

OpenVPN Installation and Simulation Exploration Experience (SEE) VPN Configuration

This document describes the OpenVPN client installation process, Simulation Exploration Experience (SEE) Virtual Private Network (VPN) registration, and setup instructions. These instructions are for Windows machines, and should work with Windows Vista and up. There is an additional section at the end for Mac OS X configuration.

VPN Registration

Participants must register to use the VPN before use. Once registered, users will be able to download configuration files and scripts to run the VPN. **Each registration corresponds to a single user that can log in to the VPN at a time.** For multiple VPN log ins, submit multiple registrations.

1. Go here: <http://35.167.237.255/> and click the “register” link.
2. Fill in the form with relevant information and click submit
3. As soon as you submit your form, an email will be sent to the Administrator to activate your account, once active you will be able to access the VPN.

VPN Setup

1. Register for the VPN (See VPN Registration)
2. Go here: <http://35.167.237.255/login/> and log in with the credentials set during registration.
3. You will be redirected to a page containing a link to download the OpenVPN configuration files, click the download link.
4. Extract the VPNConfig folder, this contains some configuration files and scripts to help run the VPN

Windows Installation and Configuration

OpenVPN Installation

OpenVPN is a VPN client that will be used to connect to the SEE VPN, the client software must be installed on each computer that needs to access the VPN.

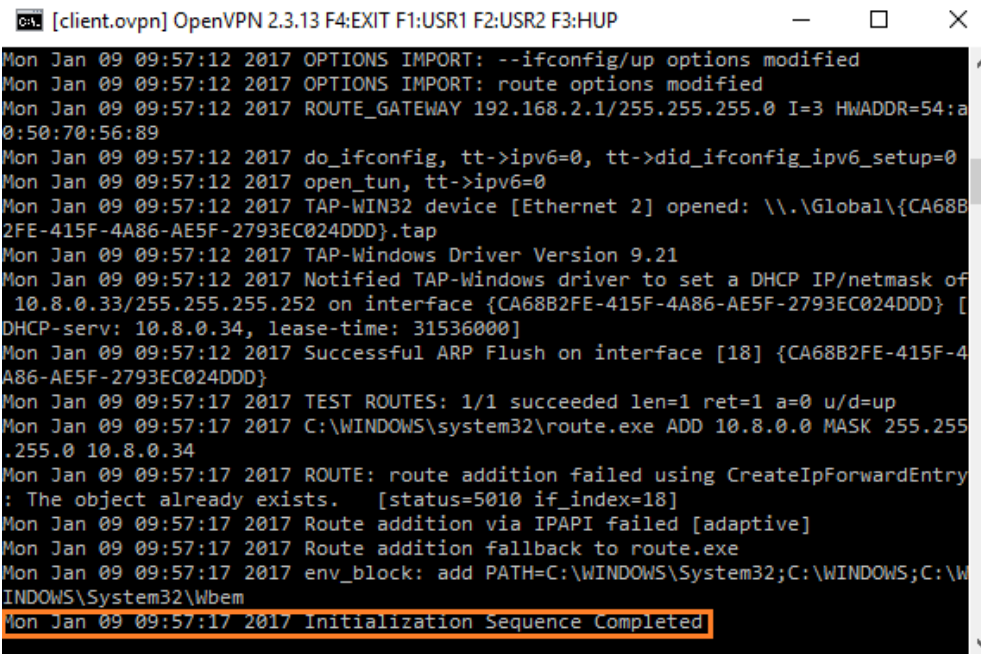
1. Download the client software from here: <https://openvpn.net/index.php/open-source/downloads.html>
 - a. Click the link next to “Installer, Windows Vista and later”
2. Install the client
 - a. The default options will be fine, leave them as is

VPN Execution

Note: This method requires access to an administrator account on your machine. If you do not have access to an administrator account, see the Alternative VPN Execution section.

1. Navigate to the VPNConfig folder that was extracted during setup

2. Double click (or ./) the runvpn.bat file in the VPNConfig folder
 - a. You may need to dismiss/accept any security alerts
3. A terminal window should open and dump logs for its initialization
4. You should see "Initialization Sequence Completed" when complete

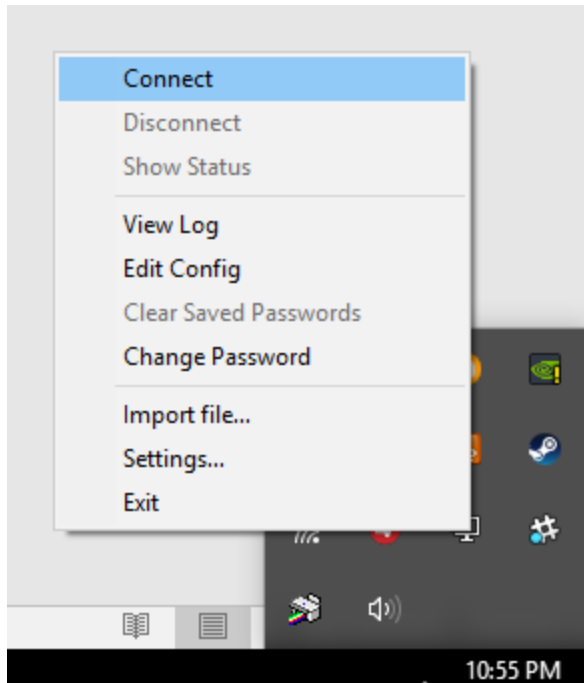


```
[client.ovpn] OpenVPN 2.3.13 F4:EXIT F1:USR1 F2:USR2 F3:HUP
Mon Jan 09 09:57:12 2017 OPTIONS IMPORT: --ifconfig/up options modified
Mon Jan 09 09:57:12 2017 OPTIONS IMPORT: route options modified
Mon Jan 09 09:57:12 2017 ROUTE_GATEWAY 192.168.2.1/255.255.255.0 I=3 HWADDR=54:a
0:50:70:56:89
Mon Jan 09 09:57:12 2017 do_ifconfig, tt->ipv6=0, tt->did_ifconfig_ipv6_setup=0
Mon Jan 09 09:57:12 2017 open_tun, tt->ipv6=0
Mon Jan 09 09:57:12 2017 TAP-WIN32 device [Ethernet 2] opened: \\.\Global\{CA68B
2FE-415F-4A86-AE5F-2793EC024DDD}.tap
Mon Jan 09 09:57:12 2017 TAP-Windows Driver Version 9.21
Mon Jan 09 09:57:12 2017 Notified TAP-Windows driver to set a DHCP IP/netmask of
10.8.0.33/255.255.255.252 on interface {CA68B2FE-415F-4A86-AE5F-2793EC024DDD} [
DHCP-serv: 10.8.0.34, lease-time: 31536000]
Mon Jan 09 09:57:12 2017 Successful ARP Flush on interface [18] {CA68B2FE-415F-4
A86-AE5F-2793EC024DDD}
Mon Jan 09 09:57:17 2017 TEST ROUTES: 1/1 succeeded len=1 ret=1 a=0 u/d=up
Mon Jan 09 09:57:17 2017 C:\WINDOWS\system32\route.exe ADD 10.8.0.0 MASK 255.255
.255.0 10.8.0.34
Mon Jan 09 09:57:17 2017 ROUTE: route addition failed using CreateIpForwardEntry
: The object already exists. [status=5010 if_index=18]
Mon Jan 09 09:57:17 2017 Route addition via IPAPI failed [adaptive]
Mon Jan 09 09:57:17 2017 Route addition fallback to route.exe
Mon Jan 09 09:57:17 2017 env_block: add PATH=C:\WINDOWS\System32;C:\WINDOWS;C:\W
INDOWS\System32\Wbem
Mon Jan 09 09:57:17 2017 Initialization Sequence Completed
```

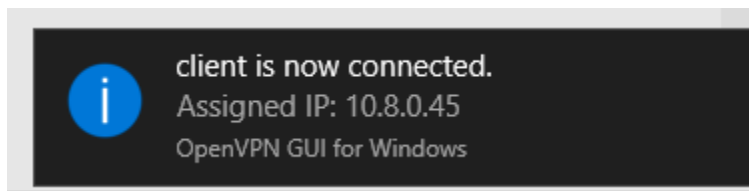
Alternative VPN Execution

Note: This method only requires that the most recent version of OpenVPN is installed. This will create a Windows service, and will not require administrator rights to run. Use this method if you cannot access an administrator account on your machine, otherwise, the previous method is preferable.

1. Navigate to the VPNConfig folder that was extracted during setup
2. Navigate to the OpenVPN Installation folder (Probably: C:\Program Files\OpenVPN)
3. Copy the contents of the "Windows" directory from the VPNConfig folder to the OpenVPN Configuration folder (Probably: C:\Program Files\OpenVPN\config)
4. In your task tray, you will now have the option to connect to the VPN. Locate the OpenVPN icon in your task tray, right click on it, and click "Connect"



5. OpenVPN will open a new window, and attempt to connect. This step should end with a message from OpenVPN indicating that you are connected. This message will also contain your client IP address, which will be needed later.



Obtaining Your VPN IP Address

Your IP address within the VPN is necessary for several other configuration steps. If you have completed the alternative execution instructions, then you will have already received your client IP address from the notification. However, you should still be able to use this method to obtain your client IP regardless of the way in which you started OpenVPN.

1. Navigate to the VPNConfig folder that was extracted during setup
2. Double click (or ./) the vpninfo.bat file in the VPNConfig folder
 - a. You may need to dismiss/accept any security alerts
3. A terminal window should open and dump some information about your OpenVPN Adapter

```
C:\WINDOWS\system32\cmd.exe
Adapter: 'Ethernet 2' {CA68B2FE-415F-4A86-AE5F-2793EC024DDD}
Extracted Adapter Name: Ethernet 2
Configuration for interface "Ethernet 2"
  DHCP enabled: Yes
  IP Address: 10.8.0.33
  Subnet Prefix: 10.8.0.32/30 (mask 255.255.255.252)
  InterfaceMetric: 35
Press any key to continue . . .
```

Mac OS X Installation and Configuration

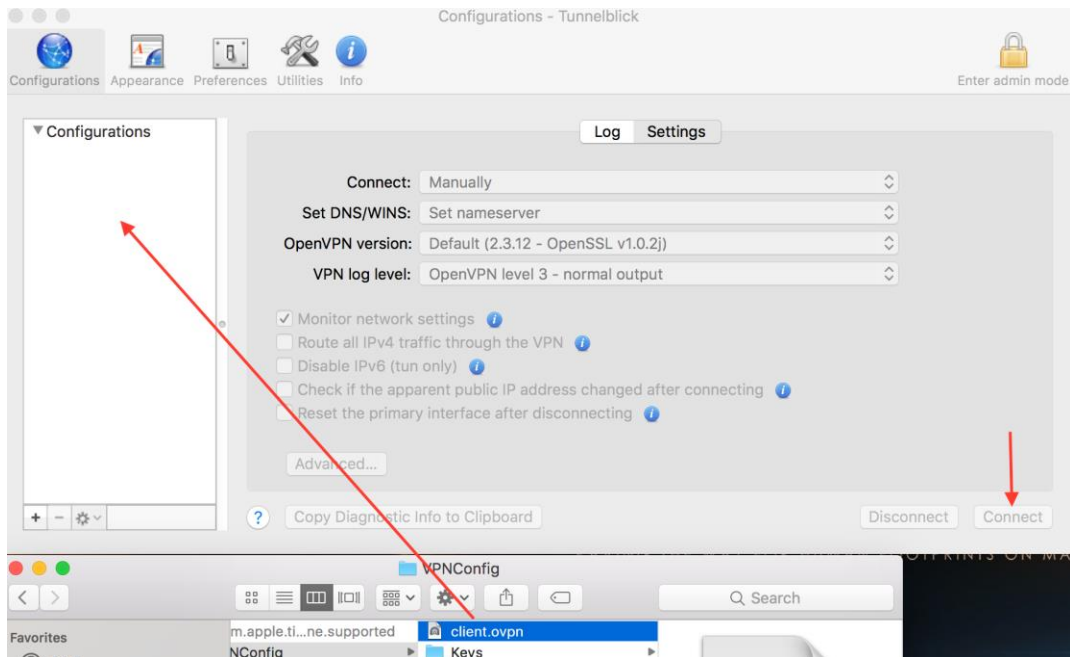
Tunnelblick Installation

Tunnelblick is a VPN client that will be used to connect to the SEE VPN, the client software must be installed on each computer that needs to access the VPN.

1. Download the client software from here: <https://tunnelblick.net/downloads.html>
 - a. Click the link next to "Stable" to download the most recent stable release
2. Install the client
 - a. The default options will be fine, leave them as is

Tunnelblick Execution

1. Navigate to the OpenVPN configuration files that were downloaded in the VPN setup section.
2. Open the Tunnelblick user interface
3. Drag the "client.ovpn" file from the OSX folder in the OpenVPN directory into Tunnelblick
4. Click the connect button at the bottom right hand side of the Tunnelblick app
5. You may see some warning messages, saying that the apparent IP address is not changed, this is normal



Obtaining Your VPN IP Address

1. Start Tunnelblick using the instructions in the previous section
2. Once started, you can see the VPN logs (you may have to click "Log" in the center of Tunnelblick)
3. The last line in the log should contain your VPN IP address

