



WAN Troubleshooting iSite Router

INTRODUCTION

The iSite can access to the internet via WAN.

This article describes how to troubleshoot Network Connection via WAN

CONFIGURATION

When setting **Static IP** as Connection Type

Ensure your static IP is not occupied by other devices and Gateway IP is correct. You can connect your PC under switch/router's subnet (LAN and Wi-Fi may be different subnets), run **ipconfig** in terminal to find out its network segment.

Take the configuration in the following figure as an example, the network segment is 192.168.23.0 so we will assign an IP address under 192.168.23.0 subnet to the device. You can ping 192.168.23.221 to see if you get any reply; If not, it means this IP address is not used by other devices and we can assign 192.168.23.221 to the router as its static WAN IP. Network mask and default gateway can be set the same as your PC's.

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19043.1415]
(c) Microsoft Corporation. All rights reserved.

C:\Users\>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

Ethernet adapter Ethernet2:

    Connection-specific DNS Suffix  . :
    IPv4 Address. . . . . : 192.168.23.183
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.23.1
```

```
C:\Users\ >ping 192.168.23.221

Pinging 192.168.23.221 with 32 bytes of data:
Reply from 192.168.23.183: Destination host unreachable.
Reply from 192.168.23.183: Destination host unreachable.
Reply from 192.168.23.183: Destination host unreachable.
Reply from 192.168.23.183: Destination host unreachable.

Ping statistics for 192.168.23.221:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

The screenshot shows the SilverNet web interface with the 'WAN' tab selected. Under 'WAN Settings', the 'WAN_1' configuration is displayed. The 'Enable' checkbox is checked. The 'Port' is set to 'LAN1/WAN'. The 'Connection Type' is set to 'Static IP'. A red box highlights the IP configuration fields: 'IPv4 Address' (192.168.23.221), 'Netmask' (255.255.255.0), and 'IPv4 Gateway' (192.168.23.1). Other fields include 'IPv6 Address' (fe80::26e1:24ff:fe0:b714) and 'Prefix Length' (64).

When setting **DHCP Client** as Connection Type

Go to **Maintenance -> Tools -> Ping**, check whether DHCP Server IP is reachable, if not, check configuration of DHCP Server.

The screenshot shows the SilverNet web interface with the 'WAN' tab selected. Under 'WAN Settings', the 'WAN_1' configuration is displayed. The 'Enable' checkbox is checked. The 'Port' is set to 'LAN1/WAN'. The 'Connection Type' is set to 'DHCP Client', which is highlighted with a red box. Other fields include 'MTU' (1500), 'Use Peer DNS' (unchecked), 'IPv4 Primary DNS' (8.8.8.8), 'IPv4 Secondary DNS' (empty), and 'Enable NAT' (checked).

When setting PPPoE or Dual-Stack Lite as Connection Type

For PPPoE: double check whether Username and Password are correct.

The screenshot shows the SilverNet configuration interface with the 'WAN' tab selected. Under 'WAN_1', the 'Connection Type' is set to 'PPPoE'. A red box highlights the 'Username' and 'Password' fields, indicating they must be double-checked for correctness. Other settings include 'Enable' (checked), 'Port' (LAN1/WAN), 'Link Detection Interval(s)' (60), 'Max Retries' (0), 'MTU' (1500), 'Use Peer DNS' (unchecked), and 'IPv4 Primary DNS' (8.8.8.8).

For Dual-Stack Lite: Check whether Gateway address DS-Lite or AFTR address are reachable.

The screenshot shows the SilverNet configuration interface with the 'WAN' tab selected. Under 'WAN Settings' for 'WAN_1', the 'Connection Type' is set to 'Dual-Stack Lite'. A red box highlights the 'IPv6 Gateway', 'DS-Lite AFTR Address', and 'Local IPv6 Address' fields, indicating these must be checked for reachability. Other settings include 'Enable' (checked), 'Port' (LAN1/WAN), 'MTU' (1500), 'IPv4 Primary DNS' (8.8.8.8), and 'IPv4 Secondary DNS' (empty).

Check whether NAT is enabled

It is recommended to enable NAT for most usage scenarios. When enabled, a private IP can be translated to a public IP otherwise further network service outside of switch/router cannot be used.

Set WAN/eth0 as Main interface

Go to **Network -> Interface -> Link Failover**, set WAN as the highest priority.

Priority	Enable Rule	Link in use	Interface	Connection Type	IP	Operation
1	☒	●	WAN	Static	192.168.22.105	
2	☒	●	Cellular-SIM1	DHCP	-	
3	☐	●	Cellular-SIM2	DHCP	-	

Check DNS address

We provide **Use Peer DNS** option to obtain peer DNS automatically during PPP dialing, but sometimes you will need to set the primary and secondary DNS. In that case, please double check if some universal DNS servers are accessible in local network by pinging it on PC.

The screenshot displays the SilverNet configuration interface for WAN settings. On the left, a dark sidebar contains a menu with options like Status, Network, Interface, DHCP, Firewall, QoS, VPN, IP Passthrough, Routing, VRRP, DDNS, System, Industrial, and Maintenance. The 'Interface' option is currently selected. The main panel, titled 'WAN Settings', has tabs for Link Failover, Cellular, Port, WAN (active), Bridge, Switch, and Loopback. Under the 'WAN' tab, the 'WAN_1' configuration is shown. It includes a list of settings: 'Enable' is checked; 'Port' is set to 'LAN1/WAN'; 'Connection Type' is 'PPPoE'; 'Username' and 'Password' are empty fields; 'Link Detection Interval(s)' is 60; 'Max Retries' is 0; 'MTU' is 1500; 'Use Peer DNS' is unchecked and highlighted with a red box; 'IPv4 Primary DNS' is 8.8.8.8 and also highlighted with a red box; 'IPv4 Secondary DNS' is an empty field; and 'Enable NAT' is checked. A blue 'Save & Apply' button is located at the bottom of the configuration area.

Confirm switch/router can access to the Internet

Connect another device under its subnet (LAN or WiFi) and visit Internet. Check if you can visit Google or watch videos on YouTube, if so, please follow next step.

Check whether the Ethernet port on the switch/router is broken or has poor contact with the cable

Use the same cable to connect the device to another port on switch/router. If it still doesn't work, use the same port to connect the device with another cable.

Check whether the Ethernet cable is plugged into WAN port of iSite

You need to plug Ethernet cable into WAN port for the device to be in the switch/router's subnet. If the Ethernet cable is plugged into LAN port, the configuration in **Network -> Interface -> WAN** won't take into effect.

Check Ethernet port LEDs

If the green LED is on, there is 10/100/1000 Mbps (auto-sensing) traffic. If the orange LED is blinking, data is being transferred. If both are off, refer to switch/router section above.