

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.





III. Troubleshooting

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.





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.

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

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.)

Ruj	ie Eg							S	cenario: General 🔞	Config Wizard	ネ Online Service	Hi, admin 🗸
Home	Interface	Basic Settings	Multi-PPPoE	Interface Co	inversion	n	Link Detection	i				
Common	Route/Load DNS Settings	Tip: Click the interfa Tip: Gi0/0 correspon	ce to configure it. The DF ids to WAN0. Gi0/2 corres	ICP interface does r sponds to LAN1-LAI	N7. LAN1/	t <mark>line esca</mark> WAN1 cor	pe or link detect responds to Gi0/	ion. 2. 15 for users allowing th	om to access laternet with	ut changing configuration	×	
₩ Flow	VPN	Panel	to simulate the gateway	to respond to an A	u icquest	s and gen	erate uncer rout	s to asers, anowing a	en lo occess mernet war	or changing coniguration	6->-	
tion that the second se	NAT/Port Mapping	Dutte		WANO	LAN2	LAN4	LAN6	RG-EG2100-P				
a	DHCP	I <uijie< td=""><td></td><td>10.</td><td>2</td><td></td><td><u>10</u></td><td>NO-LO2100-1</td><td></td><td></td><td></td><td></td></uijie<>		10.	2		<u>10</u>	NO-LO2100-1				
ache	Line Escape	Status		WAN Bridge	LAN Bridge	Bridge Bridge	Bridge Bridge	PoE				
			O Reset	靈	n	2	22	0	Powered on			
Luser 1		4 Click the interfac	e to configure it.	LANI	LAN3	LAN5	LAN7					
() etwork		LAN Config			_							
ē	ļ.	LAN2(Gi0/2)Port-IP	Address: 192,168.1.	1	*		Descript	ion:				
VLAN		5	Submask: 255.255.25	5.0	*							
<i>{</i> 6}		MAC	Address: 300d 0a7fd	0788	/Exa	J unole: 00)d0 (822 1234)					





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.

Flow	VPN	Panel					
Behavior	Mapping	Ruíjie	WANO	LAN2 LAN4	LAN6	RG-EG2100-	P
(M)	DHCP	Console -	WAN	LAN Bridg	Bridge		
	Line Escape	Status O	Bridge	Bridge Bridg	e Bridge	PoE	
Security			LANI	LAN3 LANS	LAN7		Powered-on Powered-off
ی User		Click the interface to config	jure it.				
♥ ② Network	ж. С	LAN Config					
ŝ		LAN2(Gi0/2)Port-IP Address: 1	92.168.1.1	*	Desc	ription:	
WLAN		Submask: 2	55.255.255.0	*			
ැබූ Advanced		MAC Address: 3	00d.9e7f.0c88	(Example:	00d0.1822.12	34)	
		Any IP:	Enable 😗				p.a.
		Src In Src Out: 🗹	Enable 🕜				
		Sav	Cancel	Secondary IP	Sub In	terface	RITA •
		Model: EG2100-P Web Version: 2020.0	38,17,15 Details			@20	00-2022 Ruijie Networks Co., Ltd Service Portal Service Mail Official Website Online Service

(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.

Ruij	ie eg					Scenario: General 🥝	दि Config Wizard 🔗 O	nline Service 🛛 Hi, admin 🗸
∩ Home	Interface	Settings	Static IP Address	User List	3			
ŧ	Route/Load	+Add DHCP	X Delete Selected DHCF	P Ø Excluded Address Range D				
Common	DNS Settings		Name	IP Address Range	Default Gateway	4 Lease Time	DNS	Action
۲	VPN		test	192.168.1.1-192.168.1.254	192.168.1.1	Permanent	8.8.8	Edit Delete
How			AP	10.10.0.1-10.10.1.254	10.10.1.1	Permanent	8.8.8,114.114.114.114	Edit Delete
Behavior	NAT/Port Mapping	Show No.:	0 🗸 Total Count: 2				14 First 4 Pre 1 N	ext ≯ Last ¥ 1 GO
	DHCP							
Cache								
Ð	Line Escape							
Security								
8								
User								10000
۲								
Network	l.							
() WLAN								BILA
-								
् ट्र) Advanced		Model: EG2100-P	Web Version: 2020.08.17.1	5 Details		@2000-2022 Ruijie Networks Co	o., Ltd Service Portal Service Mail	Official Website Online Service
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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.

CALCULAR CONCERNMENT OF A CALCULAR OF A CALC		G Wizard	O MACC	Service (→ More	G Logout
DHCP Seaoping DHCP S	ooping					
Gateway Anti- ARP Speefing Note: DH	P snooping is used to filter DHCP packets received on an untrusted port from outside the network or firewall. The DHCP request packet is forwarded to the trusted port. The DHCP reply packet is forwarded only if it is from a truste	d port.				
Network IP Source Guard	and connected to the DHCP server is configured as a trusted port generally.					
Port Security	CP Snooping, CH					
A Starm Cantrol	Select Port					
(6)	a 🚍 Unavailable 💽 Selected 🖸 AG Port 🔂 Coppet 🛄 Fibber					
System						
All livert	2 4 5 8 10 12 14 15 18 20 22 24 25 26 27 28 Deselect More:Click and hold the reft Dutton as you drive the porter across the section to select multiple ports					
, judi assistan						
	Save Display DHCP Snooping Trusted Port					
					0.00000000	
	IS2000-2019 Ruijie Networks 0	co., Ltd. Offici	al Website Se	ervice Poltal Onli	ine Service [Service Mail

Incorrect IP address is obtained.

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

Ruij	ie eg	Scenario: General 😮 🗔 Config Wizard 🖄 Online Service Hi, admin	~
∂ Home	Interface	Basic Settings Multi-PPPoE Interface Conversion Link Detection	
Common	Route/Load DNS Settings	Tip: Click the interface to configure it. The DHCP interface does not support line escape or link detection. Tip: Gi0/0 corresponds to WAN0. Gi0/2 corresponds to LAN1-LAN7. LAN1/WAN1 corresponds to Gi0/2. AnyIP: AnyIp is used to simulate the gateway to respond to all ARP requests and generate direct routes for users, allowing them to access Internet without changing configuration.	
Flow	VPN NAT/Port	l Panel	
Behavior	Mapping DHCP	Ruijie WANO LAN2 LAN4 LAN6 RG-EG2100-P	
Cache	Line Escape	Consolo WAN LAN Bridge Bridge Status Image Bridge Bridge Bridge Bridge Image Image Bridge Bridge Bridge Image Image Image Bridge Image Image Image Bridge Image Image Image Image Image Image	
User 1		Click the interface to configure it.	
Network		LAN Config	
(î wlan		LAN2(Gi0/2)Port-IP Address: 192.168.1.1 * Description: Submask: 255.255.255.0 * *	
۞ Advanced		MAC Address: 300d.9e7f.0c88 (Example: 00d0.f822.1234)	

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

Home Inter- Home Rom Common DN Elow VP Flow VP Behavior NA Behavior DH Cache In	iterface oute/Load NS Settings PN AT/Port lapping 2 HCP	Settings	Static IP Addres Control Count: 2 Control Coun	s User List CP ØExcluded Address Range D IP Address Range 192.168.1.1-192.168.1.254 10.10.0.1-10.10.1.254	HCP: ON Default Gateway 192.168.1.1 10.10.1.1	Lease Time Permanent	DNS 8.8.8.8	Act	ion
Common Co	oute/Load NS Settings PN AT/Port lapping 2 HCP	+ Add DHCP	X Delete Selected DH Name test AP Total Count: 2	CP ② Excluded Address Range D IP Address Range 192.168.1.1-192.168.1.254 10.10.0.1-10.10.1.254	HCP: ON Default Gateway 192.168.1.1 10.10.1.1	Lease Time Permanent	DNS 8.8.8.8	Act	ion Delete
Common DN Flow VPI Behavior MA Cache Ein	NS Settings PN AT/Port lapping 2 HCP	Show No.: 10	Name test AP Total Count: 2	IP Address Range 192.168.1.1-192.168.1.254 10.10.0.1-10.10.1.254	Default Gateway 192.168.1.1 10.10.1.1	Lease Time Permanent	DNS 8.8.8.8	Act	Delete
Flow VPI Flow NA Behavior Ma Cache Ein	PN AT/Port lapping 2 HCP	Show No.:	AP Total Count: 2	192.168.1.1-192.168.1.254 10.10.0.1-10.10.1.254	192.168.1.1 10.10.1.1	Permanent	8.8.8	Edit	Delate
Flow MA Behavior Ma Cache Ein	AT/Port lapping 2	Show No.: 1	AP Total Count: 2	10.10.0.1-10.10.1.254	10.10.1.1	1700 N			Delette
Behavior Ma Behavior DH Cache Ein	AT/Port lapping E	Show No.: 1	Total Count: 2			Permanent	8.8.8.8,114.114.114.114	Edit	Delete
Cache	2 HCP						14 First 4 Pre 1 1	vext ⊁ Last⊁l	1 GO
Security	ne Escape								
ය User									
Network									
WLAN									

- 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.

RUJI	WEB Model \$2910-24GT4SFP-UP-H Detail	C Wizard	C MACC	Service	⊖ More	🕞 Logout
Ruise Switch Pavorites Pavorites Cateway Anti- ARP Spooling P Source Guard P Source Guard Port Security Scource Storm Control System	WEB Model \$2810-24CT4SFP-UP H Detail DHCP Snooping Note: DHCP snooping is used to the DHCP packets received on an untrusted port from outside the network or firewall. The DHCP request packet is forwarded to the trusted port. The DHCP reply packet is forwarded only dit is from a true. Note: The port connected to the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP server is configured as a trusted port generally. Image: Comparison of the DHCP	R Wizard	<i>₫</i> MACC	2 Service	⊖ More	C Logout
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> 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 $(\mathbf{3})$ Verify the configuration. Verify that the correct IP address can be obtained in the PC direct connection test. Ethernet adapter Connection-specific DNS Suffix . : MAC address DHCP Enabled. Yes Autoconfiguration Enabled : Yes Link-local IPv6 Address : fe80::248b:c4f7:acc4:8ec1%13(Preferred) 9:38:56DHCP 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 Topip. : Enabled

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