).

Figure 54 WiFi Settings (for 2.4G and 5G models)

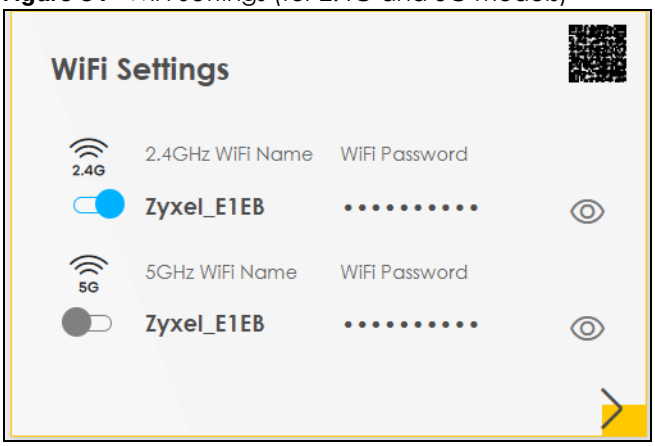
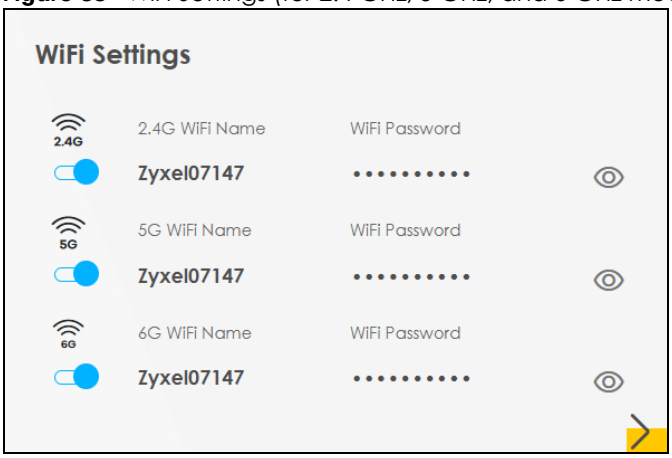


Figure 55 WiFi Settings (for 2.4 GHz, 5 GHz, and 6 GHz models)



Click the Arrow icon ( ) to configure the SSIDs and/or passwords for your main WiFi networks. Click the Eye icon ( ) to display the characters as you enter the WiFi Password.

Scanning the QR code is an alternative way to connect your WiFi client to the WiFi network.

Note: When you enable Mesh in the **Network** > **Wireless** > **MESH** screen, **Keep 2.4G, 5G and 6G the same** will be enabled and cannot be disabled.

Figure 56 WiFi Settings: Configuration (for 2.4G and 5G models)

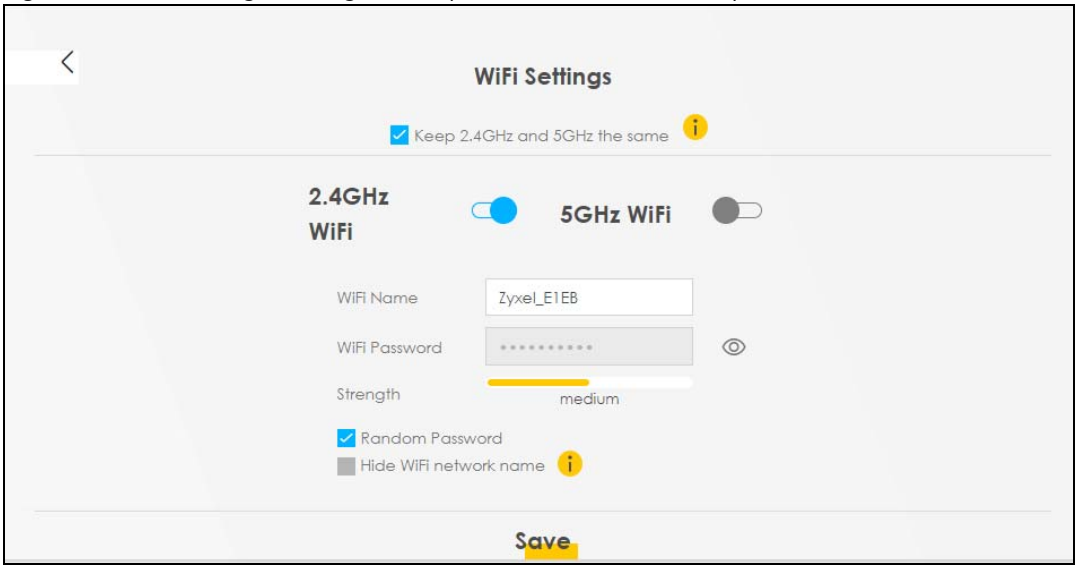


Figure 57 WiFi Settings: Configuration (2.4 GHz, 5 GHz, and 6 GHz models)

Each field is described in the following table.

Table 16 WiFi Settings: Configuration

LABEL	DESCRIPTION
Keep 2.4G, 5G and 6G the same	Select this and the 2.4 GHz, 5 GHz and 6 GHz wireless networks will use the same SSID. If you deselect this, the screen will change. You need to assign different SSIDs for the 2.4 GHz and 5 GHz wireless networks. Note: To see if your model supports 6 GHz, please see Section 1.1 on page 19 for more information.
2.4G / 5G / 6G WiFi	Click this switch to enable or disable the 2.4 GHz / 5 GHz / 6 GHz WiFi network. When the switch turns blue, the function is enabled. Note: To see if your model supports 6 GHz, please see Section 1.1 on page 19 for more information.
WiFi Name	The SSID (Service Set Identifier) identifies the service set with which a WiFi device is associated. WiFi devices associating to the access point (AP) must have the same SSID. Enter a descriptive name for the WiFi. You can use up to 32 printable characters, including spaces.
WiFi Password	If you selected **Random Password**, this field displays a pre-shared key generated by the Zyxel Device. If you did not select **Random Password**, you can manually enter a pre-shared key from 8 to 63 alphanumeric (0-9, a-z, A-Z) and special characters, including spaces. Click the Eye icon to show or hide the password for your WiFi network. When the Eye icon is slashed, you will see the password in plain text. Otherwise, it is hidden.
Random Password	Select this to have the Zyxel Device automatically generate a password. The **WiFi Password** field will not be configurable when you select this option.
Hide WiFi network name	Select this to hide the SSID in the outgoing beacon frame so a station cannot obtain the SSID through scanning using a site survey tool. Note: Disable WPS in the **Network Setting** > **Wireless** > **WPS** screen to hide the SSID.
Save	Click **Save** to save your changes.

6.2 Guest WiFi Settings

Use this screen to enable or disable the guest 2.4 GHz / 5 GHz /6 GHz WiFi networks. When the switch goes to the right (), the function is enabled. Otherwise, it is not. You can check their SSIDs (WiFi network name) and passwords from this screen. If you want to show or hide your WiFi passwords, click the Eye icon.

Note: To see if your model supports 6 GHz, please see Section 1.1 on page 19 for more information.

Figure 58 Guest WiFi Settings (for 2.4 GHz and 5 GHz models)

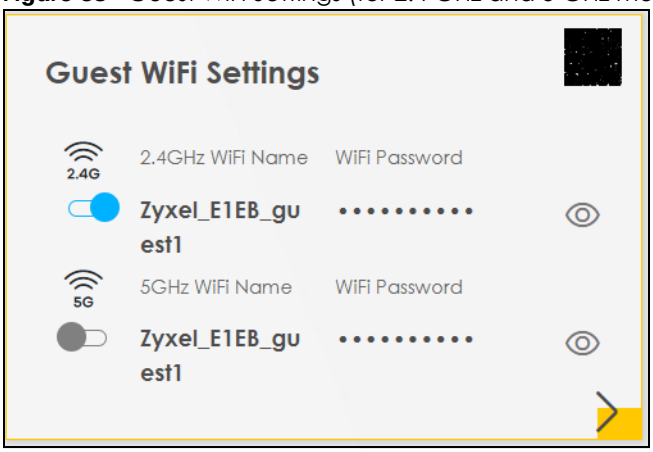
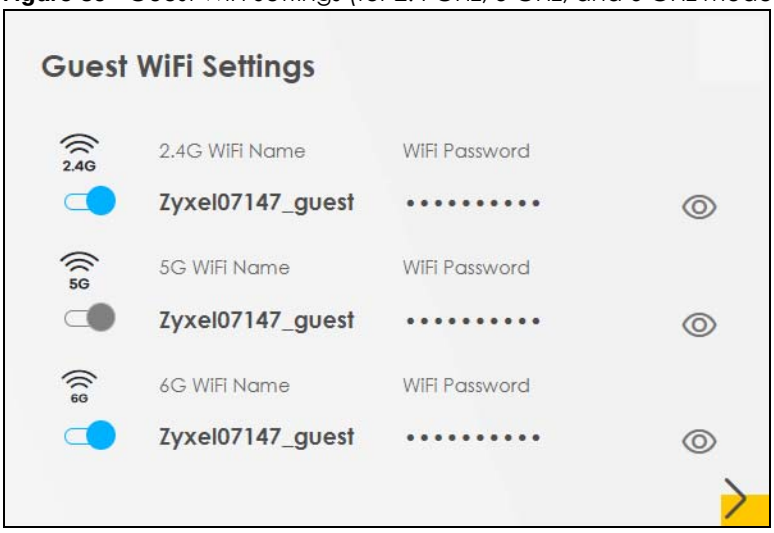


Figure 59 Guest WiFi Settings (for 2.4 GHz, 5 GHz, and 6 GHz models)



Click the Arrow icon ( ) to open the following screen. Use this screen configure the SSIDs and/or passwords for your guest WiFi networks.

To see if your model supports 6 GHz, please see Section 1.1 on page 19 for more information.

To assign different SSIDs to the 2.4 GHz and 5 GHz guest wireless networks, clear the **Keep 2.4G, 5G and 6G the same** checkbox in the **WiFi Settings** screen, and the **Guest WiFi Settings** screen will change.

Figure 60 Guest WiFi Settings: Different SSIDs (for 2.4G and 5G models)

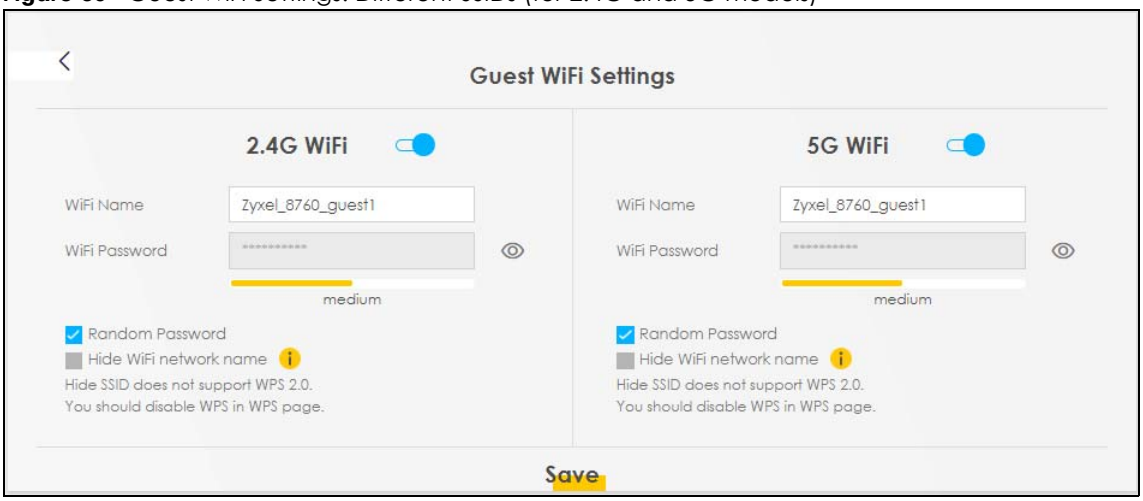
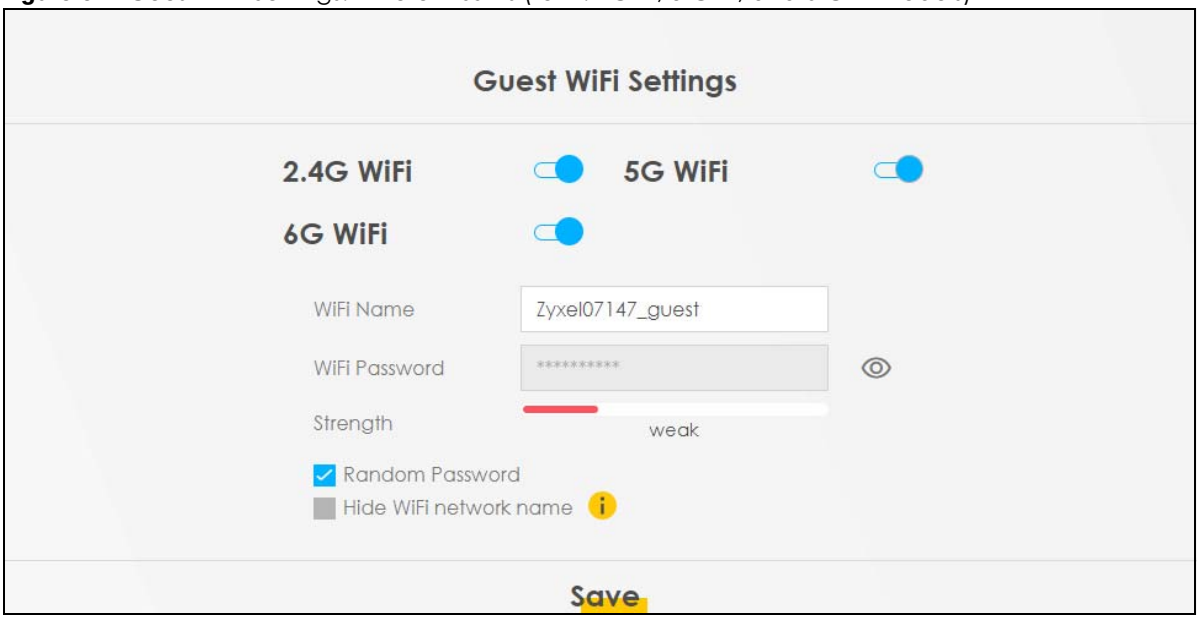


Figure 61 Guest WiFi Settings: Different SSIDs (for 2.4 GHz, 5 GHz, and 6 GHz models)



Each field is described in the following table.

Table 17 WiFi Settings: Configuration

LABEL	DESCRIPTION
2.4G/5G/6G WiFi	Click this switch to enable or disable the 2.4 GHz / 5 GHz / 6 GHz WiFi networks. When the switch goes to the right, the function is enabled. Otherwise, it is not. Note: To see if your model supports 6 GHz, please see Section 1.1 on page 19 for more information.
WiFi Name	The SSID (Service Set IDentity) identifies the service set with which a wireless device is associated. Wireless devices associating to the access point (AP) must have the same SSID. Enter a descriptive name (up to 32 printable characters, including spaces) for the WiFi.
WiFi Password	If you selected **Random Password**, this field displays a pre-shared key generated by the Zyxel Device. If you did not select **Random Password**, you can manually enter a pre-shared key from 8 to 64 alphanumeric (0-9, a-z, A-Z) and special characters, including spaces.

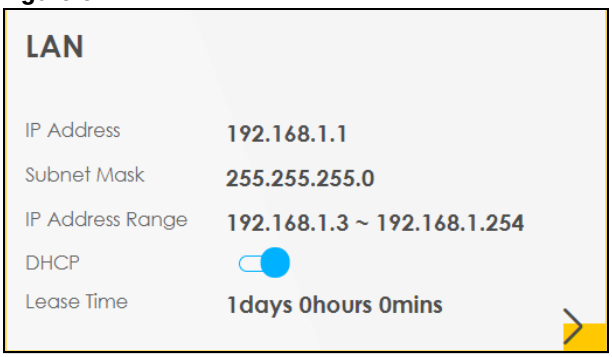
Table 17 WiFi Settings: Configuration (continued)

LABEL	DESCRIPTION
	Click the Eye icon to show or hide the password of your WiFi network. When the Eye icon is slashed, you will see the password in plain text. Otherwise, it is hidden.
Random Password	Select this option to have the Zyxel Device automatically generate a password. The **WiFi Password** field will not be configurable when you select this option.
Hide WiFi network name	Select this checkbox to hide the SSID in the outgoing beacon frame so a station cannot obtain the SSID through scanning using a site survey tool. Note: Disable WPS in the **Network Setting** > **Wireless** > **WPS** screen to hide the SSID.
Save	Click **Save** to save your changes.

6.2.1 LAN

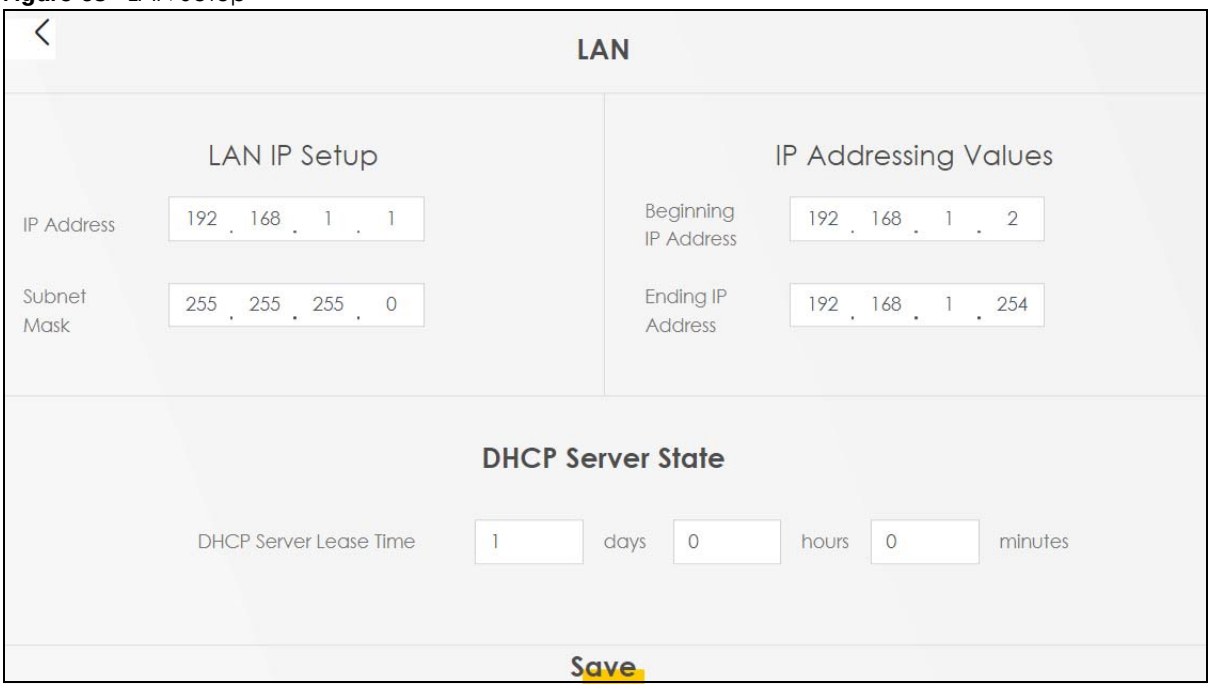
Use this screen to view the LAN IP address, subnet mask, and DHCP settings of your Zyxel Device. Click the switch button to turn on/off the DHCP server.

Figure 62 LAN



Click the Arrow icon ( ) to configure the LAN IP settings and DHCP setting for your Zyxel Device.

Figure 63 LAN Setup



Each field is described in the following table.

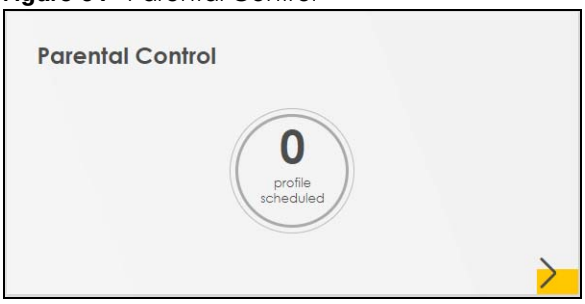
Table 18 LAN Setup

LABEL	DESCRIPTION
LAN IP Setup	
IP Address	Enter the LAN IPv4 IP address you want to assign to your Zyxel Device in dotted decimal notation, for example, (factory default).
Subnet Mask	Enter the subnet mask of your network in dotted decimal notation, for example 255.255.255.0 (factory default). Your Zyxel Device automatically computes the subnet mask based on the IP Address you enter, so do not change this field unless you are instructed to do so.
IP Addressing Values	
Beginning IP Address	This field specifies the first of the contiguous addresses in the IP address pool.
Ending IP Address	This field specifies the last of the contiguous addresses in the IP address pool.
Days/Hours/ Minutes	Enter the lease time of the DHCP server.

6.3 The Parental Control Screen

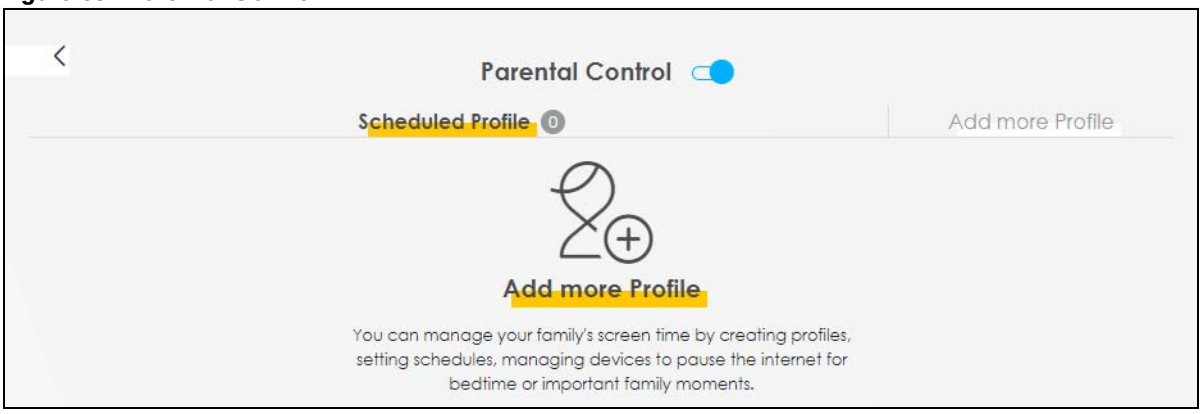
Use this screen to view the number of profiles that were created for parental control.

Figure 64 Parental Control



Click the yellow Arrow icon to open the following screen. Use this screen to enable parental control and add more profiles. Add a profile to create restricted access schedules. Go to the **Security** > **Parental Control** > **Add New PCP/Edit** screen to configure URL filtering settings to block the users on your network from accessing certain web sites.

Figure 65 Parental Control



Each field is described in the following table.

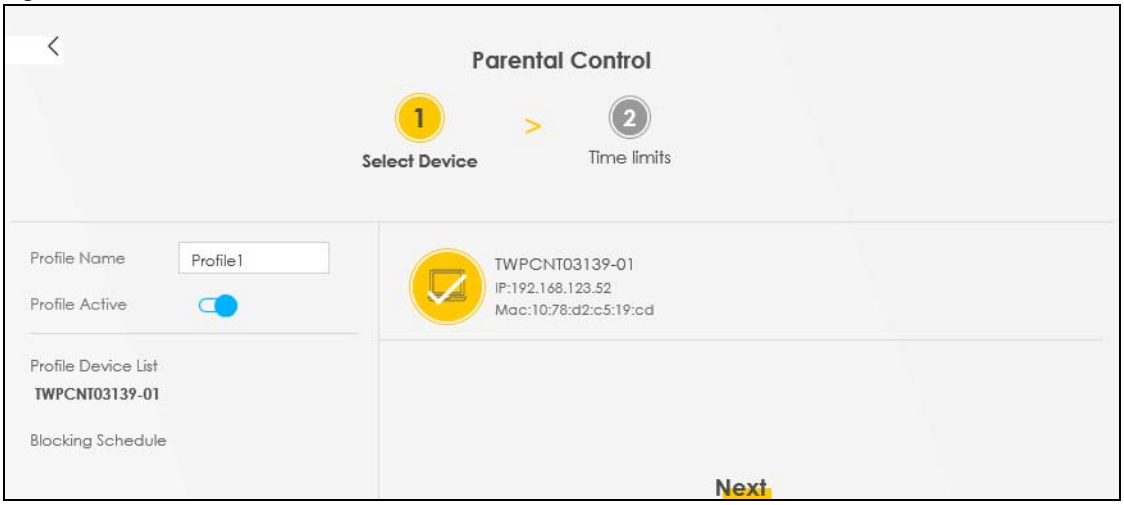
Table 19 Parental Control: Schedule

LABEL	DESCRIPTION
Parental Control	Click this switch to enable parental control.
Scheduled Profile	This screen shows all the created profiles.
Add More Profile	Click this to create a new profile.

6.3.1 Create a Parental Control Profile

Click **Add more Profile** to create a profile. Use this screen to add a devices in a profile and block Internet access on the profile devices.

Figure 66 Parental Control: Add More Profile

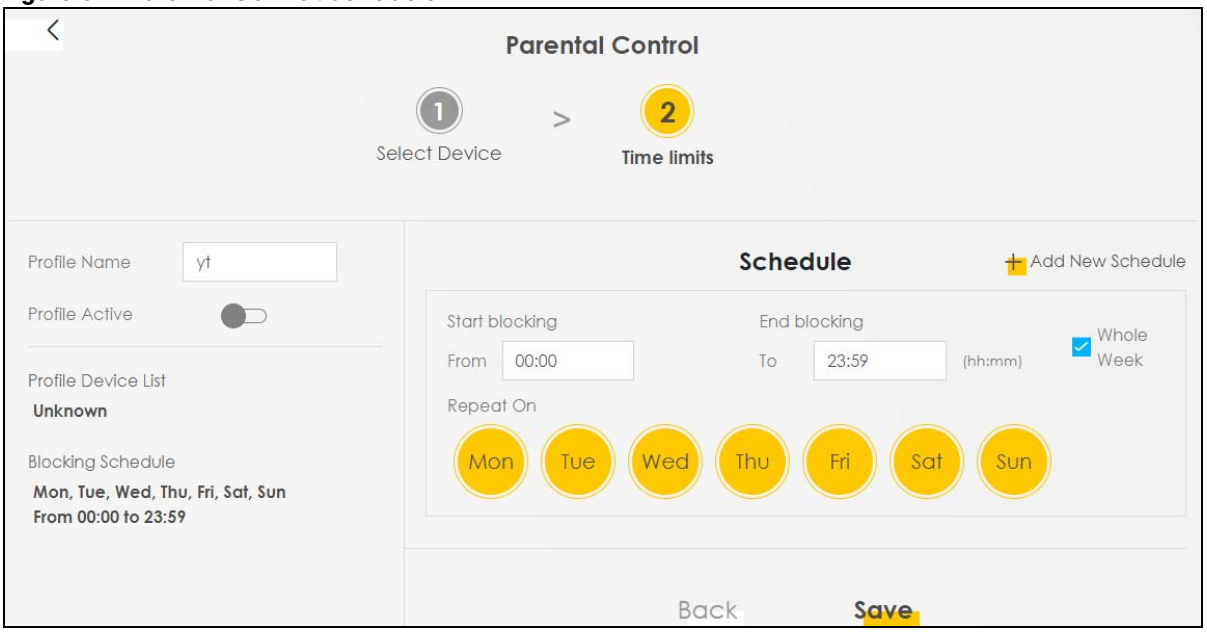


Each field is described in the following table.

Table 20 Parental Control: Add More Profile

LABEL	DESCRIPTION
Profile Name	Enter a descriptive name for the profile.
Profile Active	Click this switch to enable or disable Internet access. When the switch goes to the right, the function is enabled. Otherwise, it is not.
Profile Device List	This field shows the devices selected on the right for this profile.
Blocking Schedule	This field shows the time during which Internet access is blocked on the profile device(s).
	Select a device(s) on your network for this profile.

Figure 67 Parental Control: Schedule



Each field is described in the following table.

Table 21 Parental Control: Schedule

LABEL	DESCRIPTION
Profile Name	Enter a descriptive name for the profile. You can use up to 17 printable characters except ["], [`], ['], [<], [>], [^], [$], [|], [&], or [;]. Spaces are allowed.
Profile Active	Click this switch to enable this profile.
Profile Device List	This field shows the devices selected on the right for this profile.
Blocking Schedule	This field shows the time during which Internet access is blocked on the profile devices.
Schedule	
Add New Schedule	Click this to add a new block for scheduling.
Back	Click **Back** to return to the previous screen.
Save	Click **Save** to save your changes.

Once a profile is created, it will show in the following screen. Click this to **Delete** or **Edit** a profile.

Figure 68 Parental Control: Edit/Delete