

## Operation Sheet 4.2 Installing and Configuring VPN in Windows 2012 Server

**Objectives:** After the end of the activity, the students will be able to:

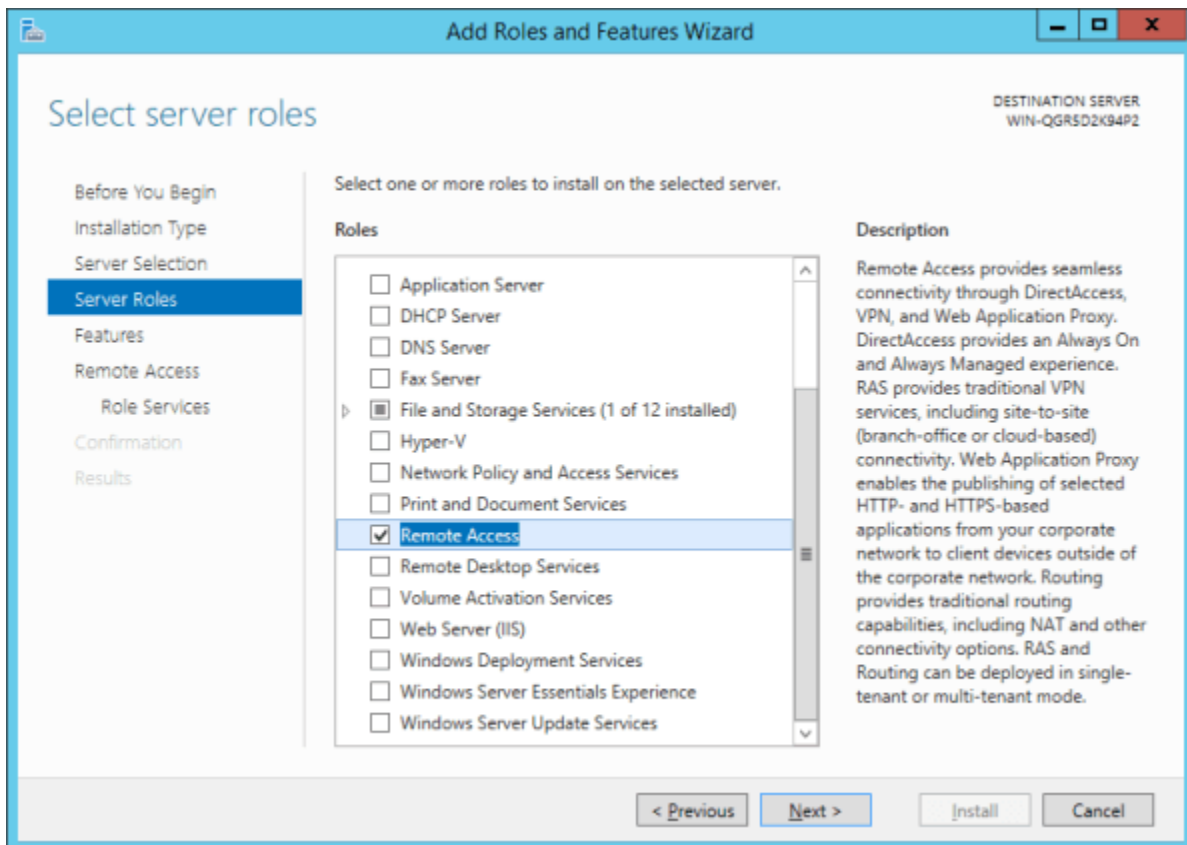
- Install VPN in Windows 2012 Server
- Configure PPTP VPN
- Test VPN from Windows 7 Client

**Procedure:**

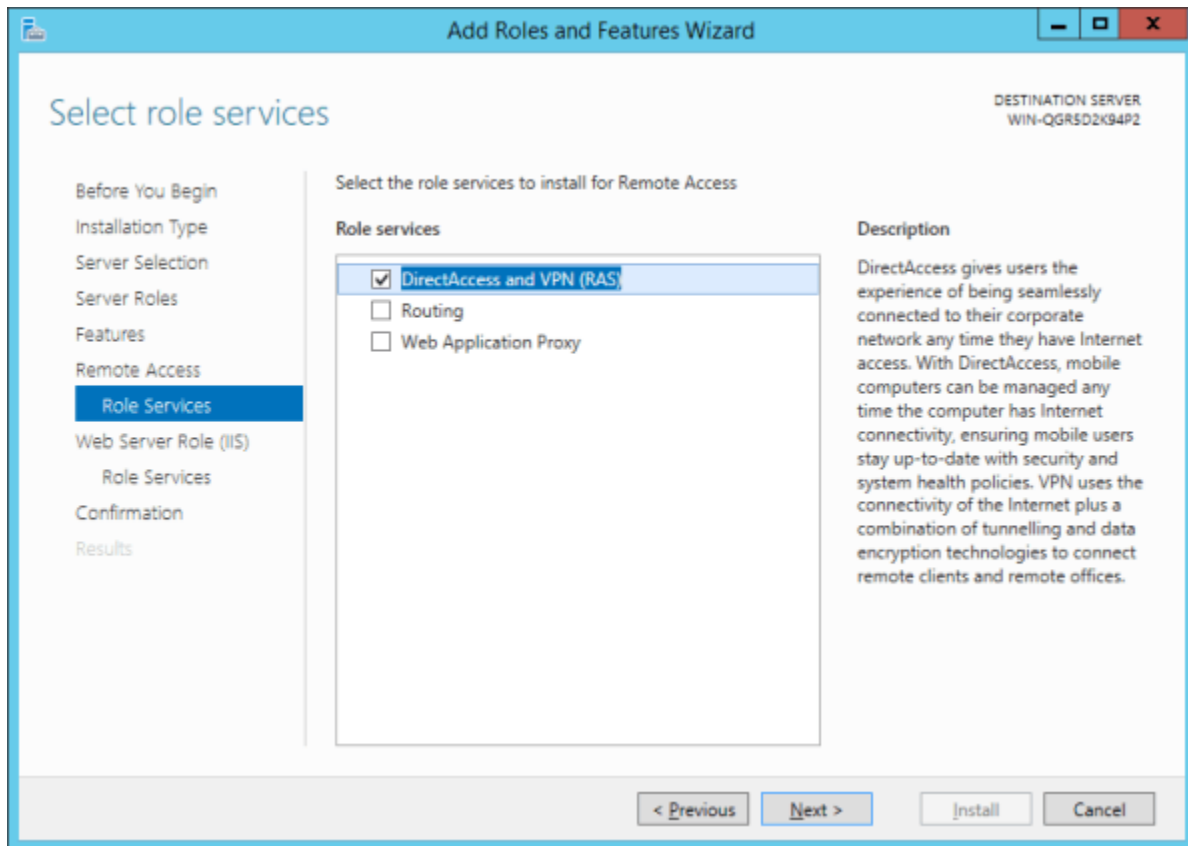
### Part I: Setup a VPN on Windows 2012 Server

This operation sheet shows you how you can install a VPN Server on Windows Server 2012 R2 Step-by-Step. It shows you how you can easily setup a VPN server from a small environment or for a hosted server scenario.

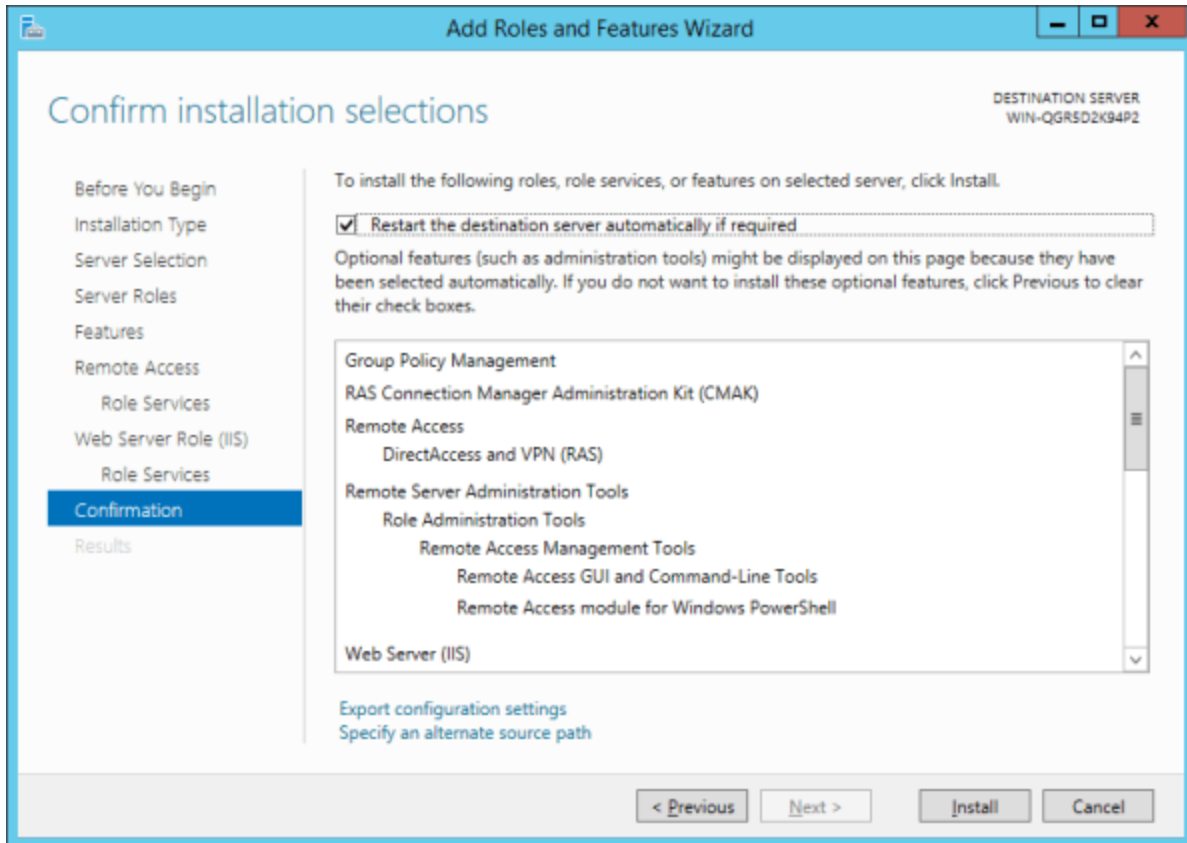
Step 1: First install the “**Remote Access**” via Server Manager or Windows PowerShell.



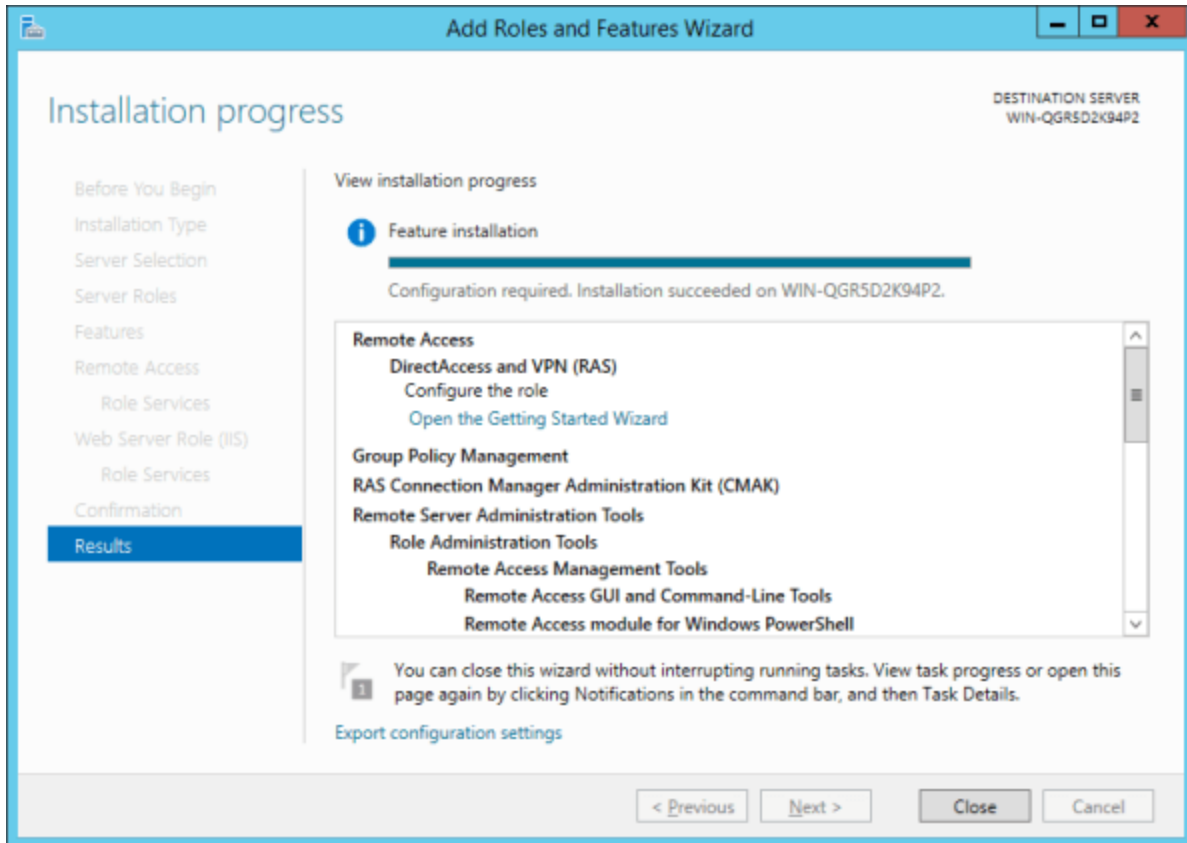
Step 2: Select the “**DirectAccess and VPN (RAS)**” role services.



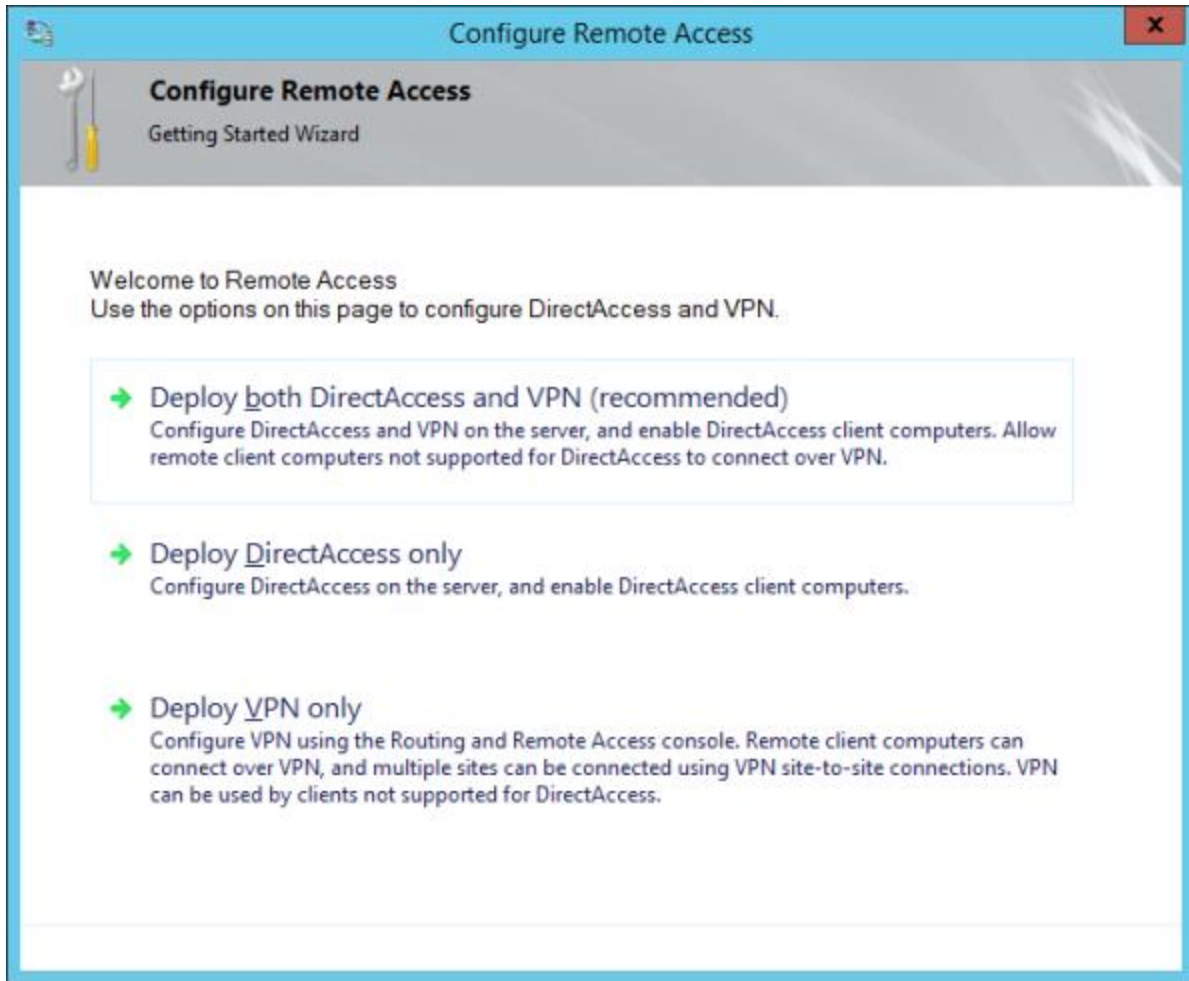
Step 3: On the next steps just use the default settings. After that you can have a look at the Overview screen and install the role.



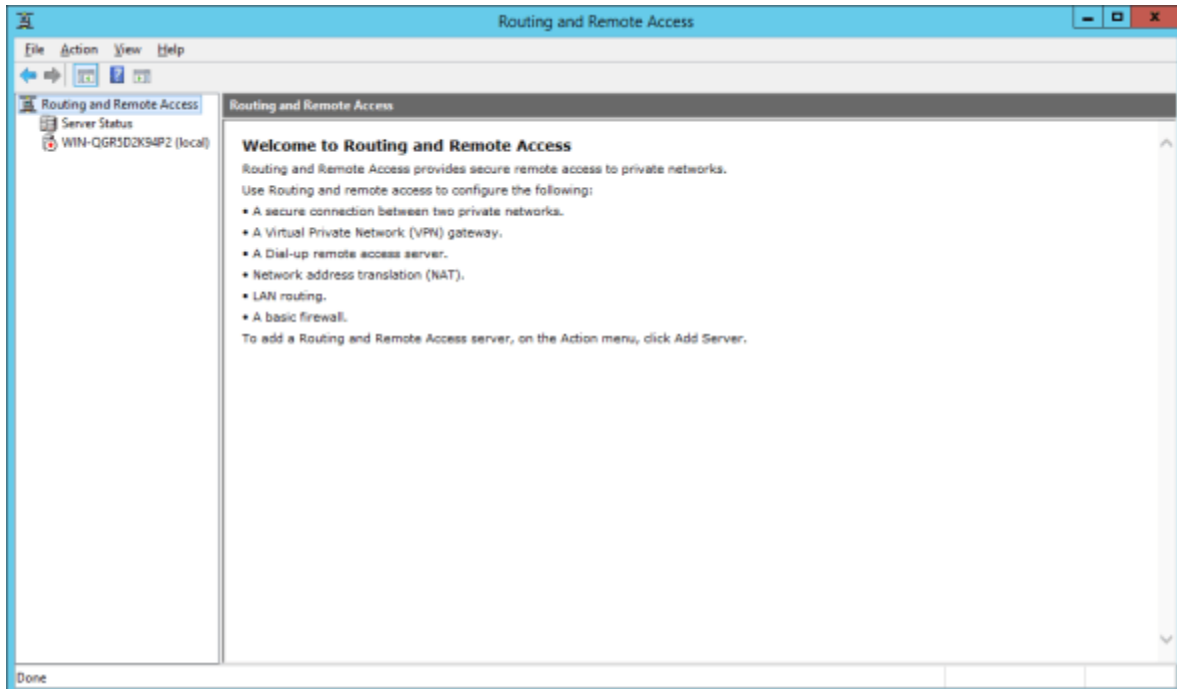
Step 4: After the features are installed, which can take a while to finish you see the link for the Getting Started Wizard. Click on “**Open the Getting Started Wizard**”.



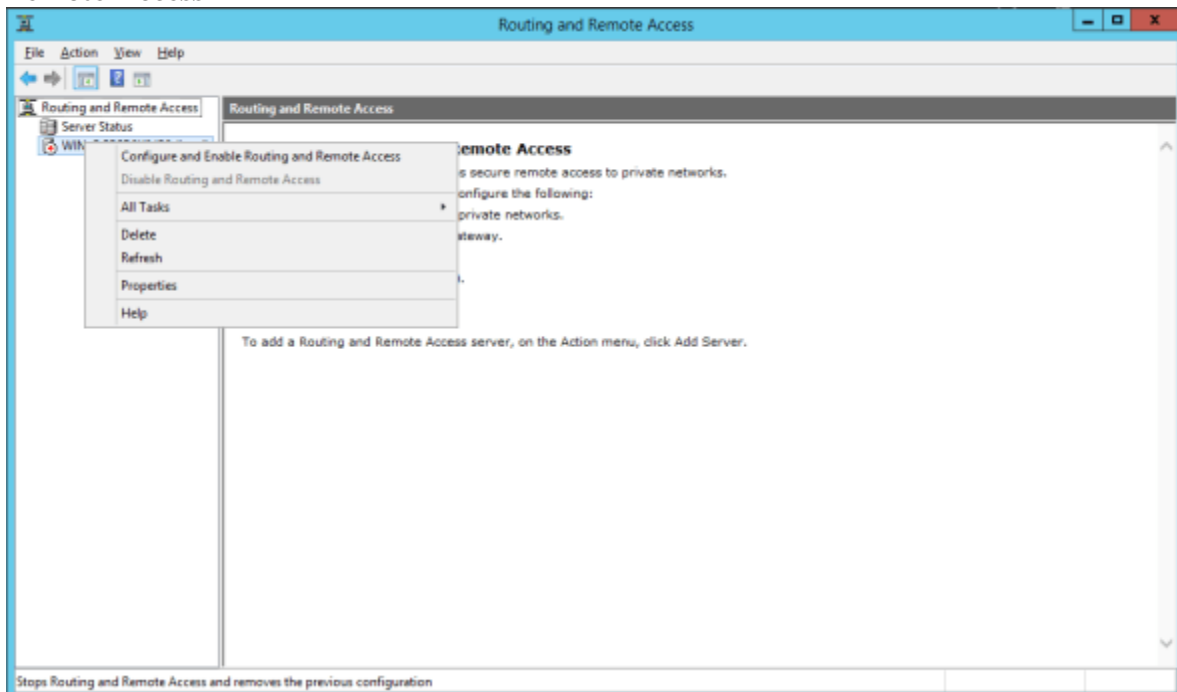
Step 5: This opens a new wizard which will help you to configure the server. On the first screen select “**Deploy VPN only**”.



Step 6: This opens the Routing and Remote Access MMC



Step 7: Right click on the Server name and click on “**Configure and Enable Routing and Remote Access**”.



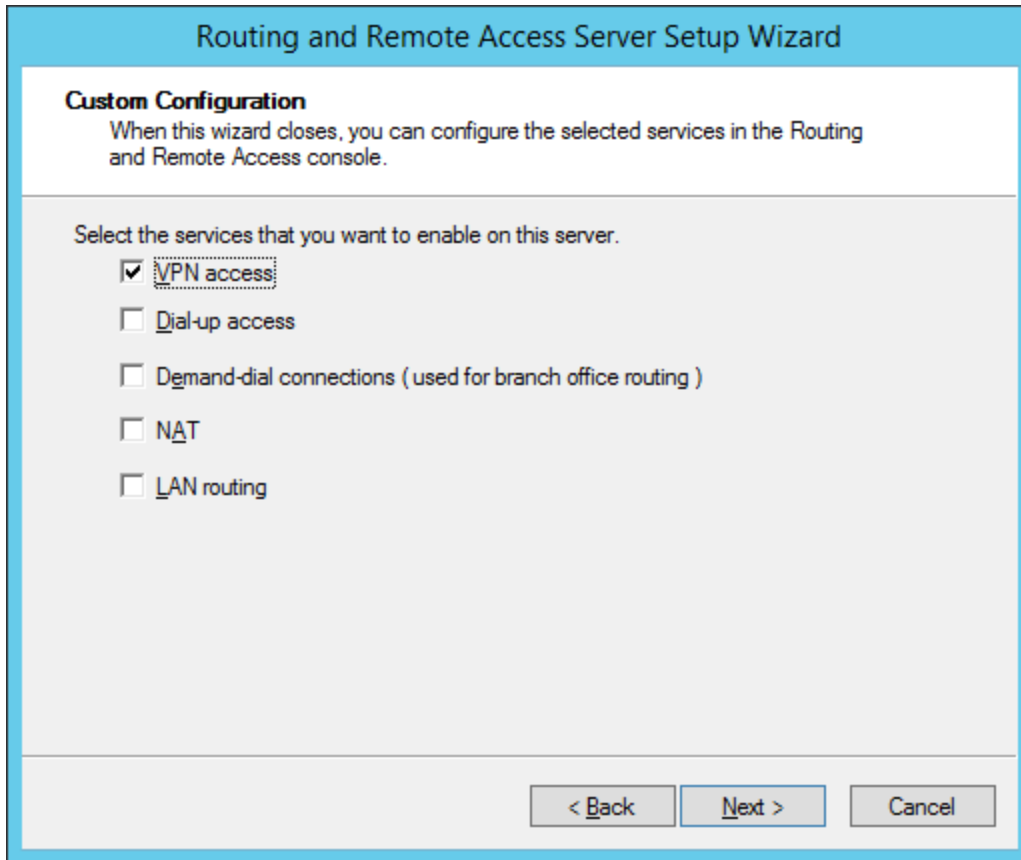
Step 8: On the new wizard select “Custom configuration”.

The screenshot shows a window titled "Routing and Remote Access Server Setup Wizard" with a "Configuration" section. The text reads: "You can enable any of the following combinations of services, or you can customize this server." Below this are five radio button options:

- Remote access (dial-up or VPN)  
Allow remote clients to connect to this server through either a dial-up connection or a secure virtual private network (VPN) Internet connection.
- Network address translation (NAT)  
Allow internal clients to connect to the Internet using one public IP address.
- Virtual private network (VPN) access and NAT  
Allow remote clients to connect to this server through the Internet and local clients to connect to the Internet using a single public IP address.
- Secure connection between two private networks  
Connect this network to a remote network, such as a branch office.
- Custom configuration  
Select any combination of the features available in Routing and Remote Access.

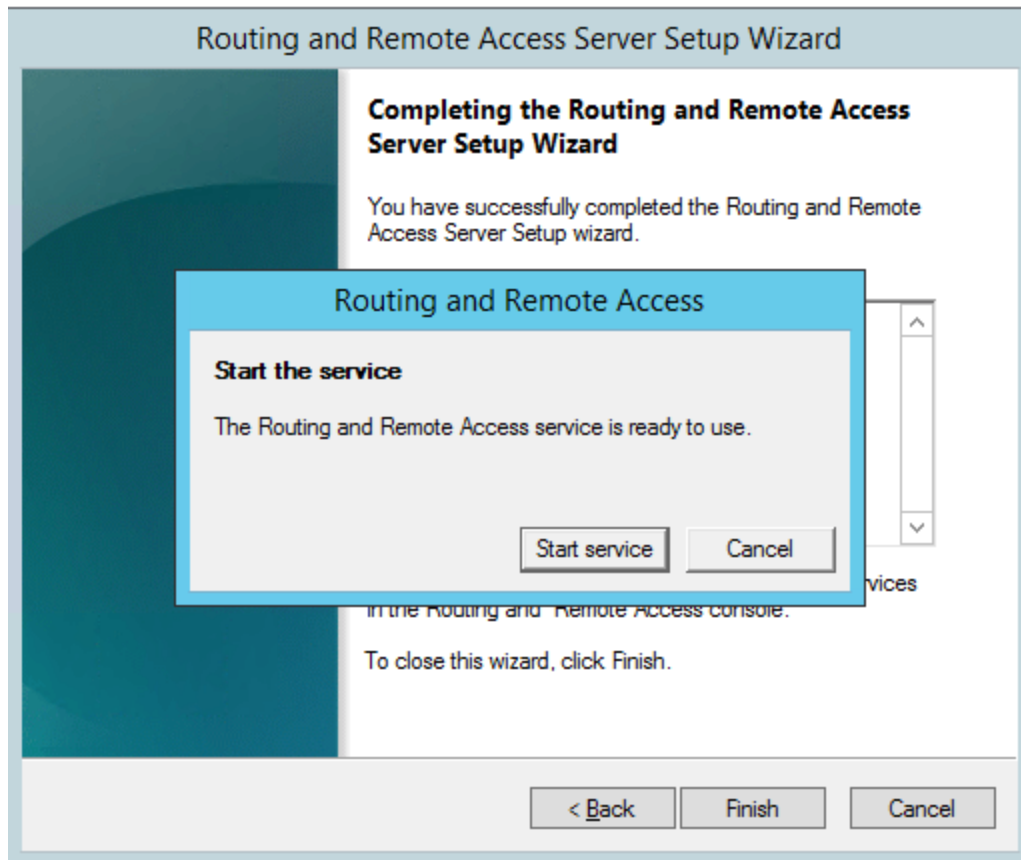
At the bottom of the window are three buttons: "< Back", "Next >", and "Cancel".

Step 9: Select “VPN Access”.



Step 10: After you have click finish you can now start the **Routing and Remote Access service**.





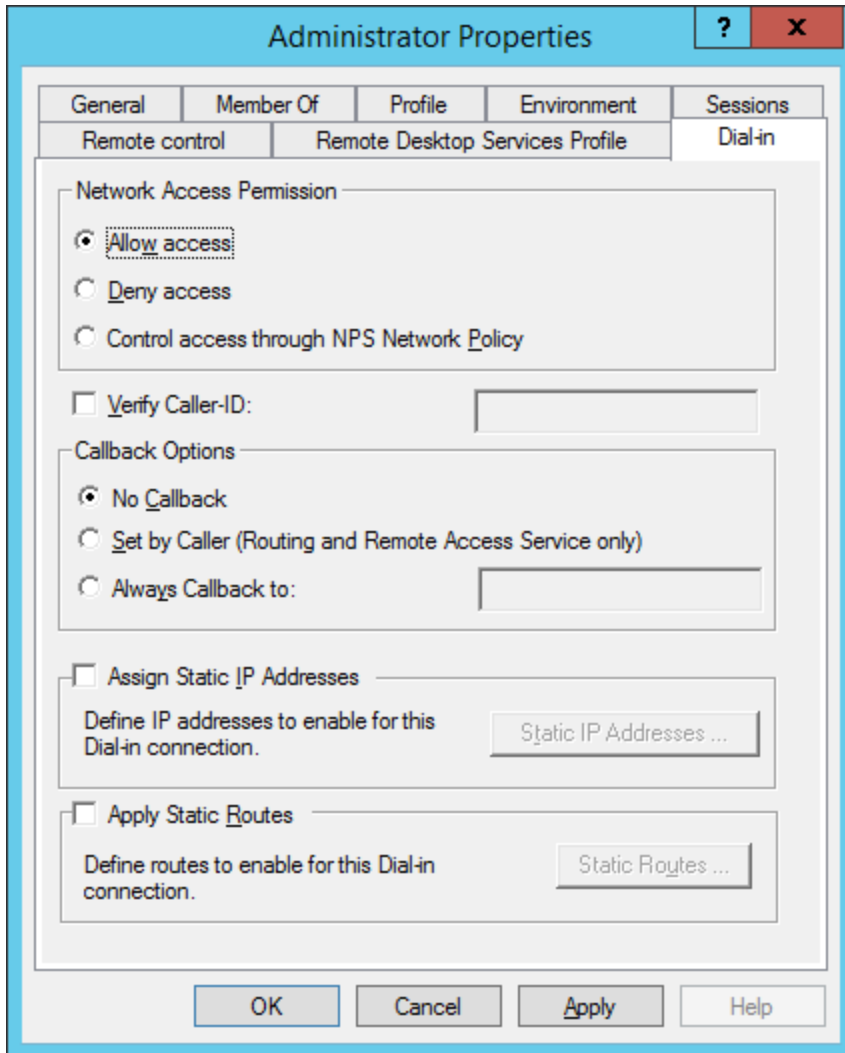
If you have another firewall between the internet and your Windows Server you have to open the following Firewall port and forward them to your Windows Server:

**For PPTP:** 1723 TCP and Protocol 47 GRE (also known as PPTP Pass-through)

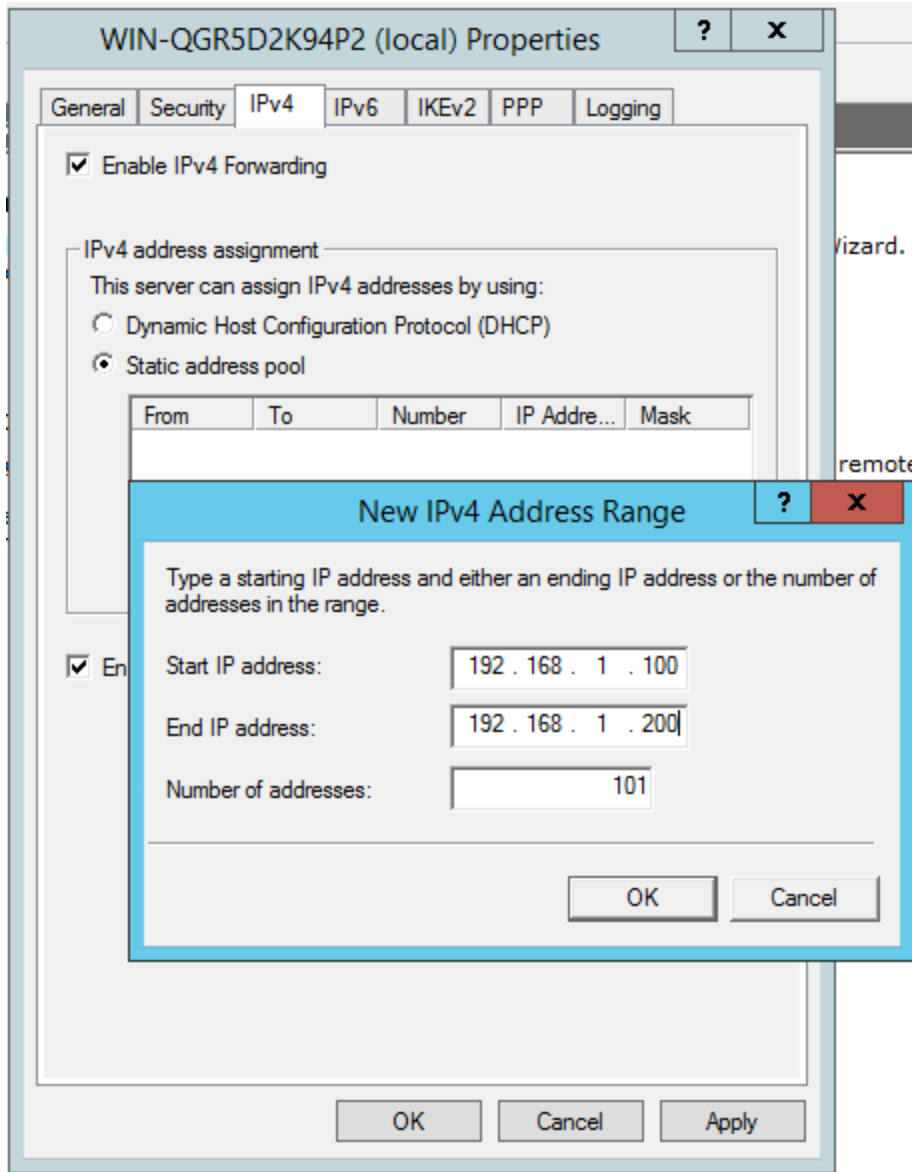
**For L2TP over IPSEC:** 1701 TCP and 500 UDP

**For SSTP:** 443 TCP

After the installation Users have to be enabled for Remote Access to connect to your VPN Server. On a standalone server this can be done in the Computer Management MMC, in a domain environment this can be done in the user properties of an Active Directory user.



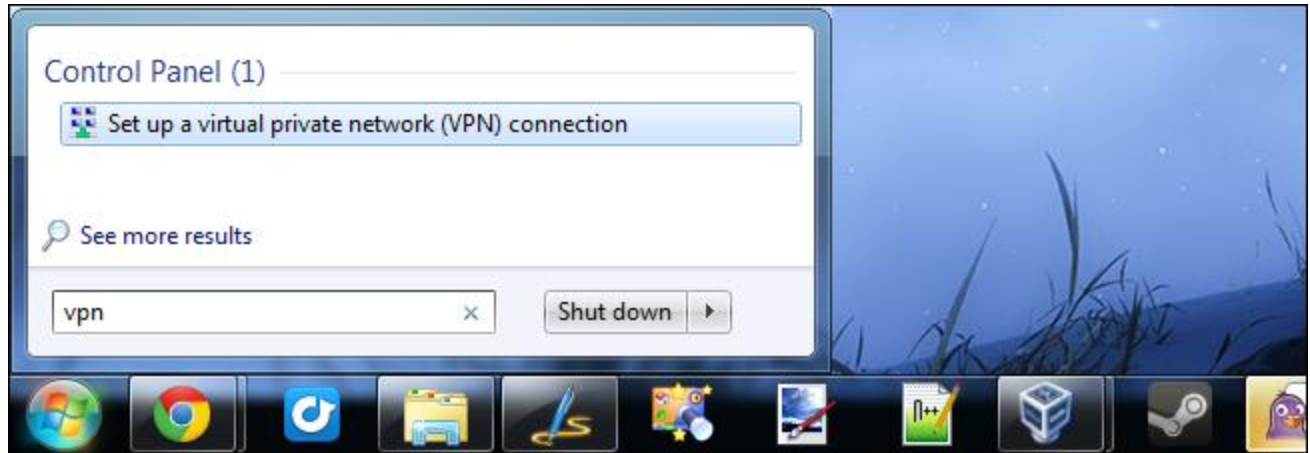
If you don't have a DHCP Server in your environment you have to add a static IP address pool. This is often needed if you have a single server hosted at a service provider. In the properties of your VPN server you can click on the IPv4 tab and enable and configure the "Static address pool".



You now have to add a IP address from the same subnet as your static address pool to the network interface of your server, so users can access the server.

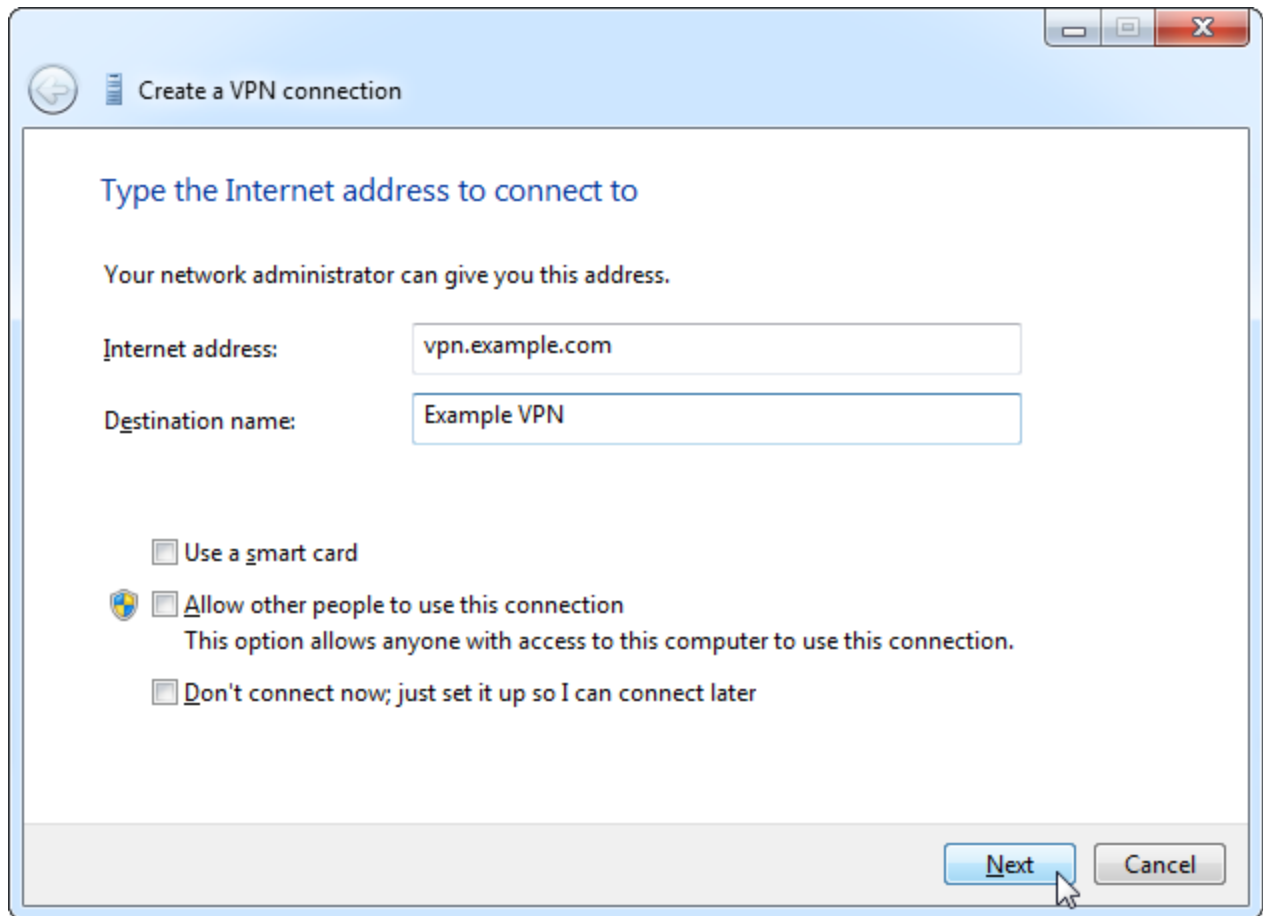
## Part II: Connecting VPN Server from Windows 7 Client

To connect to a VPN on Windows 7, press the Windows key and, type VPN, and press Enter.

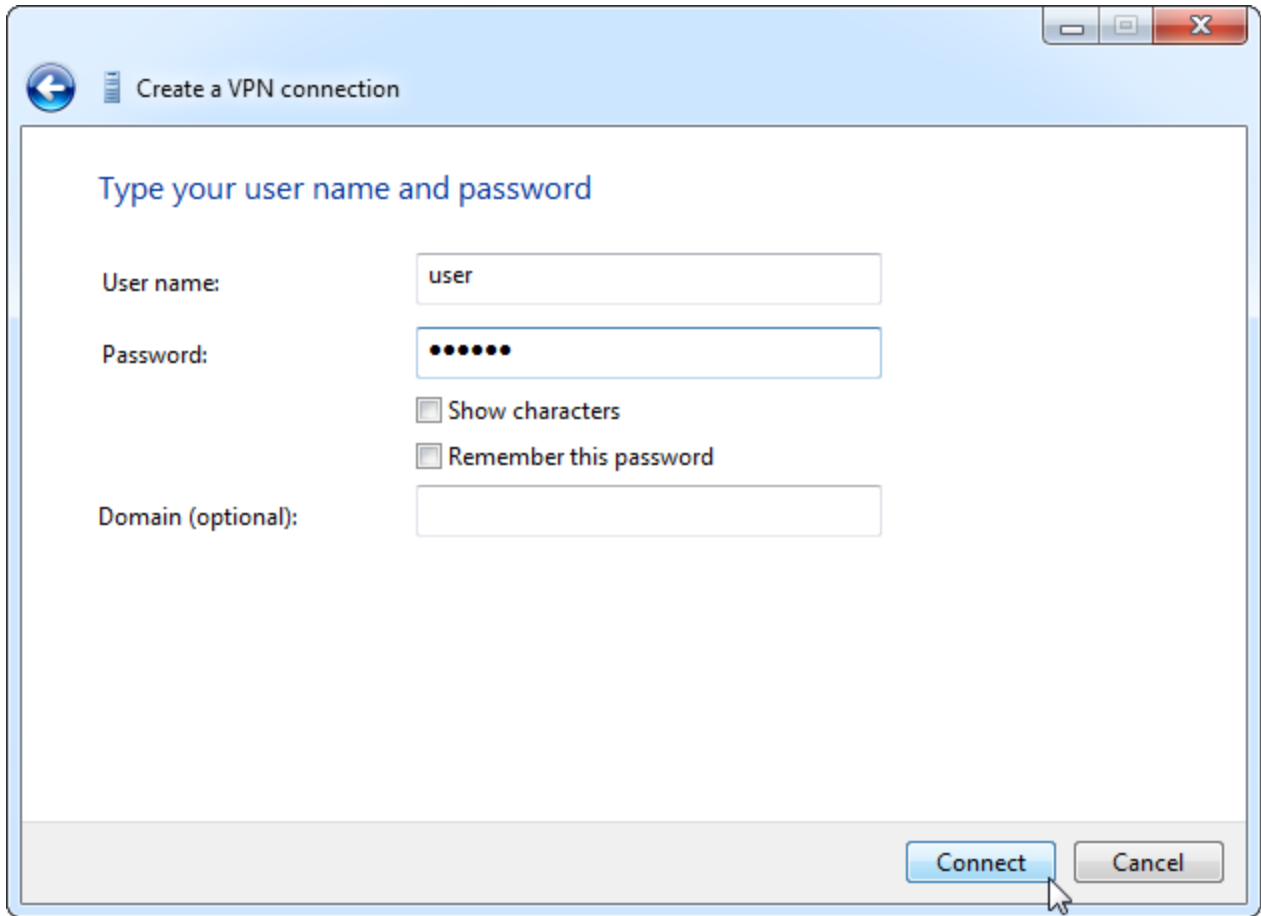


Enter the address of your VPN provider in the Internet Address box. You can enter an address like `vpn.example.com` or a numerical IP address, depending on the server information your VPN provider gave you.

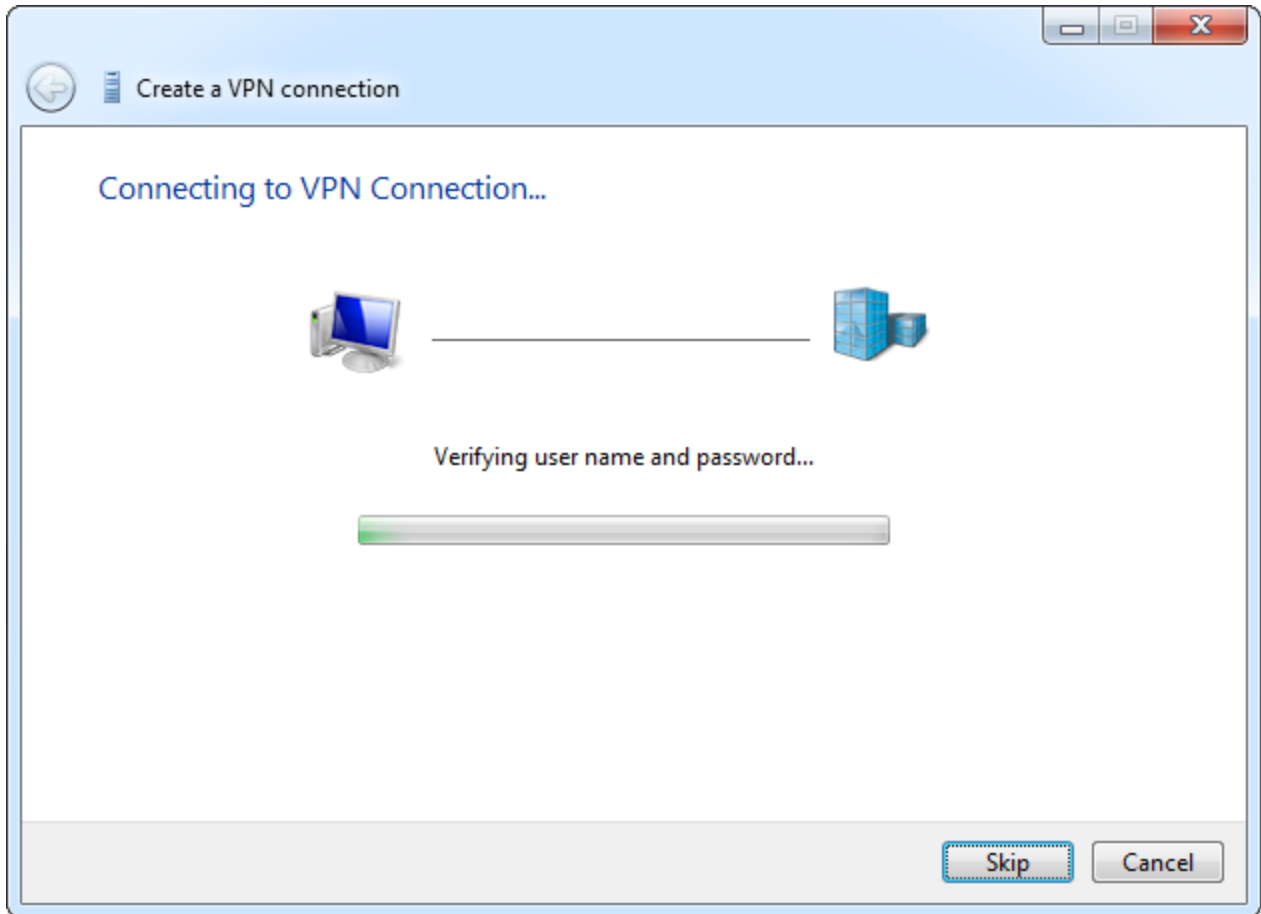
You should also enter a Destination name – this can be anything you like. It's only used to help you remember which VPN connection is which.



Enter your login credentials on the next screen. Use the username and password your VPN provider gave you.

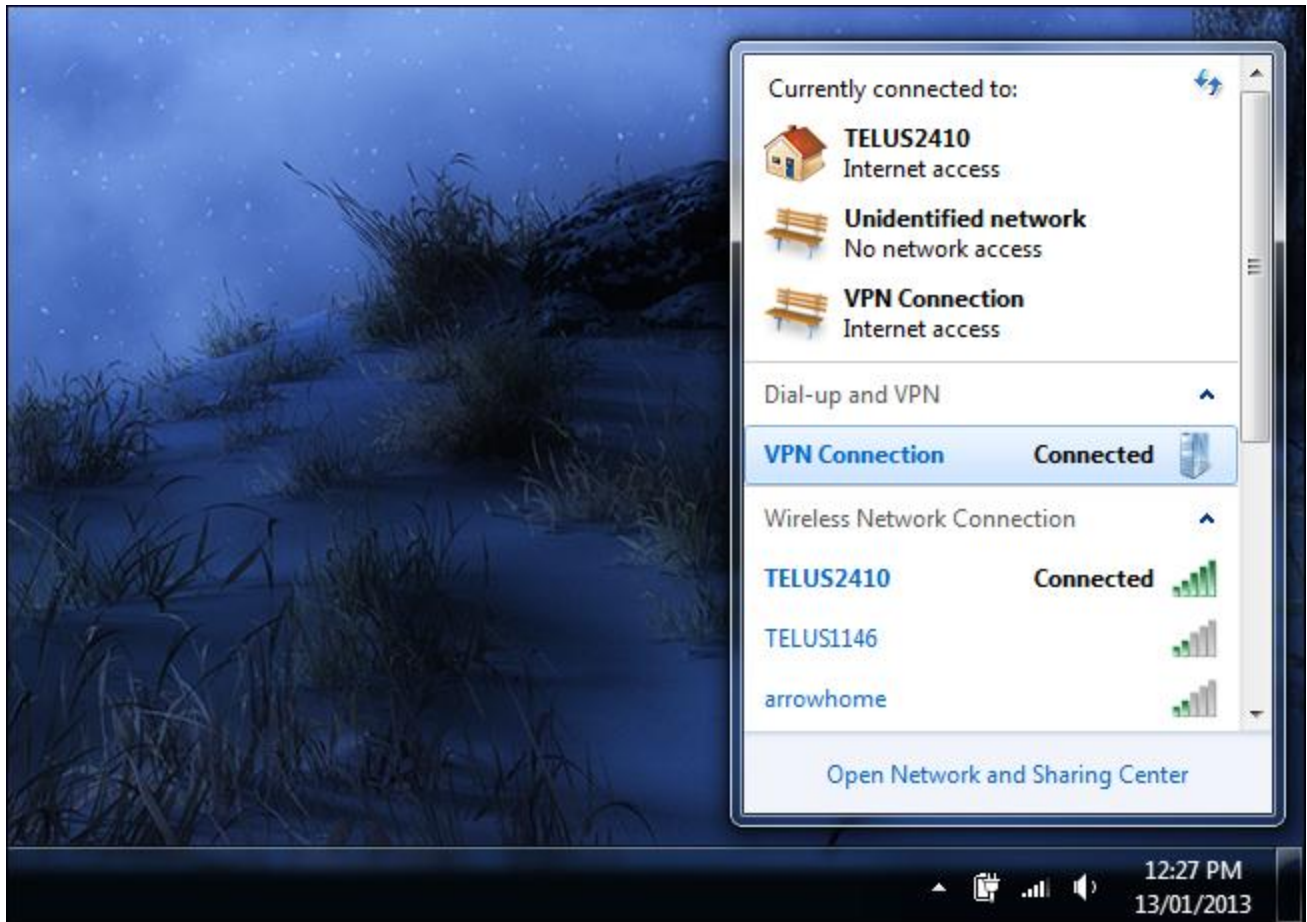


Windows will connect you to the VPN you configured. If you checked the “Don’t connect now” checkbox on the first screen, Windows will save the VPN connection so you can easily connect later.



Once connected, you can click the network icon in your system tray to view your VPN connections. While connected to a VPN, all your network traffic will be sent over it.

To disconnect from a VPN, click it and click Disconnect. You can then reconnect to it later by clicking it and selecting Connect. You can have multiple VPNs configured and switch between them in this way.



To delete a saved VPN connection, press the Windows key, type *network connections*, and press Enter. Right-click a VPN connection and use the Delete option.



