ZXHN H2640

Home Gateway

Maintenance Management Guide

Version: V10

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LEGAL INFORMATION

Statement on the Use of Third-Party Embedded Software:

If third-party embedded software such as Oracle, Sybase/SAP, Veritas, Microsoft, Vmware, and Redhat is delivered together with this product of ZTE, the embedded software must be used as only a component of this product. If this product is discarded, the licenses for the embedded software must be void either and must not be transferred. ZTE will provide technical support for the embedded software of this product.

Revision History

Revision No.	Revision Date	Revision Reason
R1.0	2020-07-27	First edition

Serial Number: SJ-20200714160642-002

Publishing Date: 2020-07-27(R1.0)

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Chapter 1
Safety Precautions

Note

Before using the device, read the following safety precautions. ZTE bears no liability to the consequences incurred by violation of the safety instructions.

Usage Cautions

- Read all the safety cautions carefully before using the device.
- Only use the accessories included in the package, such as power supply adapter and battery.
- Do not extend the power cord, otherwise the device will not work.
- The power supply voltage must meet the requirements of the device input voltage (The voltage fluctuation range is less than 10%).
- Keep the power plug clean and dry to prevent any risk of electric shock or other dangers.
- Disconnect all the cables during a lightning storm to prevent the device from damage.
- Power off and unplug the power plug when the device is not in use for a long time.
- Do not attempt to open the covers of the device. It is dangerous to do so when the device is powered on.
- Power off and stop using the device under the conditions such as, abnormal sound, smoke, and strange smell. Contact the service provider for maintenance if the device is faulty.

Environment Requirements

- Ensure proper ventilation to the device. Place the device away from direct sunlight.
- Keep the device ventilated and dry. Never spill any liquid on the device.
- Do not place any object on the device to prevent any deformation or damage to the device.

- Do not place the device near any source of heat or water.
- Keep the device away from any household appliances with strong magnetic or electric fields, such as microwave oven and refrigerator.

Cleaning Requirements

- Before cleaning, power off the device, and unplug all the cables connected to the device, such as power cable, optical fiber, and Ethernet cable.
- Do not use any liquid or spray to clean the device. Use a soft dry cloth.

Environment Protection

- Do not dispose the device or battery improperly.
- Observe the local regulations about the equipment disposal or treatment.

Restrictions in the 5 GHz Band

According to Article 10(10) of Directive 2014/53/EU, the packaging shows that this radio equipment will be subject to some restrictions when placed on the market in Belgium(BE), Bulgaria(BG), the Czech Republic(CZ), Denmark(DK), Germany(DE), Estonia(EE), Ireland(IE), Greece(EL), Spain(ES), France(FR), Croatia(HR), Italy(IT), Cyprus(CY), Latvia(LV), Lithuania(LT), Luxembourg(LU), Hungary(HU), Malta(MT), Netherlands(NL), Austria(AT), Poland(PL), Portugal(PT), Romania(RO), Slovenia(SI), Slovakia(SK), Finland(FI), Sweden(SE), the United Kingdom(UK), Turkey(TR), Norway(NO), Switzerland(CH), Iceland(IS), and Liechtenstein(LI).
The WLAN function for this device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

RF Exposure Information

The Maximum Permissible Exposure (MPE) level is calculated based on a distance of d=20 cm between the device and the human body. To maintain compliance with the RF exposure requirement, a separation distance of 20 cm between the device and the human should be maintained.

EU Declaration of Conformity

Hereby, ZTE Corporation declares that the radio equipment type ZXHN H2640 is in compliance with Directive 2014/53/EU, The full text of the EU declaration of conformity is available at the following Internet address:
http://support.zte.com.cn/support/cer/EU

Environmental Information

The equipment you purchased has required the extraction and use of natural resources for its production. It may contain substances that are hazardous to people's health and to the environment. To avoid putting such substances into our environment and to reduce pressure on our natural resources, we ask that you reuse or recycle your end-of-life equipment by using an accredited electronics take-back system.

The symbols below indicate that this product should be reused or recycled and not simply discarded. Please locate and use an appropriate reuse and recycling site.

If you need more information on collection, reuse and recycling systems, contact your local or regional waste administration. You may also contact your equipment provider for more information on the environmental performances of these products.

Chapter 2
Product Overview

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The ZXHN H2640 is a new generation VDSL 35b + SFP home gateway device with 802.11ax Wi-Fi(2.4GHz, 5GHz), which provides High Speed Internet, IPTV and Voice over IP services through the ADSL/VDSL, GE or Fiber(SFP) uplink. Those services are delivered by the gateway on your home network to the PCs, STBs, phones, gaming devices and so on via the integrated interfaces: Ethernet, Wi-Fi, phone ports.

2.1 Product Specifications

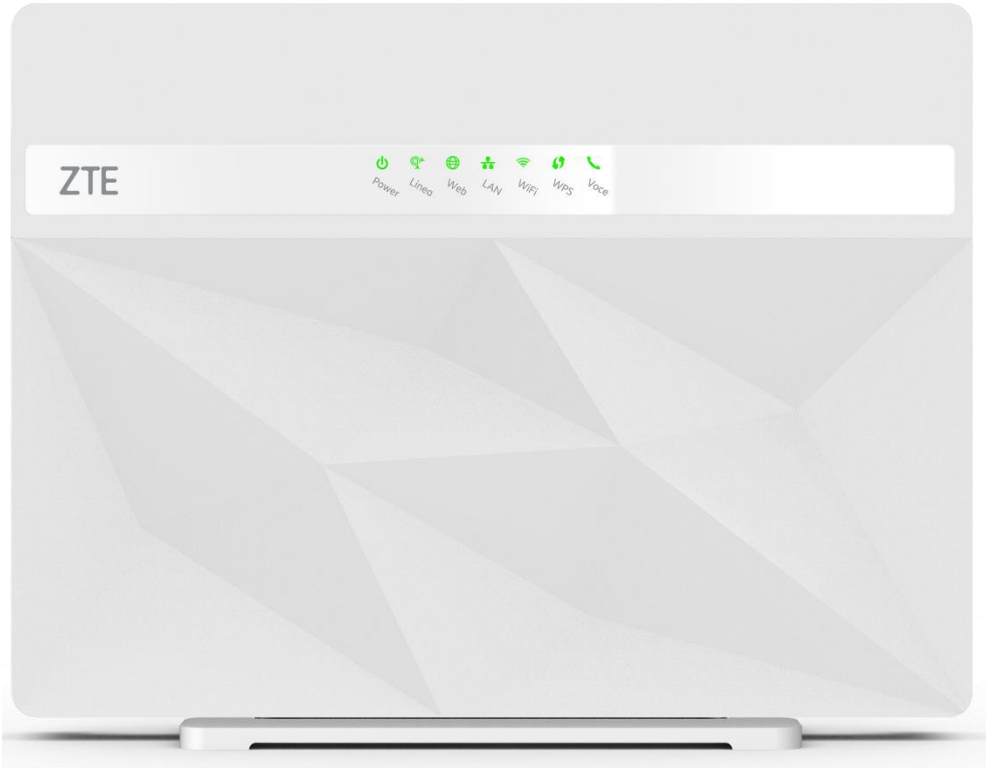
Technical Specifications	
Dimension	275 mm × 80 mm × 212 mm(L x W x H, not excluding the base)
Certification	CE Certification and Wi-Fi Certification
Power adapter	Input: AC 100 V – 240 V, 50 Hz/60 Hz Output: DC 12.0 V, 2.5 A
Environment Requirements	
Operation temperature	0 °C – 40 °C (32 °F – 104 °F)
Operation humidity	5% – 95% (non-condensing)
Wi-Fi Radio Specifications	
Radio Frequencies	Maximum Output Power
Wi-Fi 2.4 GHz band: 2400 MHz – 2483.5 MHz	EIRP < 20 dBm
Wi-Fi 5 GHz band: 5150 MHz – 5350 MHz	EIRP < 23 dBm
Wi-Fi 5 GHz band 5470 MHz – 5725 MHz	EIRP < 30 dBm

2.2 Hardware Description

Front panel

Figure 2-1 shows the front panel of the ZXHN H2640.

Figure 2-1 The Front Panel



Indicator	Status	Definition
Power	Solid Green	All services are available. At lease one wireless radio is enabled.
	Solid Red	One or more subscription services are currently unavailable.
	Solid Orange	Bootloader is in progress.
	Flashing Green	Operator is configuring the modem remotely.
	Flashing Orange	The device is upgraded remotely or locally.
	Off	Modem off.
Linea (DSL)	Solid Green	Synchronized DSL line.
	Flashing Green	Attempt to detect carrier signal or DSL line synchronization in progress.
	Off	No DSL line connected.

Indicator	Status	Definition
Linea (LAN4/SFP)	Solid Green	Connected to the WAN device.
	Off	Not connected to the WAN device.
Web	Solid Green	Internet connection succeed.
	Flashing Green	Connected to the Internet, when sending or receiving data.
	Off	No internet connection.
LAN	Solid Green	At least one active network device is connected to the Ethernet switch.
	Flashing Green	At least one active network device is connected to the Ethernet switch and is in the process of sending / receiving data.
	Off	There are no active Ethernet devices connected to the Ethernet switch.
WiFi	Solid Green	At lease one wireless interface is enabled, no wireless activity.
	Flashing Green	At lease one wireless interface is enabled, wireless activity in progress.
	Off	Both 2.4G and 5G wireless interfaces are disabled.
WPS	Solid Green	Client registered correctly via WPS.
	Flashing Green	Process error or session overlap is detected.
	Off	WPS registration in progress.
Voice	Solid Green	The VoIP telephone service is active.
	Flashing Green	The VoIP telephone service is active and there are activities in progress.
	Off	The VoIP telephone service is not active or is not included in your subscription.

Rear panel

Figure 2-2 shows the interfaces and buttons on the rear panel of the ZXHN H2640.

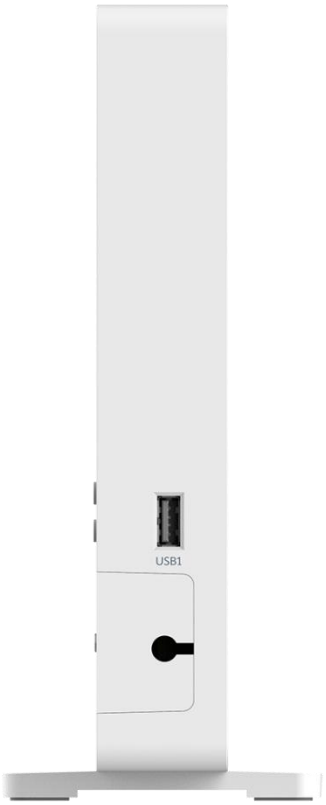
Figure 2-2 The Rear Panel

Interface/ Button	Function
WiFi	Wi-Fi dual-interfaces On/Off button.
WPS	WPS Push Button, press this button to enable or disable the WPS function.
Power	Power supply port, it is connected to the power adapter.
Reset	Reset pinhole, it is used to reset the configuration to factory default settings.
Tel1–Tel2	RJ-11 port, it is used to connect to the analog telephone.
USB2	USB3.0 host port in right panel.
LAN1-LAN3	RJ-45 port, it is used to connect the modem to computer , STB or other network devices.
LAN4/WAN	RJ-45 port, it is used to connect to the uplink Ethernet access network.
DSL	RJ-14 port, it is used to connect to the uplink ADSL, VDSL or VDSL Bonding access network.

Side panel

Figure 2-3 shows the interfaces on the side panel of the ZXHN H2640.

Figure 2-3 The Side panel

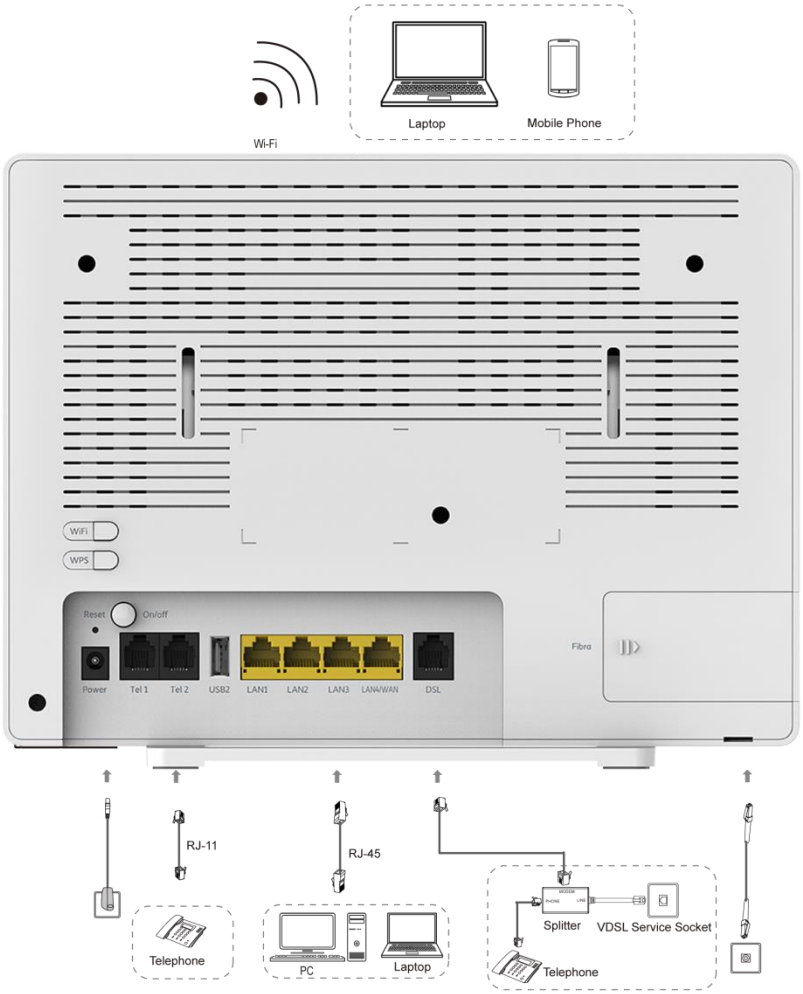


Interface	Function
USB1	USB2.0 host port in right panel.
PON	PON interface.

2.3 Hardware Connection

Figure 2-4 shows the devices that are connected to interfaces of the ZXHN H2640.

Figure 2-4 Cable Connection



The factors affecting the wireless network coverage range include the location of the product, distance between the product and a wireless terminal, number of obstacles, obstacle material and density, and interference source. It is recommended that you place the product in accordance with the following principles to maximize the strength of wireless signals.

- The product should be far away from the objects affecting wireless signal propagation, for example, an object with a high reflectivity such as a metallic object or a mirror.
- The product should be far away from an electrical appliance with a strong magnetic or electric field, for example, a microwave oven, a refrigerator, a wireless router, a cordless phone, or a Bluetooth product.
- The product should be installed on the same floor as the applied area.
- Do not put other objects on the product. Try to reduce the number of obstacles between the product and a wireless terminal.

- Horizontally place the product in the middle of the applied area and do not put it in a corner.
- Do not place the product at a high position while it is placed horizontally. The recommended height is 1.2 to 1.5 meters.

Chapter 3
Configuration Preparation

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Configure TCP/IP 3-1
Login 3-2

This manual uses the Windows operating system as an example for describing how to configure the ZXHN H2640. Before configuring the ZXHN H2640, you need to perform the following operations:

- Ensure that a crossover or straight-through Ethernet cable connects a computer to the device.
- Ensure that the TCP/IP configuration on the computer is correct.
- Stop any firewall or other security software operating on the computer.
- Disable the proxy setting of Internet Explorer.

3.1 Configure TCP/IP

Abstract

To log in to the ZXHN H2640 on a computer, you need to set the IP address of the computer to ensure that the IP address of the computer and the maintenance IP address of the ZXHN H2640 are in the same network segment.

Context

The default maintenance IP address of the ZXHN H2640 is as follows:

- IP address: 192.168.1.1
- Subnet mask: 255.255.255.0
- Default gateway: 192.168.1.1

Steps

1. Use an Ethernet cable to connect a local computer to the LAN interface of the ZXHN H2640.

2. On the local computer, double-click **Local Area Connection** and click **Properties**. The **Local Area Connection Properties** dialog box is displayed.
3. Double-click **Internet Protocol (TCP/IP)**. The **Internet Protocol (TCP/IP) Properties** dialog box is displayed. Set the IP address to *192.168.1.200*, subnet mask to *255.255.255.0*, and default gateway to *192.168.1.1*.
4. Click **OK**.

Postrequisite

After the IP address of the computer is set, you can run the **Ping** command to ping the IP address 192.168.1.1. If the ping operation is successful, it indicates that the TCP/IP configuration is correct and the computer is properly connected to the ZXHN H2640.

3.2 Login

Abstract

The ZXHN H2640 provides a Web-based configuration and management system. You can enter a specified IP address in the address bar of Internet explorer to access the system.

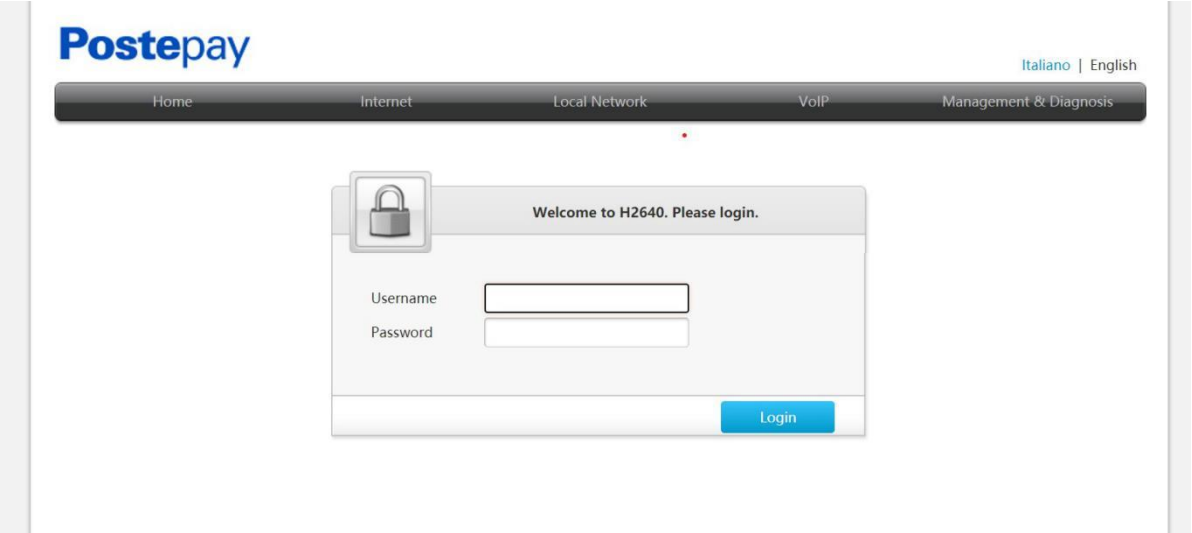
Prerequisite

A computer is directly connected to the ZXHN H2640, and their IP addresses are in the same network segment.

Steps

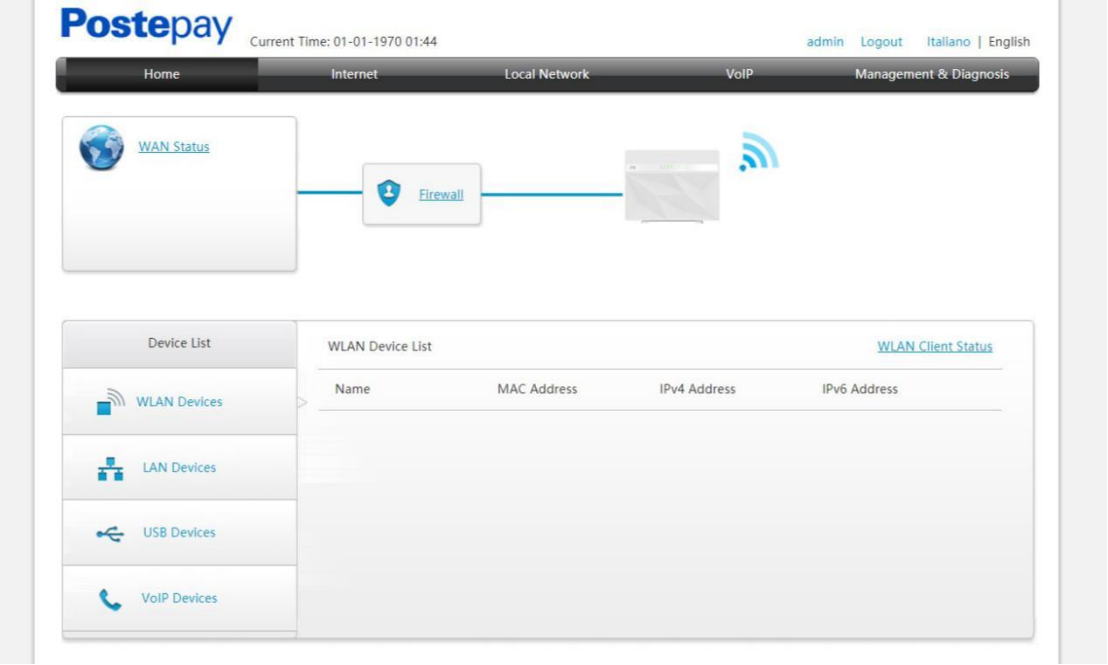
1. Open Internet explorer, and enter *http://192.168.1.1* (default maintenance IP address of the ZXHN H2640) in the address field. Press the **Enter** key. The login page is displayed, see Figure 3-1.

Figure 3-1 Login Page



2. Enter your username and password and click **Login**. The configuration page is displayed, see Figure 3-2.

Figure 3-2 Configuration Page



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Configure the Parental Controls 4-29
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Configure the Mulitcast 4-33

4.1 Status

4.1.1 Check the DSL Status

Abstract

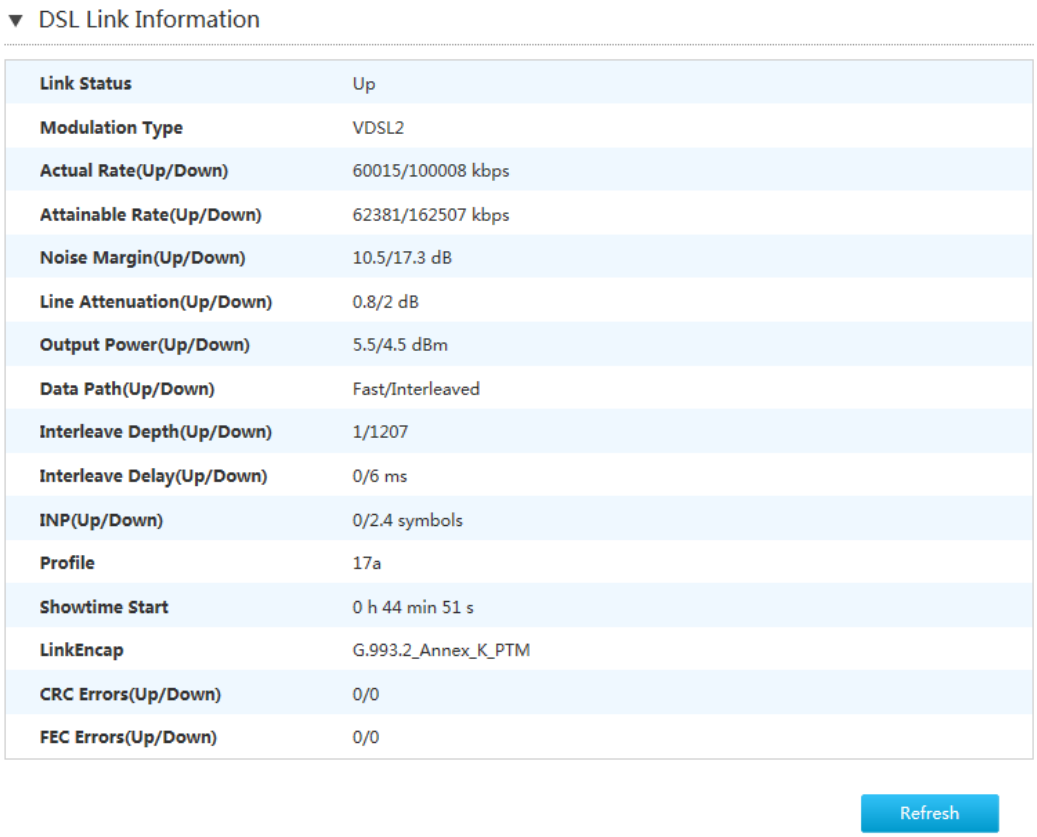
The section describes how to check the DSL status.

Steps

Checking the DSL Link Information

1. On the main page of the ZXHN H2640, select **Internet > Status > DSL > DSL Link Information** to the **DSL Link Information** page, see Figure 4-1.

Figure 4-1 DSL Link Information

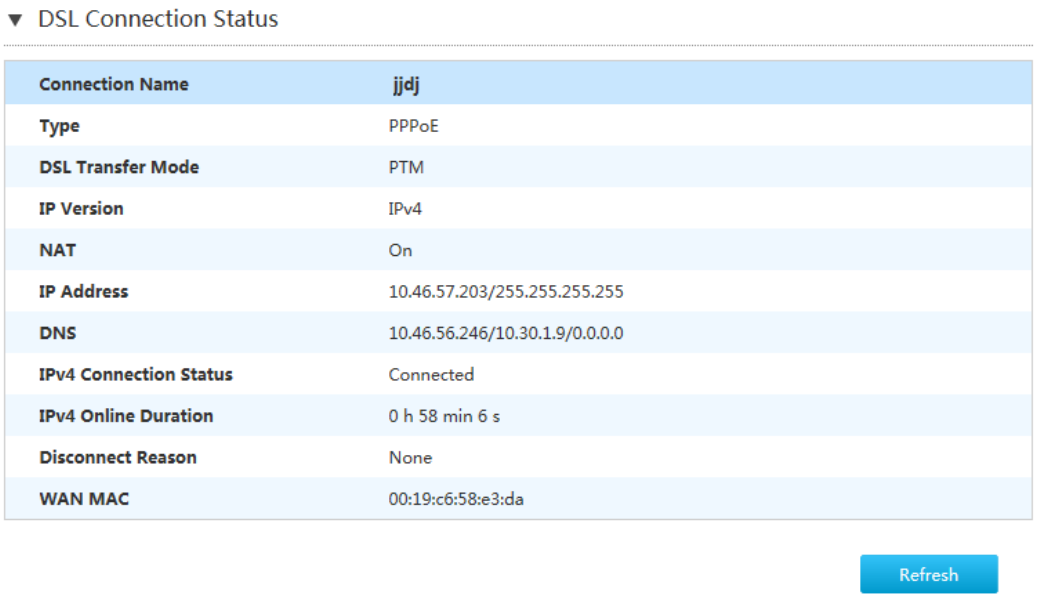


2. Click **Refresh** to refresh the information.

Checking the DSL Connection Status

1. On the main page of the ZXHN H2640, select **Internet > Status > DSL > DSL Connection Status** to the **DSL Connection Status** page, see Figure 4-2.

Figure 4-2 DSL Connection Status



2. Click **Refresh** to refresh the information.

4.1.2 Check the Ethernet Status

Abstract

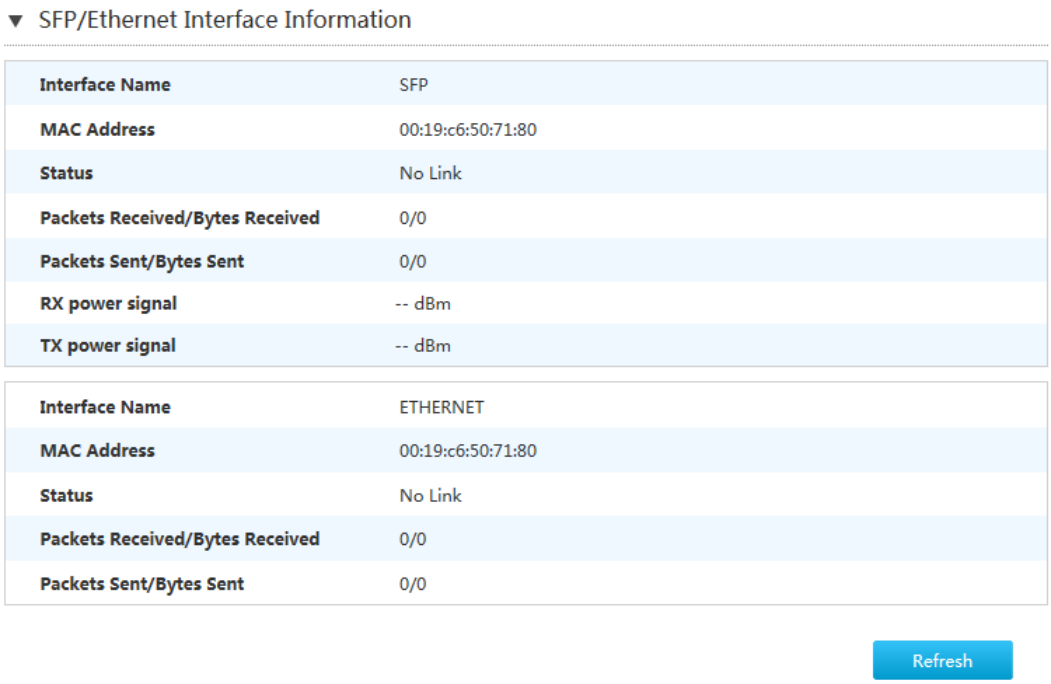
The section describes how to check the Ethernet status.

Steps

Checking the Ethernet Interface Information

1. On the main page of the ZXHN H2640, select **Internet > Status > SFP/Ethernet > SFP/Ethernet Interface Information** to the **SFP/Ethernet Interface Information** page, see Figure 4-3.

Figure 4-3 SFP/Ethernet Interface Information

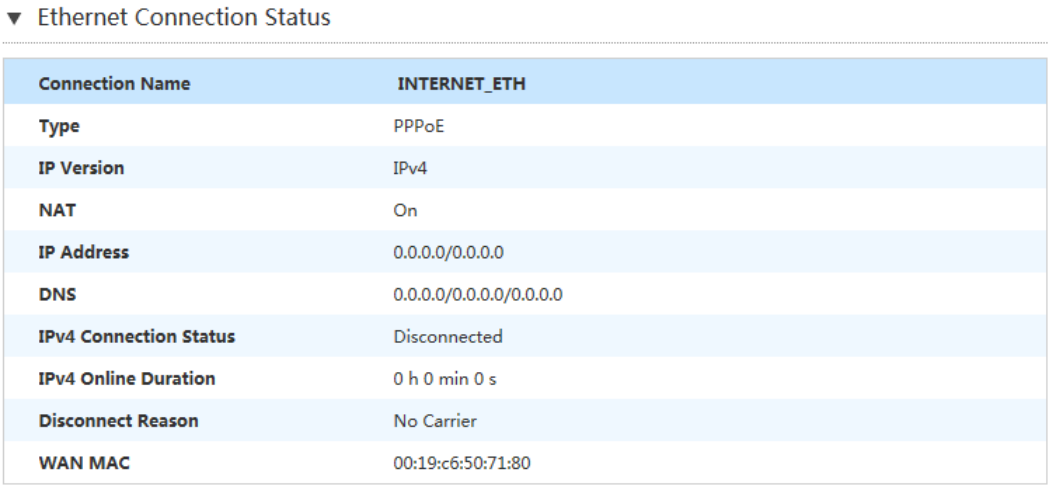


2. Click **Refresh** to refresh the information.

Checking the Ethernet Connection Status

3. On the main page of the ZXHN H2640, select **Internet > Status > Ethernet > Ethernet Connection Information** to the **Ethernet Connection Information** page, see Figure 4-4.

Figure 4-4 Ethernet Connection Information



4. Click **Refresh** to refresh the information.

4.1.3 Check the 3G Status

Abstract

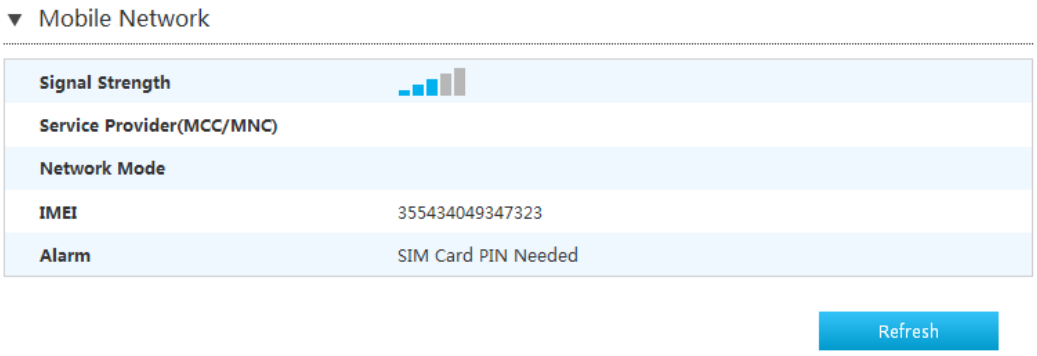
The section describes how to check the mobile network and 3G connection status.

Steps

Checking the Mobile Network Information

1. On the main page of the ZXHN H2640, select **Internet > WAN Status > 3G > Mobile Network** to the **Mobile Network** page. The signal strength can verify the network card is plugged, see Figure 4-5.

Figure 4-5 Mobile Network

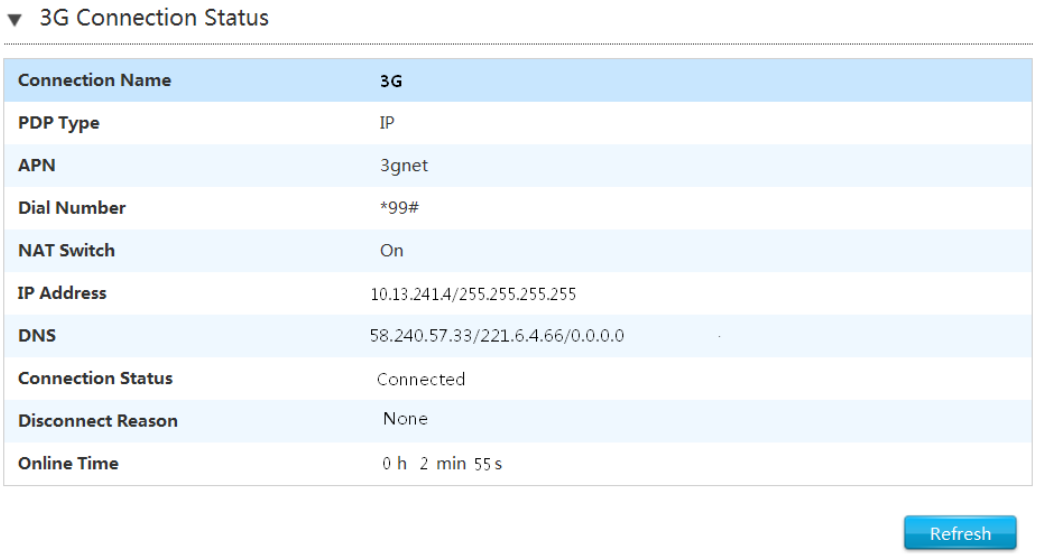


2. Click **Refresh** to refresh the information.

Checking the 3G Connection Status

3. On the main page of the ZXHN H2640, select **Internet > WAN Status > 3G > 3G Connection Status** to the **3G Connection Status** page, see Figure 4-6.

Figure 4-6 3G Connection Status



4. Click **Refresh** to refresh the information.

4.2 Configure the WAN

4.2.1 Configure the DSL Connection

Abstract

This procedure describes how to configure the DSL on the network side, so that user services can be connected to the external network.

The ZXHN H2640 supports Route-based and Bridge-based WAN connections.

Steps

Configuring the DSL Connection

1. On the main page of the ZXHN H2640, select **Internet > WAN > DSL** to the **DSL Connection** page, see Figure 4-7.

Figure 4-7 DSL Connection page

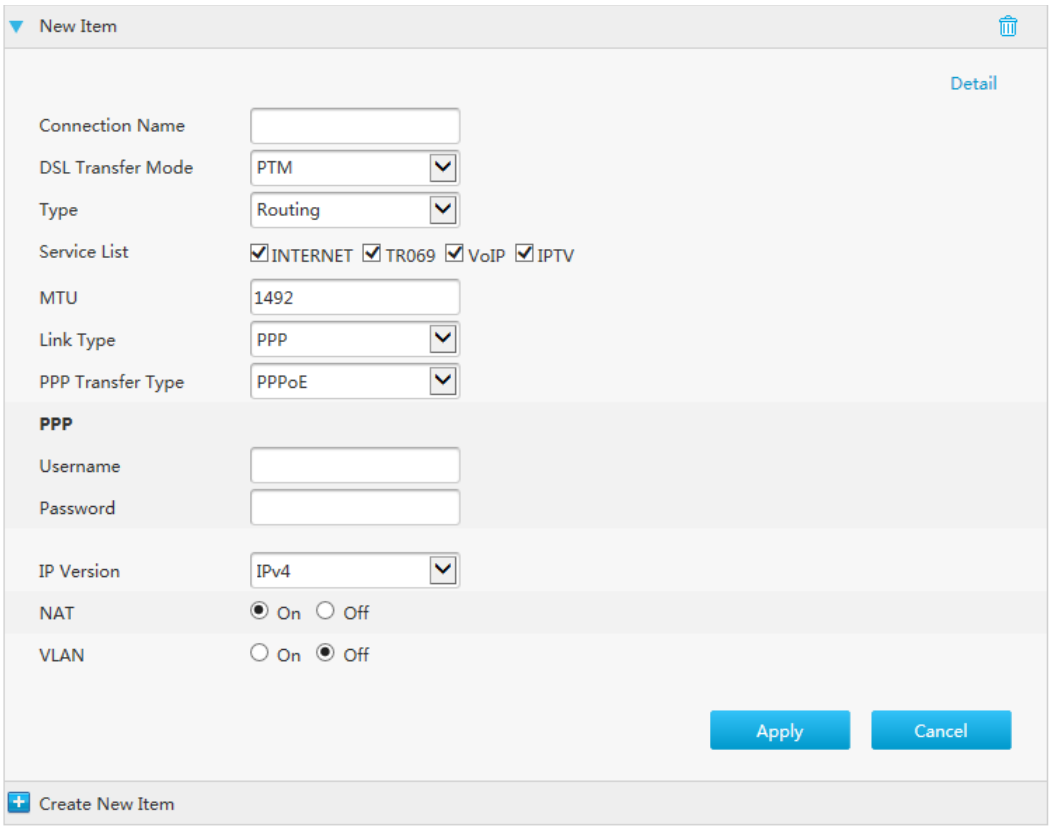


Table 4-1 lists the new item parameters.

Table 4-1 Parameter Descriptions for the DSL

Parameter	Description
Connection Name	Name of the connection.
DSL Transfer Mode	There are two xDSL transfer modes: ATM, PTM.
VPI/VCI	If xDSL Transfer Mode is selected to be ATM, the VPI/VCI values provided by the ISP needs to be configured. VPI Range: 0 - 255 VCI Range: 0 - 65535
Service Type	If xDSL Transfer Mode is selected to be ATM, Service Type needs to be configured. ATM QoS used to limit the transmission of uplink traffic. The options are: UBR, CBR, VBR-nrt, and VBR-rt.
PCR	If Service Type is selected to be CBR,VBR-rt or VBR-nrt, PCR needs to be configured.
SCR	Sustainable Cell Rate. If Service Type is selected to be VBR-rt or VBR-nrt, SCR needs to be configured.
MBS	Maximum Burst Size. If Service Type is selected to be VBR-rt or VBR-nrt, MBS needs to be configured.
Type	The connection type includes Routing and Bridge Connection. In this case, Routing is selected.
Service List	Options: INTERNET, TR069, VoIP, IPTV. This parameter must be consistent with service configuration. For example, if **INTERNET** is selected, it indicates that the WAN connection supports the Internet access service only. If **TR069** is selected, it indicates that the WAN connection supports remote management.
MTU	Define the maximum transfer unit. In this case, default value is 1492.
Link Type	There are two link types: PPP and IP.
PPP Transfer Type	In this case, default value is PPPoE.
PPP	
Username/Password	PPPoE user name and password. They are provided by the ISP.
IP Version	The IP version includes: IPv4, IPv6, and IPv4/v6. In this case, IPv4 is selected.

Parameter	Description
IPv4	
IP Type	● DHCP: The DHCP server automatically allocates a dynamic IP address to the device. ● Static: You need to specify a static IP address for the device. By default, it is set to DHCP.
IP Address	IP Address of ZXHN H2640.
Subnet Mask	Subnet mask of ZXHN H2640.
Gateway	It is usually the IP address of the ZXHN H2640 by default.
DNS1-DNS3	IP address of the DNS server for static connections. You can set up to three IP addresses for the server. These IP addresses are provided by the ISP.
NAT	Enable or disable the NAT function.
IPv6	
IPv6 Info Acquire Mode	Specifies how to acquire IPv6 information for the WAN connection. It is valid only if the WAN connection supports IPv6. The options are: ● Manual :You need to set the global address, gateway, and DNS acquisition modes. ● Auto :The global address, gateway, and DNS acquisition modes are automatically configured.
Request PD	By default, the On button is selected.
Unnumbered Mode	By default, the On button is not selected. If it is selected, Specifies how to acquire the global IPv6 address.
GUA Allowed From	Specifies how to acquire the global IPv6 address. It is valid only when the IPv6 Info Get Mode parameter is set to be Manual Mode. Options: ● DHCPv6: The device acquires a global address through DHCPv6. If no option is selected, it indicates that no address acquisition mode is configured. ● PD: You need to set a static IPv6 address. ● SLAAC: The device generates a global address in accordance with the RA packets from the upper-layer server.
GUA	Mode of obtaining global address. If IPv6 Info Acquire Mode is set to Manual, the GUA value must be entered manually.
PD	Prefix Delegation. If IPv6 Info Acquire Mode is set to Manual, the PD value must be entered manually.

Parameter	Description
DNS1–DNS3	IPv6 address of the DNS server for static connections. You can set up to three IPv6 addresses for the server. These IPv6 addresses are provided by the ISP.
VLAN	Specifies whether to carry a VLAN tag in the packets sent over the WAN connection. By default, **On** button is not selected. If it is selected, a VLAN tag is carried in the packets sent over the WAN connection, and the VLAN ID must be set.
VLAN ID	Identifies a VLAN. Range: 0–4094. To ensure normal service operation, the **VLAN ID** must be the same as that set in upper-layer MDU/DSLAM configuration.

Note

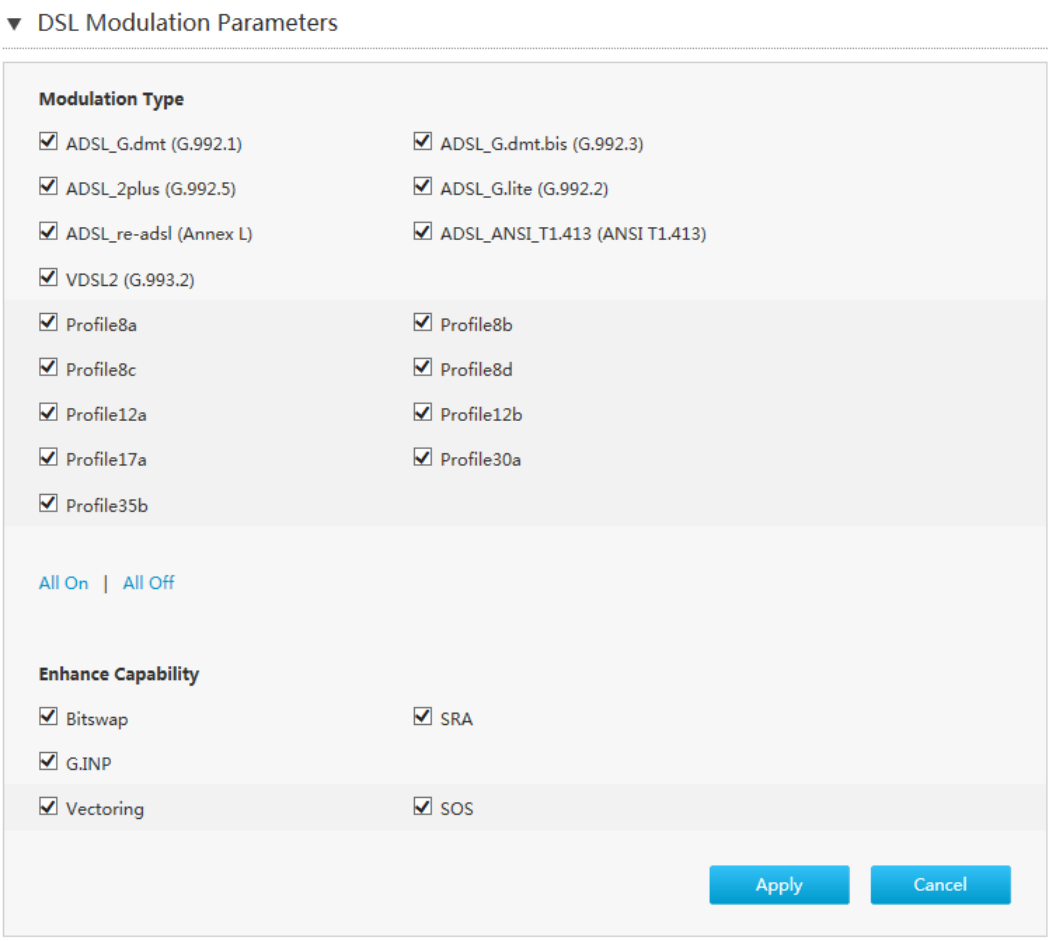
In the ZXHN H2640 provisioning, configure only one Internet-WAN connection and delete other WAN connections.

2. Click **Apply** button to apply the changes.

Configuring the DSL Modulation Parameters

3. On the main page of the ZXHN H2640, select **Internet > WAN > DSL** to the **DSL Modulation Parameters** page, see Figure 4-8.

Figure 4-8 DSL Modulation Parameters



4. Select the DSL modulation types and click **Apply** button to apply the changes.

Note

- Click **All On** to select all DSL modulation types.
- Click **All Off** to cancel all DSL modulation types.
- When you select the Bitswap check box, the system can adjust the modulation bit of an interfered channel to the bit of other channels.

4.2.2 Configure the Ethernet Connection

Abstract

This procedure describes how to configure the Ethernet on the network side, so that user services can be connected to the external network.

The ZXHN H2640 supports Route-based and Bridge-based WAN connections.

Steps

1. On the main page of the ZXHN H2640, select **Internet > WAN > SFP/Ethernet** to the **Ethernet Connection** page, see Figure 4-9.

Figure 4-9 Ethernet Connection page

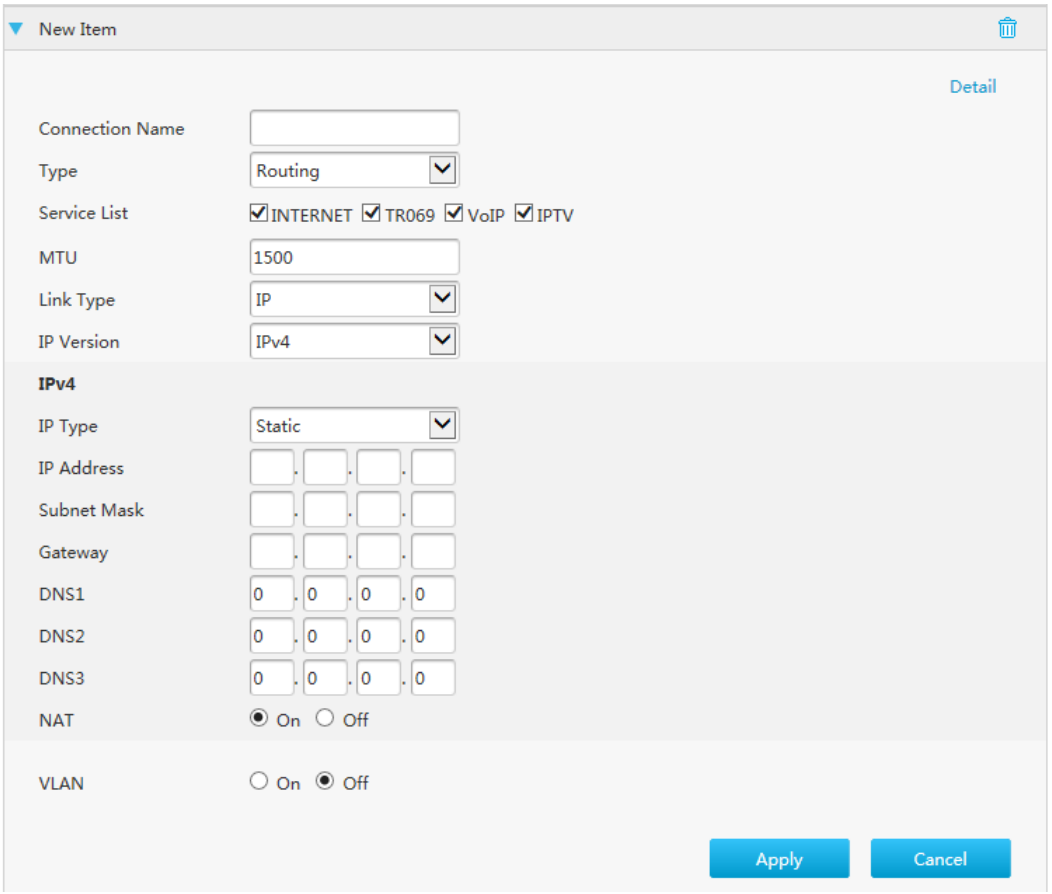


Table 4-2 lists the new item parameters.

Table 4-2 Parameter Descriptions for the DSL

Parameter	Description
Connection Name	Name of the connection.
Type	The connection type includes Routing and Bridge Connection. In this case, Routing is selected.
Service List	Options: INTERNET, TR069, VoIP, IPTV. This parameter must be consistent with service configuration. For example, if **INTERNET** is selected, it indicates that the WAN connection supports the Internet access service only. If **TR069** is selected, it indicates that the WAN connection supports remote management.
MTU	Define the maximum transfer unit.

Parameter	Description
	In this case, default value is 1500.
Link Type	There are two link types: PPP and IP.
PPP Transfer Type	In this case, default value is PPPoE.
PPP	
Username/Password	PPPoE user name and password. They are provided by the ISP.
IP Version	The IP version includes: IPv4 and IPv6 IPv4/v6 In this case, IPv4 is selected.
IPv4	
IP Type	By default, it is set to DHCP. Options: ● DHCP: The DHCP server automatically allocates a dynamic IP address to the device. ● Static: You need to specify a static IP address for the device.
IP Address	IP Address of ZXHN H2640.
Subnet Mask	Subnet mask of ZXHN H2640.
Gateway	It is usually the IP address of the ZXHN H2640 by default.
DNS1-DNS3	IP address of the DNS server for static connections. You can set up to three IP addresses for the server. These IP addresses are provided by the ISP.
NAT	Enable or disable the NAT function.
IPv6	
IPv6 Info Acquire Mode	Specifies how to acquire IPv6 information for the WAN connection. It is valid only if the WAN connection supports IPv6. The options are: ● Manual :You need to set the global address, gateway, and DNS acquisition modes. ● Auto :The global address, gateway, and DNS acquisition modes are automatically configured.
Request PD	By default, the On button is selected.
Unnumbered Mode	By default, the On button is not selected. If it is selected, Specifies how to acquire the global IPv6 address.
GUA Allowed From	Specifies how to acquire the global IPv6 address. It is valid only when the IPv6 Info Get Mode parameter is set to be Manual Mode. Options:

Parameter	Description
	● DHCPv6: The device acquires a global address through DHCPv6. If no option is selected, it indicates that no address acquisition mode is configured. ● PD: You need to set a static IPv6 address. ● SLAAC: The device generates a global address in accordance with the RA packets from the upper-layer server.
GUA	Mode of obtaining global address.
Gateway	It is usually the IPv6 address of the ZXHN H2640 device by default.
PD	Prefix Delegation.
DNS1–DNS3	IPv6 address of the DNS server for static connections. You can set up to three IPv6 addresses for the server. These IPv6 addresses are provided by the ISP.
VLAN	Specifies whether to carry a VLAN tag in the packets sent over the WAN connection. By default, **On** button is not selected. If it is selected, a VLAN tag is carried in the packets sent over the WAN connection, and the VLAN ID must be set.
VLAN ID	Identifies a VLAN. Range: 0–4094. To ensure normal service operation, the **VLAN ID** must be the same as that set in upper-layer MDU/DSLAM configuration.

Note

In the ZXHN H2640 provisioning, configure only one Internet-WAN connection and delete other WAN connections.

2. Click **Apply** button to apply the changes.

4.2.3 Configure the 3G

Abstract

A Dongle device can be connected to ZXHN H2640 through a USB interface. If the Dongle has a 3G(SIM) card inserted, the ZXHN H2640 can access the Internet through the Dongle device.

Contacts

Table 4-3 lists the 3G process of configuring the WAN connection.

Table 4-3 3G Configuration Process

Steps	Operation	Instructions
1	Insert 3G device.	Null.
2	Check the 3G device status.	The signal strength can verify whether the network card is plugged.
3	Create a 3G WAN connection.	Click Create New Item on the page, and create a new 3G connection.
4	Check the 3G connection status.	The IP address getting from carries can verify that the 3G WAN Connection based on IPv4 was completed successfully.

Note

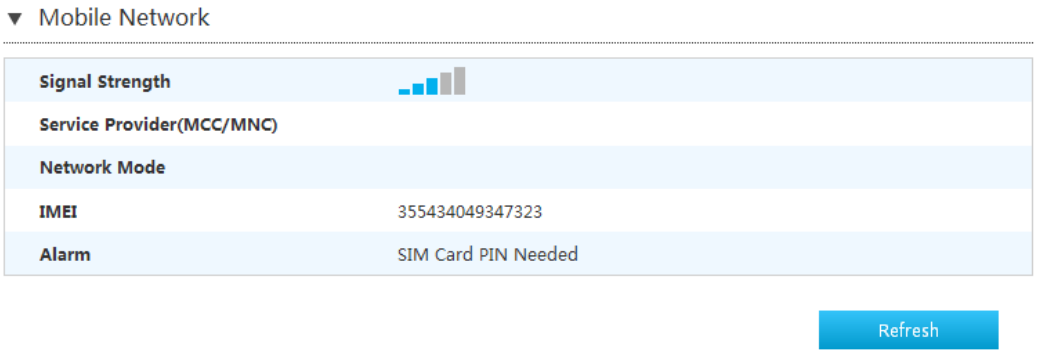
What to do when 3G device is not ready?

1. Check whether the dongle is plugged in.
2. If the device is already plugged in, please check whether the USB is contacted well.
3. If the device is still unrecognized, maybe it has been damaged. Please replace the device.

Steps

1. Insert 3G device.
2. On the main page of the ZXHN H2640, select **Internet > WAN > 3G > Mobile Network** to the **Mobile Network** page. The signal strength can verify the network card is plugged, see Figure 4-10.

Figure 4-10 Mobile Network



3. Click **Refresh** to refresh the information.
4. On the main page of the ZXHN H2640, select **Internet > WAN > 3G** to the **3G Connection** page.

Table 4-4 lists the New Item parameter. After the setup is complete, you can see the page , see Figure 4-11.

Figure 4-11 New 3G Connection

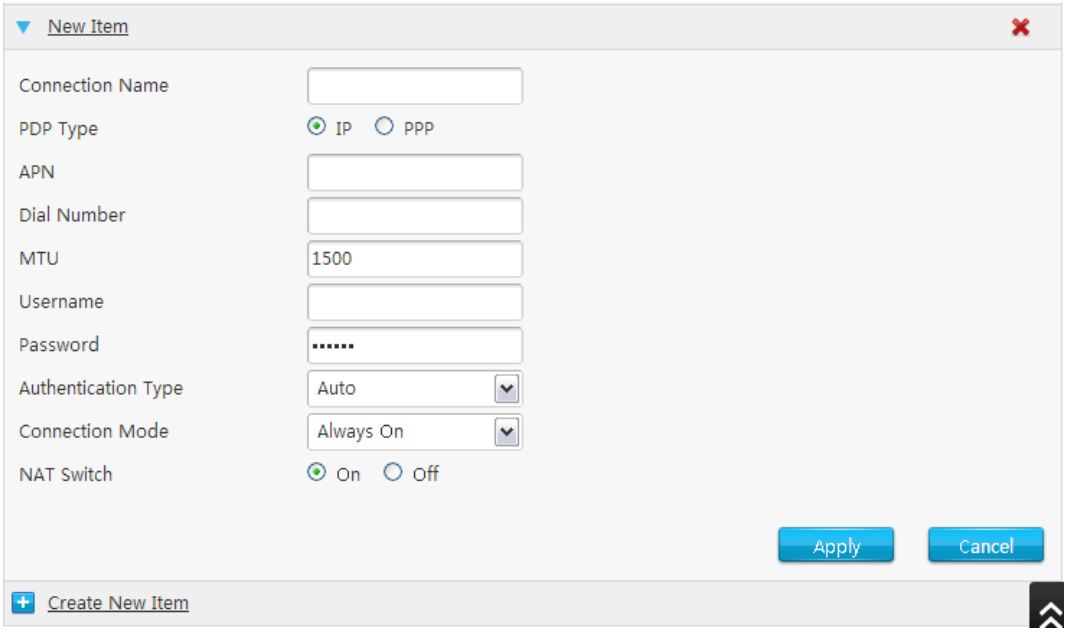


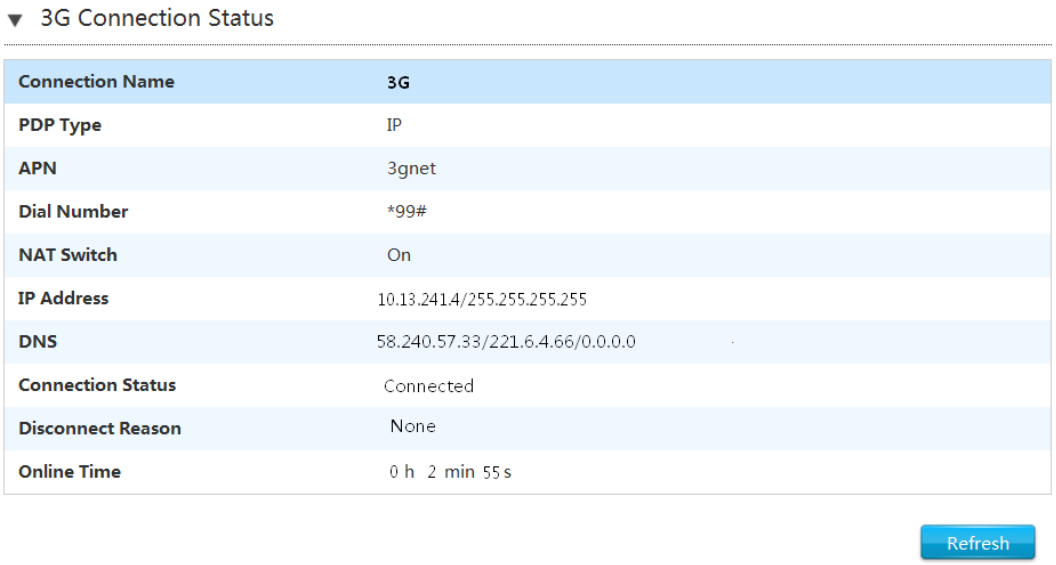
Table 4-4 New 3G Connection parameters

Parameter	Description
Connection Name	Name the 3G connection. For example "3G”.
PDP Type	There are two PDP types: ● IP ● PPP
APN	Set the communication standard of the access network to be used. For example ”3GNET”.
Dial Number	Dial Number. Different communication standards have different dial numbers. For example ”*99#”.
MTU	Define the maximum transfer unit.
Username/Password	The Username/Password of new 3G connection.
Authentication Type	There are three authentication types: ● Auto ● PAP ● CHAP

Parameter	Description
Connection Mode	There are two connection modes: ● Always On ● On Demand
Auto-disconnected without traffic	Setting this parameter when **Connection Mode** is **On Demand**.
NAT Switch	Select on/off NAT switch function.

5. Click **Apply** button to apply the changes.
6. On the main page of the ZXHN H2640, select **Internet > Status > 3G** to the **3G Connection Status** page, see Figure 4-12.

Figure 4-12 3G Connection Status



7. Click **Refresh** to refresh the information.

4.3 Configure the QoS

4.3.1 Configure the QoS Global Parameters

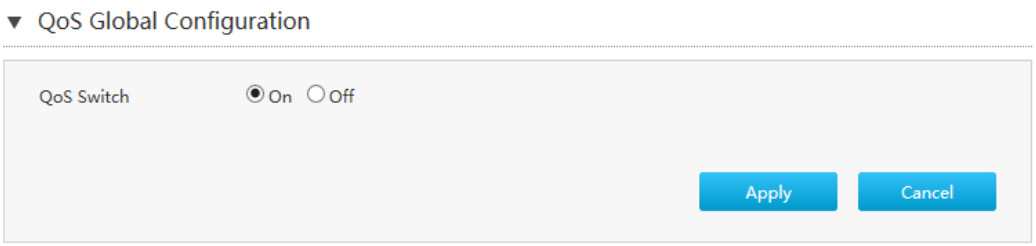
Abstract

This page provides the function of QoS switch and other global parameters configuration. Packets that match no classification rules will be processed according to the default policy showed in this page.

Steps

1. On the main page of the ZXHN H2640, select **Internet > QoS > QoS Global Configuration** to the **QoS Global Configuration** page, see Figure 4-13.

Figure 4-13 QoS Global Configuration page



2. Set radiobox **On** to enable QoS function.
3. Click **Apply** button to apply the changes.

4.3.2 Configure the QoS Classification

Abstract

This page provides the parameters of QoS classification configuration features.

Steps

1. On the main page of the ZXHN H2640, select **Internet > QoS > Classification** to the **Classification** page.
2. Click to create new QoS classification, see Figure 4-14.

Figure 4-14 New QoS Classification Page

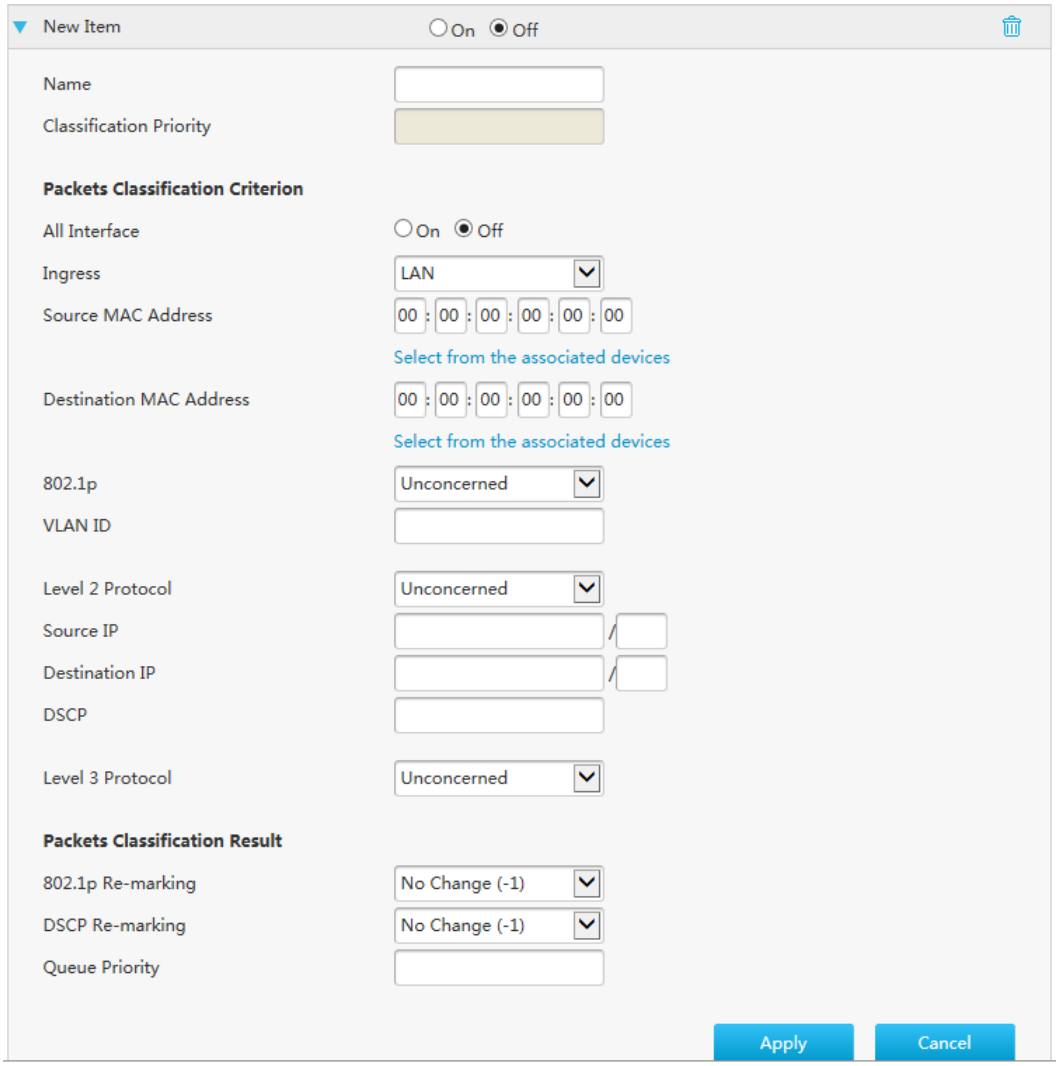


Table 4-5 lists the QoS classification Configuration parameters.

Table 4-5 Parameter Descriptions for the QoS Classification

Parameter	Description
On/Off	Set radiobox **On** to enable the function of classification.
Name	To create a QoS classification, enter the name of the classification.
Classification Priority	It can be modified by ISP.
Packets Classification Criterion	
All Interface	Set radiobox **On** to enable all Interface.
Ingress	If setting radiobox **Off** to disable all Interface, specify the data traffic direction.
Source MAC Address	Source host MAC address.

Parameter	Description
Destination MAC Address	Destination host MAC address.
802.1p	Specify the 802.1p value to modify the service priority.
VLAN ID	Identifies a VLAN. Range: 0–4094. To ensure normal service operation, the **VLAN ID** must be the same as that set in upper-layer configuration.
Level 2 Protocol	The level 2 protocol includes: Unconcerned, IPv4, IPv6, ARP and PPPoE.
Source IP	Source host IP address.
Destination IP	Destination host IP address.
DSCP	DSCP value.
Level 3 Protocol	The Level 3 Protocol includes: Unconcerned, TCP, UDP and ICMP.
Source Port	Source port number of the matching packets.
Destination Port	Destination port number of the matching packets.
TCP ACK	Set radiobox **On** to enable the function of TCP ACK.
Packets Classification Result	
802.1p Re-marking	802.1p identifier value.
DSCP Re-marking	DSCP identifier.
Queue Priority	Range:1-8.

3. Click **Apply** button to apply the changes.

4.4 Configure the Security

4.4.1 Configure the Firewall Level

Abstract

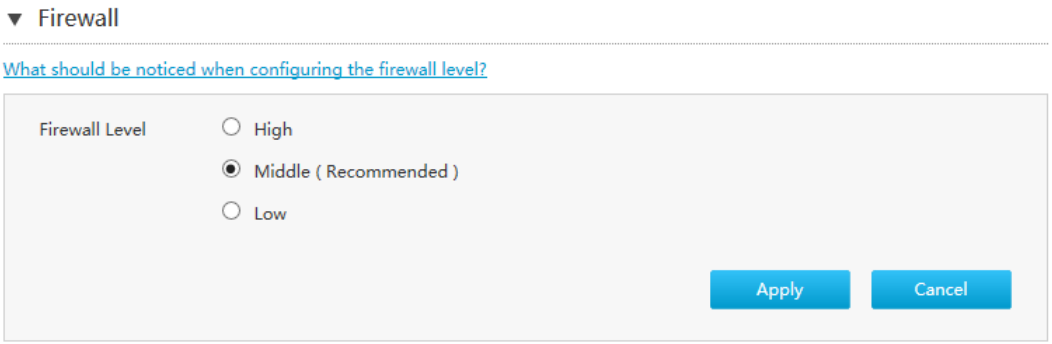
The section describes how to configure firewall level.

Steps

Configuring the Firewall

1. On the main page of the ZXHN H2640, select **Internet > Security > Firewall** to the **Firewall** page, see Figure 4-15.

Figure 4-15 Firewall Page



2. Set the parameters. For a description of the parameters, refer to Table 4-6.

Table 4-6 Firewall Parameter Descriptions

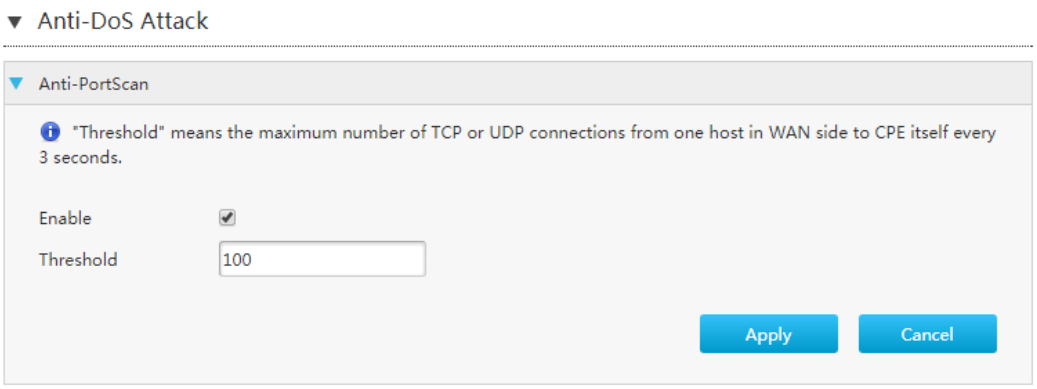
Parameter	Description
Enable	To enable the firewall level to be configured, select this check box.
Firewall Level	● High: allows legal access from the WAN but forbids Internet devices from sending ping packets to the WAN interface of the ZXHN H2640. ● Middle(Recommended): allows legal access from the WAN and blocks dangerous data from the Internet. ● Low: allows legal access from the WAN and allows Internet devices to send ping packets to the WAN interface of the ZXHN H2640.

3. Click **Apply** button to apply the changes.

Configuring the Anti-DoS Attack

4. On the main page of the ZXHN H2640, select **Internet > Security > Firewall** to the **Anti-DoS Attack** page, see Figure 4-16.

Figure 4-16 Anti-DoS Attack Page



5. Set the parameters. For a description of the parameters, refer to Table 4-7.

Table 4-7 Anti-DoS Attack Parameter Descriptions

Parameter	Description
Enable	To enable the Anti-PortScan to be configured, select this check box.
Threshold	"Threshold" means the maximum number of TCP or UDP connections from one host in WAN side to CPE itself every 3 seconds.

6. Click **Apply** button to apply the changes.

4.4.2 Configure the Filter Criteria

Abstract

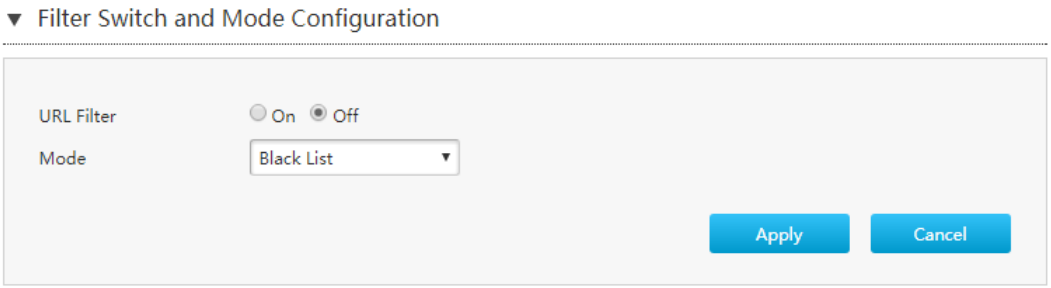
The section describes how to configure filter criteria.

Steps

Configuring the Filter Switch and Mode

1. On the main page of the ZXHN H2640, select **Internet > Security > Filter Criteria** to the **Filter Criteria** page.
2. Click **Filter Switch and Mode Configuration** to the configuration page, see Figure 4-17.

Figure 4-17 Filter Switch and Mode Configuration Page



3. Configure filter switch and mode configuration parameters, see Table 4-8 .

Table 4-8 Parameter Descriptions for the Filter Switch and Mode Configuration

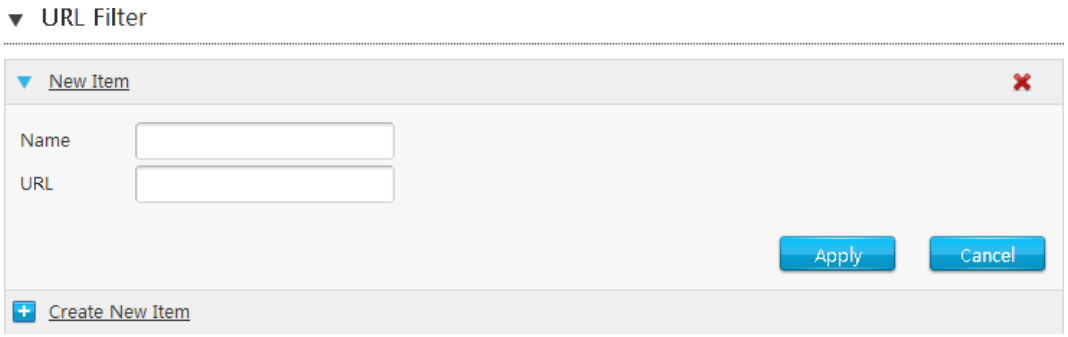
Parameter	Description
URL Filter	Set radiobox **On** to enable the URL filter function.
Mode	Enable the URL filter function. There are two modes: ● Black List Addresses in the **URL Filter** list are not allowed to access. ● White List Only addresses in the **URL Filter** list can be accessed.

4. Click **Apply** button to apply the changes.

Configuring the URL Filter

5. Click **URL Filter** to open **URL Filter** page, see Figure 4-18.

Figure 4-18 URL Filter Page



6. Table 4-9 lists the URL filter parameters.

Table 4-9 Parameter Descriptions for the URL Filter

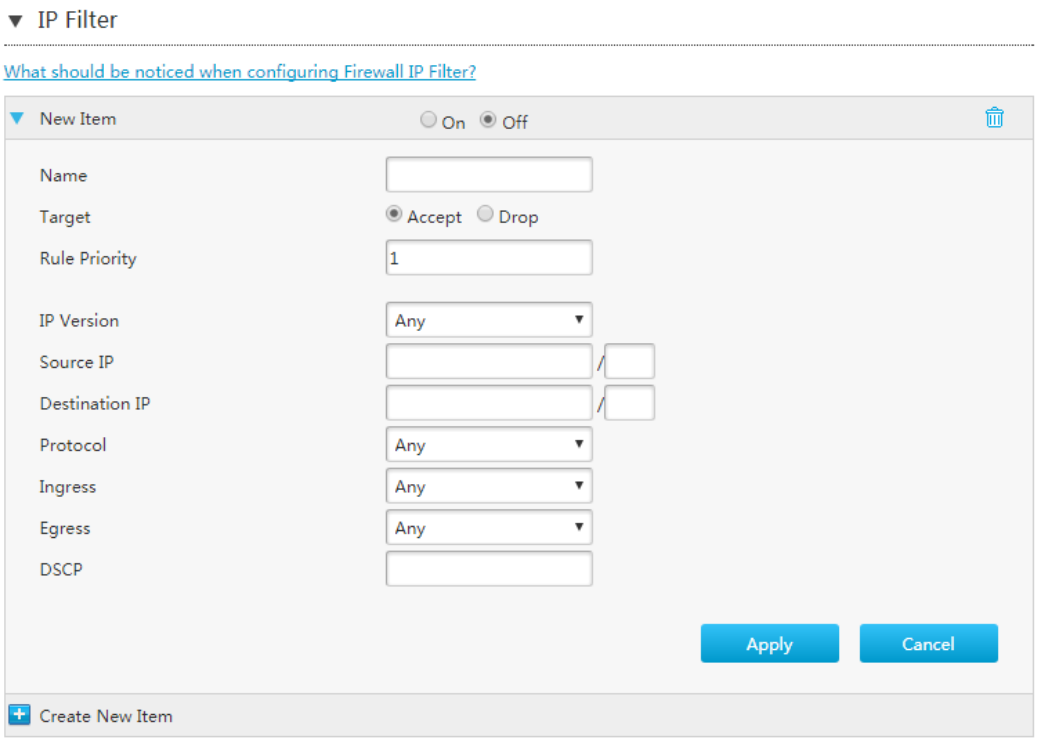
Parameter	Description
Name	The name of the URL filter.
URL	The URL address.

7. Click **Apply** button to apply the changes.

Configuring the IP Filter

8. Click **IP Filter** to open the IP filter page, see Figure 4-19.

Figure 4-19 IP Filter Page



9. Table 4-10 lists the IPv4 filter parameters.

Table 4-10 Parameter Descriptions for the IPv4 Filter

Parameter	Description
On/Off	Set radiobox **On** to enable the function of IP filter.
Name	Name of the IP filter item. The name must be specified.
Target	Specify to discard or permit the data packages.
Rule Priority	Specify the value to modify the service priority.
IP Version	The IP version includes: Any, IPv4 , IPv6.
Source IP/Destination IP	Source/Destination IP address.
Protocol	Select the protocol that needs to filter packets. By default, it is Any.
Ingress	Specify the data traffic direction. The Ingress option and egress option cannot be the same. ● If the ingress is LAN, the egress should be a WAN or 3G connection. The data traffic direction is upstream. ● If the ingress is a WAN or 3G connection, the egress should be the LAN. The data traffic direction is downstream.

Parameter	Description
Egress	Specify the data traffic direction. The Ingress option and egress option cannot be the same. ● If the ingress is LAN, the egress should be a WAN or 3G connection. The data traffic direction is upstream. ● If the ingress is a WAN or 3G connection, the egress should be the LAN. The data traffic direction is downstream.
DSCP	A DSCP is specified for the TOS byte in the IP header of each packet to indicate the priority. Range: 0–63.

10. Click **Apply** button to apply the changes.

4.4.3 Configure the Local Service Control

Abstract

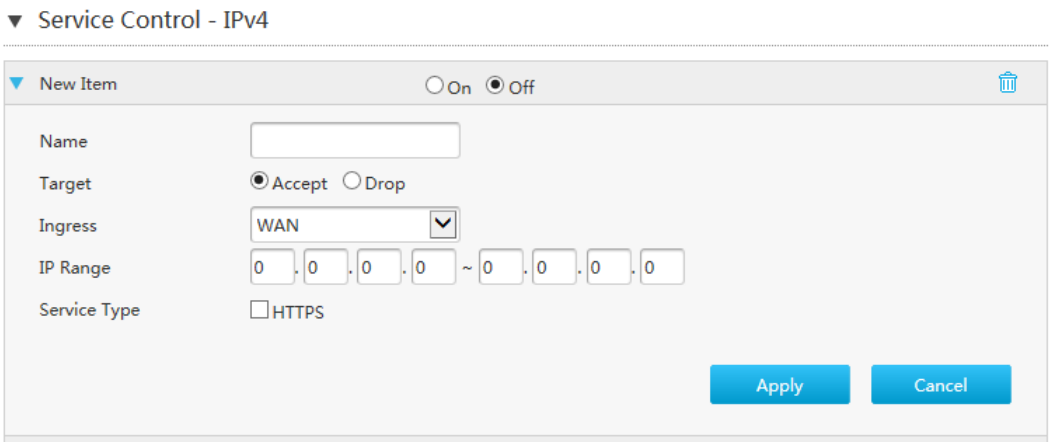
The section describes how to configure local service control.

Steps

Configuring the Service Control-IPv4

1. On the main page of the ZXHN H2640, select **Internet > Security > Local Service Control** to the **Local Service Control** page.
2. Click **Service Control-IPv4** to open **Service Control-IPv4** page, see Figure 4-20.

Figure 4-20 Service Control-IPv4 Page



3. Configure the service control-IPv4 parameters.

   Table 4-11 lists the local service control-IPv4 parameters.

Table 4-11 Parameter Descriptions for the Service Control-IPv4

Parameter	Description
On/Off	Click On to enable the function. Click Off to disable the function.
Name	Name of the Service Control item. The name must be specified.
Target	Specify to discard or permit the data packages.
Ingress	Specify the data stream inbound direction, and this parameter must be specified. ● If the Ingress is WAN_All, all the WAN connection can access ZXHN H2640. ● If the Ingress is LAN, the LAN side can access ZXHN H2640. ● If the Ingress is a WAN or Route_3G connection, the connection selected can access ZXHN H2640.
IP Range	The IP address segment that needs to be filtered. When the IP segment is null, it refers to all the IP addresses.
Service Type	Specify the service that is permitted or denied to access.

4. Click **Apply** button to apply the changes.

Configuring the Service Control-IPv6

5. Click **Service Control-IPv6** to open **Service Control-IPv6** page, see Figure 4-21.

Figure 4-21 Service Control-IPv6 Page

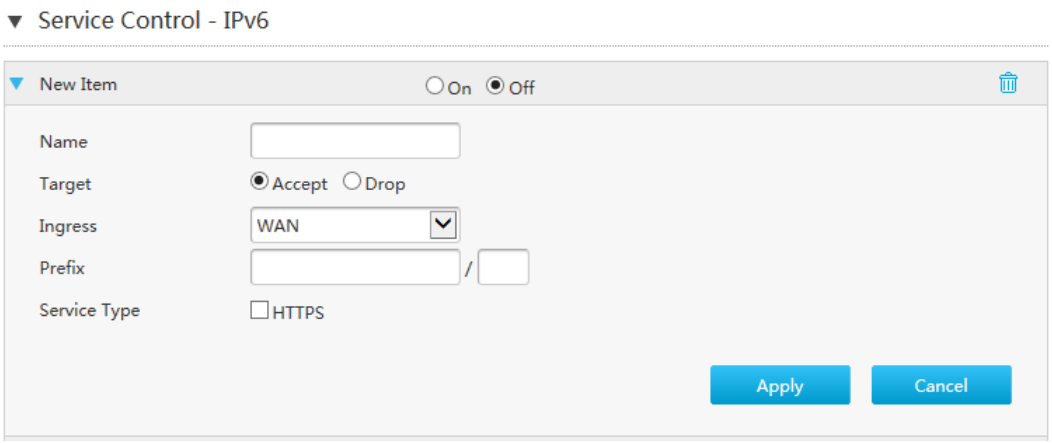


Table 4-12 lists the Service Control-IPv6 parameters.

Table 4-12 Parameter Descriptions for the Service Control-IPv6

Parameter	Description
On/Off	Click On to enable the function.

Parameter	Description
	Click Off to disable the function.
Name	Name of the Service Control item. The name must be specified.
Target	Specify to discard or permit the data packages.
Ingress	Specify the data stream inbound direction, and this parameter must be specified. ● If the Ingress is WAN_All, all the WAN connection can access ZXHN H2640. ● If the Ingress is LAN, the LAN side can access ZXHN H2640. ● If the Ingress is a WAN or Route_3G connection, the connection selected can access ZXHN H2640.
Prefix	IPv6 address prefix.
Service Type	Type Specify the service that is permitted or denied to access.

6. Click **Apply** button to apply the changes.

Configuring the Remote Service Port Control-IPv4

7. Click **Remote Service Port Control - IPv4** to open **Remote Service Port Control - IPv4** page, see Figure 4-22.

Figure 4-22 Remote Service Port Control - IPv4 Page

Table 4-13 lists the remote service port control - IPv4 parameters.

Table 4-13 Parameter Descriptions for the Remote Service Port Control - IPv4

Parameter	Description
HTTPS	The remote service port control of HTTPS.

8. Click **Apply** button to apply the changes.

4.4.4 Configure the ALG

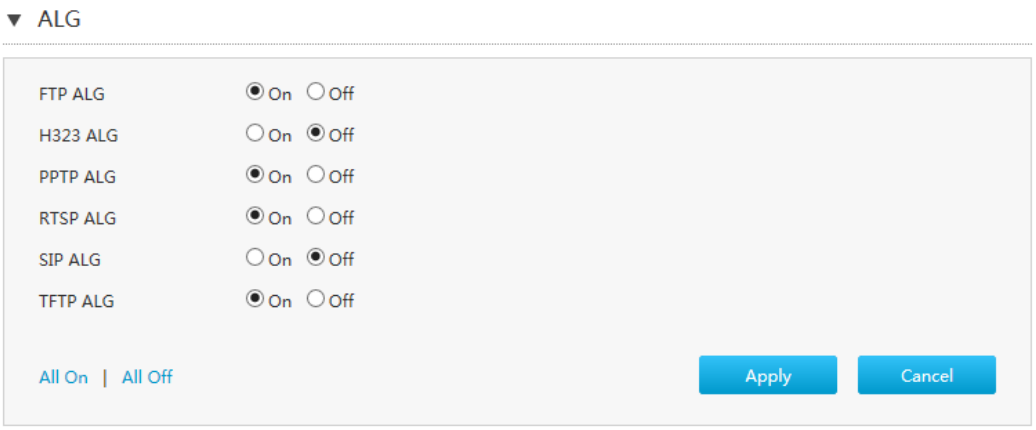
Abstract

The section describes how to configure ALG. **ALG** provides the relevant parameters of security configuration function.

Steps

1. On the main page of the ZXHN H2640, select **Internet > Security > ALG** to the **ALG** page, the page see Figure 4-23.

Figure 4-23 ALG Configuration Page



2. Select the ALG services.
3. Click **Apply** button to apply the changes.

Note

- Click **All On** to select all ALG services.
- Click **All Off** to cancel all ALG services.

4.4.5 Configure the DMZ

Abstract

The section describes how to configure DMZ. **DMZ** provides the parameters of DMZ configuration features.

Steps

1. On the main page of the ZXHN H2640, select **Internet > Security > DMZ** to the **DMZ** page, the page see Figure 4-24.

Figure 4-24 DMZ Configuration Page

Table 4-14 lists the DMZ parameters.

Table 4-14 Parameter Descriptions for the DMZ

Parameter	Description
DMZ Switch	Enable the DMZ host function.
LAN Host	The IP address or the MAC address of the computer at the LAN side.

2. Click **Apply** button to apply the changes.

4.4.6 Configure the Port Forwarding

Abstract

This procedure introduces how to configure Port Forwarding so that a computer from the external network can access the LAN-side server through the WAN connection. Port Forwarding provides the parameters of Port Forwarding configuration features.

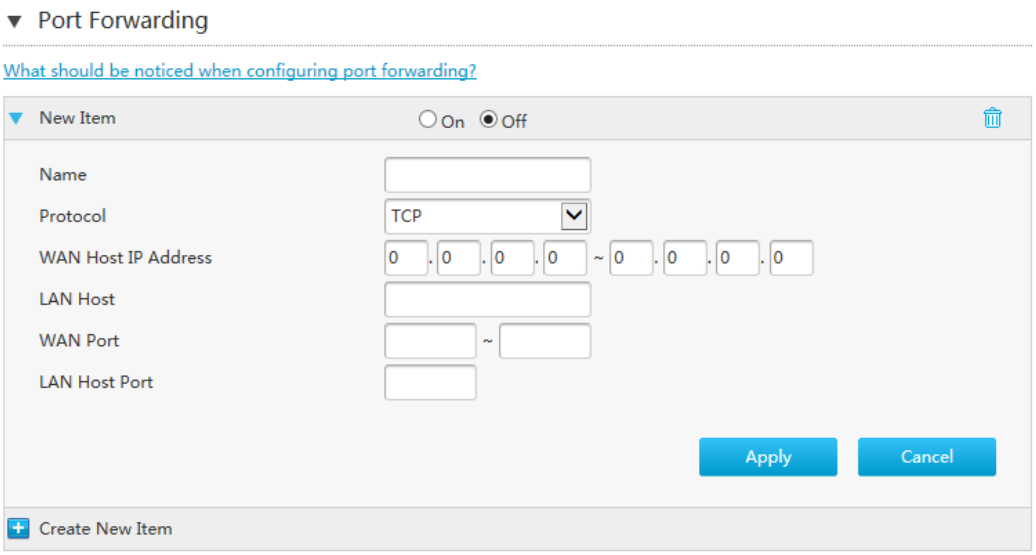
If you have local servers for different services and you want to make them publicly accessible, you need to specify the port forwarding policy. With NAT applied, it translates the internal IP addresses of these servers to a single IP address that is unique on the Internet.

To the Internet users, all virtual servers on your LAN have the same IP Address. This IP Address is allocated by your ISP. This address should be static, rather than dynamic, to make it easier for Internet users to connect to your servers. However, you can use dynamic DNS feature to allow users to connect to your virtual servers by using a URL, instead of an IP address.

Steps

1. On the main page of the ZXHN H2640, select **Internet > Security > Port Forwarding** to the **Port Forwarding** page, the page see Figure 4-25.

Figure 4-25 Port Forwarding Configuration Page



2. Configure the port forwarding parameters.

   Table 4-15 lists the port forwarding settings parameters.

Table 4-15 Parameter Descriptions for the Port Forwarding

Parameter	Description
On/Off	Set radiobox **On** to enable the port forwarding function.
Name	Virtual host name, which cannot be null.
Protocol	Protocol name, including TCP, UDP, TCP AND UDP. The default protocol is TCP.
WAN Host IP Address	IP address segment of the WAN-side hosts.
LAN Host	IP address of the LAN-side host.
WAN Port	Port segment of the WAN-side hosts.
LAN Host Port	Port number of the LAN-side host. Range: 1-65535.

3. Click **Apply** button to apply the changes.

4.5 Configure the Parental Controls

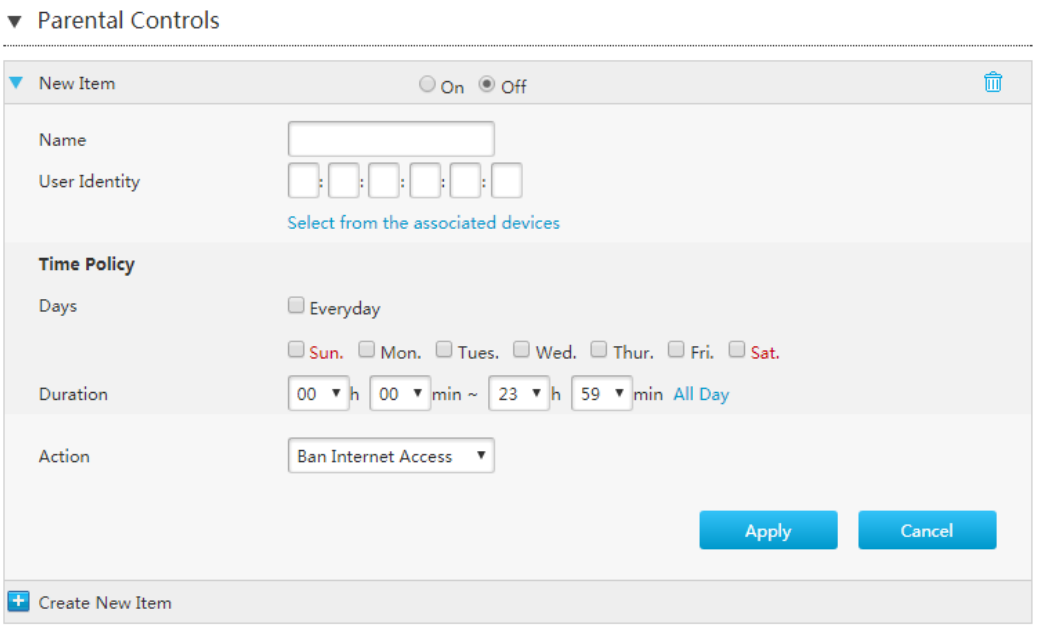
Abstract

The section describes how to configure parental controls.

Steps

1. On the main page of the ZXHN H2640, select **Internet > Parental Controls** to the **Parental Controls** page, see Figure 4-26.

Figure 4-26 Parental Controls



2. Configure the parental controls parameters.

   Table 4-16 lists the parental controls parameters.

Table 4-16 Parental Controls Parameters

Parameter	Description
On/Off	Click **On** to enable the parental controls function.
Name	The name of parental control.
User Identity	Configure the user information according to the IP address or MAC address.
Days	Specify the days when the parent control settings are applied.
Duration	Specify the time when the parent control settings are applied.
Action	The device supports: ● Ban Internet Access ● URL Black List ● URL White List

3. Click **Apply** button to apply the changes.

4.6 Configure the DDNS

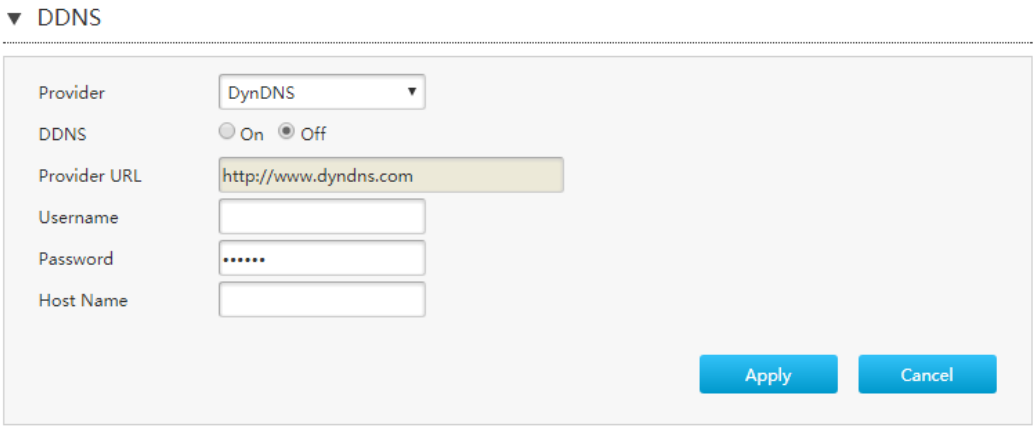
Abstract

The section describes how to configure DDNS. **DDNS** provides the parameters of DDNS configuration function.

Steps

1. On the main page of the ZXHN H2640, select **Internet > DDNS** to the **DDNS** page, see Figure 4-27.

Figure 4-27 DDNS Configuration Page



2. Configure the DDNS parameters.

   Table 4-17 lists the DDNS parameters.

Table 4-17 Parameter Descriptions for the DDNS

Parameter	Description
Provider	Supported provider. Options: DynDNS, DtDNS, No-IP, easyDNS, freedns and TZO. If the DtDNS is selected, the **WAN Connection** should be configured.
DDNS	DDNS Switch. Click On to enable the DDNS function.
Provider URL	The URL of provider. If the DynDNS HTTP is used, the URL is *http://www.dyndns.com*. If the DtDNS HTTP is used, the URL is *http://www.dtdns.org*. If the No-IP HTTP is used, the URL is *http://www.no-ip.com*. If the easyDNS HTTP is used, the URL is *http://www.easydns.com*. If the freedns HTTP is used, the URL is *http://freedns.afraid.org*. If the TZO HTTP is used, the URL is *http://www.tzo.com*.
Username	DDNS server user name.
Password	DDNS server password.
Host name	Host name corresponding to the user.

3. Click **Apply** button to apply the changes.

4.7 Configure the SNTP

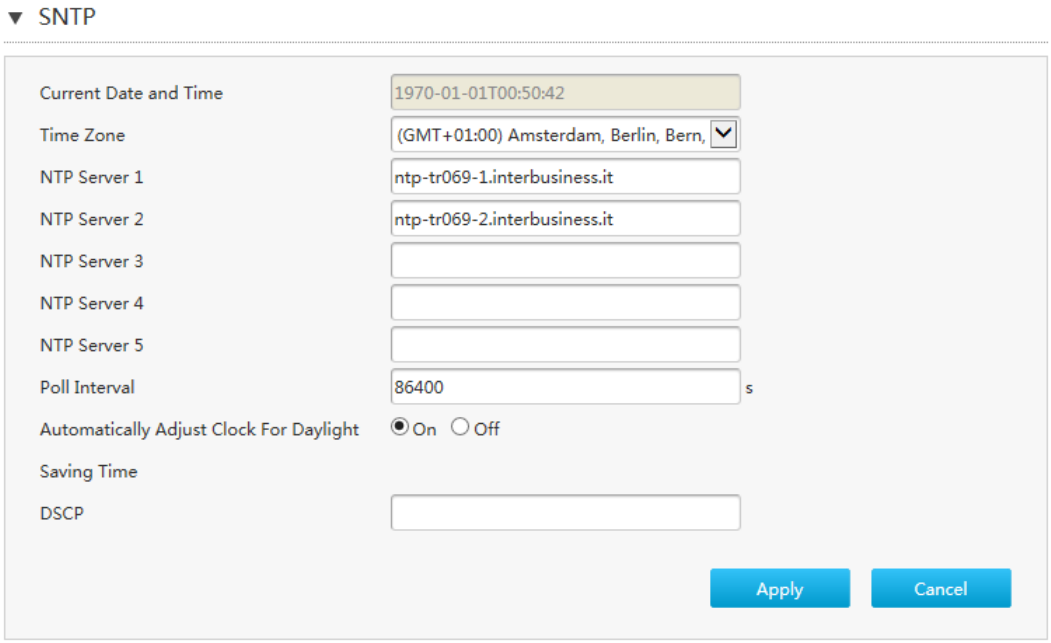
Abstract

The section describes how to configure SNTP. **SNTP** provides the parameters of SNTP configuration features.

Steps

1. On the main page of the ZXHN H2640, select **Internet > SNTP** to the **SNTP** page, see Figure 4-28.

Figure 4-28 SNTP Configuration Page



2. Configure the SNTP parameters.

   Table 4-18 lists the SNTP parameters.

Table 4-18 Parameter Descriptions for the SNTP

Parameter	Description
Time Zone	Time zone.
NTP Server1 ~ NTP Server5	IP address of the primary/secondary/third/fourth/fifth NTP server.
Poll Interval	Interval of time synchronization. Unit: second.
Automatically Adjust Clock For Daylight	Enable or disable the automatically adjust clock for daylight function.
DSCP	To ensure the QoS of communication, DSCP (Differentiated Services Code Point) encodes the 8 flag bytes in the IP header of data packets to classify service

Parameter	Description
	types and distinguish service priorities.The value range of DSCP is 0~63 and each DSCP code value is mapped to a defined PHB (Per-Hop-Behavior) code.

3. Click **Apply** button to apply the changes.

4.8 Configure the Mulitcast

4.8.1 Configure the IGMP

Abstract

The section describes how to configure IGMP. **IGMP** provides the parameters of IGMP configuration features.

Steps

1. On the main page of the ZXHN H2640, select **Internet > Multicast > IGMP** to the **IGMP** page, see Figure 4-29.

Figure 4-29 IGMP Configuration Page

2. Enable the IGMP functions, see Table 4-19.

Table 4-19 Parameter Descriptions for the IGMP

Parameter	Description
IGMP Proxy	The system serves as a proxy server to forward IGMP packets from the MDU/DSLAM to other devices.

3. Click **Apply** button to apply the changes.

4.8.2 Configure the MLD

Abstract

The section describes how to configure MLD. **MLD** provides the parameters of MLD configuration features.

Steps

1. On the main page of the ZXHN H2640, select **Internet > Multicast > MLD** to the **MLD** page, see Figure 4-30.

Figure 4-30 MLD Configuration Page

2. Enable the MLD functions, see Table 4-20.

Table 4-20 Parameter Descriptions for the MLD

Parameter	Description
IGMP Proxy	The system serves as a proxy server to forward MLD packets from the MDU/DSLAM to other devices.

3. Click **Apply** button to apply the changes.

Chapter 5
Configure the Local Network

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5.1 Check the Local Network Status

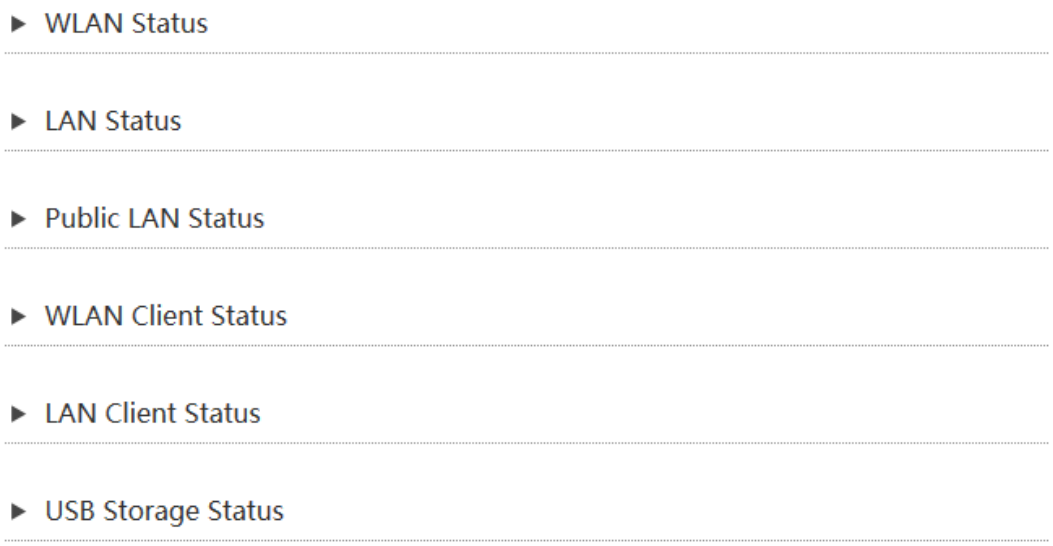
Abstract

The section describes how to check the status of Local Network. The relevant information of Local Network status includes **LAN Status**, **WLAN Status**, **WLAN Client Status**, **LAN Client Status** and **USB Storage Status**.

Steps

1. On the main page of the ZXHN H2640, select **Local Network > Status** to the **Local Network Status** page, see Figure 5-1.

Figure 5-1 Local Network Status Page



2. Click **Refresh** to refresh the information.

5.2 Configure the WLAN

5.2.1 Configure the Basic Parameters of the WLAN

Abstract

The section describes how to configure WLAN basic settings.

Steps

Configuring the WLAN On/Off

1. On the main page of the ZXHN H2640, select **Local Network > WLAN > WLAN Basic** to the **WLAN Basic** page, see Figure 5-2.

Figure 5-2 WLAN On/Off Configuration

2. Table 5-1 lists the WLAN on/off configuration parameters.

Table 5-1 WLAN On/Off Configuration parameters

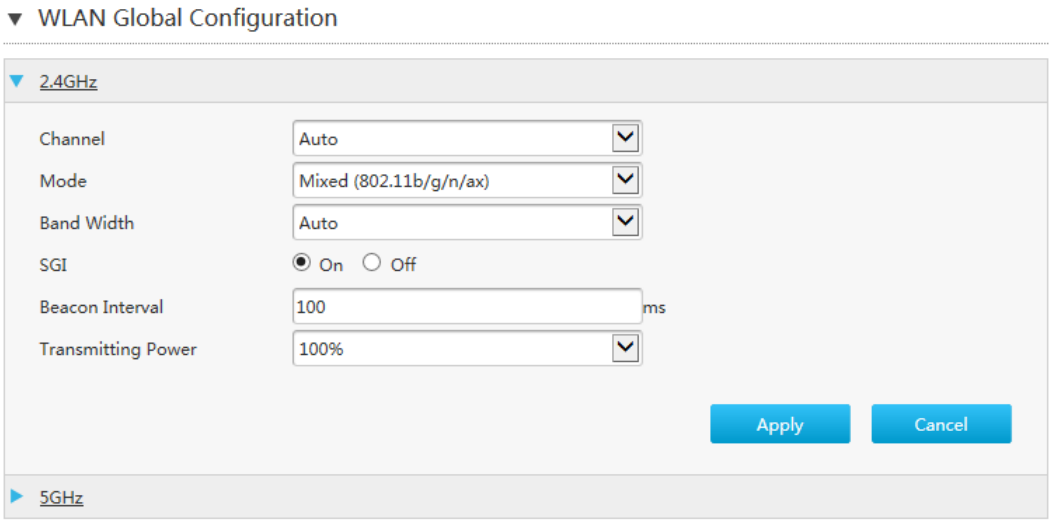
Parameter	Description
WLAN (2.4GHz)	Click **On** to enable the 2.4GHz wireless function. Click **Off** to disable the 2.4GHz wireless function.
WLAN (5GHz)	Click **On** to enable the 5GHz wireless function. Click **Off** to disable the 5GHz wireless function.

3. Click **Apply** button to apply the changes.

Configuring the WLAN Global Parameters

4. Click **WLAN Global Configuration** to the configuration page, see Figure 5-3.

Figure 5-3 WLAN Global Configuration Page



5. Table 5-2 lists the WLAN global configuration parameters.

Table 5-2 Parameter Descriptions for WLAN Global Configuration

Parameter	Description
Channel	Channel of the wireless network. A proper channel can be selected in accordance with the country code. Options: Auto, 1–13, default: 13. Specifies the channel used for communication between the AP and the wireless site, depending on the local circumstance.
Mode	Options: ● IEEE 802.11b Only ● IEEE 802.11g Only ● IEEE 802.11n Only ● Mixed(802.11b/g) ● Mixed(802.11g/n) ● Mixed(802.11b/g/n)

Parameter	Description
	● Mixed(802.11b/g/n/ax)
Band Width	Radio frequency bandwidth, including Auto,20Mhz and 40Mhz. Default: Auto.
SGI	Click **On** to enable SGI function. Click **Off** to disable SGI function.
Beacon Interval	Interval for transmitting beacon frames, default: 100 ms. Beacon frames are used for communicating with other AP devices or network control devices to announce the WLAN presence.
Transmitting Power	Level of radio signal transmitting power. A larger value indicates wider coverage. Options: ● 100% ● 80% ● 60% ● 40% ● 20%

6. Click **Apply** button to apply the changes.

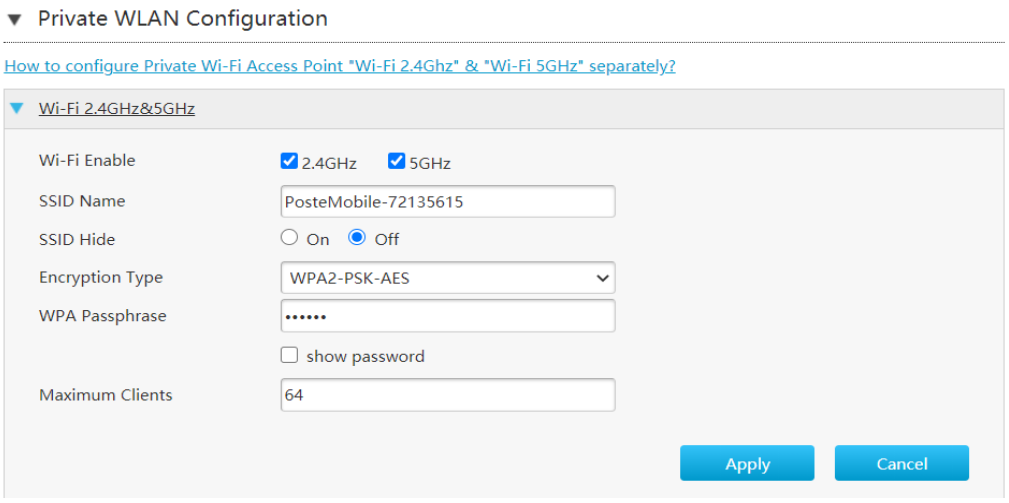
Note

WLAN global configuration(5GHz) refers to WLAN global configuration(2.4GHz).

Configuring the Private WLAN SSID Parameters

7. Click **Private WLAN SSID Configuration** to the configuration page, see Figure 5-4.

Figure 5-4 Private WLAN SSID Configuration Page



8. Table 5-3 lists the private WLAN SSID configuration parameters.

Table 5-3 Parameter Descriptions for the Private WLAN SSID Configuration

Parameter	Description
SSID Name	The name of SSID.
SSID Hide	Set radiobox **On** to hide the SSID information to prevent illegal users.
Encryption Type	Select Encryption Type.
WPA Passphrase	Password to connect to the wireless network. The value range is 8–63.
Maximum Clients	Maximum number of users that can access the SSID. The value range is 1-32.

9. Click **Apply** button to apply the changes.

Note

Private WLAN SSID Configuration(5GHz) refers to Private WLAN SSID Configuration(2.4GHz).Guest WLAN SSID Configuration refers to Private WLAN SSID Configuration.

5.2.2 Configure the Advanced Parameters of the WLAN

Abstract

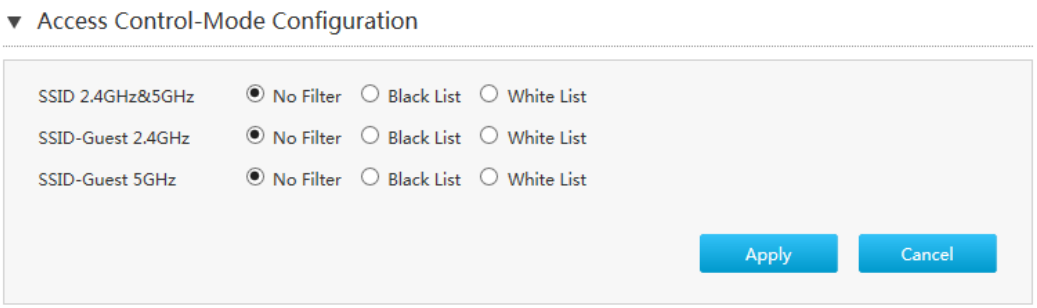
WLAN Advanced provides the parameters of WLAN Advanced configuration features.

Steps

Configuring the Access Control-Mode Settings

1. On the main page of the ZXHN H2640, select **Local Network > WLAN > WLAN Advanced** to the **WLAN Advanced** page.
2. Click **Access Control-Mode Configuration** the configuration page, see Figure 5-5.

Figure 5-5 Access Control-Mode Configuration Page



3. Configure the access control-mode configuration parameters.

Table 5-4 lists the access control-mode configuration parameters.

Table 5-4 Access Control-Mode configuration parameters

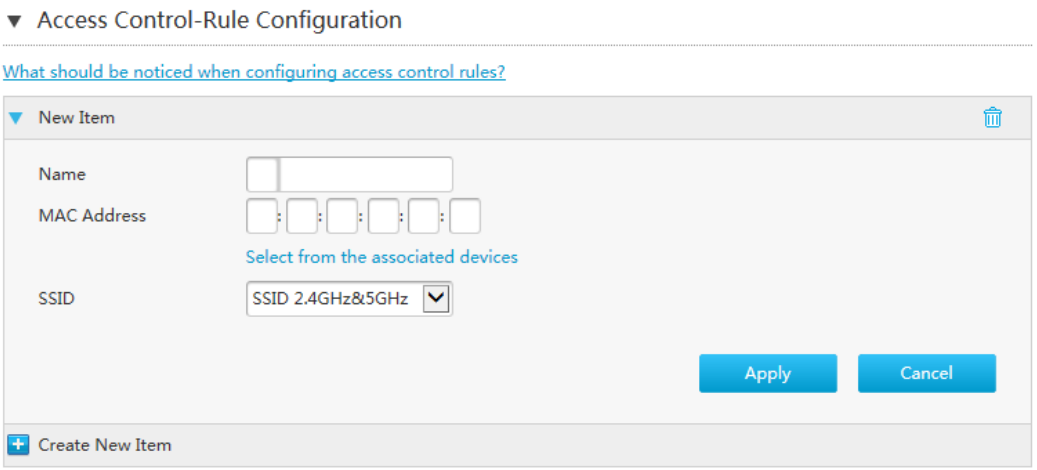
Parameter	Description
No Filter	No filter is to be applied (the default).
Black List	Deny LAN users to access specific address.
White List	Allow LAN users to access specific address.

4. Click **Apply** button to apply the changes.

Configuring the Access Control-Rule Parameters

5. Click **Access Control-Rule Configuration** to the configuration page, see Figure 5-6.

Figure 5-6 Access Control-Rule Settings



6. Configure the access control-rule configuration parameters.Table 5-5 lists the access control-rule configuration parameters.

Table 5-5 Access Control-Rule Configuration parameters

Parameter	Description
Name	The name of Access Control Item.
SSID	SSID name corresponding to the wireless network that the rule is applied to. The default value is SSID1.
MAC Address	The MAC address of the wireless device. We suggest to set the MAC addresses in access control list using a wireline connected device. Modifying the list using a wireless device may cause unexpected disconnection of the device used.

7. Click **Apply** button to apply the changes.

5.2.3 Configure the BSS Steering

Abstract

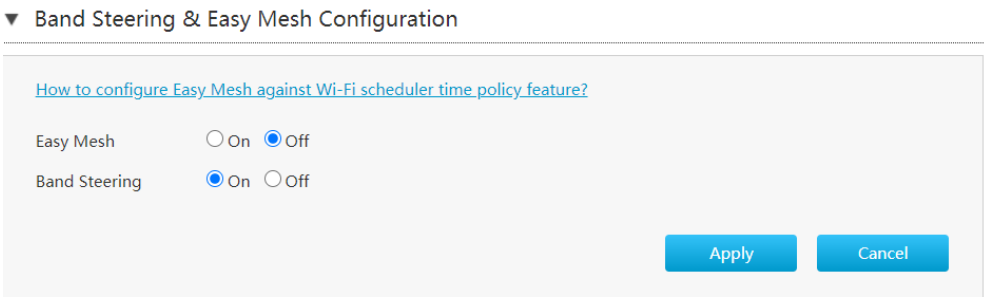
Easy Mesh is the latest wireless network standard launched by the Wi-Fi alliance. It enables the MESH products produced by different manufacturers to interwork with each other.

Band Steering is a feature that encourages dual-band capable wireless clients to connect to the faster 5GHz Wi-Fi, and leave the 2.4GHz Wi-Fi less-crowded for those clients who support 2.4GHz only; therefore to improve Wi-Fi performance for all the clients.

Steps

1. On the main page of the ZXHN H2640, select **Local Network > WLAN > BSS Steering** to the **BSS Steering** page, see Figure 5-7.

Figure 5-7 BSS Steering



2. Enable the functions, see Table 5-6.

Table 5-6 Parameter Descriptions for the BSS Steering

Parameter	Description
Easy Mesh	ZXHN H2640 support the Easy Mesh standard or not.
Band Steering	ZXHN H2640 support the Band Steering or not.

3. Click **On** to enable the function and click **Apply** to refresh the information.

5.2.4 Configure the Wi-Fi Scheduler

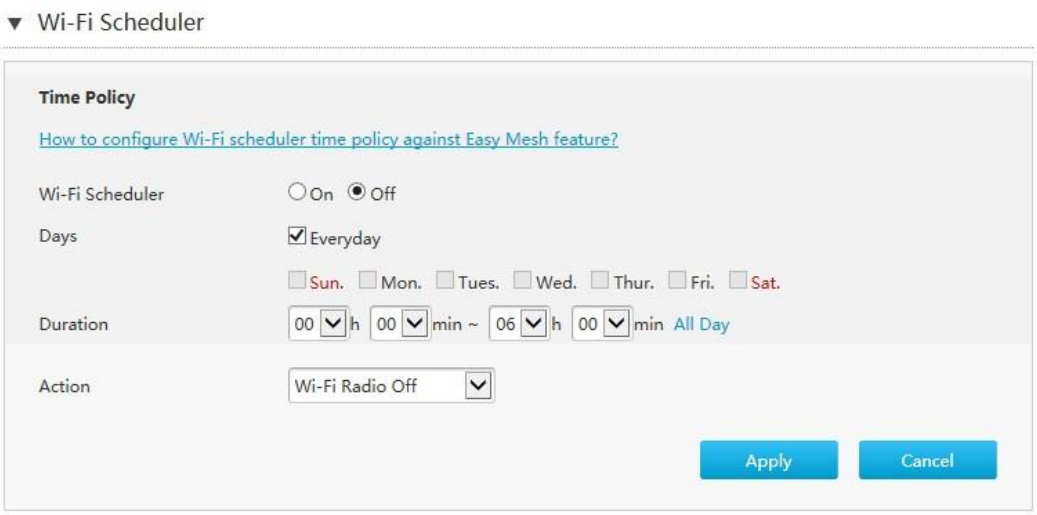
Abstract

The section describes how to configure Wi-Fi scheduler.

Steps

1. On the main page of the ZXHN H2640, select **Local Network > WLAN > Wi-Fi Scheduler** to the **Wi-Fi Scheduler** page, see Figure 5-8.

Figure 5-8 Wi-Fi Scheduler



2. Configure the Wi-Fi scheduler parameters.

   Table 5-7 lists the Wi-Fi scheduler parameters.

Table 5-7 Wi-Fi Scheduler Parameters

Parameter	Description
Wi-Fi Scheduler	Click **On** to enable the Wi-Fi scheduler function.
Days	Specify the days when the Wi-Fi scheduler settings are applied.
Duration	Specify the time when the Wi-Fi scheduler settings are applied.
Action	The device supports: ● Wi-Fi Radio Off ● Wi-Fi Radio On

3. Click **Apply** button to apply the changes.

5.3 Configure the LAN

5.3.1 Configure the LAN(IPv4)

Abstract

The section describes how to configure LAN(IPv4).

The relevant information of Internet status includes **Allocated Address(DHCP)**, **DHCP Server**, **DHCP Binding** and **Port Control**.

Steps

Configuring the Allocated Address(DHCP)

1. On the main page of the ZXHN H2640, select **Local Network > LAN > IPv4** to the **IPv4** page.
2. Click **Allocated Address(DHCP)** to the configuration, see Figure 5-9.

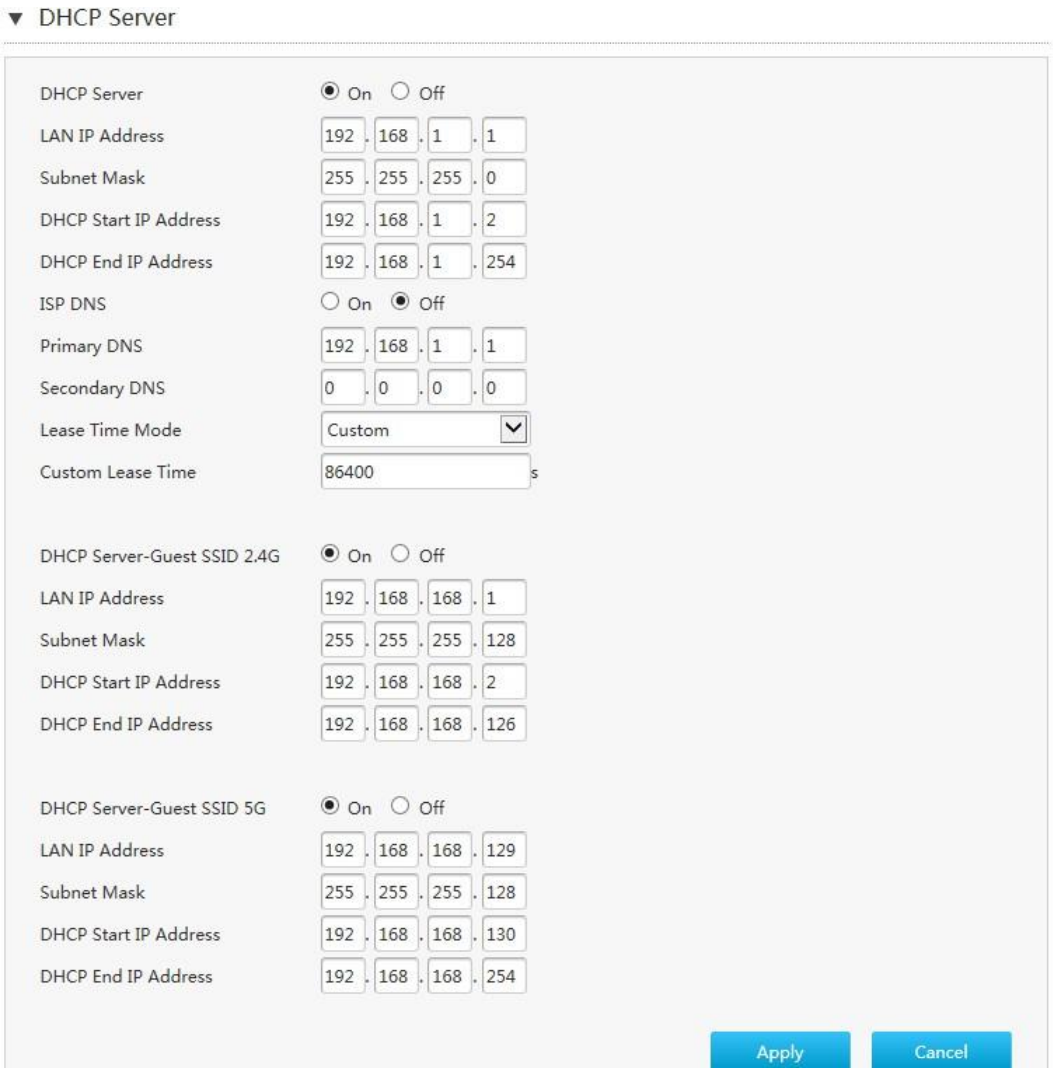
Figure 5-9 Allocated Address(DHCP) Page

3. Click **Refresh** to refresh the informations.

Configuring the DHCP Server

4. Click **DHCP Server** to the configuration, see Figure 5-10.

Figure 5-10 DHCP Server(IPv4) Page



5. Configure the DHCP server parameters.

   Table 5-8 lists the DHCP server parameters.

Table 5-8 Parameter Descriptions for the DHCP Server

Parameter	Description
DHCP Server	Select On to let the device work as a DHCP server and assign IP addresses to open the client PCs or wireless devices.
LAN IP Address	The IPv4 address of LAN.
Subnet Mask	Subnet mask of the device.
DHCP Start IP Address	The start IP address of the DHCP address pool.
DHCP End IP Address	The end IP address of the DHCP address pool.
ISP DNS	Select the On check box to let the Assign IspDNS work.

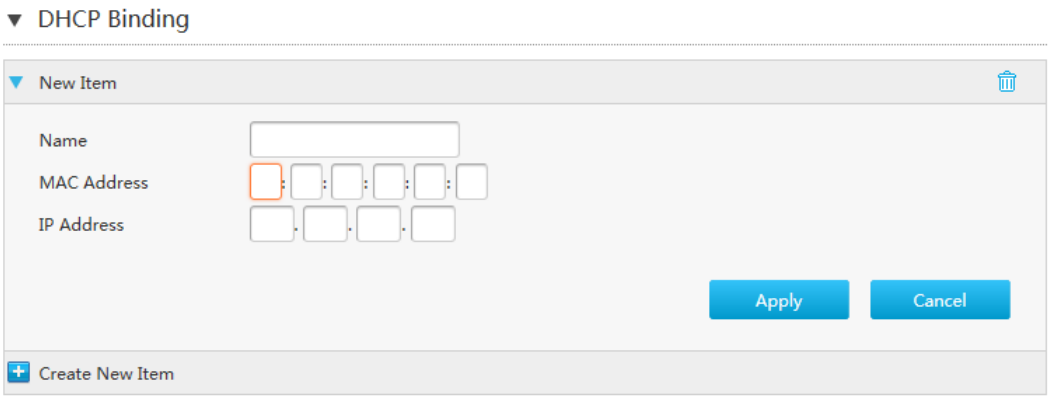
Parameter	Description
Primary DNS	IP address of the DNS server, provided by ISP.
Secondary DNS	IP address of the DNS server2, provided by the ISP.
Lease Time Mode	The mode of Lease Time.
Custom Lease Time	The time during which the client PCs use the IP address assigned by the DHCP server.After the lease time expires, the private IP address will be available for assigning to other network devices.

6. Click **Apply** button to apply the changes.

Configuring the DHCP Binding

7. Click **DHCP Binding** to the configuration, see Figure 5-11.

Figure 5-11 DHCP Binding Page



8. Configure the DHCP Binding parameters.

   Table 5-9 lists the DHCP binding parameters.

Table 5-9 Parameter Descriptions for the DHCP Binding

Parameter	Description
Name	The name of the DHCP Binding.
MAC Address	The MAC address of the DHCP Binding.
IP Address	IP address of the DHCP Binding.

9. Click **Apply** button to apply the changes.

5.3.2 Configure the LAN(IPv6)

Abstract

The section describes how to configure LAN(IPv6).

The relevant information of Internet status includes **Allocated Address(DHCPv6)**, **LAN Address Management**, **Static Prefix**, **DHCPv6 Server**, **RA Service**.

Prerequisite

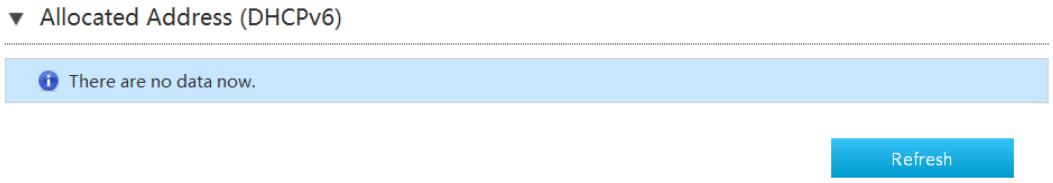
Before configuring the prefix delegation, make sure that the prefix delegation is enabled for the specified IPv6 WAN connection.

Steps

Configuring the Allocated Address(DHCPv6)

1. On the main page of the ZXHN H2640, select **Local Network > LAN > IPv6** to the **IPv6** page.
2. Click **Allocated Address (DHCPv6)** to the configuration page, see Figure 5-12.

Figure 5-12 Allocated Address(DHCPv6) Page

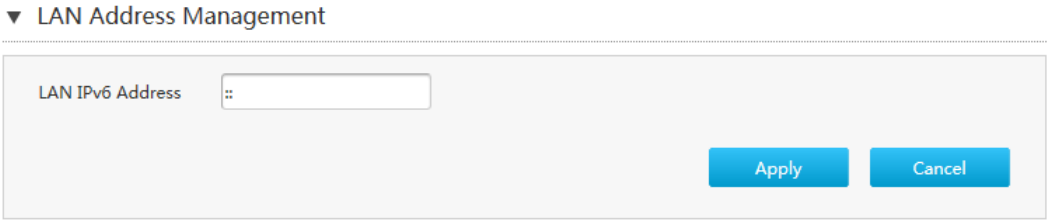


3. Click **Refresh** to refresh the information.

Configuring the LAN Address Management

4. Click **LAN Address Management** to the configuration page, see Figure 5-13.

Figure 5-13 LAN Address Management Page



5. Configure the LAN address parameters. Table 5-10 lists the LAN address parameters.

Table 5-10 Parameter Descriptions for the LAN Address

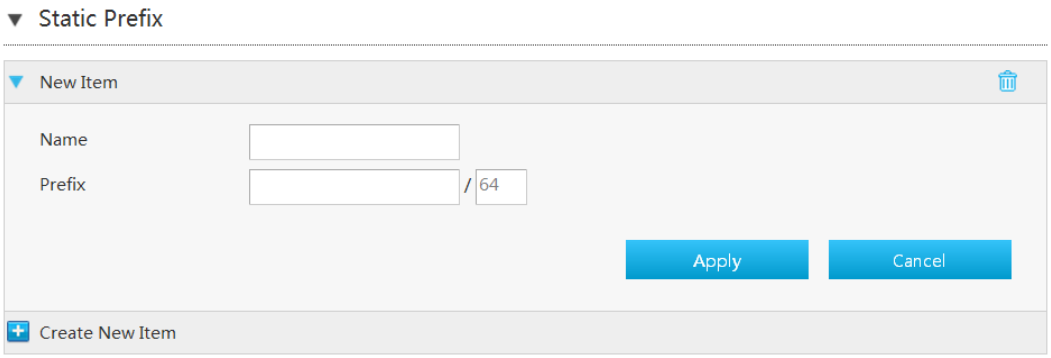
Parameter	Description
LAN IPv6 Address	The address of LAN.

6. Click **Apply** button to apply the changes.

Configuring the Static Prefix

7. Click **Static Prefix** to the configuration page, see Figure 5-14.

Figure 5-14 Static Prefix Page



8. Configure the static prefix parameters.Table 5-11 lists the static prefix parameters.

Table 5-11 Parameter Descriptions for the Static Prefix

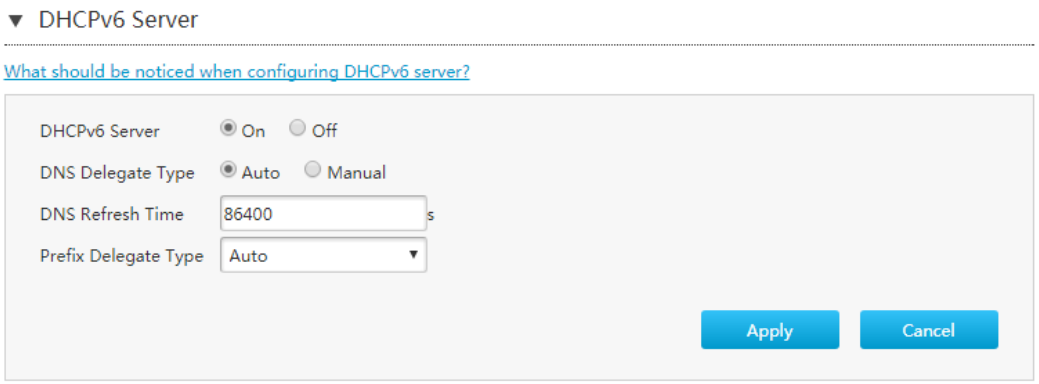
Parameter	Description
Name	The name of the prefix.
Prefix	IPv6 address and prefix length. Only a GUA prefix is supported. Prefix length: 64.

9. Click **Apply** button to apply the changes.

Configure DHCPv6 Server

10. Click **DHCPv6 Server** to the configuration page, see Figure 5-15.

Figure 5-15 DHCPv6 Server Page



11. Configure the DHCPv6 server parameters.

Table 5-12 lists the DHCPv6 server parameters.

Table 5-12 Parameter Descriptions for the DHCPv6 Server

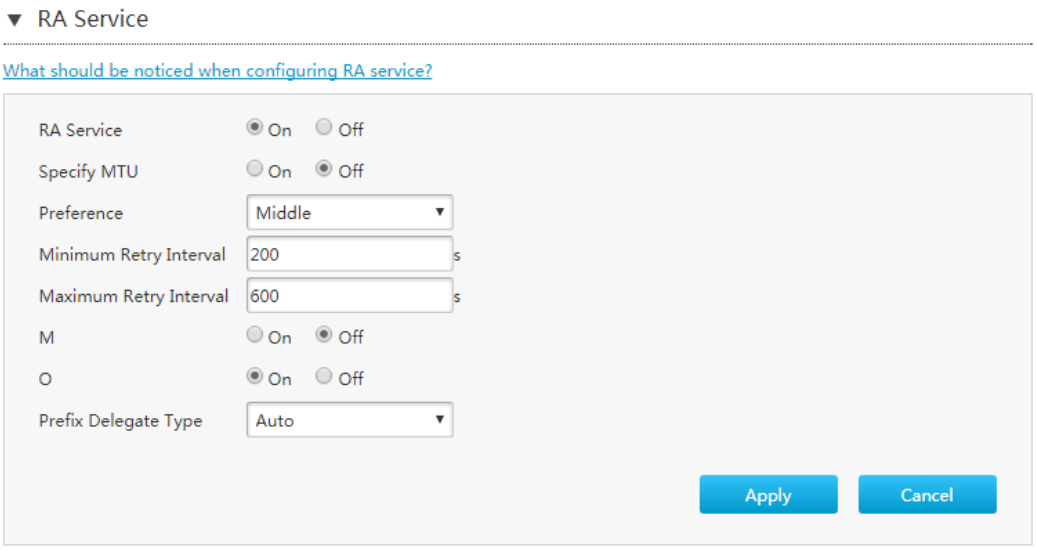
Parameter	Description
DHCPv6 Server	Select **On** to let the device work as a DHCP server and assign IP addresses to the client PCs or wireless devices.
DNS Delegate Type	DNS Delegate Type: ● Auto: One DNS selected automatically from all the available DNS will be delegated. ● Manual: One or more DNSs selected manually from all the DNSs configured before will be delegated.
DNS Refresh Time	The time during which the client PCs use the IP addresses assigned by the DHCP server. After the lease time expires, the private IP address will be available for assigning to other network devices.
Prefix Delegate Type	Option: ● Auto: One prefix selected automatically from all the available prefixes will be delegated. ● Manual: One or more prefixes selected manually from all the static prefixes configured before will be delegated. ● Disabled: No prefix will be delegated.

12. Click **Apply** button to apply the changes.

Configuring the RA Service

13. Click **RA Service** to the configuration page, see Figure 5-16.

Figure 5-16 RA Service Page



14. Configure the RA service parameters.Table 5-13 lists the RA service parameters.

Table 5-13 Parameter Descriptions for the RA Service

Parameter	Description
RA Service	Click **On** to enable the function. Click **Off** to disable the function.
Specify MTU	If On button is selected, enter the MTU value.
MTU	Define the maximum transfer unit.
Preference	By default, the preference is Middle.
Min Retry Interval	The minimum time allowed between sending unsolicited multicast Router Advertisements from the interface. (The value must not be greater than 0.75 * (MaxiClick **Apply** button to apply the changes.mum Retry Interval)).
Max Retry Interval	maximum time allowed between sending unsolicited multicast Router Advertisements from the interface.
M	Managed flag. Select this check box to enable the connected devices to obtain the IPv6 address through DHCP IPv6.
O	Other configure flag. Select this check box to enable the connected devices to obtain DNS address through DHCP IPv6.
Prefix Delegate Type	Option: ● AutoSense: All the available prefixes will be delegated. ● Manual: One or more prefixes selected manually from all the static prefixes configured before will be delegated.

15. Click **Apply** button to apply the changes.

5.3.3 Configure the eDNS0

Abstract

eDNS0 (extension Mechanisms for DNS Version 0) is an extension of DNS on the basis of RFC 1035. eDNS0 Allows the DNS requester to publicize the size of its UDP packets and make it easier to transmit packets larger than 512 bytes.

Steps

1. On the main page of the ZXHN H2640, select **Local Network > LAN > eDNS0** to the **eDNS0** page, see Figure 5-17

Figure 5-17 eDNS0 Page

2. Click **On** to enable the eDNS0 function and click **Apply** button to apply the changes.

5.4 Configure the Route

5.4.1 Configure the Routing(IPv4)

Abstract

The section describes how to configure routing(IPv4), which provides the parameters of route(IPv4) configuration features.

The relevant information of Internet status includes **Routing Table**, **Static Routing** and **Policy Routing**.

Prerequisite

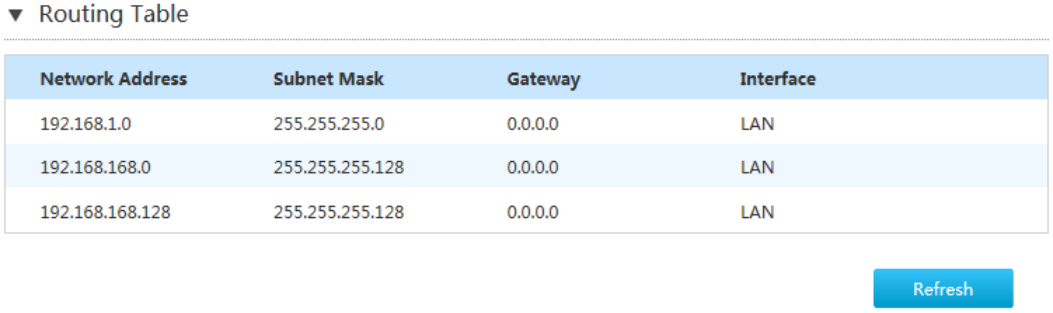
Before configuring routing(IPv4), make sure that the IPv4 WAN connection is created.

Steps

Configuring the Routing Table

1. On the main page of the ZXHN H2640, select **Local Network > Routing > IPv4** to the **Routing(IPv4)** page.
2. Click **Routing Table** to the configuration page, see Figure 5-18.

Figure 5-18 Routing Table Page

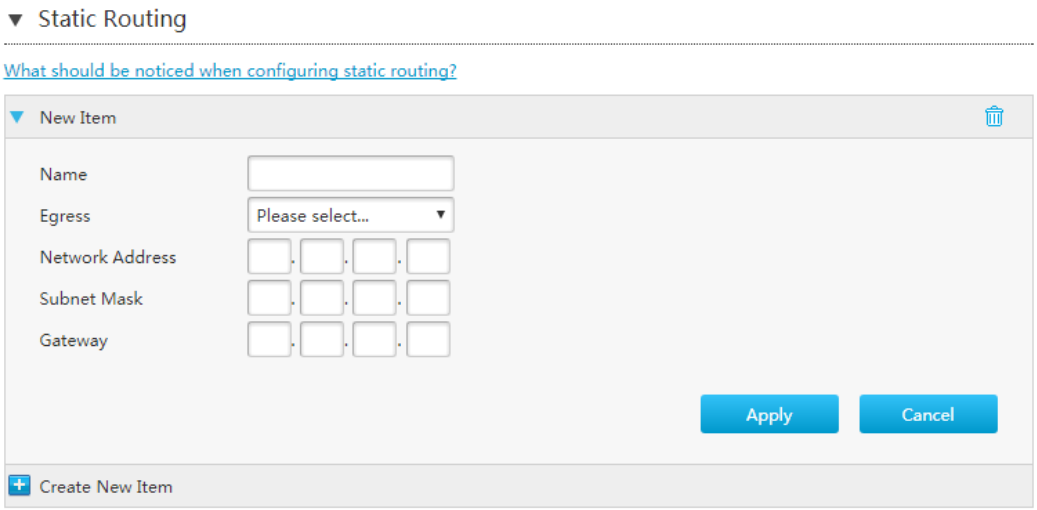


3. Click **Refresh** to refresh the information.

Configuring the Static Routing

4. Click **Static Routing** to the configuration page, see Figure 5-19.

Figure 5-19 Static Routing Page



5. Configure the static routing parameters.Table 5-14 lists the static routing parameters.

Table 5-14 Parameter Descriptions for the Static Routing

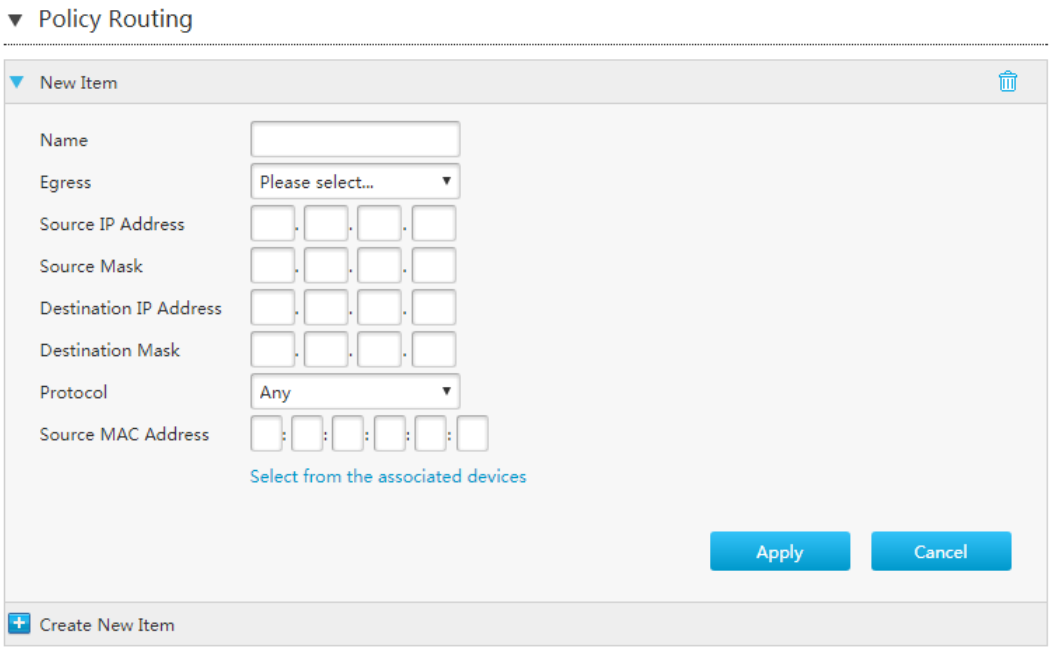
Parameter	Description
Name	The name of static routing entry.
Egress	WAN connection for static routing.
Network Address	IPv4 address of the destination network.
Subnet Mask	Subnet mask of the destination network.
Gateway	The next-hop IPv4 address to the destination network.

6. Click **Apply** button to apply the changes.

Configuring the Policy Routing

7. Click **Policy Routing** to the configuration page, see Figure 5-20.

Figure 5-20 Policy Routing Page



8. Configure the policy routing parameters. Table 5-15 lists the policy routing parameters.

Table 5-15 Parameter Descriptions for the Policy Routing

Parameter	Description
Name	The name of Policy routing entry.
Egress	WAN connection for policy routing
Source IP Address	Source IPv4 address of the matching packets.
Source Mask	Source mask of the matching packets.
Destination IP Address	Destination IPv4 address of the matching packets.
Destination Mask	Destination mask of the matching packets.
Protocol	Matching IPv4 protocol. The ANY option means any IPv4 protocol.
Source Port	Source port number of the matching packets.
Destination Port	Destination port number of the matching packets.
Source MAC Address	MAC address of the source device that sends the matching packets.

9. Click **Apply** button to apply the changes.

5.4.2 Configure the Routing(IPv6)

Abstract

The section describes how to configure Routing(IPv6).

The relevant information of Internet status includes **Routing Table**, **Static Routing** and **Policy Routing**.

Prerequisite

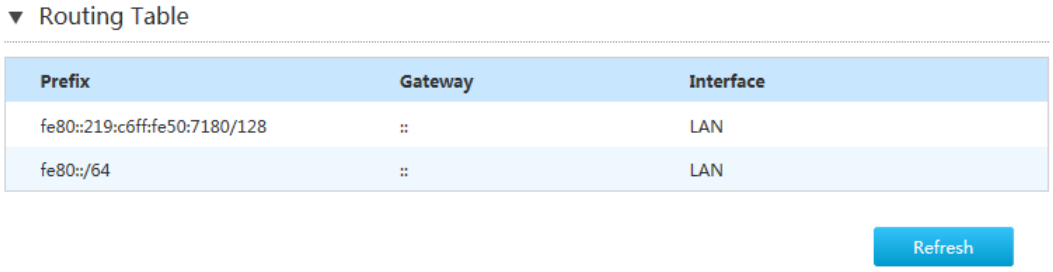
Before configuring routing(IPv6), make sure that the IPv6 WAN connection is created.

Steps

Configuring the Routing Table

1. On the main page of the ZXHN H2640, select **Local Network > Routing > IPv6** to the **Routing(IPv6)** page.
2. Click **Routing Table** to the configuration page, see Figure 5-21.

Figure 5-21 Routing Table Page

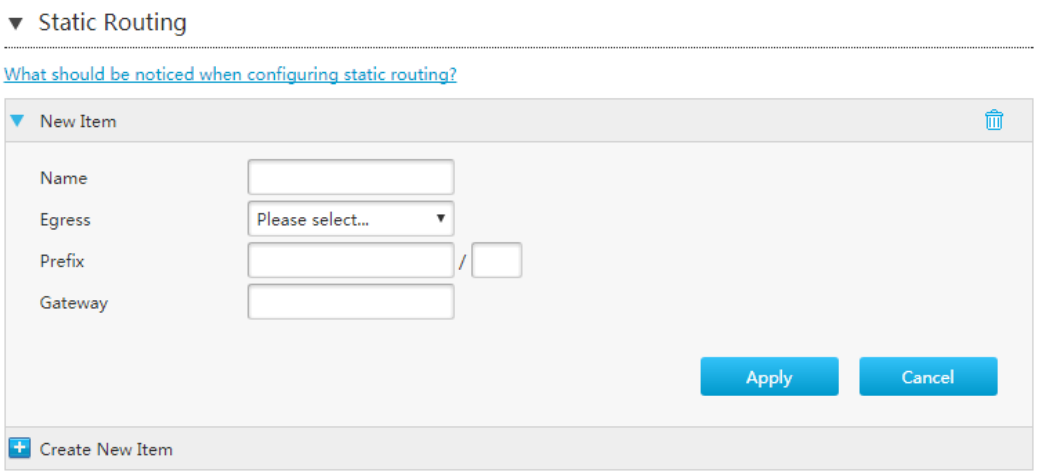


3. Click **Refresh** to refresh the information.

Configuring the Static Routing

4. Click **Static Routing** to the configuration page, see Figure 5-22.

Figure 5-22 Static Routing(IPv6) Page



5. Configure the static routing parameters. Table 5-16 lists the static routing parameters.

Table 5-16 Parameter Descriptions for the Static Routing

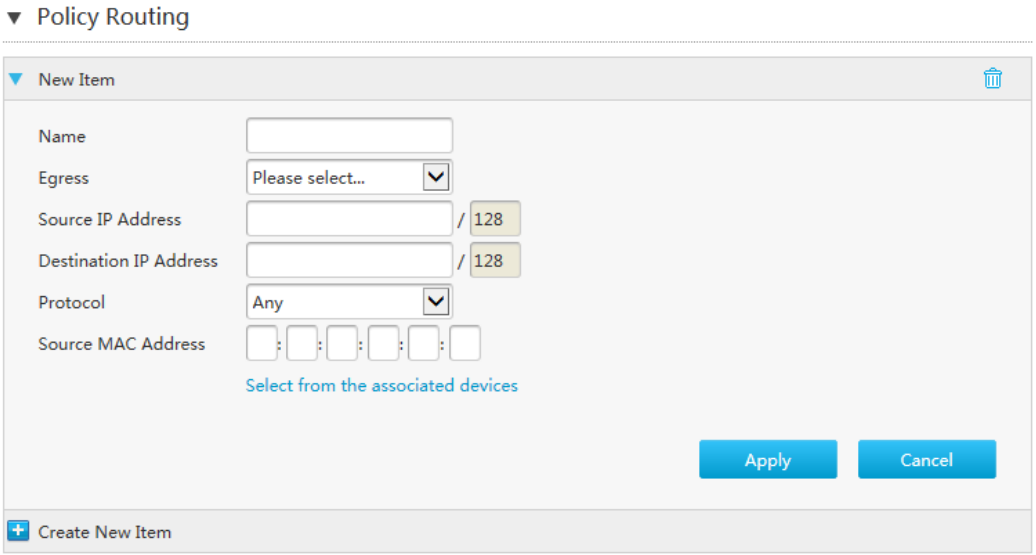
Parameter	Description
Name	The name of static routing entry.
Egress	WAN connection for static routing.
Prefix	IPv6 address and prefix length. The value range is 1-128.
Gateway	The next-hop IP address to the destination network.

6. Click **Apply** button to apply the changes.

Configuring the Policy Routing

7. Click **Policy Routing** to the configuration page, see Figure 5-23.

Figure 5-23 Policy Routing(IPv6) Page



8. Configure the policy routing parameters. Table 5-17 lists the policy routing parameters.

Table 5-17 Parameter Descriptions for the Policy Routing

Parameter	Description
Name	The name of Policy routing entry.
Egress	WAN connection for policy routing
Source IP Address	Source IPv6 address of the matching packets.
Destination IP Address	Destination IPv6 address of the matching packets.
Protocol	Matching IPv6 protocol. The ANY option means any IPv6 protocol.
Source Port	Source port number of the matching packets.
Destination Port	Destination port number of the matching packets.
Source MAC Address	MAC address of the source device that sends the matching packets.

9. Click **Apply** button to apply the changes.

5.5 Configure the FTP Server Feature

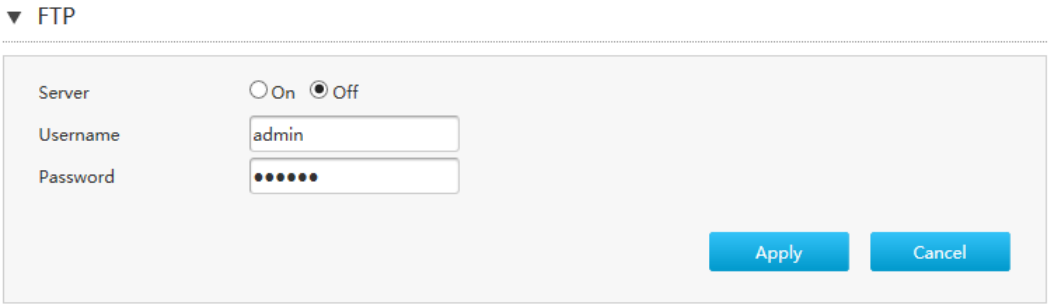
Abstract

This procedure describes how to enable the FTP feature of the ZXHN H2640 by configuring FTP parameters, including the username and password.

Steps

1. In the left navigation tree, click **Local Network > FTP**. The FTP Application page is displayed, see Figure 5-24.

Figure 5-24 FTP Page



2. Set the parameters. For a description of the parameters, refer to Table 5-18.

Table 5-18 FTP Server Parameter Descriptions

Parameter	Description
Server	Enable or disable the FTP server feature .
FTP Username/FTP Password	Username and password used to connect to the FTP server.Valid only if FTP security control is enabled.

3. Click **On** to enable the FTP server feature ,and click **Apply** button to apply the changes.

5.6 Configure the UPnP

Abstract

This page provides the parameters of UPnP configuration features.

Steps

Configuring the UPnP

1. On the main page of the ZXHN H2640, select **Local Network > UPnP** to the **UPnP**, see Figure 5-25.

Figure 5-25 UPnP Page

Table 5-19 lists the UPnP parameters.

Table 5-19 Parameter Descriptions for the UPnP

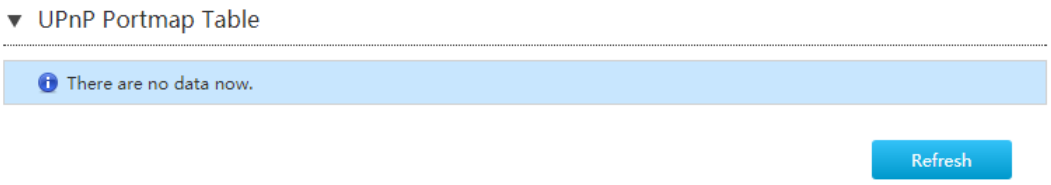
Parameter	Description
UPnP	Enable or disable the UPnP function.

2. Click **Apply** button to apply the changes.

Checking the UPnP Portmap Table

1. Click **UPnP Portmap Table** to the information page, see Figure 5-26.

Figure 5-26 UPnP Portmap Table Page



2. Click **Refresh** button to refresh the information.

5.7 Configure the DMS

Abstract

The section describes how to configure DMS. **DMS** provides the parameters of DMS configuration features.

DMS is a multimedia server defined in DLNA protocol, which uses UPnP protocol to search and categorize the local media files or photos, and provide VOD services for the DMP.

If the DMS function is enabled on the ZXHN H2640 device, any client that supports UPnP function can use the specified DMP (for example, Windows Media Player) to watch the media files or photos stored in the USB storage device.

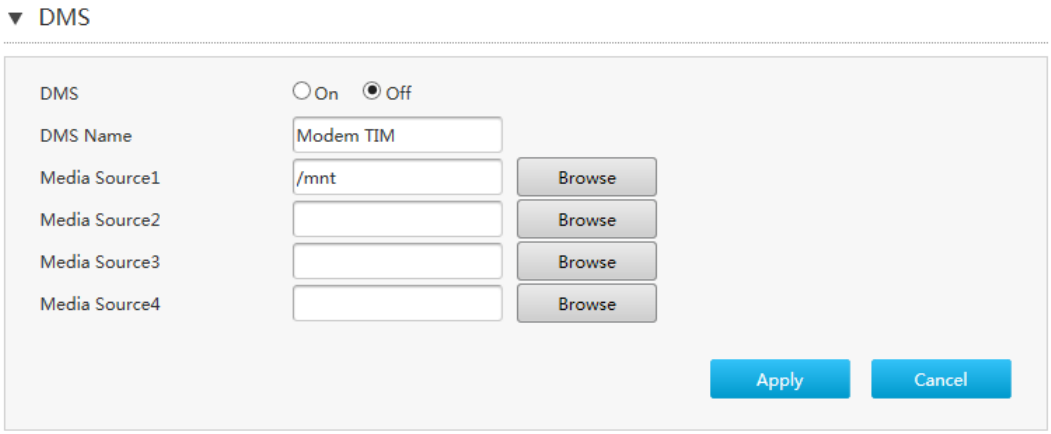
The version of the Windows media player used for DMS function must be 11 or later, or the OS must be vista or Win 7. To enable the DMP function in OS of earlier version,

special tools, such as Intel(R) Tool for UPnP(TM) Technology or Twonky Media Manager must be installed.

Steps

1. In the left navigation tree, click **Local Network > DMS** to the **DMS** page, see Figure 5-27.

Figure 5-27 DMS page



2. Enable the DMS function, and specify the path storing the media files. For a description of the parameters, refer to Table 5-20.

Table 5-20 Parameter Descriptions for the DMS

Parameter	Description
DMS	Enable or disable the DMS function.
DMS Name	To create a DMS, enter the name of the DMS.
Library Rescan Method	Library rescan method that the device supports. Normally, it is set to Auto.
Media Source1–Media Source4	By default, the media source is */mnt*, that is the root directory of the USB device. You can change the root directory to other directory of the USB storage device.

Note

By default, the media source is */mnt*, that is the root directory of the USB device. You can change the root directory to other directory of the USB storage device.

3. Click **Apply** button to apply the changes.

5.8 Configure the DNS

Abstract

The section describes how to configure DNS.

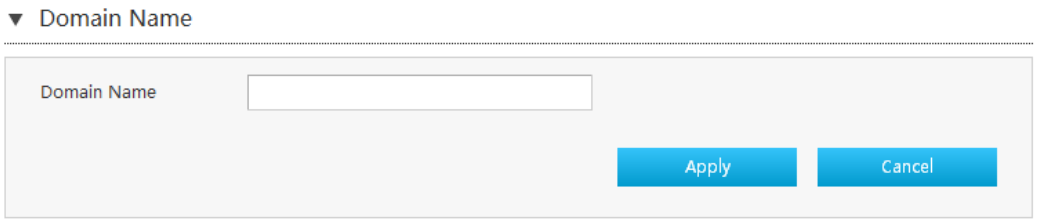
The relevant information of Internet status includes **Domain name**, **Host Name** and **DNS**.

Steps

Configuring the Domain Name

1. On the main page of the ZXHN H2640, select **Local Network > DNS** to the **Domain Name** page, see Figure 5-28.

Figure 5-28 Domain Name Page

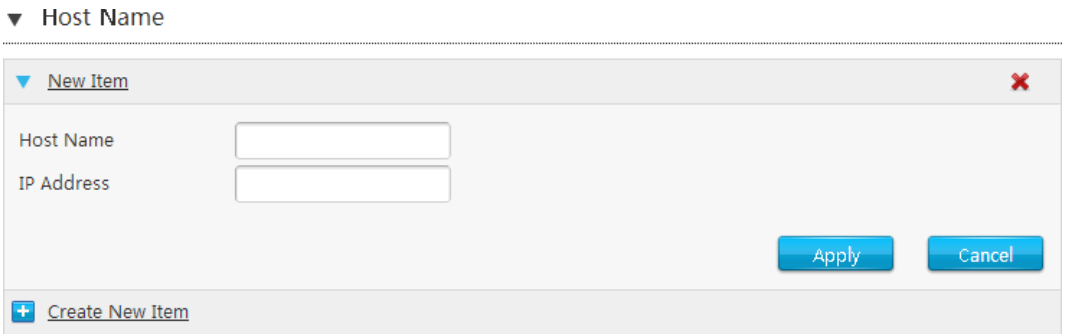


2. Type the **Domain name**.
3. Click **Apply** button to apply the changes.

Configuring the Host Name

4. Click **Host name** to the page, see Figure 5-29.

Figure 5-29 Host Name Page



5. Type the host name in the **Host Name** text box and the **IP Address** in the IP Address text box.
6. Click **Apply** button to apply the changes.

Chapter 6
Configure the VoIP

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6.1 Check the Status of VoIP

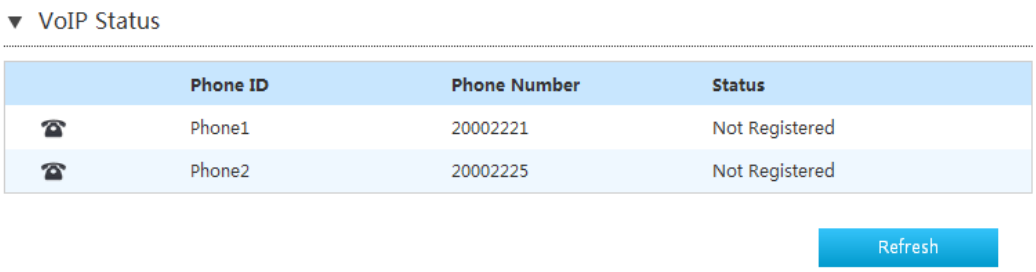
Abstract

This procedure shows the relevant information of VoIP status.

Steps

1. On the main page of the ZXHN H2640, select **VoIP > Status**. The **VoIP Status** page is displayed, see Figure 6-1.

Figure 6-1 VoIP Status Page



2. Click **Refresh** to refresh the information.

6.2 Configure the SIP Accounts

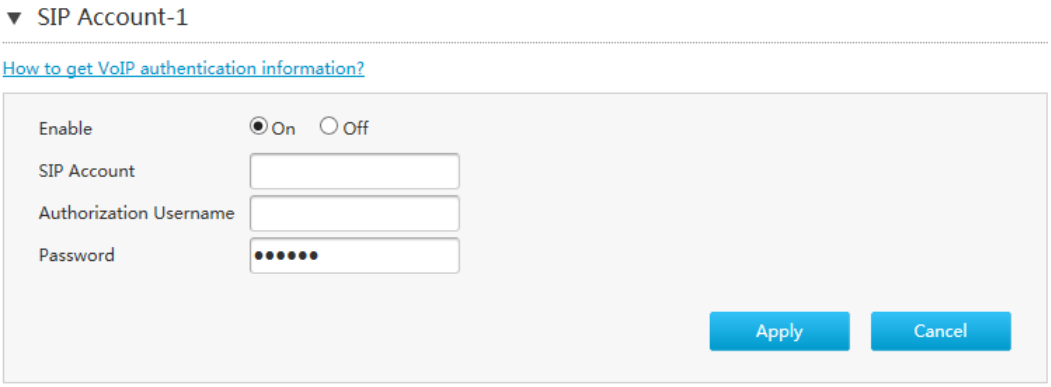
Abstract

This procedure describes how to configure basic parameters of the VoIP service, including sip account, authorization username, password.

Steps

1. On the main page of the ZXHN H2640, select **VoIP > Basic**. The **SIP Account-1** page is displayed, see Figure 6-2.

Figure 6-2 SIP Account-1 Page



2. Set the parameters. For a description of the parameters, refer to Table 6-1.

Table 6-1 Parameter Descriptions for the SIP Account-1

Parameter	Description
Enable	Specifies whether to enable the VoIP service.
SIP Account	Registered name of a SIP subscriber. Normally, it is the phone number of the subscriber.
Authorization Username	Username for authentication by the SS system, which must be the same as that configured in the SS system.
Password	Password for VoIP service authentication by the SS system, which must be the same as that configured in the SS system.

3. Click **Apply** button to apply the changes.

Note

SIP Account-2 configuration refers to SIP Account-1 configuration.

6.3 Configure the Advanced Parameters of VoIP

Abstract

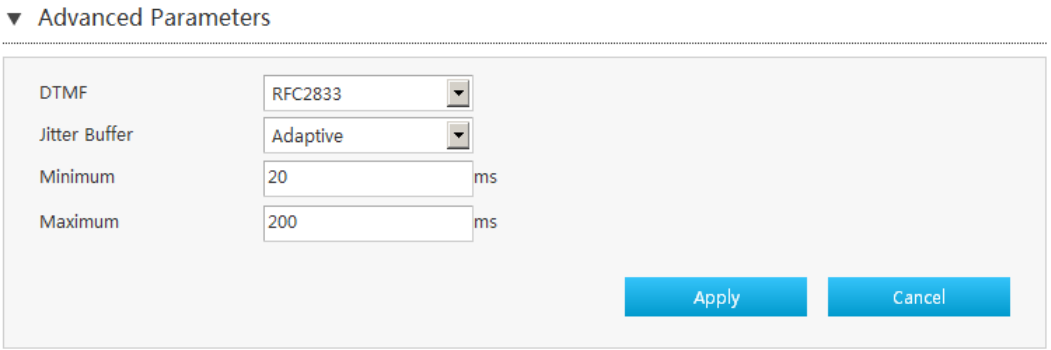
This procedure describes how to configure advanced parameters of the VoIP service, including echo cancellation, jitter buffer, and DTMF.

Steps

Configuring the Advanced Parameters

1. On the main page of the ZXHN H2640, select **VoIP > Advanced**. The **Advanced Parameters** page is displayed, see Figure 6-3.

Figure 6-3 Advanced Parameters Page



2. Set the advanced parameters. For a description of the parameters, refer to Table 6-2.

Table 6-2 Advanced Parameter Descriptions for the VoIP Service

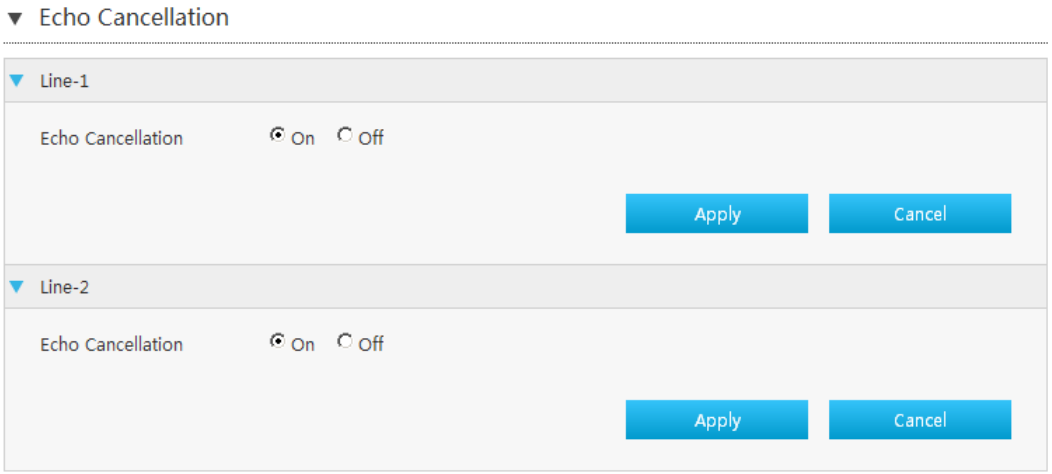
Parameter	Description
DTMF	DTMF mode. Options: ● **RFC2833**: DTMF digits are carried by RTP streams. ● **DTMF in Voice**: DTMF digits are not processed. ● **SIP Info**:SIP protocol information.
Jitter Buffer	The variation in packet delay is called jitter. Jitter buffer refers to intentional delay of packets. Options: ● **Fixed**: A fixed buffer time must be specified. ● **Adaptive**: A jitter range must be specified.
Min Value	Minimum value of the jitter range, default: 20 ms.
Max Value	Maximum value of the jitter range, default: 200 ms.

3. Click **Apply** button to apply the changes.

Configuring the Echo Cancellation

4. On the main page of the ZXHN H2640, select **VoIP > Advanced > Echo Cancellation**. The **Echo Cancellation** page is displayed, see Figure 6-4.

Figure 6-4 Echo Cancellation Page



5. Set the advanced parameters. For a description of the parameters, refer to Table 6-3.

Table 6-3 Parameter Descriptions of the Echo Cancellation

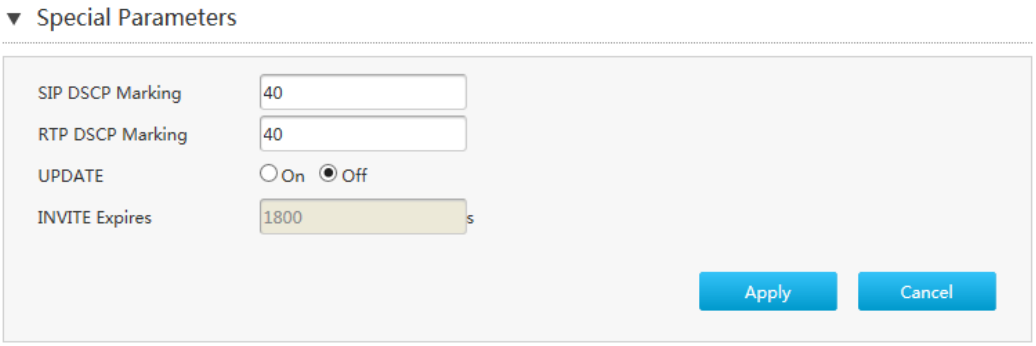
Parameter	Description
Echo Cancellation	Click **Off** to disable the function. By default, this function is enabled.

6. Click **Apply** button to apply the changes.

Configuring the Special Parameters

7. On the main page of the ZXHN H2640, select **VoIP > Advanced > Special Parameters**. The **Special Parameters** page is displayed, see Figure 6-5.

Figure 6-5 Special Parameters Page



8. Set the advanced parameters. For a description of the parameters, refer to Table 6-4.

Table 6-4 Parameter Descriptions of the Special Parameters

Parameter	Description
SIP DSCP Marking	DSCP value of SIP packets, the value range is 0–63.
RTP DSCP Marking	DSCP value of RTP packets, the value range is 0–63.
UPDATE	The UPDATE message is a mechanism for SIP extension. It updates the media stream status when a call is not established.

9. Click **Apply** button to apply the changes.

6.4 Configure the SIP Protocol

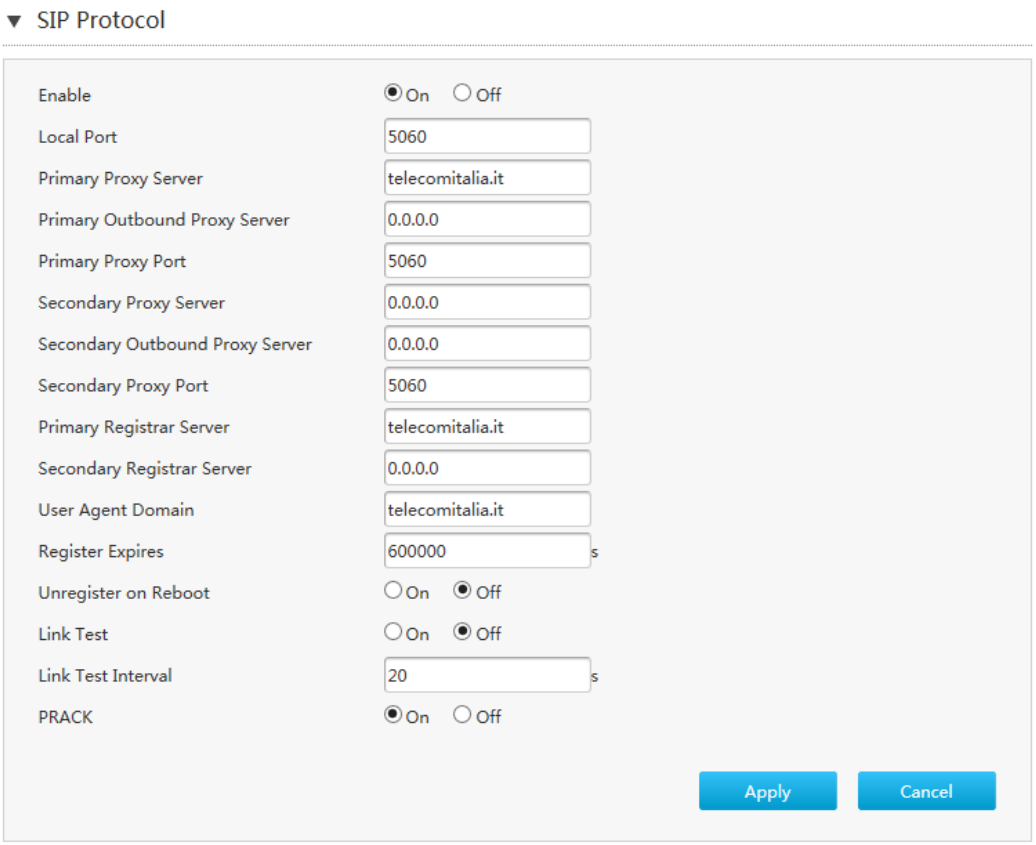
Abstract

This procedure describes how to configure the SIP Protocol.

Steps

1. On the main page of the ZXHN H2640, select **VoIP > SIP Protocol**. The **SIP Protocol** page is displayed, see Figure 6-6.

Figure 6-6 SIP Protocol Page



2. Set the parameters. For a description of the parameters, refer to Table 6-5.

Table 6-5 Parameter Descriptions for the SIP Protocol

Parameter	Description
Local Port	Local port that the SIP protocol uses, default: 5060.
Primary Proxy Server	IP address of the active SIP proxy server that the ISP provides, which must be the same as that configured on the SIP server.
Primary Outbound Proxy Server	IP address of the active outbound proxy server that the ISP provides, which must be the same as that configured on the SIP server.
Primary Proxy Port	Port number that the ISP provides for communication between the active server and VoIP terminals, which must be the same as that configured on the SIP server, default: 5060.
Secondary Proxy Server	IP address of the standby SIP proxy server that the ISP provides, which must be the same as that configured on the SIP server.
Secondary Outbound Proxy Server	IP address of the standby outbound proxy server that the ISP provides, which must be the same as that configured on the SIP server.
Secondary Proxy Port	Port number that the ISP provides for communication between the standby server and VoIP terminals, which must be the same as that configured on the SIP server, default: 5060.
Primary Registrar Server	IP address of the active SIP registrar server that the ISP provides, which must be the same as that configured on the registrar server.
Secondary Registrar Server	IP address of the standby SIP registrar server that the ISP provides, which must be the same as that configured on the registrar server.
Register Expires	Registered lifecycle, unit: seconds, default: 3600.
Unregister On Reboot	Whether to deregister VoIP terminals after the server is restarted. By default, this function is enabled.
Link Test	Click **On** to enable the function. By default, this function is disabled.
Link Test Interval	Interval of link tests, default: 20 seconds.
PRACK	PRACK is a mechanism for ensuring the reliable transmission of temporary messages (101-199) in SIP messages. When this function is enabled, a temporary response to the 101–199 message can be made and the message can be transmitted reliably.

3. Click **Apply** button to apply the changes.

6.5 Configure the Media

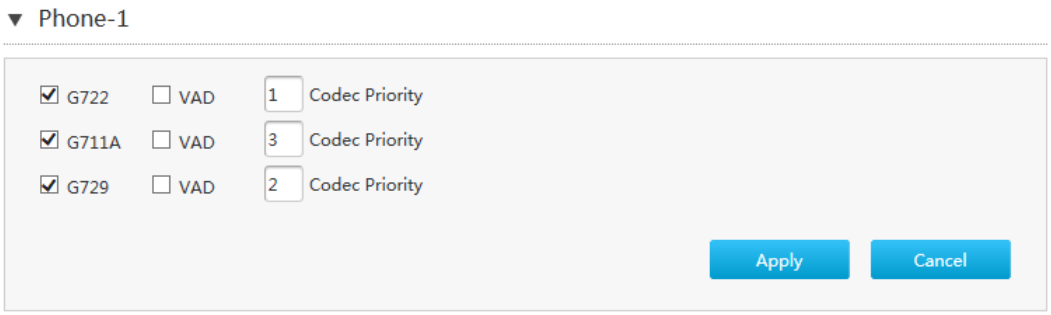
Abstract

This procedure describes how to configure the media codec type.

Steps

1. On the main page of the ZXHN H2640, select **VoIP > Media**. The **Phone-1** page is displayed, see Figure 6-7.

Figure 6-7 Media Page



2. Set the parameters. For a description of the parameters, refer to Table 6-6.

Table 6-6 Media Parameter Descriptions

Parameter	Description
Codec Selection	Select a codec, which must be the same as that configured in the SS system.
Codec Priority	You can modify priority through this parameter. A lower number indicates a higher priority.

3. Click **Apply** button to apply the changes.

6.6 Configure the Fax

Abstract

The ZXHN H2640 supports the T30 protocoland V152 protocol fax feature. By default, the T38 protocol is used.

Steps

1. On the main page of the ZXHN H2640, select **VoIP > Fax**. The **Fax** page is displayed, see Figure 6-8.

Figure 6-8 Fax Page

2. Set the parameters. For a description of the parameters, refer to Table 6-7.

Table 6-7 Parameter Descriptions for the Fax

Parameter	Description
T38 Protocol	Whether to enable the T38 protocol.

3. Click **Apply** button to apply the changes.

6.7 Configure the Digit Map

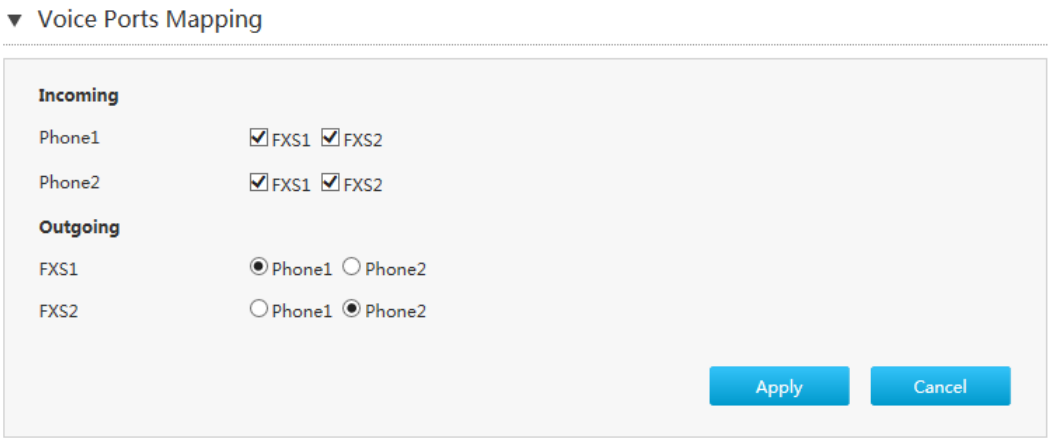
Abstract

A digital map defines dialing rules that must be followed when you dial a number.

Steps

1. On the main page of the ZXHN H2640, select **VoIP > Voice Ports Mapping**. The **Voice Ports Mapping** page is displayed, see Figure 6-9.

Figure 6-9 Voice Ports Mapping Page



2. Set the parameters. For a description of the parameters, refer to Table 6-8.

Table 6-8 Parameter Descriptions for the Digit Map

Parameter	Description
Incoming	ZXHN H2640 is called by other devices.

Parameter	Description
Outgoing	Other devices is called by ZXHN H2640.

3. Click **Apply** button to apply the changes.

6.8 Configure the POS

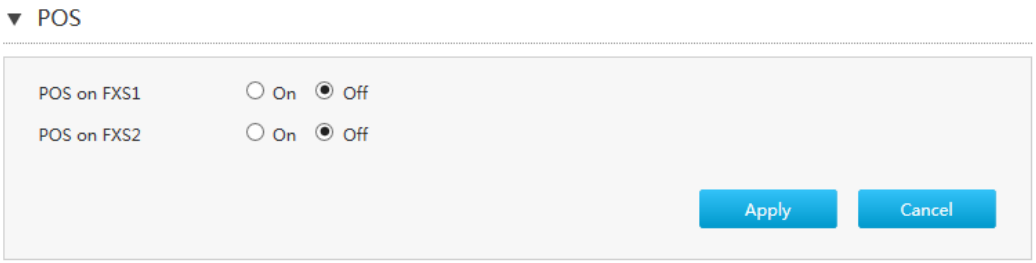
Abstract

The ZXHN H2640 supports the access of POS machines.

Steps

1. On the main page of the ZXHN H2640, select **VoIP > POS**. The **POS** page is displayed, see Figure 6-10.

Figure 6-10 POS Page



2. Set the parameters. For a description of the parameters, refer to Table 6-9.

Table 6-9 Parameter Descriptions for the POS

Parameter	Description
POS on FXS1/POS on FXS2	If the switch is selected, the outgoing/incoming call codec of the interface is negotiated as G711a, which is used to support the access to POS machine on this interface.If this switch is not selected, the outgoing/incoming calls on the interface are negotiated in accordance with the media configuration mode on the voice page.

3. Click **Apply** button to apply the changes.

Chapter 7
Configure the Management and Diagnosis

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7.1 Check the Device Status

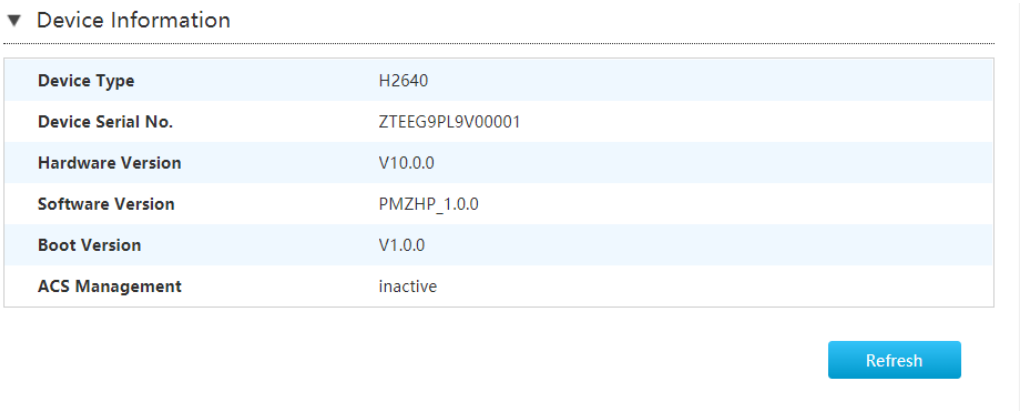
Abstract

The device status including the device type, device SN, hardware/software/boot Version, ACS management status.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > Status** to the **Status** page, see Figure 7-1.

Figure 7-1 Device Status Page



2. Click **Refresh** to refresh the information.

7.2 Configure the Account Management

Abstract

This procedure introduces how to manage the user accounts and rights.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > Account Management** to the **Admin Account Management** page, see Figure 7-2.

Figure 7-2 Admin Account Management Page

2. Configure the administrator account management parameters.

   Table 7-1 lists the administrator account management parameters.

Table 7-1 Parameter Descriptions for the Administrator Account Management

Parameter	Description
Username	The user name for the administrator privilege. The default user name of the administrator privilege is *Admin*, which cannot be modified.

Parameter	Description
Old Password	The default passwords for the Administrator is Admin.
New Password	Specify the new password.
Confirmed Password	Confirm the new password.

3. Click **Apply** button to apply the changes.

7.3 Configure the Login Timeout

Abstract

This procedure introduces how to configure the login timeout.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > Idle Timeout** to the **Idle Timeout** page, see Figure 7-3.

Figure 7-3 Idle Timeout Configuration Page

2. Specify the time in the **Timeout** text box, rang: 1-30 min.
3. Click **Apply** button to apply the changes.

7.4 Configure the System Management

7.4.1 Configure the Device Management

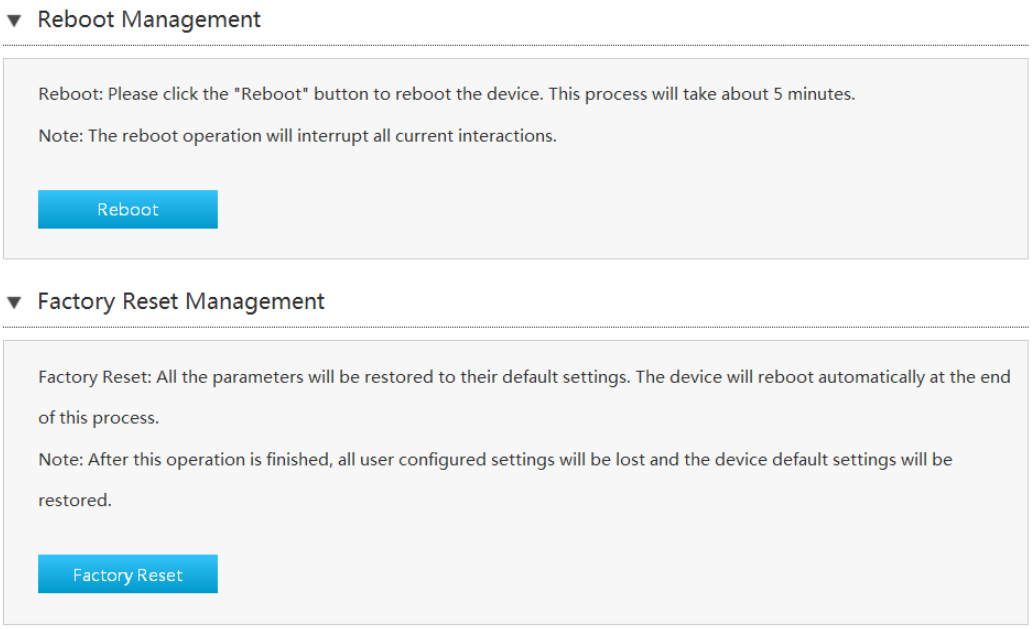
Abstract

This procedure introduces how to reboot the device or restore the factory default settings.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > System Management > Device Management** to the **Device Management** page, see Figure 7-4.

Figure 7-4 Device Management Page



2. On this page, you can perform the following operations:
   - Click **Reboot** to reboot the ZXHN H2640 device.
   - Click **Factory Reset** to restore the factory default settings.

7.4.2 Upgrade Software

Abstract

This procedure introduces how to upgrade Software.

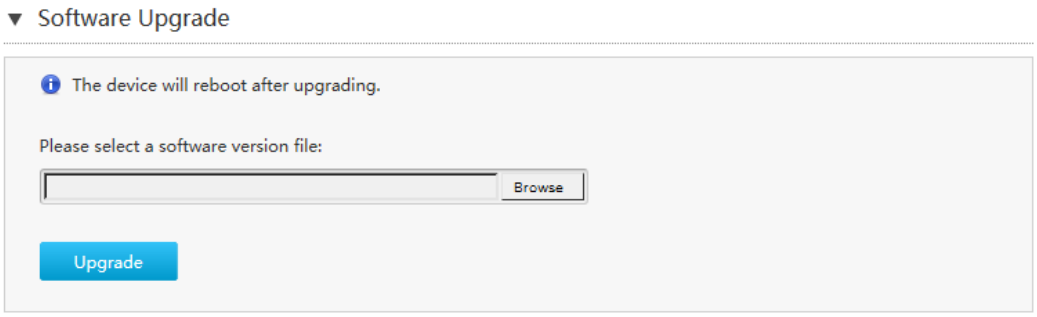
Prerequisite

Before upgrading software, make sure that the upgrade file is ready.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > System Management > Software Upgrade** to the **Software Upgrade** page, see Figure 7-5.

Figure 7-5 Software Upgrading Page



2. Click **Browse** to select the upgrade version file.
3. Click **Upgrade**.

Note

The system prompts the upgrade progress. During the upgrade process, do not cut off the power supply. Otherwise, the device may be damaged.

Generally, the software is upgraded by the ZTE CORPORATION engineers. If the user wants to upgrade the Firmware, contact the local office of ZTE CORPORATION to obtain the latest Firmware version.

7.4.3 Configure the User Configuration Management

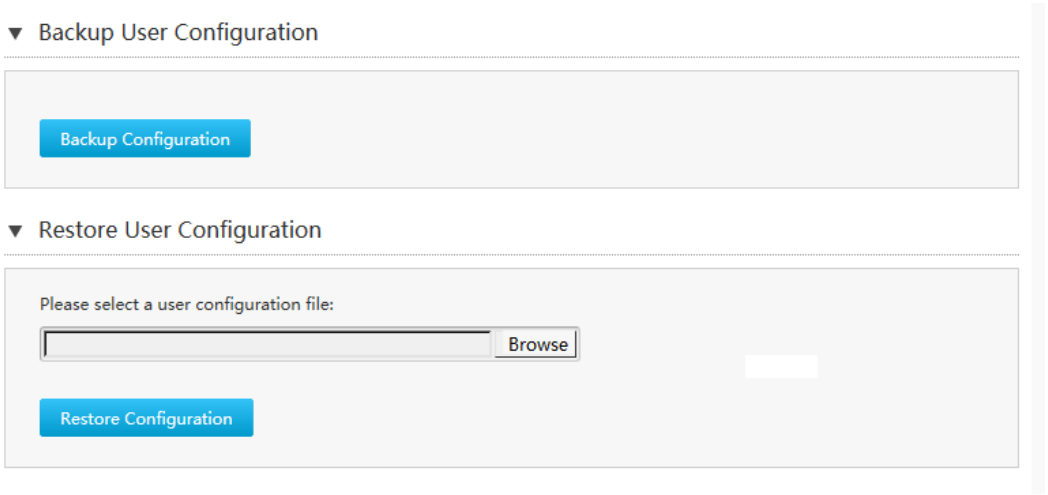
Abstract

This procedure describes how to back up or restore your user configuration file. The backup operation is used for routine maintenance, and the restoration operation is used for troubleshooting.

Steps

1. In the left navigation tree, click **Administration > System Management > User Configuration Management**. The **User Configuration Management** page is displayed, see Figure 7-6.

Figure 7-6 User Configuration Management Page



2. Backing up your user configuration file
   a. Click **Backup Configuration**. The **File Download** dialog box is displayed.
   b. Click **Save** and select a storage path.
3. Restoring your backup user configuration file
   a. Click **Browse** to select a backup file to be restored.
   b. Click **Restore Configuration**.

Note

After the restoration operation is completed, the device is automatically restarted, causing temporary service interruption, so perform this operation with care.

7.5 Configure the Mirror function

Abstract

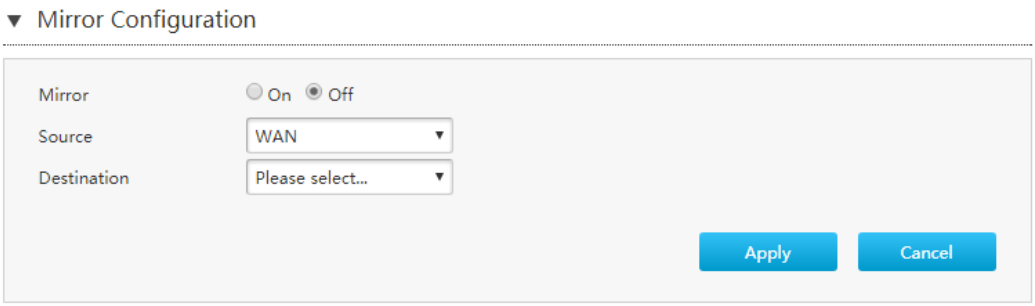
This procedure introduces how to perform the mirror configuration.

If the mirror configuration is performed, the packets at the WAN side will be copied to the specified LAN interface, and it can be used for the network analysis and troubleshooting.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > Mirror Configuration** to the **Mirror Configuration** page, see Figure 7-7.

Figure 7-7 Mirror Configuration Page



2. Configure the mirror configuration parameters.

   Table 7-2 lists the user mirror configuration parameters.

Table 7-2 Parameter Descriptions for the Mirror Configuration

Parameter	Description
Mirror	Click On to enable the mirror function. Click Off to disable the mirror function.
Source	Network-side WAN interface.
Destination	User-side LAN interface.

3. Click **Apply** button to apply the changes.

7.6 Configure the TR069 function

Abstract

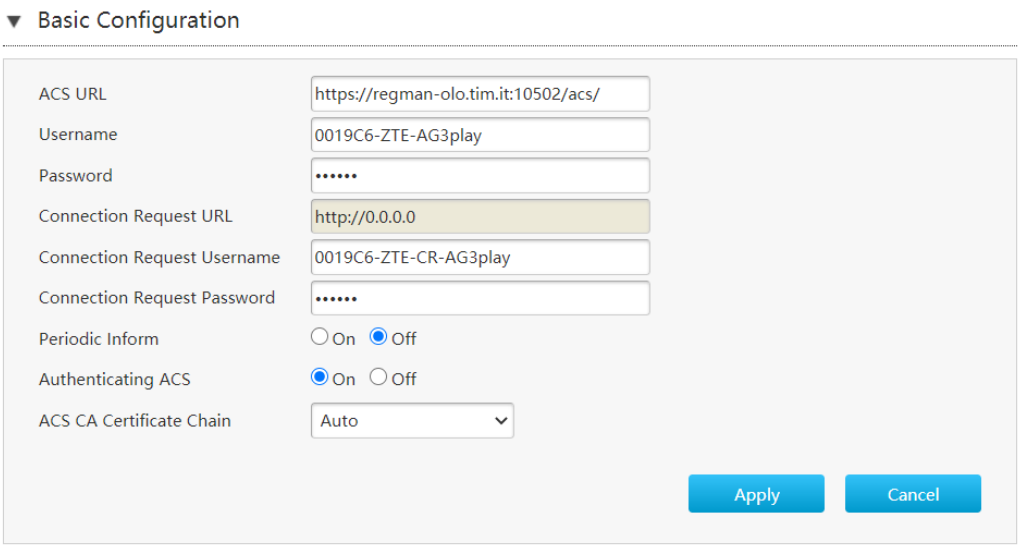
The section describes how to configure the TR-069. TR-069 provides the parameters of the TR-069 configuration features.

The relevant TR-069 includes Basic Configuration and Certificate Management.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > TR-069** to the **TR-069** page.
2. Click **Basic Configuration** to the TR069 basic configuration page, see Figure 7-8.

Figure 7-8 Basic Configuration Page



3. Configure the TR069 basic configuration parameters. Table 7-3 lists the TR069 Basic Configuration parameters.

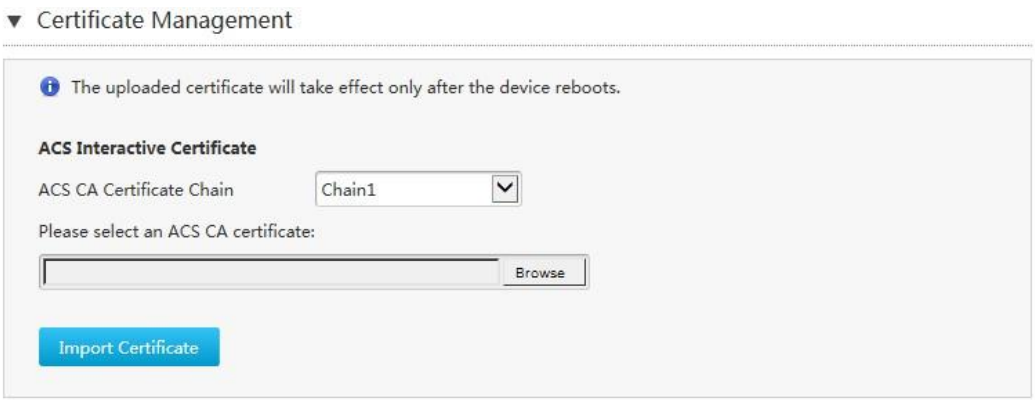
Table 7-3 Parameter Descriptions for the TR069 Basic Configuration

Parameter	Description
ACS URL	The URL of the automatic configuration server that manages the device.
Username/ Password	User name and password for the ZXHN H2640 to log in to the automatic configuration server.
Connection Request URL	Connection request URL, which is automatically generated by the system.
Connection Request Username/ Connection Request Password	User name and password for the TR-069 connection authentication that the automatic configuration server provides when it logs in to the ZXHN H2640 device.
Periodic Inform	Enable the periodic inform function.
Periodic Inform Interval	Periodic inform interval of the device (unit: second).
Authenticating ACS	Enable the TR-069 authenticating ACS.
ACS CA Certificate Chain	● Auto: Automatically select the first chain certifcate authentication or the second chain certificate authentication ● Chain1: The first chain certifcate authentication ● Chain2: The second chain certifcate authentication

Certificate Management

1. Click **Certificate Management** to the certificate management page, see Figure 7-9.

Figure 7-9 Certificate Management Page



2. Select a ACS CA certificate chain.
3. Click **Browse** to select an ACS CA certificate, and click **Import Certificate.**.

7.7 Manage the Log

Abstract

This procedure introduces how to manage the log.

Steps

Configuring the Log Level Management

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > Log Management** to the **Log Management** page.
2. Click **Log Level Management** to the log level management page, see Figure 7-10.

Figure 7-10 Log Level Management Page

3. Configure the log management parameters.

   Table 7-4 lists the Log Management parameters.

Table 7-4 Parameter Descriptions for the Log Level Management

Parameter	Description
Log Level	Options (ranked from low to high):

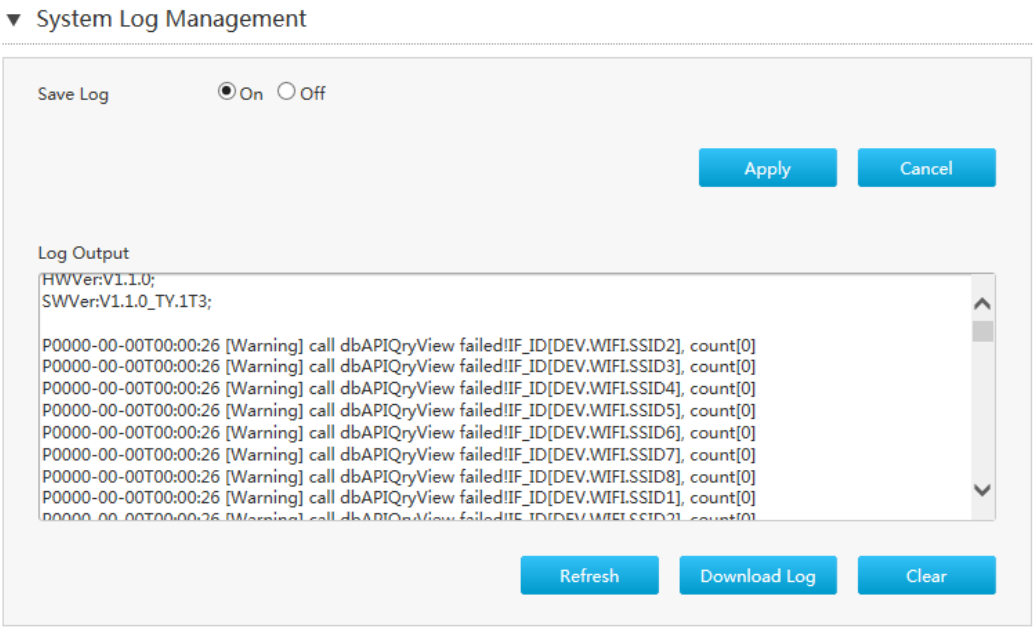
Parameter	Description
	• Debug • Informational • Notice • Warning • Error • Critical • Alert • Emergency The system stores only the logs of the selected level and above levels.

4. Click **Apply** button to apply the changes.

Configuring the System Log Management

1. Click **System Log Management** to the system log management page, see Figure 7-11.

Figure 7-11 System Log Management Page



2. Configure the system log management parameters.

   Table 7-5 lists the system log management parameters.

Table 7-5 Parameter Descriptions for the System Log Management

Parameter	Description
Save Log	Click On to enable the system log function.

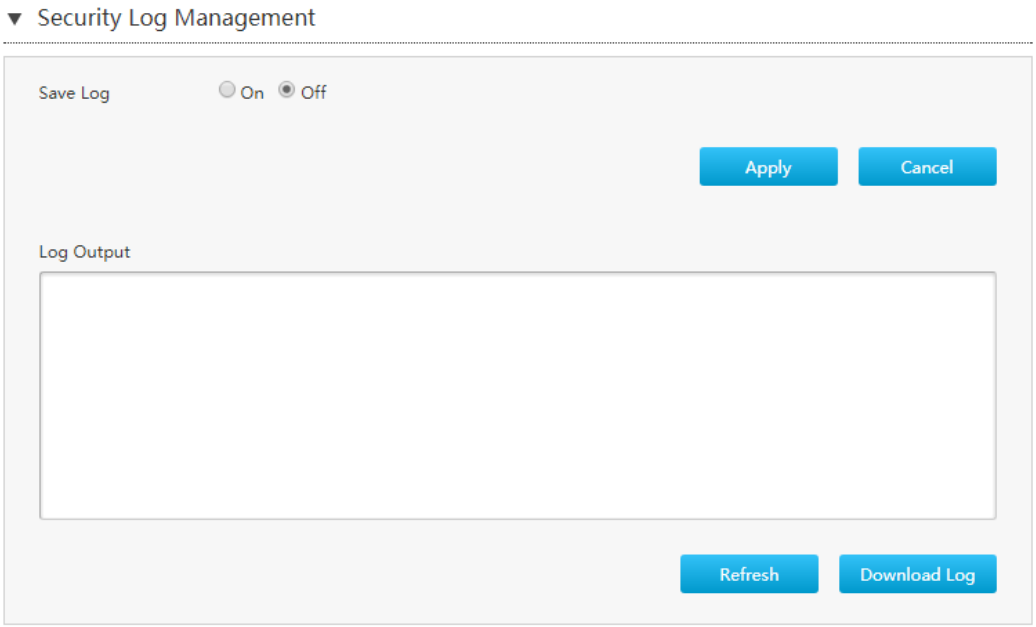
3. Click **Apply** button to apply the changes.

4. (Optional) Click **Refresh** button to get the latest information.
5. (Optional) Click **Clear** to clear the logs.
6. (Optional) Click **Download Log** to download the log file from the log server.

Configuring the Security Log Management

1. Click **Security Log Management** to the security log management page, see Figure 7-12.

Figure 7-12 Security Log Management Page



2. Configure the security log management parameters.

   Table 7-6 lists the security log management parameters.

Table 7-6 Parameter Descriptions for the security Log Management

Parameter	Description
Save Log	Click On to enable the security log function.

3. Click **Apply** button to apply the changes.
4. (Optional) Click **Refresh** button to get the latest information.
5. (Optional) Click **Download Log** to download the log file from the log server.

Managing the Remote Log

1. Click **Remote Log Management** to the remote log management page, see Figure 7-13.

Figure 7-13 Remote Log Management Page

2. Configure the remote log management parameters.

   Table 7-7 lists the remote log management parameters.

Table 7-7 Parameter Descriptions for the Remote Log Management

Parameter	Description
Remote Log	Click On to enable the remote log function.

3. Click **Apply** button to apply the changes.

7.8 Network Diagnosis

Abstract

The section describes how to diagnosis. **Diagnosis** provides the parameters of the Diagnosis configuration features.

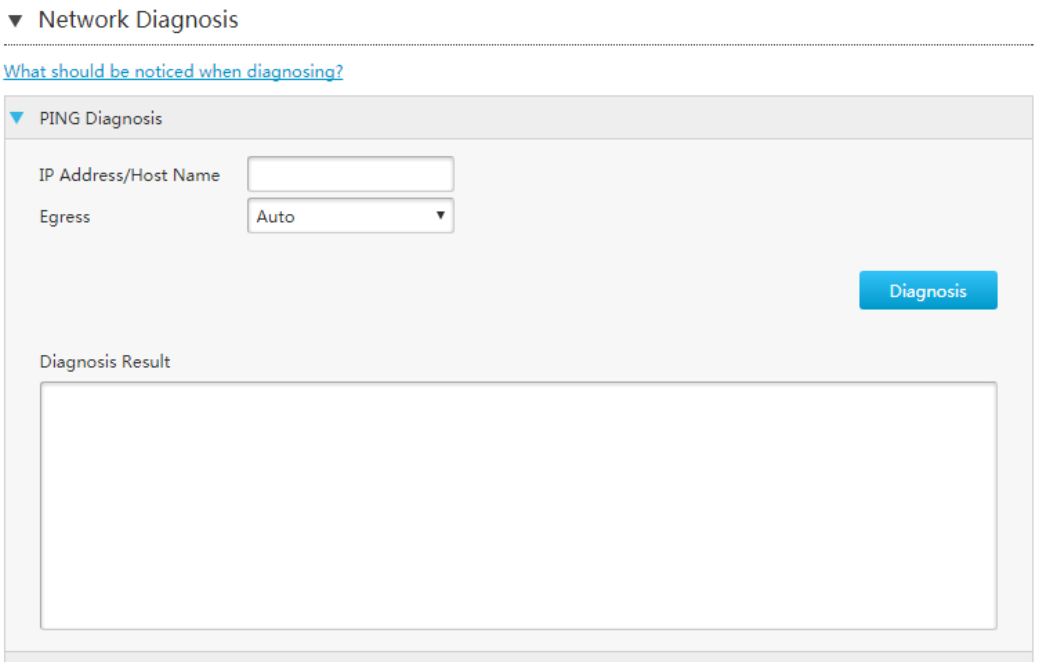
The relevant information includes ping diagnosis, trace route diagnosis and DSL line diagnosis.

Steps

Ping Diagnosis

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > Diagnosis** to the **Diagnosis** page.
2. Click to open **Ping Diagnosis** page, see Figure 7-14.

Figure 7-14 Ping Diagnosis Page



3. Set the parameters. For a description of the parameters, refer to Table 7-8.

Table 7-8 Ping Diagnosis Parameter Descriptions

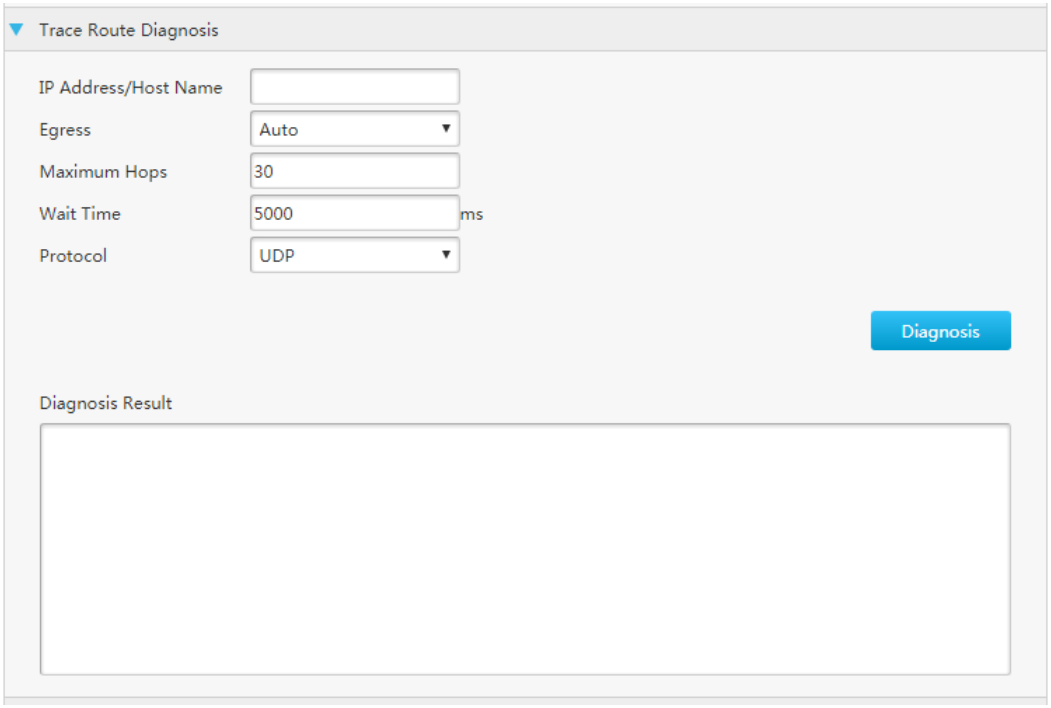
Parameter	Description
IP Address or Host Name	Destination IP address or host name.
Egress	Data direction. If you want to detect the connection with an external address, select a WAN connection.

4. Click **Diagnosis** to diagnose the connection. The system pings the specified address. The system performs ping operations for four times by default, and the operation results are displayed in the bottom box.

Trace Route Diagnosis

5. Click to open **Trace Route Diagnosis** page, see Figure 7-15.

Figure 7-15 Trace Route Diagnosis Page



6. Set the parameters. For the description of the parameters, refer to Table 7-9.

Table 7-9 Parameter Descriptions for Trace Route Diagnosis

Parameter	Description
IP Address /Host Name	Destination IP address or host name for the Trace Route operation.
Egress	To detect the connection with an external address, select a WAN connection.
Maximum Hops	Maximum number of hops that the Trace Route packets require for arriving at the destination, default: 30.
Wait Time	Time allowed for receiving a response in ms. If no response is received during this period, an asterisk is displayed. If multiple asterisks are displayed, it indicates that the corresponding node fails.
Protocol	Options: UDP and ICMP.

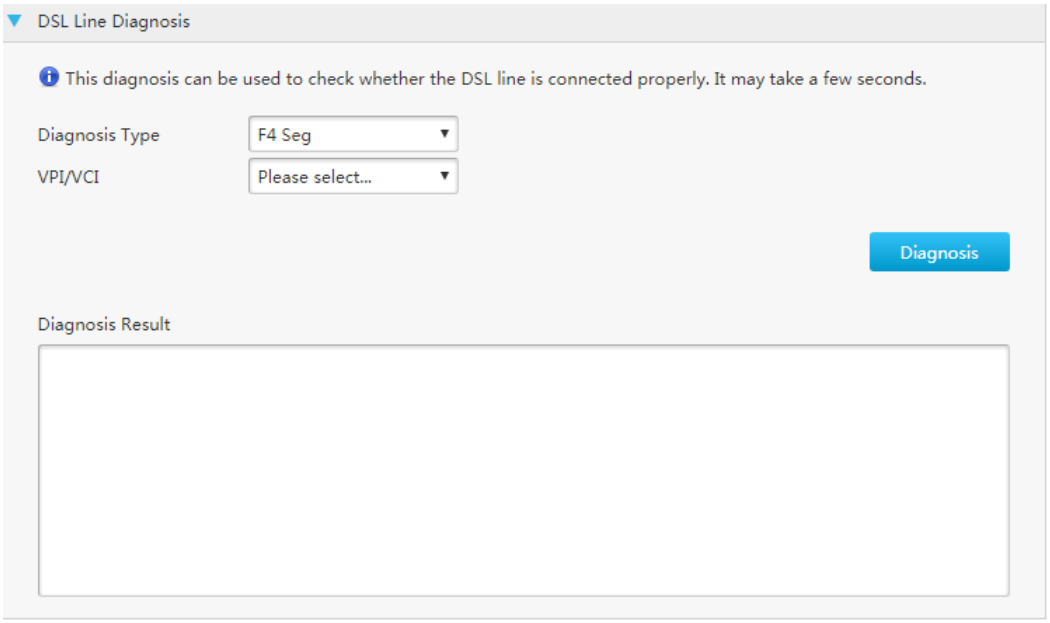
Notice

- Please don't refresh this page while diagnosing, otherwise the diagnosis result may be displayed unproperly.
- If a new diagnosis is triggered when the current diagnosis is still running, the device will only respond to the new diagnosis, and the current diagnostic result will not be saved.

DSL Line Diagnosis

1. Click to the DSL line diagnosis configuration page, see Figure 7-16.

Figure 7-16 DSL Line Diagnosis Page



2. Select the Diagnosis Type and VPI/VCI.
3. Click Diagnosis to diagnose the connection.

7.9 Check the ARP Table

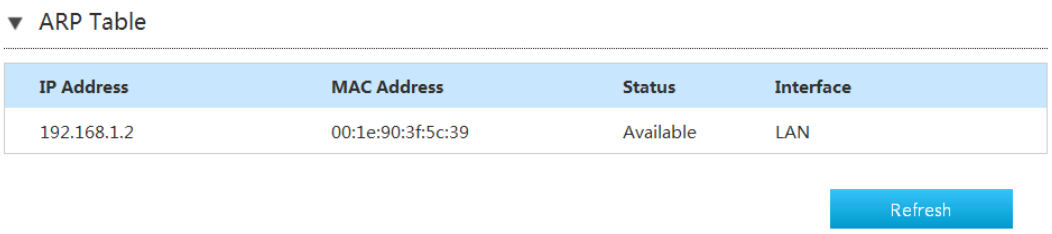
Abstract

The relevant information of ARP table is shown as below.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > ARP Table** to the **ARP Table** page, see Figure 7-17.

Figure 7-17 ARP Table Page



2. Click **Refresh** button to refresh information.

7.10 Check the MAC Table

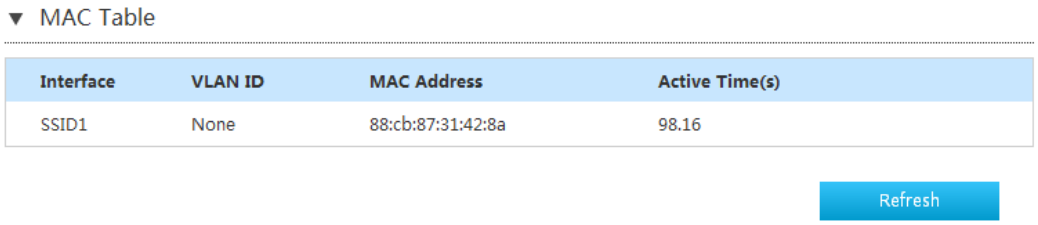
Abstract

The relevant information of MAC table is shown as below.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > MAC Table** to the **MAC Table** page, see Figure 7-18.

Figure 7-18 MAC Table Page



2. Click **Refresh** button to refresh information.

7.11 Configure the IPv6 Switch

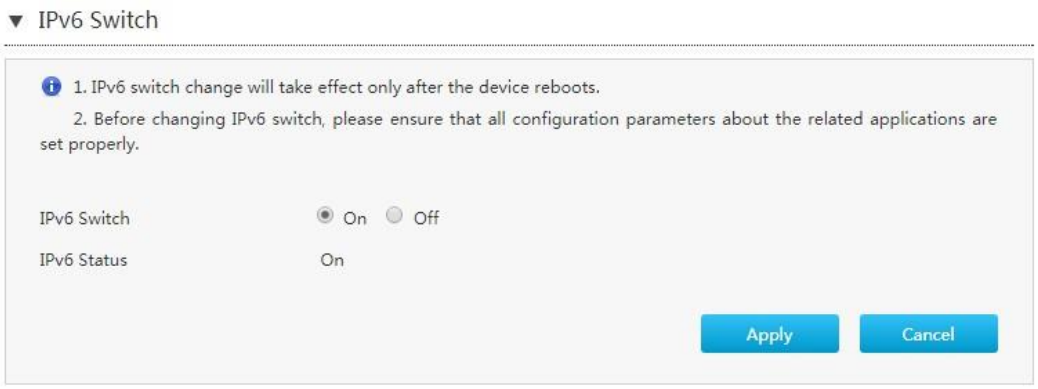
Abstract

This procedure describes how to enable or disable IPv6 support for the ZXHN H2640.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > IPv6 Switch** to the **IPv6 Switch** page, see Figure 7-19.

Figure 7-19 IPv6 Switch Page



2. To disable IPv6 support, set IPv6 Function to Off, and click **Apply**.

Note

The configuration takes effective after the device is restarted.

7.12 Configure the Ethernet WAN

Abstract

This page will help you convert LAN to WAN interface.

Steps

1. On the main page of the ZXHN H2640, select **Management&Diagnosis > Ethernet WAN** to the **Ethernet WAN** page, see Figure 7-20.

Figure 7-20 Ethernet WAN Page

2. Set radiobox **On**, the device will reboot and LAN will work as WAN interface.
3. Click **Apply** button to apply the changes.

Chapter 8
Troubleshooting

- **All indicators are of when the ZXHN H2640 equipment is powered on.**
  First make sure that you have inserted the power adapter of the ZXHN H2640 into a working power socket and that the ZXHN H2640 has been powered on (the switch button is pressed down). If the indicators are still off after confirmation of the above items, may be the hardware is damaged. You may contact local operators for maintenance. Never dismantle the equipment by yourself.
- **Will VDSL2 affect the telephone conversation quality? Will making phone calls cause a slow online rate?**
  VDSL2 separates voices from data through the frequency division multiplexing technology. Therefore, voices and data run in different paths without mutual interference. Neither the access rate nor conversation quality will fall even if you are in a call and online simultaneously.
- **How to properly install telephone extensions or other devices on the VDSL2 line?**
  It is recommended to connect the VDSL2 splitter to the telephone cable first and then connect the phone sets to the splitter interfaces. Installing a telephone directly before the splitter will lead to connection failure between the ZXHN H2640 and the device at central office side, or an Internet access failure, or a slow connection speed. Connecting other electronic devices between the user end and splitter may affect the VDSL2 communications (since VDSL2 has a higher requirement for the line quality) and furthermore affect the normal operation of VDSL2. If the phone sets are required to be connected before the splitter, you should serially connect the MicroFilter before the phone sets (Generally, to minimize interference, only one MicroFilter can be connected before the splitter).
- **Sometimes, the VDSL2 users cannot access to the Internet normally**
  First check whether the ZXHN H2640 is in the normal state (Check the indicators according to this user manual). If yes, the computer or application network may be faulty. This is unrelated with VDSL2. If the ZXHN H2640 is abnormal, check the status of indicators one by one to remove the fault.

It is suggested to check the following items before seeking help from operators:

1. The VDSL2 telephone cable connectors are proper.
2. The VDSL2 is away from the power cable and large-power electronic devices.
3. No telephone extensions and fax machines are connected between the VDSL2 incoming line and splitter.
4. The splitter has been installed correctly.
5. The ZXHN H2640 has good heat dissipation ratio.

- **What are reasons for VDSL2 synchronization failure (also referred as link down or link establishment failure)?**

  If the VDSL2 suddenly fails to be synchronized (link down) during application, usually the Link indicator on the ZXHN H2640 will not be On. It is suggested to check the following steps one by one:

  1. First check the quality of incoming cables and incoming cable connectors.
  2. Install the ZXHN H2640 correctly based on the user guidance. Minimize the number of taps.
  3. Check whether the telephone cables and VDSL2 are in good connection or whether the telephone cables are normal.
  4. Try to disconnect the splitter and directly connect the ZXHN H2640 to the incoming user cable end. Ensure the problem is not due to improper installation or incoming user line quality. If the VDSL2 can be synchronized again, it means that installation of the incoming user side is improper. Please reinstall it according to the user guide.
  5. If the VDSL2 still fails to be synchronized when the ZXHN H2640 is connected to the incoming user cable end, contact the operators to check whether it is due to external line failure or ZXHN H2640 failure.
  6. If the splitter problem is determined, call the operator for maintenance or replacement.
  7. If the problem is due to the end office equipment failure, call the operator to confirm it.
  8. Too long connection cable between the splitter and ZXHN H2640 may cause poor anti-interference performance and synchronization difficulty. Therefore, the connection cable should not be too long.