



Setting up a RemoteVPN Account

The RemoteVPN is a service offered by Contemporary Controls that allows systems integrators remote access to systems from the convenience of the systems integrator's home or office. A cloud-based VPN server hosted by Contemporary Controls provides the critical connection between two VPN clients—one installed on the systems integrator's PC and the other permanently installed on Contemporary Controls' VPN router located at the remote location. Using this approach, two secure VPN tunnels are created with no concern for intervening firewalls.

RemoteVPN is based on OpenVPN®, a well-supported open-source VPN technology that incorporates SSL/TLS security with encryption. In addition to OpenVPN PC clients for Windows machines, OpenVPN clients are available for iOS and Android mobile devices for greater flexibility in accessing sites remotely. The following instructions explain how to set up a RemoteVPN account on the cloud-based server and for VPN clients on the PC/Mobile devices.

The RemoteVPN account is accessible at <https://www.remotevpnserver.com>.

Splash Screen



Dashboard

Log in with the **username/password** provided after account setup. After logging in, the screen shows the devices in the account. For example, the image below shows five routers and five road warrior devices (such as, PC, Mac, Android, iOS in this account. It also shows the static VPN addresses assigned to each router and the routers' LAN addresses. The last octet of the LAN IP is mapped to the last octet of the VPN address for each router. For example:

- 10.7.0.1 provides access to 192.168.92.1 on Router01.
- 10.7.0.2 can be used to access device 192.168.92.2 on Router01 LAN-side.
- 10.7.3.55 can be used to access device 192.168.1.55 on Router03 LAN-side.

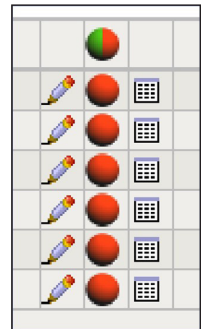
The screenshot shows the Contemporary Controls RemoteVPN dashboard. On the left is a login form with fields for 'User Name' and 'Password', and a 'Logout' link. The main area contains a table with the following columns: Name, group, VPN Addr., and LAN Addr. Each row represents a device, and each row has three icons on the right: a colored ball (status), a pencil (edit), and a table (logs).

Name	group	VPN Addr.	LAN Addr.
CCSI_HP_TEST_ROUTER01	CCSI_HP_TEST	10.7.0.0/24	192.168.92.0/24
CCSI_HP_TEST_ROUTER02	CCSI_HP_TEST	10.7.2.0/24	192.168.92.0/24
CCSI_HP_TEST_ROUTER03	CCSI_HP_TEST	10.7.3.0/24	192.168.1.0/24
CCSI_HP_TEST_ROUTER04	CCSI_HP_TEST	10.7.4.0/24	192.168.92.0/24
CCSI_HP_TEST_ROUTER05	CCSI_HP_TEST	10.7.5.0/24	192.168.92.0/24
CCSI_HP_TEST_RW01	CCSI_HP_TEST		
CCSI_HP_TEST_RW02	CCSI_HP_TEST		
CCSI_HP_TEST_RW03	CCSI_HP_TEST		
CCSI_HP_TEST_RW04	CCSI_HP_TEST		
CCSI_HP_TEST_RW05	CCSI_HP_TEST		

Connections Status Options

Each connection (row) has the following three icons:

- A **pencil icon** – click it to **edit** the connection.
- A **colored ball** indicates the connection status – red for **offline** and green for **online**. Hover over the green ball for details, such as connection time, public IP address of originating connection, etc.
- A **table icon** – click it to see the connection log.



Router Settings Screen in Cloud Account

The screenshot displays the configuration interface for a router. Key elements include:

- Name:** CCSI_HP_TEST_ROUTER03 (with a red link to [CCSI_HP_TEST_ROUTER03.cfg](#))
- Alias Name:** COD_Training_Router
- Group:** CCSI_HP_TEST
- Created on:** 2016-08-19 09:46:03
- Router's local IP:** 192.168.1.1 (LAN Addr: 192.168.1.0/24)
- OpenVPN Protocol:** UDP (selected), TCP
- VPN Addr.:** 10.7.3.0 /24
- Network Access Permissions:** A table showing permissions for other routers:

	Access via VPN Address	via real LAN Address	Status
CCSI_HP_TEST_ROUTER05	<input type="checkbox"/> 10.7.5.0/24	→ 192.168.92.0/24	●
CCSI_HP_TEST_ROUTER04	<input type="checkbox"/> 10.7.4.0/24	→ 192.168.200.0/24	●
CCSI_HP_TEST_ROUTER02	<input type="checkbox"/> 10.7.2.0/24	→ 192.168.92.0/24	●
CCSI_HP_TEST_ROUTER01	<input type="checkbox"/> 10.7.0.0/24	→ 192.168.92.0/24	●
- DirectRemote URL:** <http://sample.vpnserver.com/>
- Options:** Enable Internet Access Masquerade
- Buttons:** OK (highlighted in red), Back

A .cfg link (highlighted in red above) allows you to download a configuration file to the PC for subsequently uploading to the EIPR-V/EIGR-V/EIGR-C3 router. Any changes made to the options shown on this screen update the configuration file—which should then be uploaded to the router (by way of the PC). This screen lets you setup the LAN IP (local IP) address of the router. It also shows the connection protocol (changeable) and the VPN address assigned to the router by the RemoteVPN server. This VPN address is not changeable by the user.

Change the Alias Name to match the job site. In the example screen shown above, Alias Name has been changed to **COD_Training_Router**. The router LAN address is 192.168.1.1 and the VPN subnet is 10.7.3.0/24. From a device connected to the RemoteVPN, this router will be accessible by using the VPN address of 10.7.3.1. Recall that there is one-to-one mapping from LAN address to VPN Address. Therefore, a device connected to the LAN port using IP address 192.168.1.5 will be accessible by using the VPN address of 10.7.3.5.

The OpenVPN protocol section lets the user choose either TCP or UDP protocol to connect to the RemoteVPN. UDP is preferred. In case of an unstable connection, change to TCP. This is just for the connection between the road warrior device and the RemoteVPN server and does NOT impact the traffic that can be carried through the VPN tunnel.

The Network Access Permissions section (highlighted in yellow) shows the other routers in the account. The example screen above (for **CCSI_HP_TEST_ROUTER3**) shows permissions to **CCSI_HP_TEST_ROUTER1, 2, 4 and 5**. If you enable access to **CCSI_HP_TEST_ROUTER1**, then any device on the **CCSI_HP_TEST_ROUTER3** LAN can access **CCSI_HP_TEST_ROUTER1** (and any device on its LAN side) through the VPN address of 10.7.0.x. You will also need to go to the **CCSI_HP_TEST_ROUTER1** Edit screen and enable access to **CCSI_HP_TEST_ROUTER3**.

Enabling the URL option (highlighted in blue) under **DirectRemote**, creates a link to access the router directly from cloud account.

When using RemoteVPN, all traffic is restricted to the VPN tunnel—so devices on the LAN side of the router cannot access the Internet or other WAN-side addresses. But LAN devices **can access** other WAN-side addresses or the Internet if you check the **Enable Internet Access** option (highlighted in green). CAUTION: If the remote site uses a cellular router, disable Windows Updates to prevent bill shock. The **Masquerade** option allows access to a LAN side device irrespective of the Gateway IP Address setting on that device. This is useful to access legacy devices if they don't have the Gateway IP option or if the Gateway Address is already being used to access a different subnet.

Click **“OK”** to save your changes.

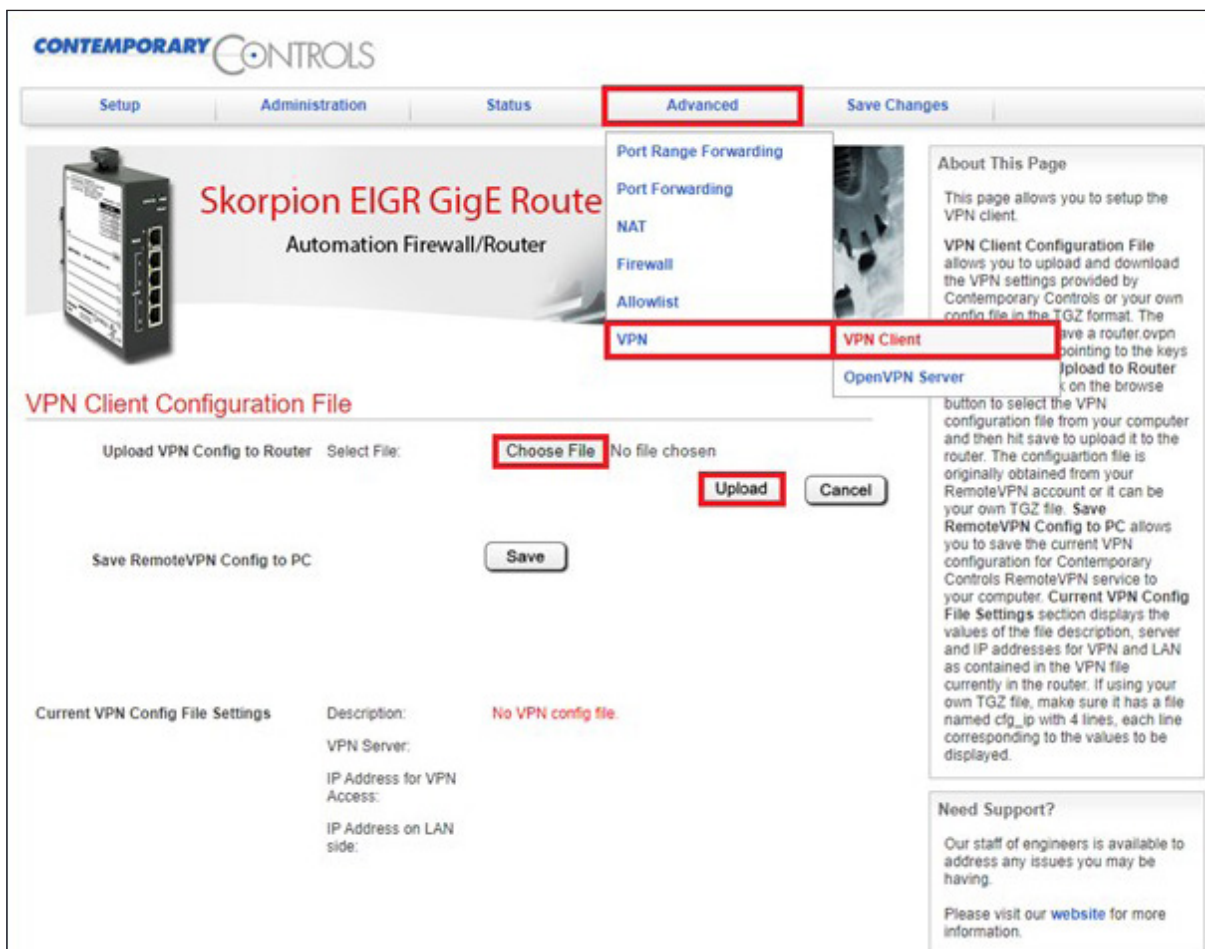
File must be uploaded to the router to use the new settings.

OpenVPN Router Client Configuration Webpage

Go to the router webpages. In this example we use the EIGR-V router.

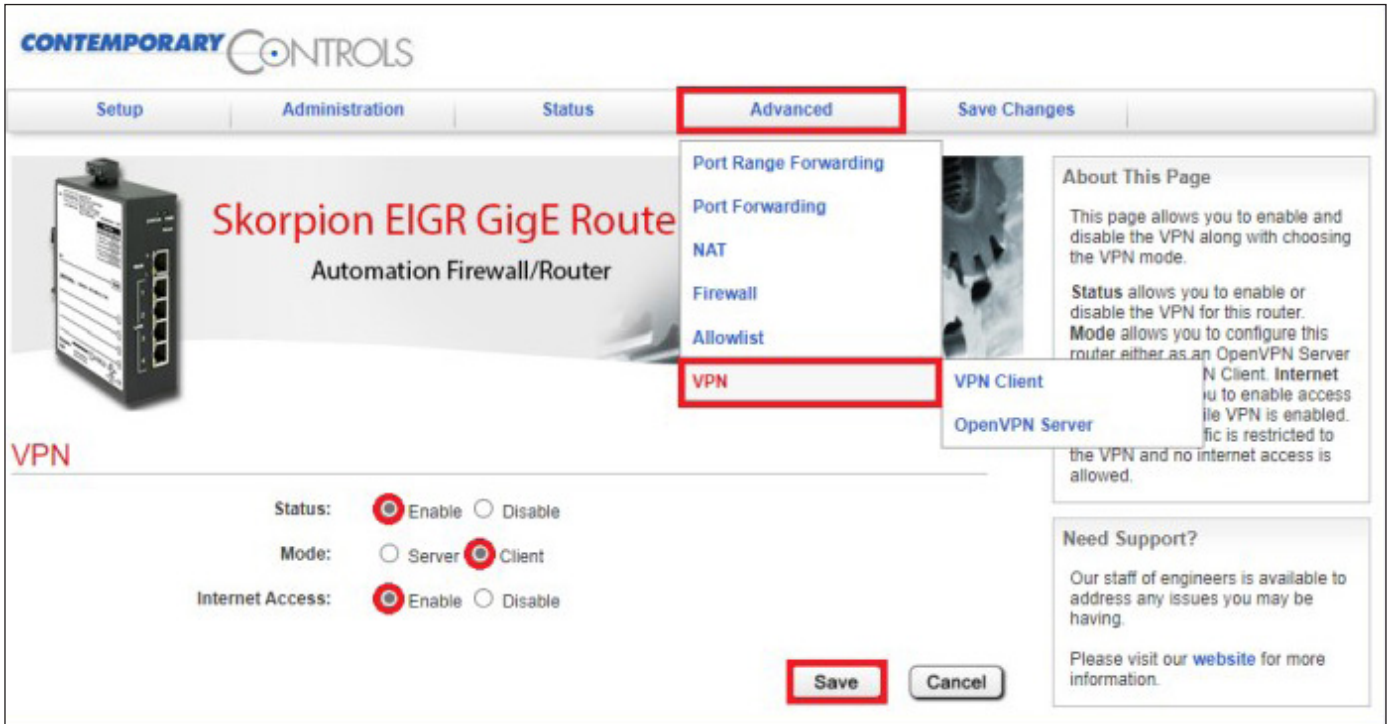
1. Select the menu option **Advanced -> VPN -> VPN Client**.

Upload the .cfg file to the router using the **Browse** button and then click **Upload**



The configuration settings from the config file are then shown at the bottom section of the webpage. Confirm VPN settings match the cloud account in the bottom section of webpage.

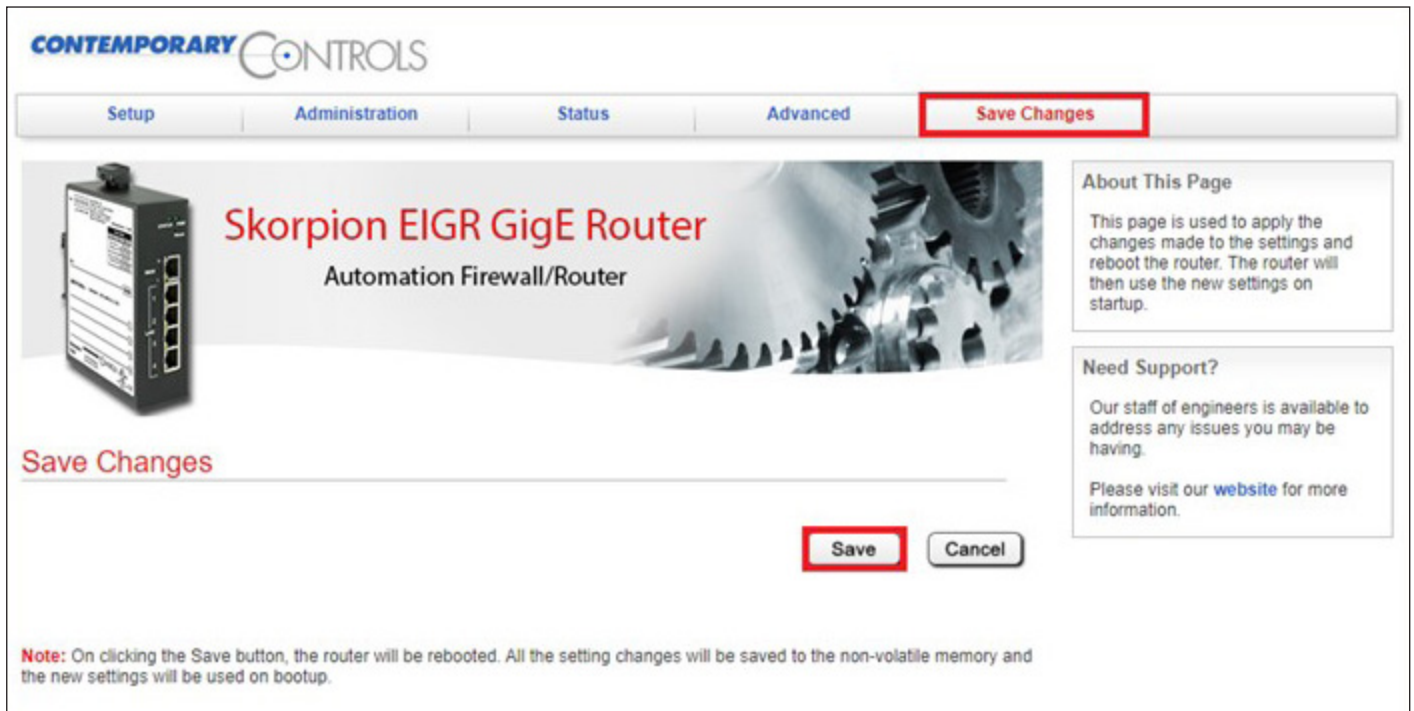
- 2. Select menu option **Advanced** -> **VPN**.
Set the Status to **Enable** and Mode to **Client**, then click **Save**.



- 3. Set the current time, select the menu option **Setup** -> **Time**.




4. Select menu option **Save Changes**. Then click **Save**, to save and reboot the router.



CONTEMPORARY CONTROLS

Setup Administration Status Advanced **Save Changes**

 **Skorpion EIGR GigE Router**
Automation Firewall/Router

Save Changes

Save Cancel

Note: On clicking the Save button, the router will be rebooted. All the setting changes will be saved to the non-volatile memory and the new settings will be used on bootup.

About This Page
This page is used to apply the changes made to the settings and reboot the router. The router will then use the new settings on startup.

Need Support?
Our staff of engineers is available to address any issues you may be having.
Please visit our [website](#) for more information.

PC Client Settings Screen in Cloud Account

Name	CCSI_HP_TEST_RW01																														
Alias Name	CCSI_HP_TEST_RW01.zip CCSI_HP_TEST_RW01.ovpn openvpngui.exe																														
Password																															
Group	CCSI_HP_TEST																														
Created on	2015-08-13 11:03:15																														
Notes																															
OpenVPN																															
Protocol	UDP <input checked="" type="radio"/> TCP <input type="radio"/>																														
Network Access Permissions	<table border="1"> <thead> <tr> <th></th> <th>Access via VPN Address</th> <th></th> <th>via real LAN Address</th> <th></th> </tr> </thead> <tbody> <tr> <td>CCSI_HP_TEST_ROUTER05</td> <td><input type="checkbox"/> 10.7.5.0/24</td> <td>→</td> <td>192.168.92.0/24</td> <td><input type="checkbox"/></td> </tr> <tr> <td>CCSI_HP_TEST_ROUTER04</td> <td><input checked="" type="checkbox"/> 10.7.4.0/24</td> <td>→</td> <td>192.168.200.0/24</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>COD_Training_Router</td> <td><input checked="" type="checkbox"/> 10.7.3.0/24</td> <td>→</td> <td>192.168.1.0/24</td> <td><input type="checkbox"/></td> </tr> <tr> <td>CCSI_HP_TEST_ROUTER02</td> <td><input type="checkbox"/> 10.7.2.0/24</td> <td>→</td> <td>192.168.92.0/24</td> <td><input type="checkbox"/></td> </tr> <tr> <td>CCSI_HP_TEST_ROUTER01</td> <td><input checked="" type="checkbox"/> 10.7.0.0/24</td> <td>→</td> <td>192.168.92.0/24</td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		Access via VPN Address		via real LAN Address		CCSI_HP_TEST_ROUTER05	<input type="checkbox"/> 10.7.5.0/24	→	192.168.92.0/24	<input type="checkbox"/>	CCSI_HP_TEST_ROUTER04	<input checked="" type="checkbox"/> 10.7.4.0/24	→	192.168.200.0/24	<input checked="" type="checkbox"/>	COD_Training_Router	<input checked="" type="checkbox"/> 10.7.3.0/24	→	192.168.1.0/24	<input type="checkbox"/>	CCSI_HP_TEST_ROUTER02	<input type="checkbox"/> 10.7.2.0/24	→	192.168.92.0/24	<input type="checkbox"/>	CCSI_HP_TEST_ROUTER01	<input checked="" type="checkbox"/> 10.7.0.0/24	→	192.168.92.0/24	<input type="checkbox"/>
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CCSI_HP_TEST_ROUTER01	<input checked="" type="checkbox"/> 10.7.0.0/24	→	192.168.92.0/24	<input type="checkbox"/>																											
Options																															
	Grant Group Access <input type="checkbox"/>																														
	Additional Settings																														
OK Back																															

Change the Protocol to **UDP**. Then, set the Network Access Permissions for each site. Set the permissions via the real LAN address to allow use of the LAN IP instead of the VPN address. Use the VPN address if multiple sites use the same LAN address.

Select Grant Group Access to allow this PC client to access all routers in the account, even those added in the future.

Click **“OK”** to save your changes. The file must be uploaded to the router to use the new settings.

PC/Mobile Device OpenVPN Client Configuration

Configuring the VPN clients for PC/mobile devices involves installing the software (if not already installed) and importing the configuration file in **.ovpn** format. The OpenVPN software for PC is available to download from openvpn.net, Google Play Store for Android devices and App Store for iOS devices. For instructions on how to use an OpenVPN File on Android devices, to refer to [Using OpenVPN File on Android](#). For iOS, refer to [Using OpenVPN File on iOS](#).

Using the **openvpngui.exe** link (highlighted in red above), you can setup OpenVPN on a Windows PC. But the latest version of Windows OpenVPN clients can be downloaded from openvpn.net.

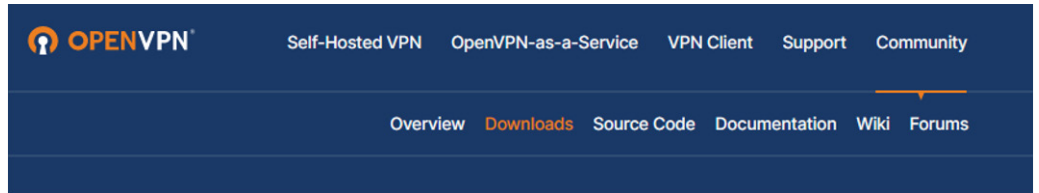
OpenVPN has versions 2.x and 3.x

- Version 2.x
 - installs as OpenVPN GUI
 - supports both TUN and TAP adapters
- Version 3.x
 - installs as OpenVPN Connect
 - supports TUN adapter only

Note: RemoteVPN uses TUN adapter (i.e., routing), hence both versions can work.

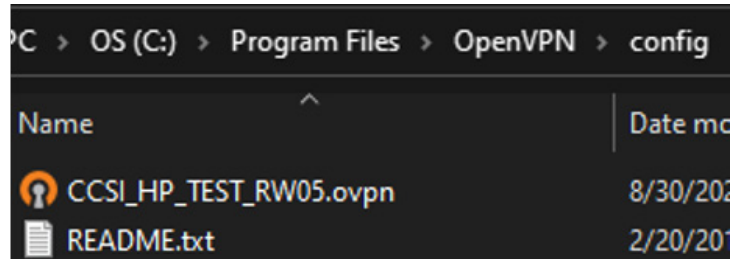
OpenVPN Windows PC Client 2.x Download

Go to openvpn.net and select the **Community** → **Downloads** menu. Install the VPN client.



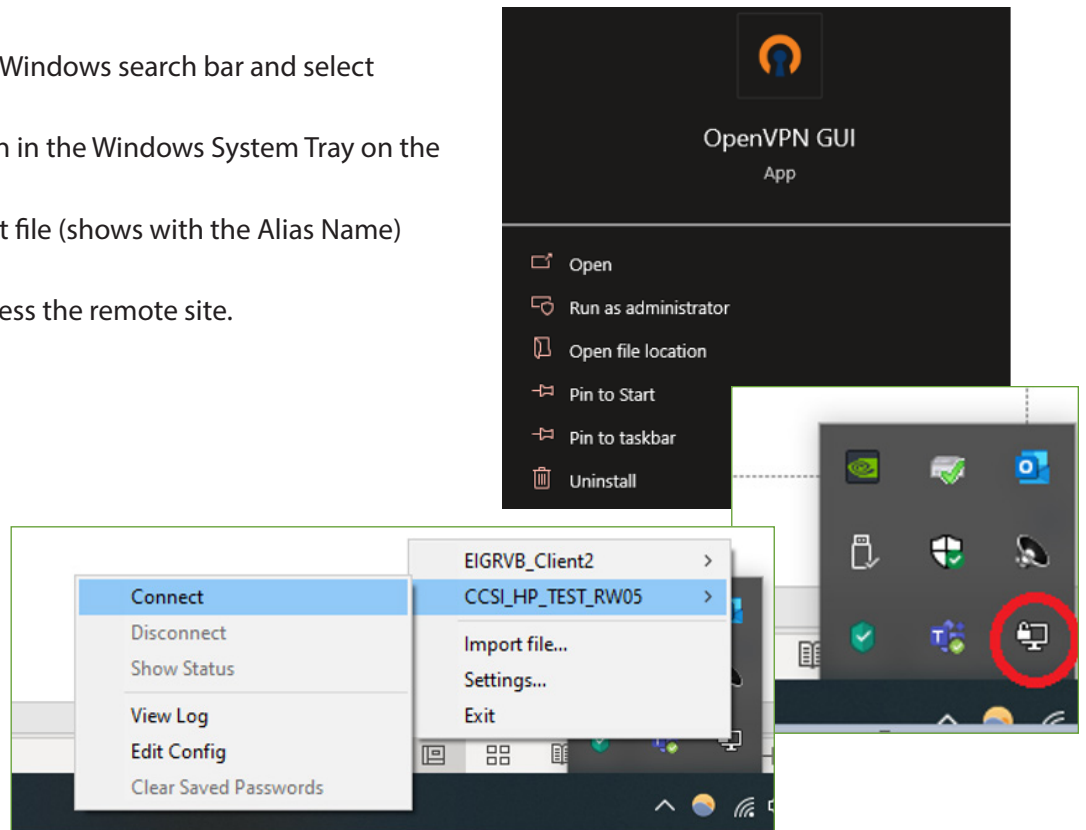
1. Install OpenVPN PC config file

Copy the .ovpn client file to the OpenVPN/config folder under Program Files.



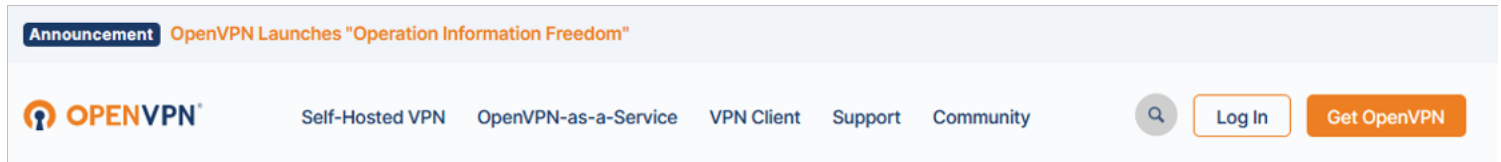
2. Start OpenVPN Client

- Type **OpenVPN GUI** in the Windows search bar and select **Run as administrator**.
- Click the OpenVPN GUI icon in the Windows System Tray on the right side.
- Choose the OpenVPN client file (shows with the Alias Name) and click **Connect**.
- Use the VPN address to access the remote site.



OpenVPN PC Client 3.x Download

Go to openvpn.net and click the **Get OpenVPN** button.



1. Install OpenVPN PC config file

- Scroll down on the webpage to locate the “OpenVPN Connect” download.
- Install OpenVPN Connect.

2. Start OpenVPN Client

- Start OpenVPN Connect.
- Import the .ovpn file and connect.
- Use the VPN address in the dashboard to access the remote site.

Please refer to the [RemoteVPN Application Guide](#) for more information on how this service can be utilized for different applications.

Ordering Information

<i>Model</i>	<i>RoHS</i>	<i>Description</i>
EIGR-C3	✓	Skorpion GigE IP Router with Cellular (Verizon) 0 to 60°C
EIGR-V	✓	Skorpion GigE IP Router with Bridge VPN 0 to 60°C
EIPR-V	✓	Skorpion 10/100Mbps IP Router with VPN

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