TROUBLESHOOTING

In this Appendix...

My StrideLinx Router Doesn't Come Online

> **NOTE:** *The ACT and SIGNAL LEDs always display the active status of the router. See the LED Status Indicators section in Chapter 1 to review the status descriptions and help identify the problem.*

Internet Connection

Make sure that the StrideLinx router is connected to the internet, via an Ethernet cable, WiFi signal or 4G cellular signal.

Make sure your cellular 4G SIM card is activated by the carrier.

Connectivity

Make sure that the router can connect to our servers. The connectivity requirements section in Chapter 1 explains how the StrideLinx router connects to our servers.

Network Settings

Make sure that the router's LAN and WAN IP addresses are in different subnets. This isn't typically a problem if the default WAN DHCP settings are used.

Configuration

Make sure that the StrideLinx router has been configured properly. The name of the configuration file must be router.conf and it needs to be placed in the root directory of a USB stick. Once placed in the router, the ACT light should blink fast (blue) for 20–30 seconds, indicating that it's running the registration procedure. If this doesn't happen and you've followed the instructions, you may try a different USB stick.

> **NOTE:** *It's best practice to remove the config file from the USB after the router has been registered so that on power up the router boots from the current configuration rather than the initial configuration.*

Proxy

If the internet connection uses a proxy, enable **HTTP Proxy** and enter your proxy's information during the WAN settings step of creating your configuration file. The settings can also be changed directly in your router's local web interface, as explained in the Online Help link to the right.

Online Help

Configuring the SE-SL3011-4GG Router for a New SIM Card

If you're reconfiguring your router with a different SIM card than before, make sure that:

1. The router is powered OFF when switching the SIM cards, as removing a SIM card from a powered device may cause problems.
2. The new SIM card was inserted before starting the router, otherwise it isn't recognized.

Switching Your WAN Configuration from Wired to WiFi/4G and Vice Versa

The internet connection method can be changed for a WiFi or 4G StrideLinx router from the StrideLinx Cloud. Before changing the connection method, make sure the new connection method is available to the router (e.g., Ethernet cable is connected, WiFi network is available, SIM card is inserted, antennas are connected). Remember that if the new connection method to the router is not available, access to the router will be lost and the router will need to be defaulted and reconfigured

WARNING: DO NOT insert or remove the SIM card when power is applied to the router.

1. In the **Fleet Manager** menu, select **Devices** ⌷⧠, then click the name of your router.
2. Expand the **Network** ✦ options and go to **[WAN]**.
3. Set up the new WAN connection, following the steps on pages 2-17 through 2-19.
4. When multiple WAN connection types are configured, the router will automatically use one as the preferred connection and others as fallback connections.
5. To change the priority of the connections, you can **drag and drop** ⠿ the connections to arrange their priority.
6. To remove the old WAN connection method instead of using it as a backup, simply click **[Configure]** on the connection type, then **[Remove]**.
7. You have now made the changes in StrideLinx Cloud, but these are not yet active in your device. Click **[Push config to device]** in the top right corner for them to take effect.

Country-wide Censored Internet Accessibility?

If your StrideLinx router is located in China or another country with censored internet accessibility, you need to turn on the "stealth" option to have your router be able to set up a VPN connection to our StrideLinx servers.

1. In the **Fleet Manager** menu, select **Devices** ⌷⧠, then click the name of your router.
2. Expand the **Network** ✦ options and go to **[VPN]**.
3. Toggle **[Use stealth mode]** in the **Stealth mode** section
4. This setting is applied the **next time your device connects**, and does not require pushing the configuration change to the router.
5. If the VPN connection is active when changing this setting, then turn the VPN connection **OFF** and back **ON** again as explained at the top of this page to use the new setting.

StrideLinx Router Log File

The log file can be obtained by placing a USB stick (without a config file) in the StrideLinx router and removing it after 10 seconds. If you just rebooted the router it is best to wait at least 3 minutes before removing the USB stick to be sure that the router has gone through all the necessary steps. With this log file we can further investigate your issue.

I Can't Connect to the StrideLinx Router

VPN Client

Make sure you have installed the VPN Client. The "Installing VPN Client Software on Your PC" section of Chapter 2 explains the installation, as well as the Online Help link to the right.

> Online Help

Once you've installed the VPN Client, refresh the StrideLinx Cloud page to have it re-check for the VPN Client to see if it's installed.

Proxy

If you're behind a proxy the VPN Client will try to automatically detect the necessary settings. In case the VPN Client is unable to do so, you may have to manually enter the address, port, login and password in your VPN Client's settings. Contact your local IT department for this information.

TAP Adapter

Make sure that the TAP adapter (installed with the VPN Client) isn't disabled and that an older version (< version 9) has not been installed áfter installing the VPN Client. You can check this in Windows at: Control Panel\Network and Internet\Network Connections.

VPN Connection

In Windows you can only have one active VPN connection at a time. If you get disconnected shortly after connecting to your StrideLinx router it is possible you already have a VPN connection active.

Simplify the connection. For example, connect directly to the internet rather than connecting through an office VPN, and connect to the internet using a Windows PC rather than a virtual Windows machine on a Mac.

VPN Client Log File

On a Windows PC you can find the VPN Client log files at "C:\ProgramData\StrideLinx\ VPN Client\Logs". Usually, the most recent log file is the most relevant. With this log file we can further investigate your issue.

I Can't Connect to My Device(s) Behind the StrideLinx Router

VPN Connection

Make sure that you are connected to the StrideLinx router. As a check you can try to ping the router's VPN address or LAN-side IP address. If you don't get a reply, but the website says you're connected, close and restart the VPN Client and attempt to connect again.

Simplify the connection. Connect directly to the internet rather than connecting through an office VPN, for example. Connect to the internet using a Windows PC rather than a virtual Windows machine on a Mac, for example.

IP Range

Make sure that your device's IP address is in the same range as the StrideLinx router and that the subnet mask is the same as the router, which is usually 255.255.255.0.

Default Gateway

Make sure that your device is configured with a default gateway. This setting can also just be named "gateway" or something along the lines of "use router". The default gateway needs to be set to the IP address of the StrideLinx router.

Timeout Setting

Increase the timeout setting to allow sufficient time for the internet connection. For testing, set this to the maximum timeout. If the problem is not the timeout, a maximum setting will cause the failure response to take a very long time (over a minute).

Programming Software Does Not Allow Multiple Programming Connections

Most programming software will only allow a single user to be connected to and programming a device at a time. Make sure no other users are programming the device.

I Don't Know How to Configure My Device

If you don't know how to configure your device for connection through the StrideLinx VPN, you can consult our connection examples in Chapter 3.

I Am Unable to Configure My Device

If you are unable to configure your device, you can set "no gateway configured" in the LAN configuration of your StrideLinx router.

1. In the **Fleet Manager** menu, select **Devices** ⊏◻, then click the name of your router.
2. Expand the **Network** ⊠ options and go to **[LAN]**.
3. Change the advanced LAN settings.
4. You have now made the changes in StrideLinx Cloud, but these are not yet active in your device. Click **[Push config to device]** in the top right corner for them to take effect.

NOTE: *The "No gateway configured" setting should only be used as a last resort. In some cases it may cause unexpected behavior. We recommend to always properly configure your device with a default gateway if you want to access it remotely.*

Check Your Settings

You can check if your device is properly configured by pinging its IP address once you've set up a VPN connection to your StrideLinx router.

NOTE: *Pinging a PC? A PC may have firewall rules that block your inbound ping request. Resulting in you not receiving a reply and thus not being able to check if you can access the PC remotely. If possible, you could enable the following inbound firewall rules on that PC:*
- *All ICMP V4*
- *File and Printer Sharing (Echo Request - ICMPv4-In).*

I Still Can't Connect to My Device

If you receive a reply in the ping check above, but are still unable to connect to your device, the issue may reside in the (development) software that you are using to connect. In this case you can consult our connection examples in Chapter 3 or contact the manufacturer.

I Can't Connect to My HTTP/VNC Server

Accessibility

Make sure you can reach your device. You can check this by pinging its IP address once you've set up a VPN connection to your StrideLinx router. If you do not receive a reply, please follow the steps explained above under "I can't connect to my device(s) behind the StrideLinx router."

HTTP/VNC Server

Make sure there is an HTTP or VNC server running on your device. You can check this by establishing a VPN connection to your StrideLinx router and:

• In case of an HTTP server, type the IP address of your device in your browser.
• In case of a VNC server, connect using a 3rd party VNC viewer (e.g. RealVNC).

Password

There may be a password set on the device. This can usually be checked on the device itself.

StrideLinx Router Settings

Make sure the router settings are properly configured, including a password if applicable, if you're trying to access the HTTP/VNC server directly via www.StrideLinx.com. The "Connect to Devices Behind the StrideLinx Router" section of Chapter 2 and the Online Help link at the right explain how you can add or manage these services.

Online Help

Specific Service and Server Settings

A VNC server running on certain devices may require advanced settings, such as encoding type or color depth. You can configure these settings as follows:

1. In the **Fleet Manager** menu, select **Devices** ⊏⎕, then click the name of your router.
2. Select the VNC service in **[Services]**, and edit the advanced settings to match your application.

If you have a VNC server running on a computer, make sure you configure your VNC server's encryption setting, if available, to also accept unencrypted connections.

Wireless Connectivity

Troubleshooting a StrideLinx router with 4G or WiFi is best accomplished as follows.

1. The WiFi connection SSID must be alphanumeric; it cannot include special characters, such as hyphen, apostrophe, etc.

2. Be sure the issue is WAN connectivity - The ACT LED will be blinking red 1 time for no internet connectivity. If the ACT LED is anything other than blinking red 1 time, then the issue is not wireless connectivity.

3. Check the Signal LED to determine if the router has a good signal. If not, check to make sure the antenna connectors are properly screwed on to the router and that the cable is not twisted, pinched, or damaged.

    a. Observe the area around the antenna installation. The magnetic and screw mount antennas work best when connected to a metal ground plane at least 30 cm². In addition, metal located above or on the sides of the antenna will decrease the range.

    b. Clear line of sight between the router antenna and the wireless access point will provide a better connection.

    c. (4G) If a single antenna is used, ensure the antenna is connected to the MAIN antenna connector, nearer to the front of the router. If a single antenna is connected properly to the MAIN connector, add a second antenna to the DIV connector.

4. If a good signal is shown (purple or blue) on the Signal LED, then

    a. (WiFi) check to make sure the SSID and password are correct.

    b. (4G) check to make sure the SIM card is properly inserted into the router and that the APN and PIN code have been correctly entered.

    c. (4G) Make sure your cellular 4G SIM card is activated by the carrier.

5. Check the wireless signal strength at the router location.

    a. (WiFi) On a smartphone, open WiFi settings and confirm wireless access point signal strength and SSID, password. If your smartphone shows a signal the wireless connection to the router should also be adequate.

    b. (4G) Check the 4G LTE signal strength in the Overview section of the router's local web server page at it's LAN IP address (default 192.168.27.1).

6. For the 4G router, contact Enabling Elements, Inc. (https://enablingelements.com/stridelinx/) to troubleshoot cellular issues on AT&T and Verizon networks.