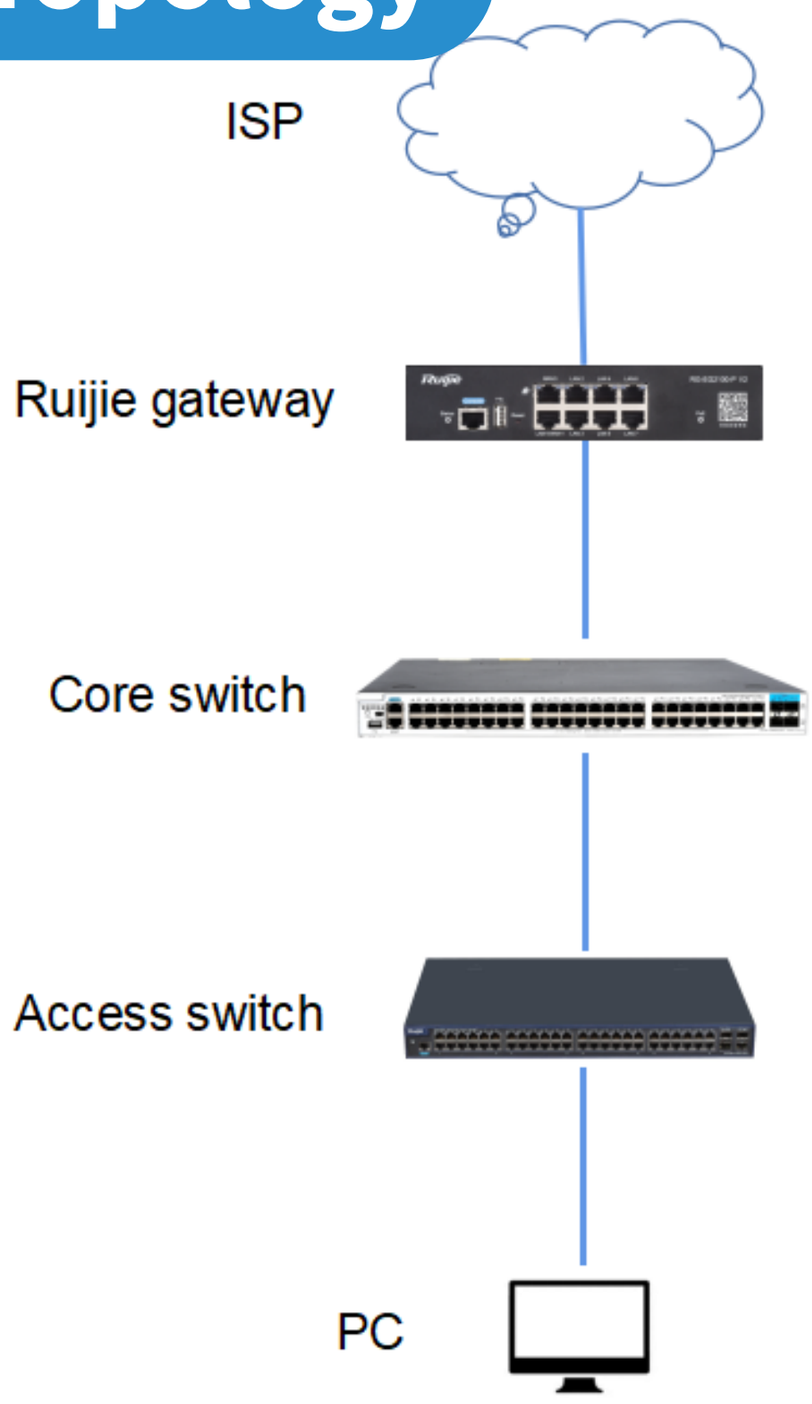
User Get IP Address Failed

I. Applicable Scenarios

When terminals in the intranet are set to obtain an IP address automatically, the terminals may fail to obtain the IP addresses or they obtain incorrect IP addresses. This document describes how to resolve this issue through the troubleshooting of DHCP obtaining exception.

II. Network Topology



III. Troubleshooting

1. The device fails to obtain IP addresses
   (1) Check whether the computer obtains an IP address. An address starting with 169 indicates that no address is obtained.
   (2) Check whether the EG configures corresponding gateway address on the LAN interface.
   (3) Set a static IP address on the PC, and ping the corresponding gateway address to check for link disconnection.

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III. Troubleshooting

(4) Check whether the DHCP server is correctly configured (a EG is taken as an example).

(5) If the function of preventing unauthorized connection is enabled on the access switch, check whether the uplink port is not configured as a trusted interface and therefore the address cannot be delivered.

2 Incorrect IP address is obtained

(1) Check whether the configuration of EG gateway address on the LAN interface is incorrect.

(2) Check whether the IP address configuration of the EG DHCP server is incorrect.

(3) Check whether the intranet access switch is connected to an unauthorized DHCP server, which can be avoided by using the function of preventing unauthorized connection.

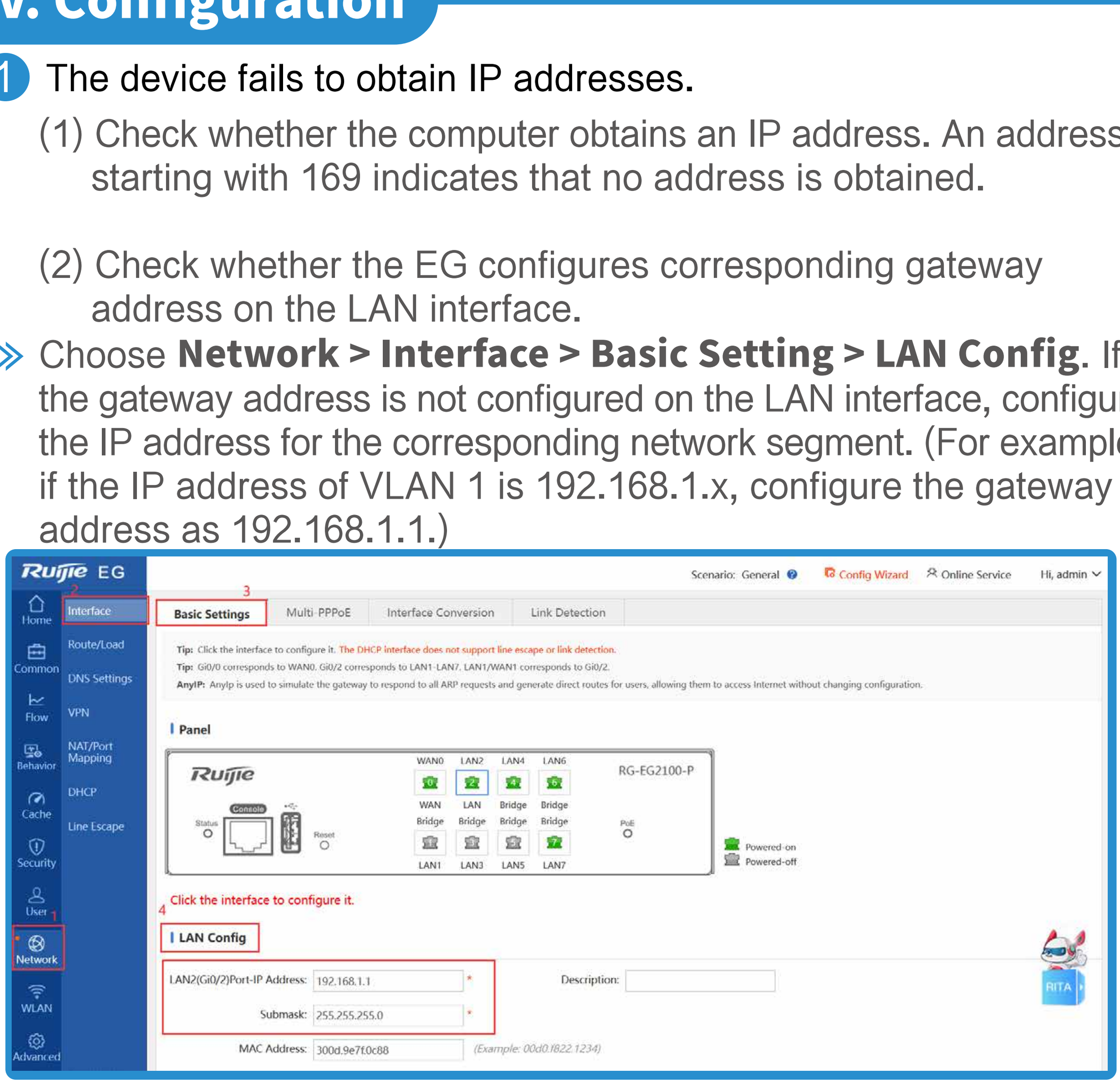
IV. Configuration

1 The device fails to obtain IP addresses.

(1) Check whether the computer obtains an IP address. An address starting with 169 indicates that no address is obtained.

(2) Check whether the EG configures corresponding gateway address on the LAN interface.

» Choose **Network > Interface > Basic Setting > LAN Config**. If the gateway address is not configured on the LAN interface, configure the IP address for the corresponding network segment. (For example, if the IP address of VLAN 1 is 192.168.1.x, configure the gateway address as 192.168.1.1.)



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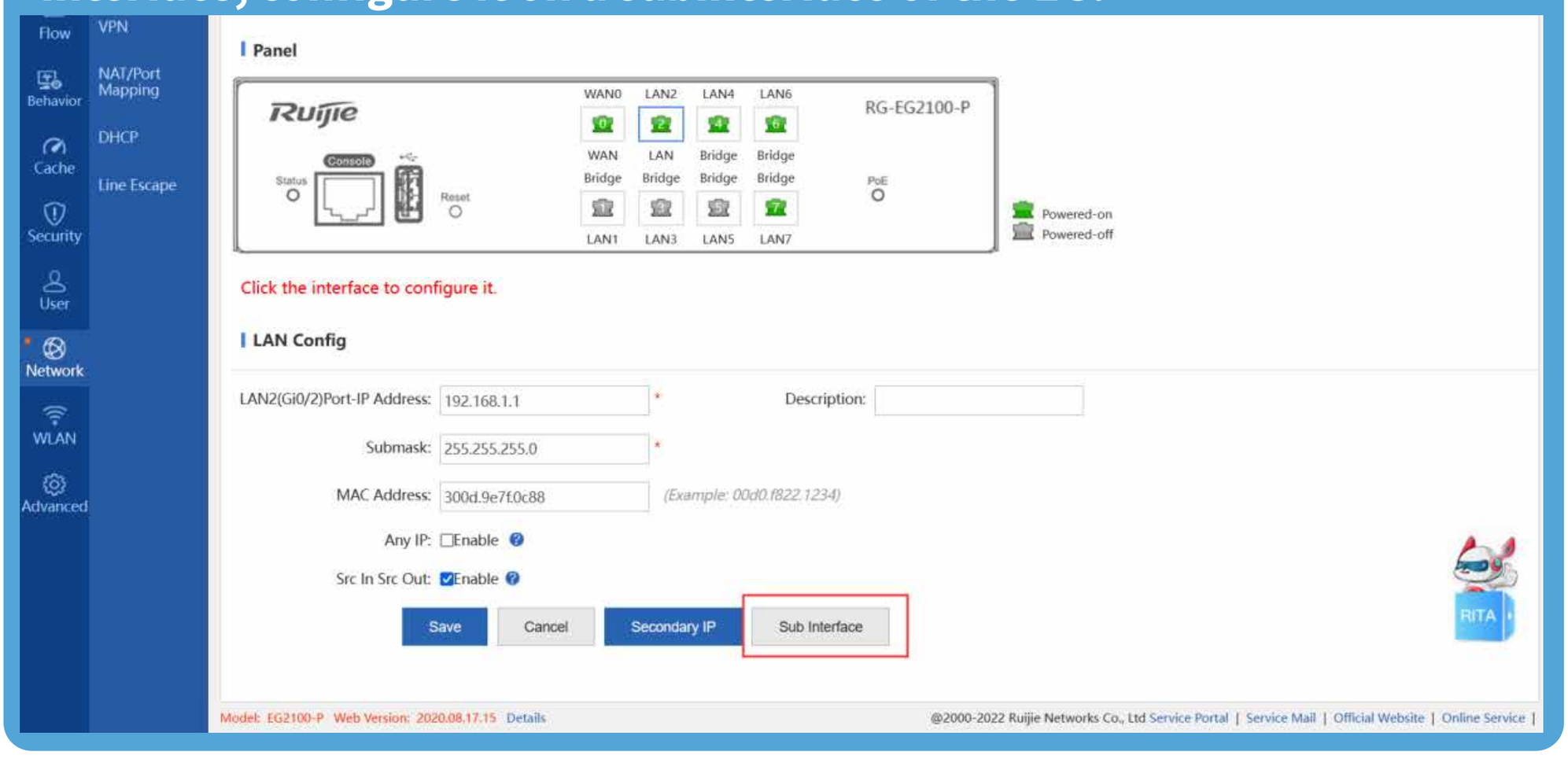
IV. Configuration

Notice

To configure an IP address for a different network segment on the LAN interface, configure it on a subinterface of the EG.



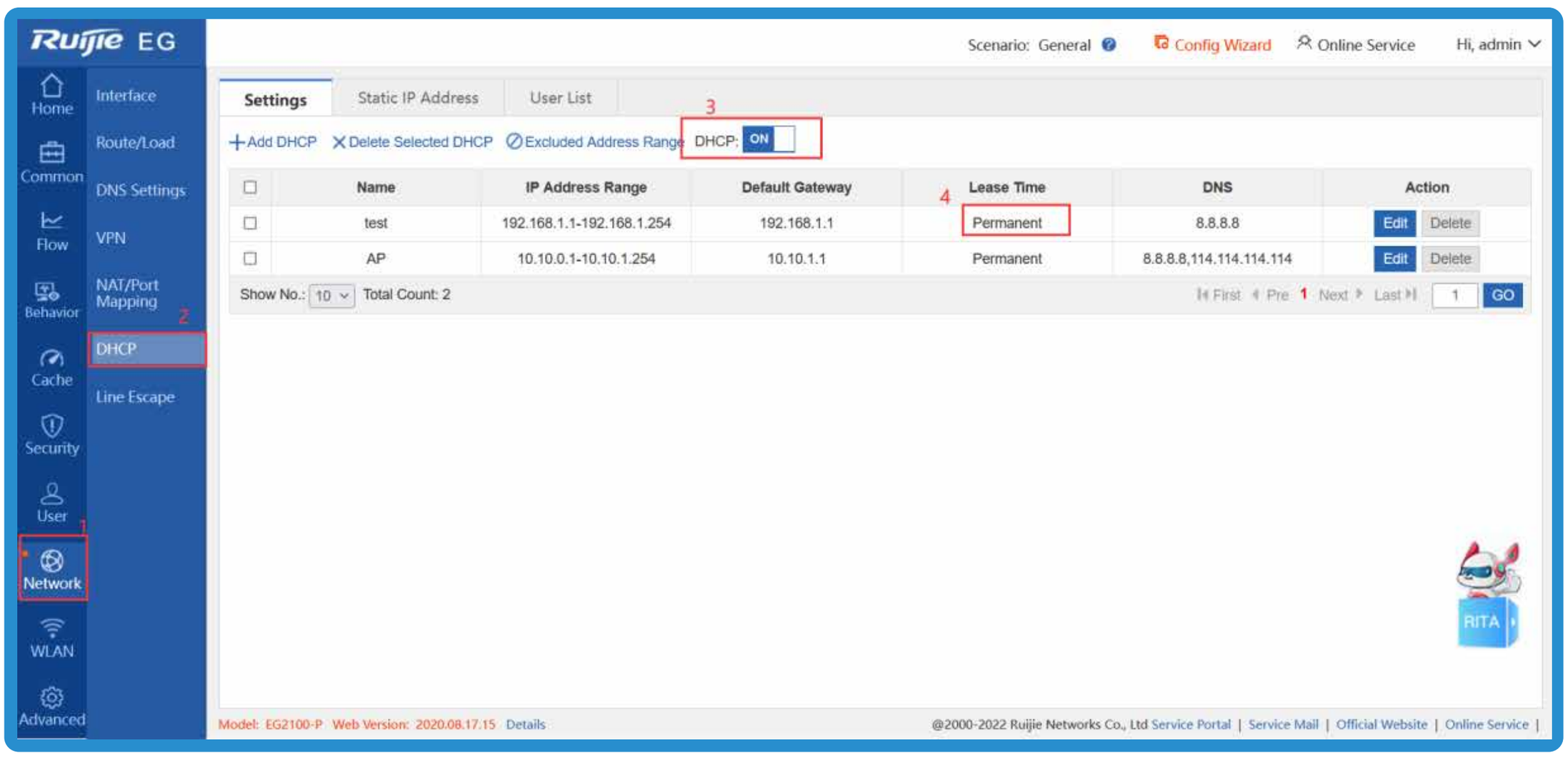
(3) Set a static IP address on the PC, and ping the corresponding gateway address to check for link disconnection.

» You need to learn the network planning and address allocation in advance. After setting a static address on the PC and accessing the switch, check whether the corresponding VLAN interface can ping the corresponding gateway address. (For example, if the obtained IP address of VLAN 1 is 192.168.1.x, the gateway address is 192.168.1.1.)

(4) Check whether the DHCP server configuration is correct (Ruijie EG is taken as an example).

» Check whether the DHCP service is enabled.

» Check whether the lease time of DHCP allocated addresses is permanent and all addresses are allocated and cannot be released. Log in to the L3 switch, choose **Network > DHCP > DHCP button > Lease Time**. If the DHCP service is not enabled, and the lease time is permanent, addresses cannot be delivered.



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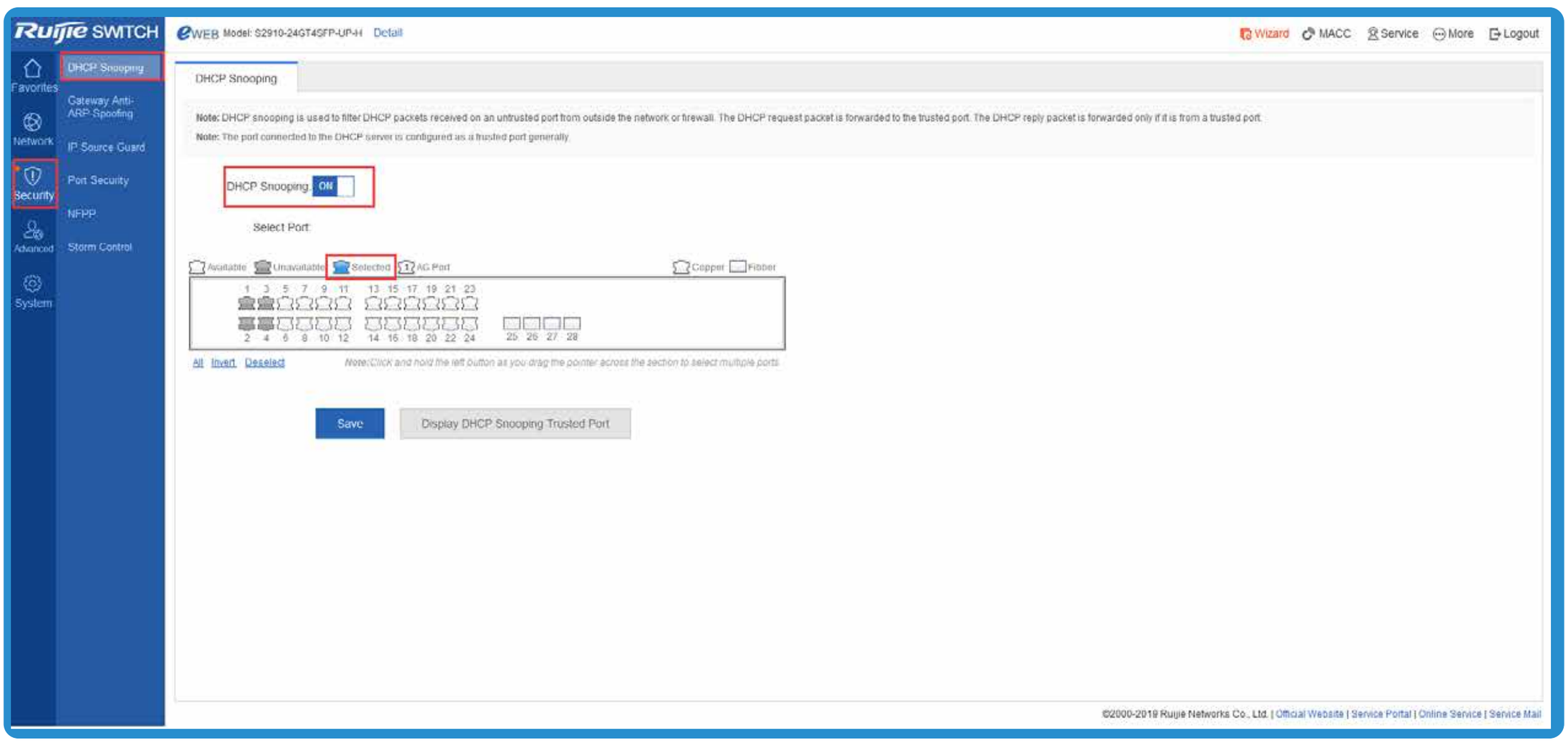
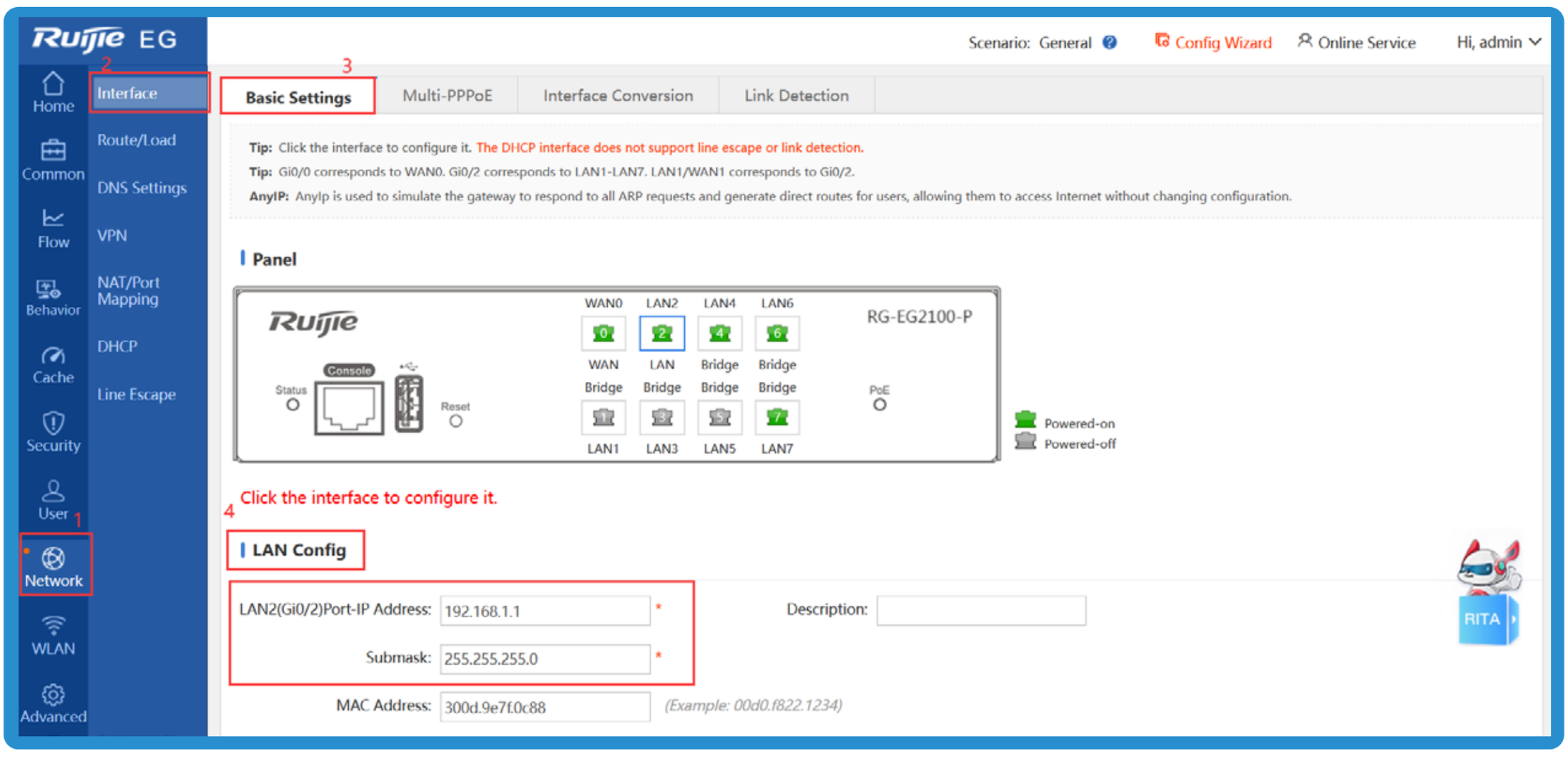
IV. Configuration

» If the function of preventing unauthorized connection is enabled on the access switch, check whether the uplink port is not configured as a trusted interface and therefore the address cannot be delivered. Choose **Security > DHCP Snooping > enable DHCP Snooping function > selected**, and check whether the interface is not selected as a trusted interface and therefore DHCP data cannot be delivered.



2 Incorrect IP address is obtained.

(1) Check whether the configuration of EG gateway address on the LAN interface is incorrect.



» Check whether the EG LAN interface is configured with correct IP address and subnet mask, and whether the gateway address is in the same address segment as the address pool range. The gateway IP address in the above figure is 192.168.1.1.

(2) Check whether the IP address configuration of the EG DHCP server is incorrect.

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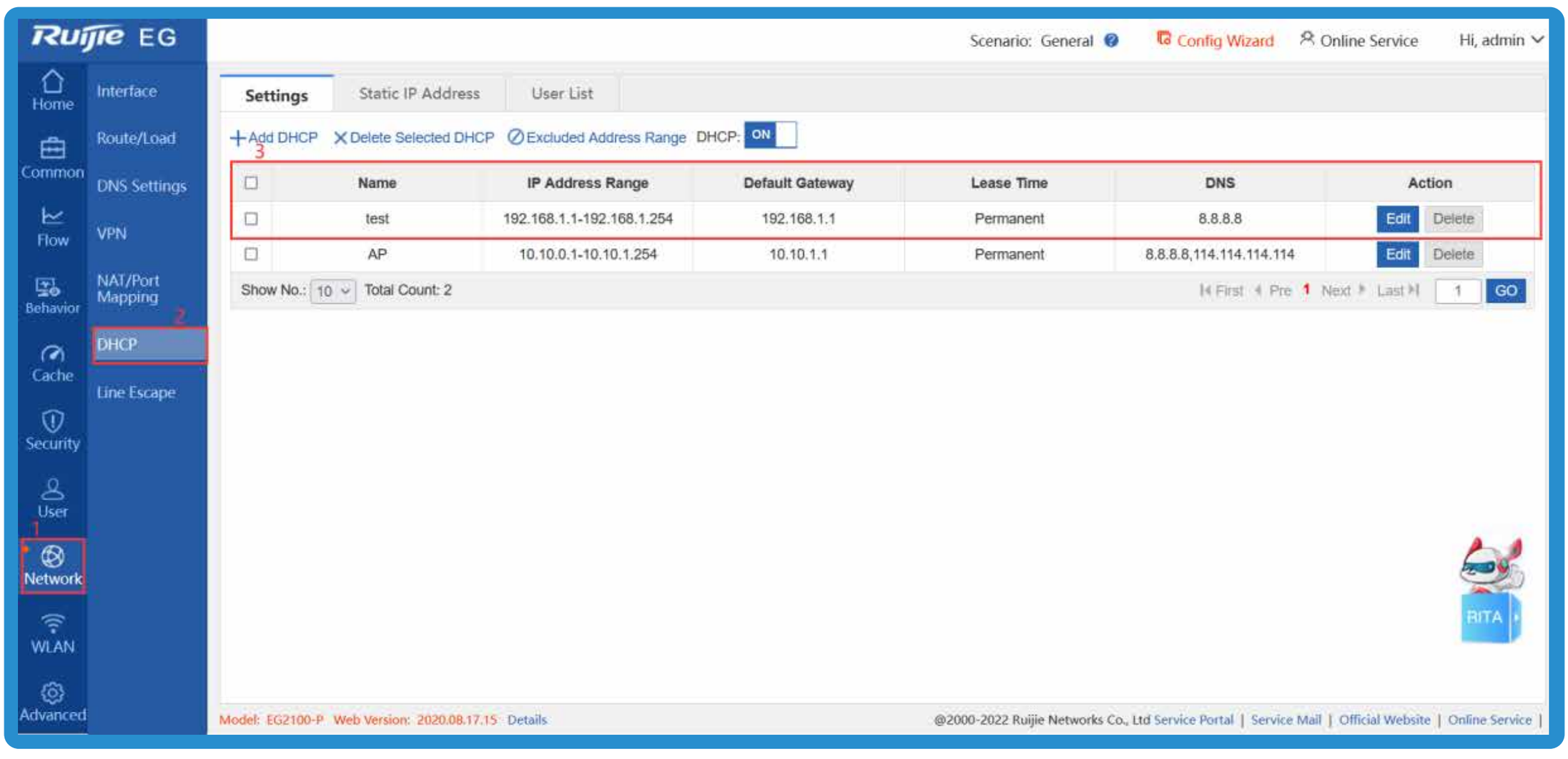
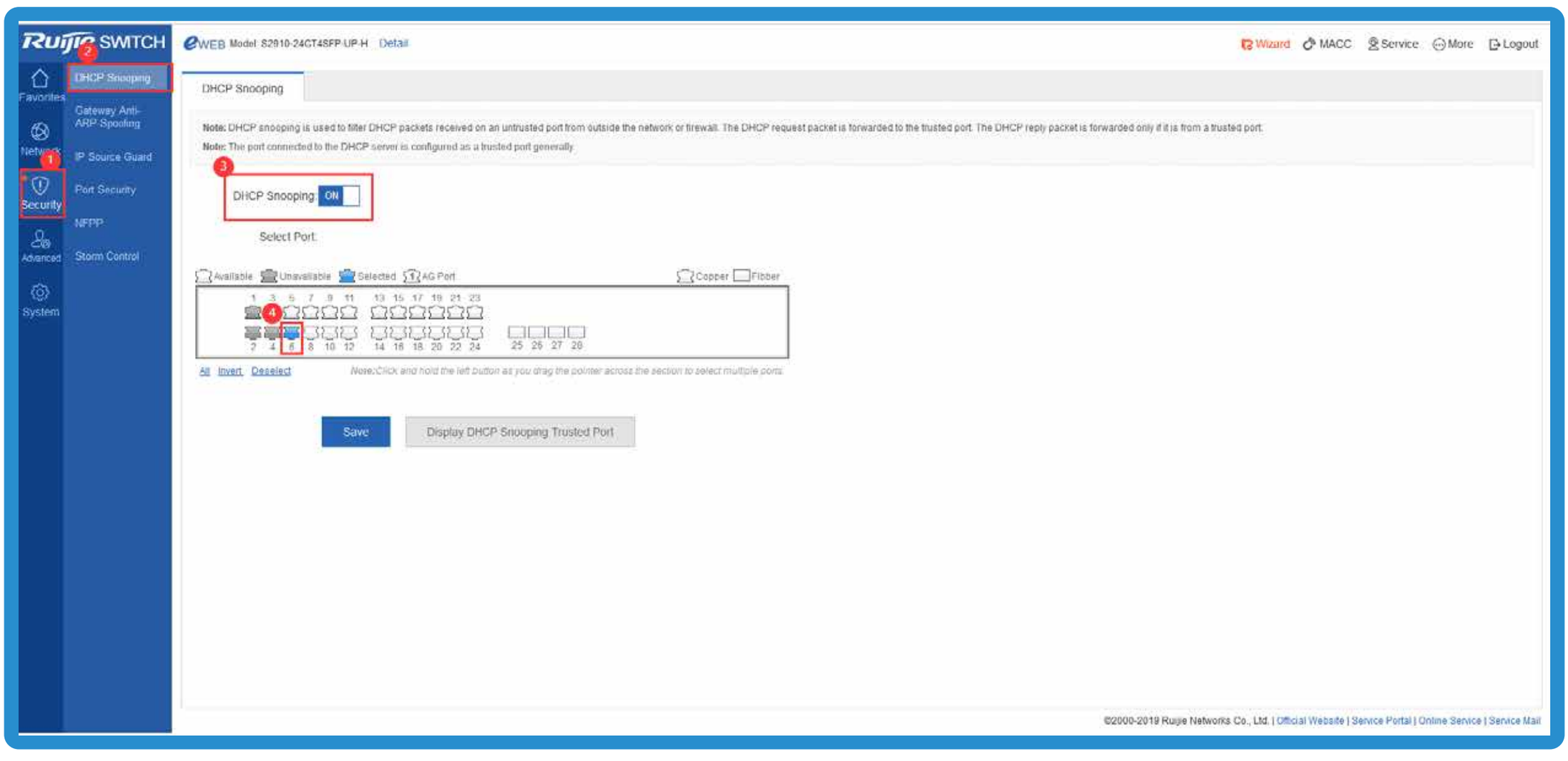
IV. Configuration



» Check whether the IP address, subnet mask, DNS, and gateway address in the DHCP configuration are correct, and whether the gateway address is in the same address segment as the address pool range. The gateway IP address 192.168.1.1 in the above figure is in the range of 192.168.1.1 – 192.168.1.254.

(3) Check whether the intranet access switch is connected to an unauthorized DHCP server, which can be avoided by using the function of preventing unauthorized connection.



» Choose **Security > DHCP Snooping > enable DHCP Snooping**, select port 6, and click **Save**.
Port 6 is an uplink port of the core switch. Configure the interface as a trusted port, and ensure that DHCP data delivered by the port can be normally received and sent.

IV. Configuration

③ Verify the configuration.

Verify that the correct IP address can be obtained in the PC direct connection test.

```
Ethernet adapter

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Intel(R) 82579LM Gigabit Network Connection
   Physical Address. . . . . . . . . : 00-21-CC-CF-6F-70 ──► MAC address
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::248b:c4f7:acc4:8ec1%13(Preferred)
   IPv4 Address. . . . . . . . . . . : 192.168.1.1(Preferred)
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Lease Obtained. . . . . . . . . . : 2013 . 3 . 8   9:38:56
   Lease Expires . . . . . . . . . . : 2013 . 3 . 9   9:39:40
   Default Gateway . . . . . . . . . : 192.168.1.254
   DHCP Server . . . . . . . . . . . : 192.168.1.254
   DHCPv6 IAID . . . . . . . . . . . : 352330188
   DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-18-5B-95-3B-60-67-20-AE-75-E4
   DNS Servers . . . . . . . . . . . : 218.85.157.99
   NetBIOS over Tcpip. . . . . . . . : Enabled
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