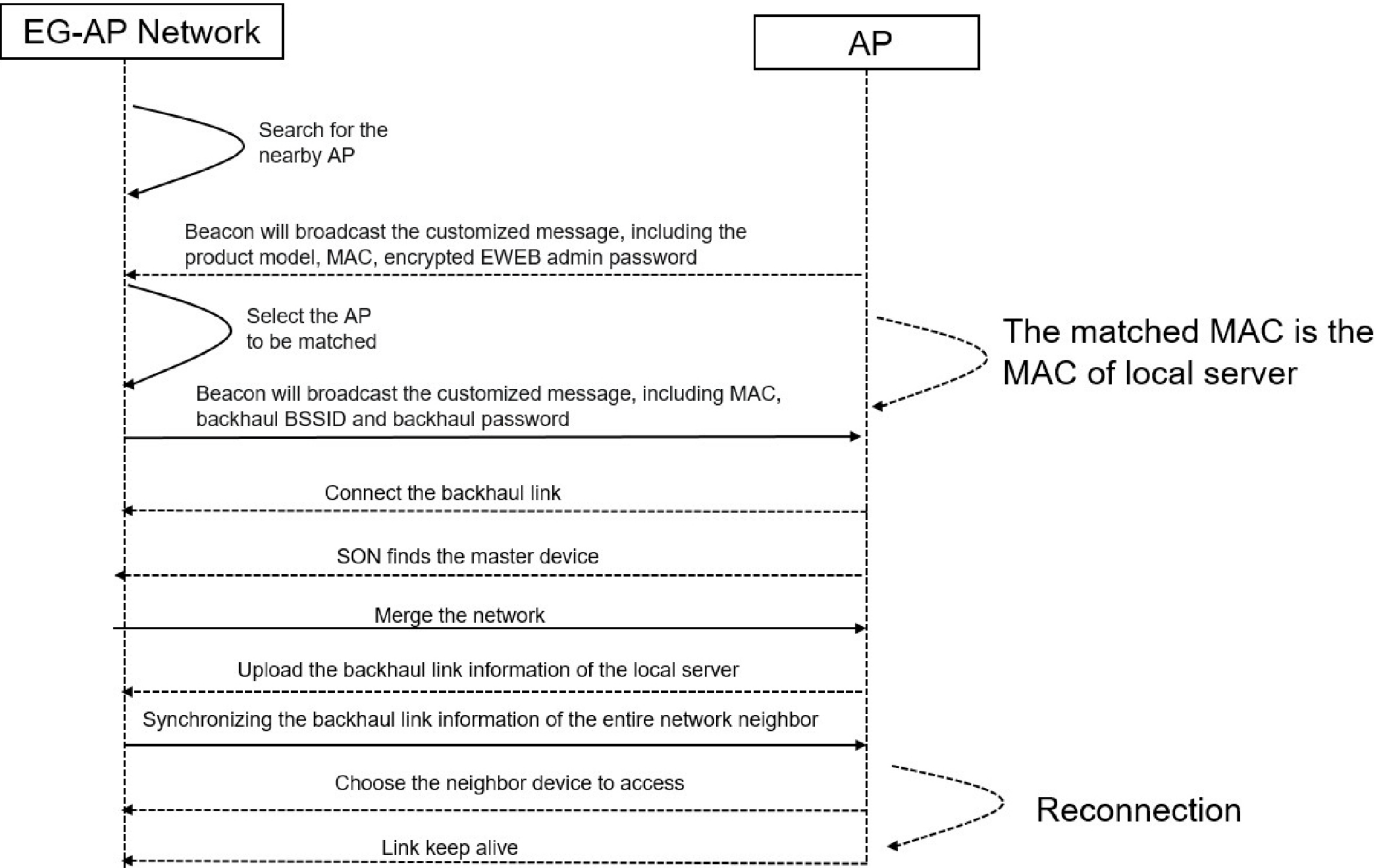


RAP Mesh Networking Introduction

I. Principle of RAP Mesh Networking

The Mesh feature is enabled by default for a root AP (RAP) whose firmware is AP_3.0(1)B11P86 or later. An RAP broadcasts a beacon frame in order to be detected by a master AP automatically. You can click + AP on the master AP to detect new RAPs, and detected RAPs will be shown on the **Other Device** list. You can then add these RAPs to the network by clicking the **Add** button. The procedure is described as follows.



II. Applicable Products and Versions

Table 1–1 Applicable Products and Versions

Device Type	Device Model	Version
Gateway	RG-EG209GS	ReyeeOS 1.97.1828
Switch	RG-ES205GC-P	ESW_1.0(1)B1P20, Release(09201814)
Access Point	RG-RAP1200(E)	ReyeeOS 1.86.2026
Access Point	RG-RAP2200(E)	ReyeeOS 1.86.2026

III. Network Planning

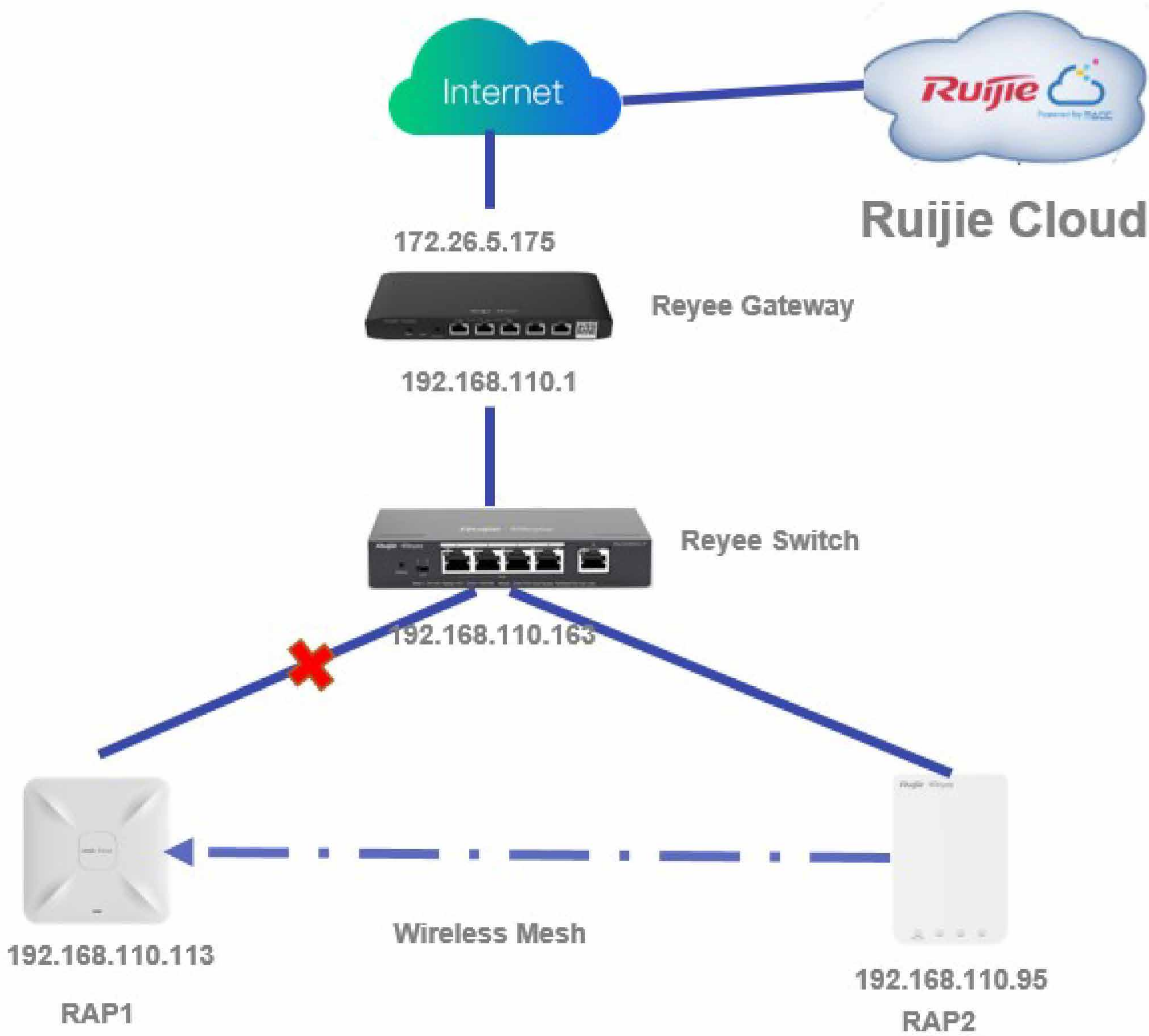


Table 1–2 Key Configuration Notes

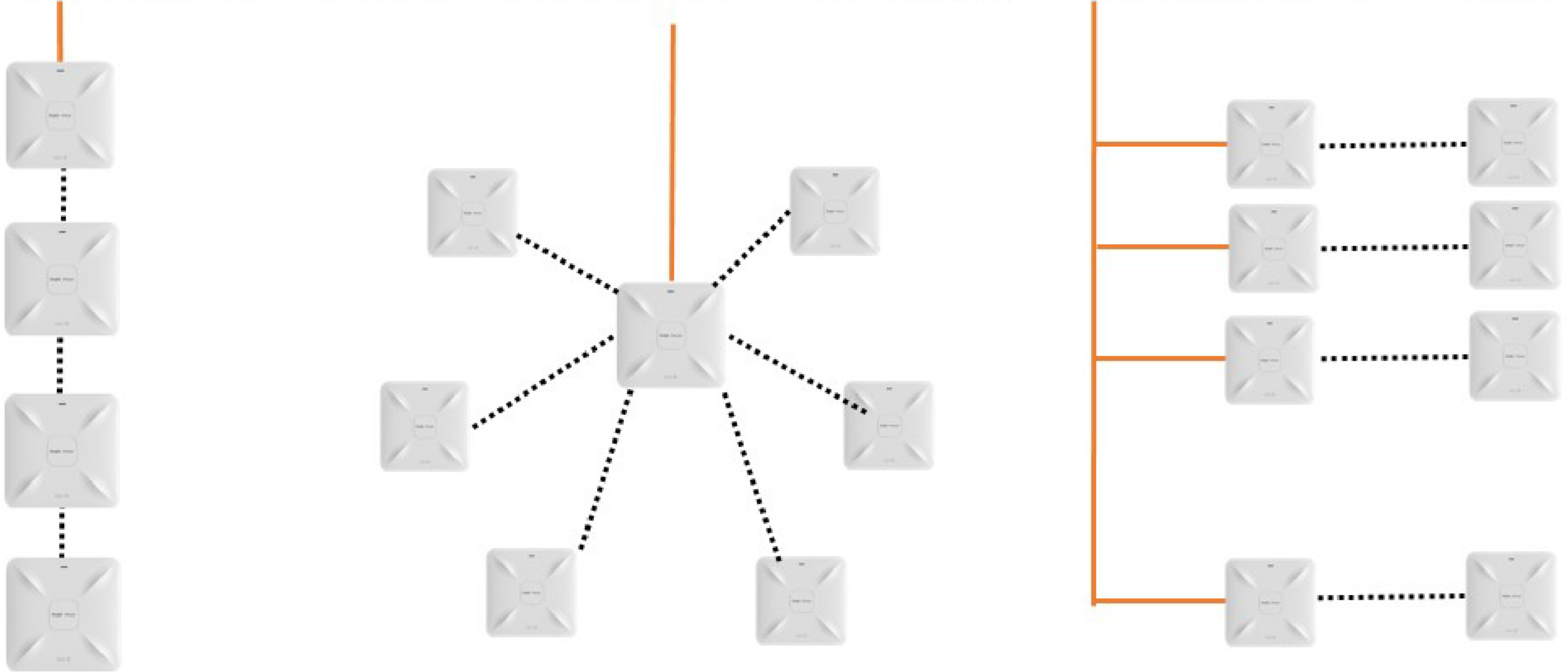
Item	Description
AP management VLAN	Default VLAN 1
Gateway management IP	192.168.110.1
SSID VLAN	Default VLAN 1
SSID IP range	192.168.110.1-192.168.110.254

IV. Constraints

- (1) The following section lists three topologies. Each topology has their own constraints.
- Chain topology only supports 3 hops.
 - Star topology only supports 6 mesh links.
 - Supplement point topology supports unlimited number of APs.

IV. Constraints

A: Chain Topology -- **3** Hops; Star Topology -- **6** Mesh Links; Supplement Point -- **Unlimited**



- (2) The RSSI of both RAPs on the Reyee wireless mesh link must be greater than -70 dBm.
- (3) When two RAPs form a wireless mesh network, they must be on the 5G channel and the channel can't be changed. However, if the WIO feature is enabled on either or both RAPs, the RAP may switch channels, which will cause disconnection of the mesh network.
- (4) An RAP supports up to eight SSIDs. As one of these eight SSIDs will be used for mesh, there are total seven SSIDs available.
- (5) All Reyee AP models support the mesh feature except RG-RAP1200(F), RG-RAP2200(F), and RG-EAP602.
- (6) Prerequisite for AP mesh networking: the RAP must be configured, but mesh APs should be in the initial state.
- (7) The firmware of the Reyee Gateway and RAP must be AP_3.0(1)B11P86 or later.

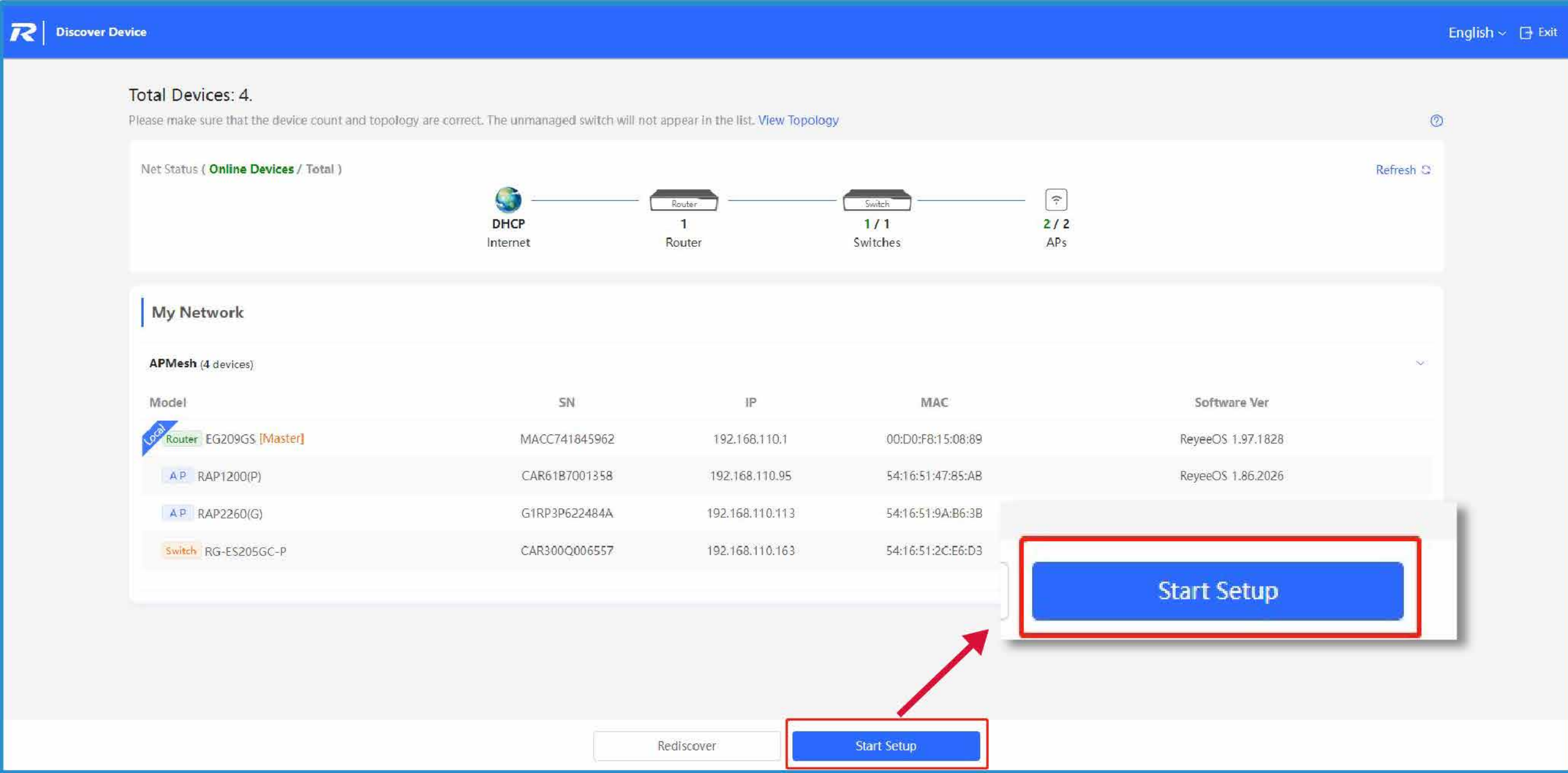
V. Before You Begin

- Set up a network and connect APs to Ruijie Cloud. Connect the gateway, switch and RAP based on the topology, and log in to the gateway to build a network by following the Network Setup steps.
- Enable the AP mesh feature on the main network.
- Scan and add wireless mesh APs.
- Set VLAN 2 and DHCP server for SSID and set the SSID on Ruijie Cloud.

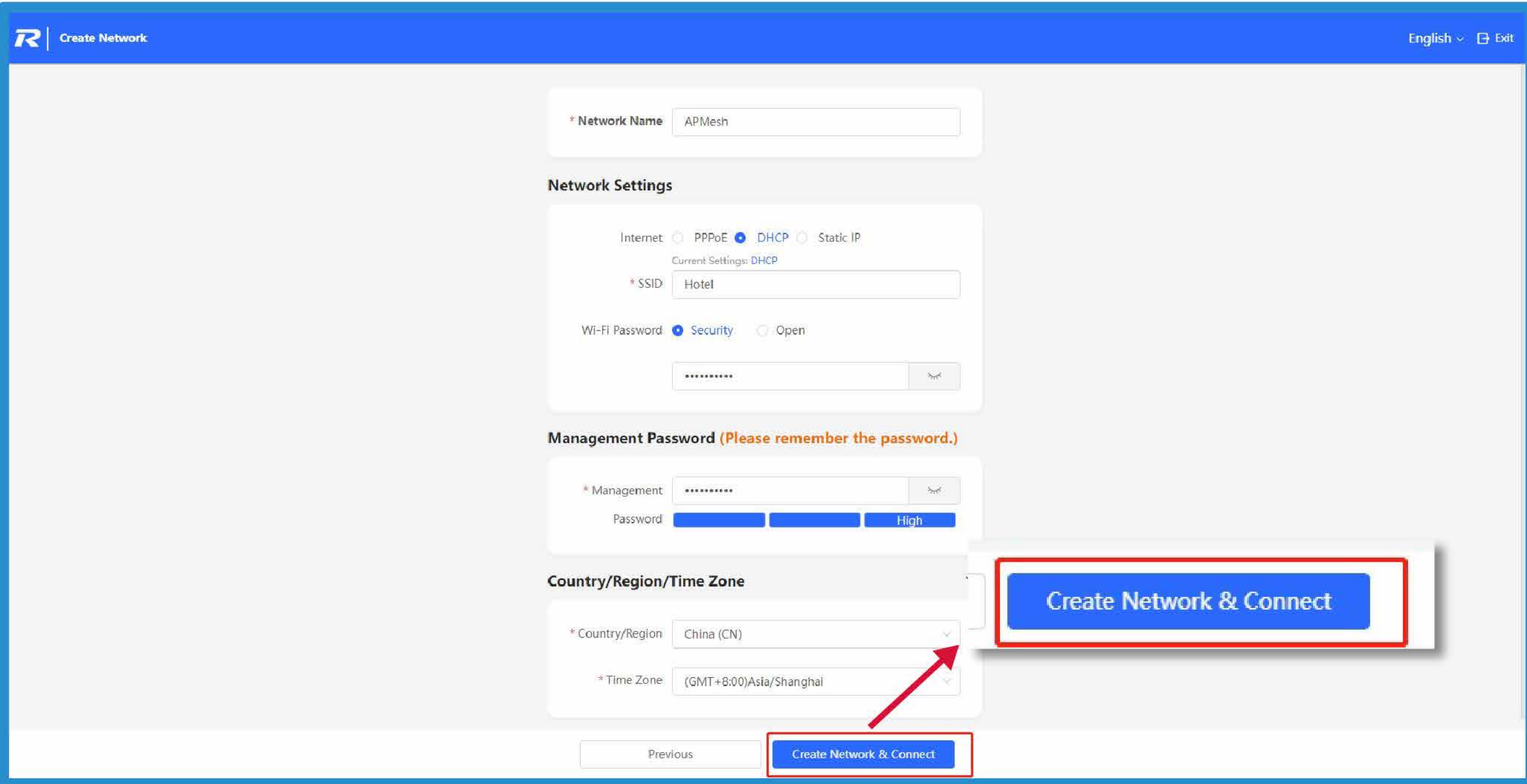
VI. Configuration Steps

1 Set Up a Network

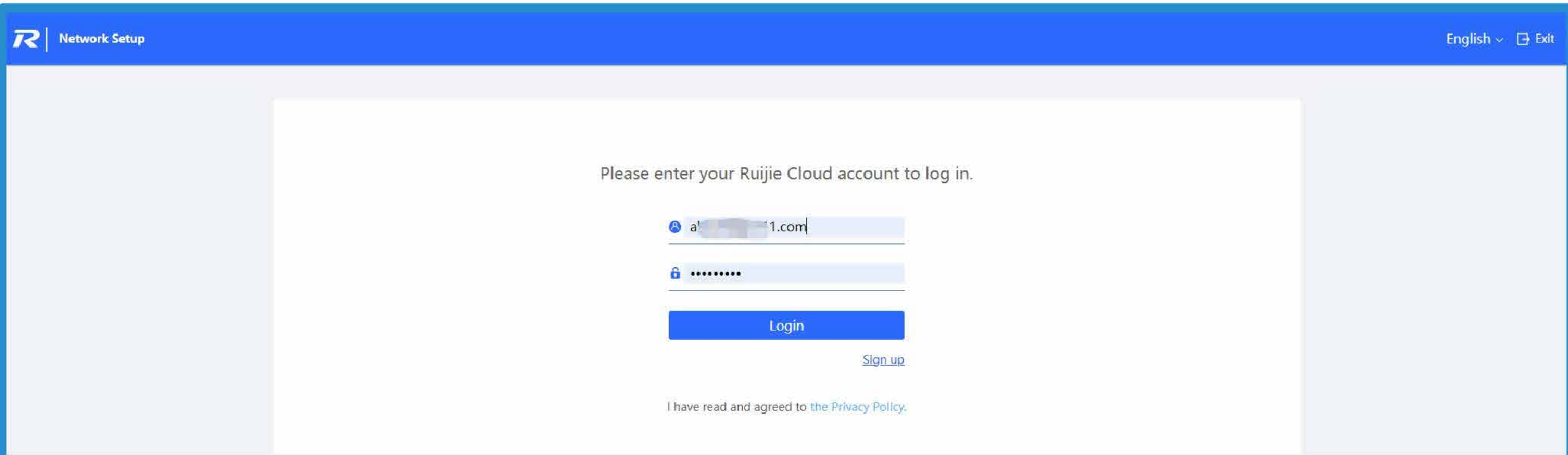
(1) Log in to the gateway with IP 192.168.110.1, and click **Start Setup** to make the network settings.



(2) Enter required information in the Network Name, Network Settings, and Country/Region/Time Zone fields, and click **Create Network & Connect**.

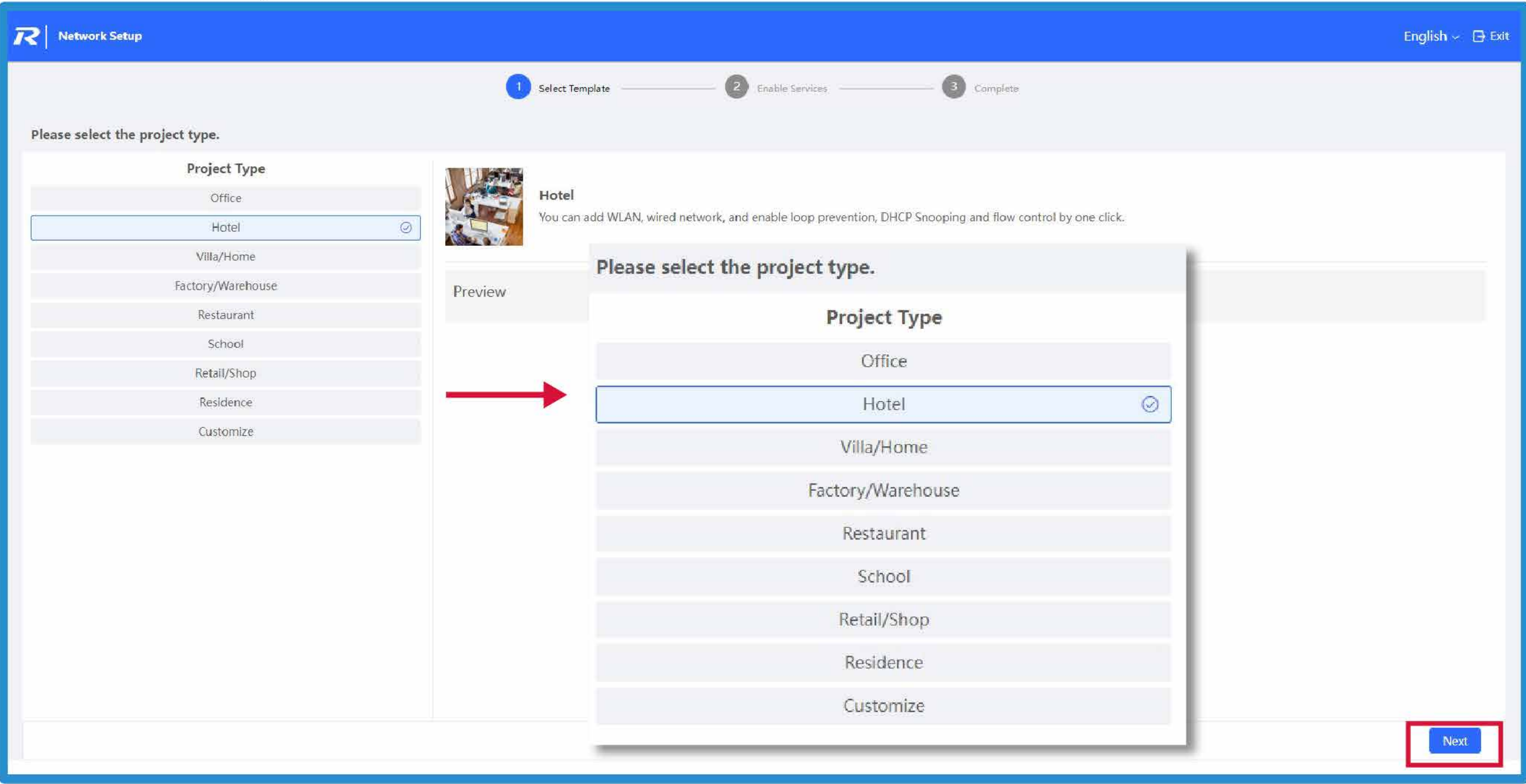


(3) After you click Finish, the Ruijie Cloud management page will appear. Log in with your account to add devices and connect them to Ruijie Cloud.

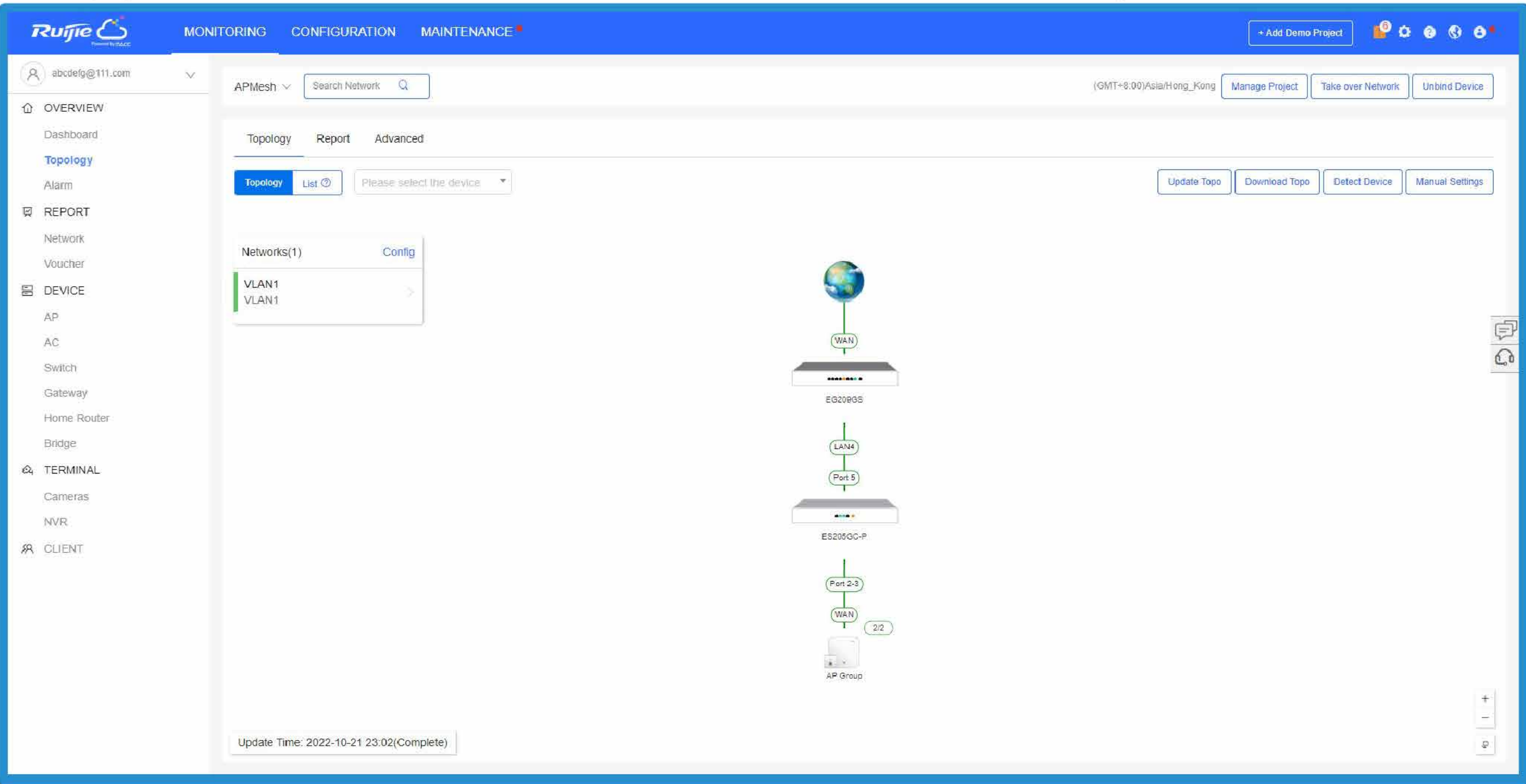


VI. Configuration Steps

(4) Choose Project Type. Here the Hotel scenario is taken as an example.

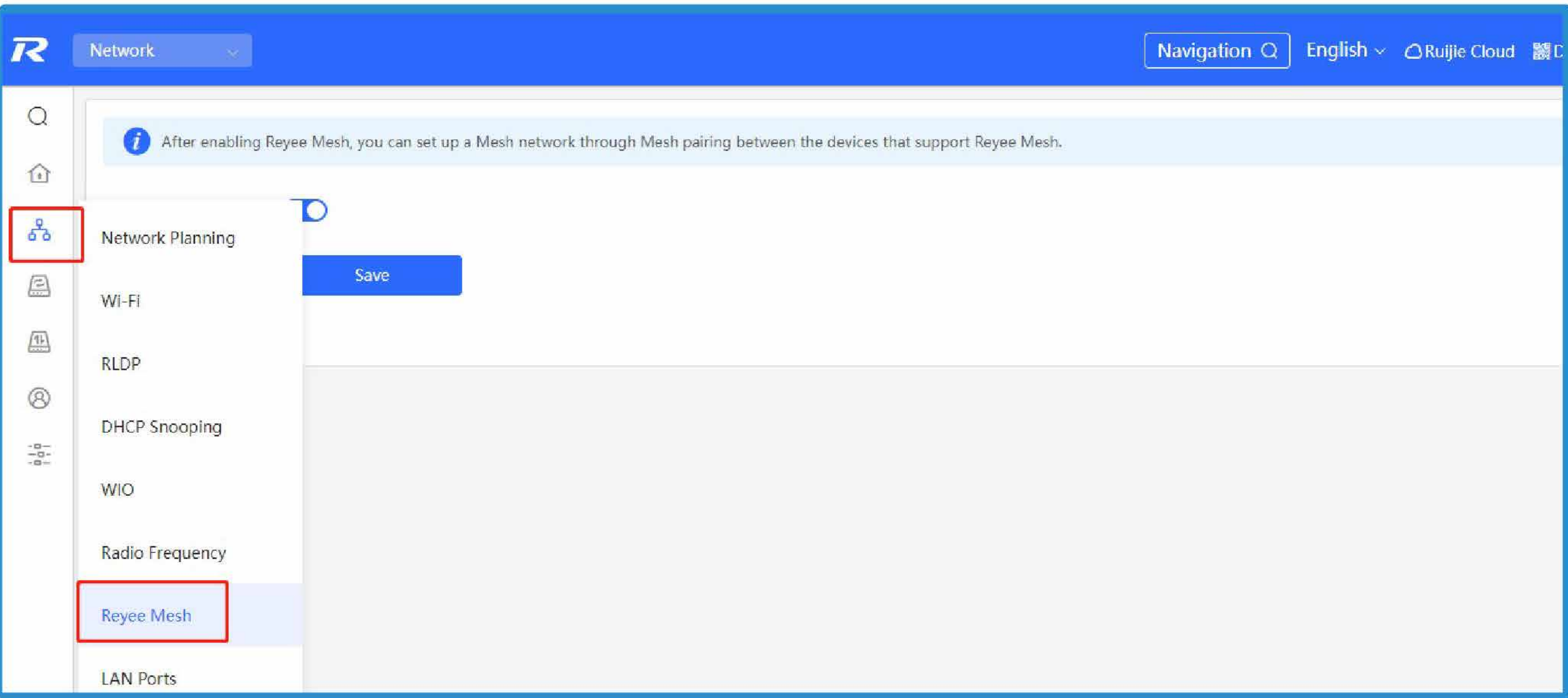


(5) Click Next. You will see that the APs are already online.



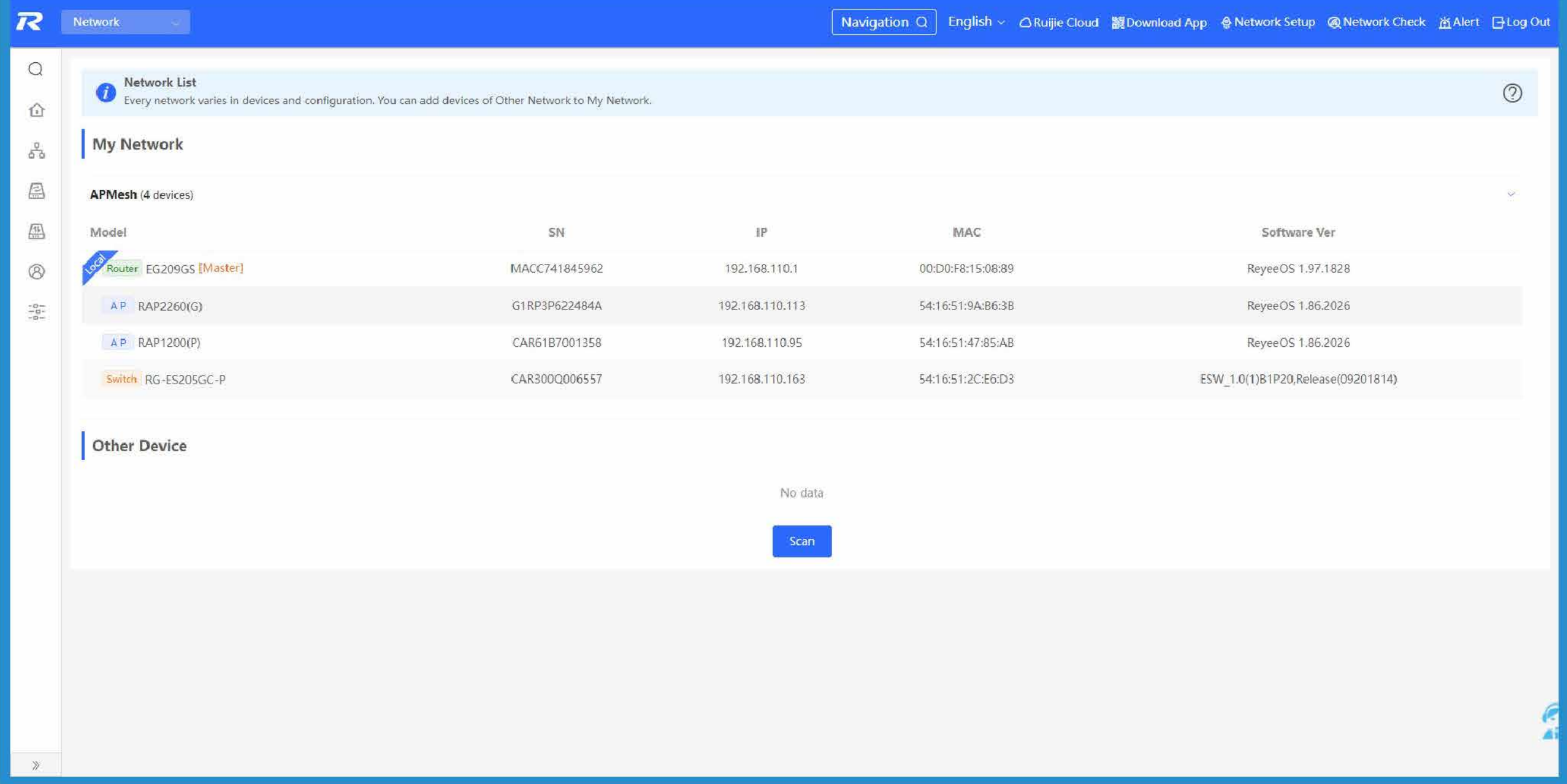
2 Enable AP Mesh Feature on Main Network

(1) Toggle the switch  to enable the Reyee Mesh function.

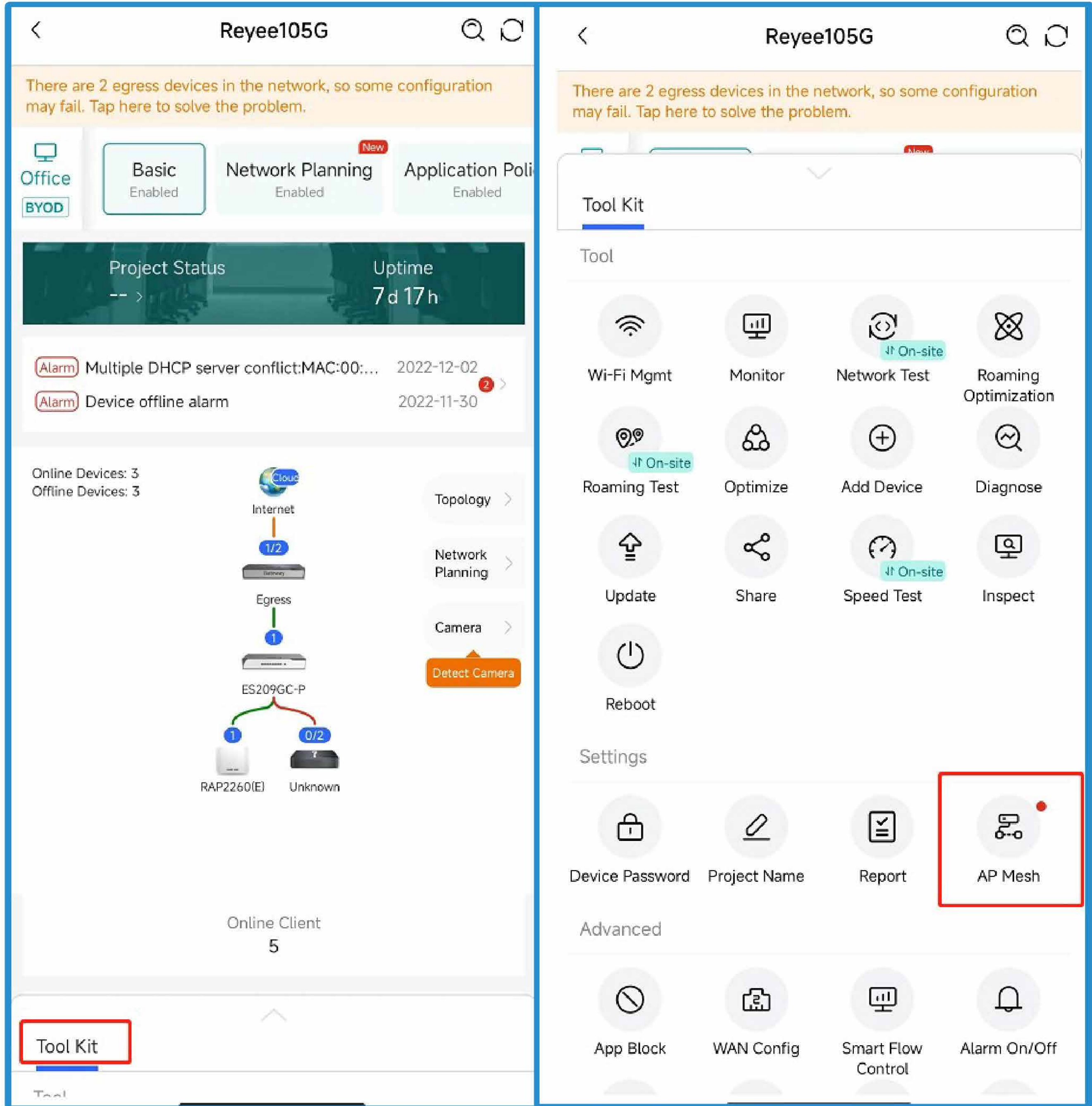


VI. Configuration Steps

(2) Choose  > + AP to view APs currently online or to add a new AP.



3 Set Up Network Using Ruijie Cloud APP

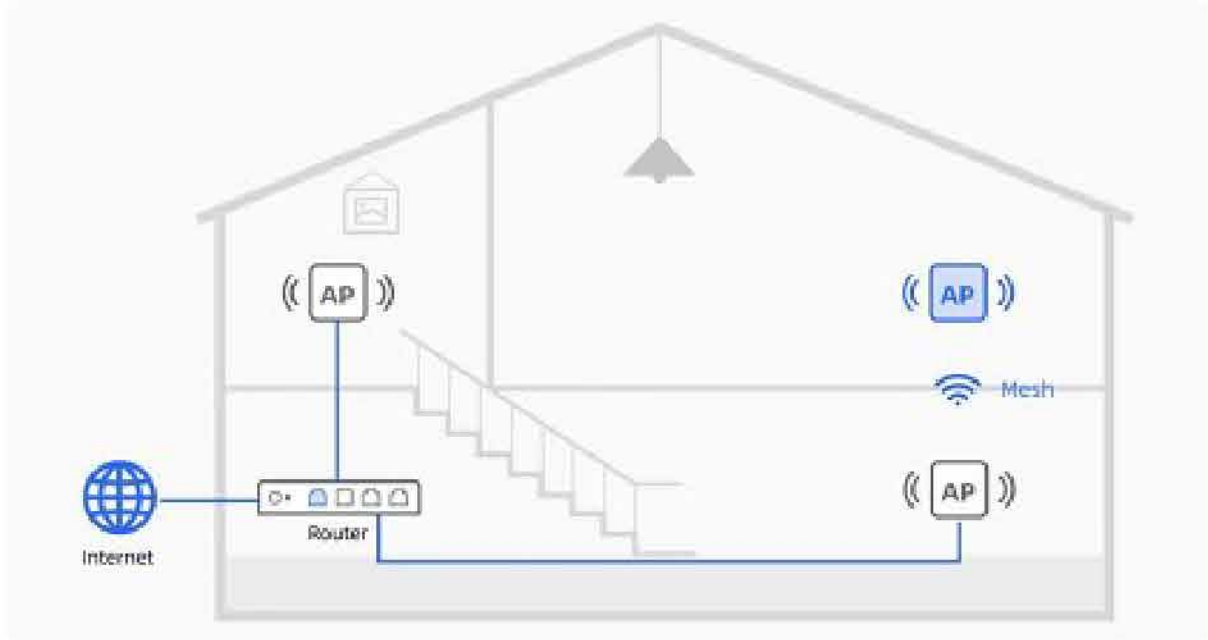


VI. Configuration Steps

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AP Mesh

AP Mesh



Guide

1 Scan to add the Mesh AP

1. A mesh link can be established between Reyee wireless devices (exclude home routers).

2. Make sure all devices are powered on.

3. Make sure both root AP and Mesh APs are within the Wi-Fi coverage radius (RSSI > -70dBm) of each other.

2 Select the Mesh AP

Scan to add Mesh AP

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AP Mesh

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1%

Scanning...

A mesh link can be established between Reyee wireless devices (exclude home routers).

Unable to scan configured device. You can restore the device to factory settings and try again.

Scan again

Mesh

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AP Mesh


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AP Mesh

Mesh APs will select the optimal connection method according to signal quality.

Mesh AP (1/1)

ListTopo

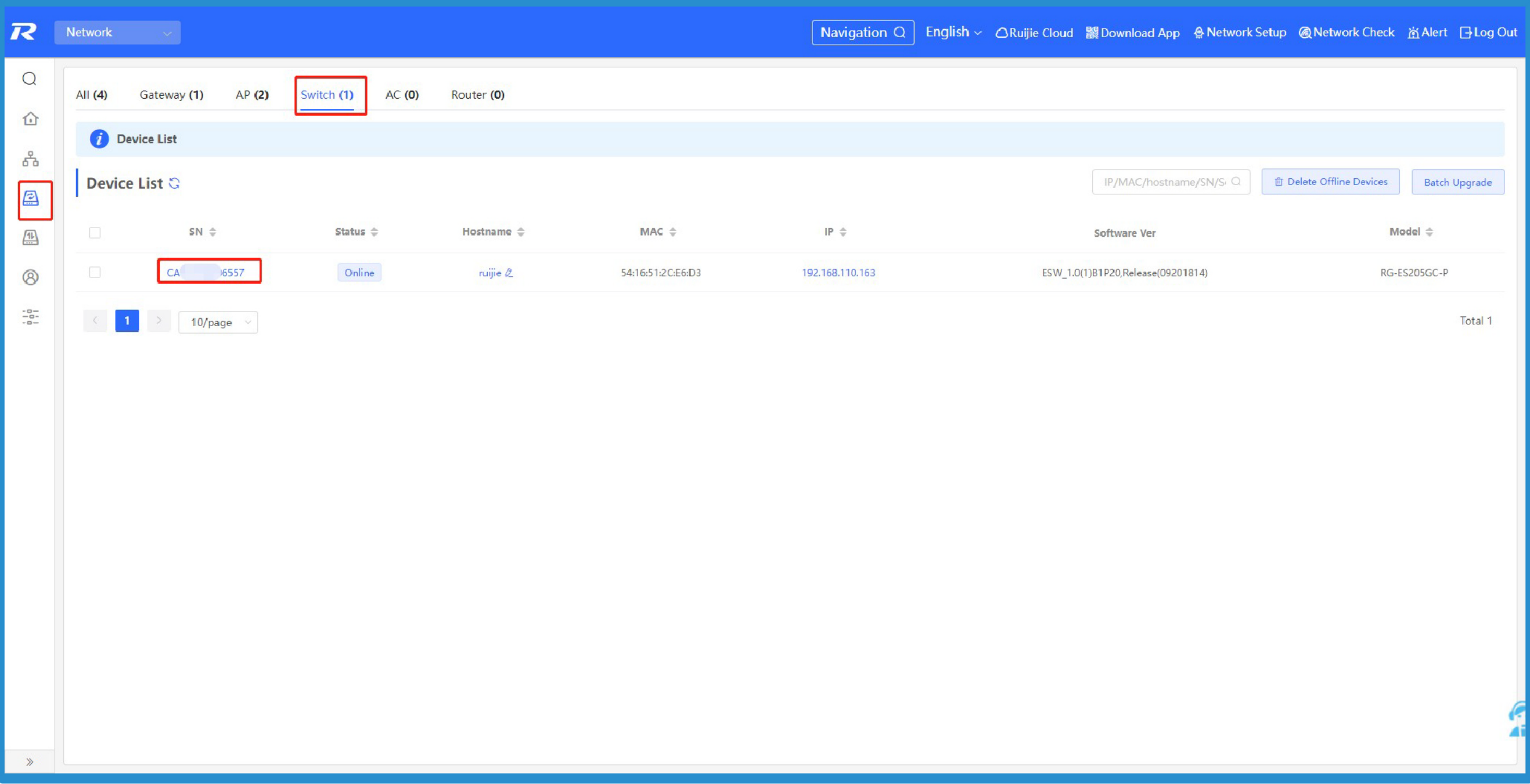
RAP6262Online
SN: MACCRAP626211

Meshed>

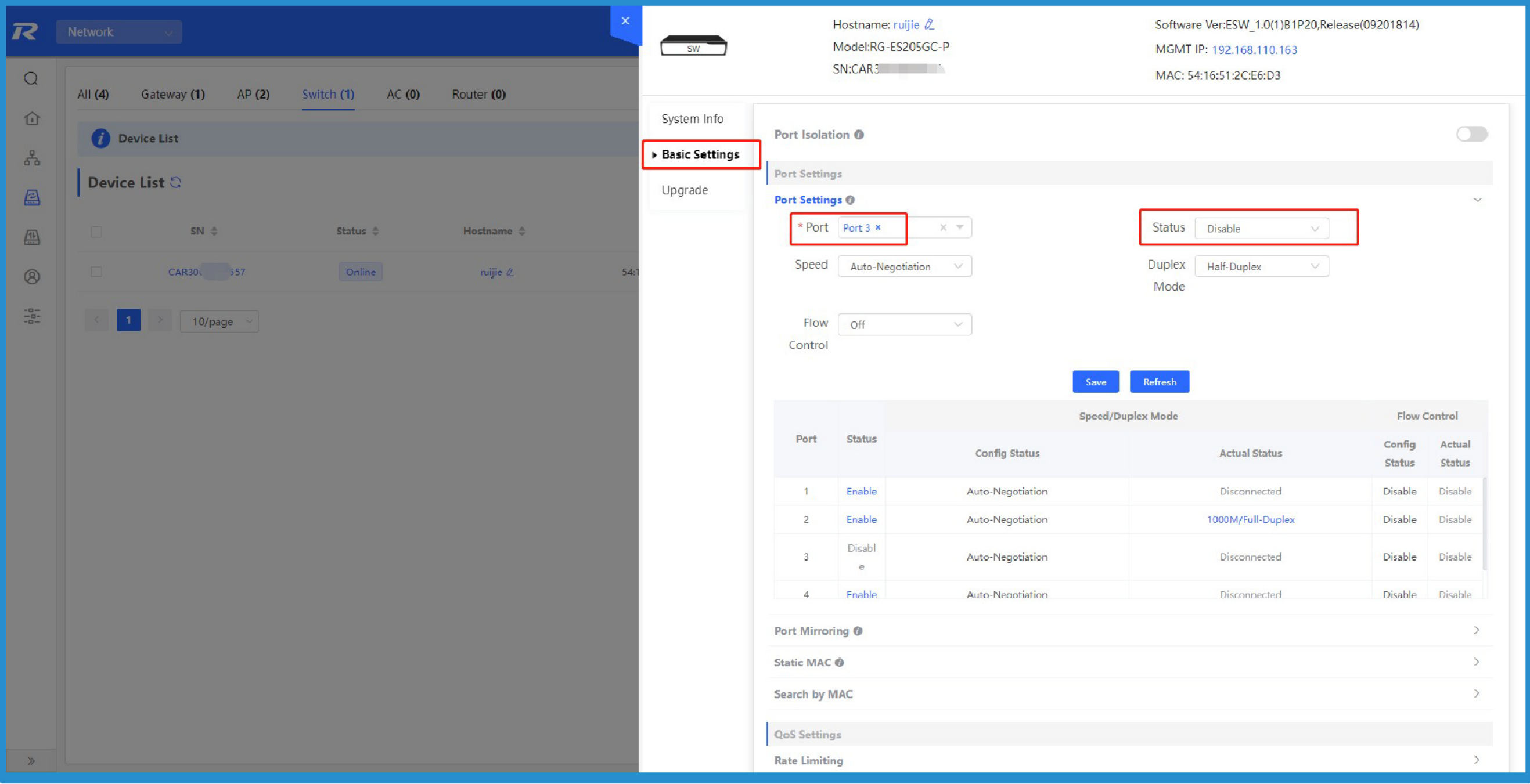
Add AP

VII. Verification

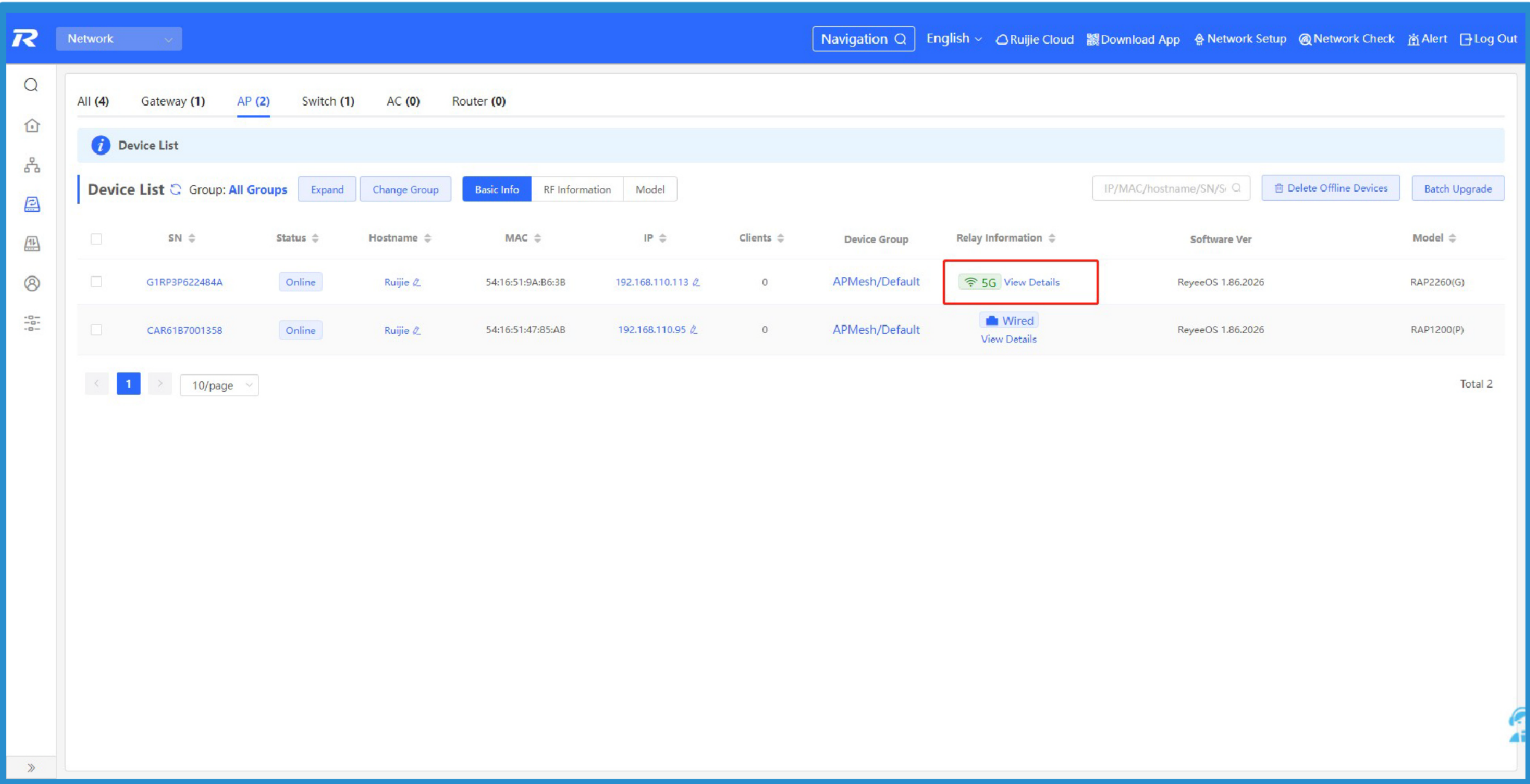
Disable the wired connection of RAP1 on the switch to verify the wireless mesh connection.
Choose **Devices > Switch > SN** to enter the switch's management page.



Choose **Basic Settings > Port Settings**. Select Port 3 and set the Status as Disable.



RAP1 is connected to RAP2 by wireless connection automatically.



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Community



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