www.ip-com.com.cn

User Guide

IP-COM WiFi App for AC1200 Enterprise Mesh WiFi System

IP-COM
World Wide Wireless

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Preface

Thank you for choosing IP-COM! Please read this user guide before you start with AC1200 Enterprise Mesh WiFi System.

Conventions

The typographical elements that may be found in this document are defined as follows.

Item	Presentation	Example
Cascading menus	>	**System** > **Live Users**
Parameter and value	Bold	Set **User Name** to **Tom**.
Variable	Italic	Format: *XX*:*XX*:*XX*:*XX*:*XX*:*XX*
UI control	Bold	On the **Policy** page, click the **OK** button.
Message	“ ”	The “Success” message appears.

The symbols that may be found in this document are defined as follows.

Symbol	Meaning
NOTE	This format is used to highlight information of importance or special interest. Ignoring this type of note may result in ineffective configurations, loss of data or damage to the device.
TIP	This format is used to highlight a procedure that will save time or resources.

Acronyms and Abbreviations

Acronym or Abbreviation	Full Spelling
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name Server
ISP	Internet Service Provider
Mesh node(s)	AC1200 Enterprise Mesh WiFi System node(s)

Additional Information

For more information, search this product model on our website at http://www.ip-com.com.cn

Technical Support

If you need more help, contact us by any of the following means. We will be glad to assist you as soon as possible.

		
+86-755-27653089	info@ip-com.com.cn	http://www.ip-com.com.cn

Contents

1 Registering and Binding

Binding an IP-COM account to your mesh network helps you secure your mesh network and manage it remotely.

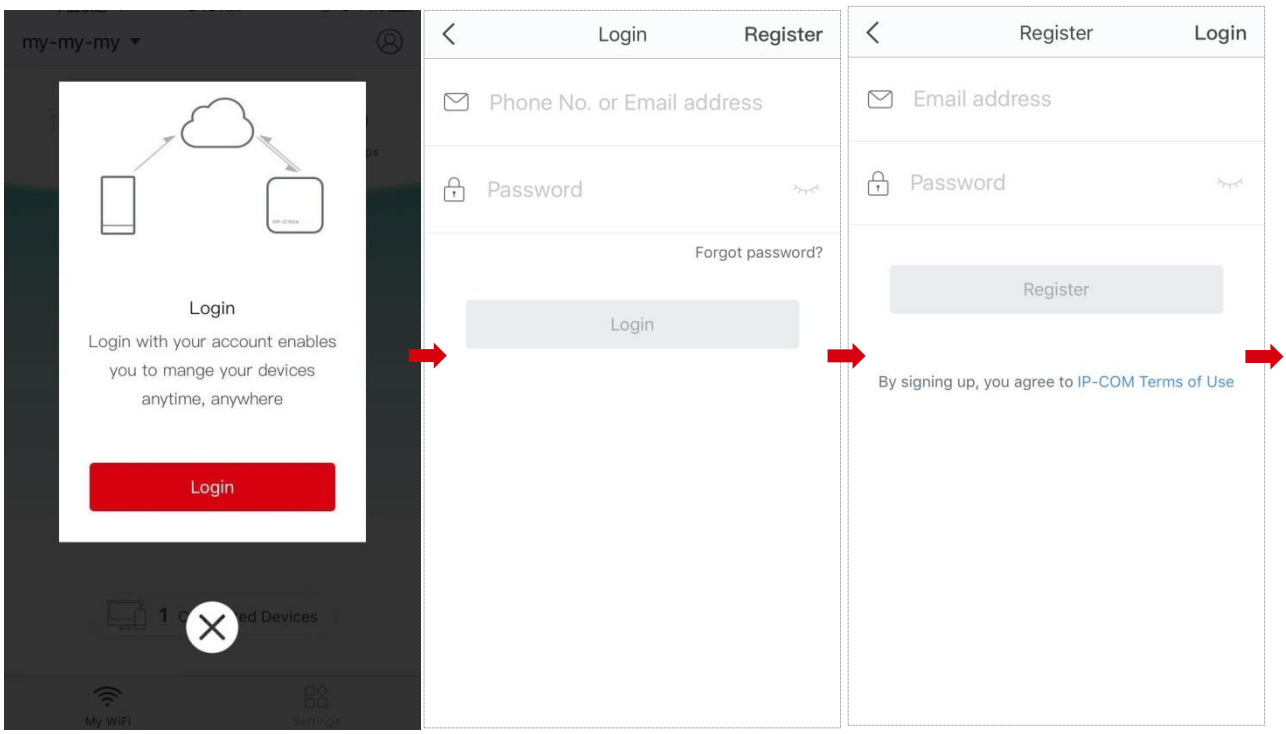
To Register an IP-COM account

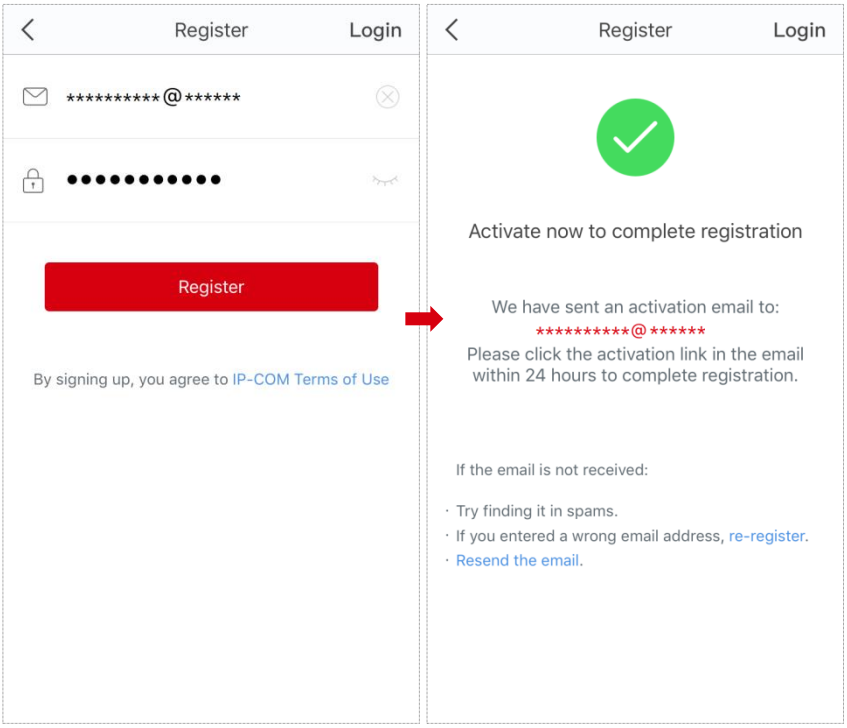
Option 1

After you complete installation and setup using the IP-COM WiFi App at the first time, a login prompt page appears.

1. Tap **Login** to enter the login page.
2. Tap **Register** on the upper-right corner.
3. Enter a valid email address.
4. Customize a password for your IP-COM account.
5. Tap **Register**.

A confirmation email will be sent to your email inbox. Check your email and follow the instruction to activate your account. After successful activation, your IP-COM account is registered successfully.





Option 2

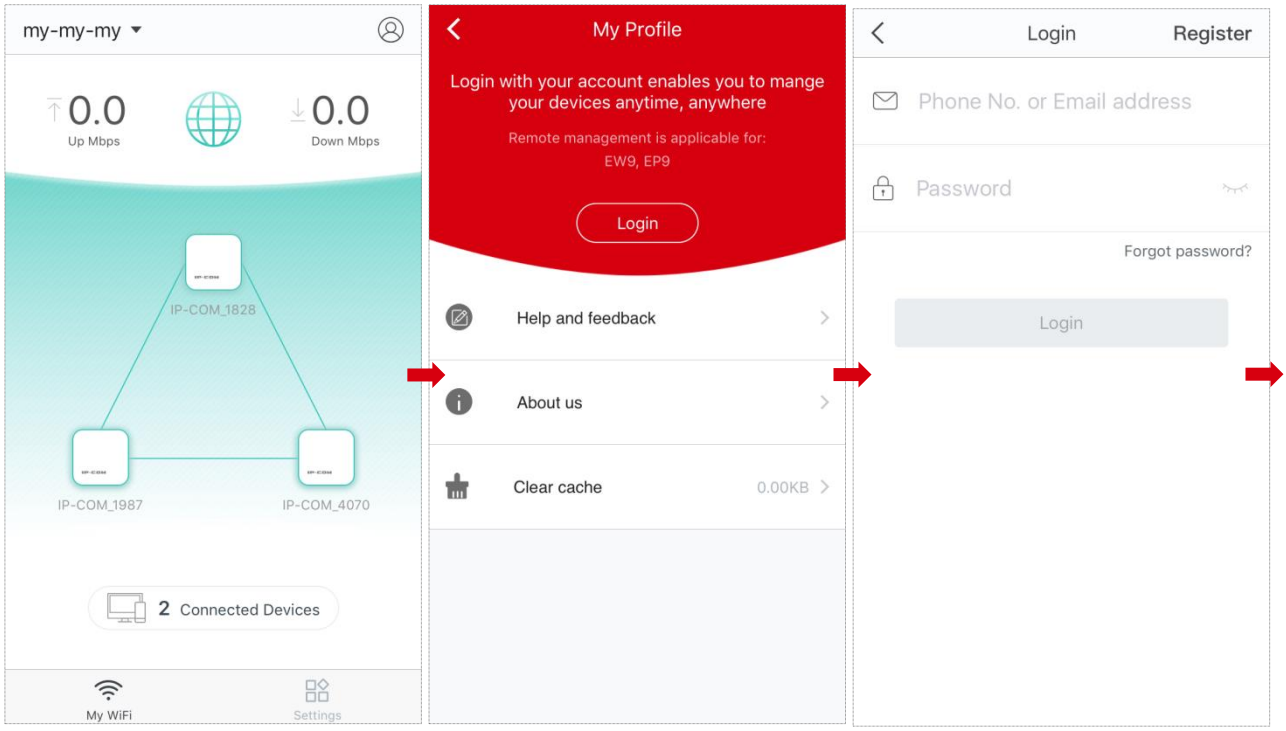
If you miss the Login prompt page, follow the steps below:

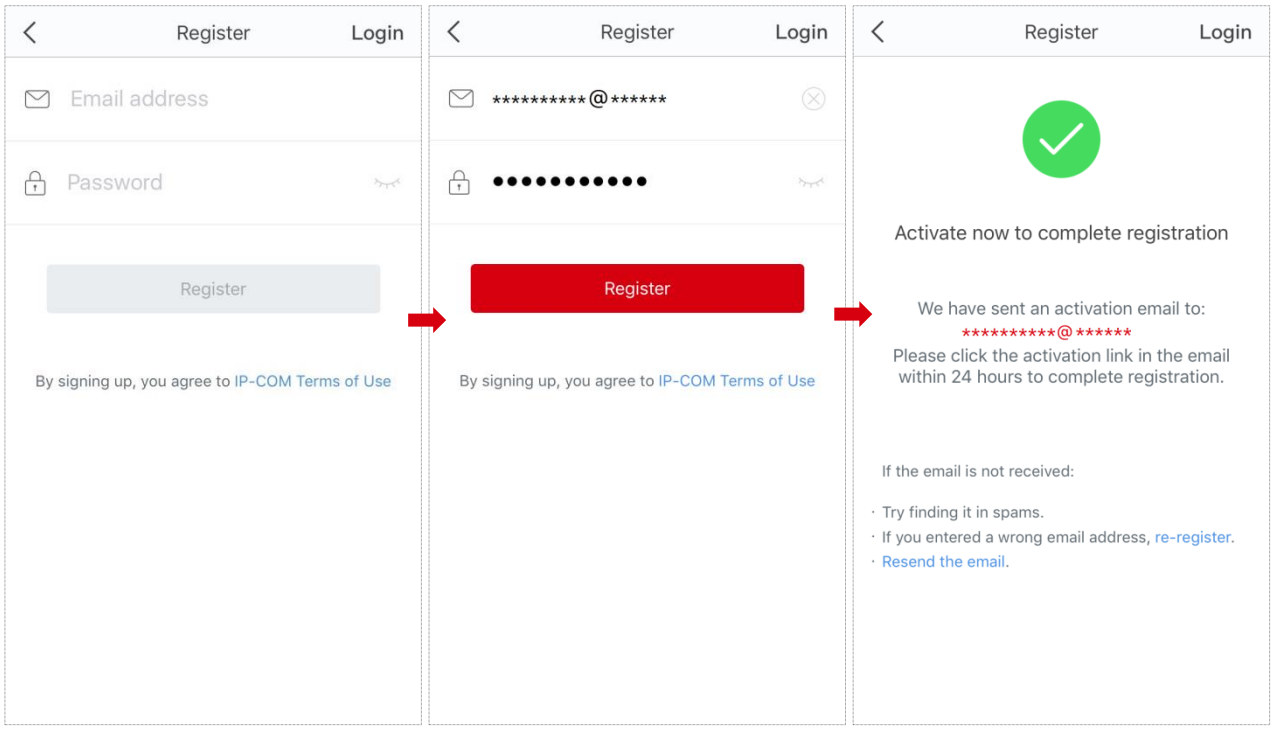
1. Run the IP-COM WiFi App, and tap on the upper-right corner.
2. Tap **Login**.
3. Tap **Register** on the upper-right corner.
4. Enter a valid email address.

5. Customize a password for your IP-COM account.

6. Tap **Register**.

A confirmation email will be sent to your email inbox. Check your email and follow the instruction to activate your account. After successful activation, your IP-COM account is registered successfully.



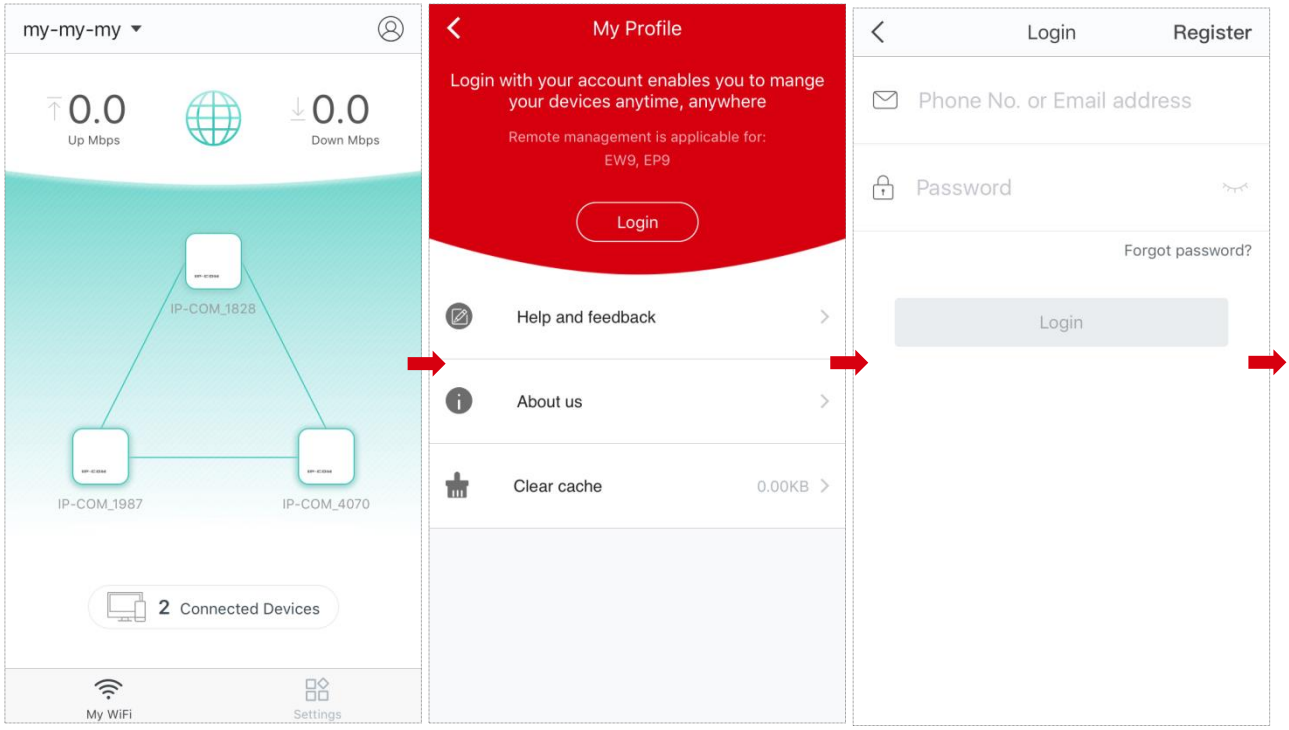


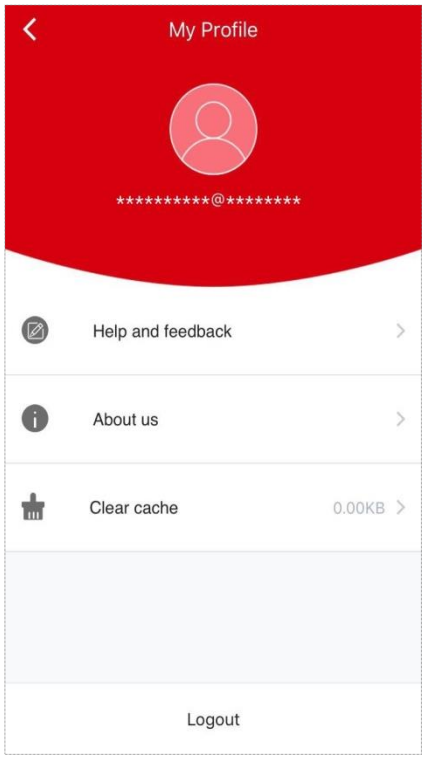
To log in to the IP-COM WiFi App

Note

The account you use to log in to the IP-COM WiFi App at the first time is bound to your mesh network automatically, and it is your administrator account.

1. Connect your smart phone to your mesh WiFi network, and run the IP-COM WiFi App.
2. Tap ⓐ on the upper-right corner.
3. Tap **Login**.
4. Enter your registered IP-COM account.
5. Enter the password.
6. Tap **Login**.





Note

After your mesh network is bound to an account, login with the account or authorized accounts is required for network management.

2 Management Type

All IP-COM AC1200 Enterprise Mesh WiFi Systems support the IP-COM WiFi App for local and remote management. You can choose either of them as needed.

Local Management

Local management indicates that you can use the IP-COM WiFi App to manage your mesh network after connecting your smart phone to the mesh network.

Configure procedure:

1. Connect your smart phone to the WiFi network of your mesh nodes.
2. Run the IP-COM WiFi App on the smart phone, and then you can use the App to manage your mesh network.

Tip

If your mesh nodes are bound to an IP-COM account, you can manage them only after login with the bound account or other accounts authorized by the account.

Remote Management

Remote management indicates that you can use the IP-COM WiFi App to manage your mesh network anytime, anywhere.

Prerequisites:
Your mesh nodes have connected to the internet successfully.

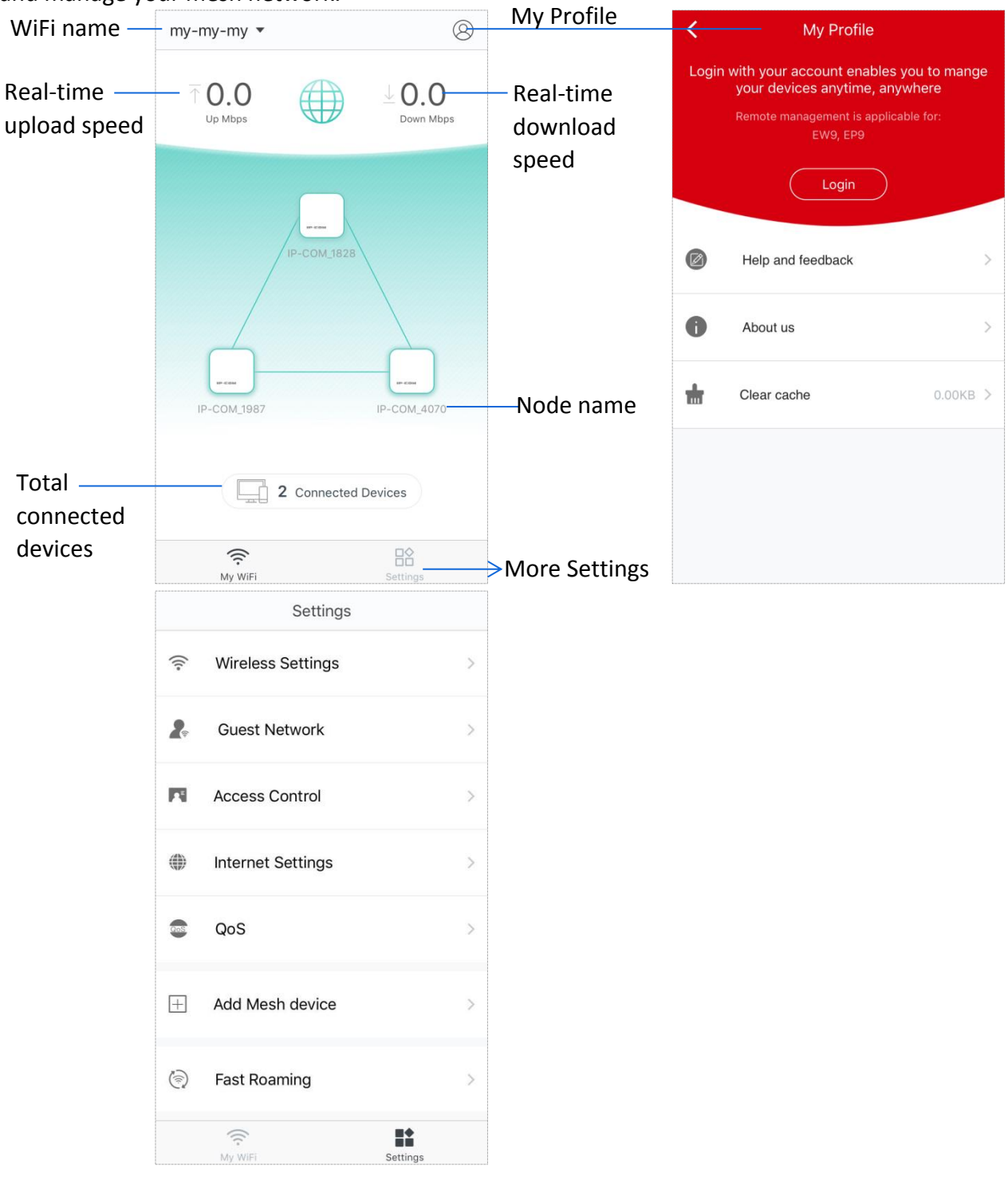
Log in with the bound or authorized account.

Tip

- A mesh network can only be bound to an account.
- If you want to use other accounts to manage your mesh network, you can authorize these accounts after login with the administrator account.
- Only the administrator account can authorize other accounts to manage the mesh network.

3 My WiFi

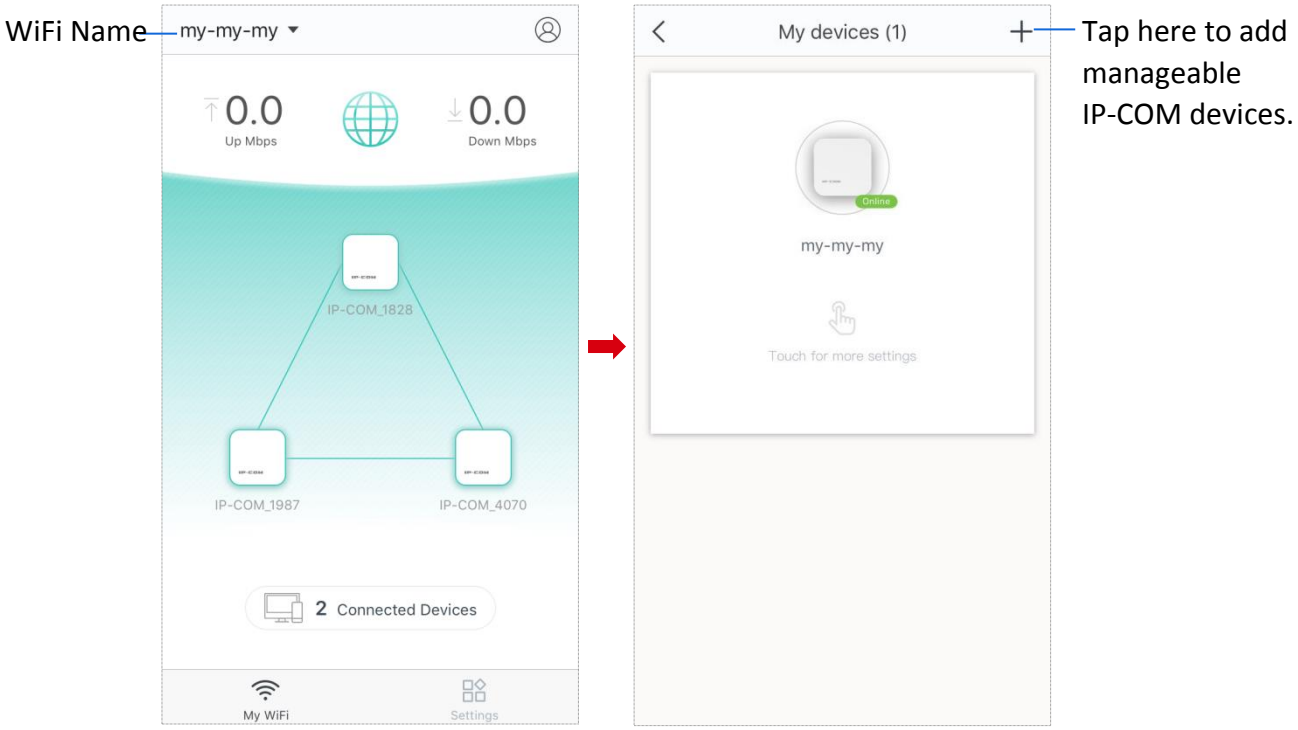
After completing the internet settings, the IP-COM WiFi App shows you the following page. You can view the status of your mesh nodes, real-time upload/download speed and connected devices, and manage your mesh network.



To check or manage your mesh nodes

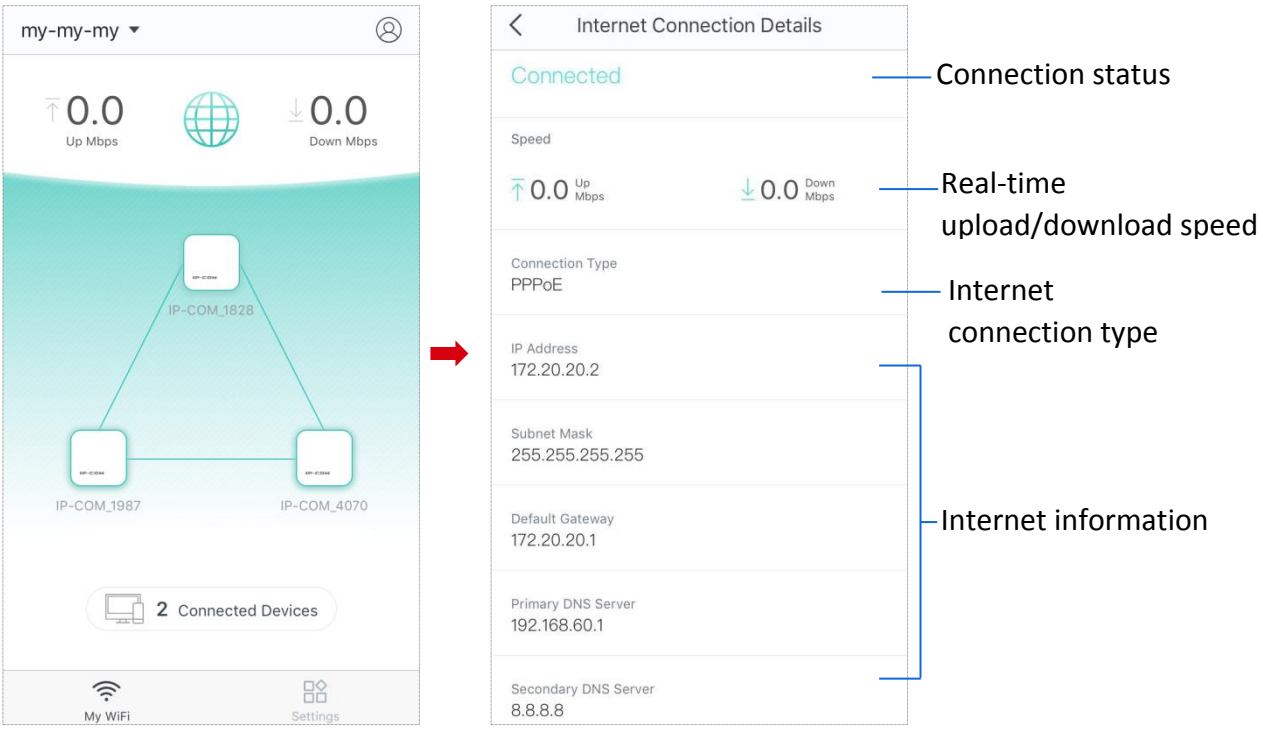
Tap the WiFi name, which is **my-my-my** in the following picture, on the **upper-left** corner of the **My WiFi** page to enter the following page.

All mesh nodes in a network share the same WiFi name.



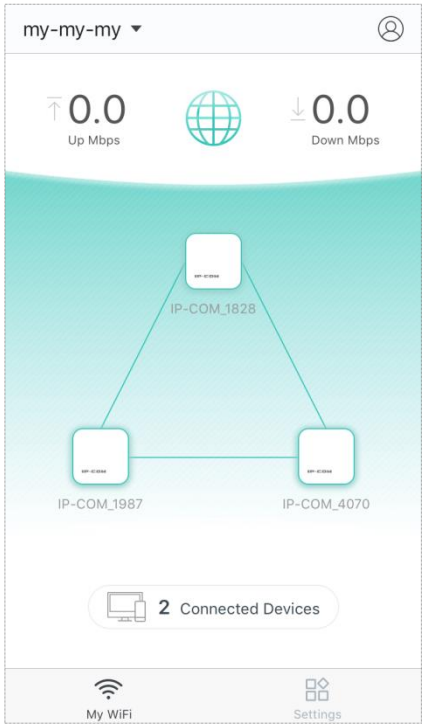
To view details of the internet settings

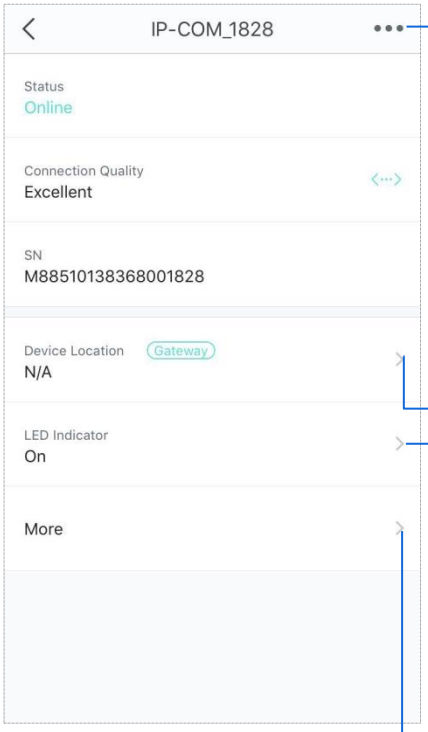
Tap the icon on the home page (**My WiFi**) of the App.



To view details of the nodes

Tap the  icon on the home page (**My WiFi**) of the App to see details of the corresponding mesh node.

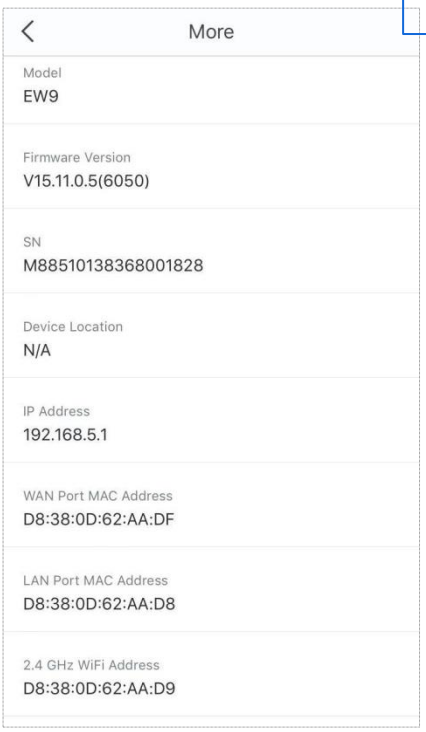




Choose this to delete the node from your WiFi network.

Choose this to change the location information of the node for convenient management.

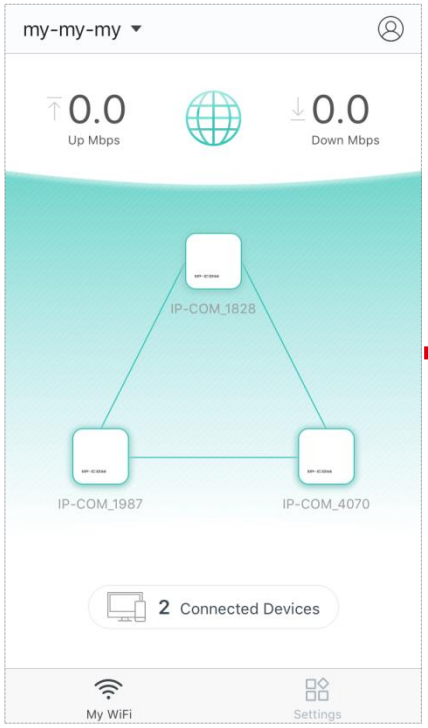
Choose this to enable/disable the LED indicator of the node.

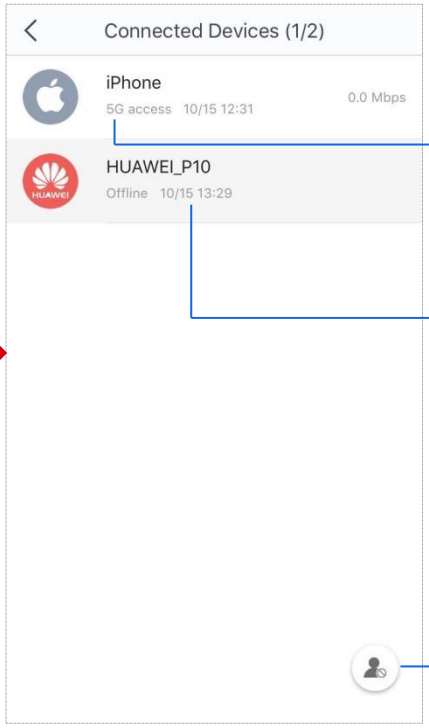


Choose this to see more information about the mesh node.

To view the connected devices

Tap the  icon on the home page (**My WiFi**) of the App. If you want to check the details of a device or manage more closely, choose the device.

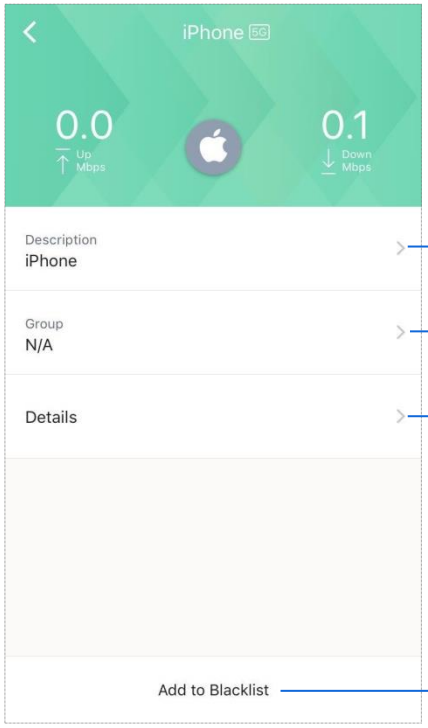




This indicates the frequency band of the WiFi network the device connects.

This indicates the time the device connects to the WiFi network.

Tap this to remove connected devices from the blacklist.



Choose this to rename the device, such as Jack's iPhone.

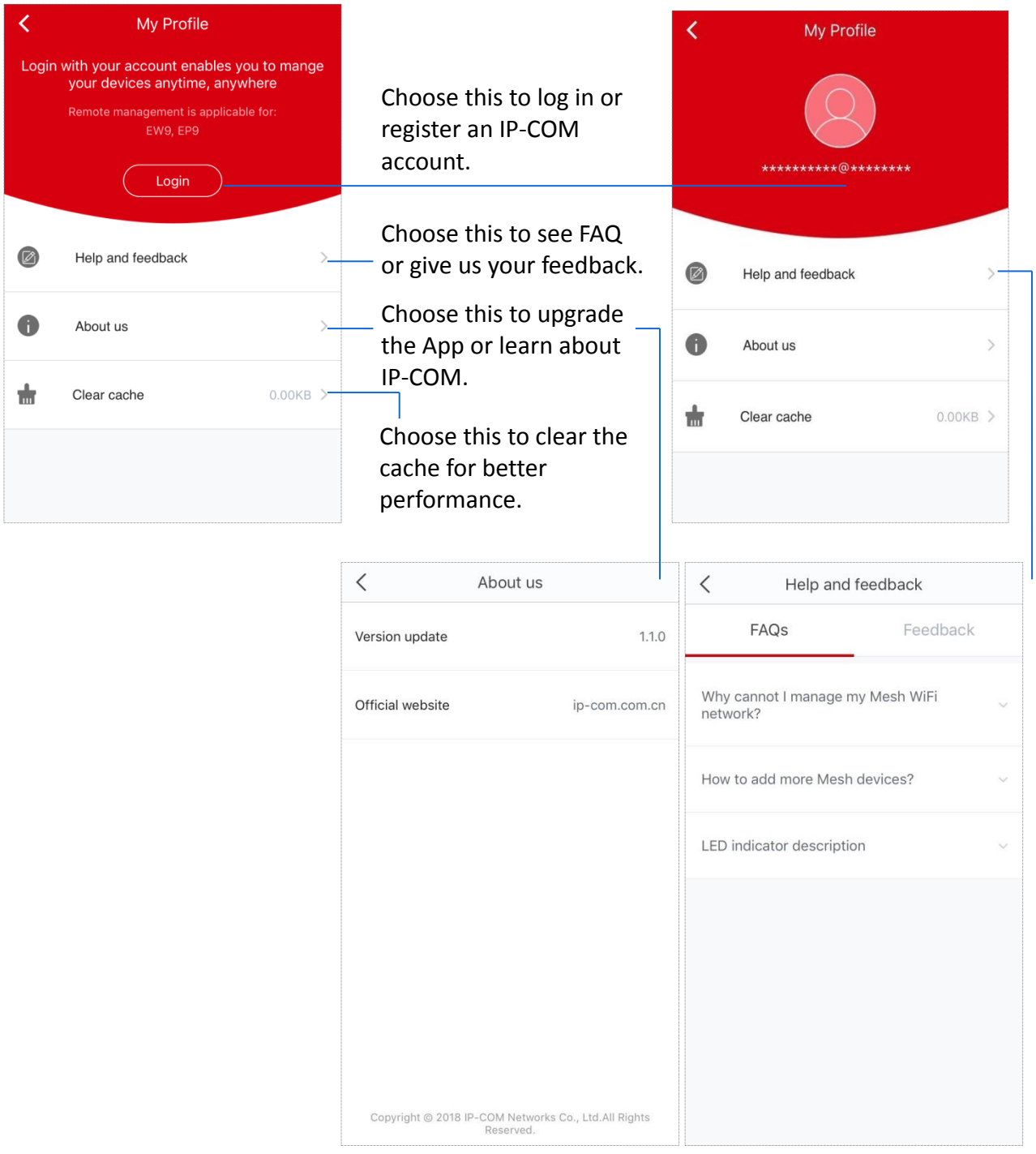
Choose this to create a group or add the connected device to a group for the access control function.

Choose this to check the details of the connected device.

Choose this to block the device. The devices in the blacklist cannot access the internet via the mesh network.

4 My Profile

Tap the icon in the upper-right corner of the home page (**My WiFi**) for logging in or registering.



5 Wireless Settings

In this section, you can change the WiFi name and password of your mesh WiFi network.

Perform the following procedure to change your WiFi name and password:

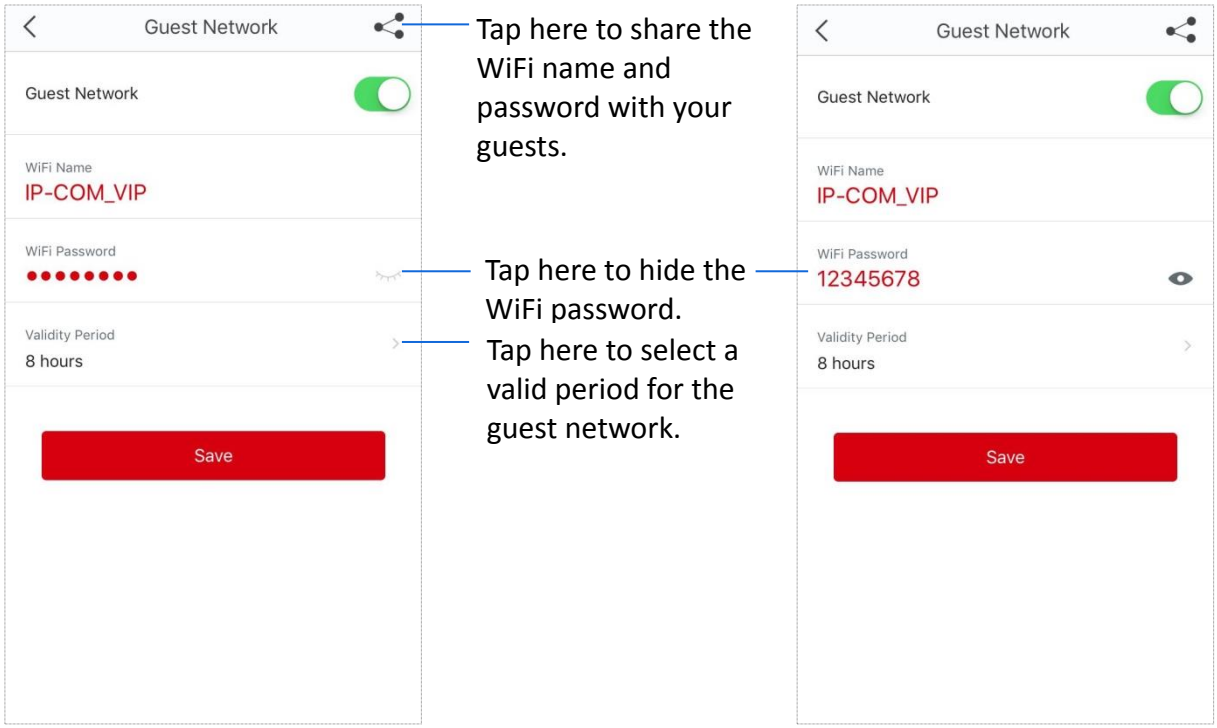
1. Choose **Settings** > **Wireless Settings** to enter the configuration page.
2. Change the WiFi name and password as required.
3. Tap **Save**.

6 Guest Network

The Guest Network function allows you to create a separate network for your guests to secure the main network.

Perform the following procedure to enable the Guest Network:

1. Choose **Settings** > **Guest Network** to enter the configuration page.
2. Set the button to the enabled state .
3. Change the WiFi name, password and validity period as required.
4. Tap **Save**.

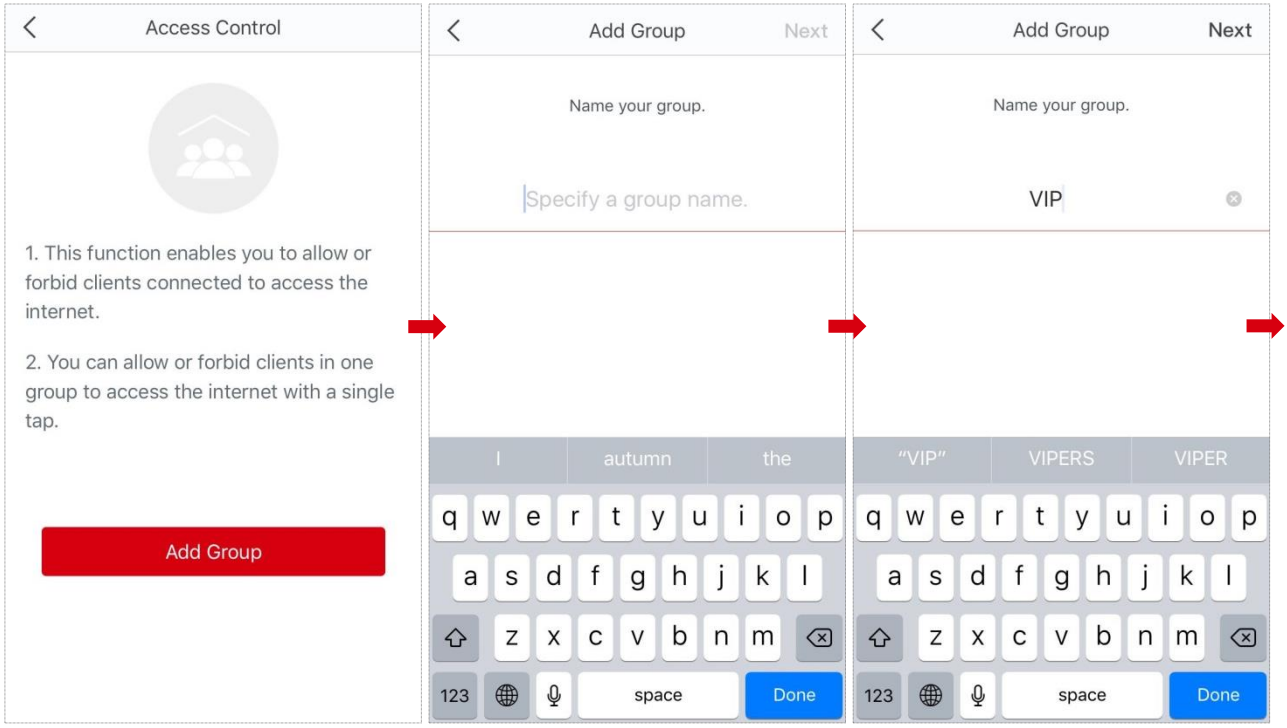


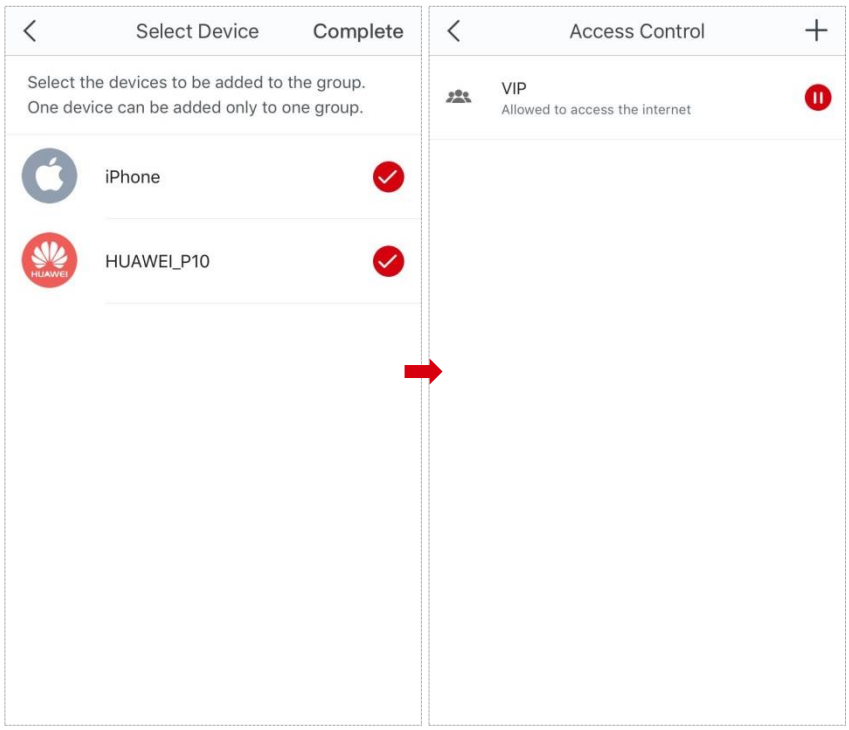
7 Access Control

The Access Control function allows you to create different department-based groups and control their internet time.

Perform the following procedure to set up the Access Control function:

1. Choose **Settings** > **Access Control** to enter the configuration page.
2. Create a group.
   (1) Tap **Add Group**.
   (2) Enter a group name, which is **VIP** in this example, and tap **Next**.
   (3) Select the devices to be added into the group.
   (4) Tap **Complete**.





(5) Tap or to change the rules.

indicates that the devices in the group are allowed to access the internet.

indicates that the devices in the group are not allowed to access the internet.

3. Specify a period for the rule.

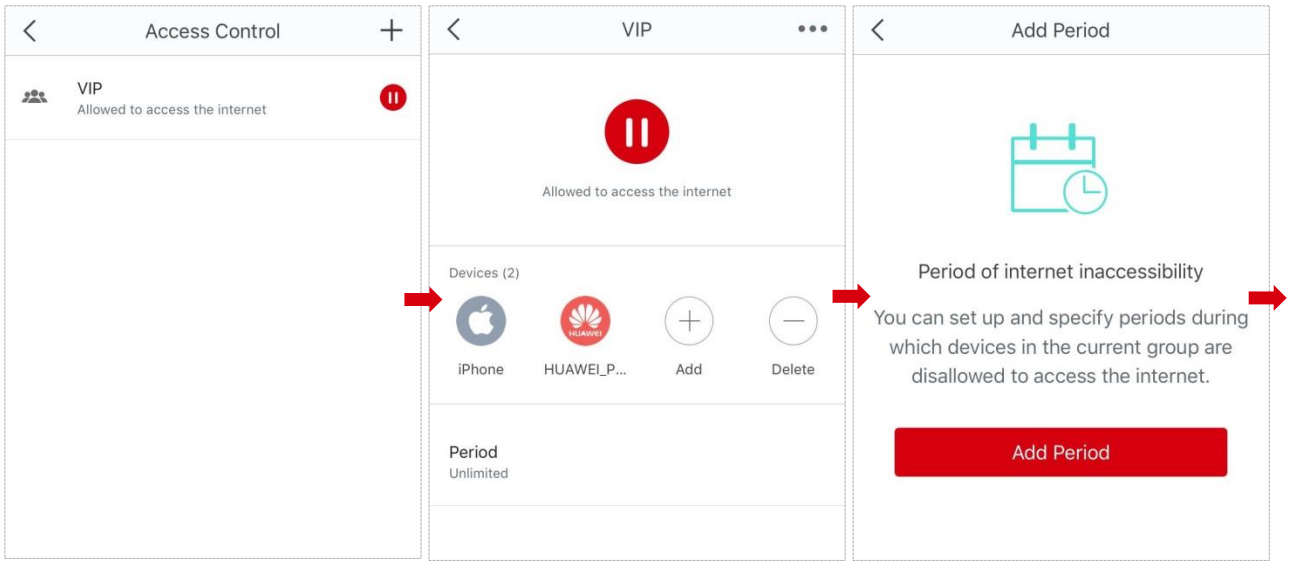
(1) Choose the group.

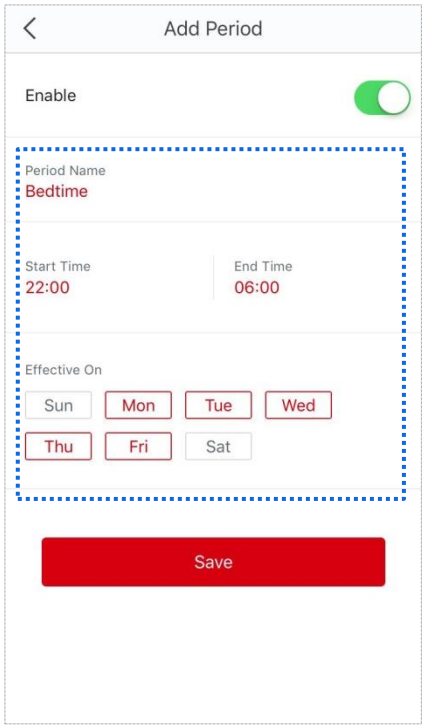
(2) Tap **Period**.

(3) Tap **Add Period**.

(4) Specify a **Period Name**, **Start Time**, **End Time**, and the dates from when the rule takes effect.

(5) Tap **Save**.




Add Period
Enable
Period Name
Bedtime
Start Time
22:00
End Time
06:00
Effective On
Sun
Mon
Tue
Wed
Thu
Fri
Sat
Save

8 Internet Settings

This section describes how to change your connection type, and set the number of WAN ports.

- **PPPoE:** If this type is selected, you need to enter the PPPoE user name and password provided by your ISP for internet access.
- **DHCP**: If this type is selected, no parameter is required to enter. The mesh node obtains the dynamic IP address and other related parameters automatically from the upstream device.
- **Static IP Address**: If this type is selected, you need to enter the static IP address and other related parameters provided by your ISP for internet access.
- **Bridge**: If this type is selected, the mesh node can access the internet only after being connected to another router with internet accessibility in wired manner.

The following three connection types are available only when the language of your smart phone is set to **Russian** or **Ukraine**.

- **PPPoE Russia**: If this type is selected, you need to enter the PPPoE user name, PPPoE password, service name, server name, MTU value, and IP address information (if any) provided by your ISP for internet access.
- **PPTP/PPTP Russia**: If this type is selected, you need to enter the IP address, user name and password of the PPTP server, MTU value, and IP address information (if any) provided by your ISP for internet access.
- **L2TP/L2TP Russia**: If this type is selected, you need to enter the IP address, user name and password of the L2TP server, MTU value, and IP address information (if any) provided by your ISP for internet access.

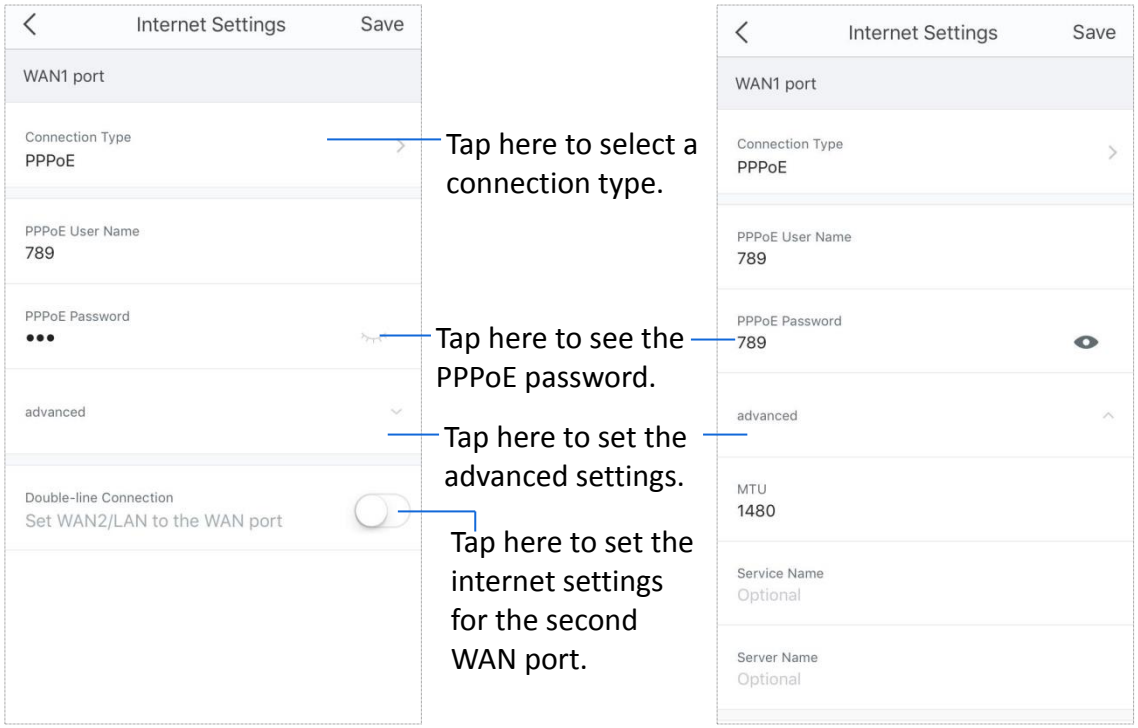
Tip

If you set the **Connection Type** to **Bridge**, the Guest Network, Access Control, Port Forwarding, UPnP, DNS, QoS, DHCP server, and Double-line Connection functions become unavailable.

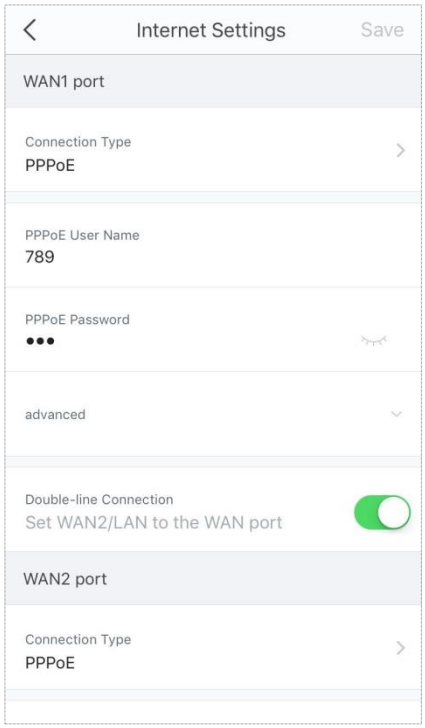
Setting up PPPoE

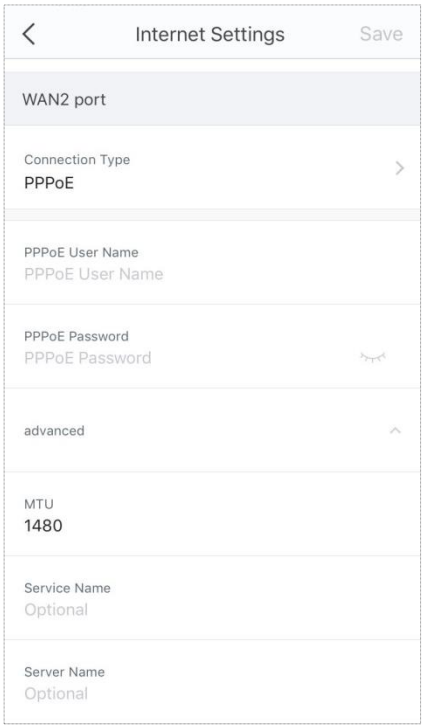
1. Choose **Settings** > **Internet Settings** to enter the configuration page.
2. Tap **Connection Type**.
3. Select **PPPoE**.
4. Enter the PPPoE user name and password provided by your ISP.

   If a service name and a server name are provided, tap **advanced** and enter them.
5. Tap **Save**.



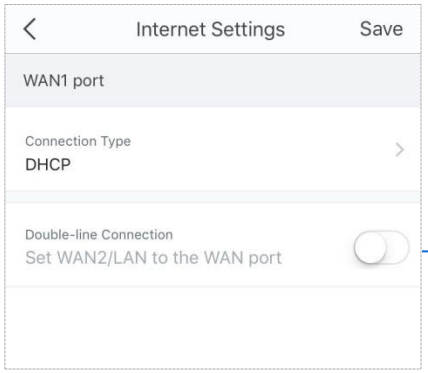
The configuration for WAN2 port is similar.



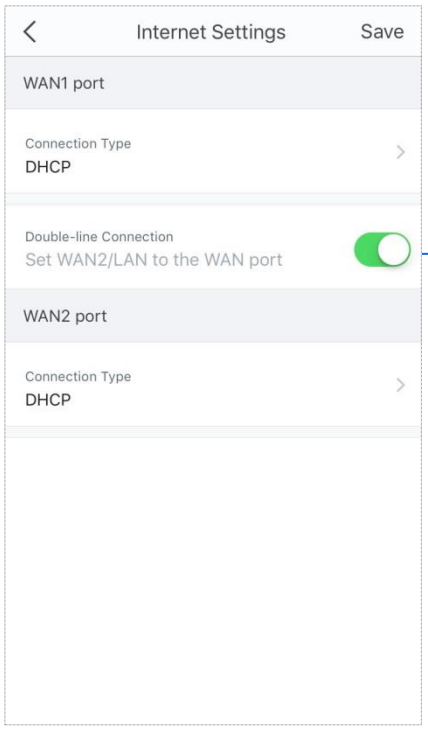


Setting up DHCP

1. Choose **Settings** > **Internet Settings** to enter the configuration page.
2. Tap **Connection Type**.
3. Select **DHCP**.
4. Tap **Save**.



The configuration for WAN2 port is similar.

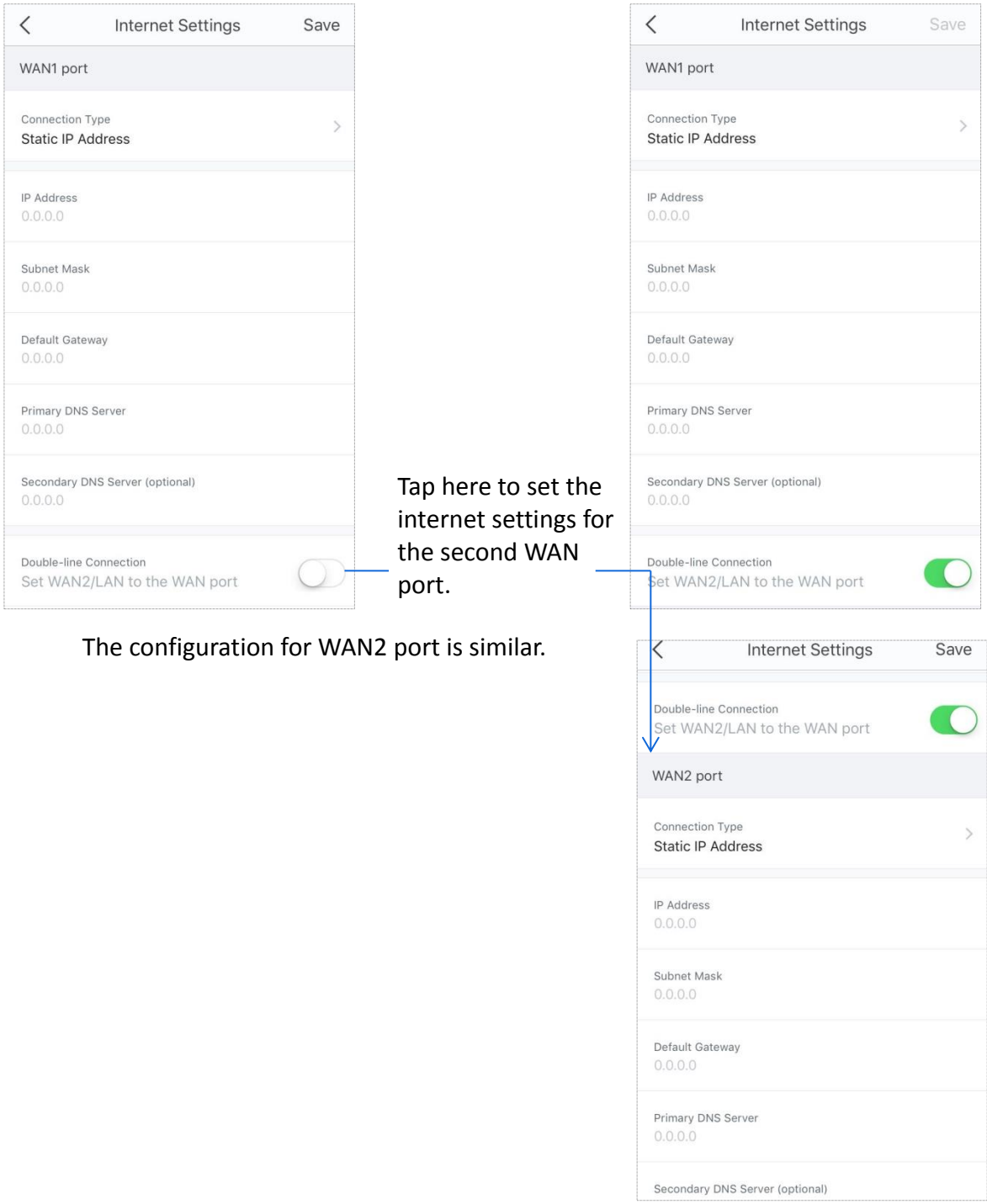


Tap here to set the internet settings for the second WAN port.

Setting up Static IP Address

1. Choose **Settings** > **Internet Settings** to enter the configuration page.
2. Tap **Connection Type**.
3. Select **Static IP Address**.
4. Enter **IP Address**, **Subnet Mask**, **Default Gateway** and **Primary DNS Server**.

   If a secondary DNS server is provided, enter it as well.
5. Tap **Save**.

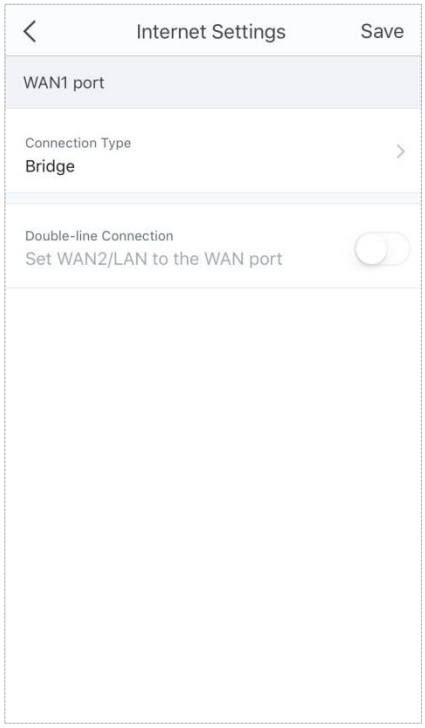


The configuration for WAN2 port is similar.

Setting up Bridge

Ensure that one of the mesh nodes in your mesh network is connected to your router with internet accessibility using an Ethernet cable.

1. Choose **Settings** > **Internet Settings** to enter the configuration page.
2. Tap **Connection Type**.
3. Select **Bridge**.
4. Tap **Save**.



Tip

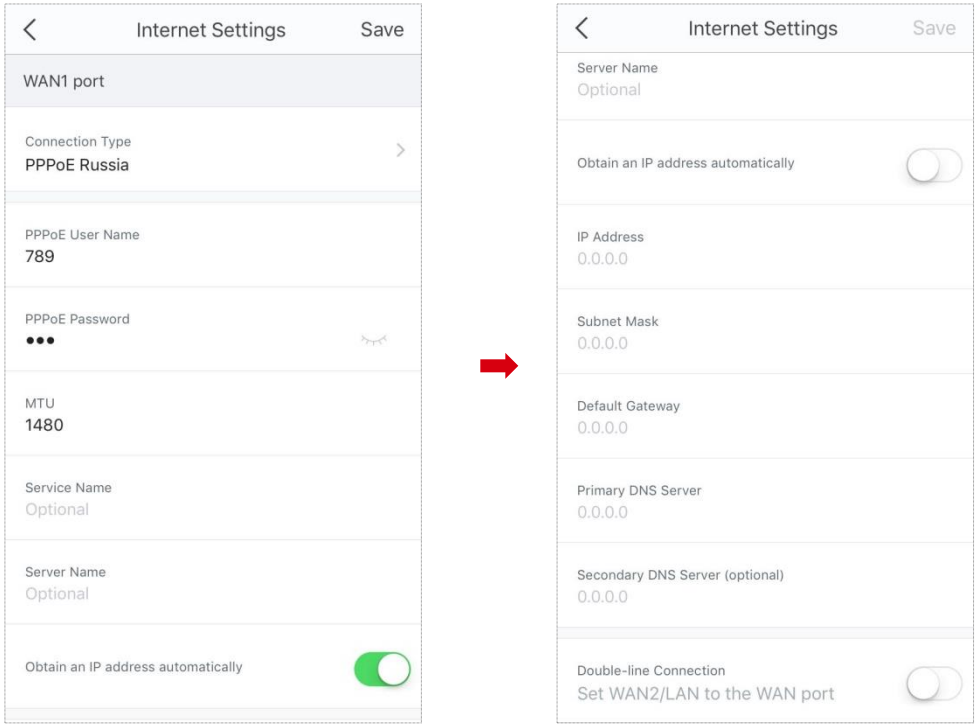
If you set the **Connection Type** to **Bridge**, the Guest Network, Access Control, Port Forwarding, UPnP, DNS, QoS, DHCP server, and Double-line Connection functions become unavailable.

The following three connection types are available only when the language of your smart phone is set to **Russian** or **Ukraine**.

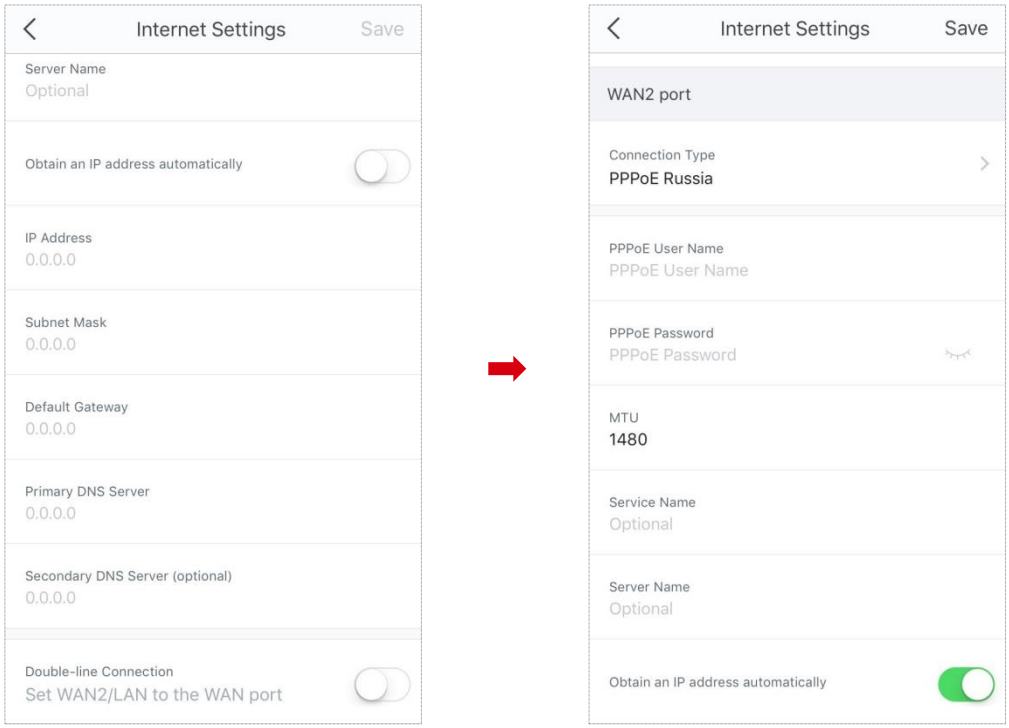
Setting up PPPoE Russia

1. Choose **Settings** > **Internet Settings** to enter the configuration page.
2. Tap **Connection Type**.
3. Select **PPPoE Russia**.
4. Enter **PPPoE User Name**, **PPPoE Password**, **Service Name and Server Name**, and change the **MTU** value as needed.

   If a static IP address and related information are provided, set the **Obtain an IP address automatically** button to the state, and enter them as well.
5. Tap **Save**.



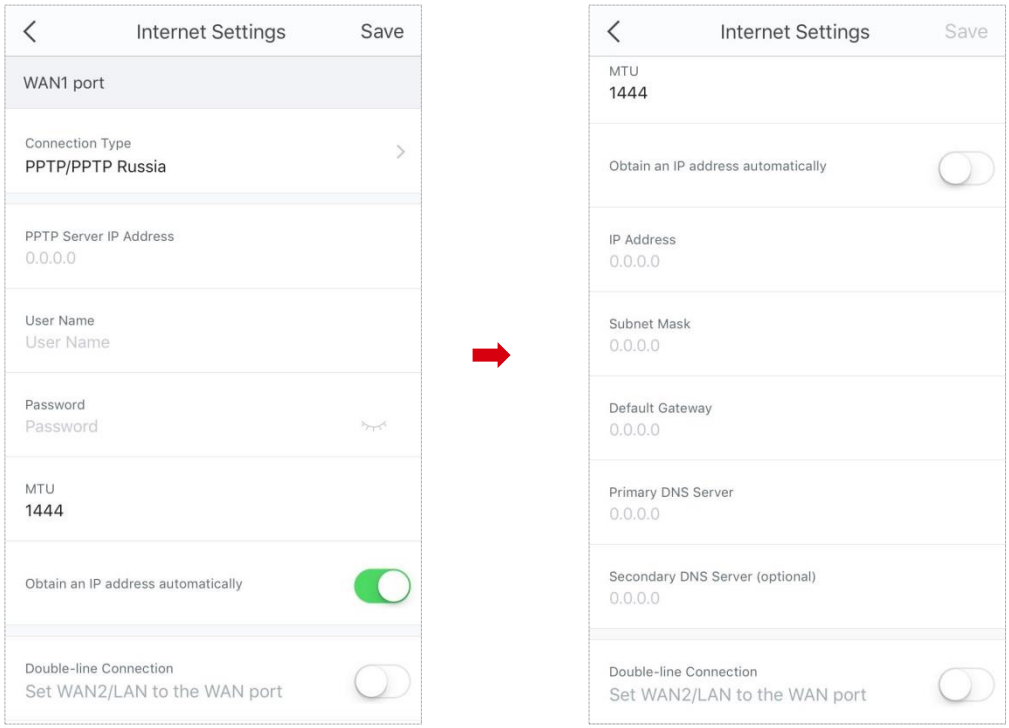
The configuration for WAN2 port is similar.



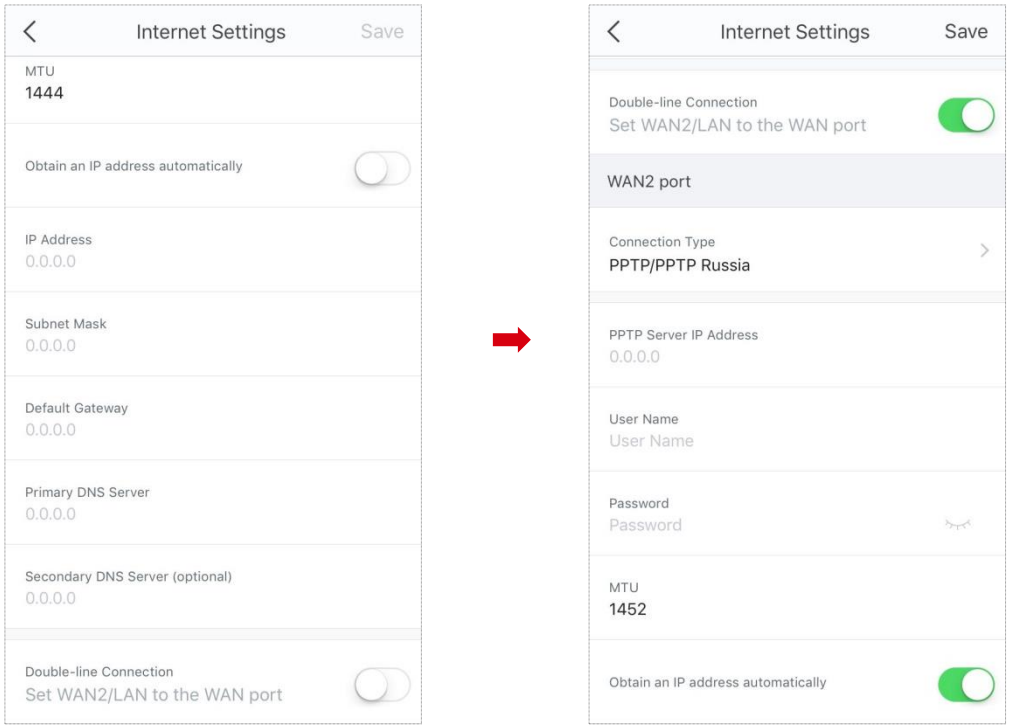
Setting up PPTP/PPTP Russia

1. Choose **Settings** > **Internet Settings** to enter the configuration page.
2. Tap **Connection Type**.
3. Select **PPTP/PPTP Russia**.
4. Enter **PPTP Server IP Address**, **User Name** and **Password**, and change the **MTU** value as needed.

   If a static IP address and related information are provided, set the **Obtain an IP address automatically** button to state, and enter them as well.
5. Tap **Save**.



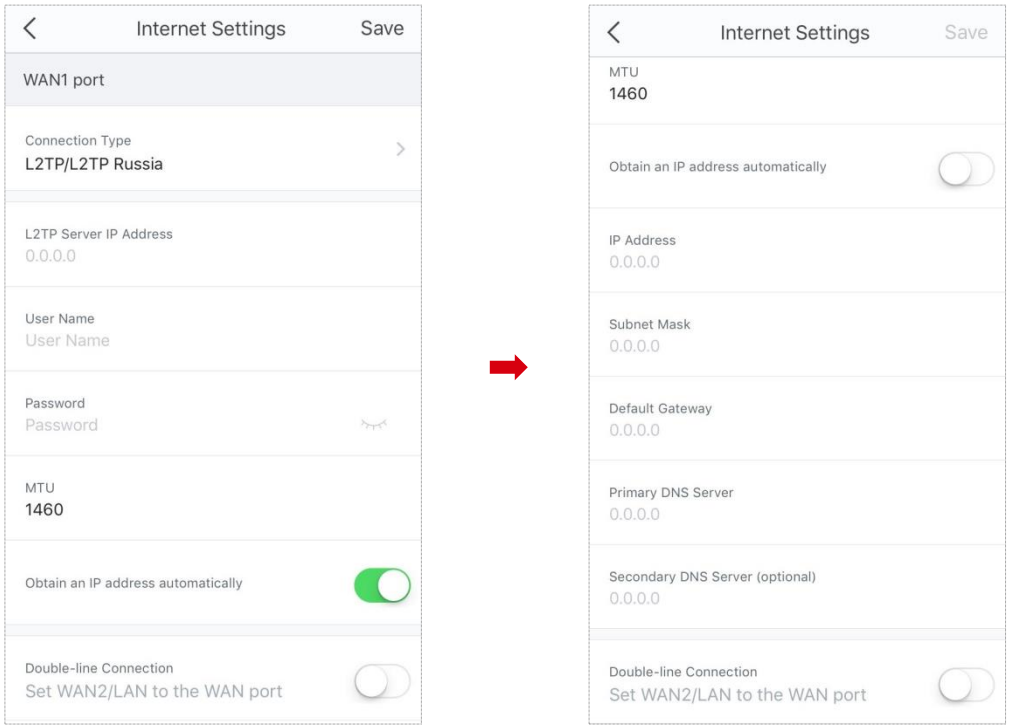
The configuration for WAN2 port is similar.



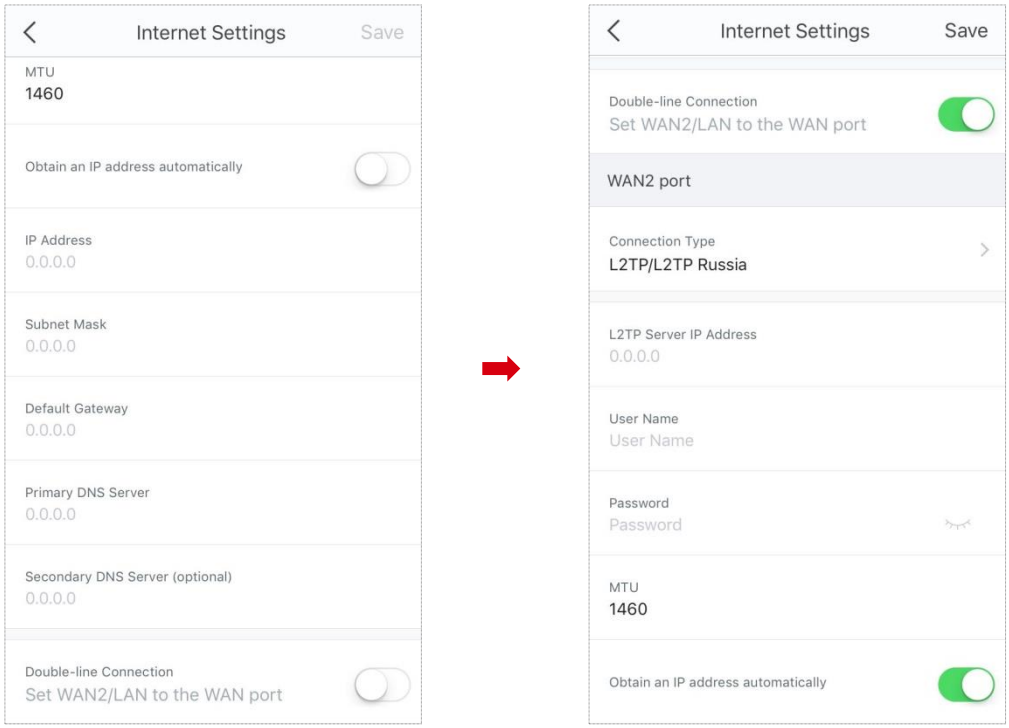
Setting up L2TP/L2TP Russia

1. Choose **Settings** > **Internet Settings** to enter the configuration page.
2. Tap **Connection Type**.
3. Select **L2TP/L2TP Russia**.
4. Enter **L2TP Server IP Address**, **User Name** and **Password**, and change the **MTU** value as needed.

   If a static IP address and related information are provided, set the **Obtain an IP address automatically** button to state, and enter them as well.
5. Tap **Save**.



The configuration for WAN2 port is similar.



9 QoS

The QoS function prioritizes gaming and web browsing activities.

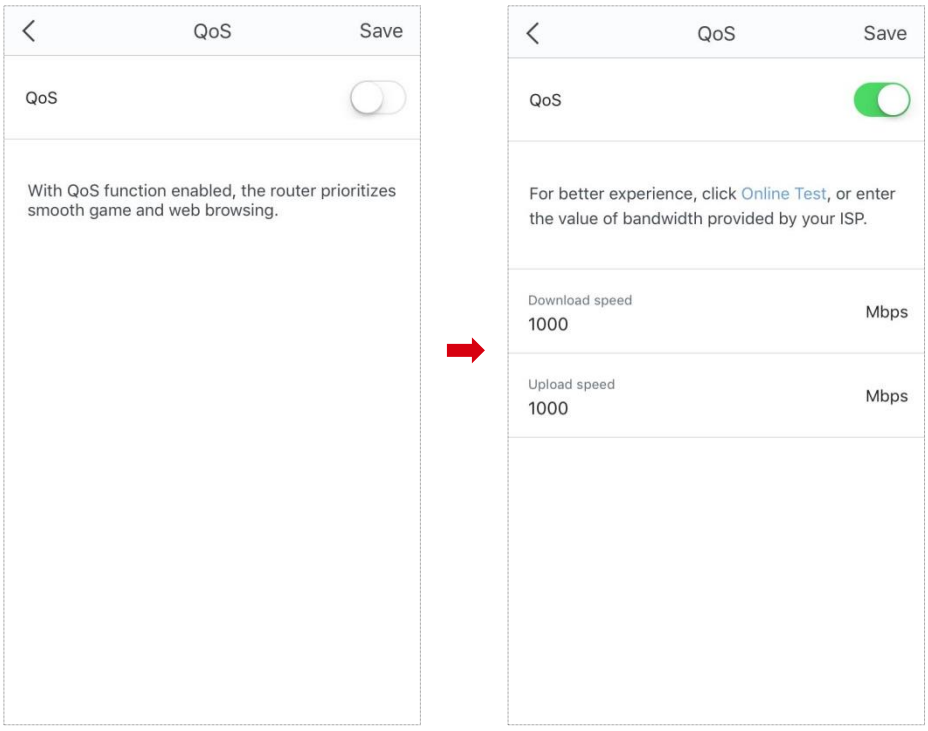
Perform the following procedure to enable the QoS function:

1. Choose **Settings** > **QoS** to enter the configuration page.
2. Set the button to the enabled state .
3. Enter download and upload speed provided by your ISP, or tap **Online Test**.

Tip

To get an accurate value, ensure that wireless devices connected to your mesh network have no internet activity when testing online.

4. Tap **Save**.



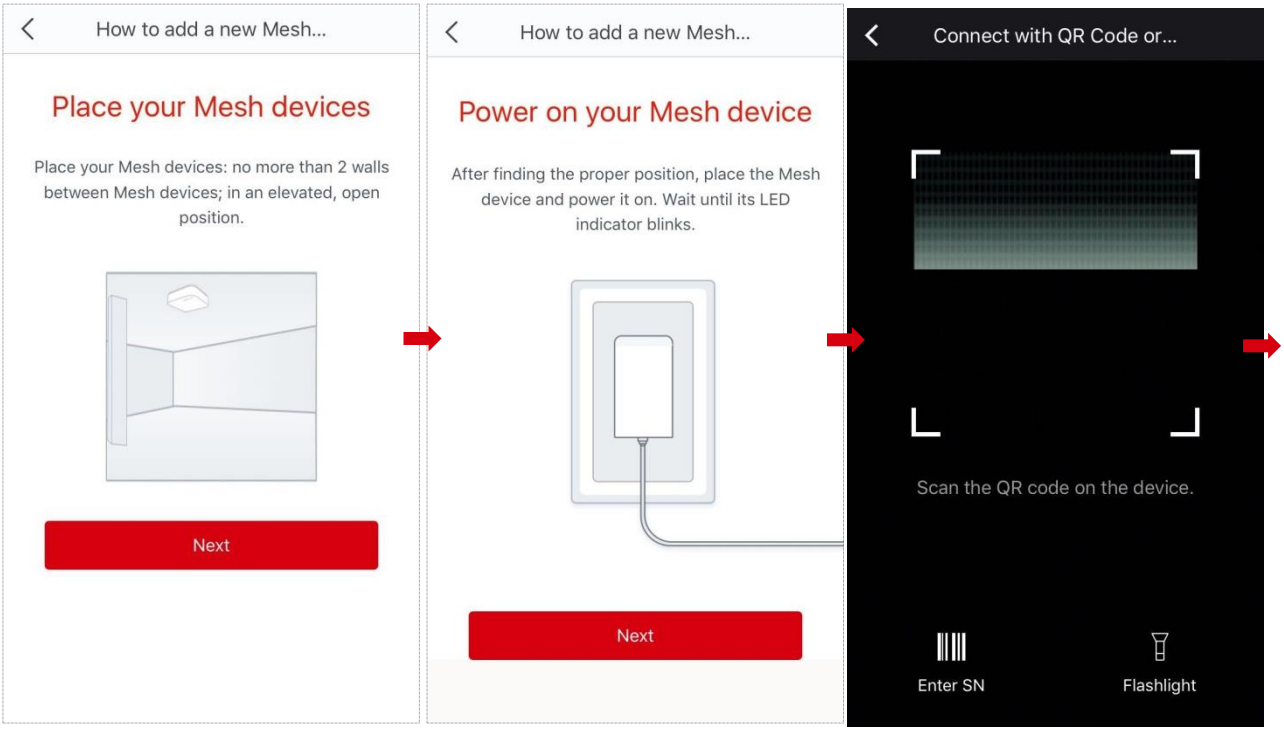
10 Add Mesh Device

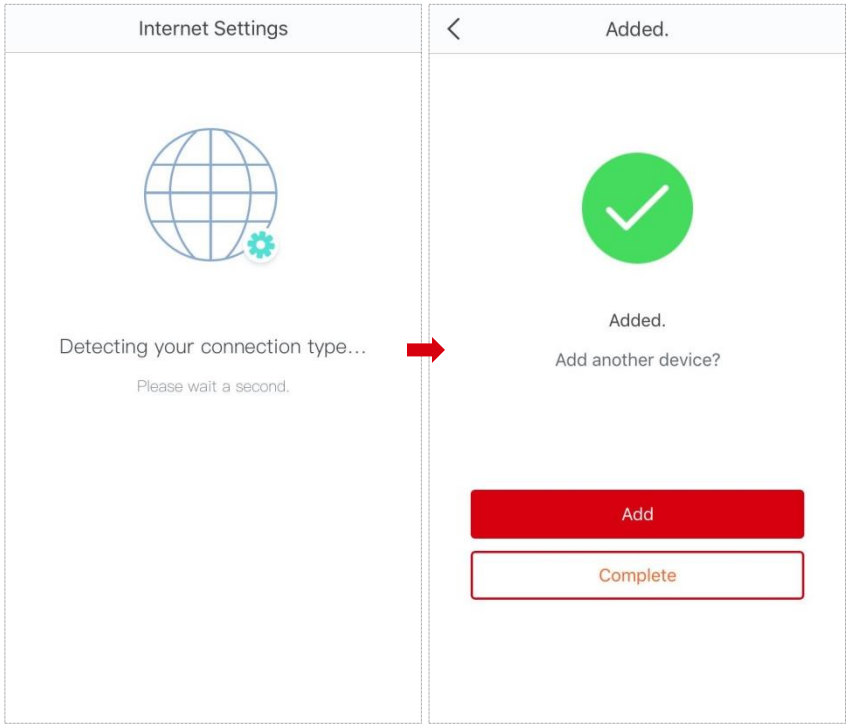
If you want to expand your WiFi coverage, you can add more mesh nodes to your existing mesh network. Use the following table to help you make the best choice.

Scenarios	Solutions
3,500 sq. ft with 60 devices	1 × EW9 + 1 × EP9
5,000 sq. ft with 80 devices	1 × EW9 + 2 × EP9
6,000 sq. ft with 100 devices	1 × EW9 + 3 × EP9

Perform the following procedure to add another mesh node into your existing mesh network:

1. Choose **Settings** > **Add Mesh device** to enter the configuration page.
2. Follow the on-screen guide to complete the settings.



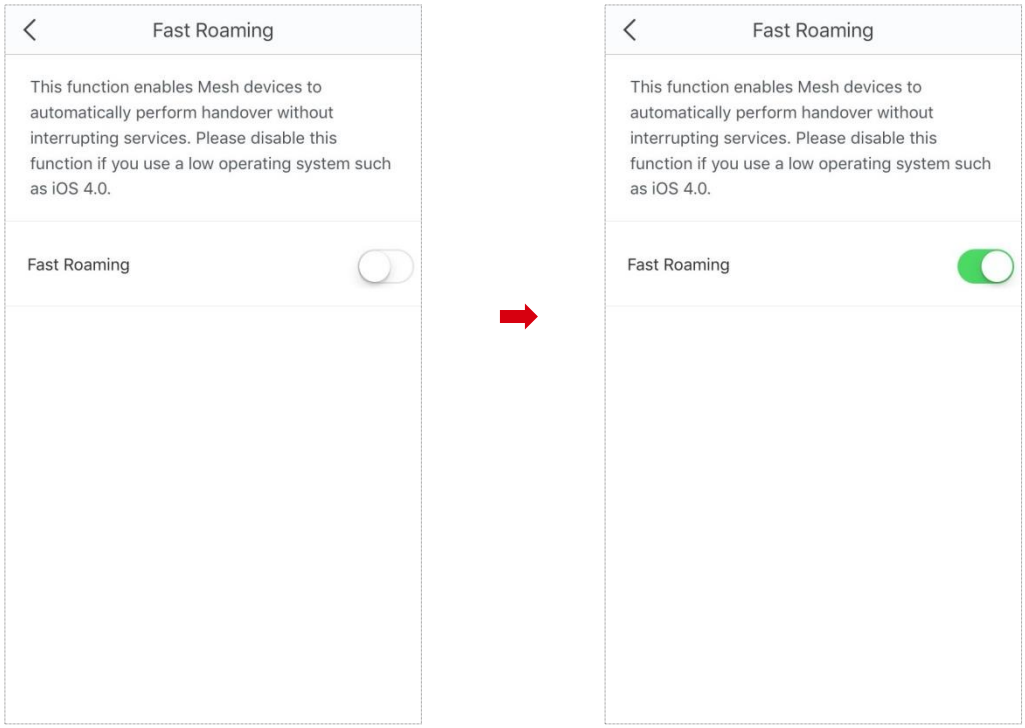

Internet Settings
Detecting your connection type...
Please wait a second.
Added.
Added.
Add another device?
Add
Complete

11 Fast Roaming

The Fast Roaming function lets you enjoy uninterrupted internet service when moving around the WiFi-blanketed range.

Perform the following procedure to enable the Fast Roaming function:

1. Choose **Settings** > **Fast Roaming** to enter the configuration page.
2. Set the button to the enabled state.

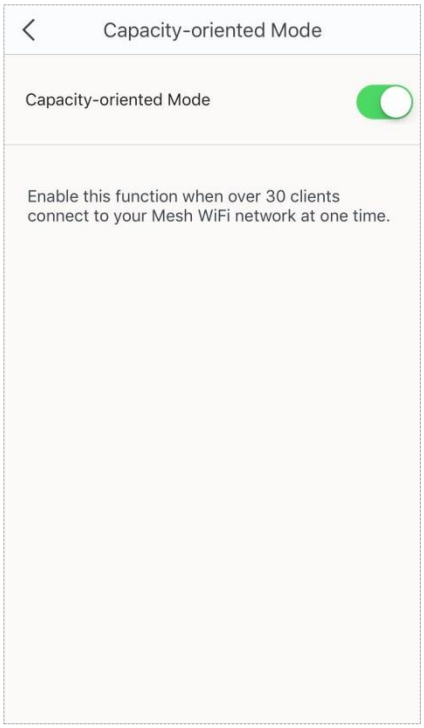


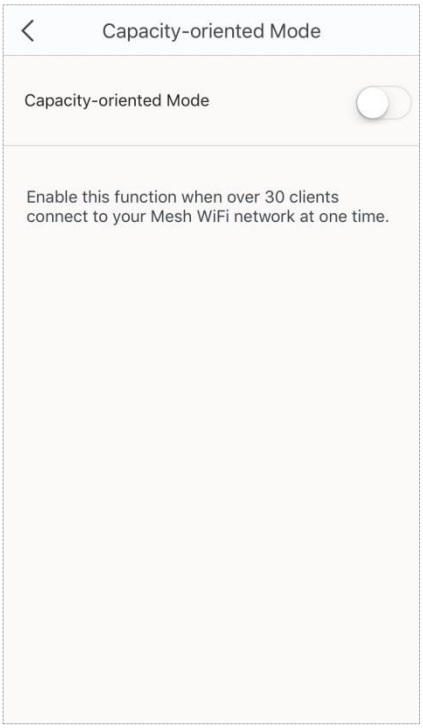
12 Capacity-oriented Mode

The Capacity-oriented mode ensures the internet experience when over 30 clients are connected to your mesh network at one time.

Perform the following procedure to disable/enable the Capacity-oriented Mode:

1. Choose **Settings** > **Capacity-oriented Mode** to enter the configuration page.
2. Alternate the status between enabled and disabled by tapping icon as required. It is recommended to keep the enabled state.





13 Captive Portal

A captive portal is an entry to a network that requires users to view a splash page and agree to terms and conditions before using the network. The Mesh WiFi system support three authentication types: account authentication, one-key authentication, and SMS authentication.

- **Account Authentication**

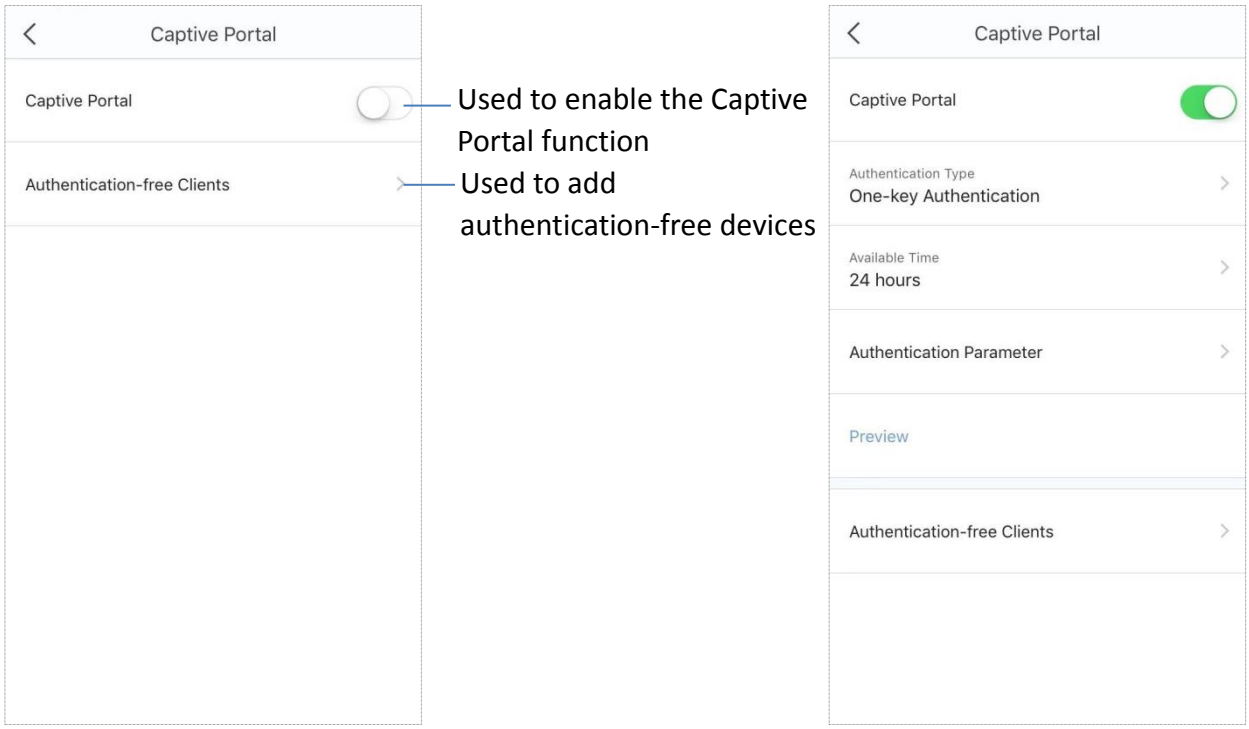
If the Account Authentication is set, Users can access the internet only after being authenticated with the valid user name and password.

- **One-key Authentication**

If the One-key Authentication is set, users can access the internet after tapping the **Connect** button on the authentication page.

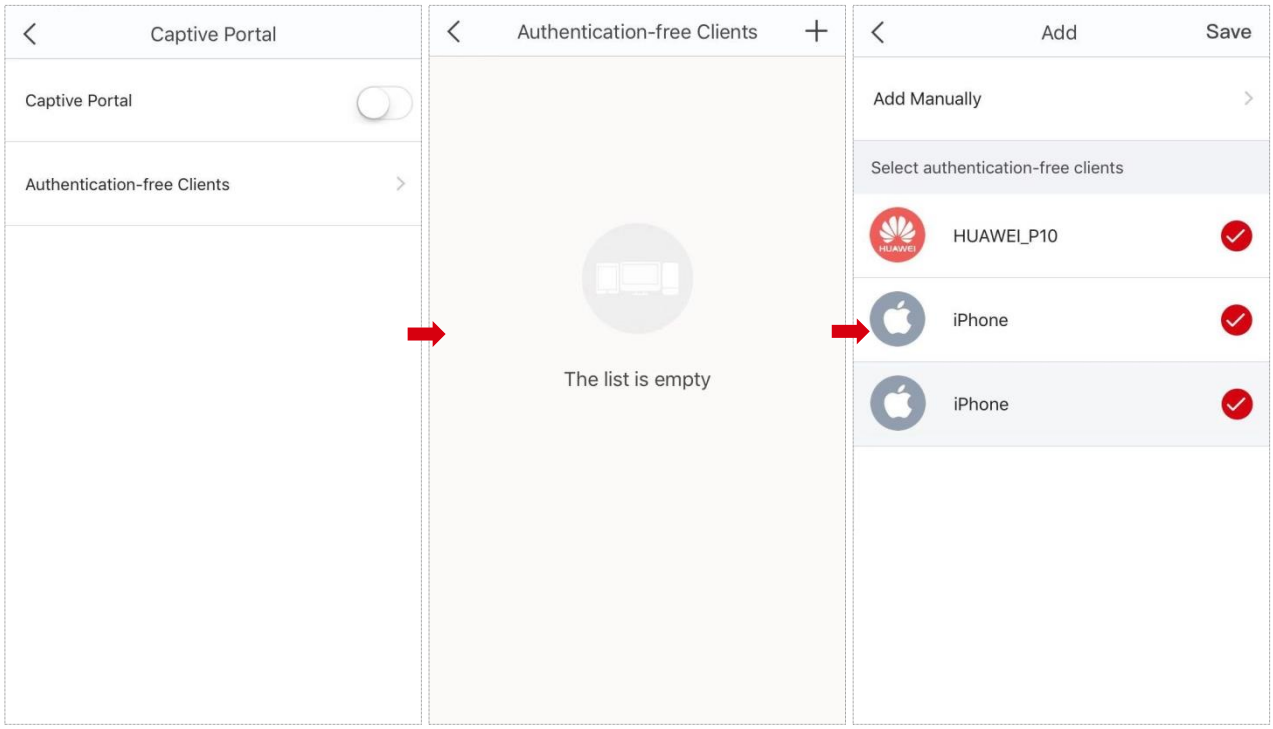
- **SMS Authentication**

If the SMS Authentication is set, users need to enter their phone number on the authentication page to receive a verification code. Then enter the verification code on the authentication page for accessing the internet.

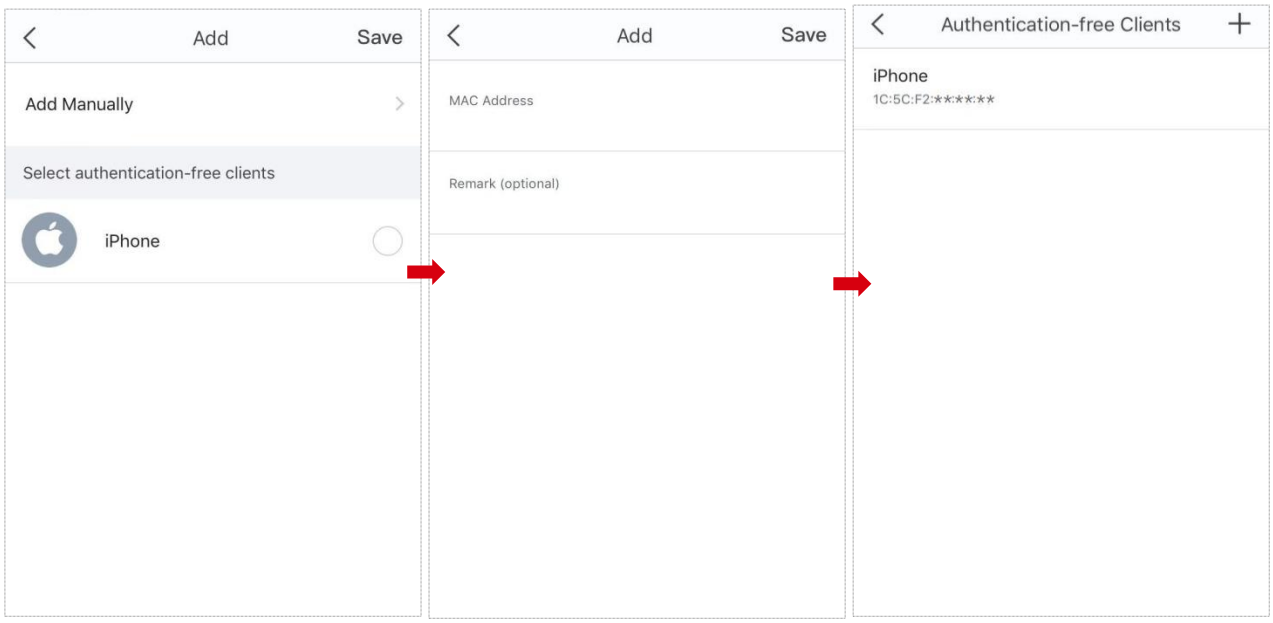


Adding authentication-free clients

1. Choose **Settings** > **Captive Portal** to enter the configuration page.
2. Tap **Authentication-free Clients**.
3. Tap the + icon on the upper-right corner.
4. If the device you want to add has connected to the mesh network, directly select it in the list, and tap **Save**.

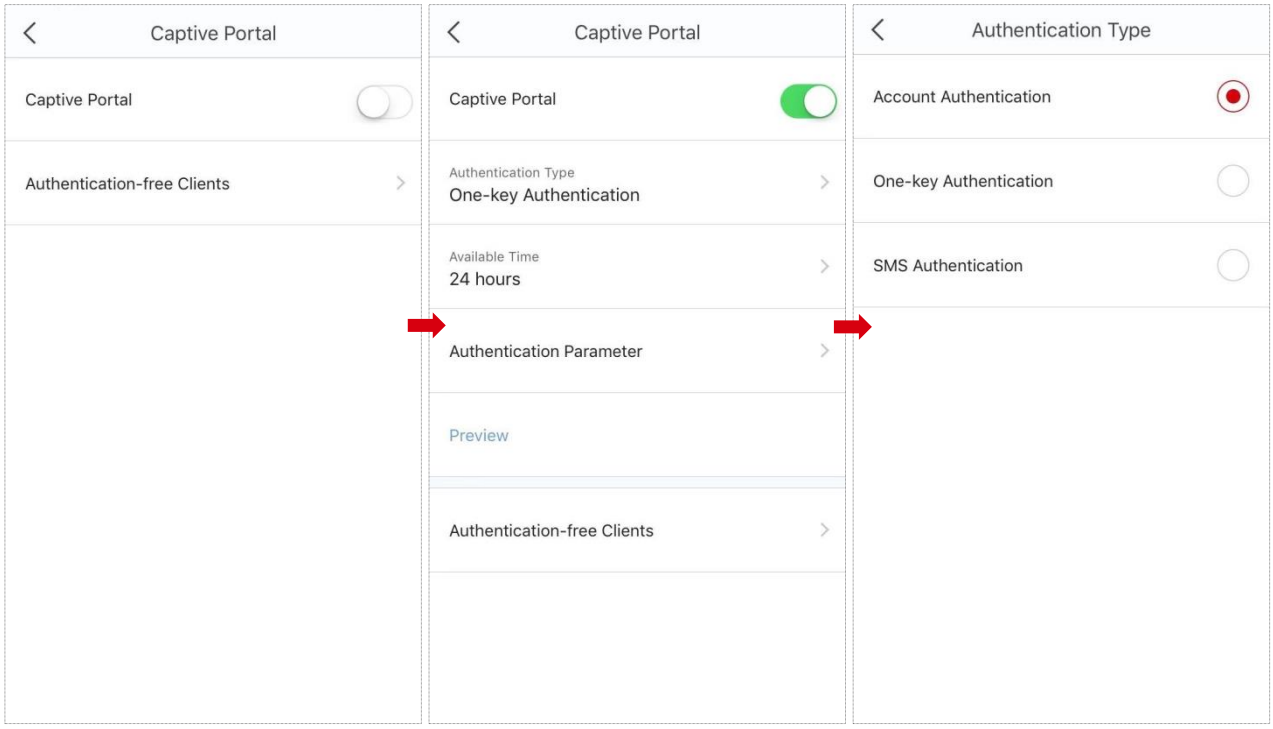


If it is not on the list, tap **Add Manually**, enter the MAC address of the device, specify remark, then tap **Save**.

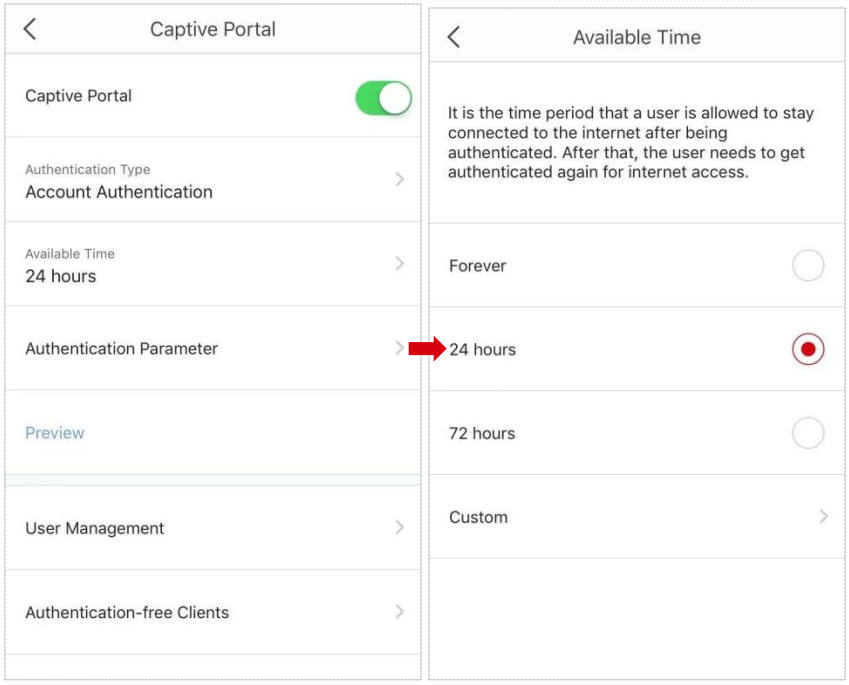


Setting up the account authentication rule

1. Choose **Settings** > **Captive Portal** to enter the configuration page.
2. Set the button to the enabled state .
3. Set the Authentication type to **Account Authentication**.



4. Select an available time for the rule, or tap **Custom** to manually specify an available time. After the available time elapses, the user is required to pass the authentication again.



5. Tap **Authentication Parameter** to set the parameters on the authentication page.

   (1) Tap **Logo** to upload a logo. This file must be .jpg, .jpeg, or .png file. The file size must be less than 30 KB, and the dimensions in pixels should be 6.5:1.

   (2) Tap **Headline** to enter a headline, and tap **Save**.

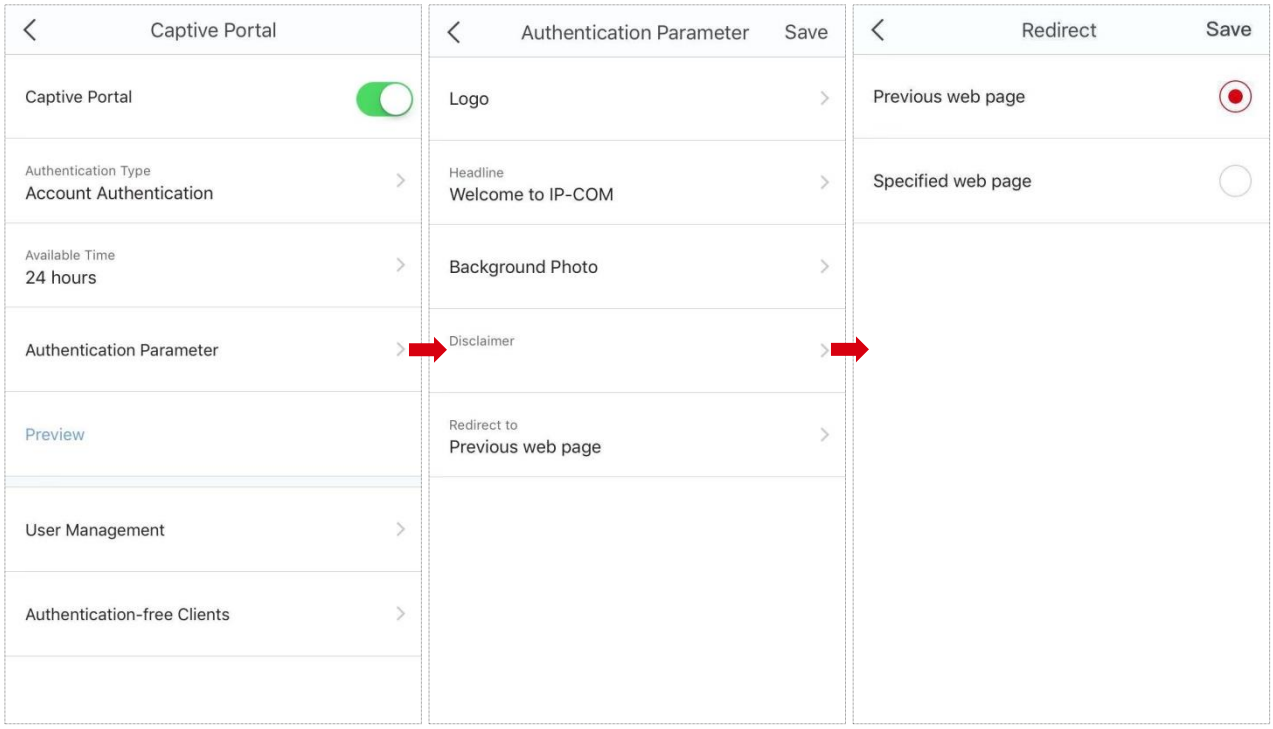
   (3) Tap **Background Photo** to upload a background file. This file must be .jpg, .jpeg, or .png file. The file size must be less than 300 KB, and the dimensions in pixels should be 16:9.

   (4) Tap **Disclaimer** to enter the disclaimer content, and tap **Save**.

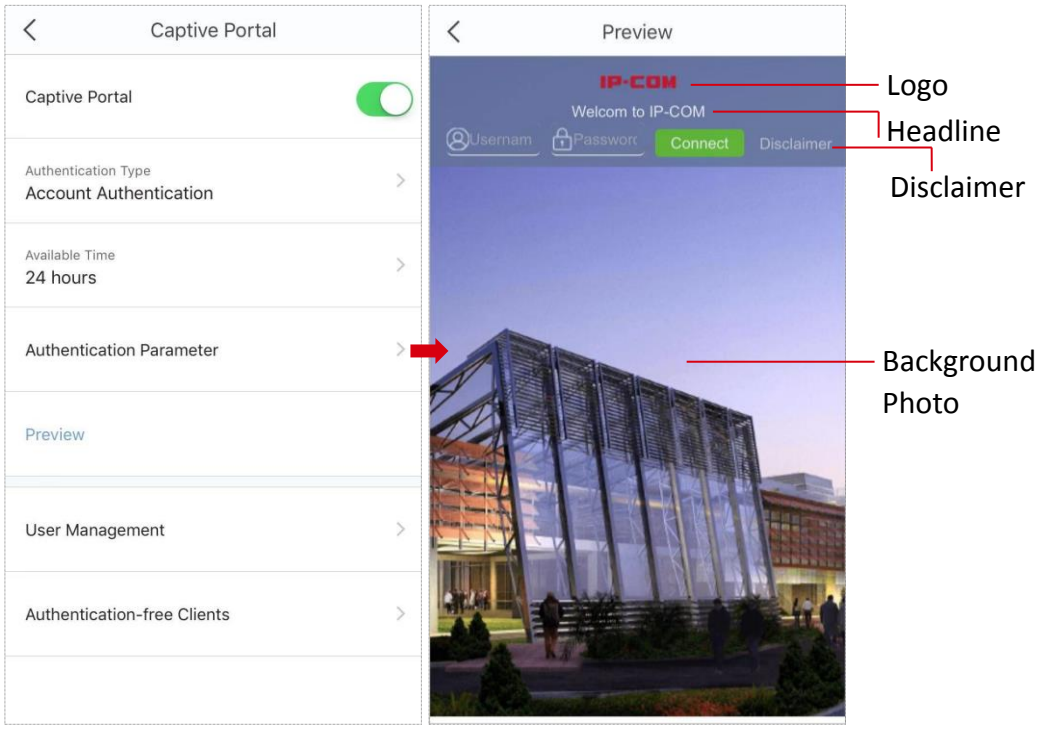
   (5) Tap **Redirect to** to specify a website that users will visit after passing the authentication, and tap **Save**.

   - **Previous web page:** It specifies that the user will be redirected to the web page he visits before the authentication.
   - **Specified web page:** It specifies that the user will be redirected to the web page you specify here after passing the authentication.

   (6) Tap **Save**.



6. Tap **Preview** to view the authentication page you set.



7. Tap **User Management** to add accounts for users.

8. Tap the + icon.

- **Adding the accounts respectively**

  (1) Tap **Add**.

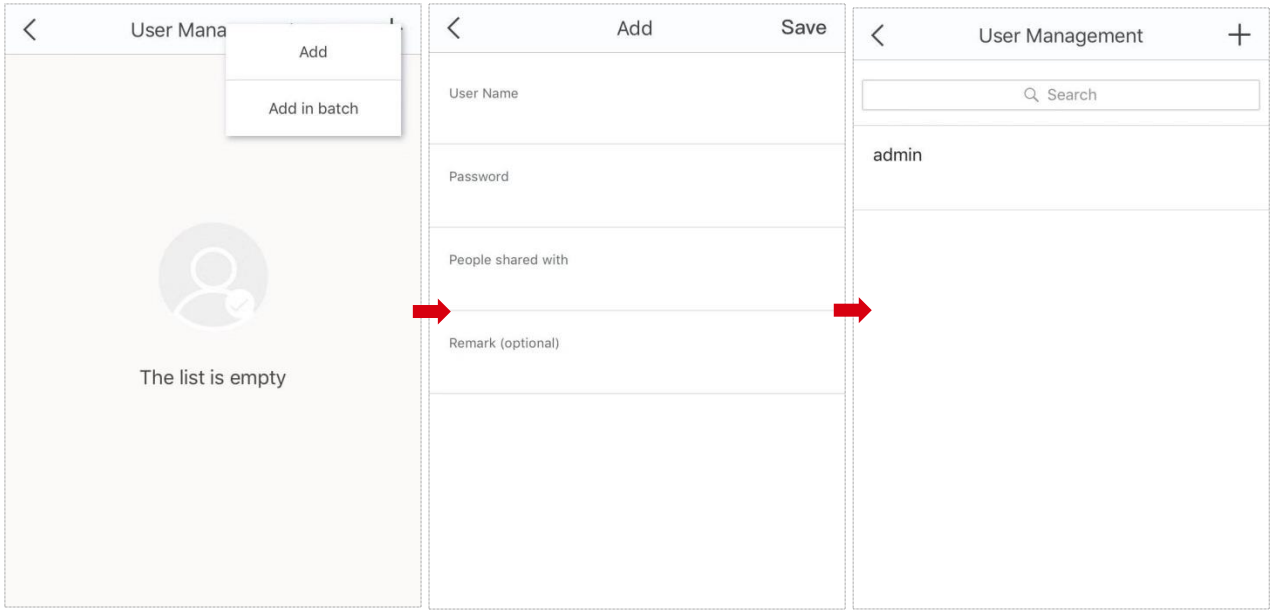
  (2) Specify a user name.

  (3) Specify a password.

  (4) Specify the number of users that can use this account to login for accessing the internet at the same time.

  (5) Specify a remark.

  (6) Tap **Save**.

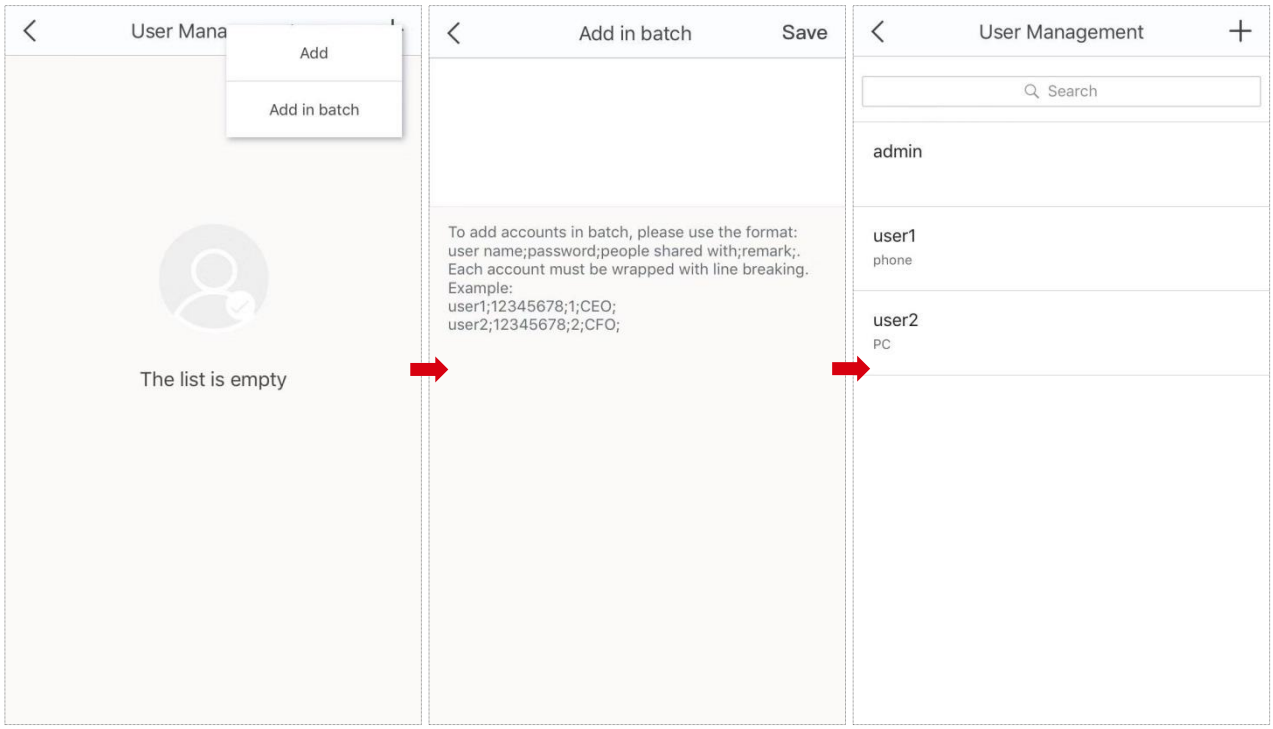


- **Adding the accounts in batch**

  (1) Tap **Add in batch**.

  (2) Enter the parameters in terms of the onscreen instructions.

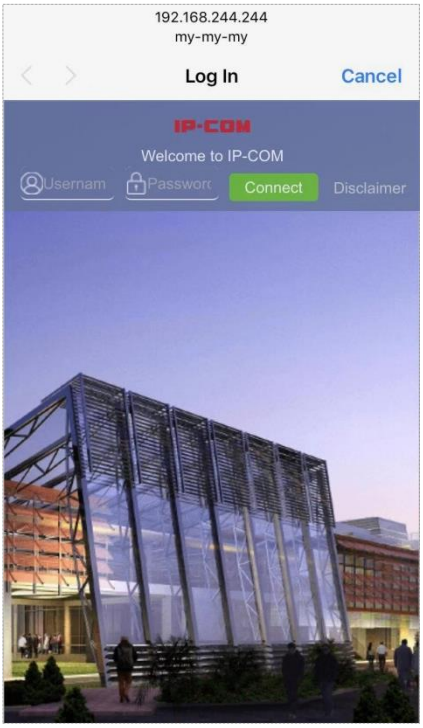
  (3) Tap **Save**.



Verification

1. Connect a device to the mesh network in wired or wireless manner, and start a web browser. An authentication page appears.
2. Enter a user name and password for authentication.
3. Tap **Connect**.

You can access the internet after passing the authentication.



Application scenario for account authentication

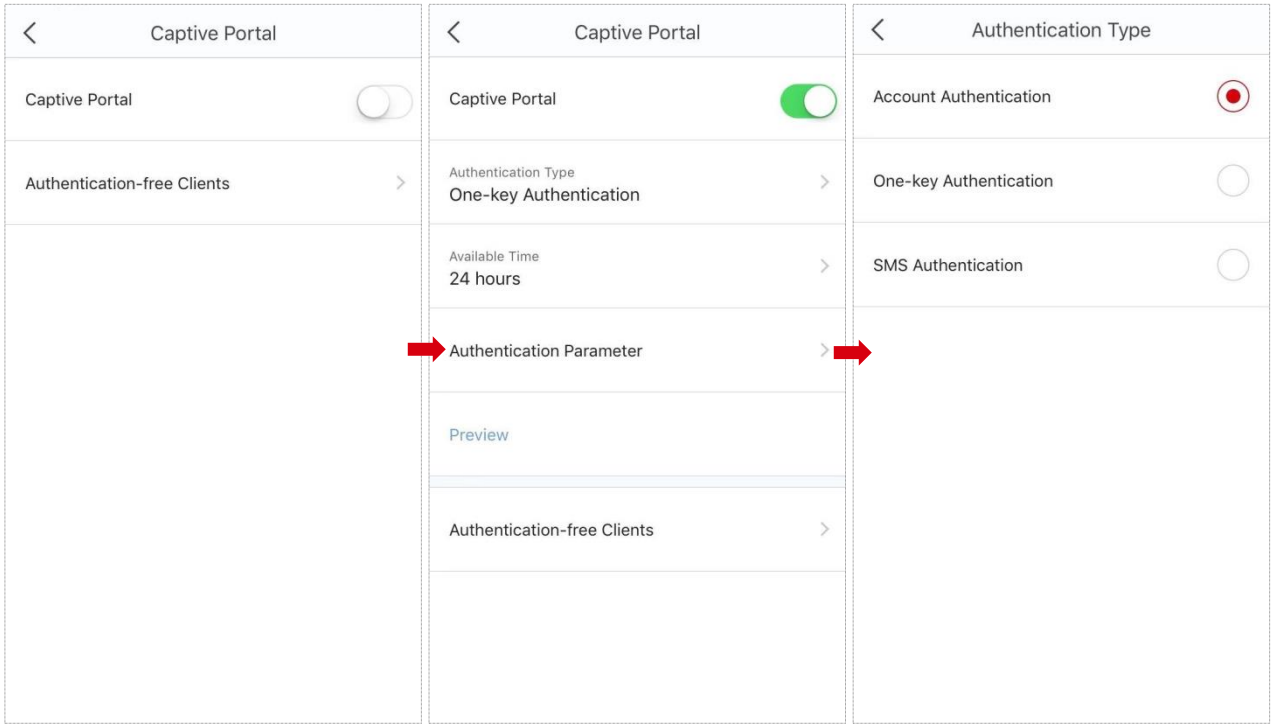
For example, a large apartment named **Home** uses the Mesh WiFi system to deploy its network. It requires that each room uses an account to pass the authentication for accessing the internet.

Configuration procedure

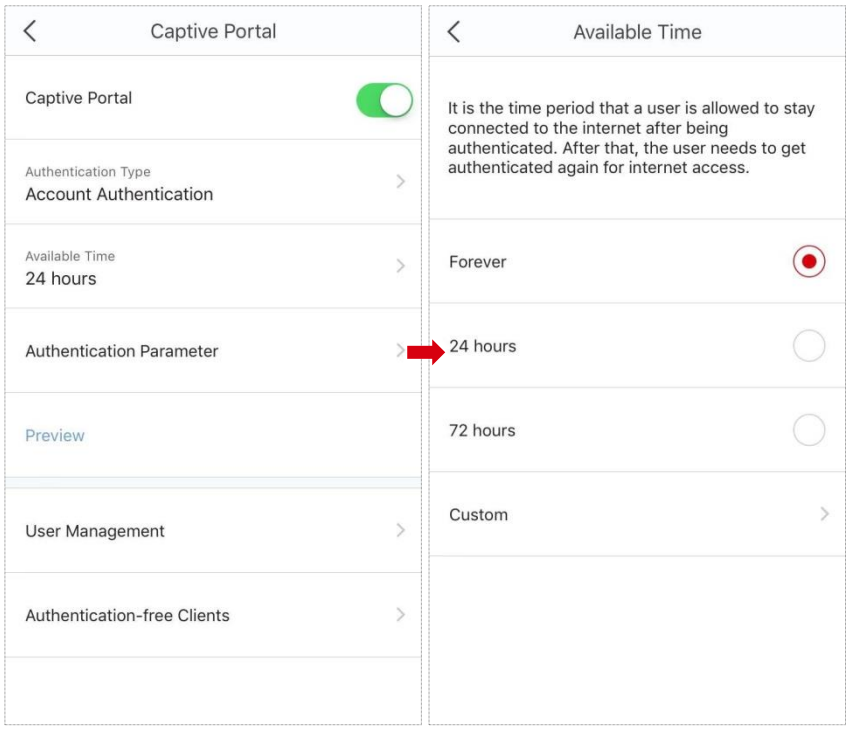
- **Setting up the account authentication rule**

  1. Set the button to the enabled state .

  2. Set the Authentication type to **Account Authentication**.



3. Select or customize an available time for the rule, which is **Forever** in this example.



4. Tap **Authentication Parameter** to set the parameters on the authentication page.

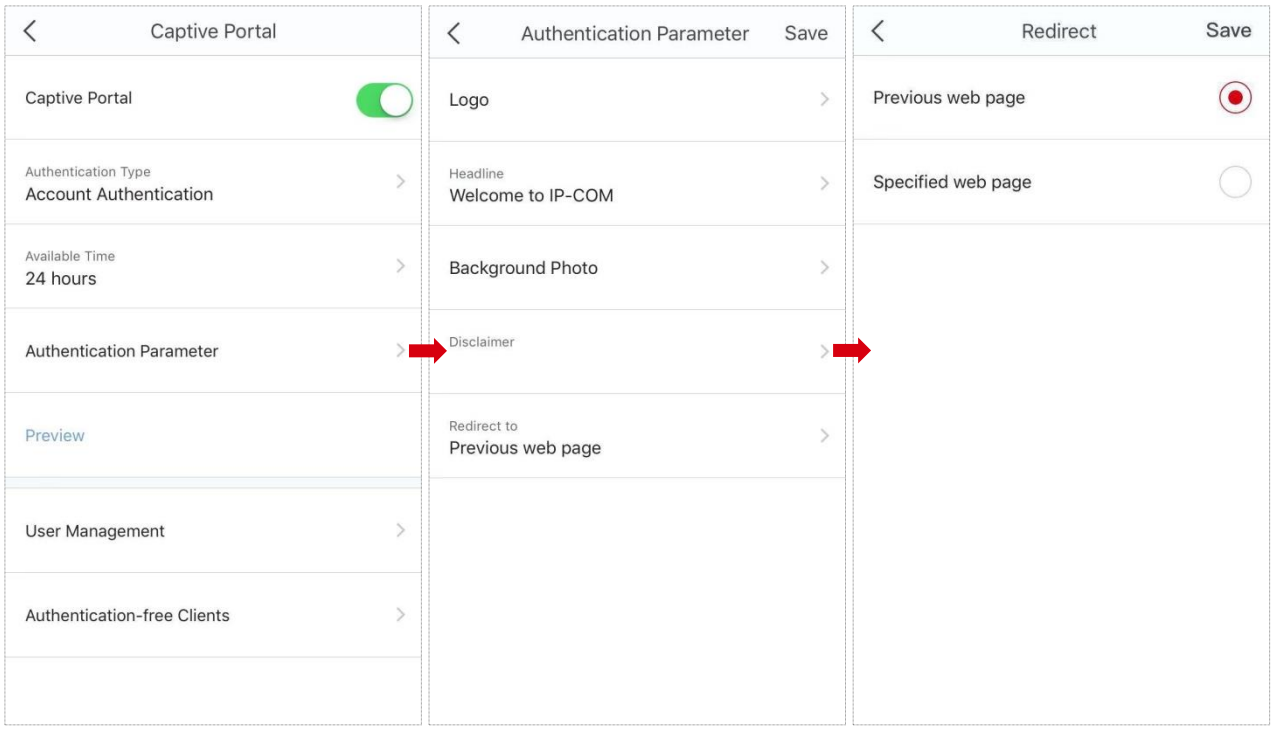
(1) Tap **Logo** to upload a logo. This file must be .jpg, .jpeg, or .png file. The file size must be less than 30 KB, and the dimensions in pixels should be 6.5:1.

(2) Tap **Headline** to enter a headline, which is **Home** in this example, and tap **Save**.

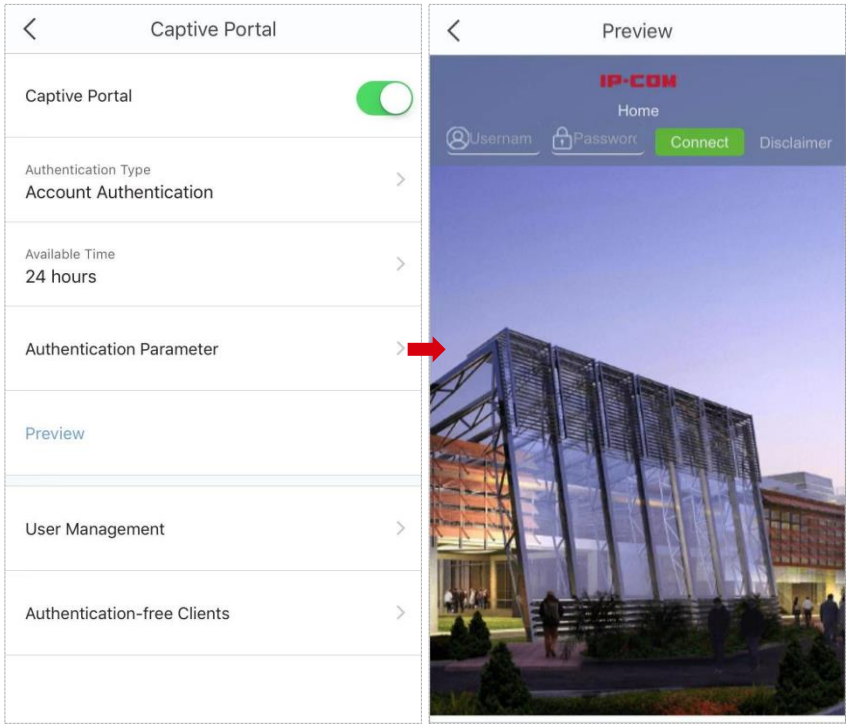
(3) Tap **Background Photo** to upload a background file. This file must be .jpg, .jpeg, or .png file. The file size must be less than 300 KB, and the dimensions in pixels should be 16:9.

(4) Tap **Redirect to** to specify a website that users will visit after passing the authentication, which is **Previous web page** in this example, and tap **Save**.

(5) Tap **Save**.

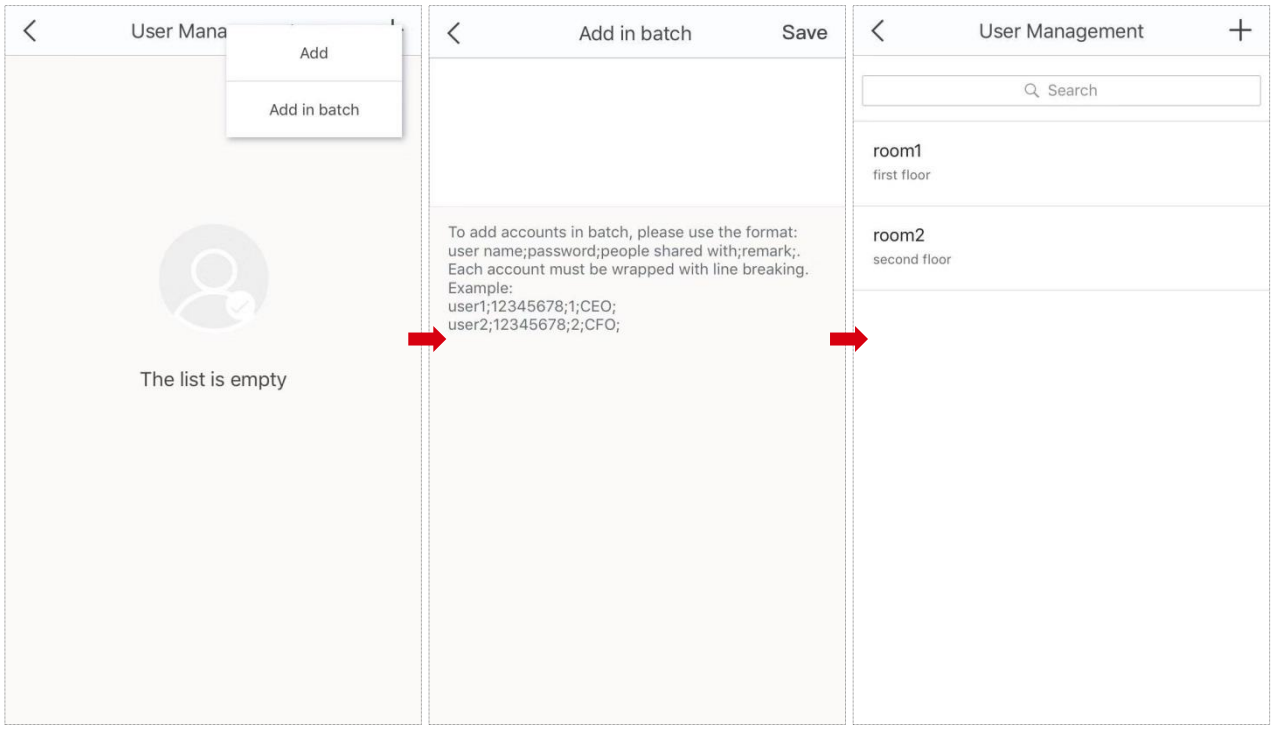


5. Tap **Preview** to view the authentication page you set.



- **Adding accounts for users**

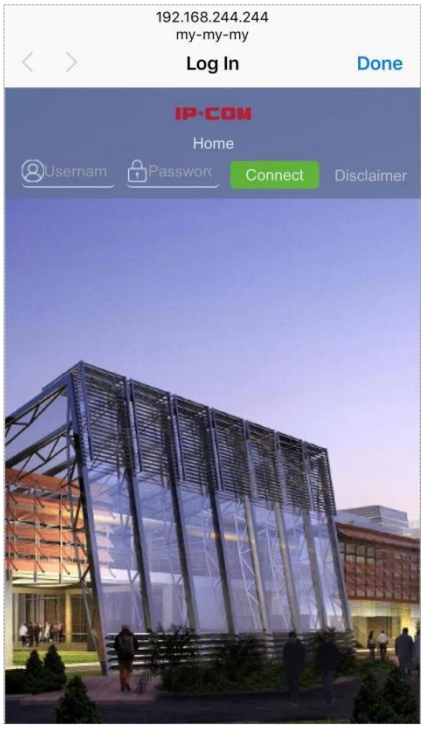
  1. Tap **User Management**.
  2. Tap the + icon.
  3. Tap **Add in batch**.
  4. Enter the parameters as required, Which are “**room1;good123;1;first floor;**”, and “**room2;good456;1;second floor;**” in this example.
  5. Tap **Save**.



- **Verification**

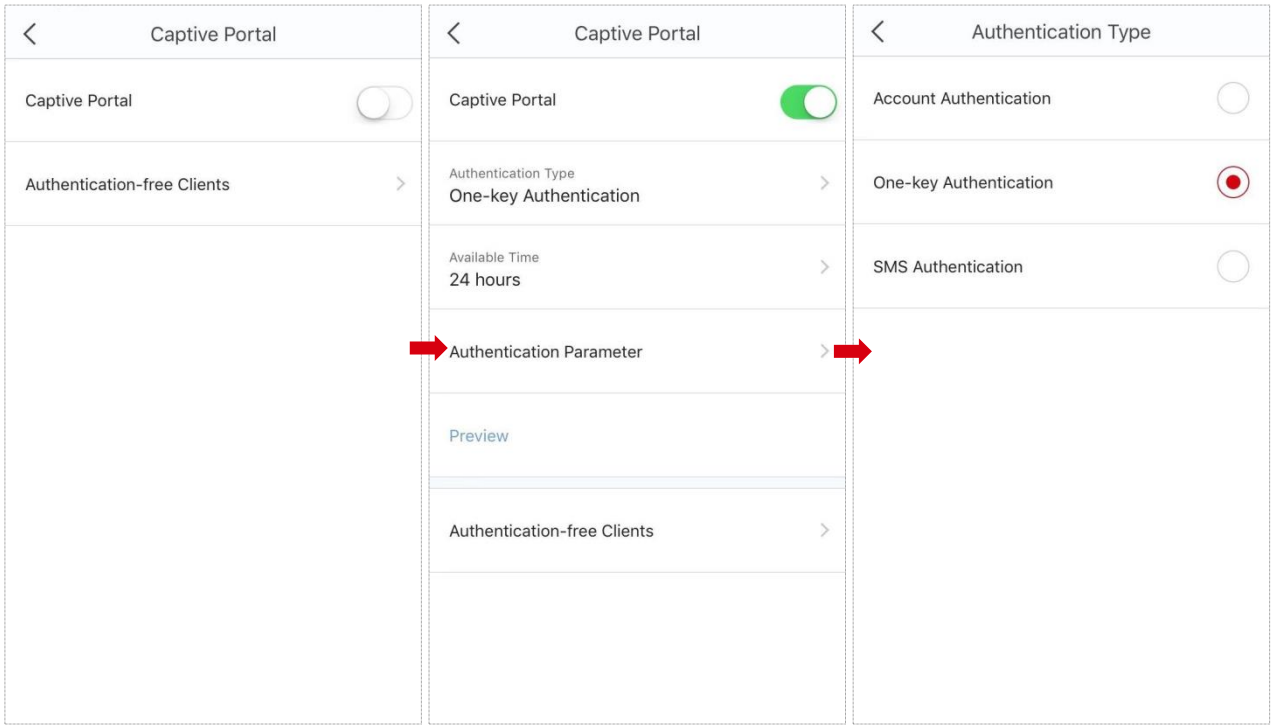
  1. Connect a device to the mesh network in wired or wireless manner, and start a web browser. An authentication page appears.
  2. Enter a user name and password for authentication, which are **room1** and **good123** in this example.
  3. Tap **Connect**.

The device can access the internet after passing the authentication.

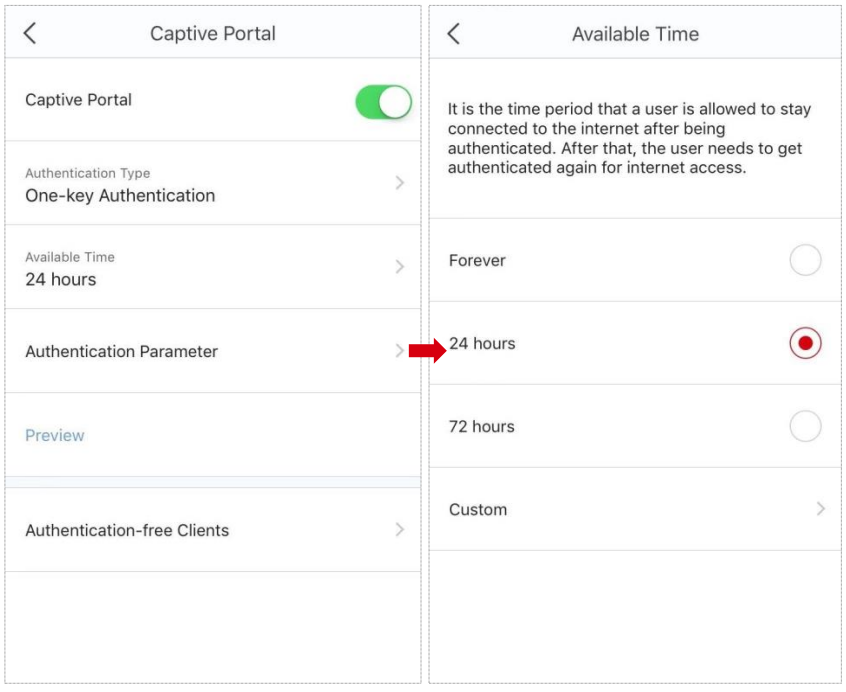


Setting up the one-key authentication rule

1. Choose **Settings** > **Captive Portal** to enter the configuration page.
2. Set the button to the enabled state .
3. Set the **Authentication type** to **One-key Authentication**.



4. Select an available time for the rule, or tap **Custom** to specify an available time. After the available time elapses, the user is required to pass the authentication again.



5. Tap **Authentication Parameter** to set the parameters on the authentication page.

(1) Tap **Logo** to upload a logo. This file must be .jpg, .jpeg, or .png file. The file size must be less than 30 KB, and the dimensions in pixels should be 6.5:1.

(2) Tap **Headline** to enter a headline, and tap **Save**.

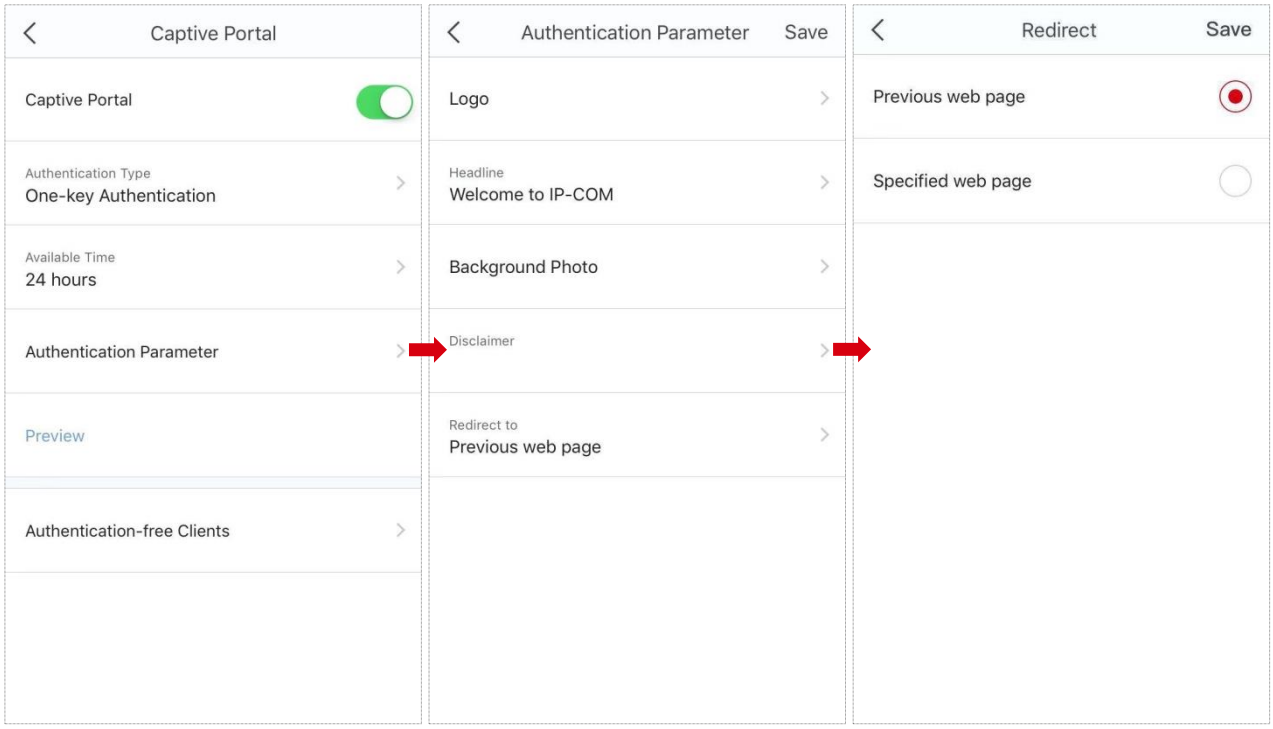
(3) Tap **Background Photo** to upload a background file. This file must be .jpg, .jpeg, or .png file. The file size must be less than 300 KB, and the dimensions in pixels should be 16:9.

(4) Tap **Disclaimer** to enter the disclaimer content, and tap **Save**.

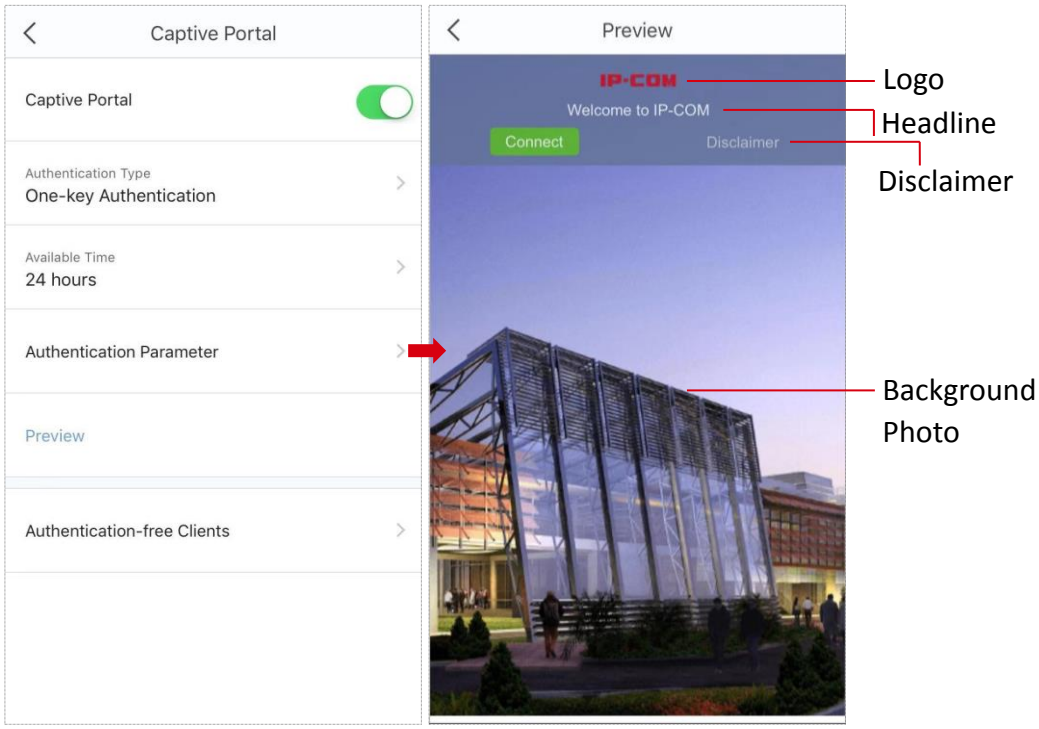
(5) Tap **Redirect to** to specify a website that users will visit after passing the authentication, and tap **Save**.

- **Previous web page**: It specifies that the user will be redirected to the web page he visits before the authentication.
- **Specified web page**: It specifies that the user will be redirected to the web page you specify here after passing the authentication.

(6) Tap **Save**.



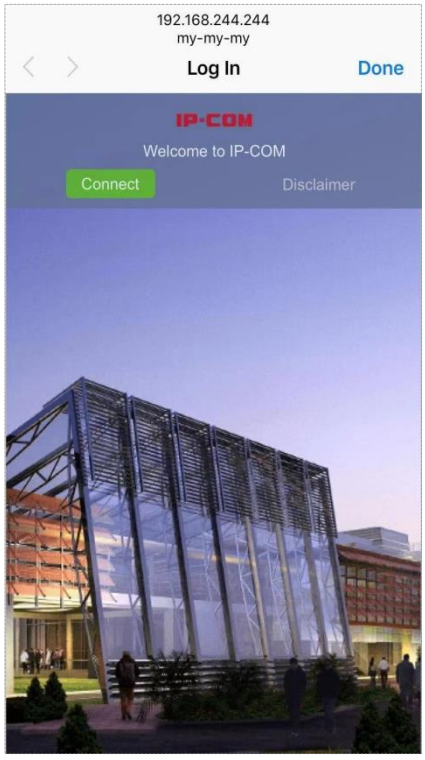
6. Tap **Preview** to view the authentication page you set.



- **Verification**

1. Connect a device to the mesh network in wired or wireless manner, and start a web browser. An authentication page appears.
2. Tap **Connect**.

Then you can access the internet.



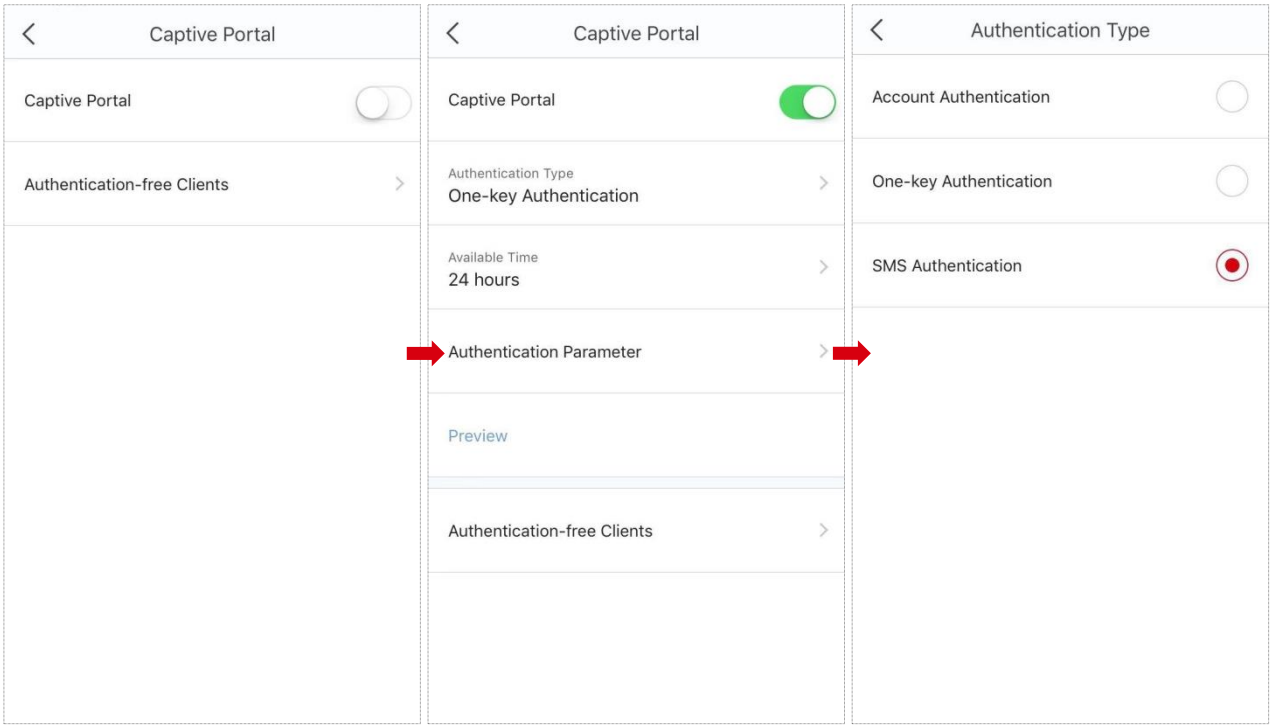
Setting up the SMS authentication rule

Prerequisites

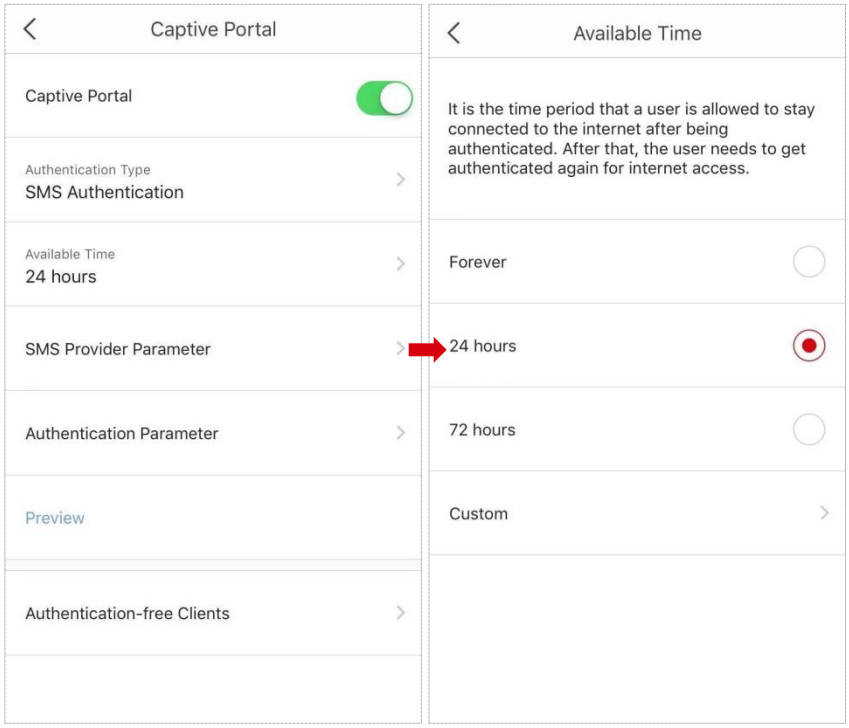
Before you set up the SMS authentication rule, you need to have an NEXMO account and buy NEXMO SMS service.

Configuration procedure

1. Choose **Settings** > **Captive Portal** to enter the configuration page.
2. Set the button to the enabled state .
3. Set the **Authentication type** to **SMS Authentication**.



4. Select an available time for the rule, or tap **Custom** to specify an available time. After the available time elapses, the user is required to pass the authentication again.



5. Set up **SMS Provider Parameter**.

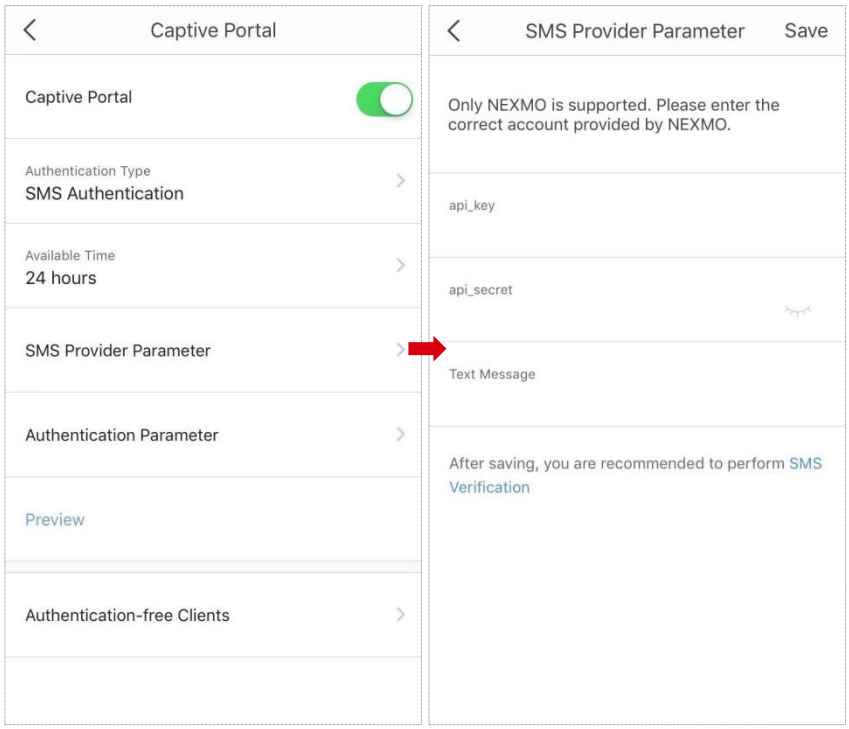
(1) Tap **SMS Provider Parameter**.

(2) Enter the API key provided by the NEXMO.

(3) Enter the API secret provided by the NEXMO.

(4) Edit a message text for verification of the users who request for accessing the internet.

(5) Tap **Save**.



6. Tap **Authentication Parameter** to set the parameters on the authentication page.

   (1) Tap **Logo** to upload a logo. This file must be .jpg, .jpeg, or .png file. The file size must be less than 30 KB, and the dimensions in pixels should be 6.5:1.

   (2) Tap **Headline** to enter a headline, and tap **Save**.

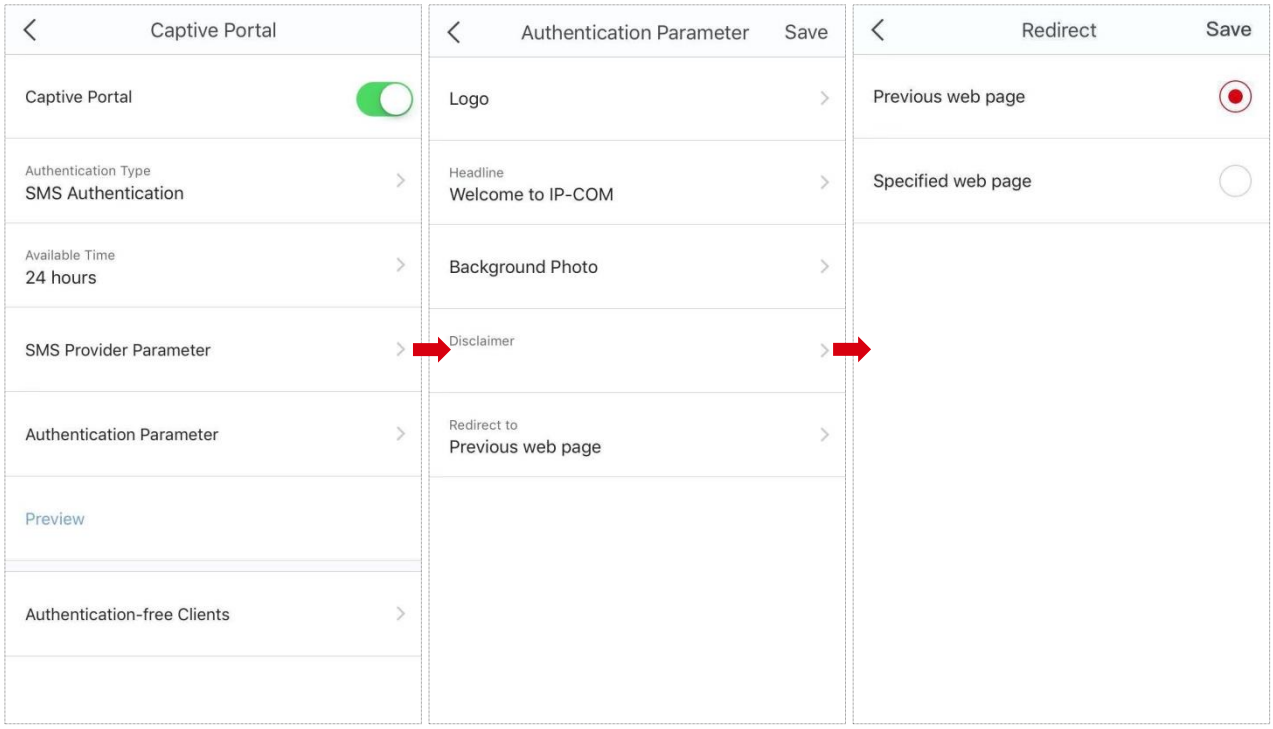
   (3) Tap **Background Photo** to upload a background file. This file must be .jpg, .jpeg, or .png file. The file size must be less than 300 KB, and the dimensions in pixels should be 16:9.

   (4) Tap **Disclaimer** to enter the disclaimer content, and tap **Save**.

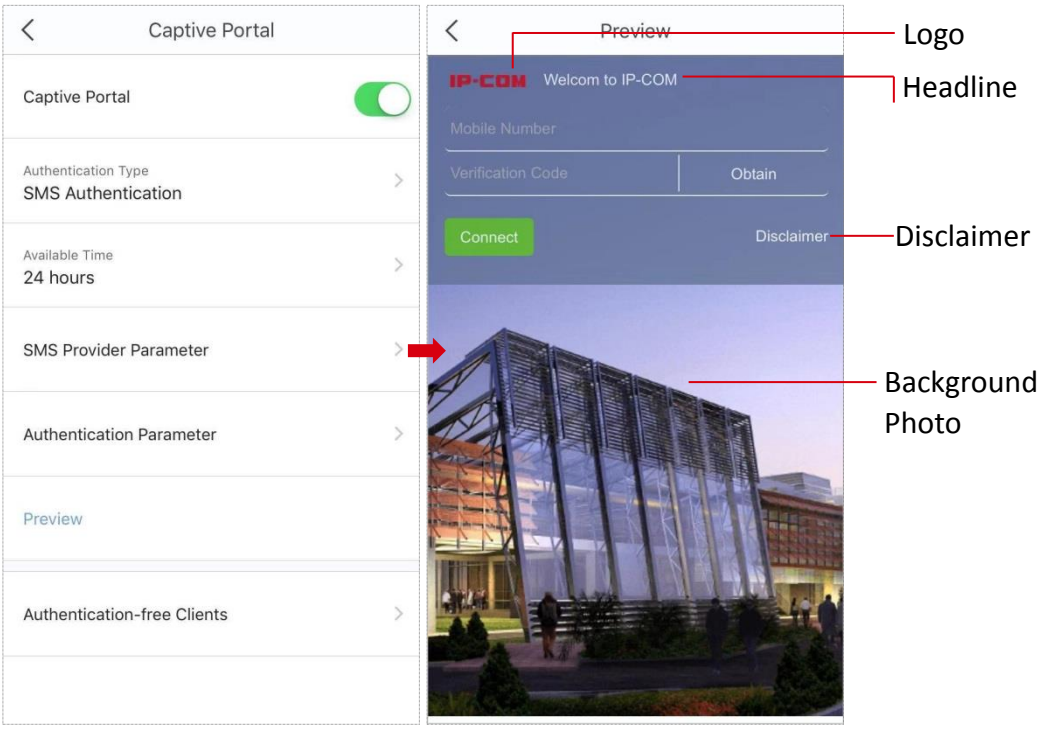
   (5) Tap **Redirect to** to specify a website that users will visit after passing the authentication, and tap **Save**.

   - **Previous web page:** It specifies that the user will be redirected to the web page he visits before after passing the authentication.
   - **Specified web page:** It specifies that the user will be redirected to the web page you specify here after passing the authentication.

   (6) Tap **Save**.



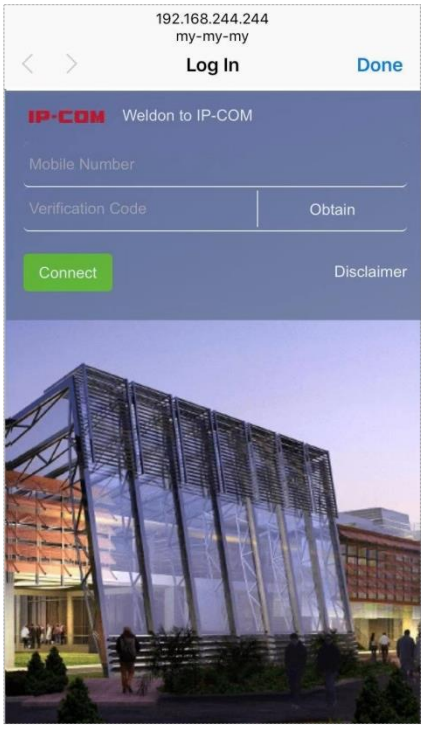
7. Tap **Preview** to view the authentication page you set.



Verification

1. Connect a device to the mesh network in wired or wireless manner, and start a web browser. An authentication page appears.
2. Enter your mobile number, and tap **Obtain**.
3. Enter the verification code you received.
4. Tap **Connect**.

You can access the internet after passing the authentication.



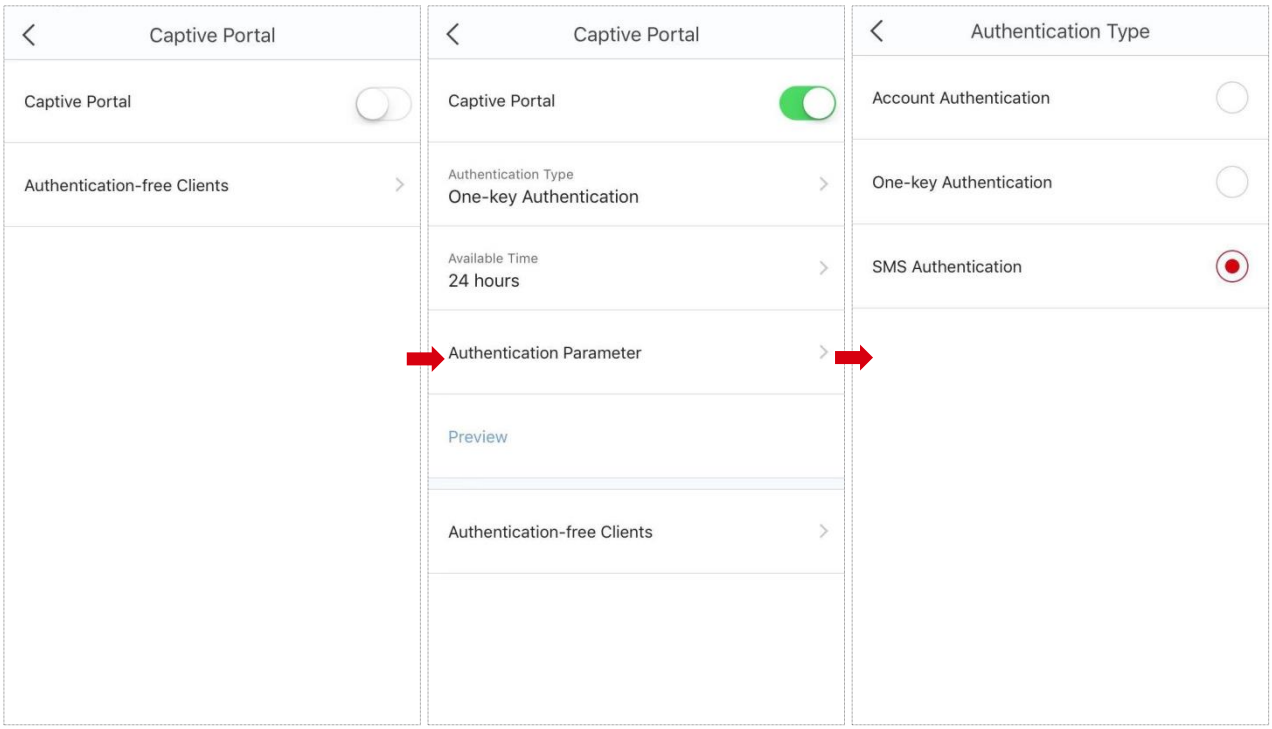
Application scenario for SMS authentication

A coffee bar named **Coffee** uses the Mesh WiFi system to deploy its network. It requires that guests use mobile numbers to pass the authentication for accessing the internet.

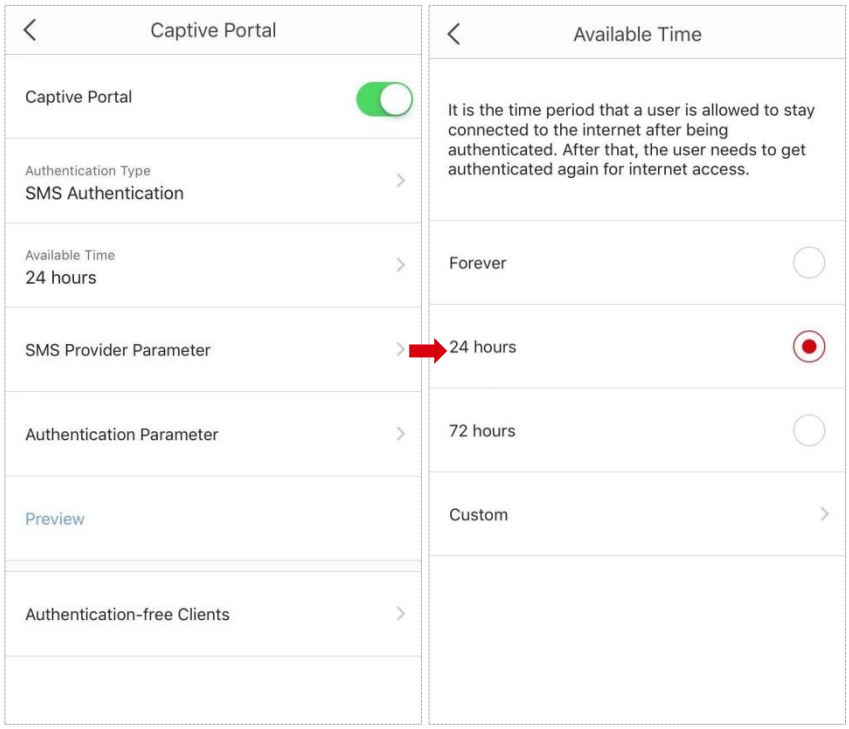
Configuration procedure

- **Setting up the SMS authentication rule**

  1. Choose **Settings** > **Captive Portal** to enter the configuration page.
  2. Set the button to the enabled state .
  3. Set the Authentication type to **SMS Authentication**.



4. Select an available time for the rule, which is **24 hours** in this example.



5. Set up **SMS Provider Parameter**.

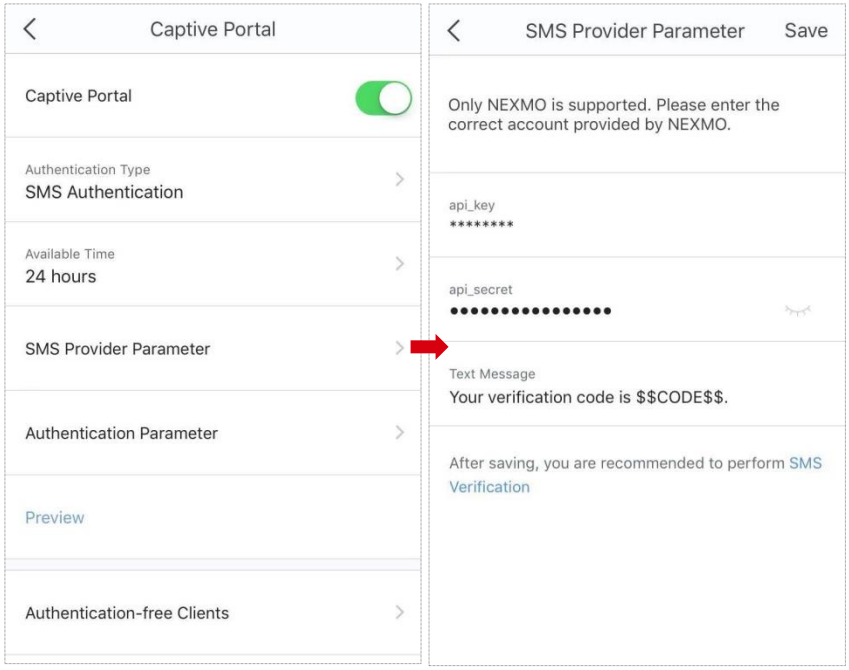
(1) Tap **SMS Provider Parameter**.

(2) Enter the API key provided by the NEXMO.

(3) Enter the API secret provided by the NEXMO.

(4) Edit a text message sent to the users who request for accessing the internet, which is "**Your verification code is $$CODE$$.**" in this example. **$$CODE$$** must be included in the text.

(5) Tap **Save**.



6. Tap **Authentication Parameter** to set the parameters on the authentication page.

   (1) Tap **Logo** to upload a logo. This file must be .jpg, .jpeg, or .png file. The file size must be less than 30 KB, and the dimensions in pixels should be 6.5:1.

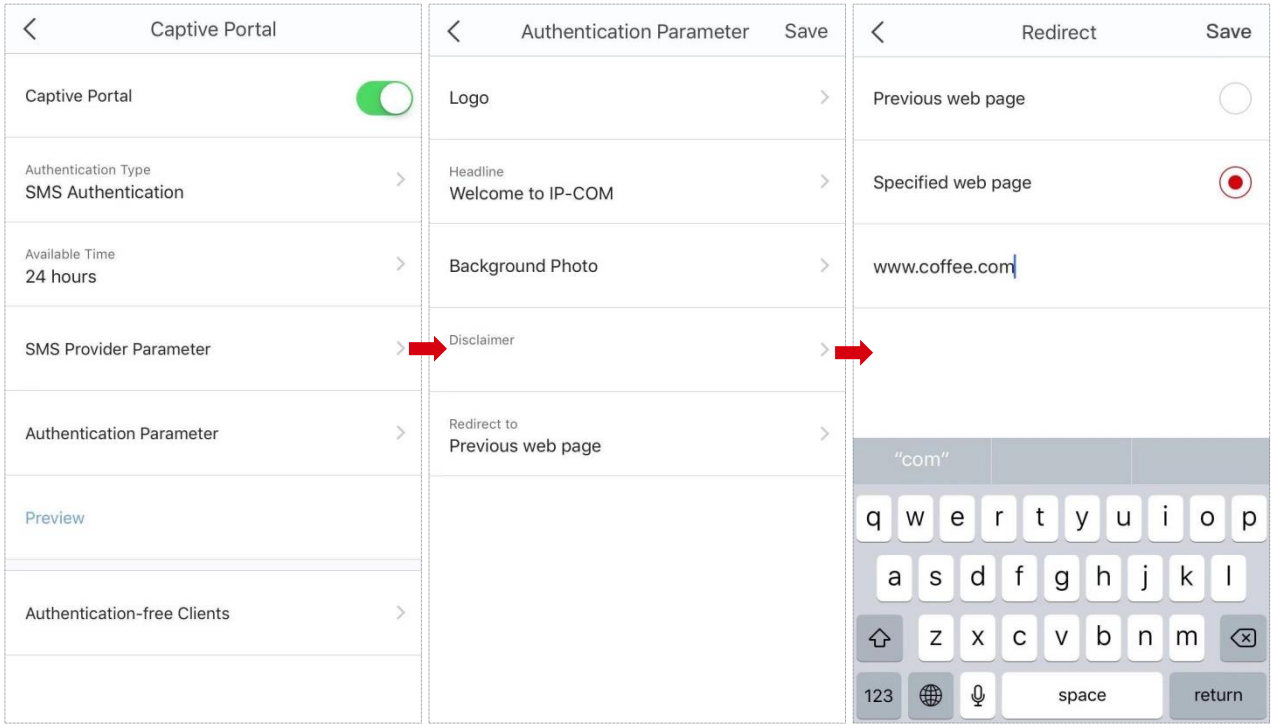
   (2) Tap **Headline** to enter a headline, which is **Coffee** in this example, and tap **Save**.

   (3) Tap **Background Photo** to upload a background file. This file must be .jpg, .jpeg, or .png file. The file size must be less than 300 KB, and the dimensions in pixels should be 16:9.

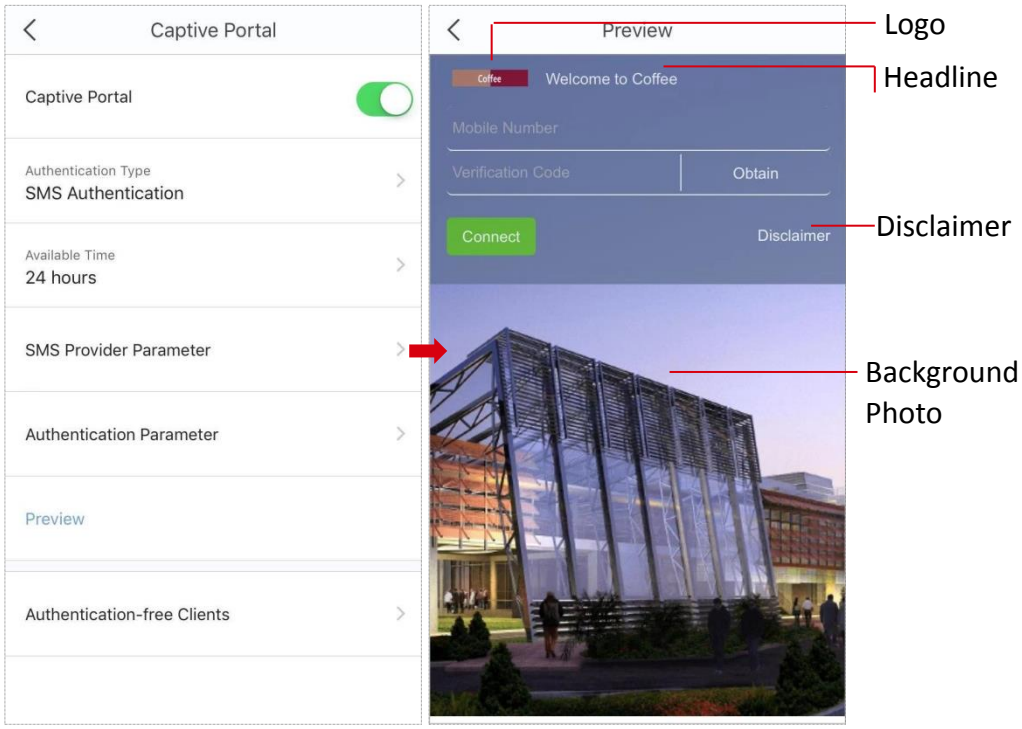
   (4) Tap **Disclaimer** to enter the disclaimer content, and tap **Save**.

   (5) Tap **Redirect to**, select **Specified web page**, enter the website, which is **www.coffee.com** in this example, and tap **Save**.

   (6) Tap **Save**.



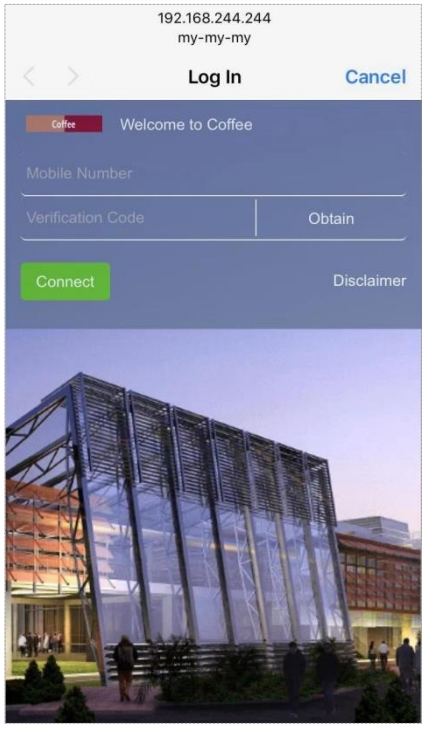
7. Tap **Preview** to view the authentication page you set.



- **Verification**

1. Connect a device to the mesh network in wireless manner, and start a web browser. An authentication page appears.
2. Enter your mobile number, and tap **Obtain**.
3. Enter the verification code received on your phone.
4. Tap **Connect**.

The device can access the internet after passing the authentication.

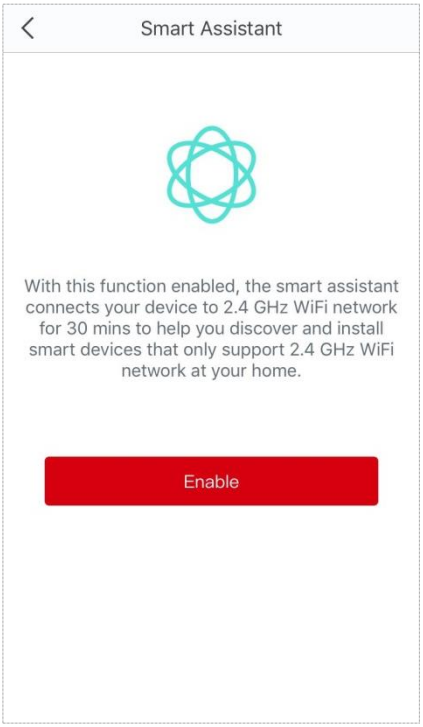


14 Smart Assistant

The mesh WiFi system supports 5 GHz priority. Therefore, dual-band clients, such as smart phones choose the 5 GHz band to connect for faster speed. In this case, to allow your 2.4 GHz WiFi-enabled devices such as printers, or IP cameras to join the mesh WiFi network, you can enable this function to keep your smart phone on 2.4 GHz for 30 minutes.

Perform the following procedure to enable the Smart Assistant function:

1. Choose **Settings** > **Smart Assistant** to enter the configuration page.
2. Tap **Enable**.

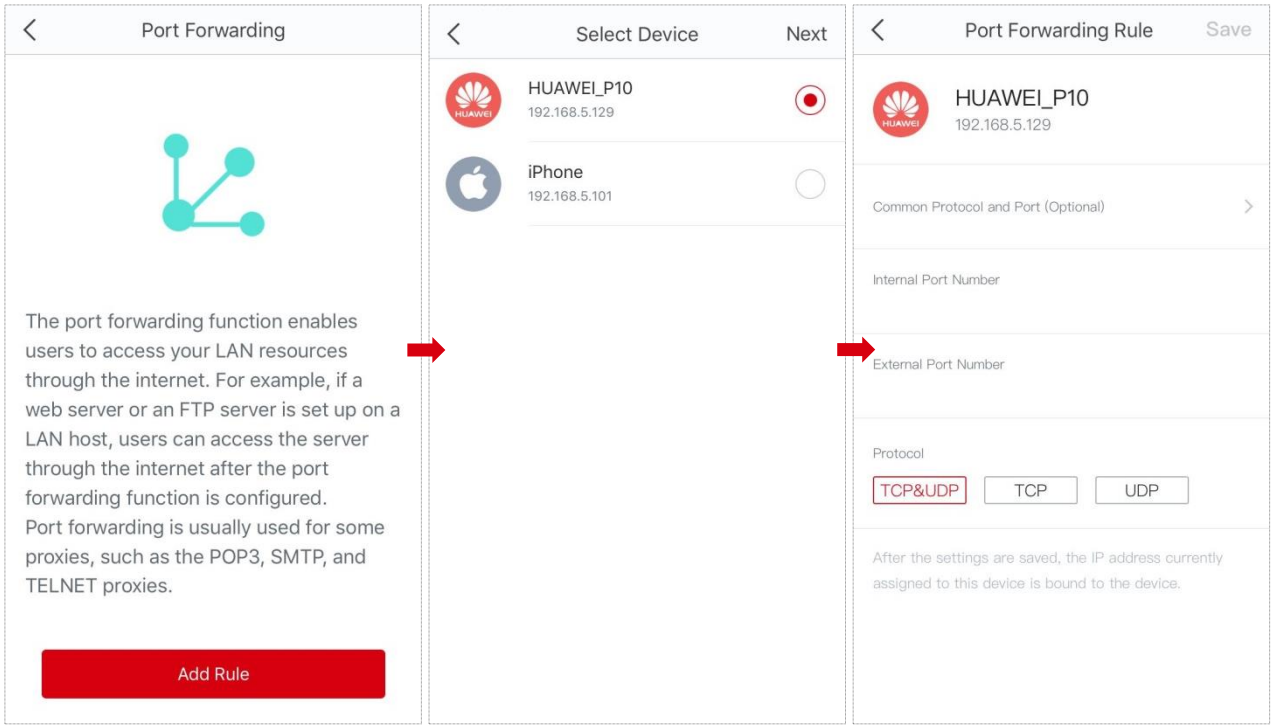


15 Port Forwarding

The Port Forwarding function enables internet users to access your LAN resources, such as resources on the web server or FTP server.

Perform the following procedure to set up the Port Forwarding function:

1. Choose **Settings** > **Port Forwarding** to enter the configuration page.
2. Tap **Add Rule**.
3. Select the device to which the rule applies.
4. Tap **Next**.
5. Set up a port forwarding rule.
   (1) **Common Protocol/Port**: optional. The App presets some common protocols and their port numbers, such as FTP, TELNET, and so on. Make your selection as required, the **Internal Port Number** and **External Port Number** are auto-filled. If the port numbers you want to set are not included, you can set them manually in the **Internal Port Number** and **External Port Number** boxes.
   (2) **Internal Port Number**: Enter the service port of the corresponding server on the LAN device.
   (3) **External Port Number**: Enter the port which is enabled for the internet users.
   (4) **Protocol**: Select the protocol of the service. If you are uncertain about it, select **TCP&UDP**.
6. Tap **Save**.



After completing the settings, internet users can visit "**Protocol name://WAN port IP address of the mesh node:External port**" to access LAN resources.

Note

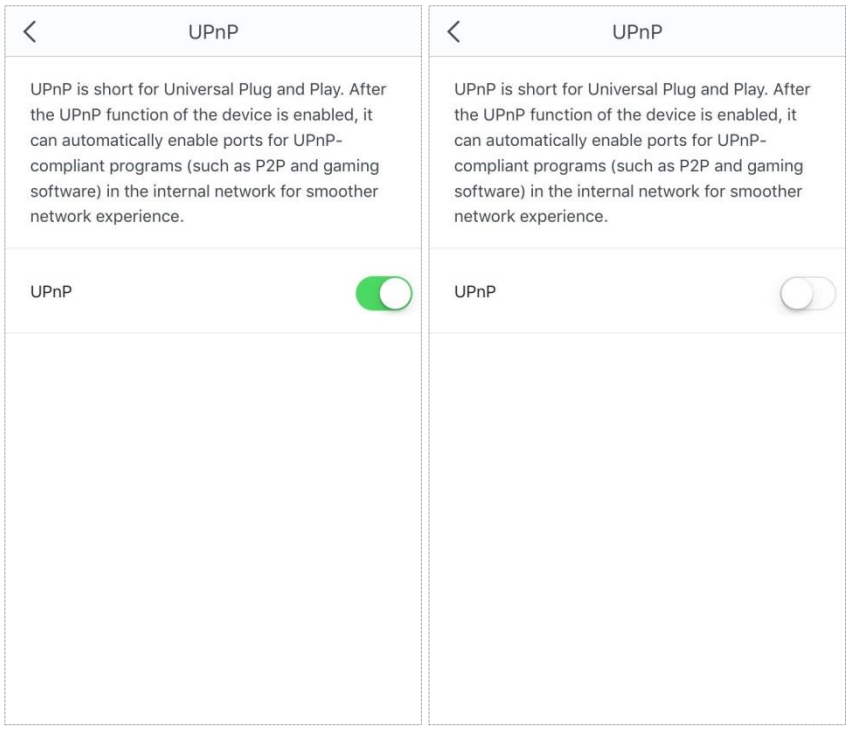
- Ensure that the WAN IP address of the mesh node is a public IP address, and the internal port you entered is correct.
- Security software, antivirus software, and the built-in OS firewall of the server may cause port forwarding function failures. Disable them when using this function.
- Manually set an IP address for the web server to avoid the service disconnection caused by the dynamic IP address.

16 UPnP

After the UPnP function is enabled, it can automatically enable ports for UPnP-supported programs, such as P2P and gaming software, in the internal network to improve your network experience.

Perform the following procedure to enable/disable the UPnP function:

1. Choose **Settings** > **UPnP** to enter the configuration page.
2. Alternate the status between enabled and disabled by tapping icon as required.

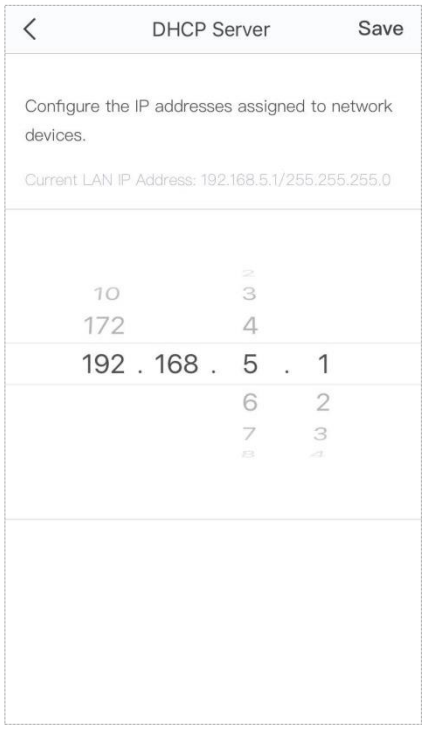


17 DHCP Server

The DHCP Server function allows you to change the IP addresses assigned to all devices that are connected to the mesh network.

Perform the following procedure to change the LAN IP address of the mesh node:

1. Choose **Settings** > **DHCP Server** to enter the configuration page.
2. Select a LAN IP address for the mesh node.
3. Tap **Save**.

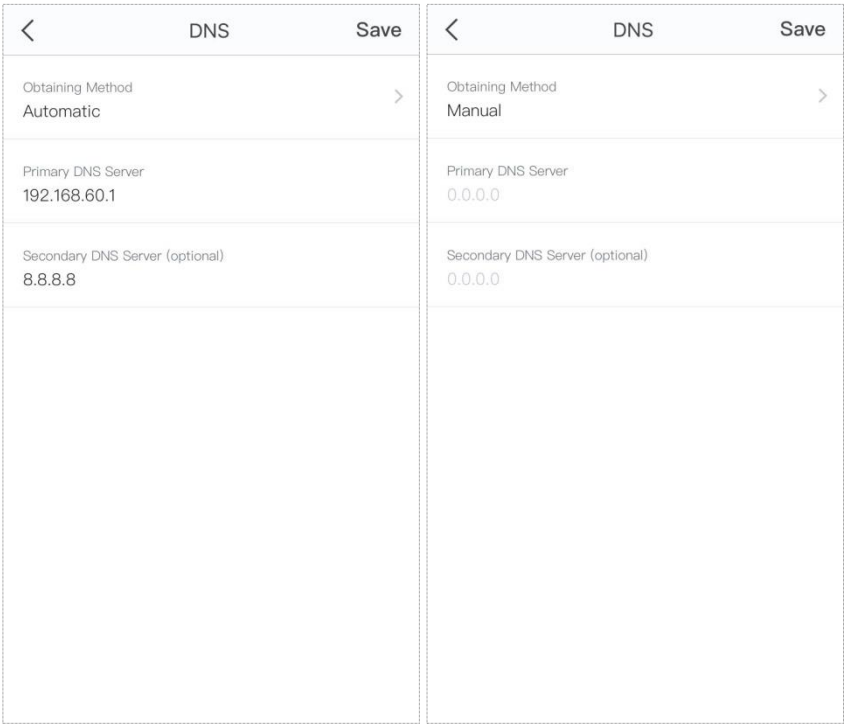


18 DNS

If websites are inaccessible with domain names but accessible with IP addresses, it may be a DNS resolution problem. You can try changing the DNS settings to solve the problem.

Perform the following procedure to change the DNS settings:

1. Choose **Settings** > **DNS** to enter the configuration page.
2. Select **Automatic** or **Manual**.
   - **Automatic:** If you select Automatic, the device obtains the Primary DNS Server and Secondary DNS Server from the upstream device.
   - **Manual:** If you select Manual, enter the correct DNS IP address in the Primary DNS Server box. If you have another DNS server IP address, enter it in the Secondary DNS Server (optional) box.
3. Tap **Save**.

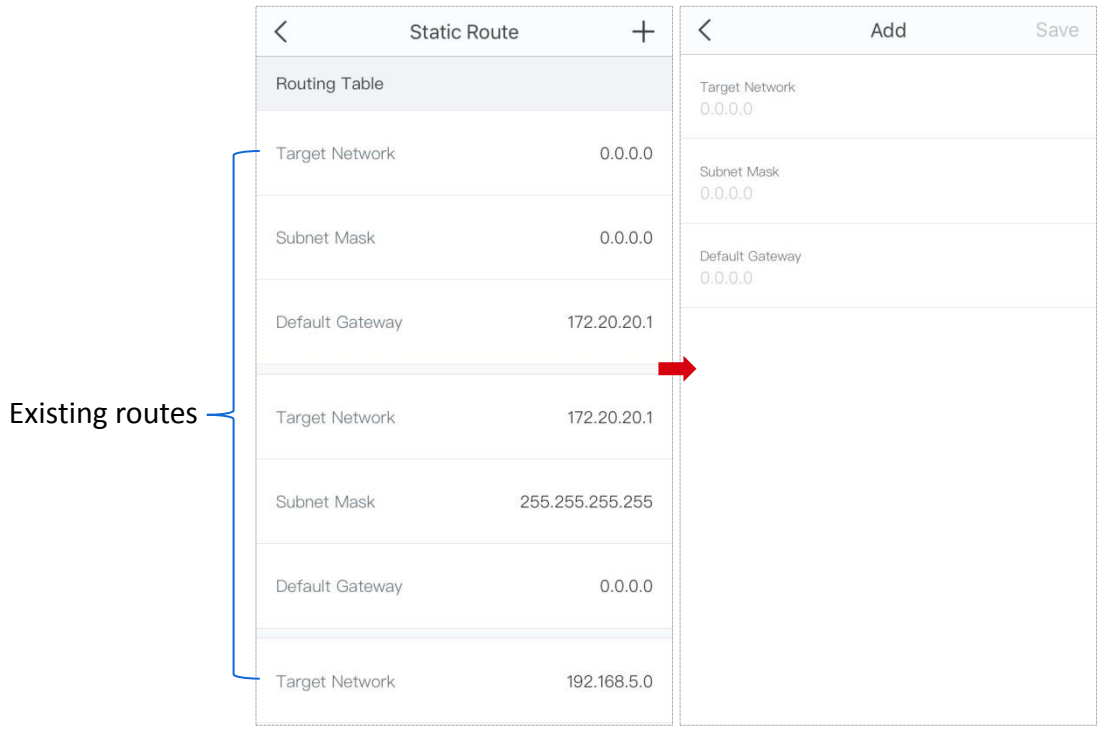


19 Static Route

The Static Route function is performed to select the best route for delivering data from a source address to a destination address. A static route is a manually configured route, which is simple, efficient, and reliable. Appropriate static routes help reduce the number of route selection problems and reduce route selection burden, increasing the packet forwarding speed.

Setting up a static route

1. Choose **Settings** > **Static Route** to enter the configuration page.
2. Tap the + icon.
3. Enter a **Target Network**, a **Subnet Mask**, and a **Default Gateway**.
   - **Target Network:** It specifies the destination IP address.
   - **Subnet Mask:** It specifies the subnet mask of the destination IP address.
   - **Default Gateway:** It specifies the IP address of the gateway. This address must be on the same LAN segment as the router.
4. Tap **Save**.



Application scenario for Static Route

Visiting multiple networks or servers at the same time

A company uses the Mesh system to deploy its networks, and its internal network is isolated from the internet. It requires that devices connected to the mesh network can access the internet and the company's server at the same time.

Solution

Connect the WAN1 port of EW9 to the internet.

Connect the WAN2 port of EW9 to the internal network.

Set static route rules on EW9.

Assume that:

Information of internal network

IP address: 172.16.0.0

Subnet mask: 255.255.0.0

Information for accessing the internal network:

IP address: 192.168.58.190

Subnet mask: 255.255.255.0

Gateway: 192.168.58.1

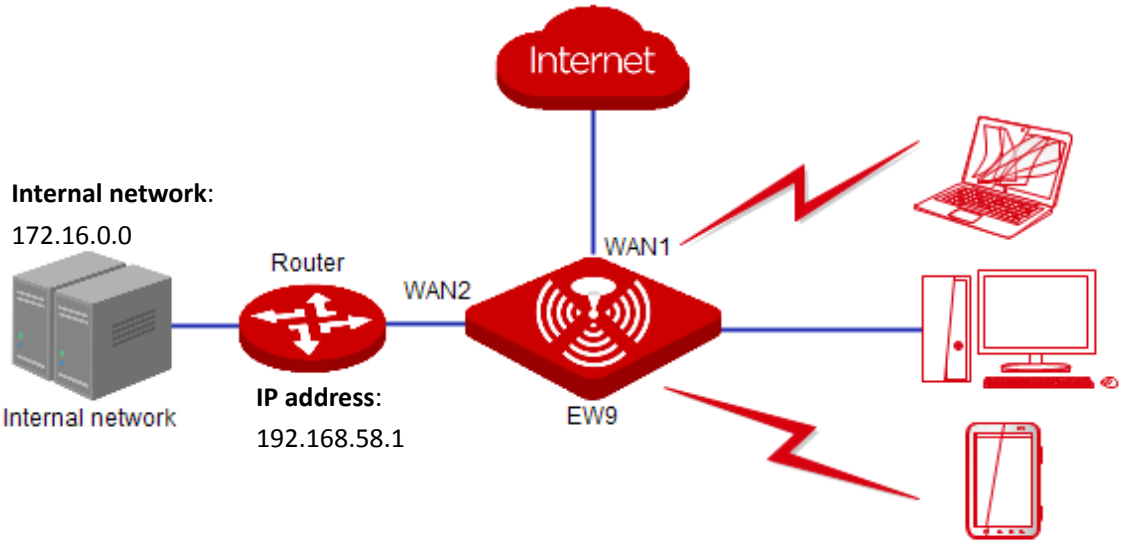
Primary DNS: 192.168.58.1

PPPoE user name and password for accessing the internet:

User name: IP-COM

Password: IP-COM

The network topology is shown as follows:



Configuration procedure

Step 1 **Setting up internet settings**

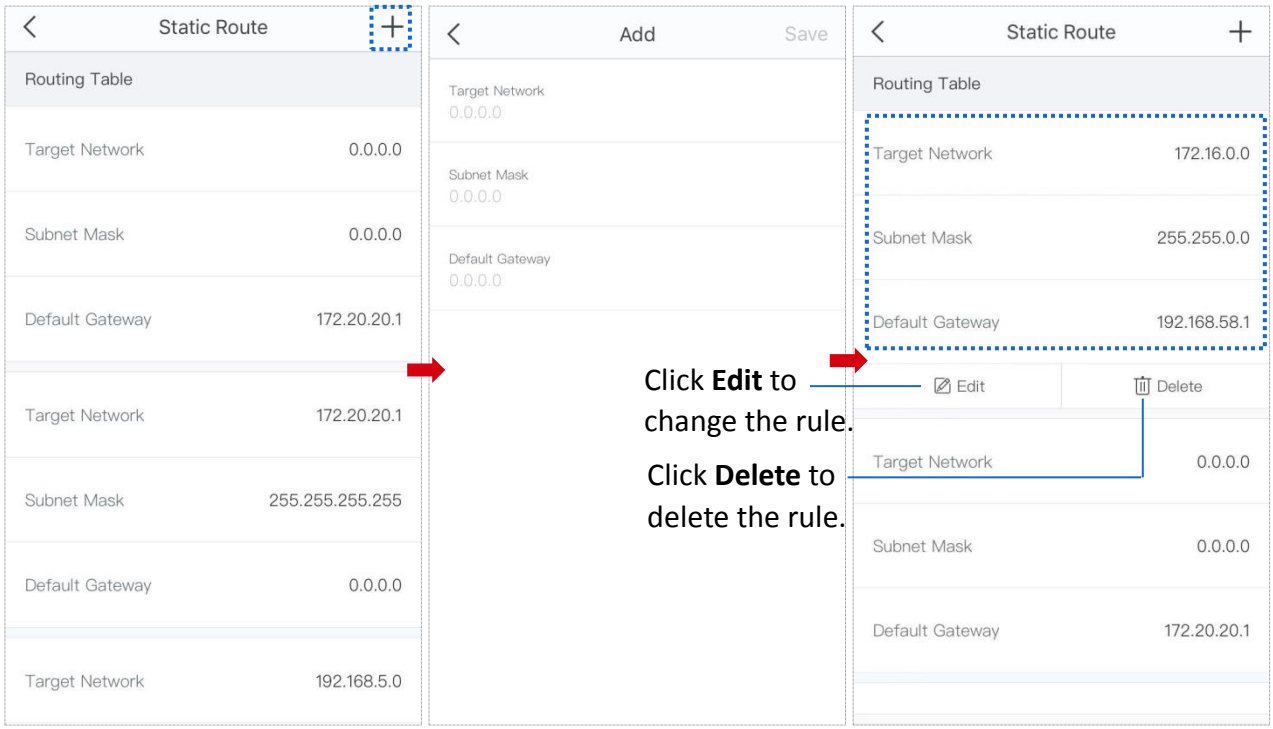
Step 2 **Setting up static route rules**

- **Setting up the internet settings**

1. Choose **Settings** > **Internet Settings** to enter the configuration page.
2. Tap **Connection Type** of WAN1 port.
3. Select **PPPoE**, and enter the **PPPoE User Name** and **PPPoE Password**, which are **IP-COM** and **IP-COM** in this example.
4. Tap **Save**.
5. Set **Double-line Connection** button to the enabled state .
6. Tap **Connection type** of WAN2.
7. Select **Static IP Address**, and enter the **IP Address**, **Subnet Mask**, **Default Gateway**, and **Primary DNS Server**, which are **192.168.58.190**, **255.255.255.0**, **192.168.58.1** and **192.168.58.1** in this example.
8. Tap **Save**.

- **Setting up the static route rules**

  1. Choose **Settings** > **Static Route** to enter the configuration page.
  2. Tap the + icon.
  3. Enter the **Target Network**, **Subnet Mask**, and **Default Gateway**, which are **172.16.0.0**, **255.255.0.0**, and **192.168.58.1** in this example.



Verification

Clients connected to the EW9 can access the internet and the company's server at the same time.

20 Firmware Upgrade

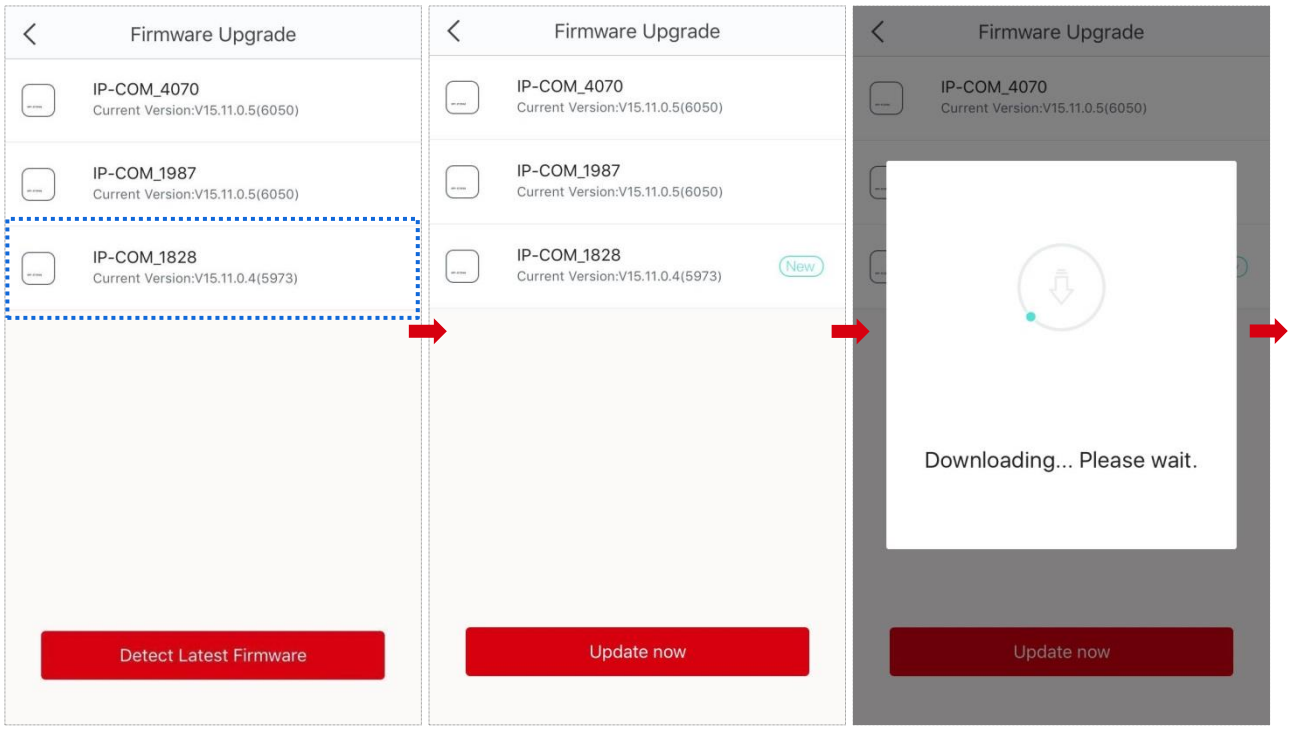
IP-COM is dedicated to improving its products to let users enjoy better performance. Please update the firmware when detecting a new available firmware version.

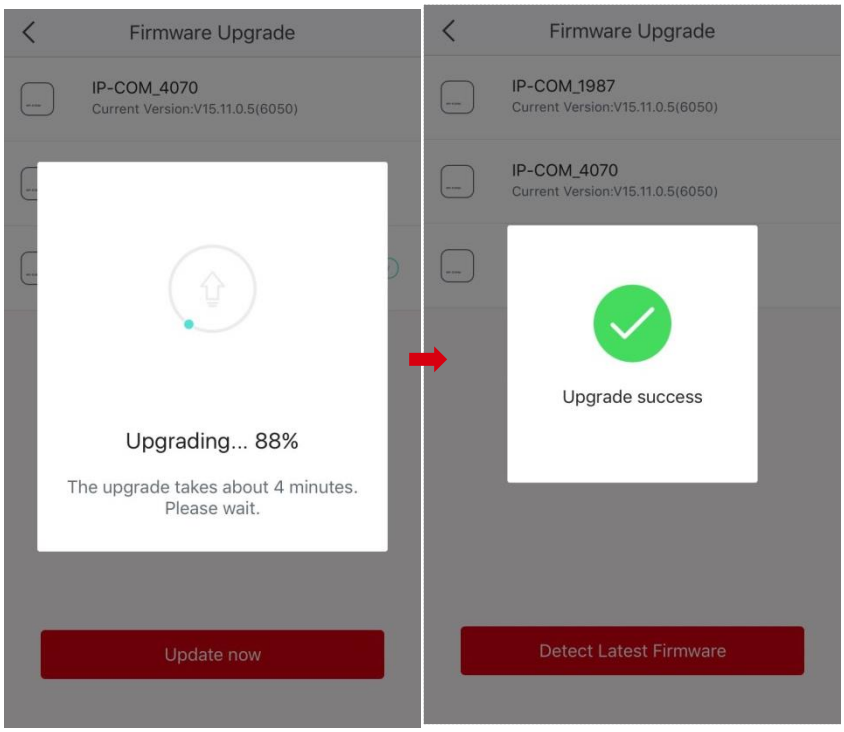
Perform the following procedure to update the firmware:

Note

Do not remove the power supply of the mesh nodes when upgrading.

1. Choose **Settings** > **Firmware Upgrade** to enter the configuration page.
2. Tap **Detect Latest Firmware**.
3. The New icon appears if a new firmware version is detected. Tap **Update now** to upgrade these nodes.
4. Wait until all nodes complete the upgrade, and then continue to manage them.



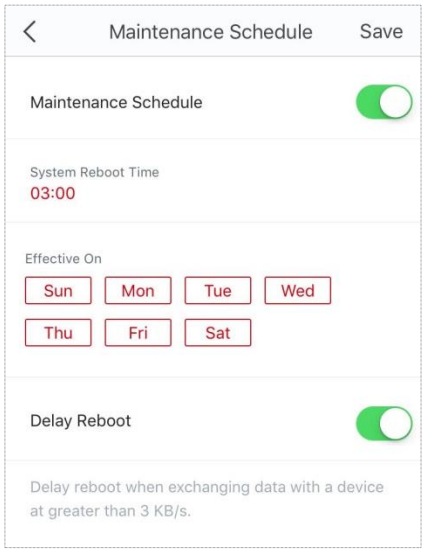

Firmware Upgrade
IP-COM_4070
Current Version:V15.11.0.5(6050)
Upgrading... 88%
The upgrade takes about 4 minutes.
Please wait.
Update now
Firmware Upgrade
IP-COM_1987
Current Version:V15.11.0.5(6050)
IP-COM_4070
Current Version:V15.11.0.5(6050)
Upgrade success
Detect Latest Firmware

21 Maintenance Schedule

The Maintenance Schedule function makes the mesh nodes reboot at specified time to keep the mesh nodes in good condition.

Perform the following procedure to set up the Maintenance Schedule function:

1. Choose **Settings** > **Maintenance Schedule** to enter the configuration page.
2. Set the button to the enabled state .
3. Select a **System Reboot Time**. You are recommended to set a time when your network is idle.
4. Select the dates on which the rule takes effect.
5. Enable or disable the **Delay Reboot** function as required.
6. Tap **Save**.



Tip

If the **Delay Reboot** function is enabled, the devices won't reboot at the specified time when the devices are exchanging data and the traffic is greater than 3 KB/s. Within 2 hours after the specified reboot time, the devices keep detecting the traffic, and reboot once when the traffic is lower than 3 KB/s. Otherwise, the devices will reboot the next day at the specified reboot time.

22 Account Authorization

You can authorize other people to manage your mesh network. An authorized account has the same permission as the bound account excluding authorizing other accounts.

Perform the following procedure to authorize another account:

1. Choose **Settings** > **Account Authorization** to enter the configuration page.
2. Tap **Add an account**.
3. Enter a registered IP-COM account.
4. Tap **OK**.