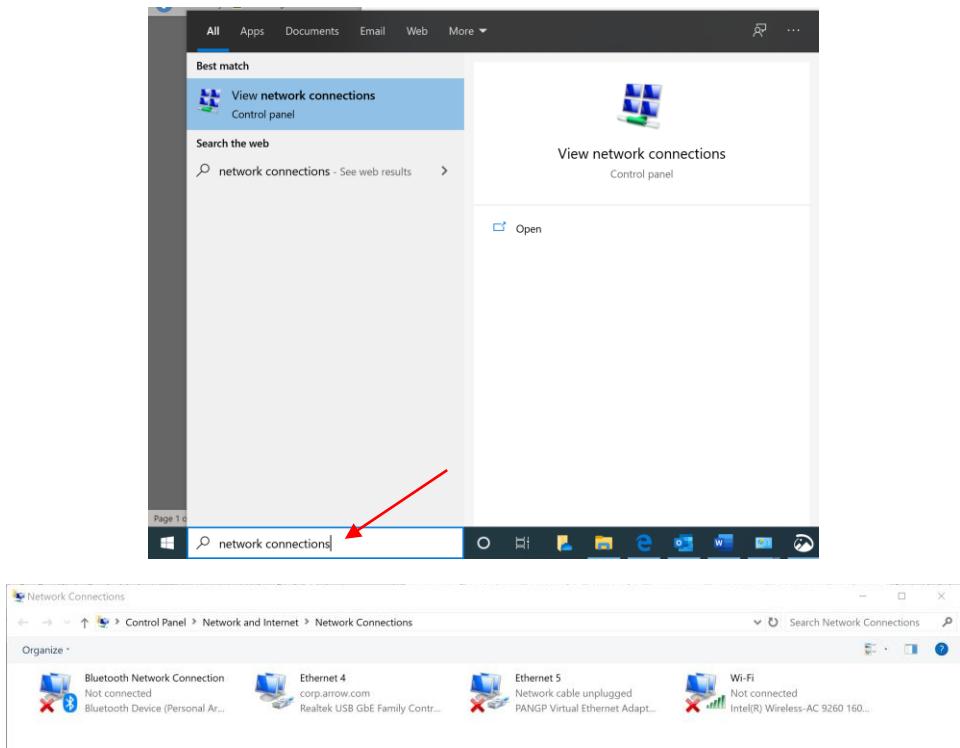
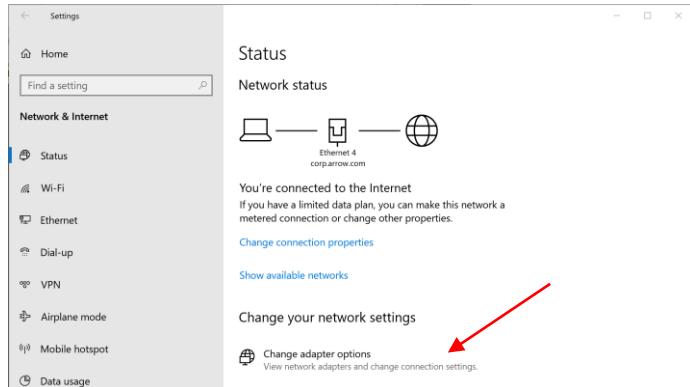


Sharing Wi-Fi Connection Over Ethernet

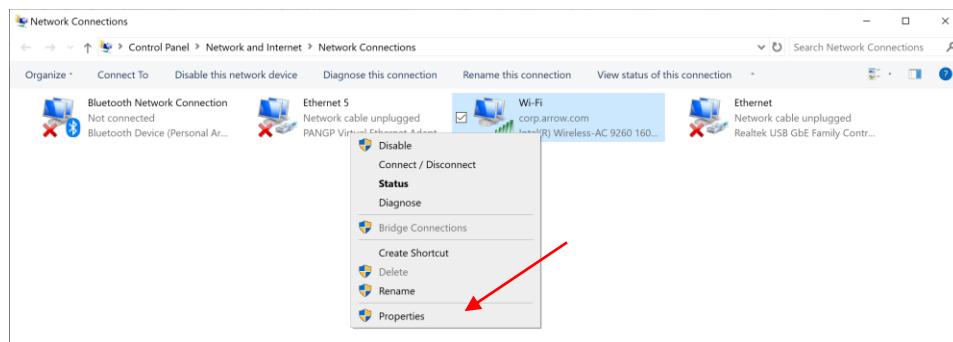
Some corporate internet connections (even seemingly open ports) won't allow the GrowHouse website, app, and hardware to function properly. In these scenarios, the following steps can be used to share the internet from a cellular Wi-Fi hotspot through the Ethernet port on a computer, if the hotspot doesn't have its own Ethernet port. **NOTE:** The phone/tablet/computer being used for the GrowHouse app and website shouldn't be connected to the corporate internet connection either. Also, **DO NOT LET THE COMPUTER GO TO SLEEP** or the internet connection may be dropped. The below instructions are for computers running Windows 10. An Apple or Android mobile device can be used to create the wireless hotspot, connecting the mobile device to the computer over USB is not required. The mobile device needs to be connected to a 4G network to provide sufficient bandwidth.

1. Connect computer to personal/cellular Wi-Fi hotspot
2. Open **Network Connections** – Type “network connections” into the **Windows Search Bar** and select **View network connections**
 - a. Alternatively, this window can be accessed through **Settings > Network & Internet > Status > Change adapter options**

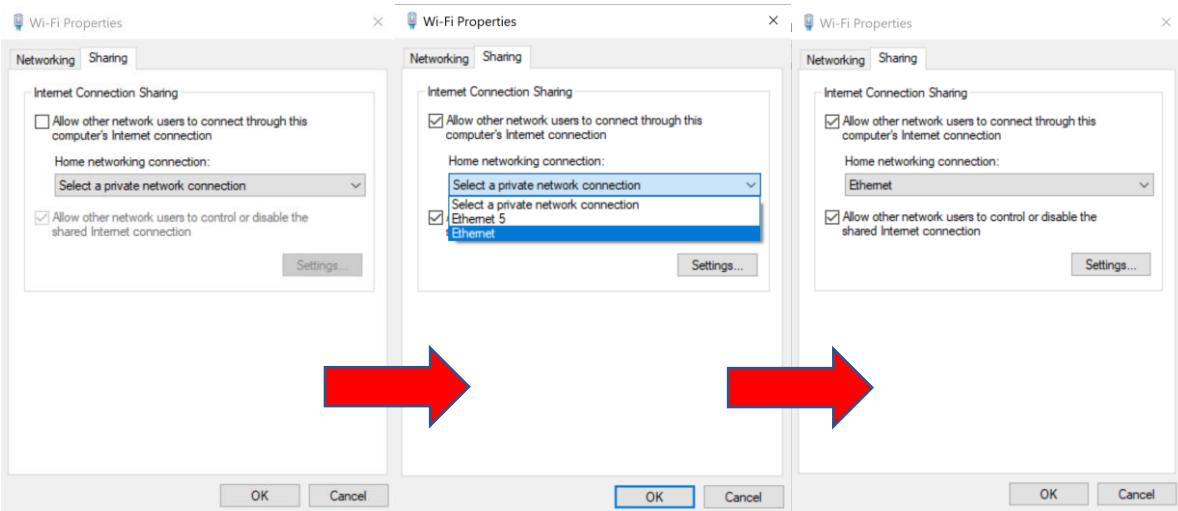




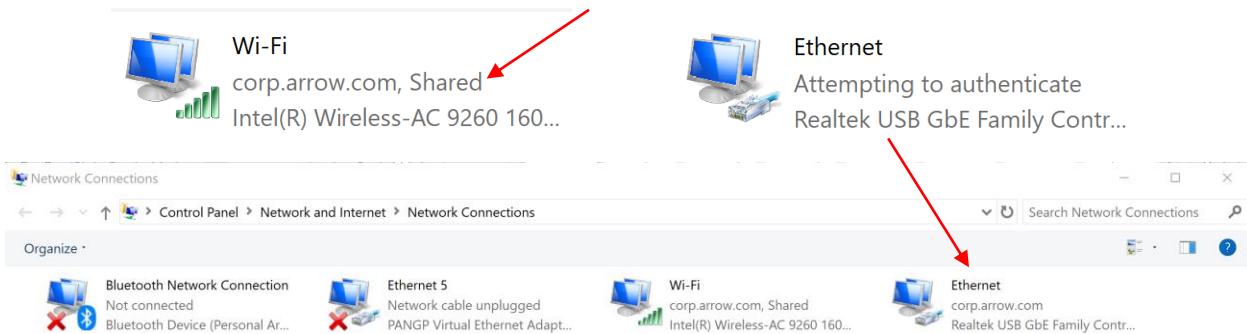
3. Right click the **Wi-Fi** connection, then select **Properties** and click on the **Sharing** tab



4. Ensure both checkboxes are selected. Select the Ethernet port, in the drop-down menu, that is intended to be shared from the computer and click the **OK** button. **NOTE:** Some computers will have more than one Ethernet port and the proper one will need to be selected. It may not match the port shown in the referenced images.



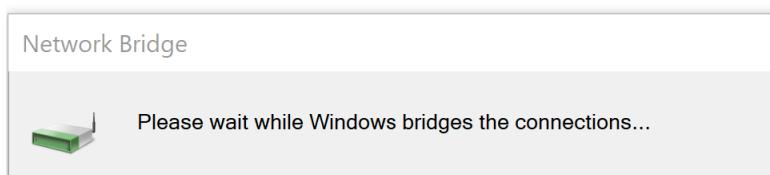
5. The Wi-Fi internet connection should now be shared and the logo will update to indicate this:



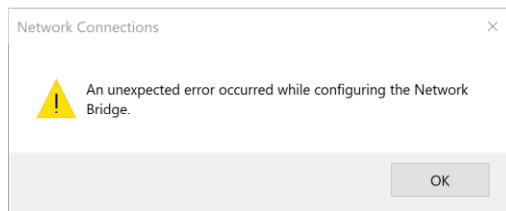
6. To stop sharing the connection, right click on the **Wi-Fi** connection being shared from the **Network Connections** window, select **Properties**, click on the **Sharing** tab, deselect the first checkbox, and click the **OK** button.

If errors arise in sharing the connection, an alternative method to bridge connections could potentially be used instead. This method is described below:

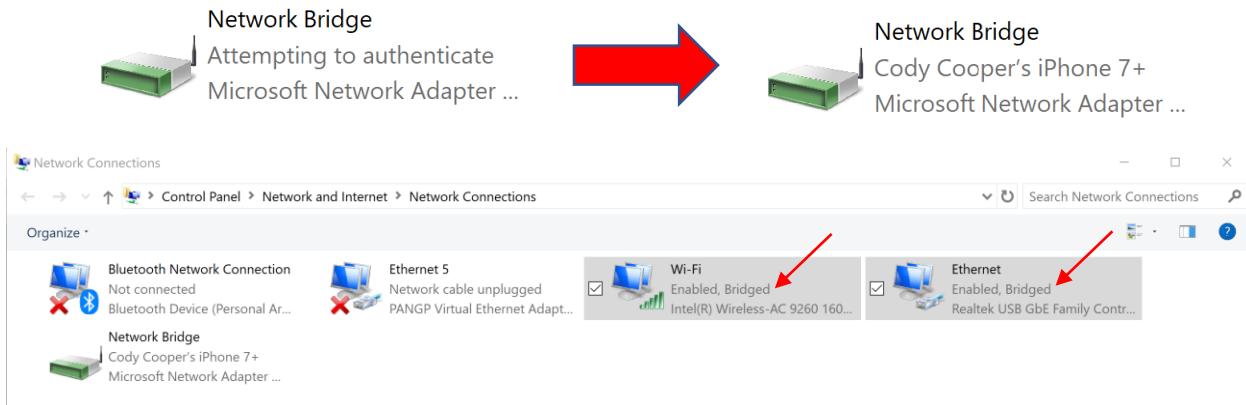
1. Connect computer to personal/cellular Wi-Fi hotspot and open the **Network Connections** window as described in steps 1-2 from the previous section.
2. Select both the **Wi-Fi** and **Ethernet** connection by holding the **CTRL** key and clicking on both items. **NOTE:** Some computers will have more than one Ethernet port and the proper one will need to be selected. It may not match the port shown in the referenced images.
3. With both connections selected, right click on the **Wi-Fi** connection and select **Bridge Connections**.
4. A popup should appear indicating the connections are being bridged:



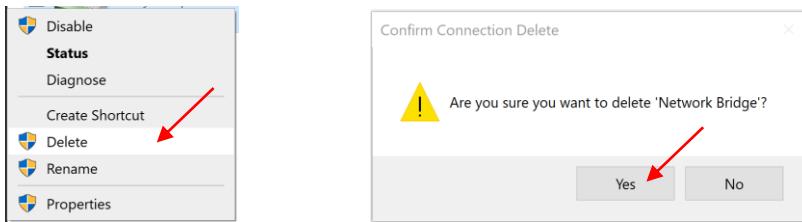
5. **NOTE:** Sometimes there may be a popup indicating an unexpected error occurred while configuring the Network Bridge. Even if this popup is experienced, the bridge may still be created. If not, attempt to recreate the bridge following steps 1-4.



6. The **Wi-Fi** connection should now be shared/bridged. A new **Network Bridge** icon will appear in the **Network Connections** window and will change status after the bridge setup is complete. The **Wi-Fi** and **Ethernet** connections will also change status to show they are bridged.



7. To stop bridging/sharing the connection, right click on the **Network Bridge** connection from the **Network Connections** window, select **Delete**, then click **Yes** on the **Confirm Connection Delete** popup.



8. A popup should appear indicating the **Network Bridge** is being deleted. The **Network Bridge** icon will also be removed from the **Network Connections** window.



TROUBLESHOOTING NOTES:

There is a chance the GrowHouse gateway will not be connected to the internet, but the computer indicates that the shared or bridged connections appear to be working. It is also possible for the GrowHouse app/website to show a green (connected) symbol next to the gateway, but the gateway isn't actually connected. If this happens, the gateway and its corresponding devices may need to be deleted and manually reset to get them to respond in a timely manner. Inversely, a red (disconnected) symbol next to the gateway may be shown in the app/website, but the gateway is actually connected. This commonly happens right after a new gateway is provisioned. Typically closing the app and reopening it

tends to fix the latter issue or refreshing the gateway/grow area list a few minutes after provisioning. This could also happen if a gateway was previously provisioned but has been offline for a while, but the same app closing/list refresh may not work. This is because the app/website takes several minutes to refresh the connected/disconnected icon next to the gateway. Deleting and reprovisioning the gateway and its corresponding LED and soil nodes can help speed this along. Any of the above scenarios, where a gateway/LED node/soil node gets deleted while the system is offline, will require a manual reset to be performed on each device before it can be discovered again during provisioning. The gateway may also need to be power cycled after a manual reset to be discoverable. The reset procedures for each device can be found in the GrowHouse Mobile Application User Manual.