Configuring a VPN Connection on Windows 11

Overview

This document describes the steps needed to configure a VPN (Virtual Private Network) connection on a Windows 11 computer. Separate documents describe this process for Windows 10 and Apple Mac computers. This document was written to support the Flex radio for Sunset Empire Amateur Radio Club members.

You will only need to perform this step one time on a computer. After following these steps your computer will have a new network interface that can be used to connect to the Flex radio.

Before undertaking this process, you must have been given a username, password, and "shared key" (sometimes called "shared secret"). This information will be used during the VPN configuration process. If you are unsure of some of these steps, you can request a remote session with a SEARC Flex administrator for assistance.

Do not share the username, password, and "shared key" with anyone else.

Configuration Steps

The first step is to add a VPN connection. This involves entering the Internet address for the connection and the type of connection along with a username and password needed to authorize the connection. The second step involves editing the connection "adapter" settings to force encryption and optimize data transmission.
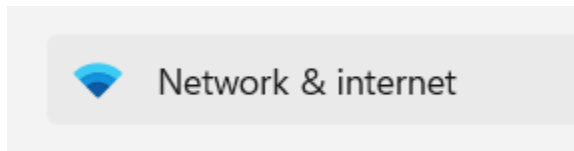
Place the mouse cursor on the Windows icon on the bottom task bar and right-click to bring up the context menu.
The resulting pop-up window will have several options, with "Settings" near the bottom:
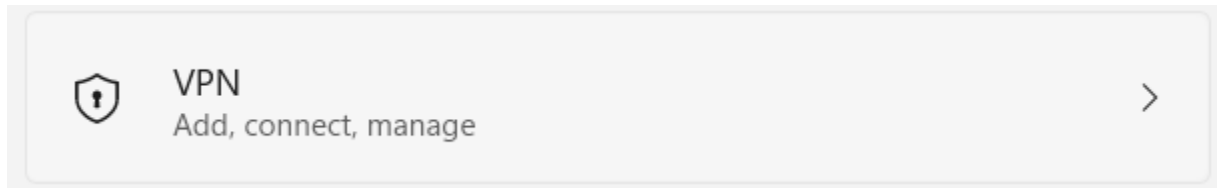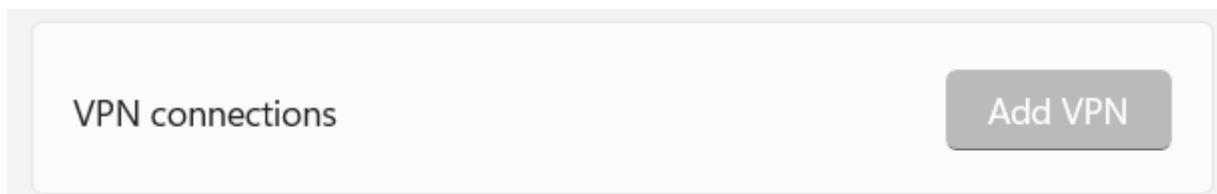
© *Sunset Empire Amateur Radio Club 2024*
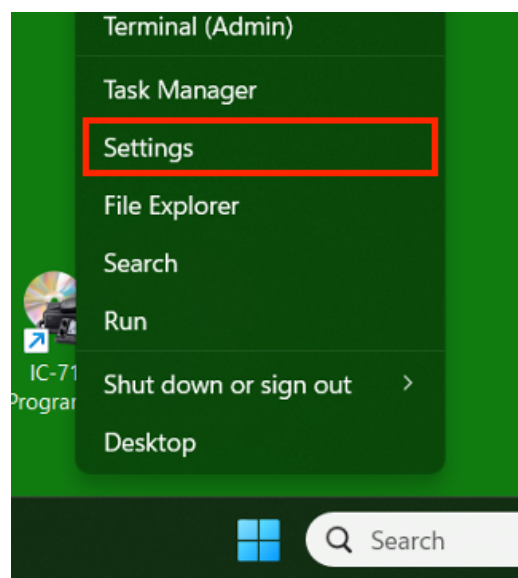
From the Settings menu, **click on "Network & Internet"**.

From the right-hand side of the "Network & internet" menu, **click on VPN**.

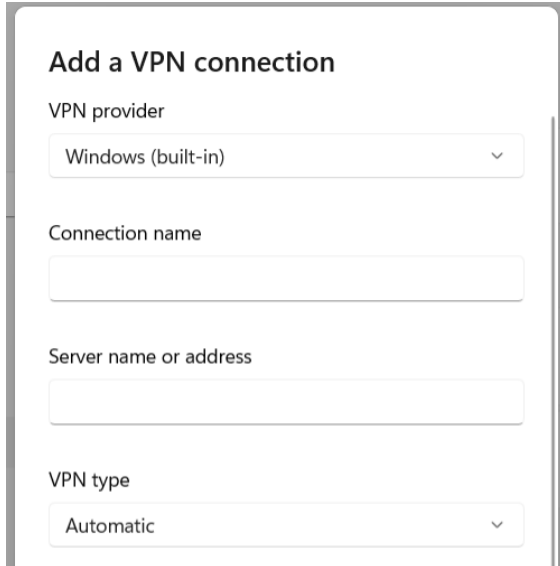Then click on Add VPN in the upper-right corner of the window.

Note: In the next step you will be entering a password and pre-shared key. Windows will obscure these with black dots so you will not be able to read them once entered. Type these very carefully. When all data entry has been completed, if the connection fails try entering the information again. You will not be able to verify that the information is correct by looking at the screen once the data has been entered. SEARC administrators will not be able to verify the correct password but can reset the password if needed.

In the "Add a VPN connection" window, you will fill in the following information:

VPN provider	Select "Windows (built-in)" from the drop-down.
Connection name	Enter "SEARC Flex Radio"
Server name or address	You will be given an IP address or name for this field.
VPN type	Select "L2TP/IPsec with pre-shared key" from the drop-down.
Pre-shared key	You will be given a pre-shared key.
Type of sign-in info	Select "User name and password" from the drop-down.
User name	This will normally be your callsign in lower case.
Password	You will be given a password unique to your user name.
Remember my sign-in info	Check this box. You should NOT be using a public computer.
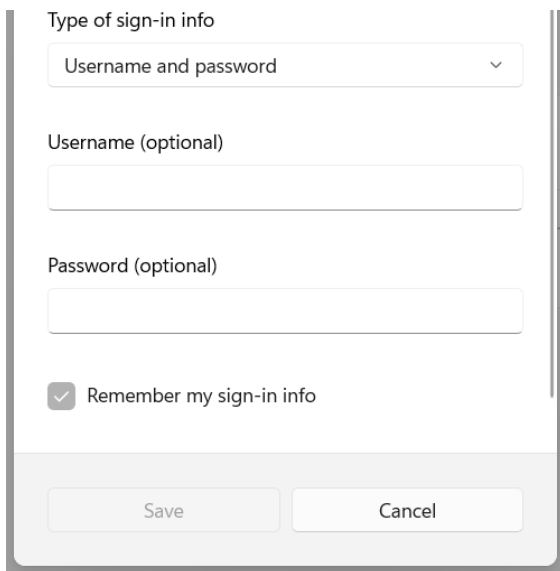
Depending on screen size you may need to scroll down to see all the fields.
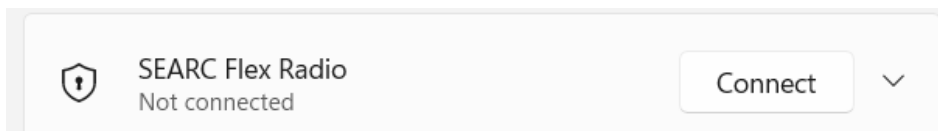
Click Save after entering the requested information.

When done, the new VPN connection will appear on the VPN page.

That completes creating the VPN connection. Now some of the properties of the newly created VPN connection must be configured.

By default, the VPN connection would route all Internet traffic through the VPN connection when it is active. This will slow down your Internet throughput, hurting performance. You must now make a configuration change to the newly created VPN connection so that only traffic to the Flex radio makes use of the VPN connection.

On the VPN page, click on the pull-down arrow next to the Connect button for the new VPN to get to the Advanced options.
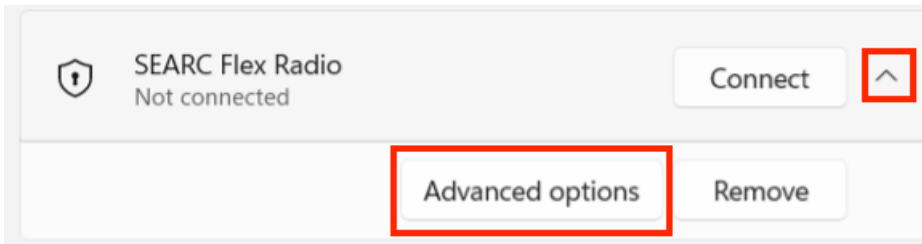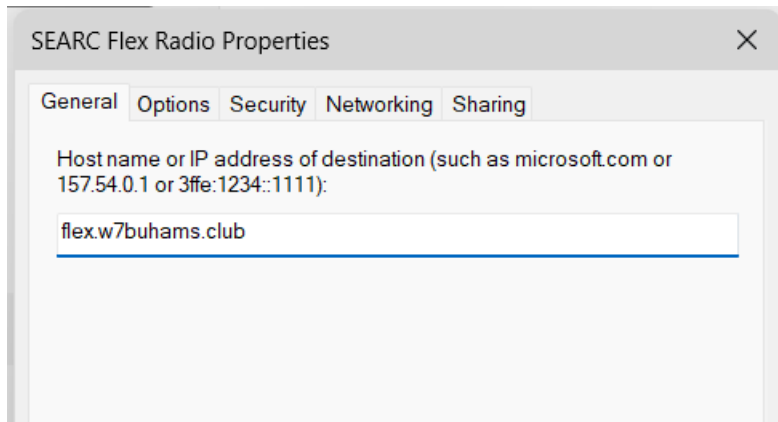

Click on the Advanced options button…

then on the More VPN properties option, click on the Edit button to get to the VPN properties:
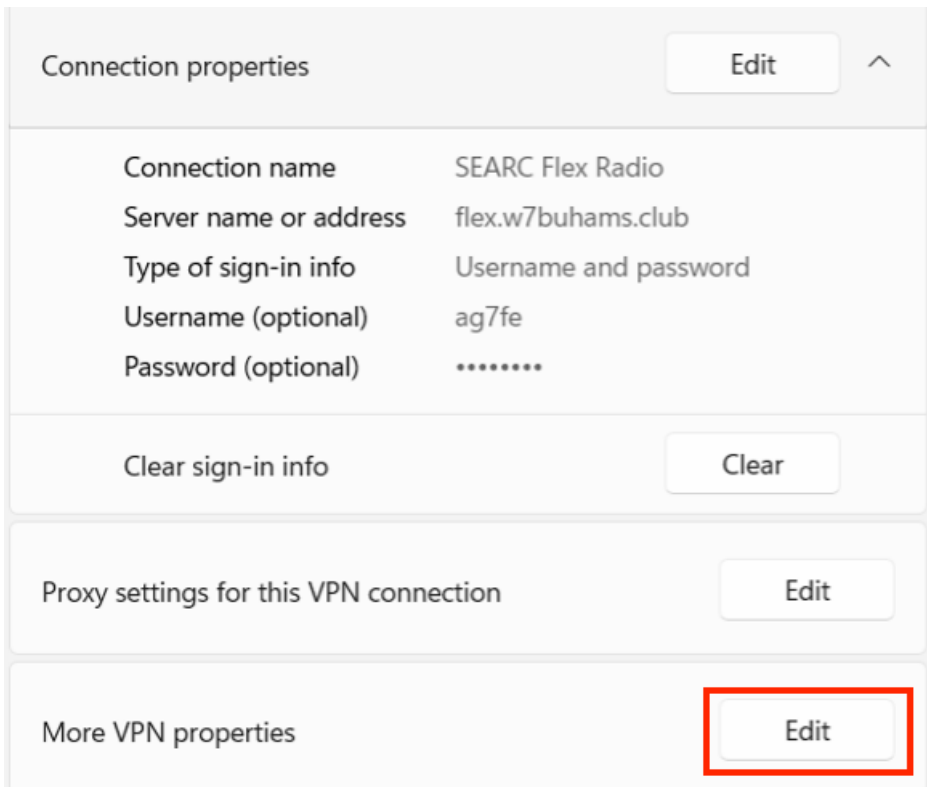
The VPN adapter property box lists several tabs along the top.

Click the "Networking" tab.

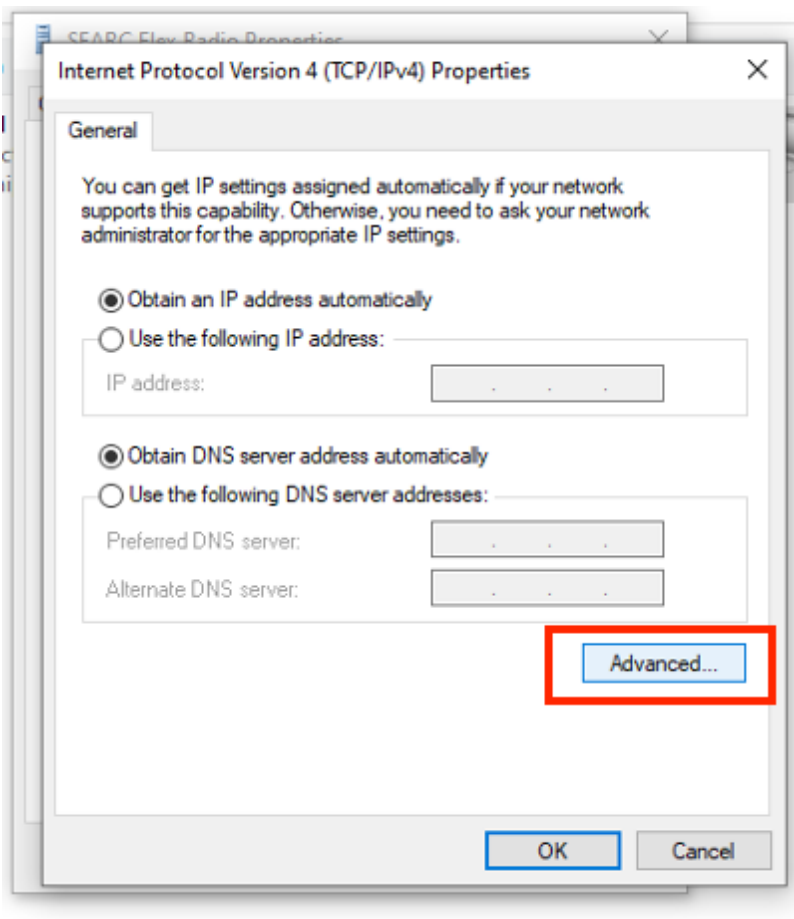This will display the networking properties for the VPN connection.
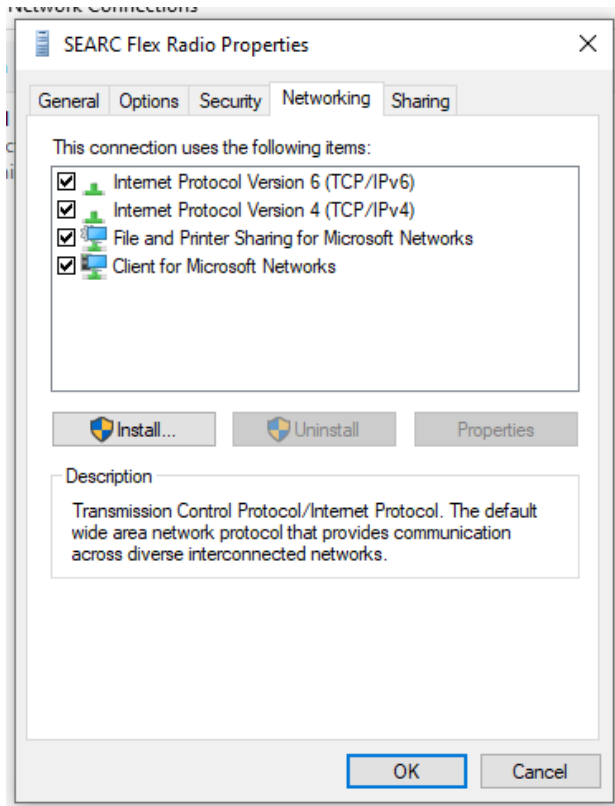
You will be making the same setting change for the top two entries, IPv4 and IPv6.

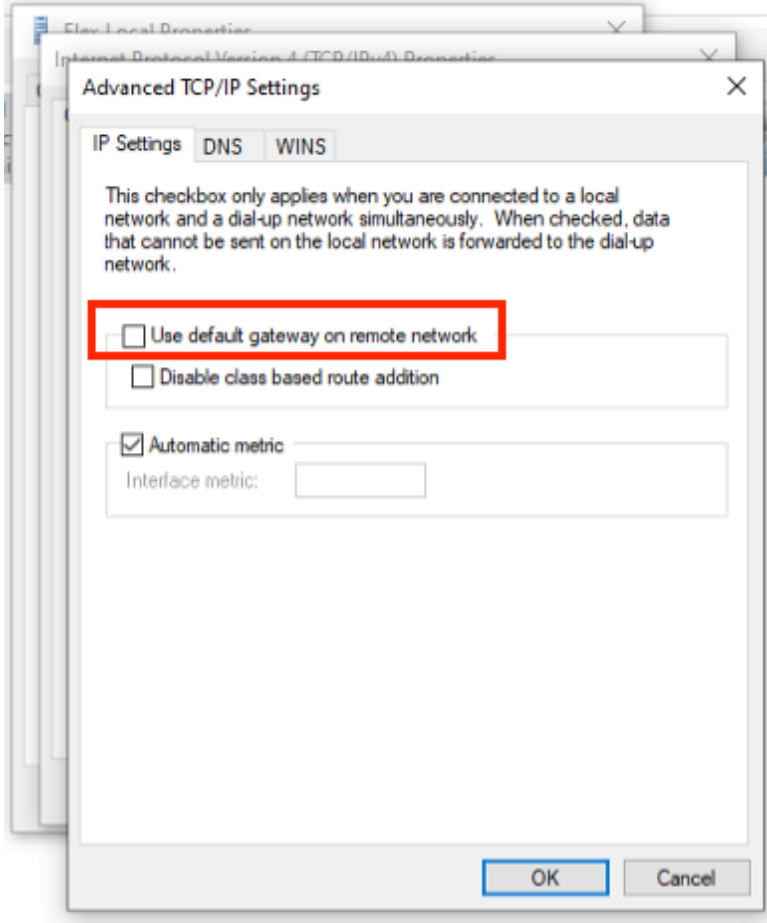**Double click on "Internet Protocol Version 4 (TCP/IPv4)".**
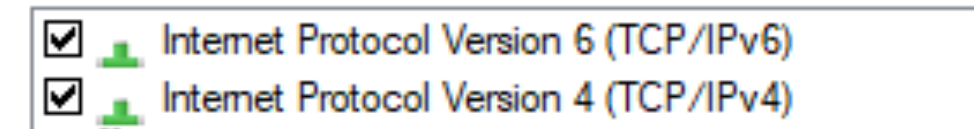
This will bring up a properties box for the IPv4 protocol.
Click on the box "Advanced".

In the "Advanced TCP/IP Properties" the default is to have "Use default gateway on remote network" checked.
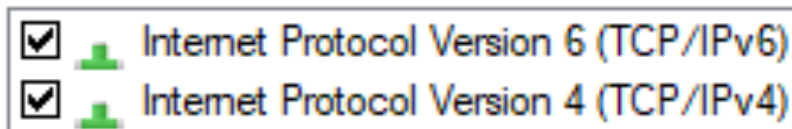**Click the box next to this setting so that the setting is CLEAR as shown below.**

Click on the box "OK" after clearing the check box.
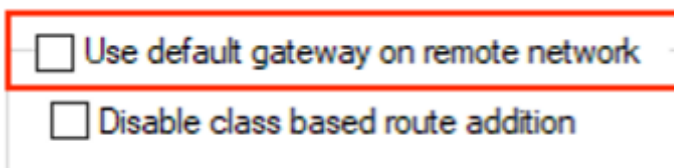**Click on the box "OK" in the IPv4 properties box.**

Now the same change will be made for the IPv6 settings.

Double click on the line "Internet Protocol Version 6 (TCP/IPv6)".
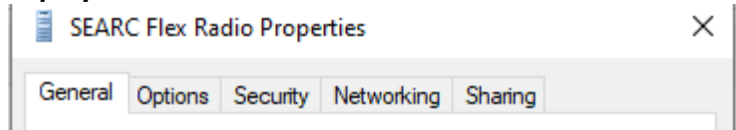

Click on the box "Advanced".
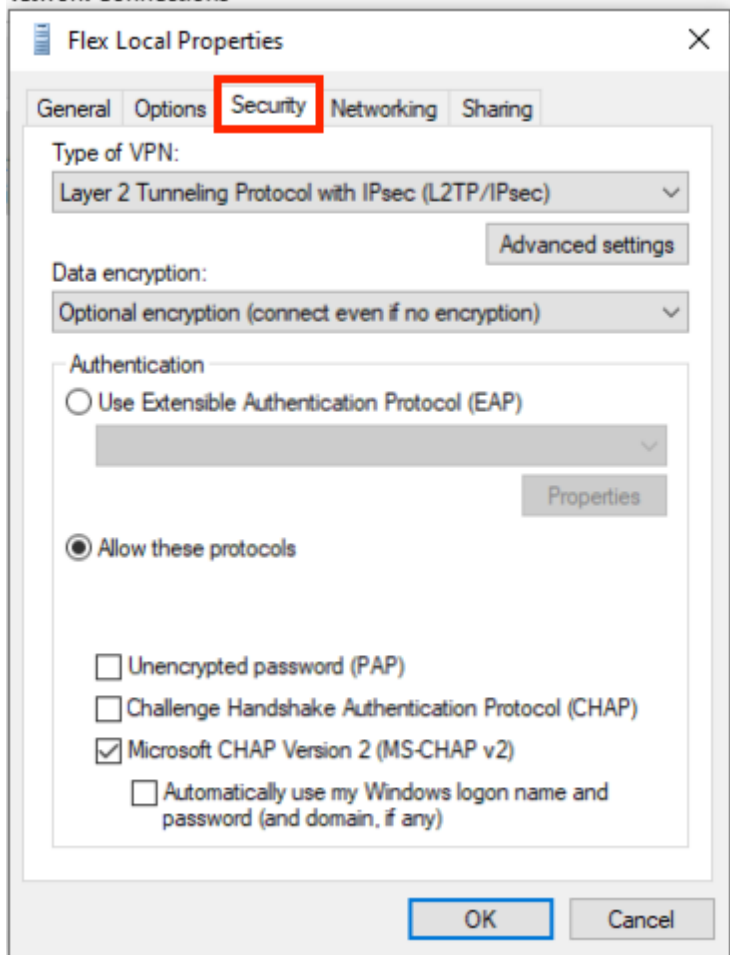<u>Clear</u> **the box next to the text "Use default gateway on remote network".**
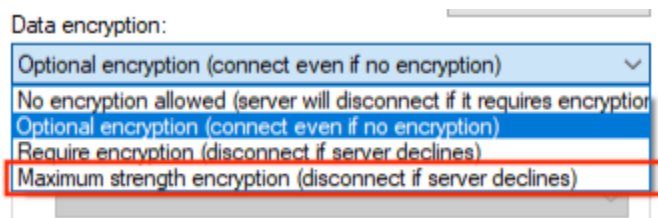
Now click the box "OK" on each on the open windows until the set of all property tabs is displayed.
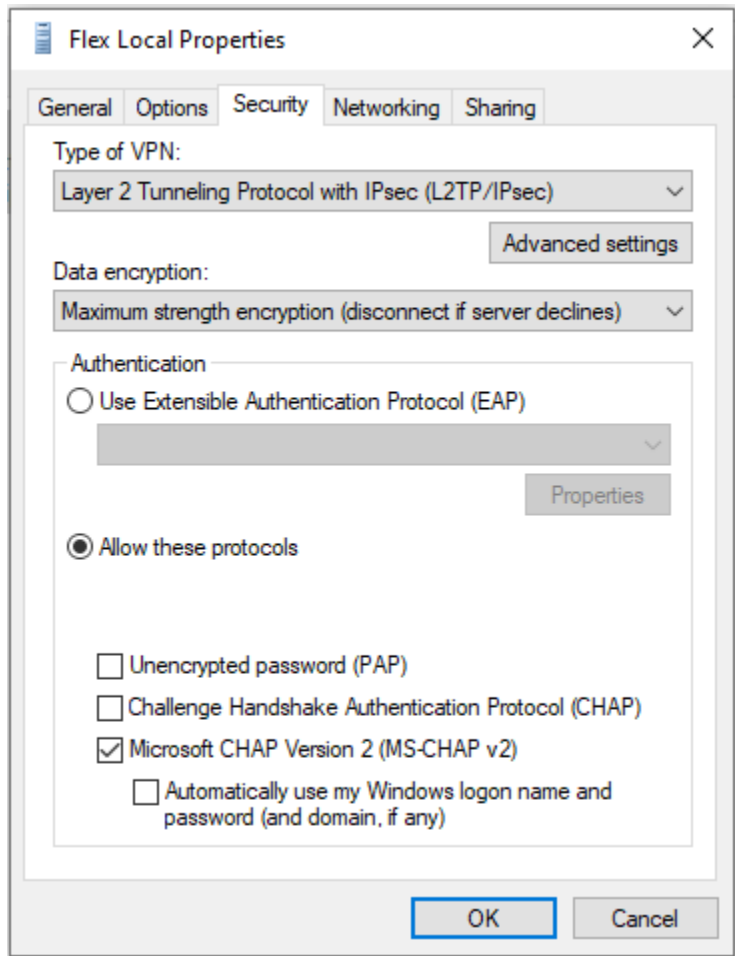

Click on the "Security" tab.

Select the drop-down under "Data encryption" and **choose "Maximum strength encryption (disconnect if server declines)".**

When done the security properties should look like this:

That completes the VPN configuration.

After clicking "OK" on all the open boxes **close the "Network Connections" window by clicking the "X" in the upper right-hand corner of the box.**

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To open a VPN connection, select Start->Settings->Network & internet->VPN. Then in the SEARC Flex Radio VPN, click the "Connect" box.
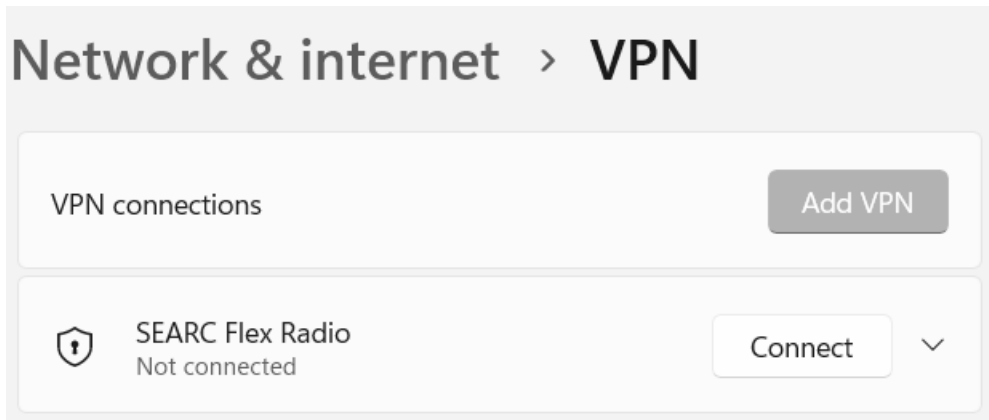
When done using the radio, close the VPN connection by selecting the VPN connection and click on the "Disconnect" box.

NOTE! When the VPN is connected, the Flex radio is powered up. Please do not leave the VPN connected unless you are going to use the Flex radio, and remember to disconnect when finished.