Sunrise Internet Box 5G

User manual

How to use this Document?

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1 Introduction

The **Sunrise Internet Box 5G** is a 5G wireless gateway for multiple users in household or small office environments. It enables users to access the Internet with optionally voice services.

The **Sunrise Internet Box 5G** supports 3GPP Release 15 with UE downlink category 19 and uplink category 13.

Downlink peak rate: 1Gbps
Uplink peak rate: 100Mbps

Note

The actual data rate varies with network configuration.

- Working band: 5G: N41/78, LTE: B1/3/5/7/8/20/28/32/34/38/39/40/41/42/43
- Wi-Fi: 802.11 b/g/n/a/ac/ax. 2.4GHz Wi-Fi 2x2 MIMO up to 300Mbps, 5 GHz Wi-Fi 4x4 MIMO up to 4.8Gbps.
- 1Gbps port for LAN/WAN, 1Gbps port for LAN
- Customer management via Web UI
- Operator maintenance via TR-069 and TR-143 (Optional)
- 5GHz Wi-Fi preferred option (band steering)

The **Sunrise Internet Box 5G** can access the services through mobile networks. By connecting clients devices to the **Sunrise Internet Box 5G** using Wi-Fi or a network cable, users can obtain access to high-speed Internet services and establish a home network.

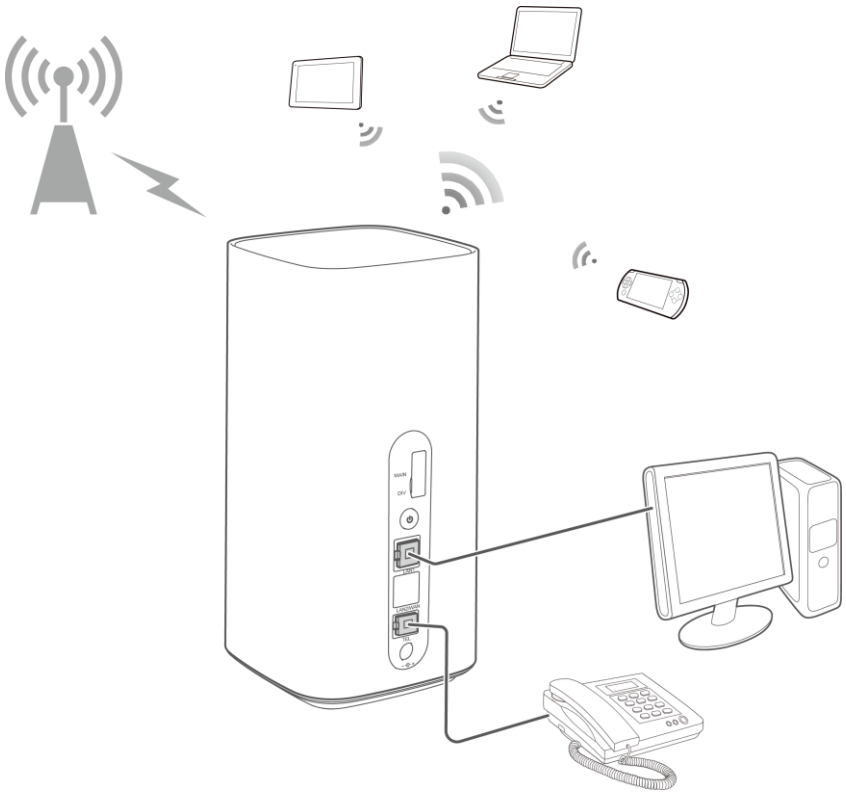

Figure 1 Home Network Overview

2 Description and hardware installation of the Sunrise Internet Box 5G

2.1 **Connectors and buttons**

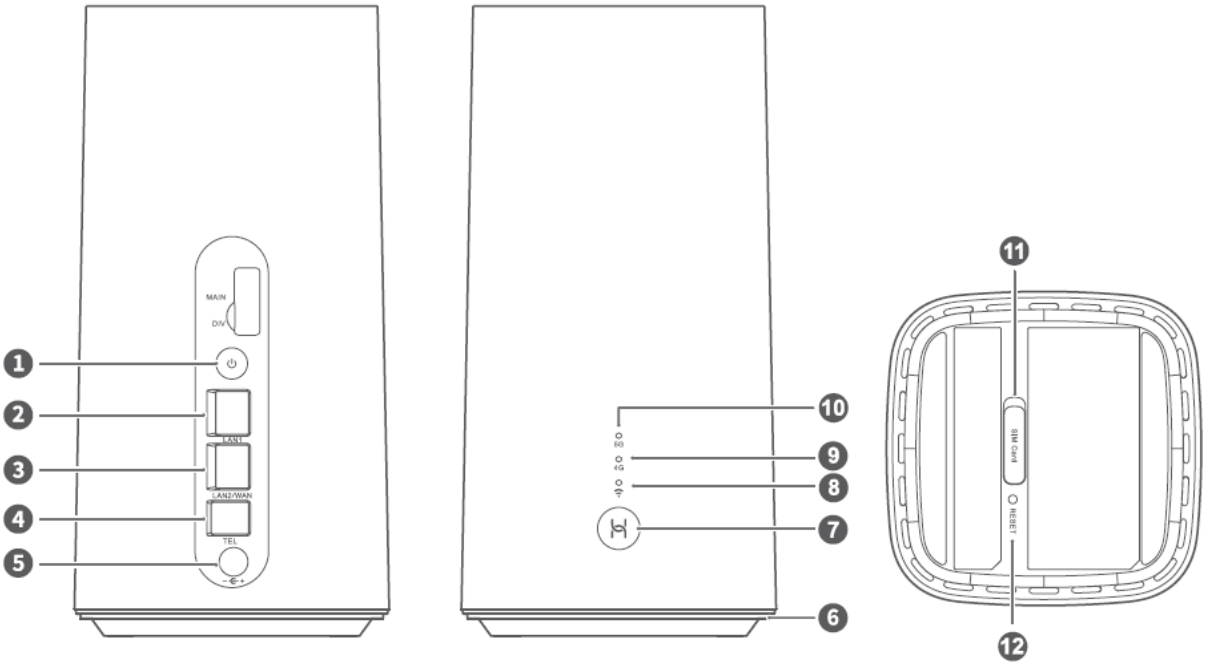

Figure 2 Sunrise Internet Box 5G connectors and buttons

Item	Meaning
1. Power button	Press and hold the Power button for 2 or more seconds to switch the **Sunrise Internet Box 5G** on/off
2. LAN port	RJ45 connector: Connect to devices over an Ethernet connection. For example, computers, printers, network storage devices, etc.

3. LAN/WAN port	RJ45 connector: WAN function: Connect the **Sunrise Internet Box 5G** to other modem using an Ethernet cable to connect to the Internet. LAN function: Connect to devices over an Ethernet connection. For example, computers, printers, network storage devices, etc.
4. Landline phone port	RJ11 connector used to connect to a classical analogue telephone set or DECT Base station for voice services (VoIP)
5. Power input	Connect a power adapter
6. Ambient light strip	On: **Sunrise Internet Box 5G** is powered on Flashing: **Sunrise Internet Box 5G** is restoring factory settings
7. Hi/WPS button	Press the button 1 to 5 seconds to start the WPS process
8. Wi-Fi indicator	On: Wi-Fi is enabled Flashing quickly: A WPS connection pairing is being set up Flashing slowly: A pair-able WPS device is detected Off: Wi-Fi is disabled
9. 4G signal indicator	Steady green: Strong Steady yellow: Moderate Steady red: Weak Off: The **Sunrise Internet Box 5G** failed to recognize the SIM card
10. 5G signal indicator	Steady green: Strong Steady yellow: Moderate Steady red: Weak Off: No 5G signal
11. SIM card slot	Insert the nano-SIM card
12. Reset button	Press and hold the Reset button for more than 2 seconds to restore the **Sunrise Internet Box 5G** to its factory settings

2.2 **Installing Sunrise Internet Box 5G**

2.2.1 Installing and connecting your Sunrise Internet Box 5G with Wi-Fi Network

1. Place the Sunrise Internet Box 5G in an upright position and as close to a window as possible. This will help to get the best possible signal.

Figure 3 Installing Sunrise Internet Box 5G (1)

2. Plug in the power cable. Turn on the Sunrise Internet Box 5G. To do so, press the ON/OFF button for three seconds. As soon as the Sunrise Internet Box 5G lights up in blue, it is switched on.

Figure 4 Installing Sunrise Internet Box 5G (2)

3. As soon as the Wi-Fi indicator as well as one of the two lights at the top glows continuously (5G or 4G), you are online. This takes about one minute.

Figure 5 Installing Sunrise Internet Box 5G (3)

Item	Meaning
4G signal indicator	Steady green: Strong Steady yellow: Moderate Steady red: Weak Off: The Sunrise Internet Box 5G failed to recognize the SIM card.
5G signal indicator	Steady green: Strong Steady yellow: Moderate Steady red: Weak Off: No 5G signal

4. Now connect your mobile device to the Wi-Fi network and start surfing at the highest speed. The necessary information (Wi-Fi name and password) can be found on the top and bottom of the Sunrise Internet Box 5G.

Or there's an even simpler way:
iOS: Scan the QR code with your smartphone's camera and open the link.
Android: Please install a QR code app, use it to scan the QR code, and open the link.

Figure 6 Installing Sunrise Internet Box 5G (4)

2.2.2 SIM Card

PIN free SIM card is already preinstalled into **Sunrise Internet Box 5G** (type nano-SIM)
Please note that:

- provided SIM is paired / locked to **Sunrise Internet Box 5G** and it cannot be used with any other device
- **Sunrise Internet Box 5G** will, work only with Sunrise provided SIM cards (**SIM card replacement is not allowed)**

To remove the SIM card, gently press the SIM card in until it clicks. The card will automatically pop out.

Do not insert or remove a SIM card when the **Sunrise Internet Box 5G** is running, as this may affect performance or damage the SIM card!

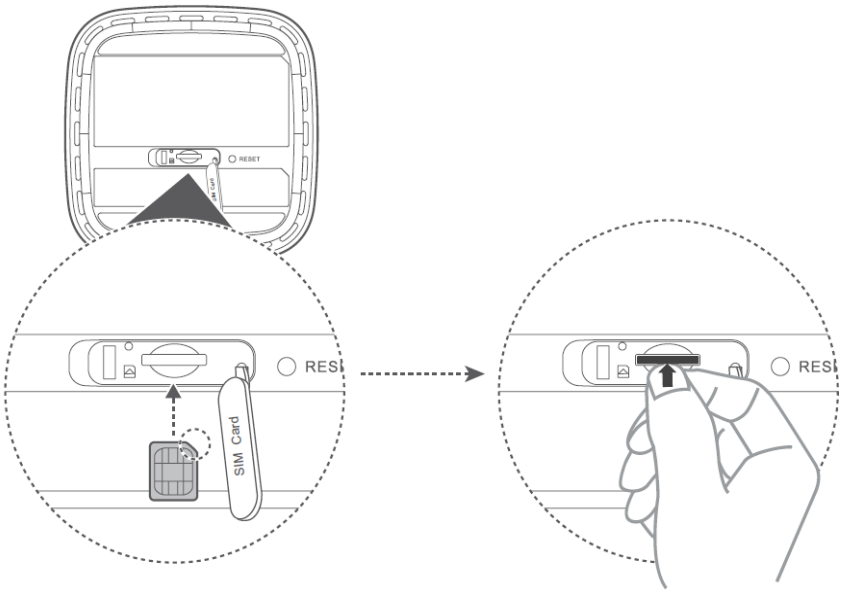

Figure 7 Inserting SIM card

3 Configuration

You can manage the **Sunrise Internet Box 5G** using the web-based management page.

All configurations in this section are performed on web-based management page. Log in to web-based management page according to the following steps:

Step 1 Connect your computer to the **Sunrise Internet Box 5G's** Wi-Fi network (or connect the computer to the router's LAN port using an Ethernet cable)

Step 2 Open your Internet browser. Enter **192.168.8.1** in your browser address bar and log in to your **Sunrise Internet Box 5G's** web-based management page. Please refer to the label on the bottom of the **Sunrise Internet Box 5G** for the default password. You would have to change default password with the first log-in

3.1 Setup Wizard

The setup wizard guides you through setting up the **Sunrise Internet Box 5G** at your first login.

Procedure

Step 1 The setup wizard is automatically displayed if this is your first time logging in

Step 2 Set the parameters as instructed

- On Welcome Screen (right top corner) select the desired language
- Enter the default UI Password mention on the label at the bottom of the **Sunrise Internet Box 5G** and select Log in
- Auto update screen is displayed
- Select–Update Manually option
- Set Wi-Fi name and password screen displayed
- 5 GHz Preferred option is default enable. On 5GHz button is ON the 2.4 GHz and 5 GHz SSID and password will be same, if 5GHz button is off, two different SSID for 2.4 GHz and 5Ghz are displayed with password fields
- The user can change SSID and password
- Click to Next to complete the setup

Note

If you insert a SIM card and set the parameters while the device is powered on, restart the device to enable the settings.

----End

3.2 **Device Management**

User can manage and view information about devices connected to the **Sunrise Internet Box 5G**.

Procedure

Step 1 Click **Devices**

Step 2 In the **Online Devices** and **Offline Devices** lists, check the information of online and offline devices connected

Step 3 From the **Offline Devices** list, user can click **Delete** to delete the selected device

Step 4 From the Online device user can edit the name of Device

Step 5 From the **Internet Access** list, user can enable or disable the Internet access permission for the selected device for both online and offline devices

----End

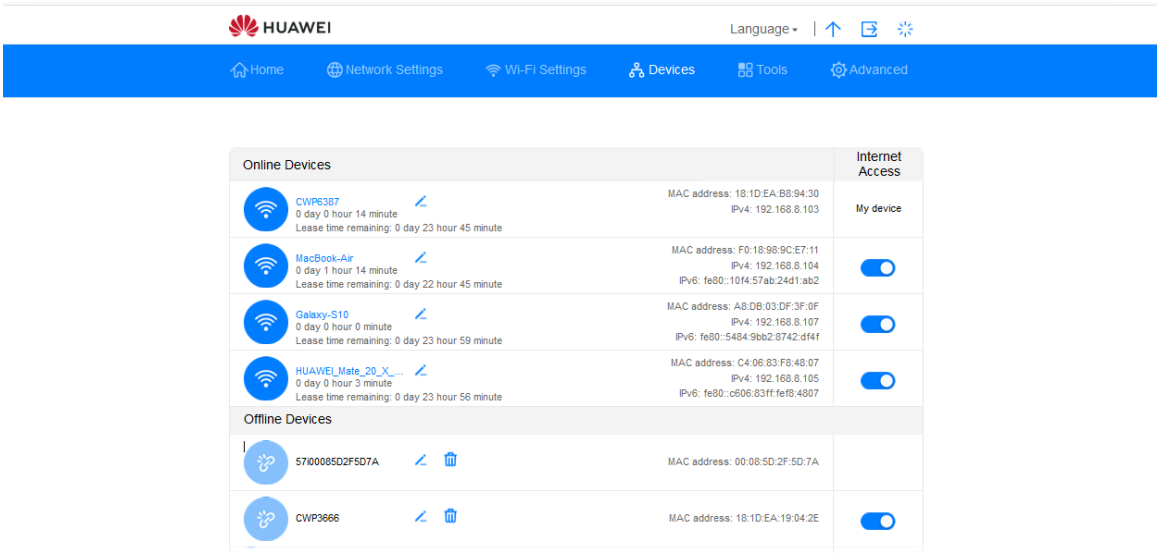

Figure 8 Devices Management

3.3 Connection

3.3.1 Mobile Network Settings

Before using the **Sunrise Internet Box 5G** to access the Internet, configure mobile network settings.

Disclaimer: Please note that traffic from **Sunrise Internet Box 5G** to Internet is NAT-ed,
As a consequence there may be limitations with remote connections to the **Sunrise Internet Box 5G** (e.g. inbound Remote Desktop, online games (e.g. Nintendo Switch)).

Procedure

Step 1 Choose **Network Settings** > **Mobile Network** > **Internet Connection**

Step 2 Enable or disable **Mobile Data** (by default is enabled)

Step 3 **Data roaming** is by default disabled (**Data roaming** is not applicable for Sunrise Internet Box 5G)

----End

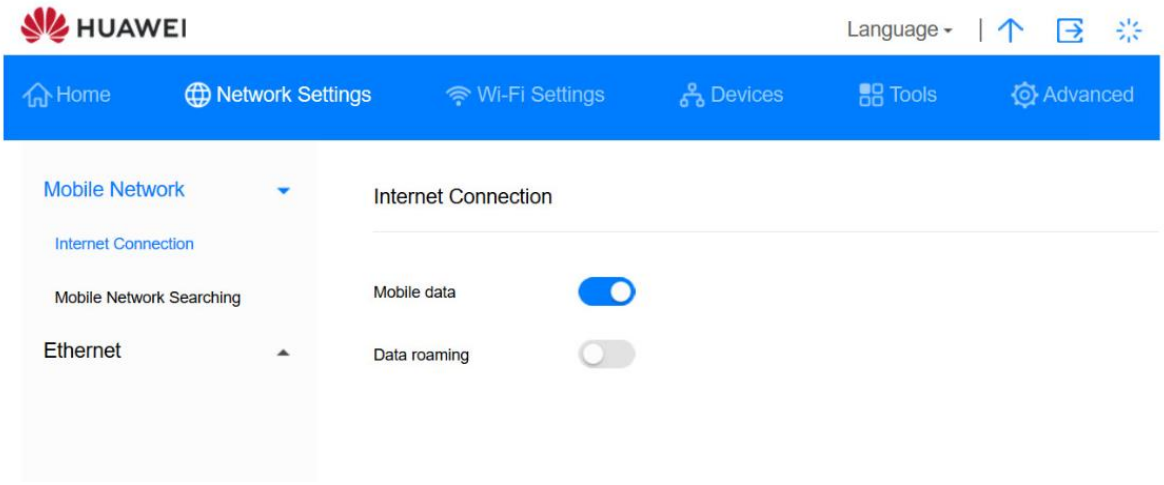

Figure 9 Mobile Network Settings

3.4 VPN* (not supported Sunrise service)

Note: configuration and potential issues related to Virtual Private Network (VPN) are not part of Sunrise Customer Services support

3.4.1 Checking VPN Status

User can check VPN connection status on your **Sunrise Internet Box 5G**.

Virtual Private Network (VPN) is a technology that extends a private network across a public network. It employs security technologies such as encryption and authentication to ensure your data privacy and security. For example, user can access your corporate intranet at home by connecting to company's VPN server via VPN. It allows you to securely and conveniently access internal corporate resources at home.

Procedure

Step 1 Go to **Advanced** > **Router** > **VPN**

Step 2 User can find VPN connection information here

----End

3.4.2 Establishing a VPN Connection

User can access his company's intranet on a terminal device (such as a PC) via VPN after configuring VPN settings on the **Sunrise Internet Box 5G**.

Procedure

Step 1 Go to **Advanced** > **Router** > **VPN**

Step 2 Select **L2TP VPN client** from **Connection type**

Step 3 Configure VPN settings

Parameter	Description
LNS address	IP address of the L2TP server. Layer 2 Tunneling Protocol (L2TP) is a virtual tunneling protocol used to support VPNs. If the server you want to connect to uses L2TP, **LNS address**, **Tunnel password**, **PPP user name** and **PPP password** are required and they are provided by your VPN server provider
Hostname	Provided by your VPN server provider
Tunnel password	Provided by your VPN server provider
Handshake interval (s)	After a VPN connection is established, **Sunrise Internet Box 5G** will send status reports to the VPN server at this frequency. Users will be disconnected if the VPN server does not receive status reports for an extended period of time

Parameter	Description
PPP user name	Provided by your VPN server provider
PPP password	Provided by your VPN server provider

----End

3.5 Traffic Statistics

3.5.1 Viewing Traffic Statistics

Traffic statistics provide the network connection duration and traffic generated.

Context

Note

Traffic statistics are provided for your reference only. Accurate traffic records can be obtained from the bill provided by your operator.

Procedure

Step 1 Click **Tools** > **Statistics**

Step 2 View the traffic data

----End

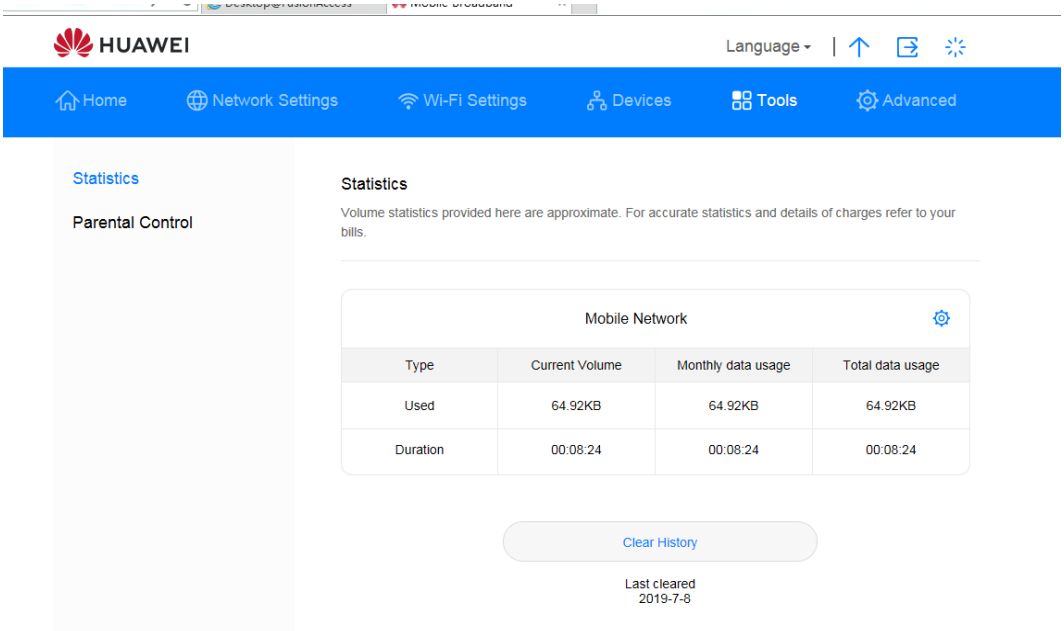

Figure 10 Traffic Statistics

3.5.2 Clearing Traffic Statistics

This section describes how to clear the recorded traffic statistics.

Procedure

Step 1 Click **Tools** > **Statistics**

Step 2 Click **Clear History**

----End

3.5.3 Setting the Monthly Traffic Statistics Function

User can set the monthly traffic statistics function and view the data usage in the current month.

Procedure

Step 1 Choose **Tools** > **Statistics**

Step 2 Click on 

Step 3 Check **Set monthly package** and set Your monthly data plan

Step 4 Click **Save**

----End

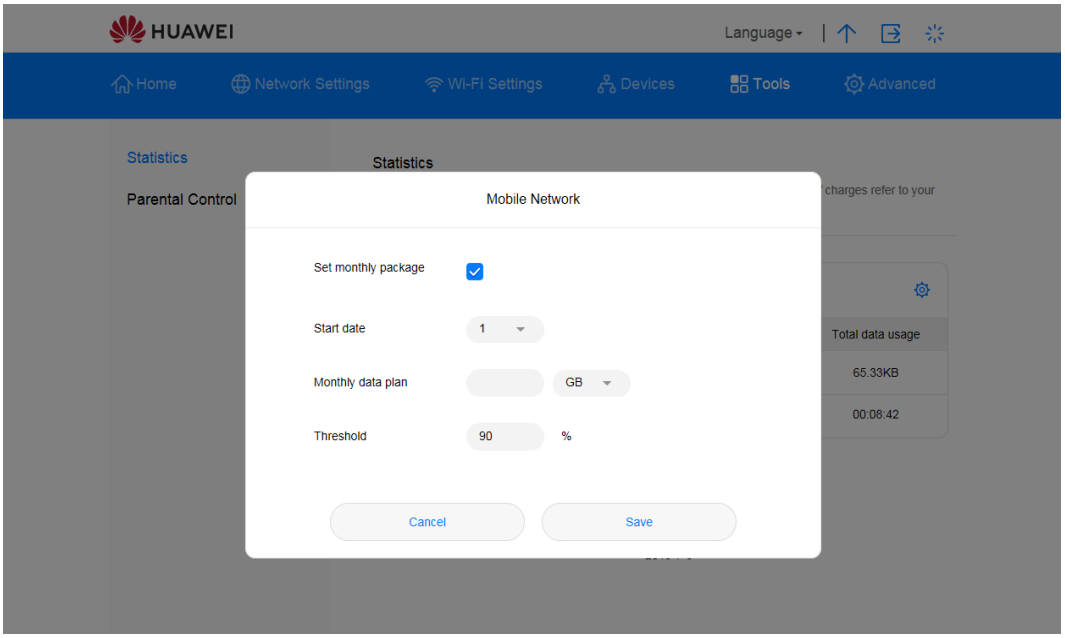

Figure 11 Monthly Traffic Statistics Settings

3.6 **Update**

In order to have **Sunrise Internet Box 5G** on latest supported version it is strongly recommended that firmware (FW) upgrades of **Sunrise Internet Box 5G** are performed only by Sunrise.
Before deploying new FW to **Sunrise Internet Box 5G** Sunrise runs extensive validation of new FW. Only after successful testing, Sunrise will remotely update **Sunrise Internet Box 5G.**
Updates are performed during maintenance window (02:00 – 05:00)

3.6.1 Online Update* (not supported Sunrise service)

Note: The **Sunrise Internet Box 5G** supports online update, however this option is not supported nor recommended by Sunrise

Procedure

Step 1 Choose **Advanced** > **Updates**

Note

During your update, do not close the browser or unplug the **Sunrise Internet Box 5G**.

When detecting a new version and being updated, the **Sunrise Internet Box 5G** reports the International Mobile Equipment Identity (IMEI) encrypted by RSA to the online update server.

Step 2 Click **Check for Updates** to check for the latest version.

Step 3 Click **Update**. In the displayed dialog box, click **began to update**

----End

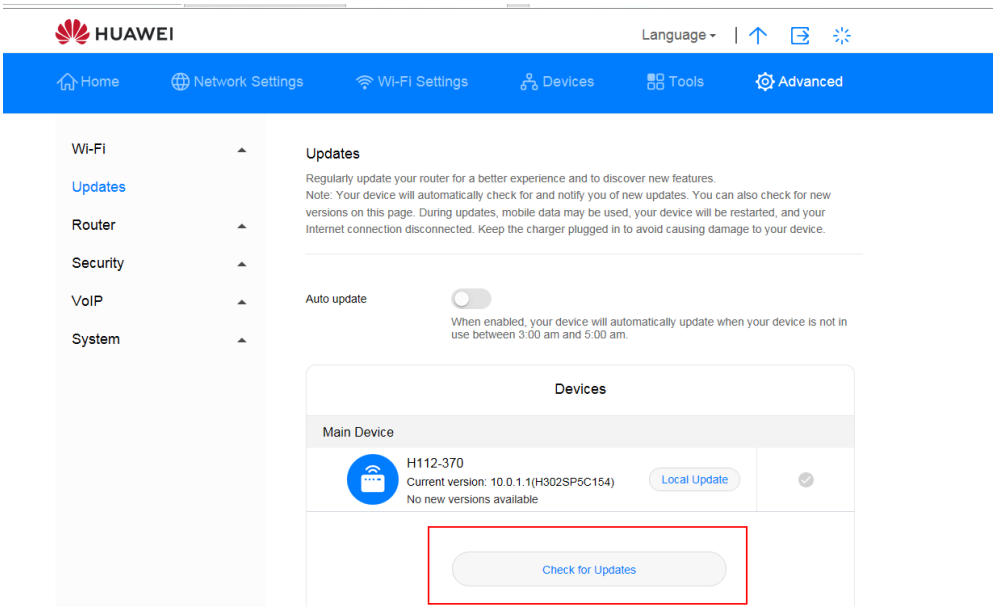

Figure 12 Online Update

3.6.2 Local Update* (not supported Sunrise service)

The **Sunrise Internet Box 5G** supports local update, however this option is not supported nor recommended by Sunrise

You can update the **Sunrise Internet Box 5G** by installing the local update package.

Procedure

Step 1 Choose **Advanced** > **Updates**

Step 2 Click **Local Update**

In the displayed dialog box, select the update package stored on your computer

Step 3 Click **Browse...**.

Step 4 Click **Update**

Step 5 On successful update pop up message displays “update successful(0)”

NOTE

During the update, do not disconnect the **Sunrise Internet Box 5G** from its power supply or your computer.

When the update is complete, the **Sunrise Internet Box 5G** automatically restarts with the new version installed.

Note

During the update, do not disconnect the **Sunrise Internet Box 5G** from its power supply or your computer.

When the update is complete, the **Sunrise Internet Box 5G** automatically restarts with the new version installed.

----End

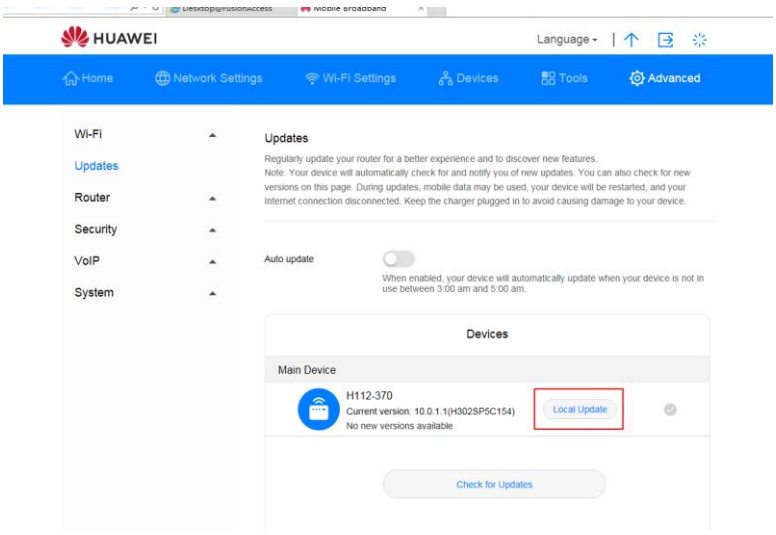

Figure 13 Local Update

3.6.3 Setting Auto Update* (not supported Sunrise service)

You can perform this task to enable system auto update, however this option is not supported nor recommended by Sunrise.

Procedure

Step 1 Select **Advanced** > **Updates**

Step 2 Select **Auto update**

----End

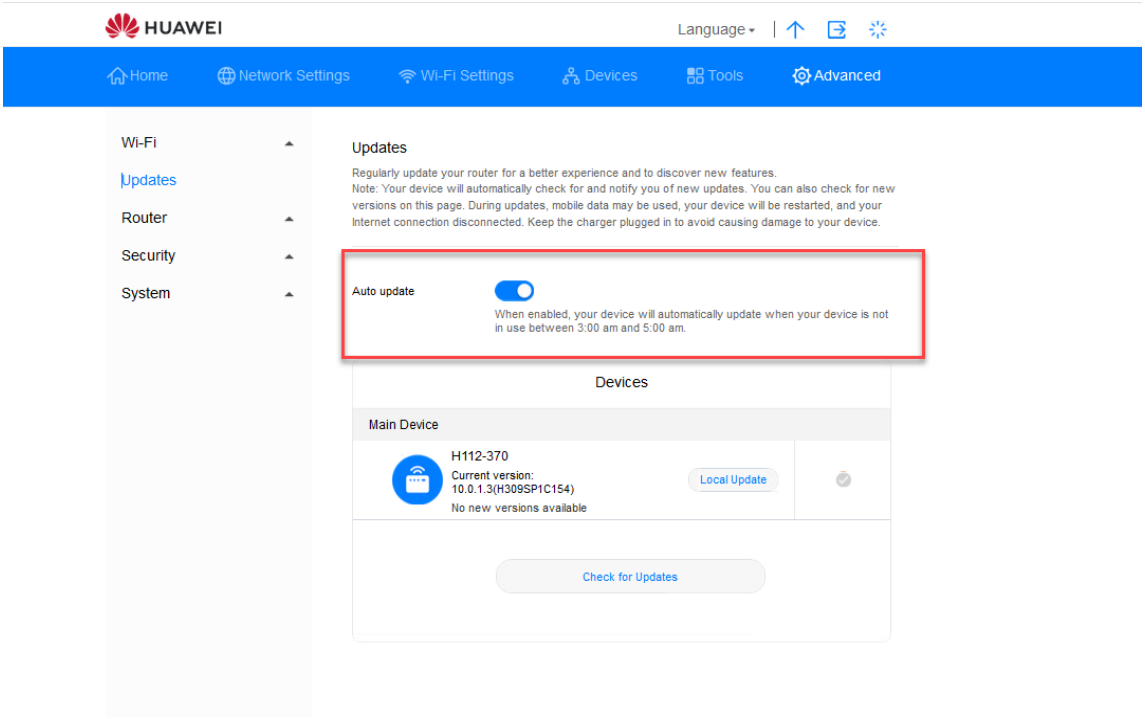

Figure 14 Auto update

3.7 **PIN Management* (not applicable for SIM card provided by Sunrise)**

Note: Sunrise Internet Box 5G is delivered with PIN free SIM, so this section is not applicable for the default SIM card. The Sunrise Internet Box 5G does not support SIM cards from other providers.

3.7.1 Enabling or Disabling PIN Verification

If PIN verification is turned on, you need to enter the PIN only when the **Sunrise Internet Box 5G** is turned on. If PIN verification is turned off, no PIN is required.

Context

- If a PIN is required, enter the correct PIN
- If you enter your PIN incorrectly three times consecutively, the SIM/USIM/UIM card is locked and you must enter the PIN unlock key (PUK)
- If you enter the PUK incorrectly ten times consecutively, the SIM/USIM/UIM card is locked permanently. If you cannot enter the correct PIN or PUK, network-associated functions are unavailable
- The PIN and the PUK are provided with the SIM/USIM/UIM card. If you did not receive them or have forgotten them, contact the operator

Procedure

Step 1 Choose **Advanced** > **System** > **PIN Code Management**.

Step 2 Set **PIN Code Management** to either of the following:

- **Off**: to disable PIN verification
- **On**: to enable PIN verification

Step 3 Enter the PIN (up to 7 digit) in the displayed dialog box

Step 4 Click **OK**

----End

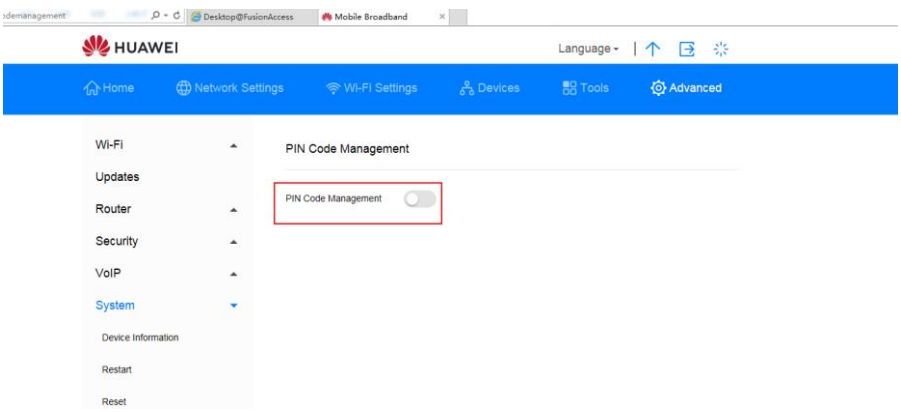

Figure 15 PIN Code Management

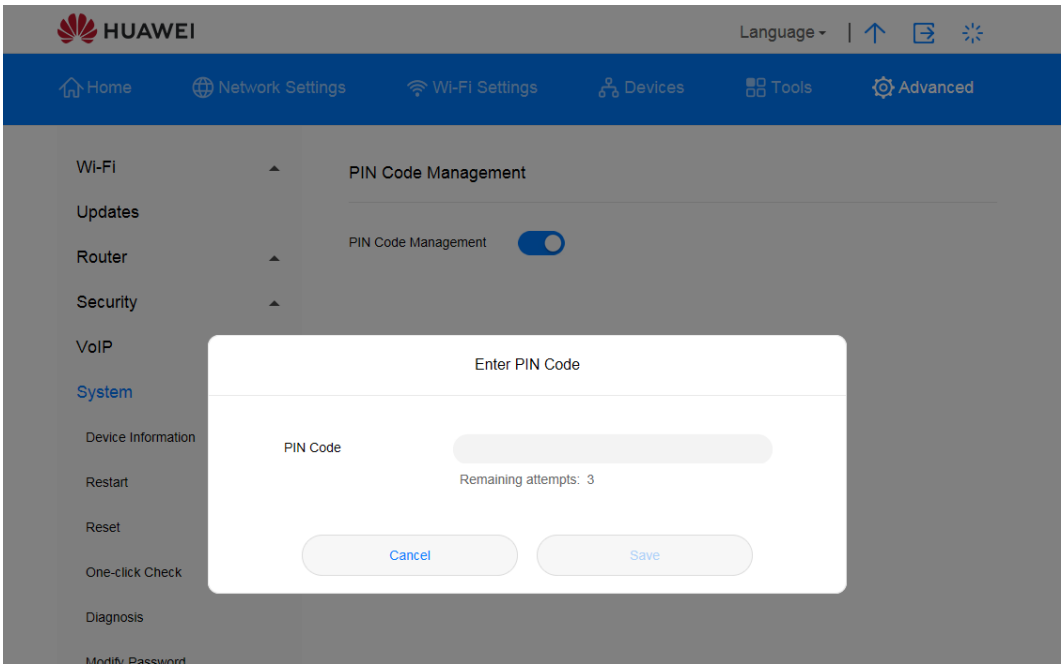

Figure 16 PIN Code Settings

3.7.2 Changing the PIN

If PIN verification is turned on, you can change the PIN.

Procedure

Step 1 Choose **Advanced** > **System** > **PIN Code Management**

Step 2 Enable PIN verification and select **Modify PIN Code**

Step 3 Enter the current PIN

Step 4 Enter a new PIN and confirm the PIN

Step 5 Click **Save**

----End

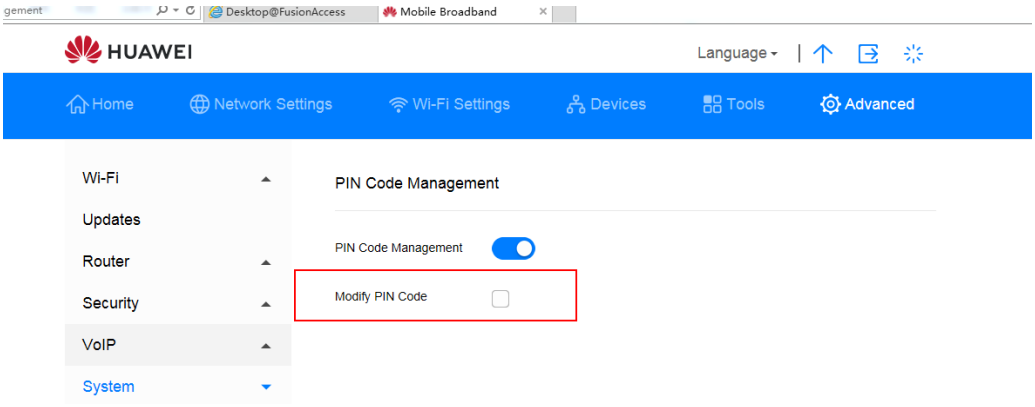

Figure 17 PIN Code Modification

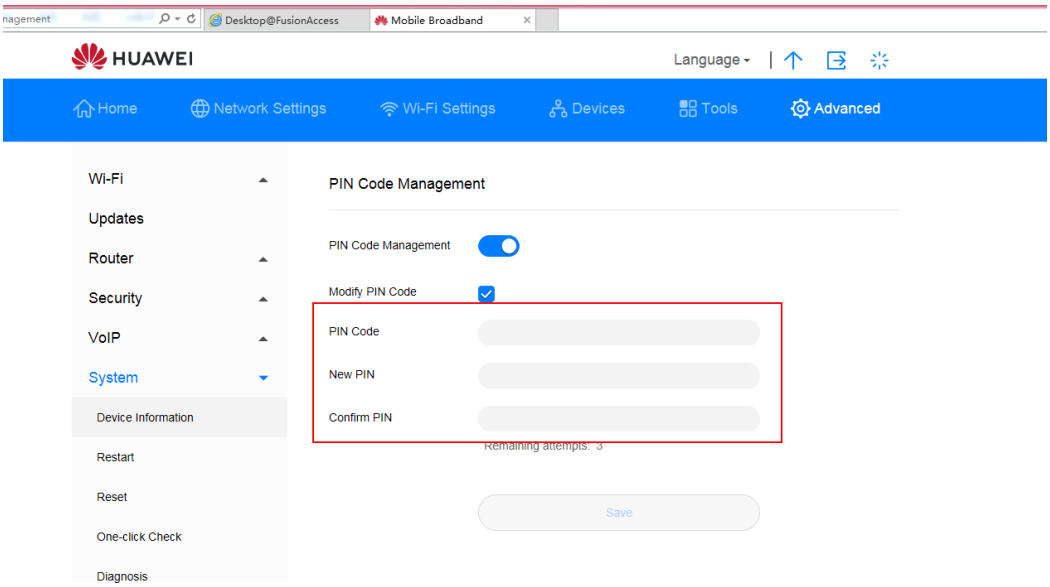

Figure 18 PIN Code Changing

3.7.3 Enabling or Disabling Automatic PIN Verification

If personal identification number (PIN) verification is enabled, you are required to enter the PIN at each startup of the **Sunrise Internet Box 5G** to verify whether the SIM/UIM is valid.

Procedure

Step 1 Choose **Advanced** > **System** > **PIN Code Management**

Step 2 Enable **PIN Code Management**

Step 3 Set **Auto validate** to either of the following:

- **Off**: to disable automatic verification
- **On**: to enable automatic verification

----End

3.8 Ethernet Settings* (not supported Sunrise service)

Note: configuration and potential issues related to Ethernet Settings (**PPPoE Dial-up Settings** and **Dynamic IP Settings**) are not part of Sunrise Customer Services support

3.8.1 Setting Up the Ethernet Connection Mode

This section describes how to set up the Ethernet connection mode and parameters.

Procedure

Step 1 Choose **Network Settings** > **Ethernet** > **Ethernet Settings**.

Step 2 Set the **Sunrise Internet Box 5G**'s connection parameters according to the following table.

Application Scenario	Configuration Method
The **Sunrise Internet Box 5G** selects the best network access mode based on the network environment.	1. Select **Auto** from the **Connection mode** drop-down list 2. Set Point-to-Point Protocol over Ethernet (PPPoE) and dynamic IP parameters. For details, see **PPPoE Dial-up Settings** and **Dynamic IP Settings**
Access the Internet using a PPPoE dial-up connection or a dynamic IP address.	1. Select **PPPoE + Dynamic IP** from the **Connection mode** drop-down list 2. Set Point-to-Point Protocol over Ethernet (PPPoE) and dynamic IP parameters. For details, see **PPPoE Dial-up Settings** and **Dynamic IP Settings**
You have the user name and password provided by your network service provider for the PPPoE dial-up connection.	1. Select **PPPoE** from the **Connection mode** drop-down list. 2. Enter the user name and password provided by your network service provider 3. Set the MTU
The computer IP address is automatically assigned by the network service provider.	1. Select **Dynamic IP** from the **Connection mode** drop-down list 2. Select the **Set DNS server manually** check box, Enter **Primary DNS server** and **Secondary DNS server** **NOTE:** This step is optional. By default, the **Sunrise Internet Box 5G** automatically obtains the Domain Name Server (DNS) address. 3. Set the MTU

You have the network parameters, such as a fixed IP address, subnet mask, gateway IP address, and domain name server (DNS) address, provided by your network service provider.	1. Select **Static IP** from the **Connection mode** drop-down list 2. Enter the IP address, subnet mask, gateway address, DNS address (optional), provided by your network service provider 3. Set the MTU
The client is connected with a network cable, but no Ethernet connection is available.	Select **LAN only** from the **Connection mode** drop-down list **NOTE:** You can also unplug the network cable and access the Internet using the cellular data network
When **Connection mode** is set to **PPPoE**, **Dynamic IP**, or **Static IP**, you can enable virtual LAN and set parameters.	1. Click on the right side of the **VLAN** to turn on the **vlan function** 2. In the **VLAN ID** box, set the parameters

Step 3 Click **Save**.

----End

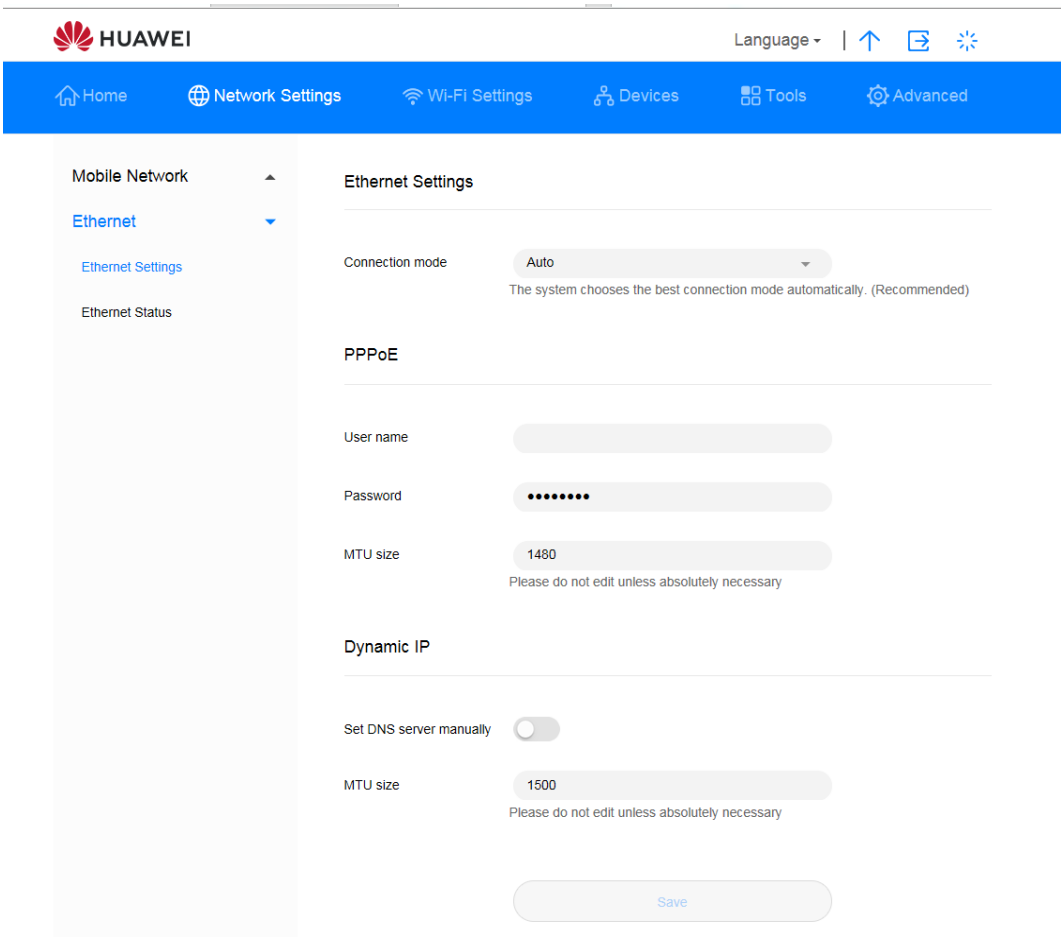

Figure 19 Ethernet Settings

3.8.2 Checking the Ethernet Status

This section describes how to check the Ethernet Status.

Procedure

Step 1 Go to **Network Settings** > **Ethernet** > **Ethernet Status**

Step 2 Check the **Duration/Connection status/MAC address/ Connection mode/IP address/Subnet mask/Default gateway** and so on

----End

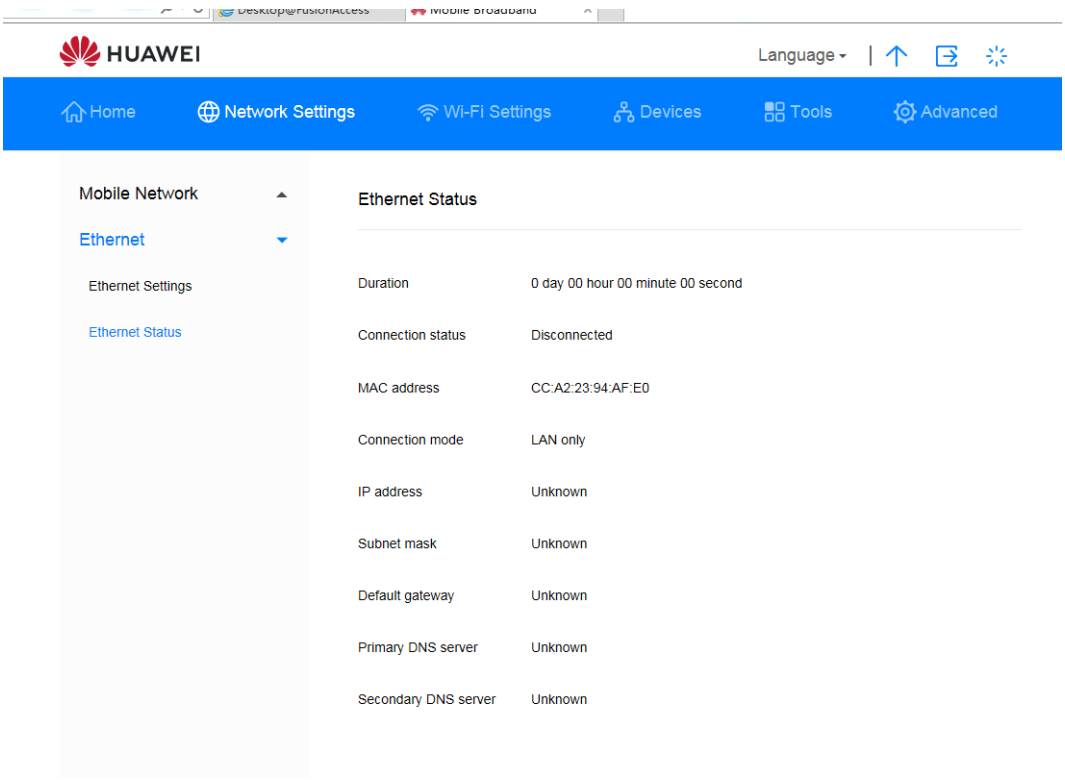

Figure 20 Ethernet Status

3.8.3 MAC Address Clone

MAC address clone allows multiple devices to connect to the **Sunrise Internet Box 5G** and access the Internet.

Procedure

Step 1 Go to **Network Settings** > **Ethernet** > **Ethernet Settings**.

Step 2 At the bottom of page the drop-down list on the right side of **Clone MAC Address**, select **Use current device MAC**.

Note

You can select **Manual input** from the drop-down list, and enter the MAC address in **MAC address**.

Or select **Do not clone** from the drop-down list.

Step 3 Click **Save**.

----End

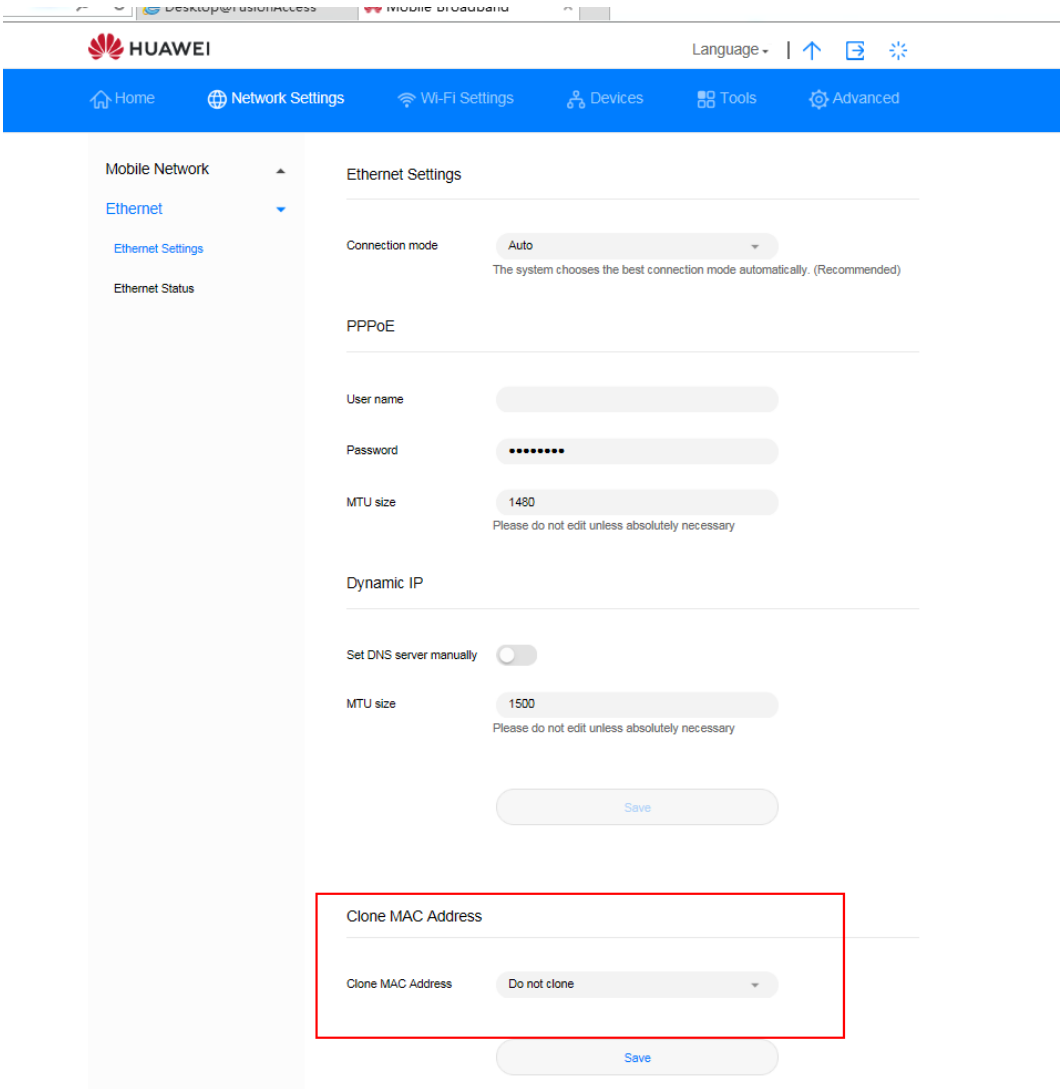

Figure 21 MAC Address Clone

3.9 **Wi-Fi Settings**

3.9.1 Configuring Wi-Fi Security Settings

You can configure more security settings for your Wi-Fi to ensure data security.

Procedure

Step 1 Go to **Advanced** > **Wi-Fi** > **Wi-Fi Security Settings**

Step 2 Select Edit button under options located on 2.4 or 5 GHz SSID

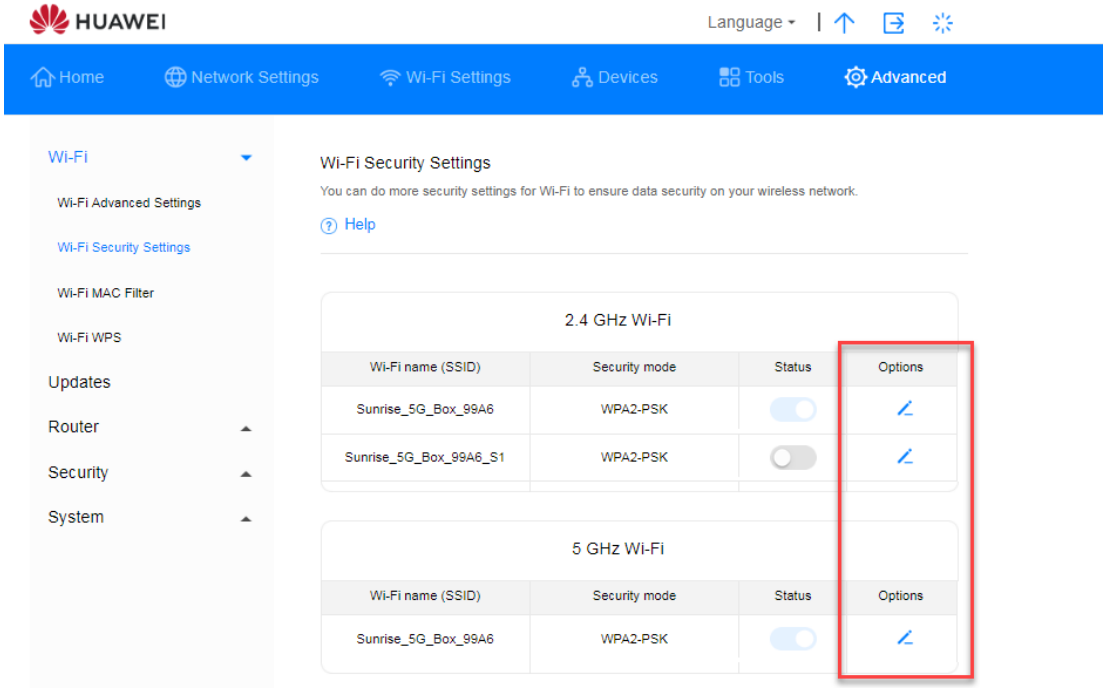

Figure 22 Wi-Fi Security Settings

Step 3 Modify the Wi-Fi name in the **Wi-Fi name (SSID)** text box

Step 4 Select an encryption method in the **Security mode** drop-down list

- **None (open)**: Unencrypted. No security key is required for a device to connect to the Wi-Fi network. User can connect SSID without any password

Note

To ensure Wi-Fi security, it is recommended that you set a security key.

- **WEP**: Wired Equivalent Privacy.
- **WPA2-PSK**: **WPA-PSK** version 2, which is more secure than **WPA-PSK**

- **WPA/WPA2-PSK**: Supports both **WPA2-PSK** and **WPA-PSK** encryption methods. You can use **WPA-PSK** or **WPA2-PSK** to connect to a Wi-Fi network

Step 5 Set your Wi-Fi password in the **Wi-Fi password** text box

Step 6 In the case You would like to hide Wi-Fi name (SSID) check the **Hide Wi-Fi** box

Note

When enabled Hide Wi-Fi, user must enter the correct Wi-Fi name (SSID) of the Wi-Fi network You would like to connect to. Note that Wi-Fi WPS will be unavailable if Hide Wi-Fi option is enabled

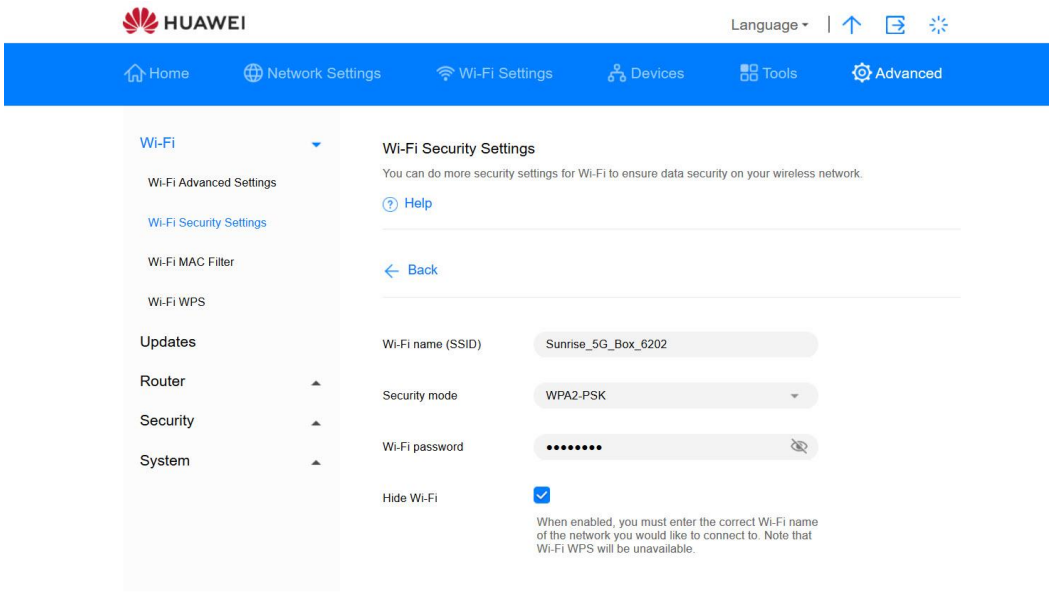

Figure 23 Hide Wi-Fi SSID

Step 7 Click **Save**

----End

3.9.2 Enabling and Configuring Wi-Fi

Follow the steps below to configure and enable/disable your Wi-Fi network.

Procedure

Step 1 Click **Wi-Fi Settings**

Step 2 **Wi-Fi** button will enable or disable the Wi-Fi

- **On**: Enable **Wi-Fi**
- **Off**: Disable **Wi-Fi**

Step 3 To Modify **Wi-Fi name (SSID)**, enter the new SSID name in text field

Step 4 Select **Encrypted** from **Security mode**

- **None (open)**: Unencrypted. No security key is required for a device to connect to the Wi-Fi network

Note

To ensure Wi-Fi security, it is recommended that you set a security key.

- **WEP**: Wired Equivalent Privacy
- **WPA2-PSK**: **WPA-PSK** version 2, more secure than **WPA-PSK**
- **WPA/WPA2-PSK**: supports both **WPA2-PSK** and **WPA-PSK**. Your device can use either **WPA-PSK** or **WPA2-PSK** to connect to the Wi-Fi network

Step 5 Enter your **Wi-Fi password**

Step 6 Click **Save**

----End

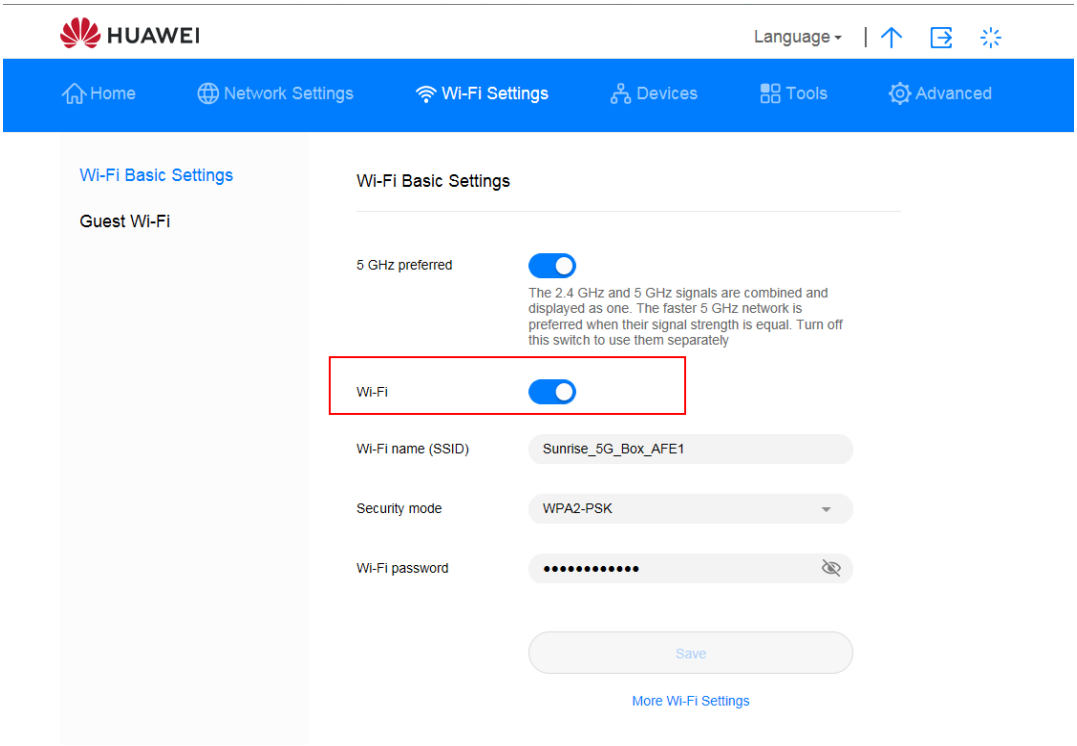

Figure 24 Enabling and Configuring Wi-Fi

3.9.3 Guest Wi-Fi

This section describes how to set up guest Wi-Fi.

Procedure—as default the SSID and password are present

Step 1 Choose **Wi-Fi Settings** > **Guest Wi-Fi**

Step 2 Enable or disable **Guest Wi-Fi**

Step 3 Default active duration of Guest Wi-Fi is 4 hours, User can modify the duration from value available from drop down menu

Step 4 In **Wi-Fi name (SSID)**, user can modify Wi-Fi SSID

Step 5 Security- user can select Guest SSID as Encrypted enable password mode or Selecting open will hide the password field

Step 6 If user use Encrypted open the default password is set, user can update the desired password

Note: The Guest Wi-Fi password and standard Home Wi-Fi password cannot be the same.

Note

Open: Anyone can connect to the guest Wi-Fi network.

Encrypted: Access to the guest Wi-Fi network requires the password you set in the **Wi-Fi password** text box.

Step 7 Click **Save**.

Note

The **Time remaining** row displays the remaining active period of the guest Wi-Fi network. To prolong the active period by 30 minutes, click **Extend by 30 minutes**.
You can as well choose to have Duration = **Unlimited**, **1 day** or **4 hours**

----End

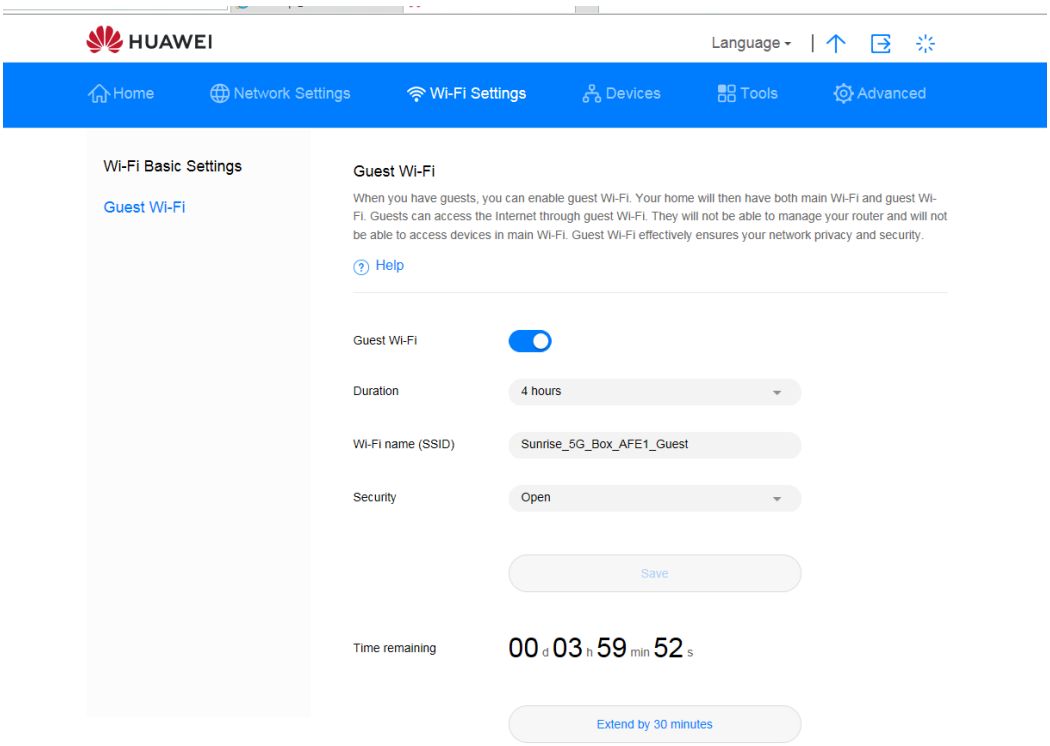

Figure 25 Guest Wi-Fi Settings

3.9.4 Selecting a Working Band

You can select the working band you need following the instructions.

Procedure

Step 1 Choose **Advanced** > **Wi-Fi** > **Wi-Fi Advanced Settings**

Step 2 Select a working band from the **Bandwidth** drop-down list

Note

- By default **Bandwidth** for 2.4 and 5 GHz Wi-FI are set to **Auto (Default)**

----End

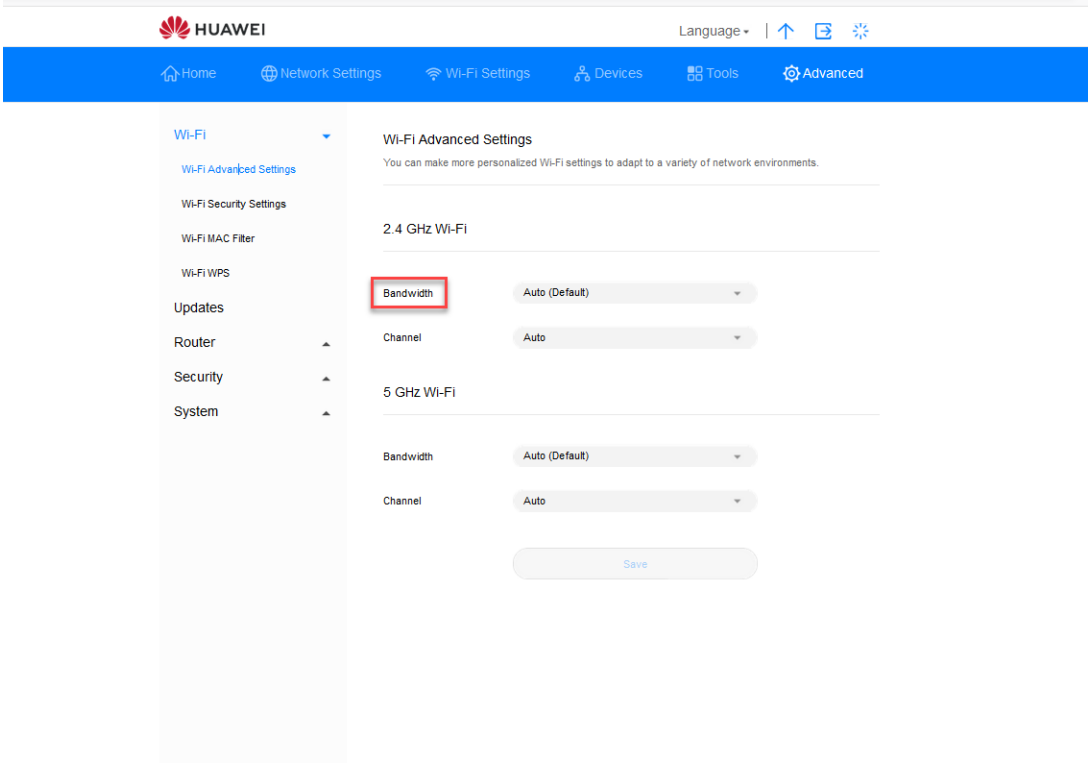

Figure 26 Working Band Settings

3.9.5 Selecting a Channel

This section describes how to select a channel.

Procedure

Step 1 Choose **Advanced** > **Wi-Fi** > **Wi-Fi Advanced Settings**

Step 2 Select a channel from the **Channel** drop-down list box

Step 3 Click **Save**

Note

If you do not know which channel to select, select **auto**. The **Sunrise Internet Box 5G** will then automatically select a channel.

In some case the higher channel are not selected depends on local DMF channel policy

----End

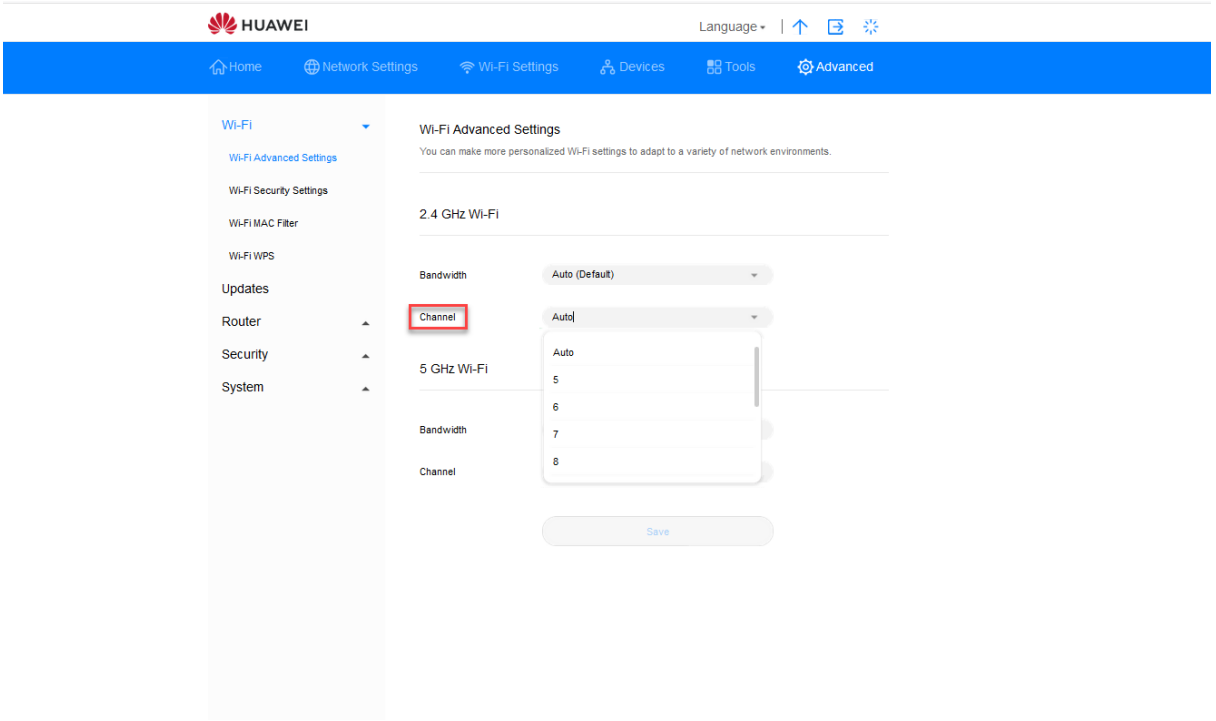

Figure 27 Channel Settings

3.9.6 WPS

The Wi-Fi Protected Setup (WPS) is a standard used to set up wireless connections in an easy and secure way. Traditionally speaking, to set up a wireless connection, you have to set a Wi-Fi name (SSID) and key for the **Sunrise Internet Box 5G**, and enter the key on the client. WPS automatically configures an SSID and key for the **Sunrise Internet Box 5G** and client. You can conveniently and securely connect your client to the Wi-Fi without having to remember the SSID and key.

The WPS feature on your Sunrise Internet Box 5G can only be used if your Wi-Fi device has a WPS button. This WPS button can be a hardware button which is part of your device's hardware. It can also be a virtual button included in your device software (for example, it could be a virtual button in your phone's WPS app). Apple devices do not currently support WPS. For instructions on how to set up a WPS connection for devices other than HUAWEI phones, consult the accompanying user guide for your device.

Connecting a Terminal Device to your Sunrise Internet Box 5G Through STA (remote device) PIN

You can simply enter the device PIN code on your **Sunrise Internet Box 5G**' web UI to connect the device to your **Sunrise Internet Box 5G**'s Wi-Fi, and visit the Internet using **Sunrise Internet Box 5G**.

Step 1 Set the WPS connection method to PIN on your device, and remember the PIN code displayed on the screen

Note

See your device's user guide for detailed operation instructions. **Apple devices don’t supports WPS**

Step 2 Connect your computer to the Sunrise Internet Box 5G's Wi-Fi network (or connect the computer to the Sunrise Internet Box 5G's LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your Sunrise Internet Box 5G's web-based management page

Note

Enable or disable the WPS switch on the right side of **WPS**. You cannot configure the WPS connection if WPS is disabled. Apple devices don’t supports WPS

Step 3 Go to Advanced > Wi-Fi > Wi-Fi WPS

Step 4 Enter the device PIN in the text box, and click Connect.
The Wi-Fi indicator should start to flash. When the phone is connected to the Sunrise Internet Box 5G's Wi-Fi, the Sunrise Internet Box 5G's Wi-Fi indicator will turn from flashing to steadily lit.

----End

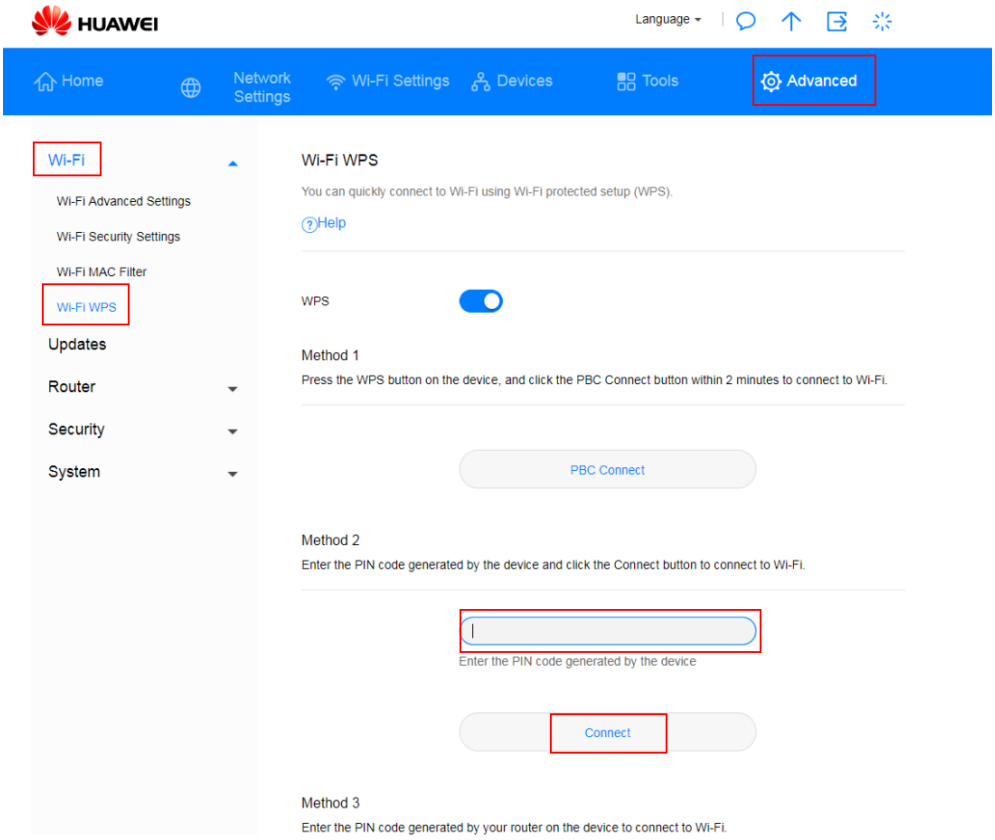

Figure 28 Wi-Fi WPS Settings

Connecting a Terminal Device to a Sunrise Internet Box 5G Through PBC

With Push Button Configuration (PBC), you can simply press the WPS button on your device to connect to your **Sunrise Internet Box 5G**'s Wi-Fi

Procedure

Step 1 On the **Sunrise Internet Box 5G**'s web UI, go to **Advanced** > **Wi-Fi** > **Wi-Fi WPS**.

Note

Enable or disable the WPS switch on the right side of **WPS**. You cannot configure the WPS connection if WPS is disabled. Apple devices don't supports WPS

Step 2 Click **PBC Connect**.

Note

See your device's user guide for detailed operation instructions.

Click **PBC Connect** within two minutes after you press the WPS button on the device.

Apple devices don't supports WPS

----End

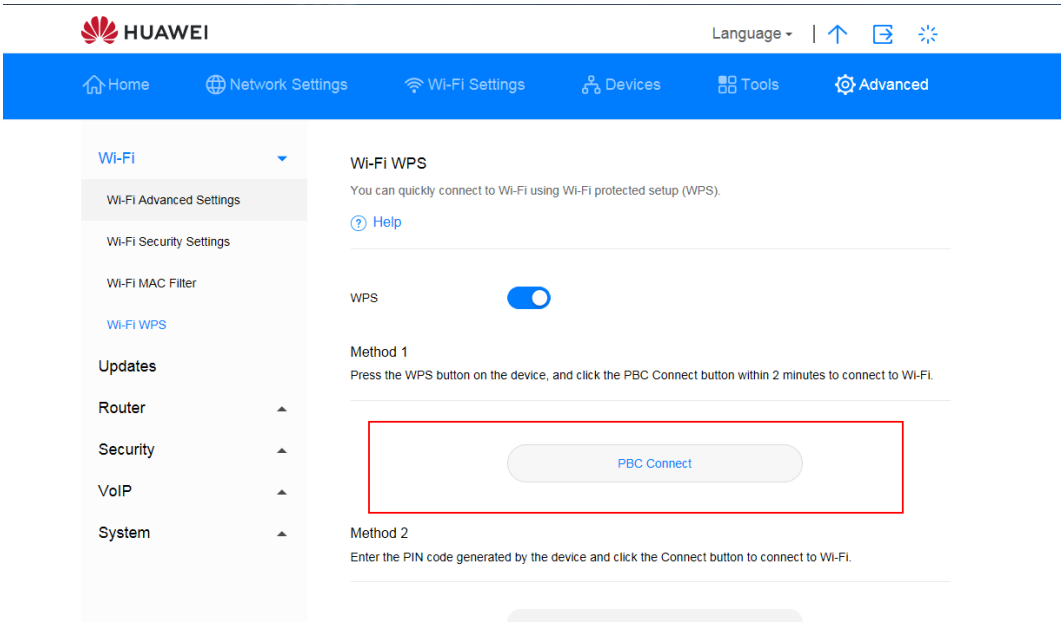

Figure 29 Wi-Fi WPS connection through PBC

Using AP PIN to connect to the Sunrise Internet Box 5G

Simply enter the **Sunrise Internet Box 5G**'s PIN code in the app to securely connect to the **Sunrise Internet Box 5G**'s Wi-Fi, and access the Internet.

Procedure

Step 1 Connect your computer to the Sunrise Internet Box 5G's Wi-Fi network (or connect the computer to the Sunrise Internet Box 5G's LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your Sunrise Internet Box 5G's web-based management page. Go to **Advanced** > **Wi-Fi** > **Wi-Fi WPS**

Note

Enable **WPS** on the right side of **WPS**. WPS connection is not available if **WPS** is disabled.

This method is generally supported on PCs or laptops with a wireless network adapter, but not supported on phones

Step 2 Enable **PIN**.

Step 3 To obtain the PIN code:

- Click **Generate PIN**. On the **Sunrise Internet Box 5G**'s web-based management page, find and memorize the randomly assigned PIN code.
- Click **Reset PIN**. Find and memorize the **Sunrise Internet Box 5G**'s PIN code.

Step 4 Open network settings on your PC, and set WPS connection to AP PIN (exact operation may vary with different PCs).

Step 5 Enter the generated PIN code from the **Sunrise Internet Box 5G**.
When the device is connected to the **Sunrise Internet Box 5G**'s Wi-Fi, the **Sunrise Internet Box 5G**'s Wi-Fi indicator will turn from flashing to steadily lit.

Note

For setting the WPS on remote device please refer to the device user guide.

----End

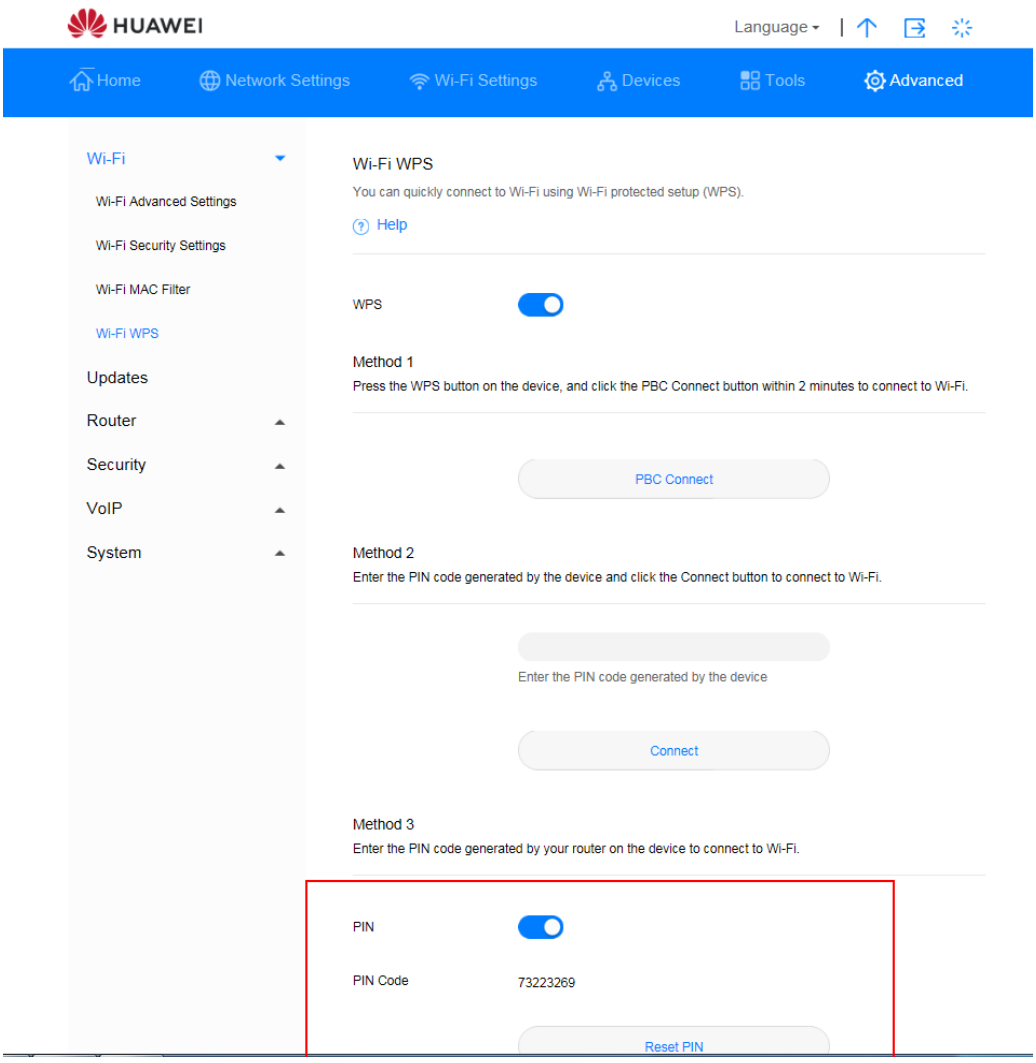

Figure 30 Wi-Fi WPS connection through generated AP PIN

3.9.7 Setting Wi-Fi MAC Address Filtering

By filtering MAC addresses, you can manage client device access permission and thereby improve your Wi-Fi network security.

Wi-Fi MAC Filter is to allow or block a device from accessing your **Sunrise Internet Box 5G** through Wi-Fi.

Procedure

Step 1 Choose **Advanced** > **Wi-Fi** > **Wi-Fi MAC Filter**

Step 2 Enable **Wi-Fi MAC Filter**

Step 3 Select a filtering mode

- **Allow**: If a client MAC address is in the **MAC address** list, the client is allowed to connect to the **Sunrise Internet Box 5G** through Wi-Fi
- **Block**: If a client MAC address is in the **MAC address** list, the client is not allowed to connect to the **Sunrise Internet Box 5G** through Wi-Fi
- **Note:** if the MAC address of device are in allow or block list then device is allowed to have access services from **Sunrise Internet Box 5G**

Step 4 In the **Wi-Fi MAC Address List**, click **New**. In the displayed dialog box, select **Host** and set **MAC address**

Step 5 Click **Confirm**

----End

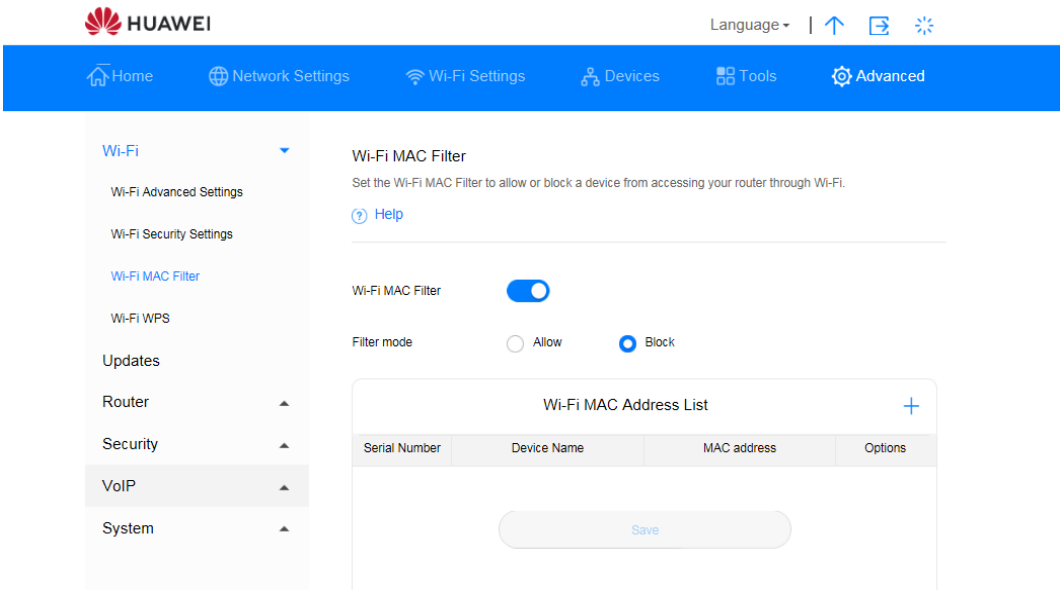

Figure 31 Wi-Fi MAC Address Filtering

1. Click **Devices** and check the MAC address of the client to be allowed to access the Wi-Fi network, for example, 40:4D:8E:6D:80:7D
2. Choose **Advanced** > **Wi-Fi** > **Wi-Fi MAC Filter**. Set **Filter mode** to **Allow**
3. Click **New**. In the **MAC address:** text box, enter **40:4D:8E:6D:80:7**

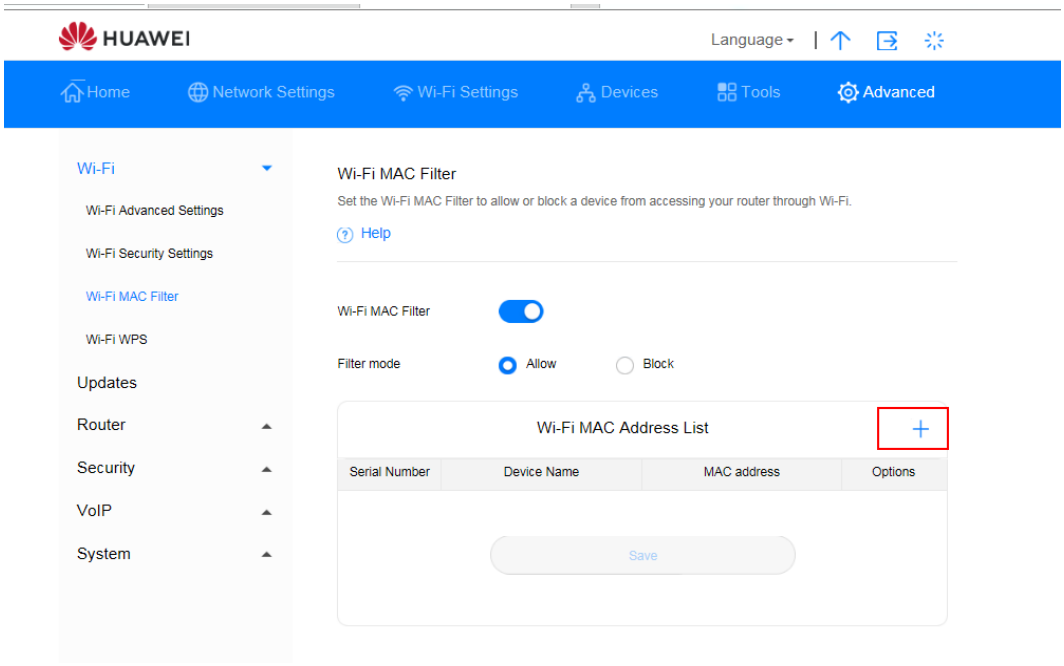

Figure 32 Allowing a Specified Client to Access the Wi-Fi Network

4. Click **Confirm**.

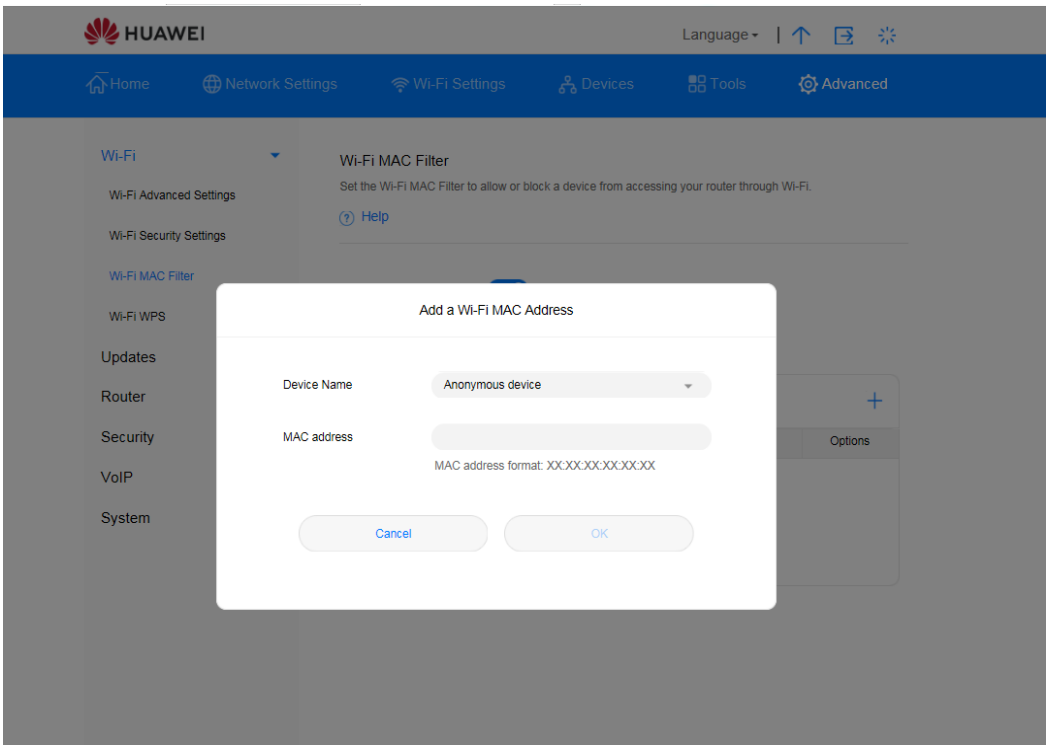

Figure 33 Add a Wi-Fi MAC Address

3.10 DHCP Settings* (not supported Sunrise service)

Note: configuration and potential issues related to Dynamic Host Configuration Protocol (DHCP) are not part of Sunrise Customer Services support

3.10.1 Enabling the DHCP Server

If the Dynamic Host Configuration Protocol (DHCP) server is enabled, the **Sunrise Internet Box 5G** allocates IP addresses to clients connected to it.

Context

- **DHCP IP range** and **DHCP lease time** are available to be set only when the DHCP server is enabled.
- After the DHCP server is enabled, enable the function to automatically obtain an IP address and a DNS server address from clients.

Procedure

Step 1 Choose **Advanced** > **Router** > **DHCP**

Step 2 In **LAN IP address**, enter the two last digits of the **Sunrise Internet Box 5G**'s IP address

Step 3 On the **DHCP server** right click on the button to enable the DHCP server

Note

On is enabled.

Step 4 In **DHCP IP range**, enter the last digit of the start IP address and the end IP address

Step 5 In **DHCP lease time**, enter a lease time

Step 6 Click **Save**

----End

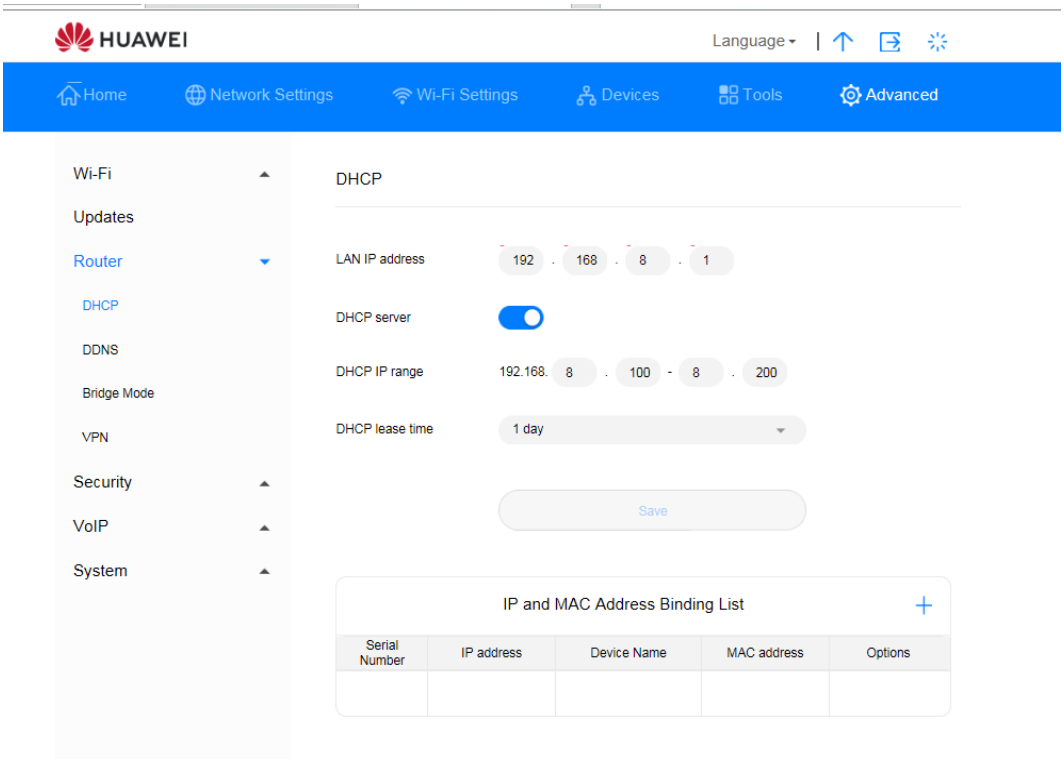

Figure 34 Enabling the DHCP Server

3.10.2 Disabling the DHCP Server

If the Dynamic Host Configuration Protocol (DHCP) server is disabled, the **Sunrise Internet Box 5G** does not allocate IP addresses to clients connected to it and IP addresses must be entered from each client.

Procedure

Step 1 Choose **Advanced** > **Router** > **DHCP**

Step 2 Disable **DHCP server**

Step 3 Click **Save**

----End

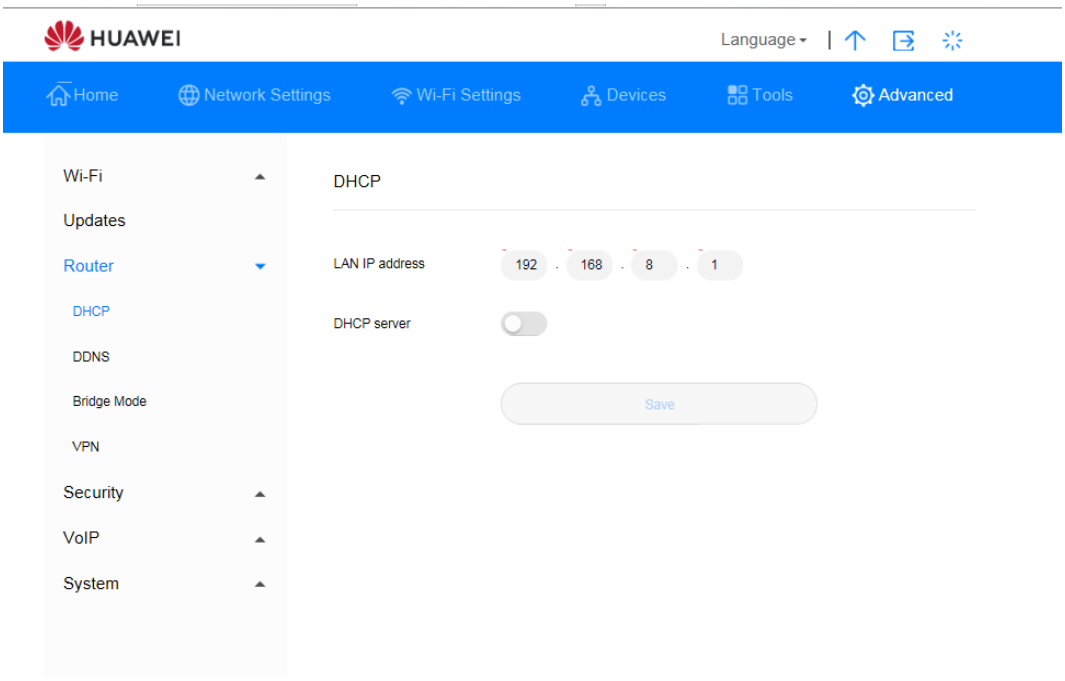

Figure 35 Disabling the DHCP Server

3.10.3 Configuring DHCP Clients

If the Dynamic Host Configuration Protocol (DHCP) server is enabled, certain settings must be configured on clients.

Context

The following describe how to configure DHCP settings on a computer running Windows 7 as an example.

Procedure

Step 1 Choose **Start** > **Control Panel**

Step 2 From the **Viewed by** drop-down list, choose **Category**

Step 3 Choose **Network and Internet** > **Network and Sharing Center** > **Change adapter settings** > **Wireless Network Connection**

Step 4 Right click the network icon that you want to configure and choose **Properties**

Step 5 On the **Networking** tab page, choose **Internet Protocol Version 6 (TCP/IPv6)** or **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**

Step 6 On the **Internet Protocol 6 (TCP/IPv6) Properties** dialog box, select **Obtain an IPv6 address automatically** and **Obtain DNS server address automatically**. Or on the **Internet Protocol 4 (TCP/IPv4) Properties** dialog box, select **Obtain an IP address automatically** and **Obtain DNS server address automatically**

Step 7 Click **OK**

----End

3.10.4 Bind IP and MAC address

After connecting to a LAN, you can assign a static IP address to the designated device.

Procedure

Step 1 Choose **Advanced** > **Router** > **DHCP**

Step 2 Click **New**, fill in your designated IP address and the MAC address of your device in the **IP and MAC Address Binding List** table

Step 3 Click **Save**

----End

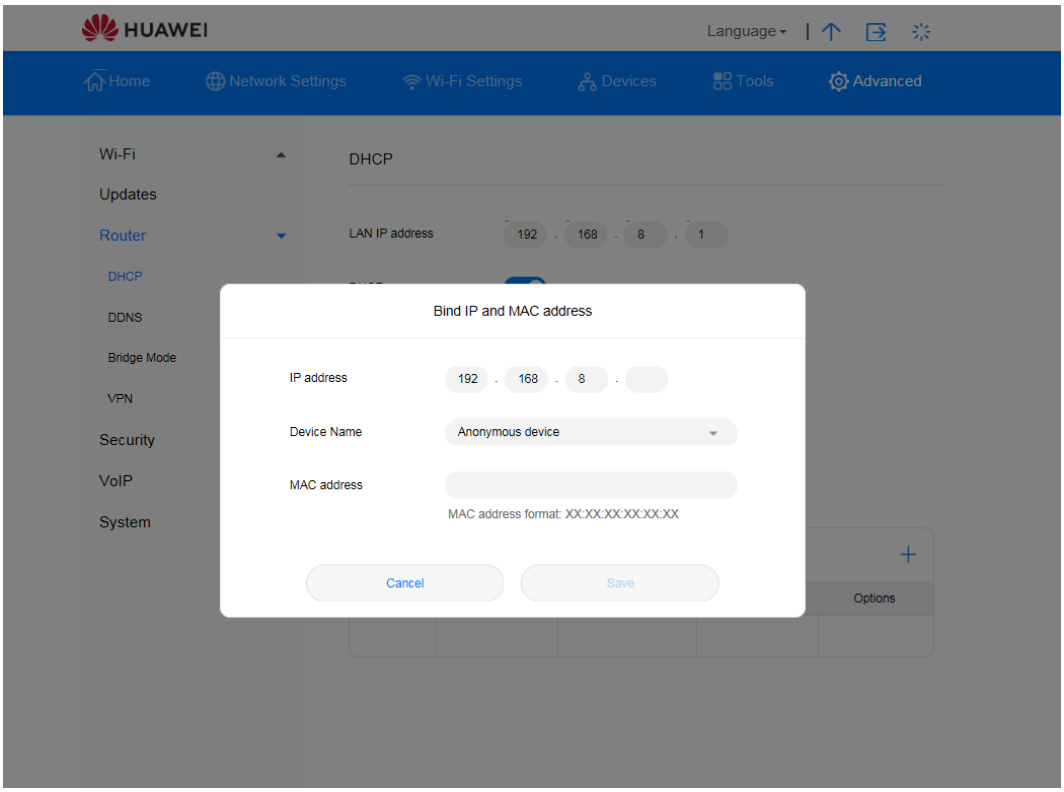

Figure 36 Bind IP and MAC address Settings

3.11 Security Settings

3.11.1 Enabling or Disabling the Firewall

The **Sunrise Internet Box 5G** supports the firewall function to control the transmission of data streams and protect your local area network from unauthorized access.

Procedure

Step 1 Choose **Advanced** > **Security** > **Firewall**

Step 2 Select **Enable firewall** to enable the firewall or clear it to disable the firewall.

Note

Other parameters are available only if you select **Enable firewall**.

Step 3 Select **Enable IP address filter** to enable the function of filtering IP addresses

Step 4 Select **Disable WAN port ping** to disable the ping function

Step 5 Select **Enable domain name filter** to enable the function of filtering URLs

Step 6 Select **Enable MAC filter** to enable the MAC filtering function

Step 7 Click **Save**

----End

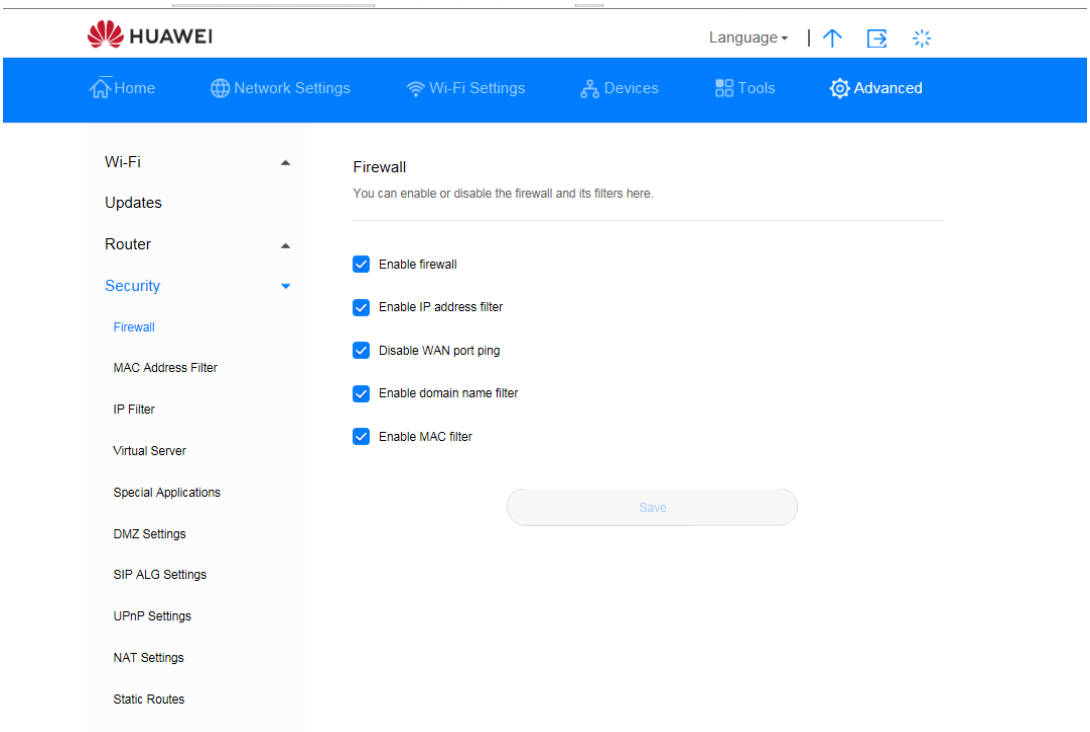

Figure 37 Firewall Settings

3.11.2 Configuring LAN IP Filter

This feature allows user to block/whitelist specific devices connected to the LAN from accessing certain Internet services.

Prerequisite

Ensure that the LAN IP filter is enabled.

Context

TCP/IP for apps

Protocol	Default Port	Service
HTTP	80	Browsing www web pages
SMTP	25	Sending emails
POP3	110	Receiving emails
FTP	21	Transferring files
TELNET	23	Remotely logging into a computer

Note

Contact your service provider if you are unsure of the service port.

Procedure

Step 1 Go to **Advanced** > **Security** > **IP Filter**

Step 2 Select Filter mode **Blacklist** to block and **Whitelist** to allow IP to access the trusted IP

Step 3 Click **New**, and configure settings on the pop-up page according to your needs.

Step 4 User can **Block/Whitelist** the device either from device drop down or by entering device IP address (**LAN IP Address**)

Note

- **Edit**: Modify selected items in the list
- **Delete**: Delete selected items in the list

Step 5 Click **Save**

----End

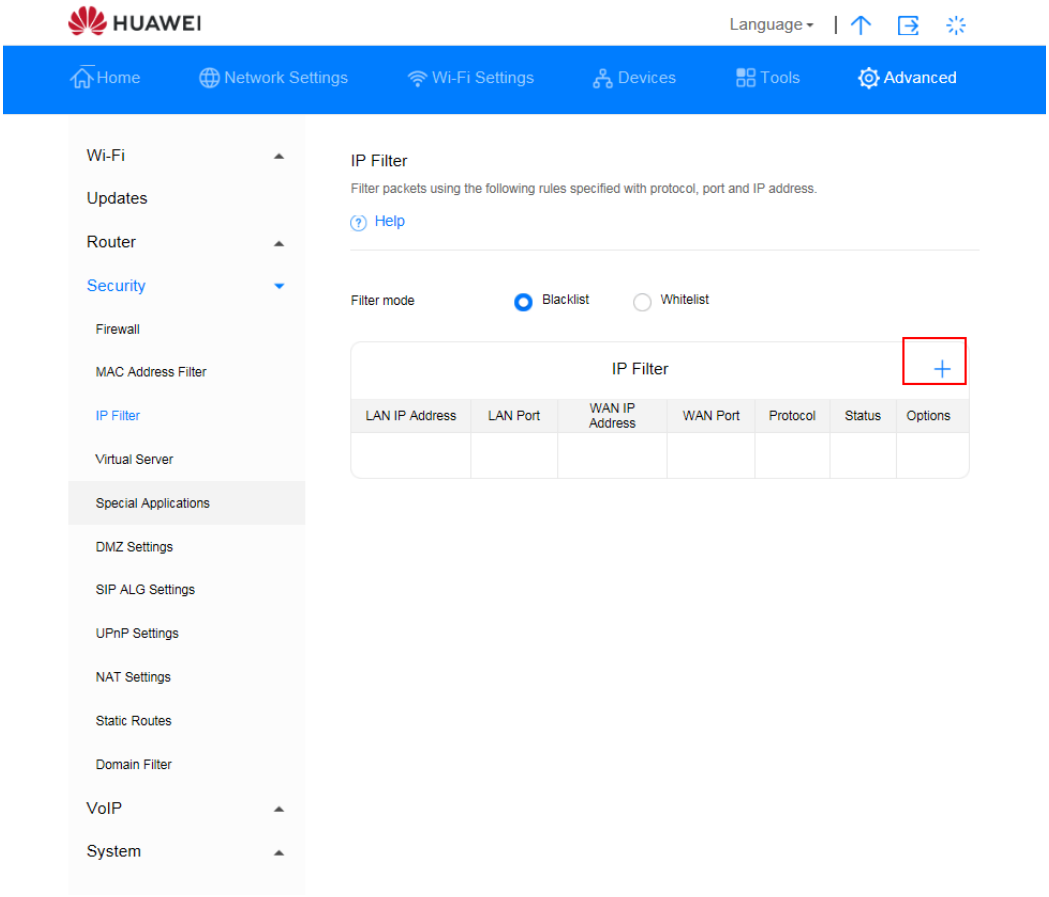

Figure 38 LAN IP Filter

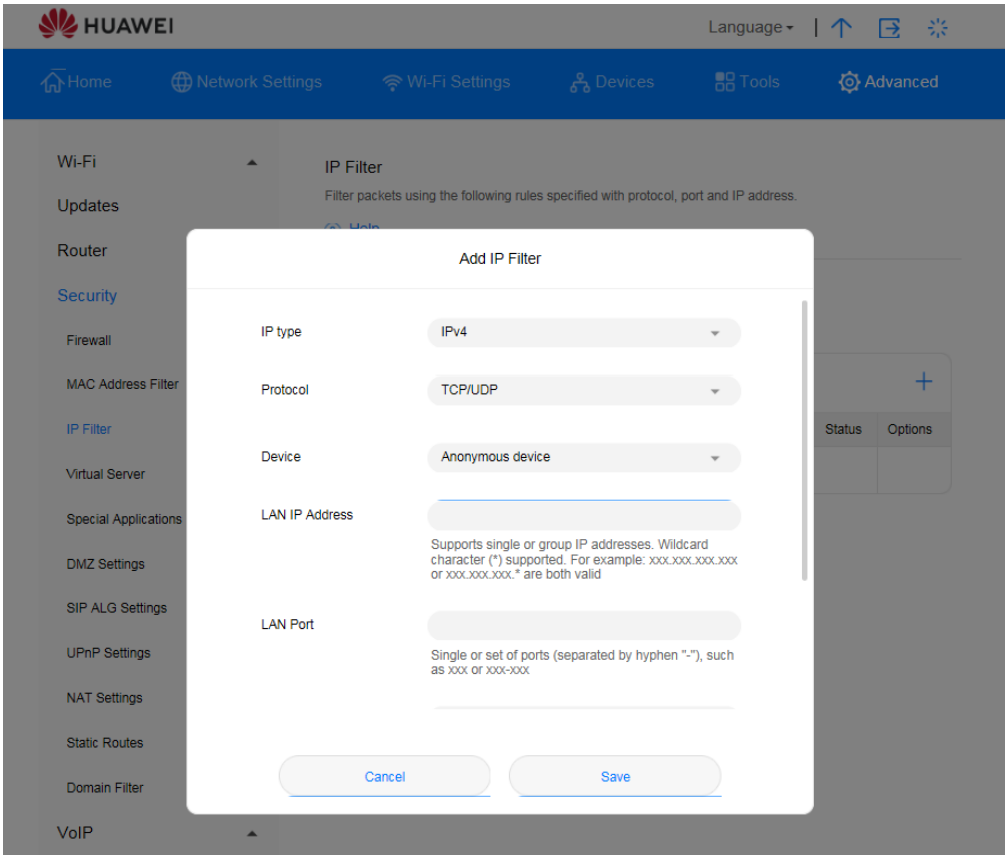

Figure 39 LAN IP Filter Settings

Blocking a Wi-Fi device from accessing certain websites

To block a Wi-Fi device from accessing **internet**

1. Go to **Advanced** > **Security** > **IP Filter**
2. Click **New**, and configure the settings on the pop-up page

Status	Select **On**
IP type	Select **IPv4**
Protocol	Select **TCP/UDP**. **NOTE** If you don't know the protocol type, select **TCP/UDP**, and the **Sunrise Internet Box 5G** will automatically select a matching protocol.
Device	Dropdown with list of devices currently connected or connected in past
LAN Port	Enter **80**
LAN IP Address	You can view the IP addresses of clients connected to the **Sunrise Internet Box 5G** on the **Devices** page. If the user select the Device from Device drop down the IP is auto populated in this field

3. Click **Save**

3.11.3 Configuring a Virtual Server* (not supported Sunrise service)

Note*: configuration and potential issues related to Virtual Server are not part of Sunrise Customer Services support
Note**: Due to Network Address Translation (NAT) remote access to **Sunrise Internet Box 5G** is not possible.

The **Sunrise Internet Box 5G** supports the virtual server to enable external users to use the services provided in the local area network (LAN) using the Hypertext Transfer Protocol (HTTP), File Transfer Protocol (FTP), and other protocols.

Procedure

Step 1 Choose **Advanced** > **Security** > **Virtual Server**

Step 2 Click **New** and set the parameters

Step 3 Click **Save** to save the settings

Note

- **Edit**: to edit an item.
- **Delete**: to delete an item.

Step 4 Click **Status** for the settings to take effect.

----End

Configuring an FTP Server

To enable a client to provide FTP services and be accessed by external users, do the following:

1. Configure a virtual server

Name	Protocol	WAN Port	LAN IP Address	LAN Port
My FTP server	**TCP**	21–22	Enter the IP address	23–24

2. Choose **Advanced** > **System** > **Device Information**, view the wide area network (WAN) IP address of the **Sunrise Internet Box 5G**. For example 10.2.1.123
3. In the browser of an external user, enter the FTP server address (**ftp://10.2.1.123**) and access the FTP services provided by the client

Note

If the default service port is 21-22, the external user should enter **ftp://10.2.1.123:21** or **ftp://10.2.1.123:22** to access the FTP server.

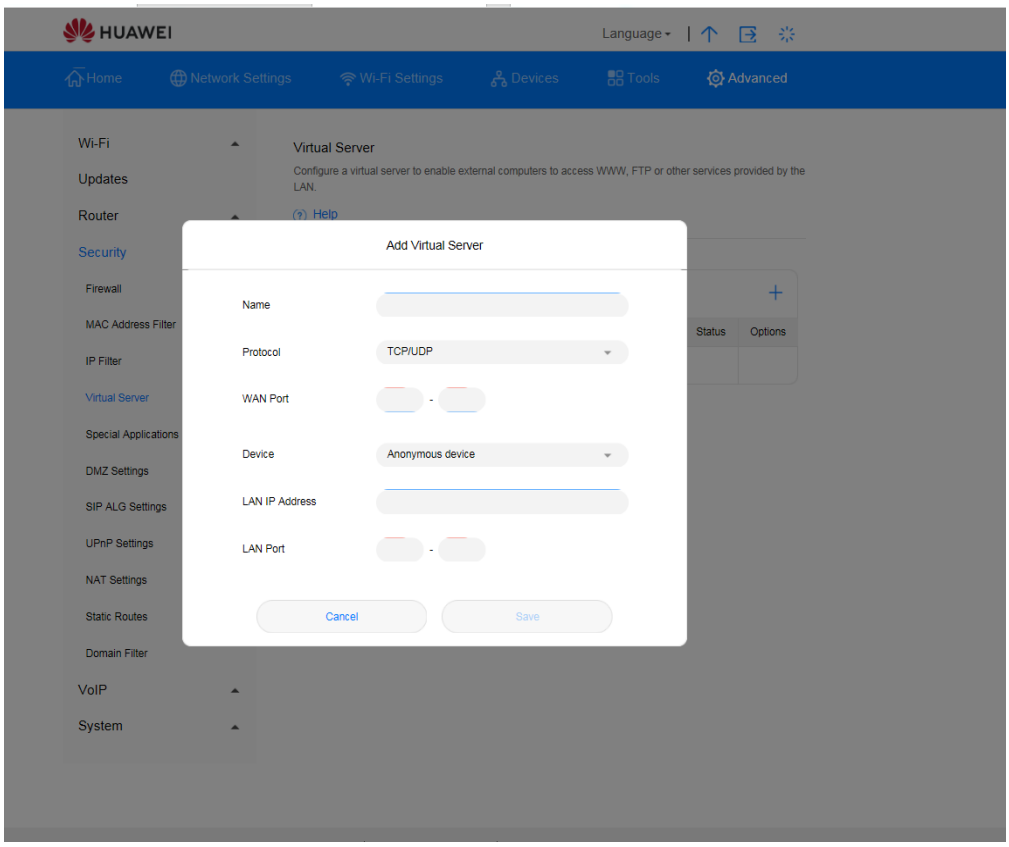

Figure 40 Virtual Server Settings

3.11.4 Configuring a Special Application* (not supported Sunrise service)

Note: configuration and potential issues related to Special Application are not part of Sunrise Customer Services support

The **Sunrise Internet Box 5G** supports the function to use a special application to configure dynamic port forwarding. Certain applications in the local area network (LAN) must use a specified port of the firewall to access remote applications. To set up a Transmission Control Protocol and User Datagram Protocol (TCP/UDP) connection between an application in the LAN and a remote application, the firewall uses this port forwarding function to open the required port.

Procedure

Step 1 Choose **Advanced** > **Security** > **Special Applications**

Step 2 Click **New** and set the parameters

Step 3 Click **Save** to save the settings

Note

- **Edit**: to edit an item
- **Delete**: to delete an item

Step 4 Click **Status** for the settings to take effect

----End

Example of the Configuration of a Special Application

A client in the LAN uses TCP to access the MSN game server through port 47624. When the game starts, the game server uses TCP and port 2400 to set up a connection to the client that tries to access the server. In this case, you must configure dynamic port forwarding, because the game conflicts with the following default firewall rules:

- The firewall blocks external data input.
- The game server can send a connection request to the external IP address of the **Sunrise Internet Box 5G** but cannot send the request to the LAN client that tries to access the game server, because the IP addresses of clients are not open to external devices.

To solve this problem, you must define a set of port forwarding rules. When the client in the LAN sends data to TCP port 47624, the rules allow data input from TCP port 2400. Then data from the game server can be received from and transmitted to the LAN client that sends data to TCP port 47624.

Name	Trigger Protocol	Trigger Port	Open Protocol	Open Port
MSN Gaming Zone	**TCP**	47624	**TCP**	2400

Note

For details about **Trigger Protocol**, **Trigger Port**, **Open Protocol**, and **Open Port**, contact your service provider.

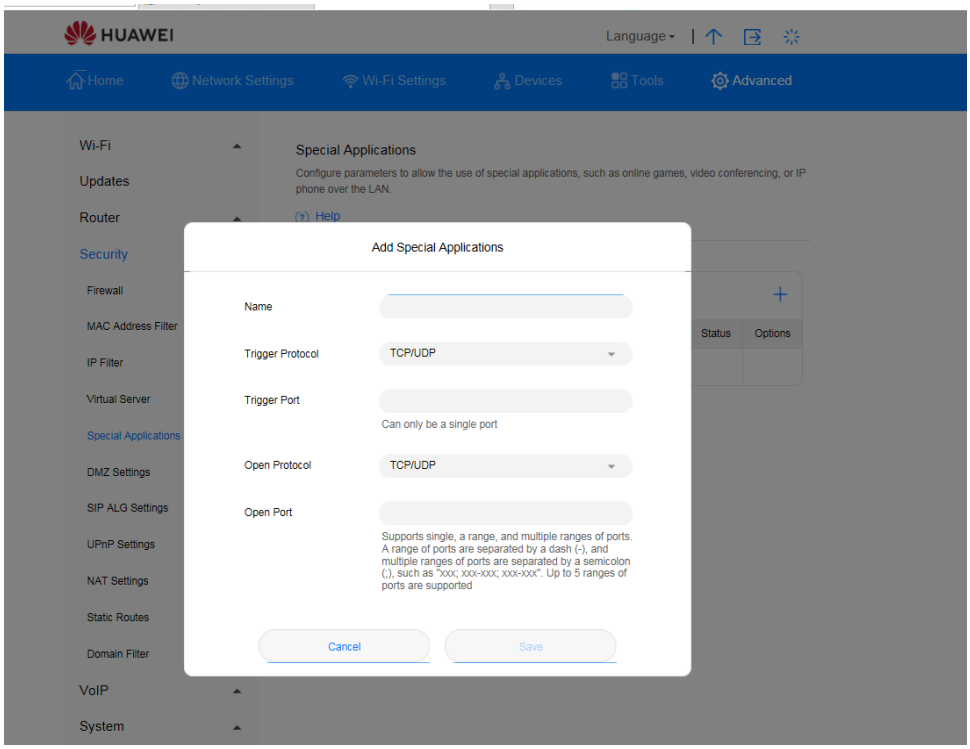

Figure 41 Special Applications Settings

3.11.5 Setting the DMZ* (not supported Sunrise service)

Note: configuration and potential issues related to DeMilitarized Zone (DMZ) are not part of Sunrise Customer Services support

DMZ is an acronym for the demilitarized zone in networks.
DMZ is a logical subnetwork that contains and exposes external-facing services to an untrusted network (e.g. Internet). The purpose of a DMZ is to add an additional layer of security to local area network (LAN) -> an external network node can access only what is exposed in the DMZ, while the rest of the network is firewalled.
If external users cannot access certain network services provided by the local area network (LAN), use the DMZ function provided by the **Sunrise Internet Box 5G** to set the client that provides the required network services as the DMZ host; external users can then access these services properly.

Prerequisite

DMZ users are not protected by the firewall and may be easily attacked. In addition, the security of other users in the LAN is compromised.

Procedure

Step 1 Choose **Advanced** > **Security** > **DMZ Settings**

Step 2 Enable or disable **DMZ status**

Step 3 In **DMZ host IP address**, enter the IP address of the client to be set as the DMZ host

Note

Only a single client can be set as the DMZ host at a time

Step 4 Click **Save**

----End

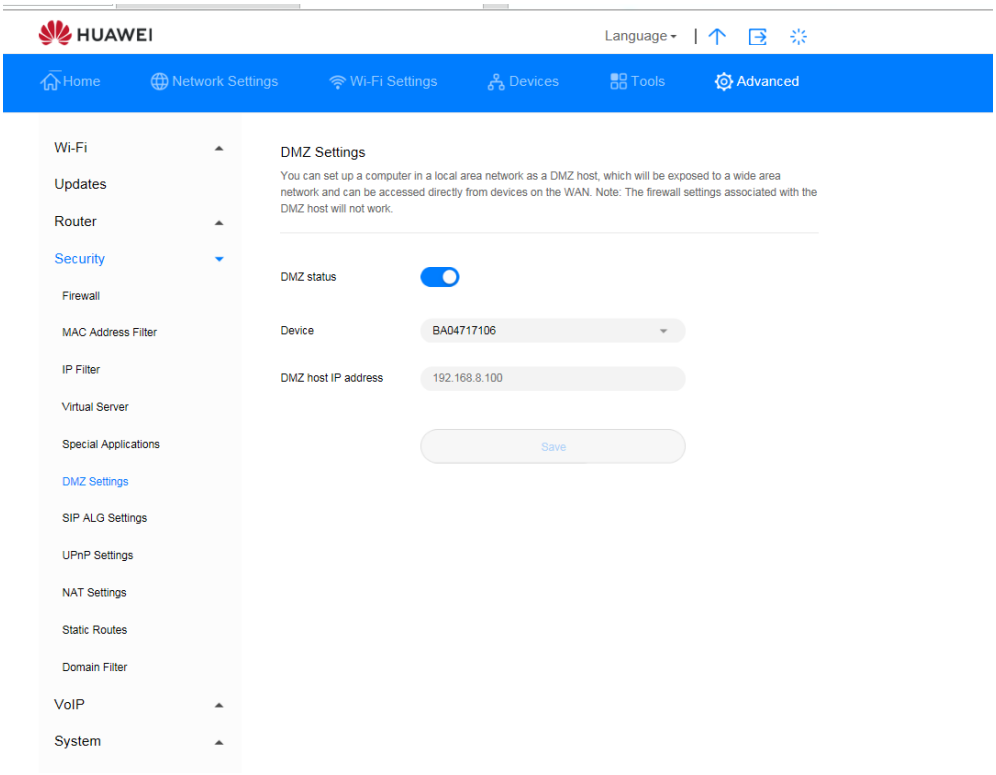

Figure 42 DMZ Settings

3.11.6 Setting the SIP ALG

Note: Sunrise is not supporting 3rd party VoIP / SIP client

The Session Initiation Protocol (SIP) is a control protocol at the Application Layer. It is used to initiate, change, or end a session. An application-level gateway (ALG) is a specific application of SIP and is used to check the status of data packages. To complete a SIP application, enable the SIP ALG.

Procedure

Step 1 Choose **Advanced** > **Security** > **SIP ALG Settings**

Step 2 Enable or disable **SIP ALG status**

Step 3 In **SIP port**, enter the SIP port number provided by your service provider

Step 4 Click **Save**

----End

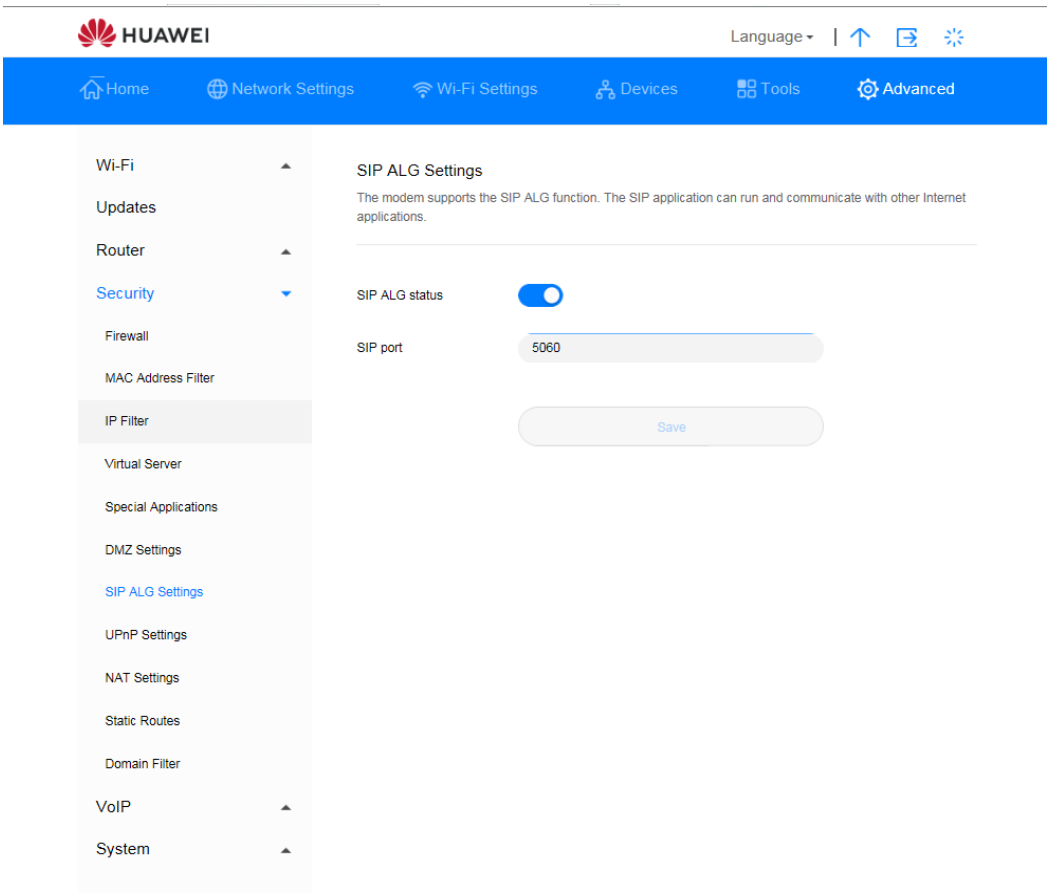

Figure 43 SIP ALG settings

3.11.7 Setting the UPnP* (not supported Sunrise service)

Note: configuration and potential issues related to Universal Plug and Play (UPnP) service are not part of Sunrise Customer Services support

The Universal Plug and Play (UPnP) service realizes intelligent connection between two UPnP devices using port forwarding. UPnP devices can obtain IP addresses automatically and access the Internet dynamically.

Procedure

Step 1 Choose **Advanced** > **Security** > **UPnP Settings**

Step 2 Select **UPnP status** to enable or disable the UPnP service

----End

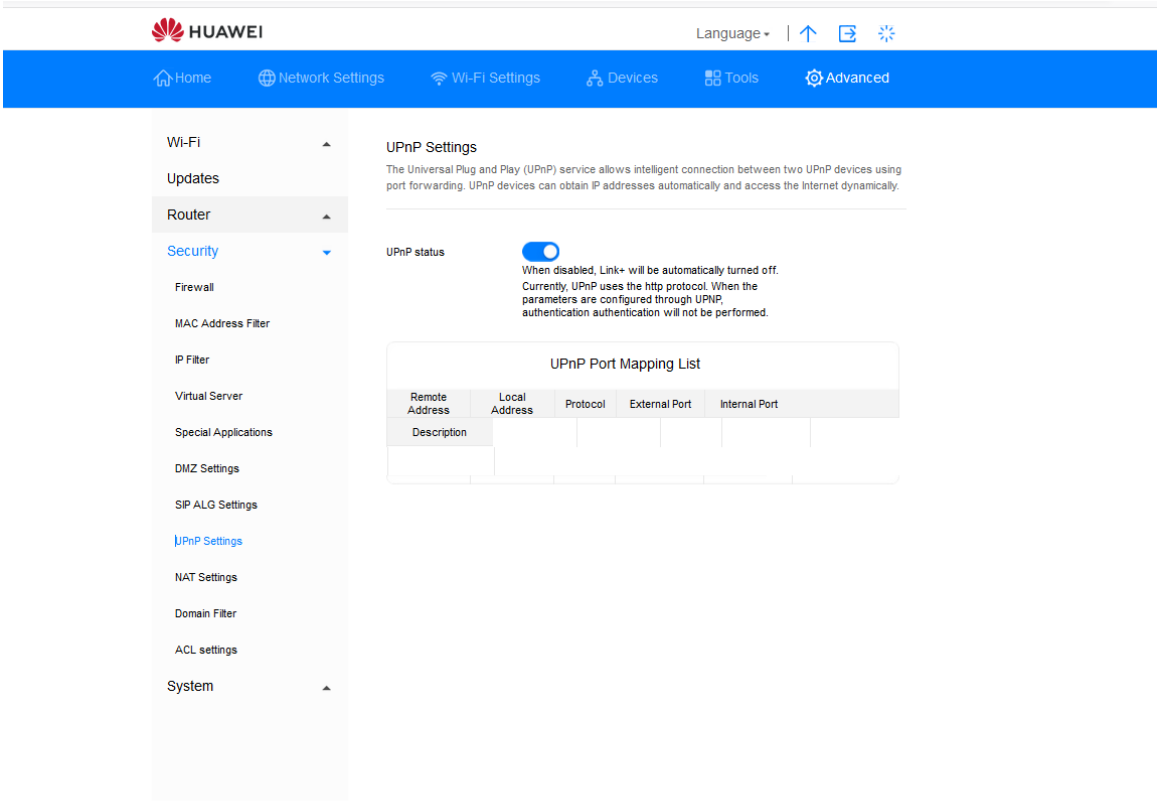

Figure 44 UPnP Settings

3.11.8 Configuring NAT* (not supported Sunrise service)

Note: configuration and potential issues related to Network Address Translation (NAT) are not part of Sunrise Customer Services support

Network address translation is the process of modifying source and destination IP addresses when IP packets are transmitted across a **Sunrise Internet Box 5G** or firewall. The purpose of this process is to translate internal (private) IP addresses into external (public) IP addresses to provide a solution to the impending exhaustion of IP addresses. **Sunrise Internet Box 5G** supports port-restricted cone NAT and symmetric NAT. You can configure the NAT settings as required.

Procedure

Step 1 Choose **Advanced** > **Security** > **NAT Settings**

Step 2 Select from the following options:

- **Cone**: to enable port-restricted cone NAT. This type of NAT are more compatible with applications (including applications on game devices), although it provides lower security
- **Symmetric**: to enable symmetric NAT. This type of NAT are generally adopted by gateways with higher security.

----End

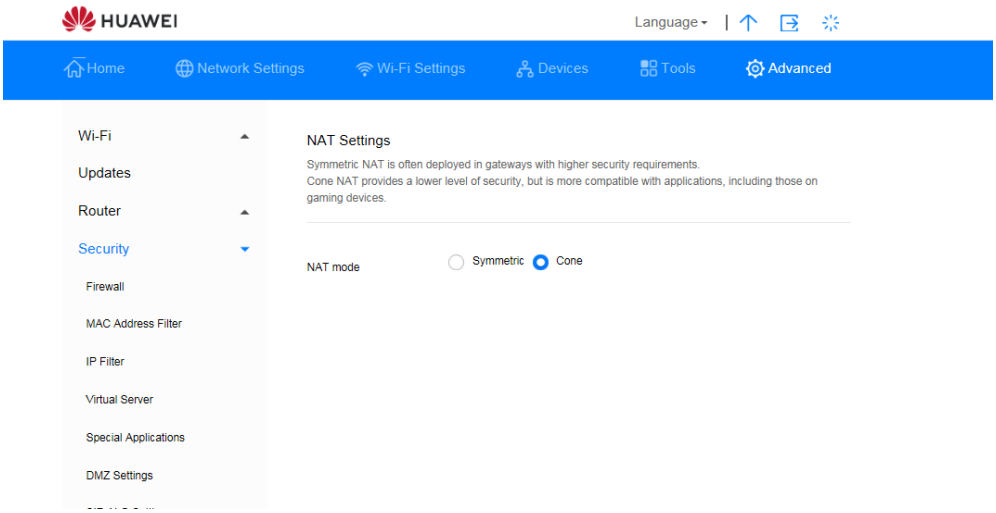

Figure 45 NAT Settings

3.11.9 Filtering Specified Websites

The **Sunrise Internet Box 5G** enables you to specify and filter undesirable websites.

Procedure

Step 1 Choose **Advanced** > **Security** > **Domain Filter**

Step 2 Click **New**

Step 3 In **Domain Name**, enter the address of the website you want to filter

Step 4 Click **OK**

Step 5 Click **Save**

----End

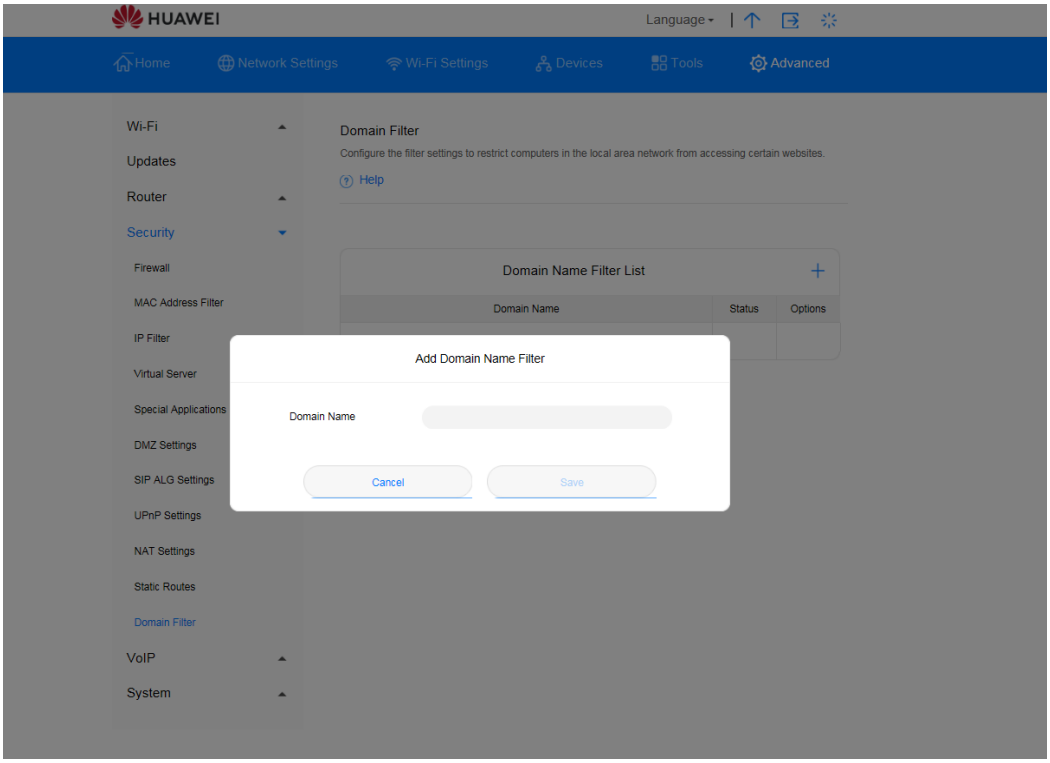

Figure 46 Filtering Specified Websites

3.11.10 Setting the DDNS* (not supported Sunrise service)

Note: configuration and potential issues related to Dynamic Domain Name Service (DDNS) are not part of Sunrise Customer Services support

Dynamic Domain Name Service (DDNS) is a system for mapping a dynamic IP address on a fixed DNS. When the DDNS is enabled, the **Sunrise Internet Box 5G** will associate its dynamic WAN IP to a fixed domain name. Then, **Sunrise Internet Box 5G** services can be accessed through the fixed domain name at anytime, anywhere, without needing to track the **Sunrise Internet Box 5G**'s WAN IP.

Procedure

Step 1 Choose **Advanced** > **Router** > **DDNS**

Step 2 Click **New**

Step 3 In the displayed dialog box, set the DDNS parameters

Note

The user name and password must be registered on the DDNS service provider website

Step 4 Click **Save**

Note

To enable or disable settings of a record, set **Status** of the record to on or off, respectively.

To delete the selected record, click **Delete**.

----End

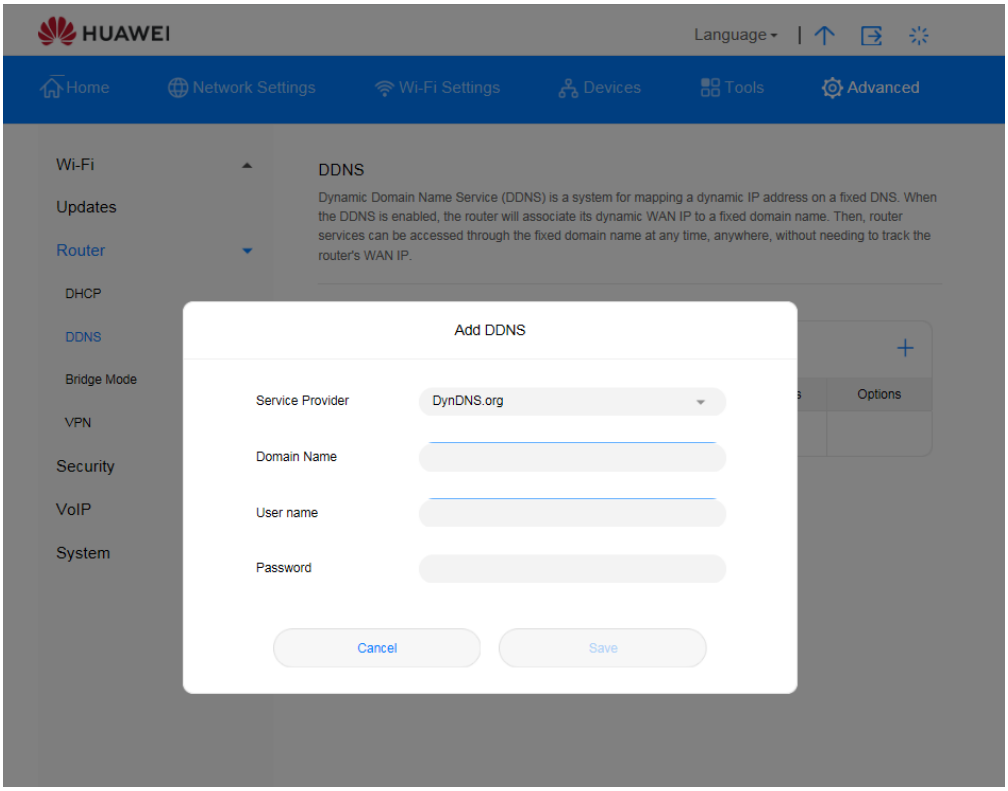

Figure 47 DDNS Settings

Example

To share large files or videos with Internet users:

1. Register the DDNS user name and password on the DDNS service provider website. In this example, the DDNS service provider website is http://www.dyndns.org/, and the registered user name and password are both **admin**
2. In the displayed dialog box, set the parameters as follows

Service Provider	**Domain Name**	**User name**	**Password**
DynDNS.org	**www.abc.com**	**admin**	**admin**

3. Click **Save**
4. Internet users will then be able to access your resources by accessing **www.abc.com** from their browsers

3.11.11 Blocking a Device

Sunrise Internet Box 5G's MAC address filter allows you to block a connected device from accessing other devices on the **Sunrise Internet Box 5G**'s network or from accessing the Internet.

Procedure

Step 1 Go to **Advanced** > **Security** > **MAC Address Filter**

Step 2 Select **Filter mode**:

- **Allow**: If a device's MAC address is in the **MAC address** list, the device can connect to the **Sunrise Internet Box 5G**
- **Block**: If a device's MAC address is not in the **MAC address** list, the device will be denied access to the **Sunrise Internet Box 5G**

Step 3 Click **New**, and configure settings on the pop-up page according to your needs

Step 4 From **Host**, select the device you want to block

Step 5 Enter the device's MAC address into **MAC address**

Step 6 Click **Save**

----End

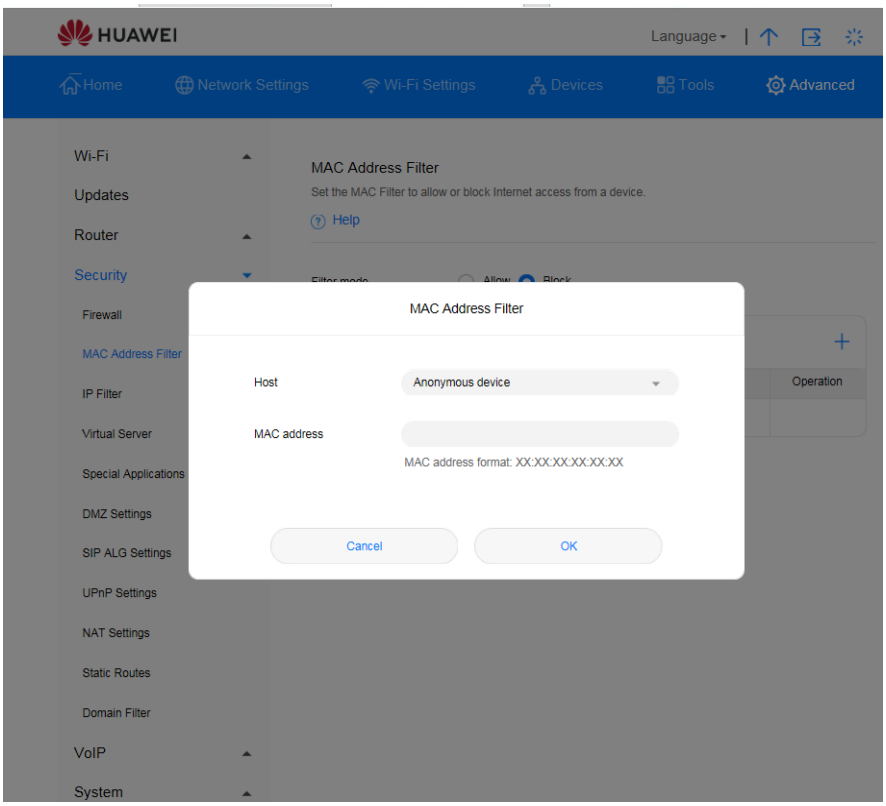

Figure 48 MAC Address Filter

3.11.12 Parental Control

The Wi-Fi timer function helps you manage the time you and your family spend online. When the timer is enabled, family members will only be able to access the Internet during set time periods.

Procedure

Step 1 Go to **Tools** > **Parental Control**

Step 2 User can select time duration of recruiting internet access

Step 3 Repeats help user to configure the blocking is to be repeated on selected days

Step 4 Enable on Device will block the internet access on check devices

Step 5 Click and configure settings according to your needs

----End

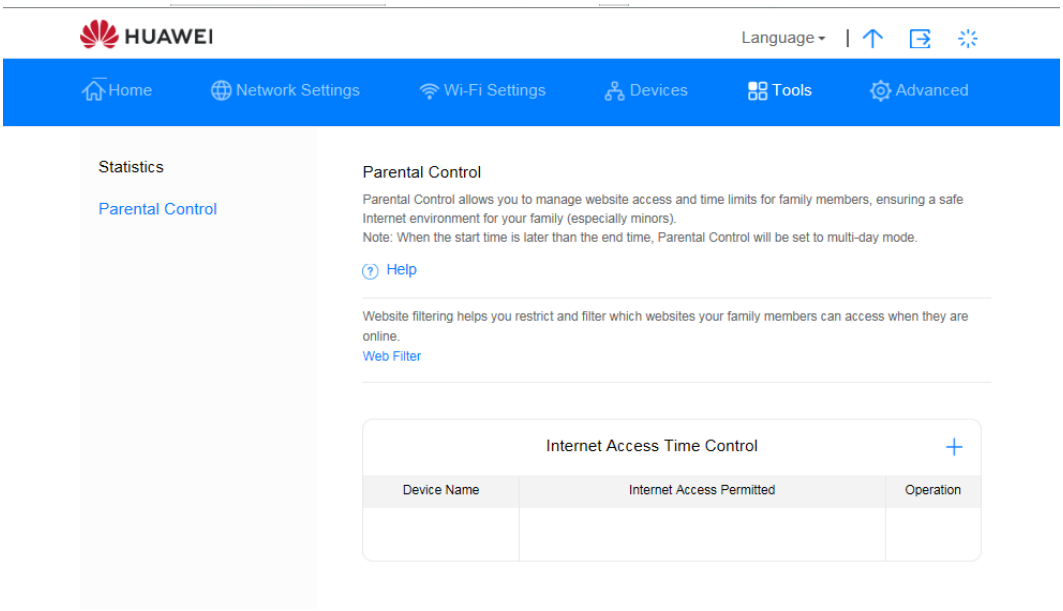

Figure 49 Parental Control Settings

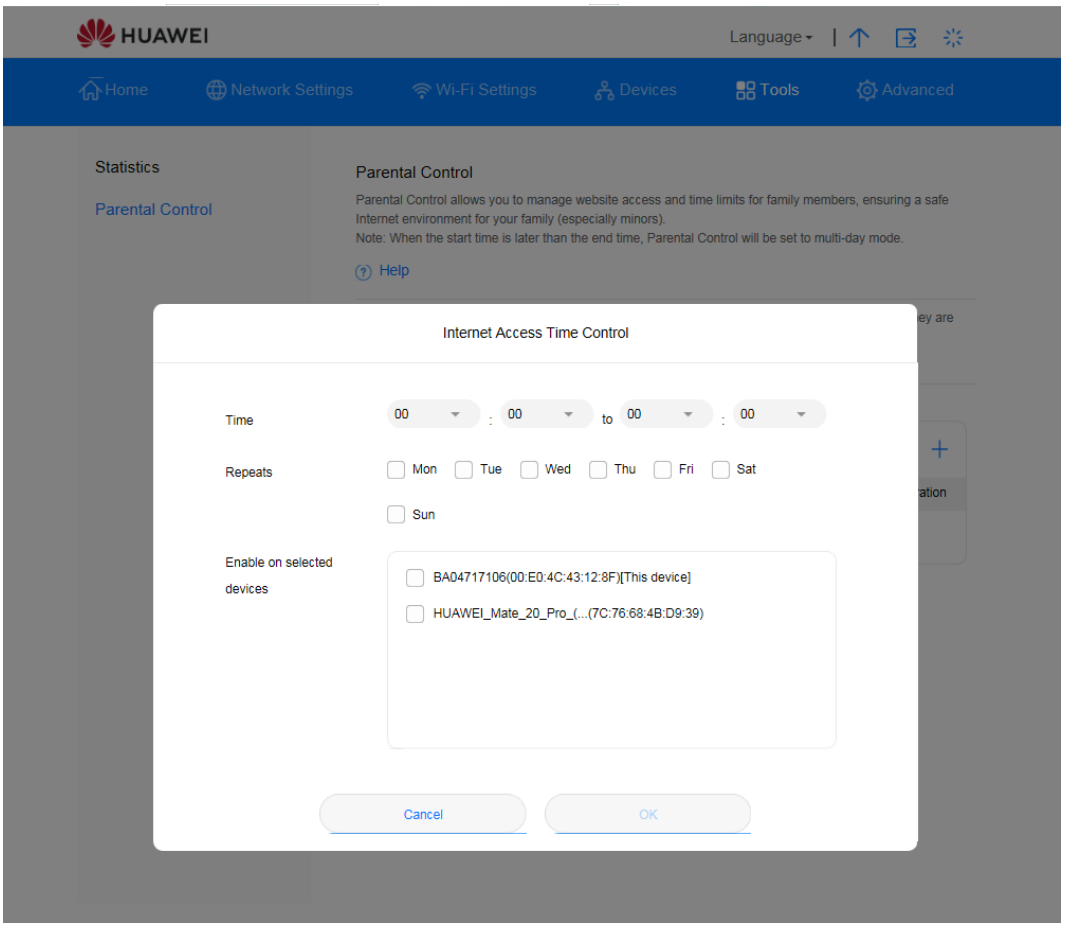

Figure 50 Internet Access Time Control

3.12 System Management

3.12.1 Viewing the device's Information

This section describes how to view the information about the device.

Procedure

Step 1 Choose **Advanced** > **System** > **Device Information**

Step 2 View the device's information

----End

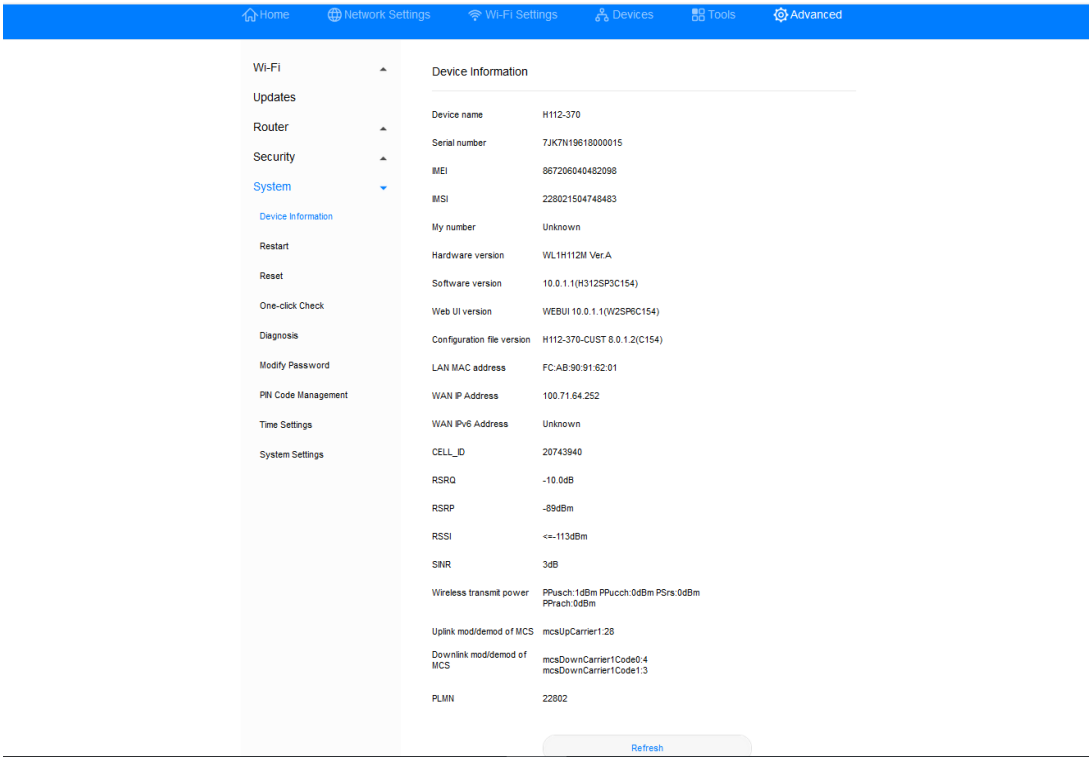

Figure 51 Device Information

3.12.2 Switching Between Languages

This section describes how to switch between the **Sunrise Internet Box 5G**'s user interface languages.

Procedure

Step 1 Click the drop-down list in upper right corner of the page.

Step 2 From the language drop-down list, select the desired language.

----E

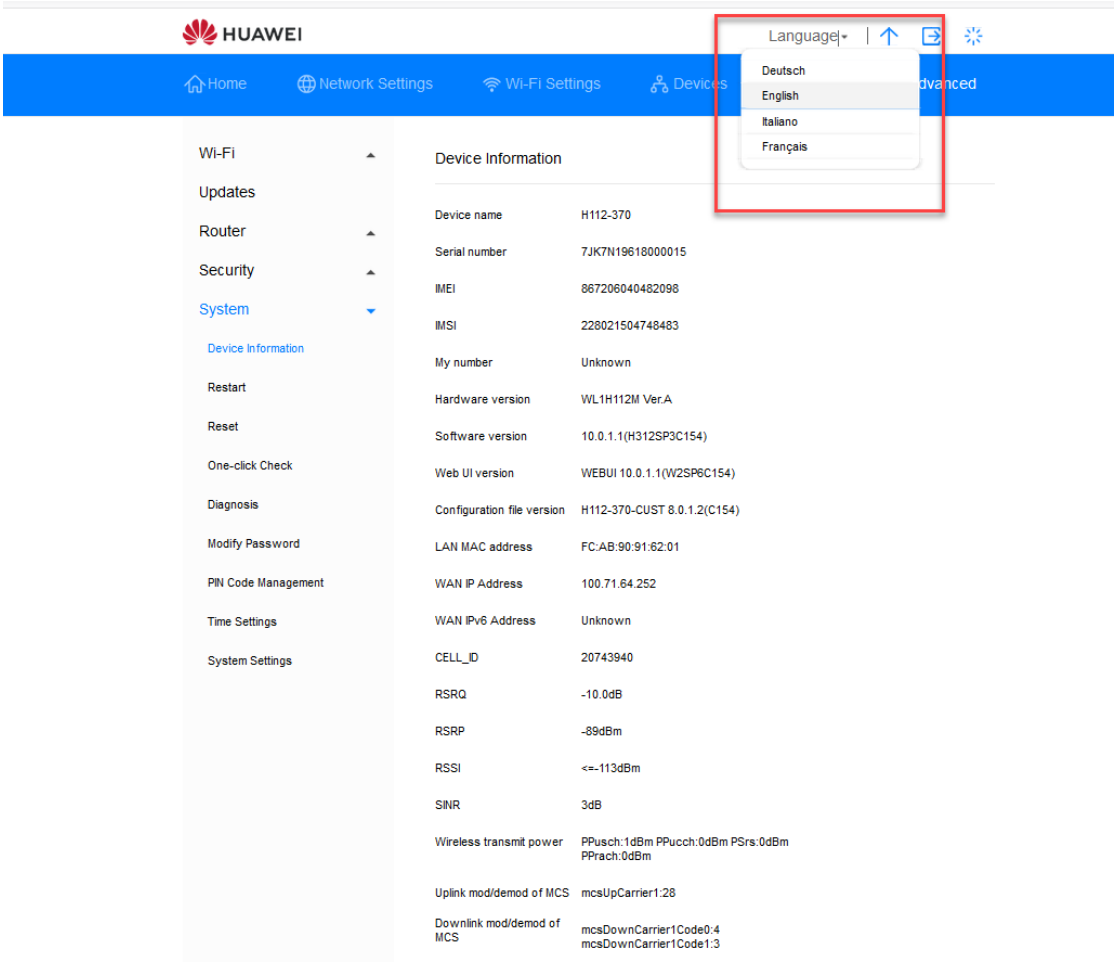

Figure 52 Language Settings

3.12.3 Changing the Password

To prevent unauthorized access to the management page, change the login password.

Procedure

Step 1 Choose **Advanced** > **System** > **Modify Password**

Step 2 Enter the current password

Step 3 Enter a new password and confirm it

Note

The password can only contain numbers, letters, and symbols (English characters only).

Step 4 Click **Save**

----End

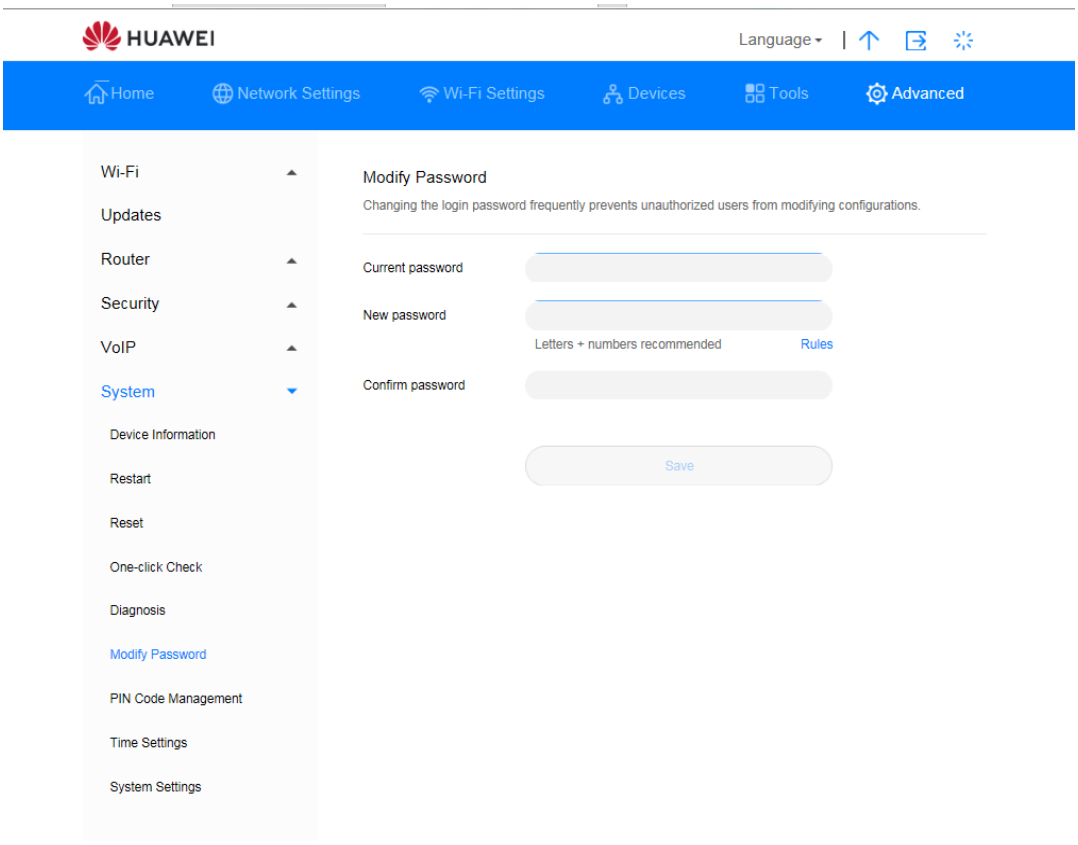

Figure 53 Changing the Password

3.12.4 Restoring Default Settings

After you restore the **Sunrise Internet Box 5G** to its default settings, your personal information will be deleted, and parameters will be restored to their default values.

Procedure

Step 1 Choose **Advanced** > **System** > **Reset**

Step 2 Click **Reset**

----End

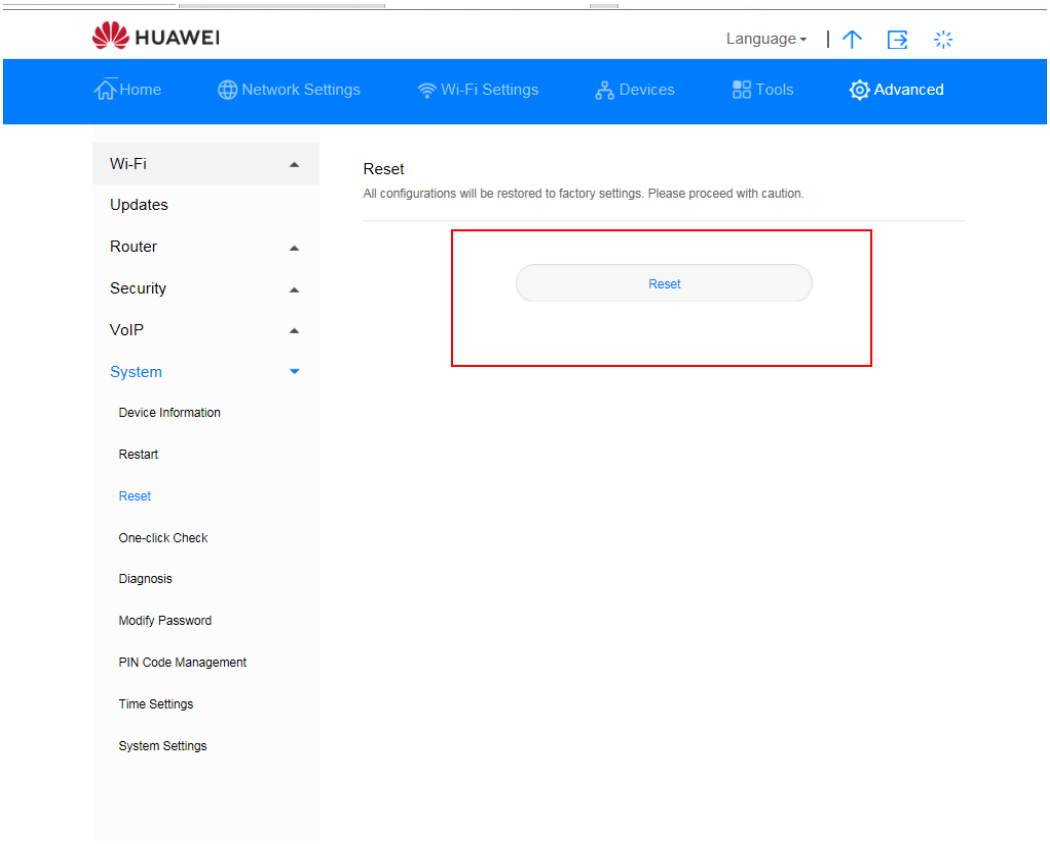

Figure 54 Restoring Default Settings

3.12.5 Rebooting the Sunrise Internet Box 5G

This section describes how to reboot the **Sunrise Internet Box 5G**.

Procedure

Step 1 Choose **Advanced** > **System** > **Restart**

Step 2 Click **Restart**

----End

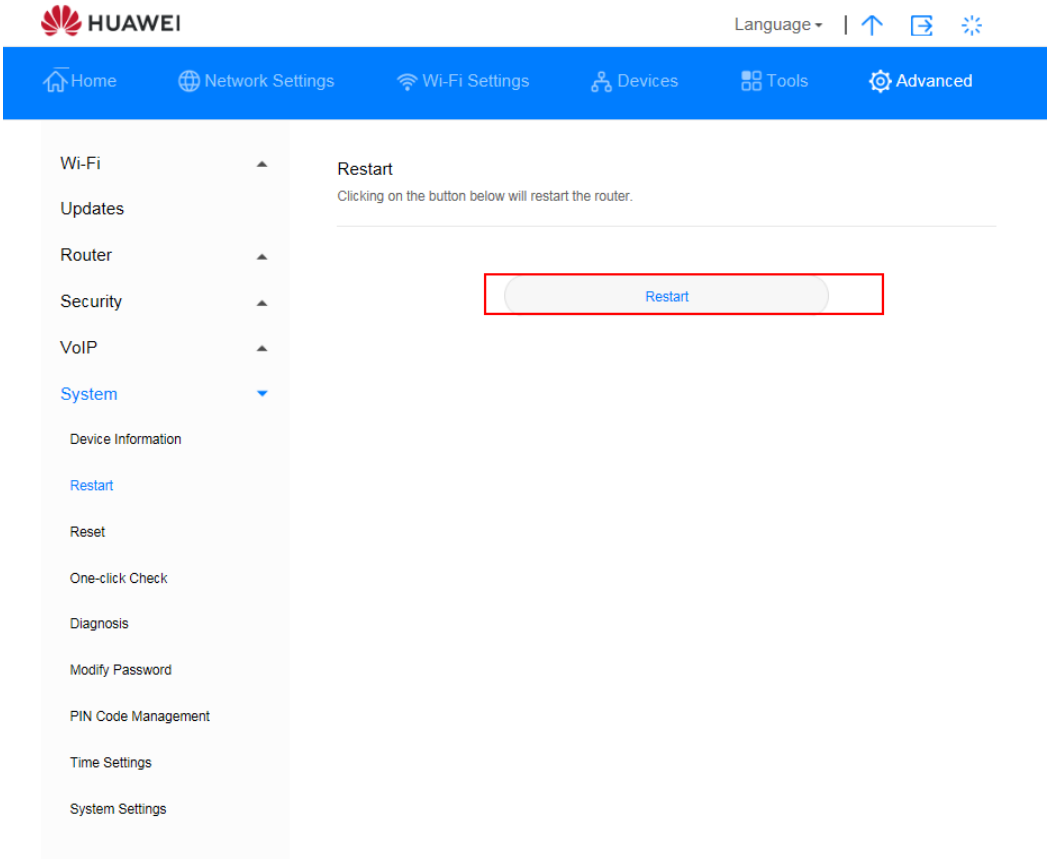

Figure 55 Rebooting the Sunrise Internet Box 5G

3.12.6 Diagnosing Network Connection Exceptions

If the **Sunrise Internet Box 5G** cannot connect to the Internet, use the diagnostics tools to identify the possible causes.

Performing a Ping Test

If the **Sunrise Internet Box 5G** cannot connect to the Internet, perform a ping test to identify the possible causes.

Procedure

Step 1 Choose **Advanced** > **System** > **Diagnosis**

Step 2 Select **Ping** from the **Diagnosis method** drop-down list box

Step 3 In the **Destination IP address/domain name** text box, enter the IP address or domain name, for example www.google.com

Step 4 Set **Timeout period**

Step 5 Click **Diagnosis**

The diagnostics results are displayed in the **Result** area on the bottom of the page.

----End

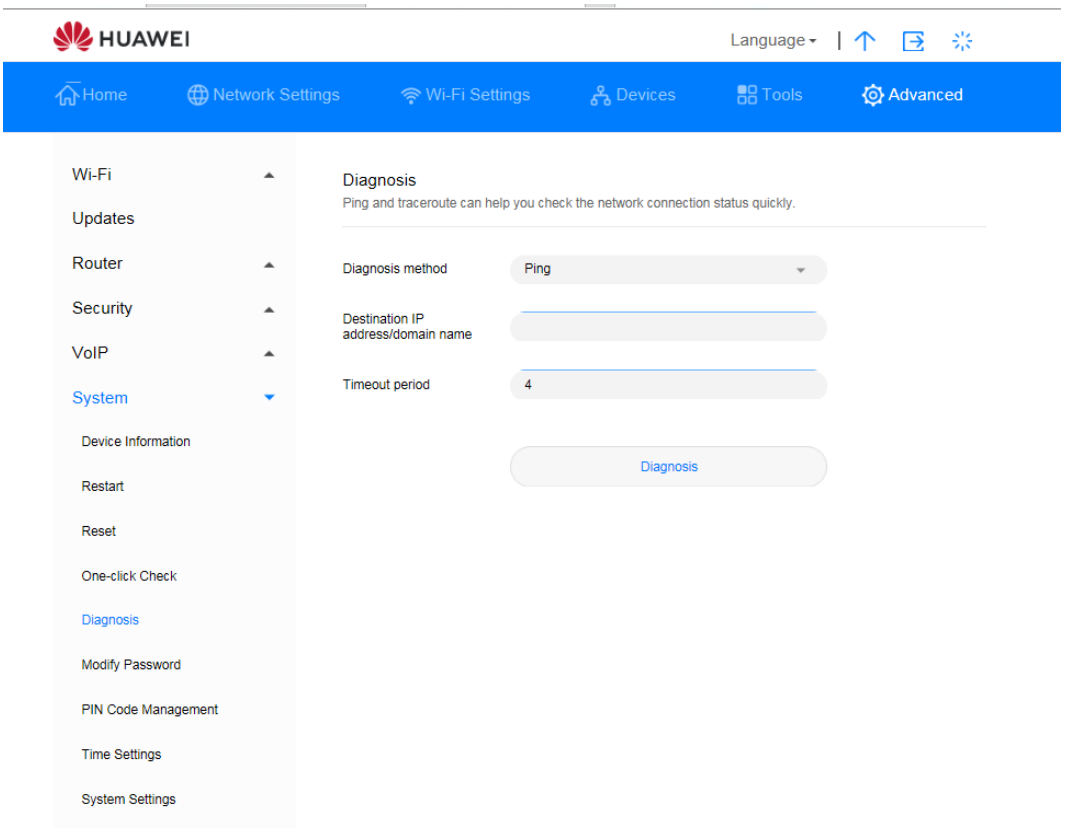

Figure 56 Ping Test

Performing a Traceroute Test

If the **Sunrise Internet Box 5G** cannot connect to the Internet, perform a traceroute test to identify the possible causes.

Procedure

Step 1 Choose **Advanced** > **System** > **Diagnosis**

Step 2 Select **Traceroute** from the **Diagnosis method** drop-down list box

Step 3 In the **Destination IP address/domain name** text box, enter the IP address or domain name, for example 8.8.8.8 or www.google.com

Step 4 Set **Maximum hops** and **Timeout period**

Step 5 Click **Diagnosis**

The diagnostics results are displayed in the **Result** area on the bottom of the page.

----End

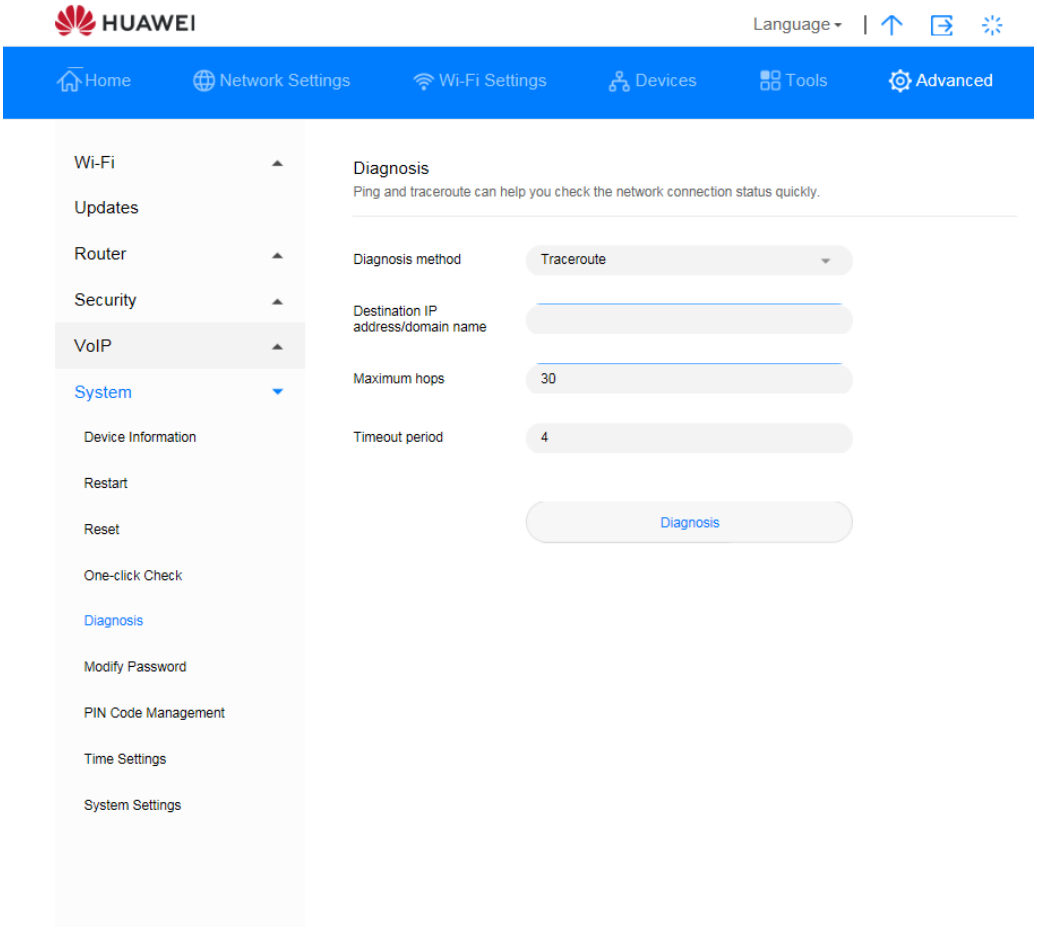

Figure 57 Traceroute Test

3.12.7 System logs

Logs record user operations and key running events.

Procedure

Step 1 Choose **Advanced** > **System** > **System Settings**

Step 2 Select the corresponding log level from the **Display type** drop-down list

Step 3 Select the corresponding log level from the **Display level** drop-down list

Note

All logs are displayed in the output box.

----End

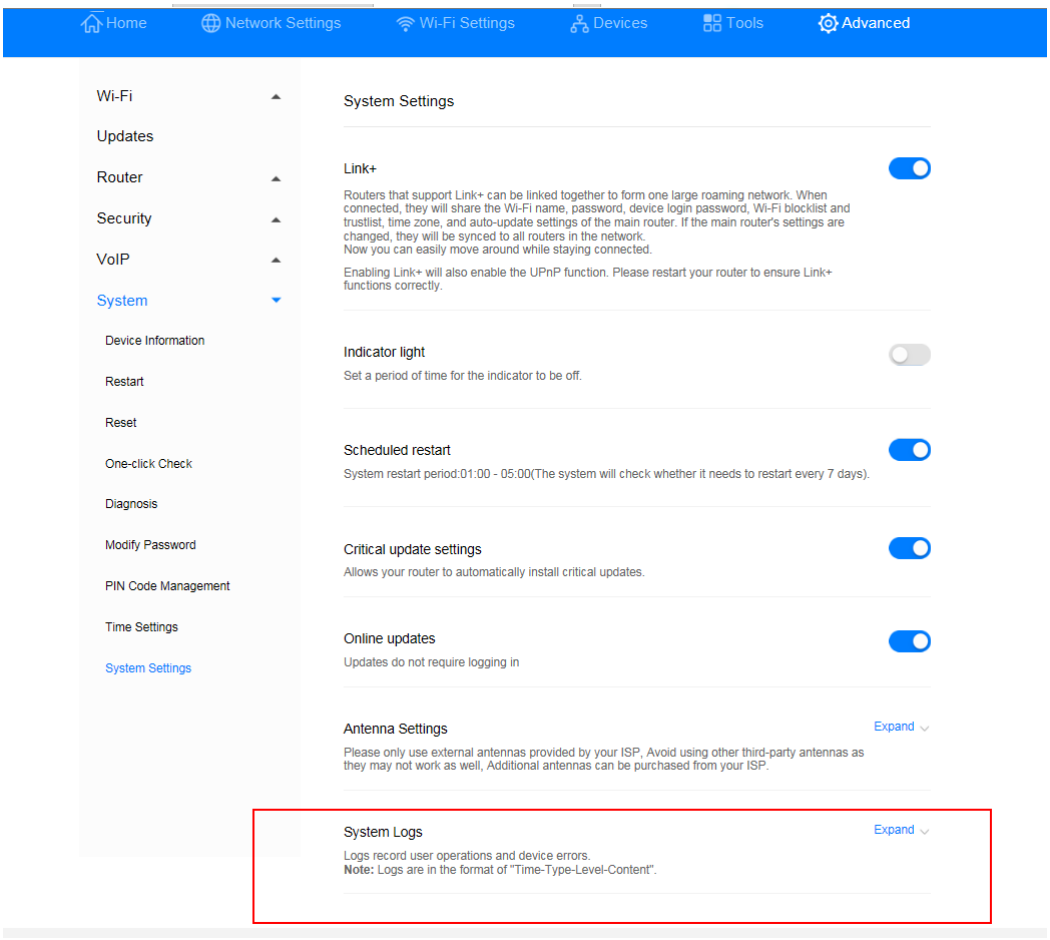

Figure 58 System Logs

3.12.8 Setting the Antenna Type

This topic describes how to set the antenna type.

Procedure

Step 1 Choose **Advanced** > **System** > **System Settings**

Step 2 Select the antenna type from the drop-down list (Auto, Internal, External, Mix)

Step 3 Click **Save**

----End

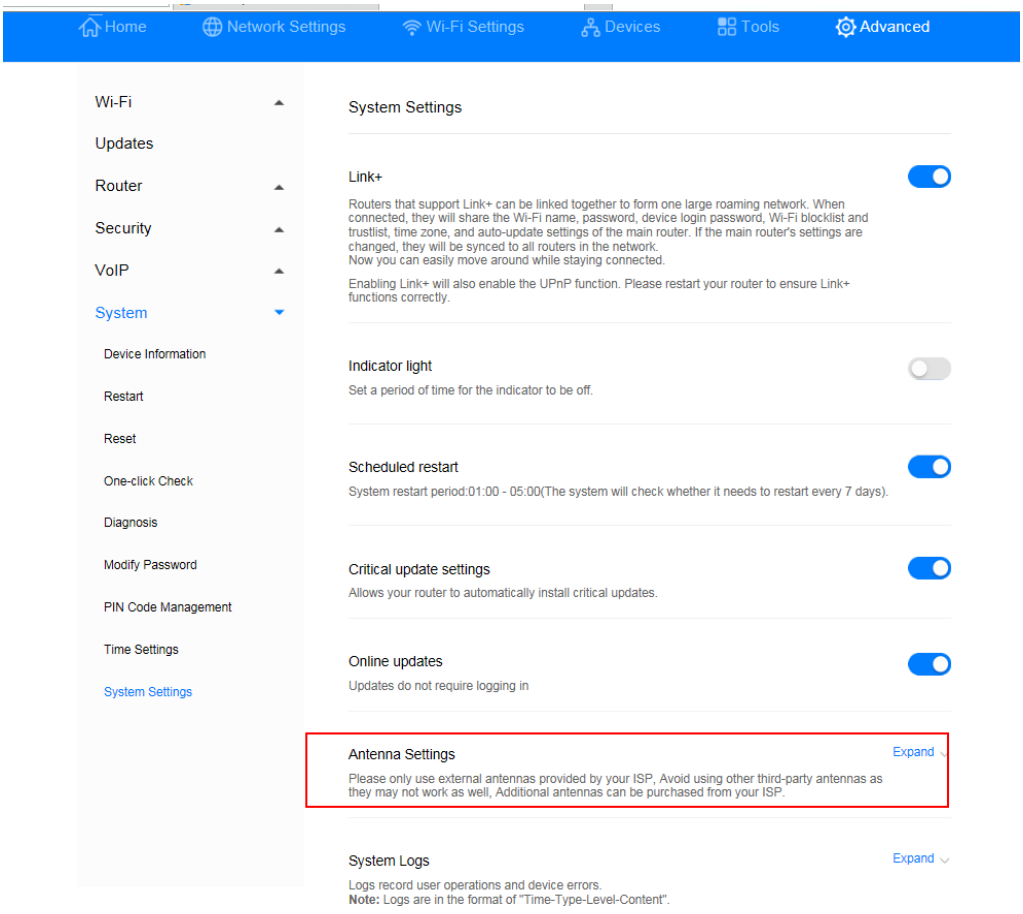

Figure 59 Antenna Settings

3.12.9 Update Settings* (not supported Sunrise service)

Note: This function is not recommended nor supported by Sunrise

Once this feature is enabled, you will be able to perform an online update without logging in to the configuration management page.

Context

- The update without login feature is enabled by default on all software versions that support this feature.
- Once enabled, all Wi-Fi users connected to **Sunrise Internet Box 5G** can update the device without logging in. If you do not wish to let other users perform an update, it is recommended that you disable this feature to avoid security risks.

Procedure

Step 1 Choose **Advanced** > **System** > **System Settings**

Step 2 Select **Online updates**

----End

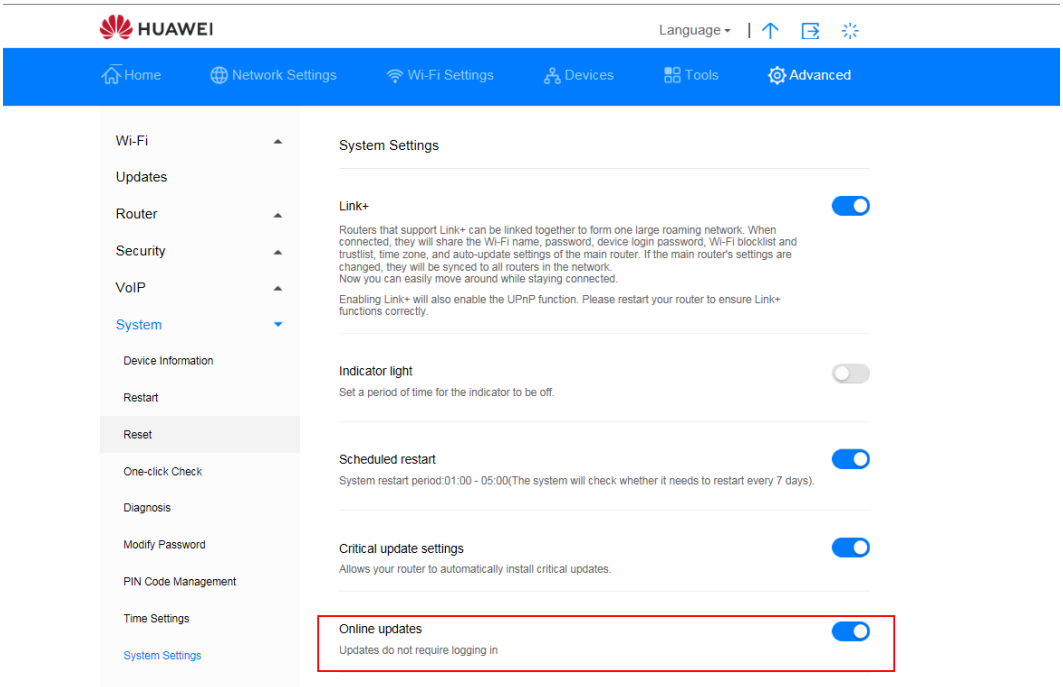

Figure 60 Online update

3.12.10 Scheduled restart

You can set the system to restart within the specified time period.

Procedure

Step 1 Choose **Advanced** > **System** > **System Settings**

Step 2 Select the **Scheduled restart** check box

----End

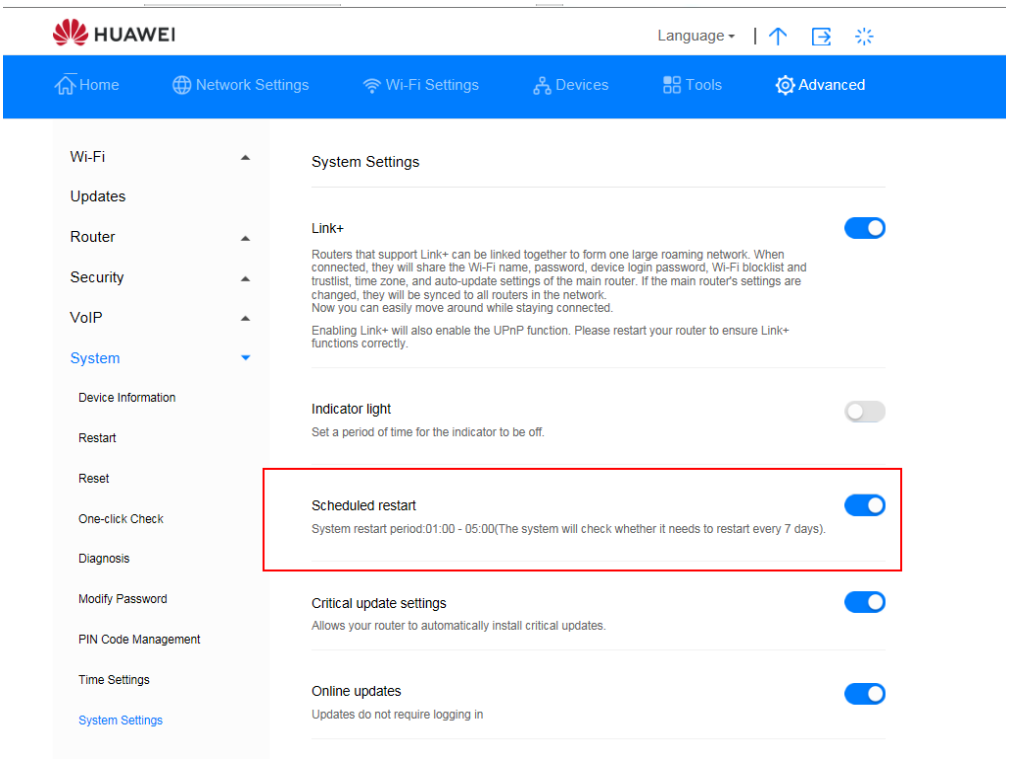

Figure 61 Scheduled restart

3.12.11 Enabling Link+* (not supported Sunrise service)

Note: configuration and potential issues related to Link+ are not part of Sunrise Customer Services support

Link+ enables interconnection between devices.

Procedure

Step 1 Choose **Advanced** > **System** > **System Settings**

Step 2 Enable **Link+**

----End

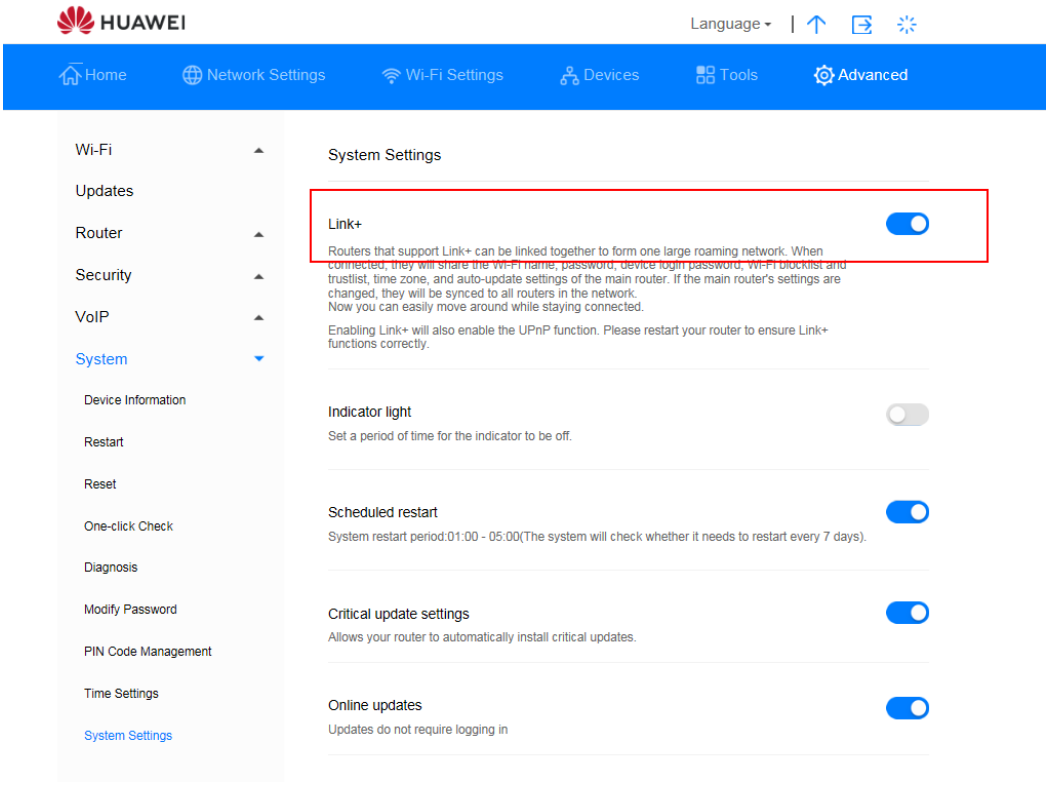

Figure 62 Link+

3.13 Configuring Time Services

3.13.1 Enabling SNTP

Enable SNTP (Simple Network Time Protocol) to sync the **Sunrise Internet Box 5G** to the server time.

Procedure

Step 1 Go to **Advanced** > **System** > **Time Settings**

Step 2 Enable **SNTP**

Step 3 Select **Primary NTP server**, the preferred server to sync to

Step 4 Select **Primary NTP server**, the alternative server to sync to

Step 5 Select **Local time zone**

Step 6 Click **Save**

----End

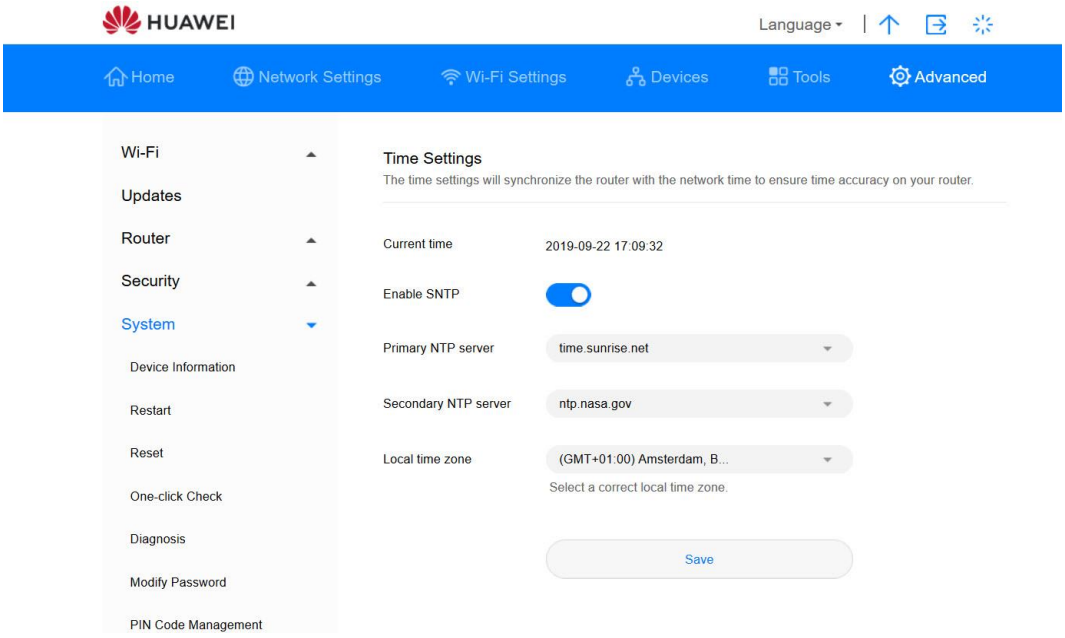

Figure 63 Time Settings

4 FAQ/Troubleshooting

4.1 General FAQ

4.1.1 What devices can be connected to the LAN port? What is the maximum data transmission rate?

- The LAN port can connect to computers, printers, TV boxes, and other devices that can connect to the Internet.
- The maximum data transmission rate is 1Gbps.

4.1.2 What is the input voltage range of my Sunrise Internet Box 5G?

The input voltage range of your **Sunrise Internet Box 5G** is 90 VAC to 264 VAC.

4.1.3 What's the coverage area of my Sunrise Internet Box 5G's Wi-Fi network?

Your **Sunrise Internet Box 5G** meets the Wi-Fi coverage requirements for most home usage scenarios. The actual coverage effect depends on the placement of your **Sunrise Internet Box 5G**, the structure of your home, and the level of Wi-Fi interference.

If there are multiple Wi-Fi signals nearby, set your **Sunrise Internet Box 5G** to a channel with less interference.

4.1.4 How many connections does the Sunrise Internet Box 5G support?

- You can connect directly up to 2 devices to the **Sunrise Internet Box 5G** using the LAN port.
  Note: more devices can be connected over switch connected to LAN port.
- You can connect up to 32 devices to Wi-Fi network, however Sunrise recommends not to connect more than 15 devices simultaneously

4.1.5 What is the daily power consumption of my Sunrise Internet Box 5G?

Under normal circumstances, **Sunrise Internet Box 5G's** daily power consumption should be between 0.2 kWh and 0.4 kWh.

4.1.6 Why does the Sunrise Internet Box 5G become hot after a while? Does that affect the usage?

Sunrise Internet Box 5G's surface temperature may rise after it has been working for a long time, but its temperature won't differ more than 30°C from the indoor temperature. This is normal and does not indicate an issue with **Sunrise Internet Box 5G**. It is recommended that you unplug **Sunrise Internet Box 5G** when it is not in use. You can then re-plug it in when you need to use it again.

4.1.7 What does the Hi/WPS button do?

You can use the Hi/WPS button to enable WPS function. The Hi/WPS button allows you to connect smart home devices that support WPS to the Wi-Fi network of the **Sunrise Internet Box 5G** with a single button press in order to build a distributed smart home network with automatic hotspot switching and wider signal coverage.

WPS: When the indicator is steady on, press the **Sunrise Internet Box 5G** Hi/WPS button for 5 seconds and within two minutes press WPS button on other Wi-Fi device (for example, your printer) to enable the standard WPS negotiation and connect the Wi-Fi device to the Wi-Fi network of the **Sunrise Internet Box 5G**.

Apple Devices are not supporting WPS

4.1.8 What does an external antenna port do?

The external antenna port of your **Sunrise Internet Box 5G** is used to connect the external antenna (optional) to improve signal reception.

Note

Generally, the **Sunrise Internet Box 5G**'s built-in antenna is enough to provide adequate signal strength and there is no need to connect an external antenna using this port.

You must use antennas that are compatible with your **Sunrise Internet Box 5G**. Contact your device supplier before purchasing external antennas.

4.1.9 What different setup and management methods are there?

When the **Sunrise Internet Box 5G** is connected to a device, use the device browser to log in to the web-based management page (http://192.168.8.1).

4.1.10 How do I check the product version?

1. Connect your computer to the **Sunrise Internet Box 5G's** Wi-Fi network (or connect the computer to the **Sunrise Internet Box 5G's** LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your **Sunrise Internet Box 5G**'s web-based management page
2. Go to **Advanced > System > Device Information** to check the product version

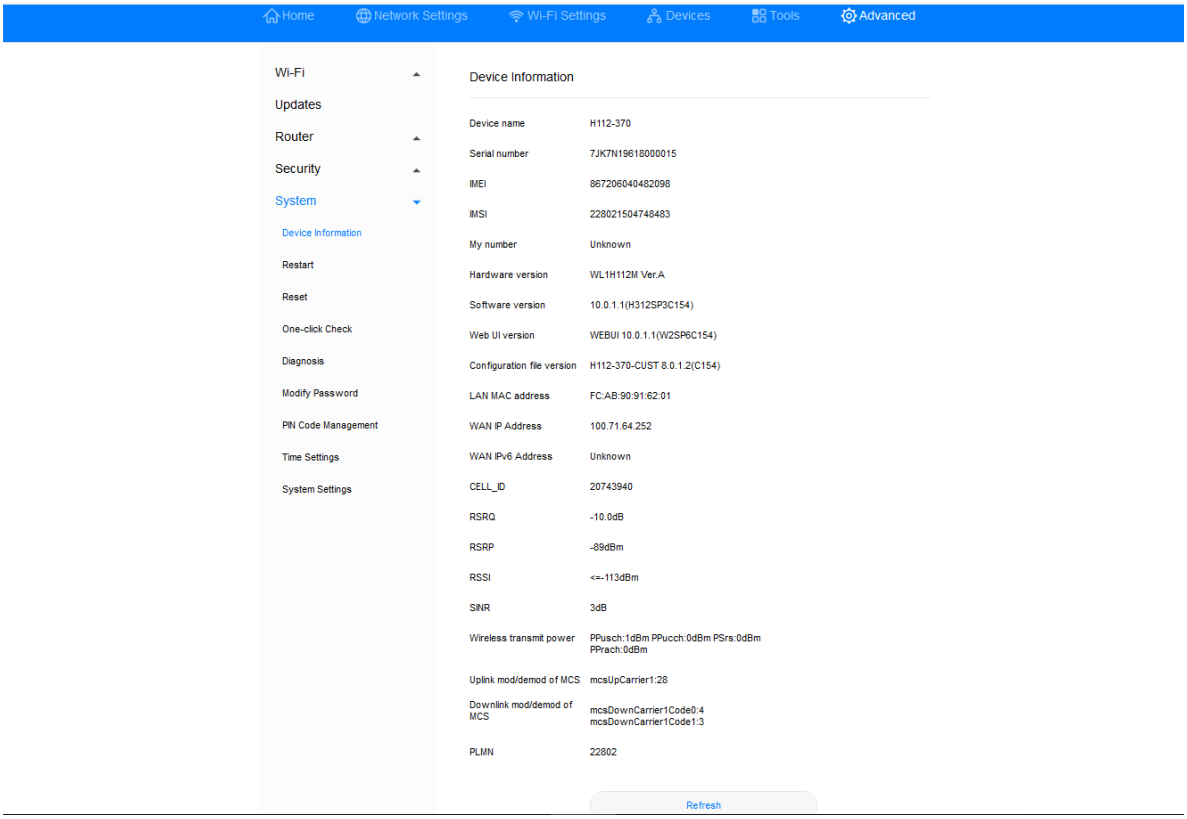

Figure 64 Device Information

----End

4.1.11 Are online updates supported?

Sunrise does not support nor recommend to perform online not manual update of **Sunrise Internet Box 5G**

4.1.12 How do I restore the Sunrise Internet Box 5G to its factory settings?

Method 1: Power on the **Sunrise Internet Box 5G** and use a sharp-pointed object (for example a needle) to press and hold the reset hole. Release when the Power indicator blinks. After the **Sunrise Internet Box 5G** has restarted, it is restored to its factory settings.

Method 2: Log in to the web-based management page and choose **Advanced** > **System** > **Reset** and click the **Reset** button.

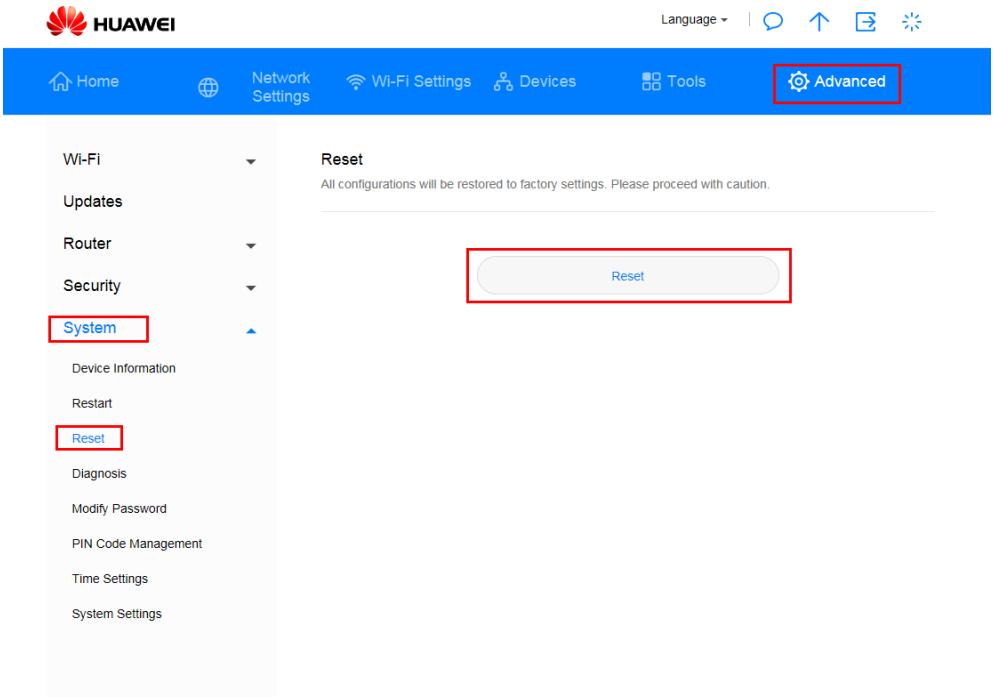

Figure 65 Reset Sunrise Internet Box 5G

4.1.13 How do I modify my login password?

1. Connect your computer to the **Sunrise Internet Box 5G**'s Wi-Fi network (or connect the computer to the **Sunrise Internet Box 5G**'s LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your **Sunrise Internet Box 5G**'s web-based management page

2. Choose **Advanced > System > Modify Password**. Enter the current password, the new password and confirm the new password and then click **Save**

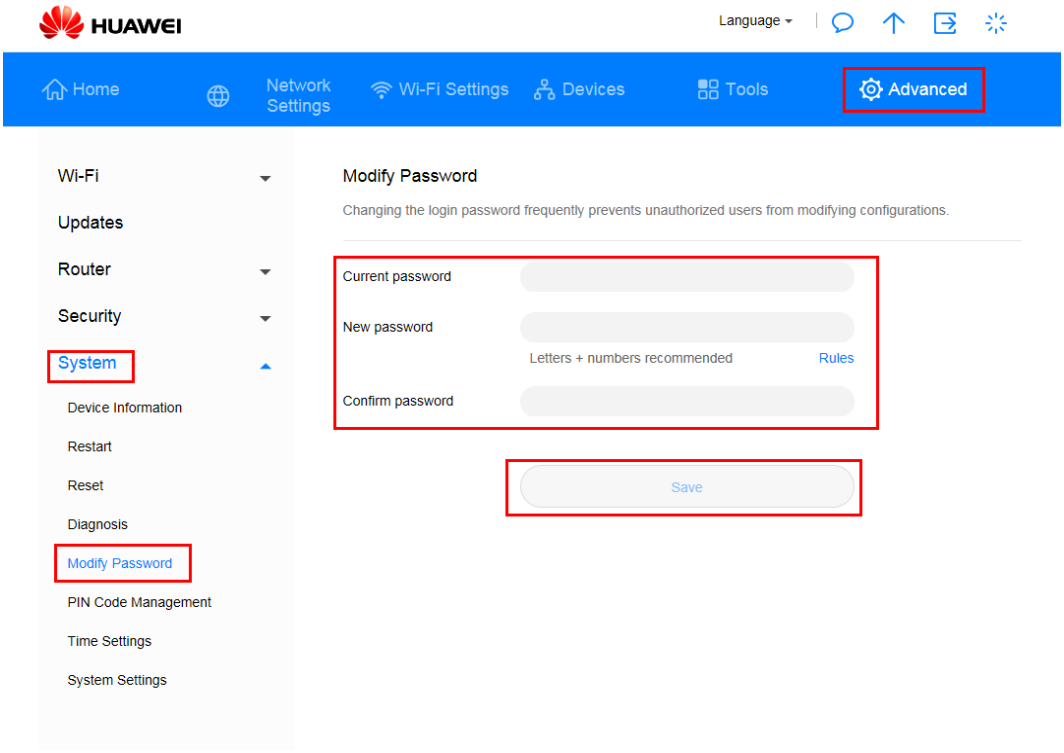

Figure 66 Modify password

----End

4.1.14 Clients Cannot Access the Internet Properly

Procedure

Step 1 Check that clients are connected to the **Sunrise Internet Box 5G** properly

Step 2 Check that the **Sunrise Internet Box 5G** is powered on properly

Step 3 Check that the **Sunrise Internet Box 5G** is in a location covered by communication networks and that the signal strength is strong

Step 4 Contact your service provider if the problem persists

----End

4.1.15 Clients Cannot Access the Wi-Fi Properly

Procedure

Step 1 Check whether there are potential interference sources or shielding objects near the **Sunrise Internet Box 5G**. If any, adjust the placement of the **Sunrise Internet Box 5G**

Step 2 Check and record the settings of the following parameters on the clients and the **Sunrise Internet Box 5G**: **Wi-Fi name (SSID)**, **Security mode**, and security key. The service set identifier (SSID) of the clients must be set to **ANY** or be same as that set on the **Sunrise Internet Box 5G**. The encryption mode and the security key on the clients must match those set on the **Sunrise Internet Box 5G**. Otherwise, change the settings on the clients

Step 3 If the Media Access Control (MAC) address filtering in the wireless local area network (Wi-Fi) is enabled on the **Sunrise Internet Box 5G**, check that the MAC address of the client is not in the **Block** list

----End

4.1.16 Wi-Fi Key Is Forgotten

- Log in to the management page and obtain the current Wi-Fi key
- Restore the default settings. Check the relevant label on the **Sunrise Internet Box 5G** to obtain the default Wi-Fi key

4.1.17 Multi-Network IP Address Conflict Occurs

When multiple types of Internet connections are used simultaneously on the client, such as physical network adapter and Wi-Fi, inserting the **Sunrise Internet Box 5G** into the client may result in IP address conflict across multiple networks.

Solution: Disable other network devices or disconnect other Internet connections from the client, and then restart **Sunrise Internet Box 5G**.

4.1.18 What Can I Do If the Icons That Indicate No Signals and No Service Are Displayed?

Procedure

Step 1 Check that the **Sunrise Internet Box 5G** is in an area with good reception

Step 2 Check that you have subscribed to network services and that there is no outstanding balance

Step 3 Contact your service provider if the problem persists

----End

4.2 **Wi-Fi settings**

4.2.1 How do I check or change the Wi-Fi password?

Method 1: Check on the **Sunrise Internet Box 5G**'s nameplate

Method 2: Check and modify on the **Sunrise Internet Box 5G**'s web-based management page

1. Connect your computer to the **Sunrise Internet Box 5G**'s (connect the computer to the **Sunrise Internet Box 5G**'s LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your **Sunrise Internet Box 5G**'s web-based management page
2. Choose **Wi-Fi Settings > Wi-Fi Basic Settings** to check the current SSID and password. To modify the SSID and password, enter the new SSID and password and then click **Save**

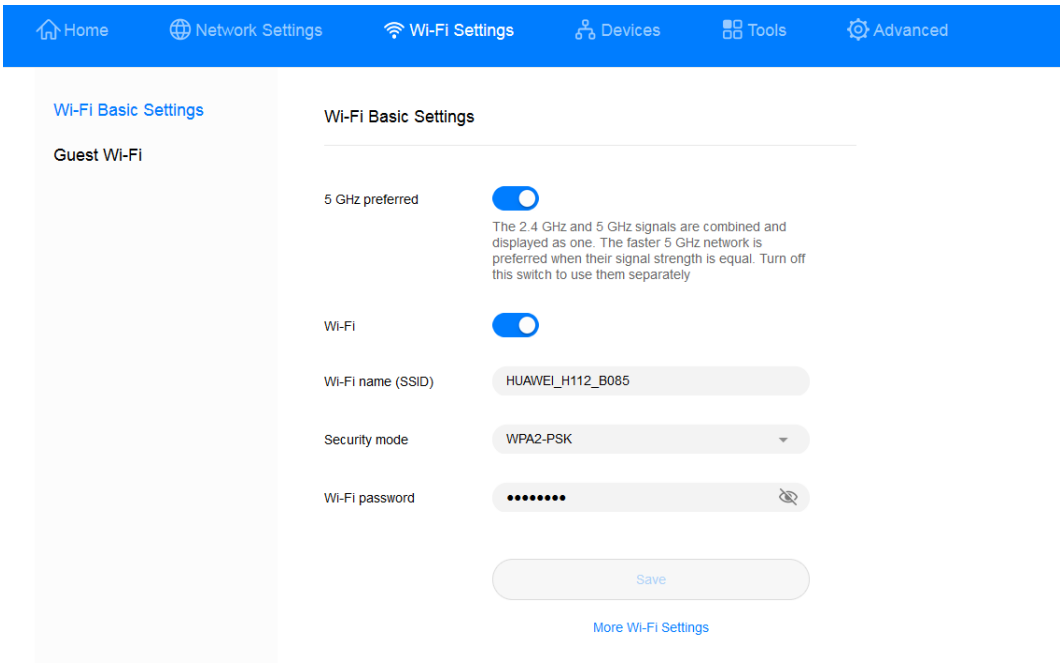

Figure 67 Wi-Fi Password Settings

----End

4.2.2 How do I hide or stop hiding the Wi-Fi SSID?

1. Connect your computer to the **Sunrise Internet Box 5G's** LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your **Sunrise Internet Box 5G**'s web-based management page

2. Choose **Advanced > Wi-Fi > Wi-Fi Security Settings**. Click next to the SSID

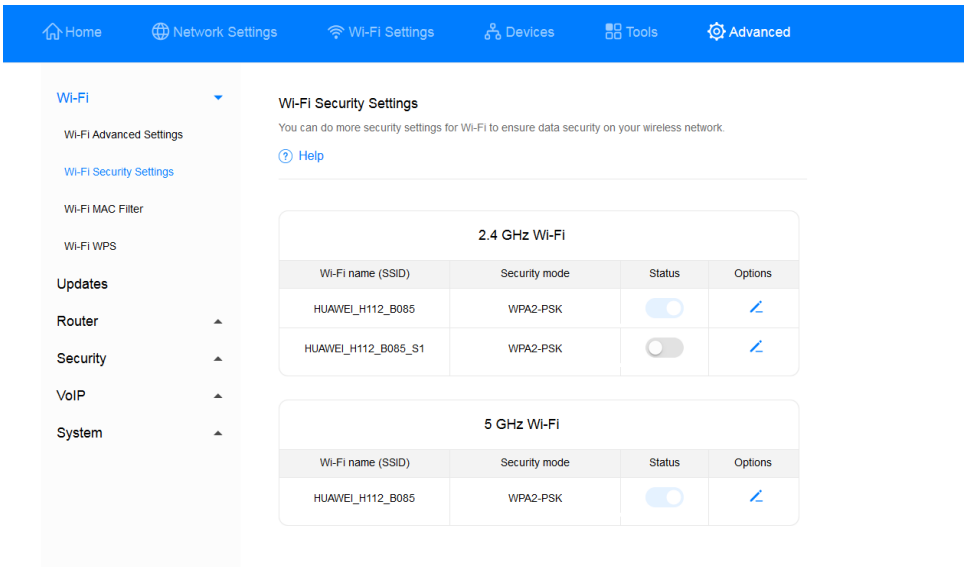

Figure 68 Wi-Fi SSID

3. Check the **Hide Wi-Fi** and then click **Save**.

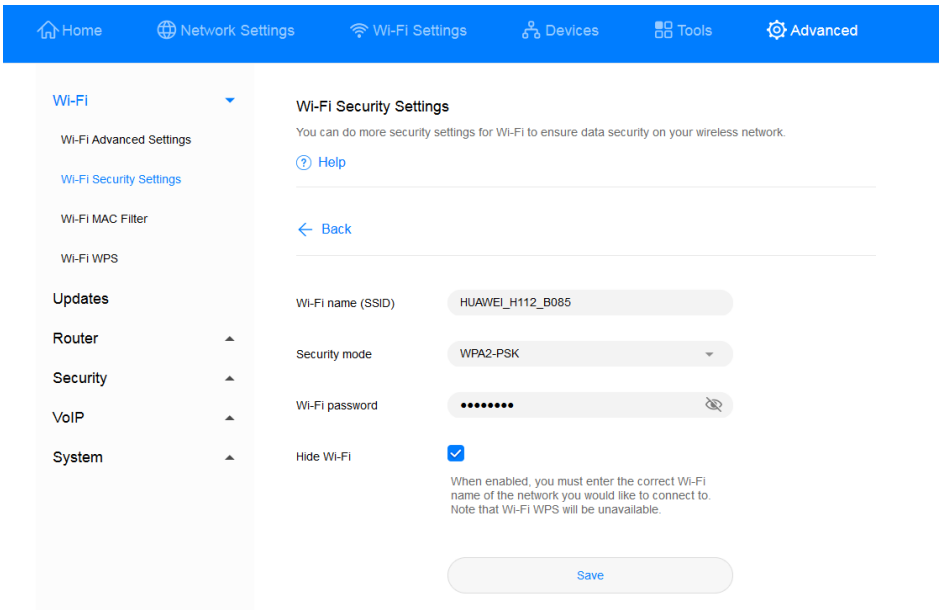

Figure 69 Hide Wi-Fi SSID

----End

To stop hiding the SSID, uncheck the **Hide Wi-Fi** and then click **Save**.

4.2.3 How do I create a Wi-Fi blacklist or whitelist?

Based on your needs, you can set your **Sunrise Internet Box 5G**'s Wi-Fi to either Blacklist or Whitelist mode by enabling **Wi-Fi MAC Filter**. In Blacklist mode, devices in the list will not be able to access your wireless network. In Whitelist mode, only listed devices will be able to access your wireless network. Setting up a blacklist or whitelist will not only enhance the security of your wireless network, but also limit the access of unwanted users, even if they know your Wi-Fi name and password

1. Connect your computer to the **Sunrise Internet Box 5G**'s Wi-Fi network (or connect the computer to the **Sunrise Internet Box 5G**'s LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your **Sunrise Internet Box 5G**'s web-based management page
2. Go to **Advanced** > **Wi-Fi MAC Filter**. Enable **Wi-Fi MAC Filter**. Set the **Sunrise Internet Box 5G** to Blacklist (block access from devices in the list) or Whitelist (only allow access to devices in the list) mode according to your needs
3. Select **Block** or **Allow** in the **Filter mode** section. Click + to add your desired Wi-Fi devices to the list and then click **Save**

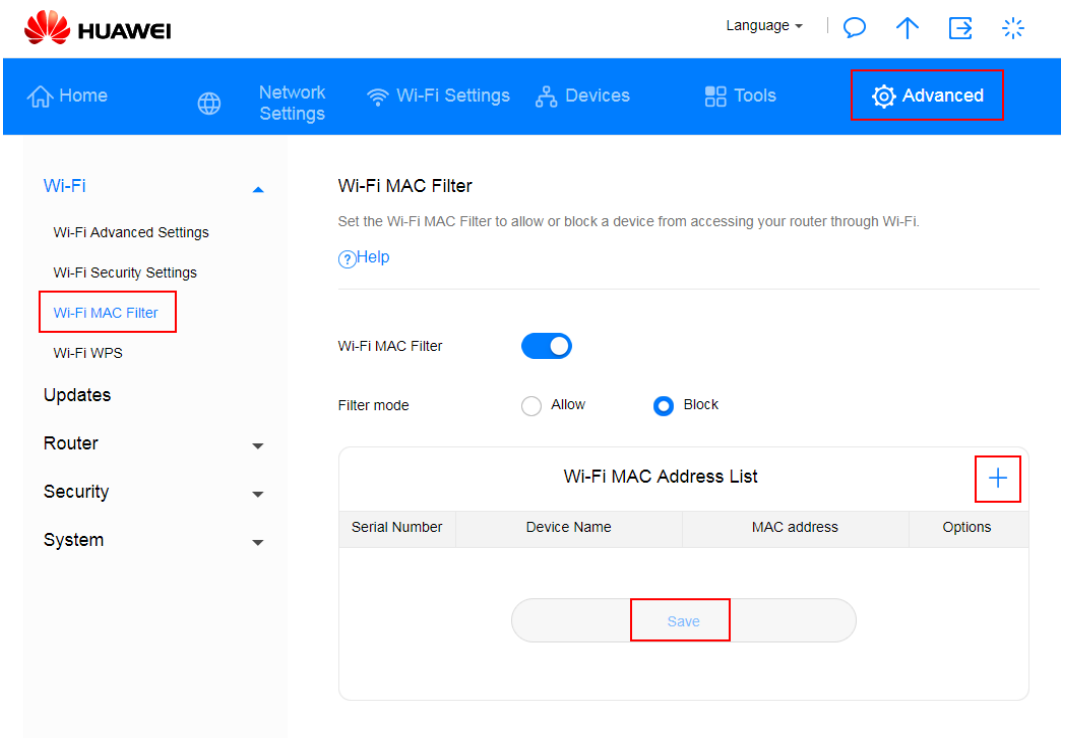

Figure 70 Wi-Fi blacklist/whitelist

Note

Once the devices are added, they will appear in the **Wi-Fi MAC Address List**.

----End

To disable Blacklist or Whitelist mode, click the **Wi-Fi MAC Filter** switch.

4.2.4 How do I set parental controls on my Sunrise Internet Box 5G?

Your **Sunrise Internet Box 5G** supports parental controls that allow you to limit your child's Internet access.

- Connect your computer to the Wi-Fi network of your **Sunrise Internet Box 5G**, or to the LAN port on the **Sunrise Internet Box 5G** using an Ethernet cable. Open a browser, enter **192.168.8.1** in the address bar, and then enter the password to access your **Sunrise Internet Box 5G**'s web-based management page
- Go to **Tools** > **Parental Control** and click **+**

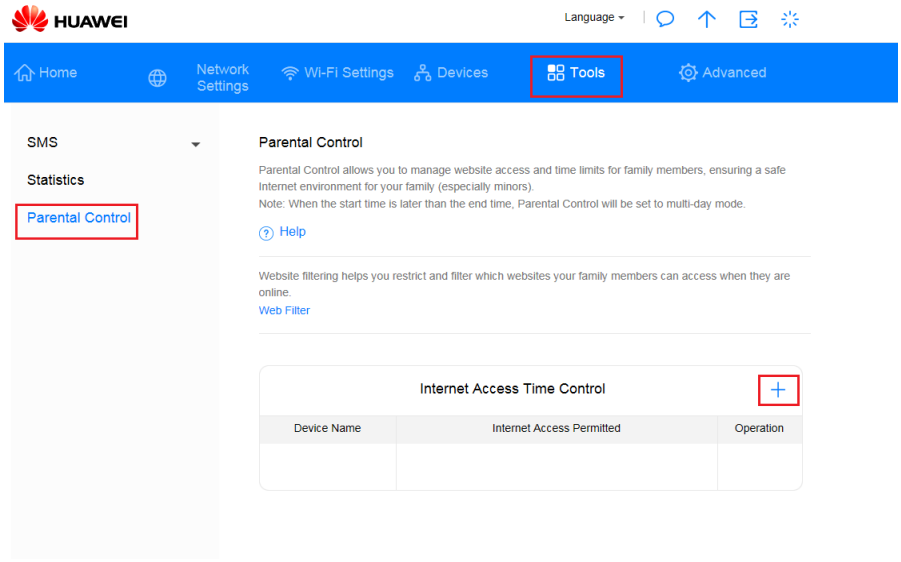

Figure 71 Parental Control

- Select the time, week, and device name you want to add parental controls for, and click **Confirm**.

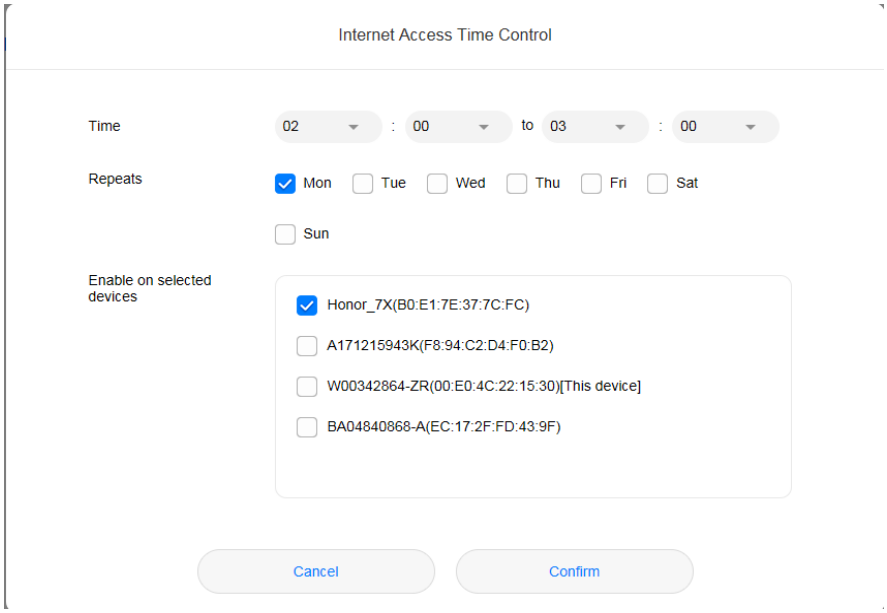

Figure 72 Internet Access Time Control

4.2.5 How can I use WPS PBC to connect a device to my Sunrise Internet Box 5G's Wi-Fi network?

With WPS PBC, you can enjoy fast, secure Wi-Fi connections without the need to manually enter a Wi-Fi password. The information in this section is based on establishing WPS connections between smart phones (except apple devices) and **Sunrise Internet Box 5G'**s.

Note

The WPS feature on your **Sunrise Internet Box 5G** can only be used if your Wi-Fi device has a WPS button. This WPS button can be a hardware button which is part of your device's hardware. It can also be a virtual button included in your device software (for example, it could be a virtual button in your phone's WPS app). Apple devices do not currently support WPS. For instructions on how to set up a WPS connection for devices other than HUAWEI phones, consult the accompanying user guide for your device.

Method 1: Using the Hi/WPS button

1. On your phone, go to **Settings** > **Wi-Fi** > **Advanced Settings** > **WPS Connection** (exact steps may vary with different phones).
2. Within 2 minutes, press the HI button on your **Sunrise Internet Box 5G** for 2 seconds and then release. Afterwards, the Wi-Fi indicator should start to quickly flash.

Figure 73 Hi/WPS button

When the phone is connected to the **Sunrise Internet Box 5G**'s Wi-Fi, the **Sunrise Internet Box 5G**'s Wi-Fi indicator will turn from flashing to steadily lit. You do not need to select a Wi-Fi network or enter a password.

----End

Method 2: Using the web-based management page

1. On your phone, go to **Settings > WLAN > Advanced Settings > WPS Connection** (exact steps may vary with different phones).
2. Connect your computer to the **Sunrise Internet Box 5G**'s Wi-Fi network (or connect the computer to the **Sunrise Internet Box 5G**'s LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your **Sunrise Internet Box 5G**'s web-based management page.
3. Go to **Advanced** > **Wi-Fi** > **Wi-Fi WPS**. Check the **PBC Connect** button. The Wi-Fi indicator should start to flash white quickly (exact light colour may vary with different **Sunrise Internet Box 5G**'s). When the phone is connected to the **Sunrise Internet Box 5G**'s Wi-Fi, the **Sunrise Internet Box 5G**'s Wi-Fi indicator will turn from flashing to steadily lit.

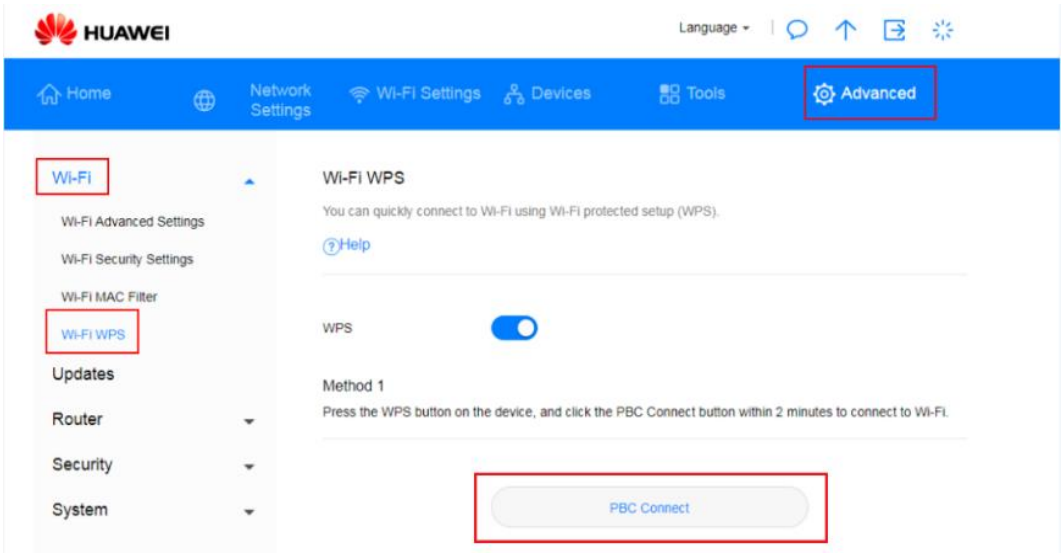

Figure 74 Wi-Fi WPS connection trough PBS

----End

4.2.6 How can I use WPS PIN to connect a device to my Sunrise Internet Box 5G's Wi-Fi network?

You can connect a device to your **Sunrise Internet Box 5G**'s Wi-Fi either using STA PIN or AP PIN.

Method 1: Using STA PIN

On your **Sunrise Internet Box 5G**'s web-based management page, enter your device PIN code to securely connect it to the **Sunrise Internet Box 5G**'s Wi-Fi network:

1. On your phone, go to **Settings > WLAN > Advanced Settings > WPS PIN Connection** (exact steps may vary with different phones).
2. On the **Sunrise Internet Box 5G**'s web UI, go to **Advanced** > **Wi-Fi** > **Wi-Fi WPS**.
3. Enter the device PIN in the text box, and click **Connect**.

For detailed information see user manual section 3.9.6

----End

Method 2: Using AP PIN

Open the app on your device and enter your **Sunrise Internet Box 5G**'s PIN code to securely connect the device to the **Sunrise Internet Box 5G**'s Wi-Fi network. This method is generally supported on PCs or laptops with a wireless network adapter, but not supported on phones.

1. On the **Sunrise Internet Box 5G**'s web UI, go to **Advanced** > **Wi-Fi** > **Wi-Fi WPS**.
2. Enable / generate the **PIN**
3. Open the network settings on your PC, and enable **Current PIN** (exact operation may vary with different PCs).
4. Enter the PIN to your device to start a connection.

For detailed information see user manual section 3.9.6

----End

4.2.7 How do I view the connected device information?

1. Connect your computer to the **Sunrise Internet Box 5G**'s Wi-Fi network (or connect the computer to the **Sunrise Internet Box 5G**'s LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your **Sunrise Internet Box 5G**'s web-based management page.
2. Go to **Devices**. From **Online Devices** list, you can view the connected device information such as IP address, name, and MAC address. From the **Offline Devices** list, you can also view disconnected devices that were once connected.

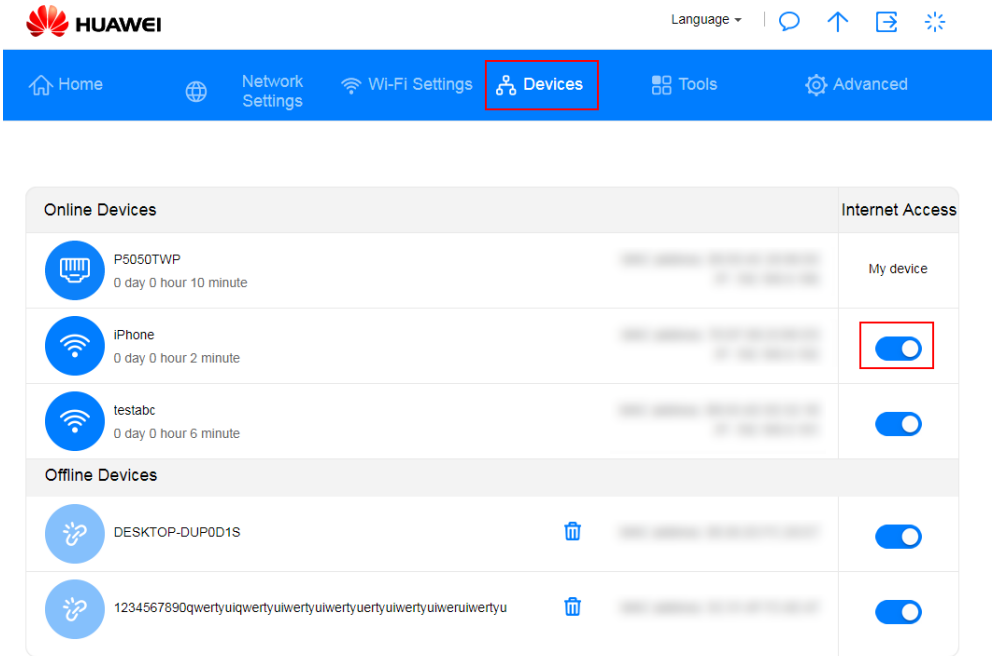

Figure 75 Devices Management

----End

4.2.8 How do I check for Wi-Fi squatters?

If you experience a sudden slowdown in your Internet connection during normal use, you should check for Wi-Fi squatters.

1. Connect your computer to **Sunrise Internet Box 5G**, or to the LAN port on the **Sunrise Internet Box 5G** using an Ethernet cable. Open a browser, enter **192.168.8.1** in the address bar, and then enter the password to access your **Sunrise Internet Box 5G**'s web-based management page.
2. Select **Device**. In the **Online devices** list, you can view information such as the IP address, host name, and MAC address of connected devices to check whether there are any Wi-Fi squatters. For example, if you know that there should only be one phone connected to your **Sunrise Internet Box 5G**, but there are two devices in the list, it indicates that someone is using your **Sunrise Internet Box 5G**'s Wi-Fi network without your permission.

----End

4.3 Internet Configuration

4.3.1 How do I create a new profile list?

By creating a new profile, **Sunrise Internet Box 5G** can connect wirelessly to the Internet through Dial-up.

1. Connect your computer to the **Sunrise Internet Box 5G**'s Wi-Fi network (or connect the computer to the **Sunrise Internet Box 5G**'s LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your **Sunrise Internet Box 5G**'s web-based management page.
2. Go to **Network Settings > Mobile Network > Internet Connection** and click "**+**".

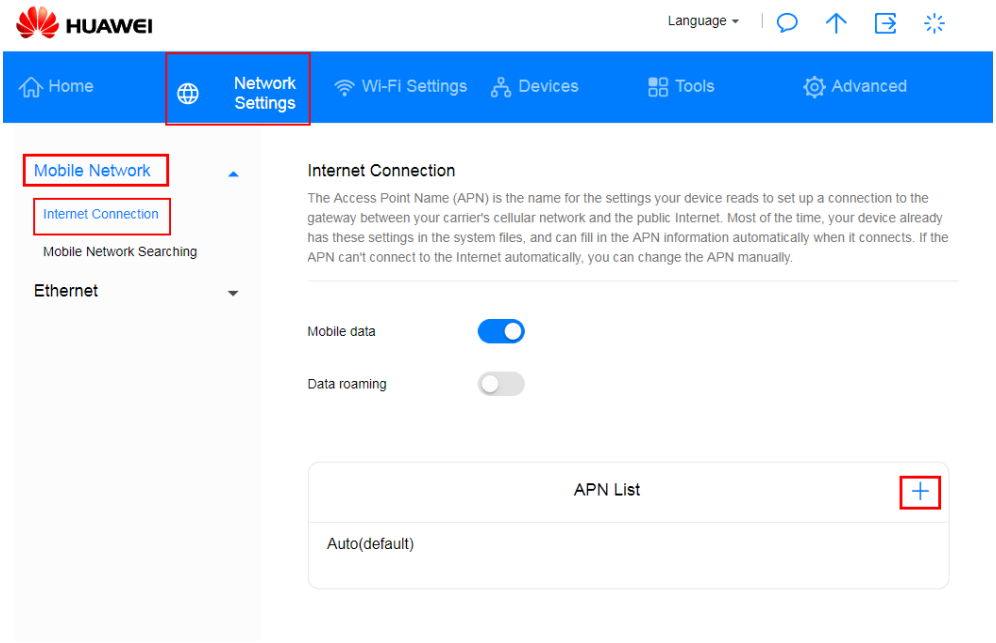

Figure 76 Internet Connection (APN)

3. Enter the network configuration information and click **Save**.

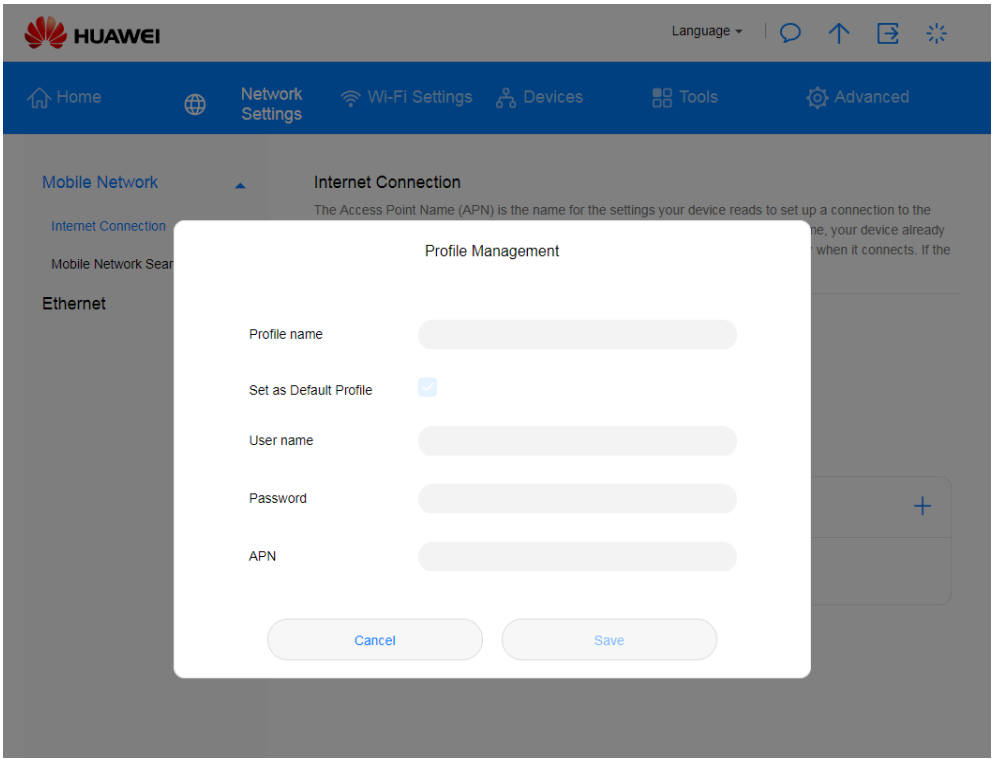

Figure 77 Internet Connection Profile Management

----End

4.3.2 How do I set a data usage limit?

1. Connect your computer to the **Sunrise Internet Box 5G**'s Wi-Fi network (or connect the computer to the **Sunrise Internet Box 5G**'s LAN port using an Ethernet cable). Open your Internet browser. Enter 192.168.8.1 in your browser address bar and log in to your **Sunrise Internet Box 5G**'s web-based management page.

2. Choose **Tools > Statistics** and click .

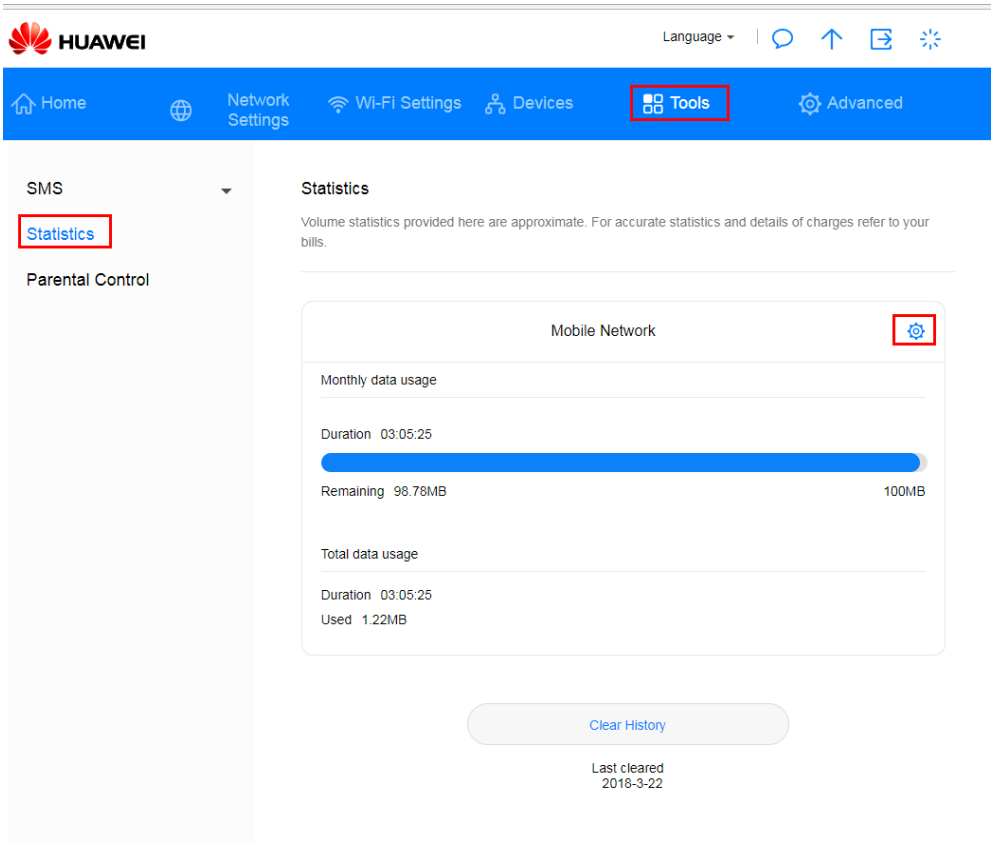

Figure 78 Data Usage Limit (Statistics)

3. Set the data usage limit and click **Save**.

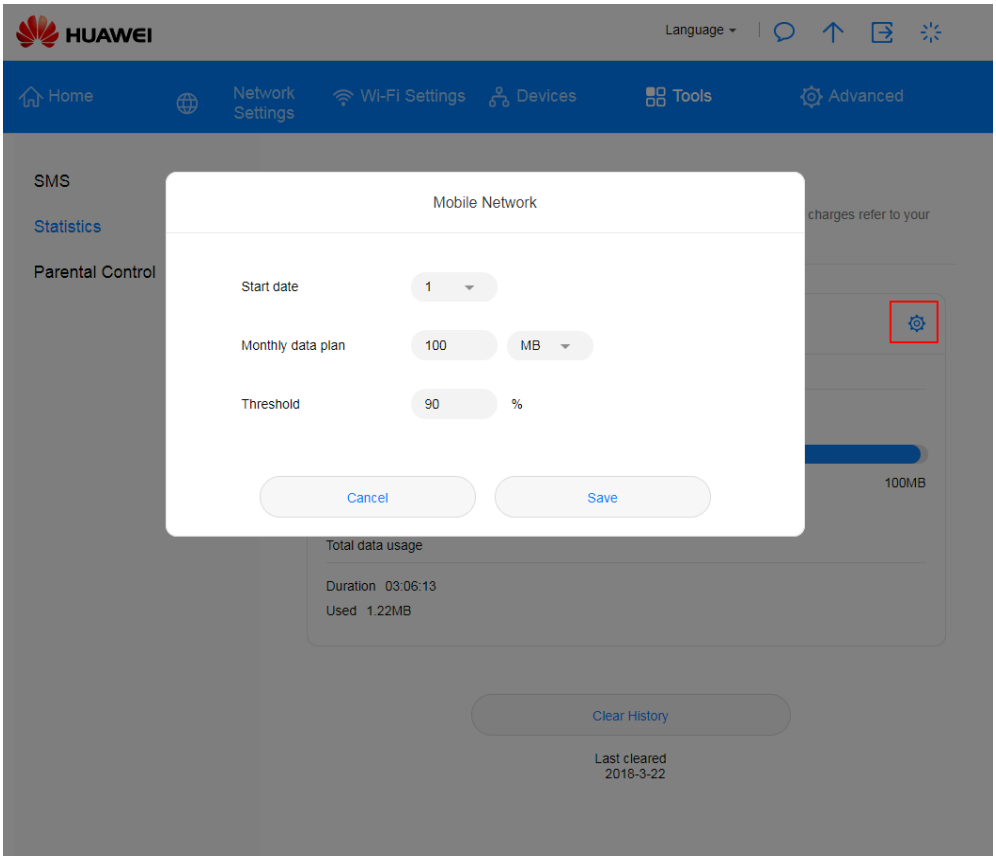

Figure 79 Mobile Network Usage Limit

----End