Appendix B: SoC-VPN

SoC Document Repository

SoC-VPN Setup Guide

SoC-VPN makes use of the open source OpenVPN software. The instructions on this page will help you setup your computer to connect to SoC-VPN on Windows XP, Windows Vista, Windows 7, Window 8 and Mac OS X platforms.
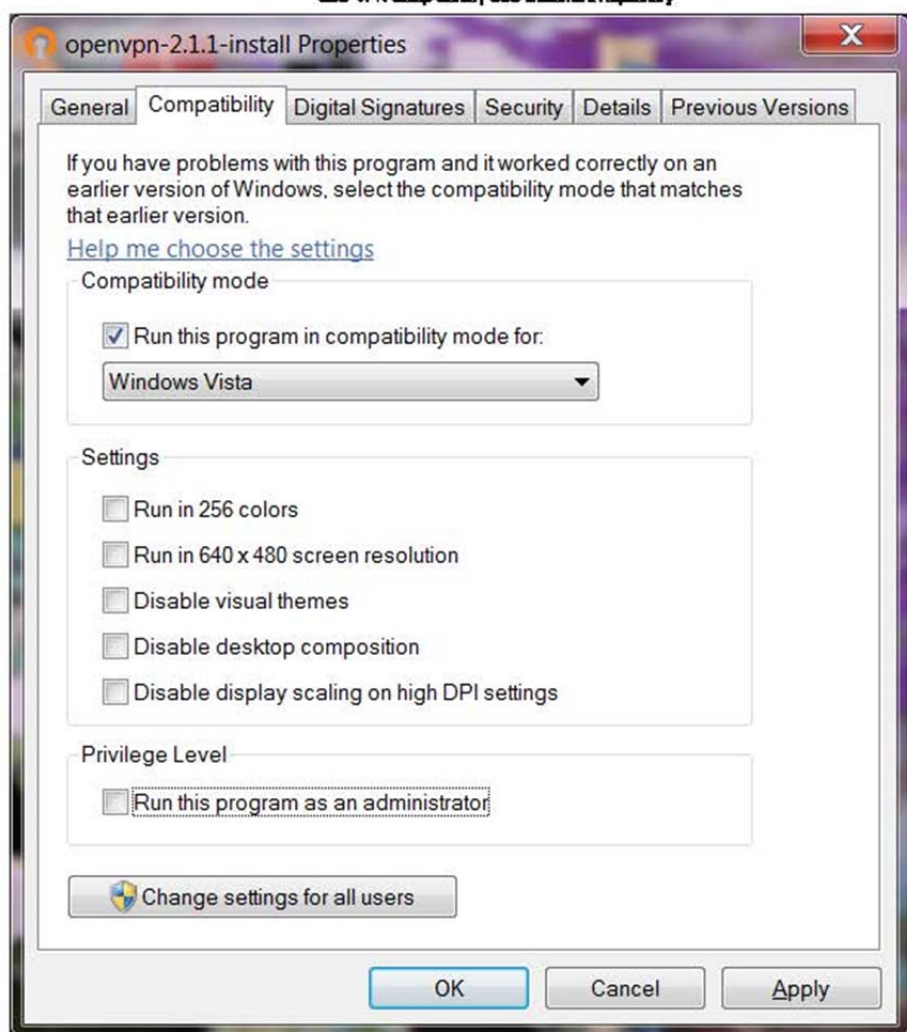
Note that there are two SoC-VPN connection profiles:

1. **socvpn:** General SoC-VPN connection that can be use by anyone with a NUSNET account.
2. **socvpn-staff:** The Staff SoC-VPN connection can be used only by SoC staff. This connection provides additional privileged access to secure resources in SoC (including RDP to computer in Staff network).

Windows XP, Windows Vista ,Windows 7 and Windows 8

Please note that if another version of OpenVPN is installed in the computer, it must be uninstalled first and ensure that the folder `C:\Program Files\OpenVPN` is removed completely.

First, install and setup OpenVPN.

1. Login as Administrator to your PC (or use an account with Administrator privileges).
2. Download the OpenVPN Windows Installer from
   http://download.comp.nus.edu.sg/download/openvpn-2.1.1-install.exe
   (http://download.comp.nus.edu.sg/download/openvpn-2.1.1-install.exe)   and save it onto your desktop.
3. For Windows 7 and Windows 8 only: Right-click on the saved OpenVPN Windows Installer file
   (e.g. `openvpn-2.1.1-install`), select Properties, click on Commpatibility tab, then:
   a. Check "Run this program in compatibility mode for", then select `Windows Vista`.

openvpn-2.1.1-install Properties   X

| General | Compatibility | Digital Signatures | Security | Details | Previous Versions |

If you have problems with this program and it worked correctly on an
earlier version of Windows, select the compatibility mode that matches
that earlier version.

Help me choose the settings

Compatibility mode

☑ Run this program in compatibility mode for:

Windows Vista ▼

Settings

☐ Run in 256 colors

☐ Run in 640 x 480 screen resolution

☐ Disable visual themes

☐ Disable desktop composition

☐ Disable display scaling on high DPI settings

Privilege Level

☐ Run this program as an administrator

🛡 Change settings for all users

[OK]   [Cancel]   [Apply]

    b. Click OK.
4. Run the OpenVPN Windows Installer and follow through to complete the installation of OpenVPN.
    a. When OpenVPN installation is completed, an OpenVPN folder, OpenVPN GUI connection shortcut will appear in your Start Menu Programs folder and an OpenVPN GUI shortcut in your desktop.
5. Configure OpenVPN with SoC-VPN connection profiles:
    a. Download the SoC-VPN configuration file:
      http://download.comp.nus.edu.sg/download/socvpn.ovpn
      (http://download.comp.nus.edu.sg/download/socvpn.ovpn) ,
      or http://download.comp.nus.edu.sg/download/socvpn-staff.ovpn
      (http://download.comp.nus.edu.sg/download/socvpn-staff.ovpn)   (for SoC staff only)
    b. Download the certificate file: http://download.comp.nus.edu.sg/download/ca.txt
      (http://download.comp.nus.edu.sg/download/ca.txt)
    c. Save the downloaded files `socvpn.ovpn` and/or `socvpn-staff.ovpn`, and `ca.txt` into the OpenVPN configuration folder `C:\Program Files\OpenVPN\config\`.

Connect to SoC-VPN by following these steps:

1. Login as Administrator to your PC (or use an account with Administrator privileges).
2. Start the OpenVPN GUI:
    a. For Windows Vista,Windows 7 and Windows 8: Right click the OpenVPN GUI shortcut in your desktop and select "Run as Administrator" to run the program or go to Start → All Programs → OpenVPN GUI, right click and select "Run as Administrator" to run the program.
    b. For Windows XP: Double-click the OpenVPN GUI shortcut or go to start → All Programs → OpenVPN → click OpenVPN GUI to run the program.
3. Right-click on the OpenVPN icon in Notification area (systray), click Connect. Or, if you have installed more than one configuration, then select `socvpn` or `socvpn-staff` (for SoC staff only) and click Connect.
4. Type in your NUSNET userid (e.g. `nusstu\u0123456` or `nusstf\comuser`) and password in the authentication window.
5. When the VPN connection has been established, your browser will launch and load a webpage with the message "Welcome to SoC-VPN". You are now securely connected to SoC-VPN.

Administrator privilege is required to run OpenVPN. For Windows Vista, Windows 7 and Windows 8, to permanently change the privilege for running the OpenVPN GUI application, right click on OpenVPN GUI application (e.g. `C:\Program Files\OpenVPN\bin\openvpn-gui-1.0.3.exe`), select Properties → Compatibility tab, check on Run this program as an administrator under Privilege Level.

To disconnect from SoC-VPN:

1. Right-click on the OpenVPN icon in Notification area (systray).
2. Click on Disconnect.
3. You're now disconnected from SoC-VPN.

Mac OS X

This is supported on Mac OS X 10.5 (Leopard) and 10.6 (Snow Leopard) and 10.7 (Lion) on Intel platforms, only.

Note: *Mountain Lion (10.8) has some bugs.*
Check http://code.google.com/p/tunnelblick/wiki/cMountainLionDnsIssue .

Installation and setup:

1. Download the SoC-VPN configuration file
    a. **for students** (/system/files/socvpn.tblk .zip) **(or here** (https://docs.comp.nus.edu.sg/sites/default/files/socvpn.tblk .zip) **)**
    b. **for staff** (/system/files/socvpn-staff.tblk .zip)
2. Unzip the configuration file. You should see a **socvpn.tblk** (or socvpn-staff.tblk) file.
3. Download and install the most current non-beta version of Tunnelblick from http://code.google.com/p/tunnelblick/wiki/DownloadsEntry?tm=2 .
4. In the setup, choose to "**I have configuration files(s)**", then "**Tunnelblick VPN Configuration(s)**". Select "**Done**".

5. Double-click on **socvpn.tblk** as per instructions.
6. SoC-VPN is now installed.

Connect to SoC-VPN:

1. Launch Tunnelblick. Tunnelblick icon appears in the menu bar (top right area).
2. Click on "Connect 'socvpn'" or "Connect 'socvpn-staff'" to connect to the VPN.
3. Enter your NUSNET userid (e.g. `nusstu\u0123456` or `nusstf\comuser`) and password when prompted.
4. When the VPN connection has been established, your browser will launch and load a webpage with the message "Welcome to SoC-VPN". You are now securely connected to SoC-VPN.

To disconnect from SoC-VPN:

1. Right-click on the OpenVPN icon in the menu bar.
2. Click on Disconnect.
3. You're now disconnected from SoC-VPN.

Unsupported Platforms

Linux

SoC-VPN on Linux is **unsupported** by Computing Facilities. Different linux distributions often have different packaging/software, it is not effective to come up with Linux guides for the multiple distributions out there.

SoC-VPN is actually OpenVPN. If you're using Linux you're probably smart enough to figure it out on your own, using the Windows configuration files. **Note that Unsupported is not equal to Does not work.** Unsupported means you cannot go to Technical Services and request them to help you if you have any problems. OpenVPN does work, you just have to figure it out for yourself.

For **Ubuntu,** you can try the following (works on 12.10):

1. `$ sudo apt-get install network-manager-openvpn`
2. On Ubuntu Desktop, click on the Network icon (top right). Select "VPN Connections", "Configure VPN"
3. Add a connection. Select "OpenVPN"
4. In the **"IPv4 Settings"** tab, use the following settings
   a. Method "Automatic (VPN)".
   b. Click on "Routes..." button. Tick "Use this connection only for resources on its network".
5. In the **"VPN"** tab, use the following settings
   a. **Gateway:** vpn.comp.nus.edu.sg or vpn-staff.comp.nus.edu.sg
   b. **Type:** Password
   c. Username and Password: Your NUSNET credentials
   d. **CA Certificate:** Download the ca.txt in the Windows/Mac setup guide. Rename it to ca.pem if you cannot select it in the dialog box.
6. Click on the **"Advanced..."** button. Select the following

   a. Tick "**Use custom gateway port**". Enter "**443**" for port.
   b. Tick "**Use custom renegotiation interval**". Use "**0**".
   c. Tick "**Use a TCP connection**".
   d. Tick "**Use a TAP device**".
   e. Tick "**Randomize remote hosts**".

However, you can visit our user community forum at Answers@Comp (http://answers.comp.nus.edu.sg/)   for assistance.

Attachment	Size
socvpn.tblk .zip (https://docs.comp.nus.edu.sg/system/files/socvpn.tblk .zip)	2.59 KB
socvpn-staff.tblk .zip (https://docs.comp.nus.edu.sg/system/files/socvpn-staff.tblk .zip)	2.7 KB

Tags: Page maintained by: SoC Technical Services. Last updated on: 30 January 2013 (CF page)

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