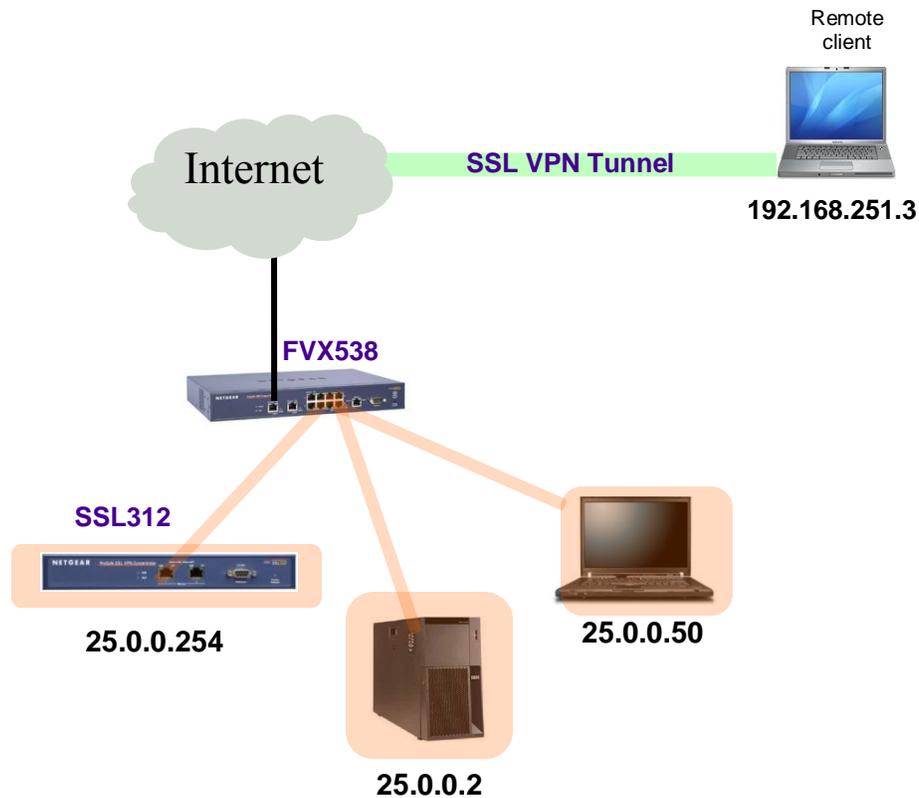


SSL312 VPN Static Route



SSL312 Firmware version 2.0.03
FVX538 Firmware version 2.1.2-7

This article illustrates the Split Tunnel SSL VPN and how to configure a static route on both the firewall and the SSL312 to allow the remote clients to access other PCs through the SSL VPN tunnel.

Issue:

SSL VPN tunnel is established, but remote client cannot ping or access other devices on the SSL312 VPN network.

Cause:

By default, the SSL VPN is configured to assign the remote VPN clients with IP addresses from the range of 192.168.251.1 through 192.168.251.254. This range of IP address may not be in the same subnet as your local network or as your SSL312.

Resolution:

- 1) Add a client route on the SSL312 to allow the VPN Tunnel client to connect to the corporate network using the VPN tunnel.
- 2) Add a client route on the corporate network's firewall to forward traffic intended for the VPN clients to the SSL VPN gateway

This is the default IP address range that the SSL312 will be giving out to its remote VPN clients:

VPN Tunnel Client

Client IP Address Range

Client Address Range Begin

Client Address Range End

Enable Full Tunnel Support

Note: Static routes should be added to reach any secure network in split tunnel mode.

NOTE: By default the SSL VPN tunnel is set to use Split Tunnel – this means that the SSL312 does not know how to route traffic to the rest of the network without a static route defined. Unless you have configured your SSL312 to be in the same subnet as the VPN Client range, you will need to add a static route on the SSL312 before you can access other devices on the network.

To add a route on the SSL312, do the following:

- 1) Log into the Administrative Portal
- 2) Select “VPN Tunnel” under the “Access Administration” section
- 3) Scroll down to the “Add Routes for VPN Tunnel Clients”, enter the network address of a local area network or subnet in the **Destination Network** field (i.e.: 25.0.0.0)
- 4) Enter the subnet mask of the local area network in the **Subnet Mask** field

Add Routes for VPN Tunnel Clients

Destination Network

Subnet Mask

- 5) Click “Add Route” to add the route on your SSL312

Configured Client Routes		
Destination Network	Subnet Mask	
25.0.0.0	255.255.255.0	Delete

In this example, the SSL312 is connected behind the FVX538 VPN Firewall router, which has a LAN subnet of 25.0.0.x, therefore we need to add a static route to this subnet so that the VPN clients on the 192.168.251.x subnet can talk to the rest of the PC and devices behind the FVX538.

Furthermore, another static route is needed on the firewall or FVX538 to route external traffic to the SSL312. To do this, we are adding the SSL VPN client subnet and route that traffic through the IP address of the SSL312 itself.

The screenshot shows the 'Routing' configuration page for a device, specifically the 'Static Routes' section. A table lists a static route named 'SSL312-VPN' with a destination of '192.168.251.0' and a gateway of '25.0.0.254'. The gateway IP is circled in red. A callout box with an arrow points to this circled IP, containing the text 'IP address of the SSL312'. Below the table are buttons for 'select all', 'delete', and 'add...'. The page title is 'RIP Configuration'.

Name	Destination	Gateway	Interface	Metric	Active	Private	Action
SSL312-VPN	192.168.251.0	25.0.0.254	LAN	2	Yes	Yes	edit

At this time, once you have established the SSL VPN tunnel, you will see an addition IP address listed:

The screenshot shows a Windows command prompt window with the following output:

```
T:\>ipconfig
Windows IP Configuration

Ethernet adapter Local Area Connection 3:

    Media State . . . . . : Media disconnected
Ethernet adapter Wireless Network Connection 6:

    Connection-specific DNS Suffix . : netgear.com
    IP Address. . . . . : 10.1.41.129
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.1.41.13
PPP adapter UPNTunnel:

    Connection-specific DNS Suffix . :
    IP Address. . . . . : 192.168.251.2
    Subnet Mask . . . . . : 255.255.255.255
    Default Gateway . . . . . :
T:\>
```

A callout box with an arrow points to the IP address '192.168.251.2' for the PPP adapter, containing the text 'New IP address given to remote client by the SSL312'.

With the routes added on both the SSL312 and the firewall router, you are now able to ping through a local network:

The screenshot shows a Windows command prompt window with the following output:

```
PPP adapter UPNTunnel:

    Connection-specific DNS Suffix . :
    IP Address. . . . . : 192.168.251.2
    Subnet Mask . . . . . : 255.255.255.255
    Default Gateway . . . . . :
T:\>ping 25.0.0.1

Pinging 25.0.0.1 with 32 bytes of data:

Reply from 25.0.0.1: bytes=32 time=30ms TTL=63
Reply from 25.0.0.1: bytes=32 time=26ms TTL=63
Reply from 25.0.0.1: bytes=32 time=27ms TTL=63
Reply from 25.0.0.1: bytes=32 time=34ms TTL=63

Ping statistics for 25.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 26ms, Maximum = 34ms, Average = 29ms
```

Routing table **BEFORE** VPN tunnel

```

C:\>route print
=====
Interface List
0x1 ..... MS TCP Loopback interface
0x2 ...00 09 6b 5f b6 a0 ..... Intel(R) PRO/100 VE Network Connection - Packet
Scheduler Miniport
0x3 ...00 14 6c a1 b4 04 ..... RangeMax(tm) NEXT Wireless Notebook Adapter WN51
iB - Packet Scheduler Miniport
=====
Active Routes:
Network Destination        Netmask          Gateway           Interface         Metric
0.0.0.0                    0.0.0.0          10.1.11.13        10.1.11.26        20
0.0.0.0                    0.0.0.0          10.1.41.13        10.1.41.130       25
10.1.11.0                  255.255.255.0   10.1.11.26        10.1.11.26        20
10.1.11.26                 255.255.255.255 127.0.0.1         127.0.0.1         20
10.1.41.0                  255.255.255.0   10.1.41.130      10.1.41.130      25
10.1.41.130                255.255.255.255 127.0.0.1         127.0.0.1         25
10.255.255.255            255.255.255.255 10.1.11.26        10.1.11.26        20
10.255.255.255            255.255.255.255 10.1.41.130      10.1.41.130      25
127.0.0.0                  255.0.0.0        127.0.0.1         127.0.0.1         1
224.0.0.0                  240.0.0.0        10.1.11.26        10.1.11.26        20
224.0.0.0                  240.0.0.0        10.1.41.130      10.1.41.130      25
255.255.255.255          255.255.255.255 10.1.11.26        10.1.11.26        1
255.255.255.255          255.255.255.255 10.1.41.130      10.1.41.130      1
Default Gateway:          10.1.11.13
=====
Persistent Routes:
None
  
```

Routing table **AFTER** VPN tunnel established

```

C:\>route print
=====
Interface List
0x1 ..... MS TCP Loopback interface
0x2 ...00 09 6b 5f b6 a0 ..... Intel(R) PRO/100 VE Network Connection - Packet
Scheduler Miniport
0x3 ...00 14 6c a1 b4 04 ..... RangeMax(tm) NEXT Wireless Notebook Adapter WN51
iB - Packet Scheduler Miniport
0x20005 ...00 53 45 00 00 00 ..... WAN (PPP/SLIP) Interface
=====
Active Routes:
Network Destination        Netmask          Gateway           Interface         Metric
0.0.0.0                    0.0.0.0          10.1.11.13        10.1.11.26        20
0.0.0.0                    0.0.0.0          10.1.41.13        10.1.41.130       25
10.1.11.0                  255.255.255.0   10.1.11.26        10.1.11.26        20
10.1.11.26                 255.255.255.255 127.0.0.1         127.0.0.1         20
10.1.41.0                  255.255.255.0   10.1.41.130      10.1.41.130      25
10.1.41.130                255.255.255.255 127.0.0.1         127.0.0.1         25
10.255.255.255            255.255.255.255 10.1.11.26        10.1.11.26        20
10.255.255.255            255.255.255.255 10.1.41.130      10.1.41.130      25
25.0.0.0                   255.255.255.0   192.168.251.2    192.168.251.2    1
127.0.0.0                  255.0.0.0        127.0.0.1         127.0.0.1         1
192.168.251.1              255.255.255.255 192.168.251.2    192.168.251.2    1
192.168.251.2              255.255.255.255 127.0.0.1         127.0.0.1         50
192.168.251.255           255.255.255.255 192.168.251.2    192.168.251.2    50
224.0.0.0                  240.0.0.0        10.1.11.26        10.1.11.26        20
224.0.0.0                  240.0.0.0        10.1.41.130      10.1.41.130      25
224.0.0.0                  240.0.0.0        192.168.251.2    192.168.251.2    50
255.255.255.255          255.255.255.255 10.1.11.26        10.1.11.26        1
255.255.255.255          255.255.255.255 10.1.41.130      10.1.41.130      1
255.255.255.255          255.255.255.255 192.168.251.2    192.168.251.2    1
Default Gateway:          10.1.11.13
=====
Persistent Routes:
None
  
```

New route added