



# XR Solution Administrator

*XR Solution Technical Certification Training*

## Session 2:

**Training | Knowledge Check | Lab Exercise**

March 2022 (Updated January 2023)

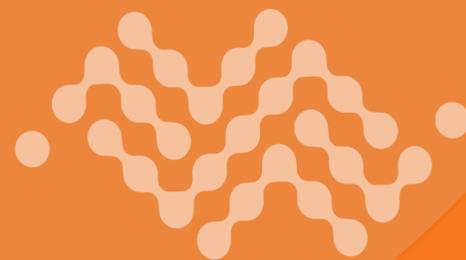


# Session 2

- Review and Lab Recap
- Labels Deep Dive
- Basic XR and AirLink® OS Use
- What's Next



# REVIEW AND LAB RECAP



# Review and Lab Recap

What are your questions from last week and the lab?

What did you learn during the lab?

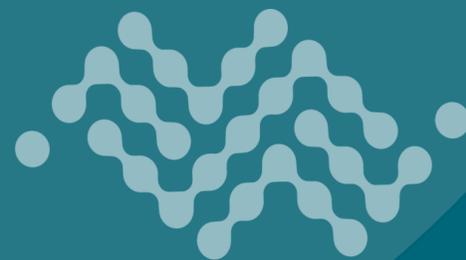


# What You Should Know

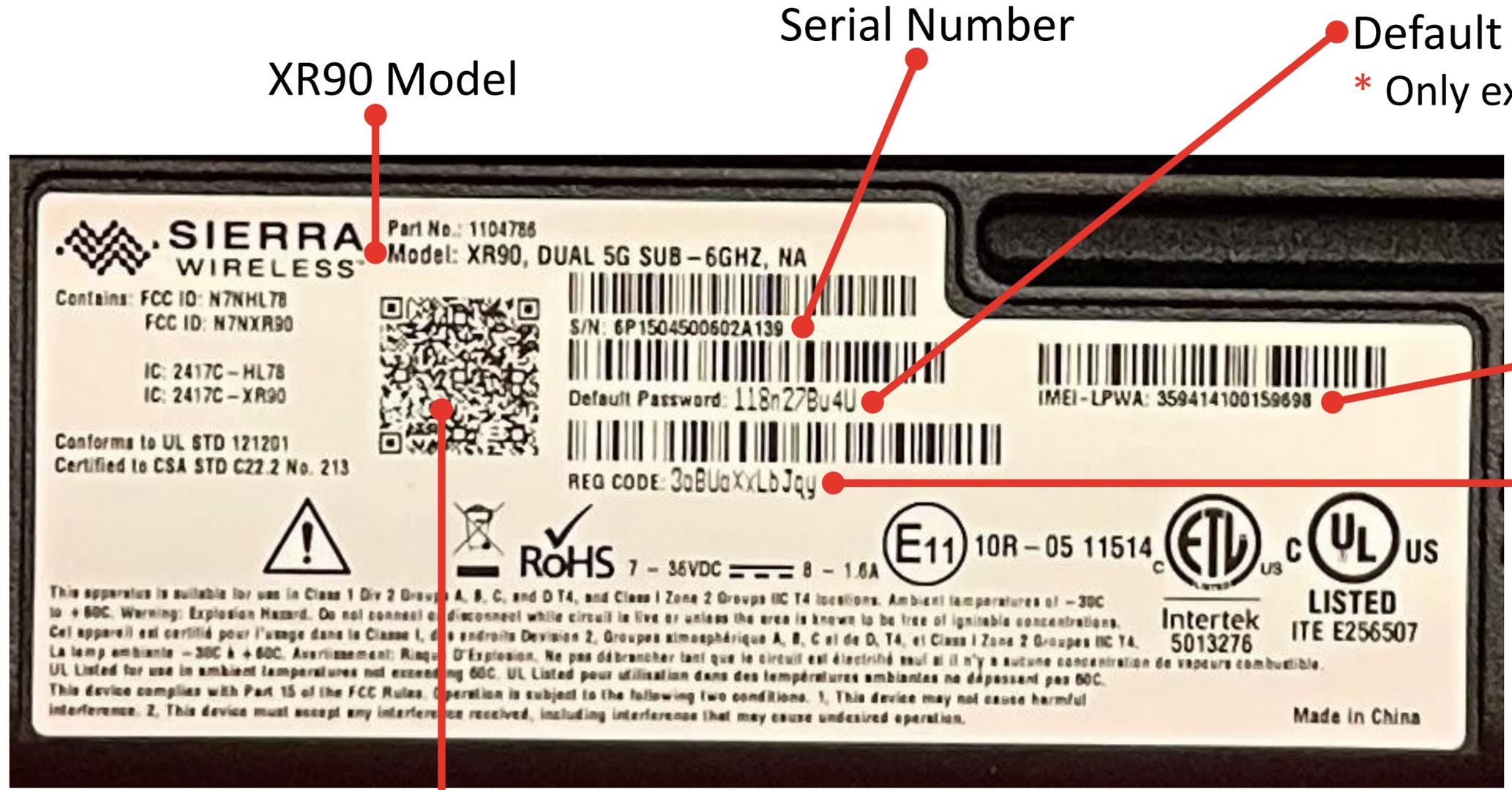
- What information is on what labels, and why
- Location of specific status information in AirLink OS:  
Link and interface states | Network states (LAN and WAN) | Current routing status | Subsystem states: location, CPU, temperature
- How to perform basic configuration settings
- How to create, save, and load templates locally
- How to perform basic operations

# LABELS DEEP DIVE

On the Router  
On the Box



# Router Label



XR90 Model

Serial Number

Default Password  
\* Only exists on this label

LPWA IMEI  
\*\* Will be removed shortly

Registration Code  
\*\* Exists on router label or from production/distribution

6P1504500602A139;359414100159698;118n27Bu4U;1104786;8 12320 00615 6;3aBUaXxLbJqy

**i**  
The XR80 label includes the integrated 4G/5G IMEI

# Exterior Box Label

**i**  
The XR80 label includes the integrated 4G/5G IMEI

Part # and Description

Serial Number

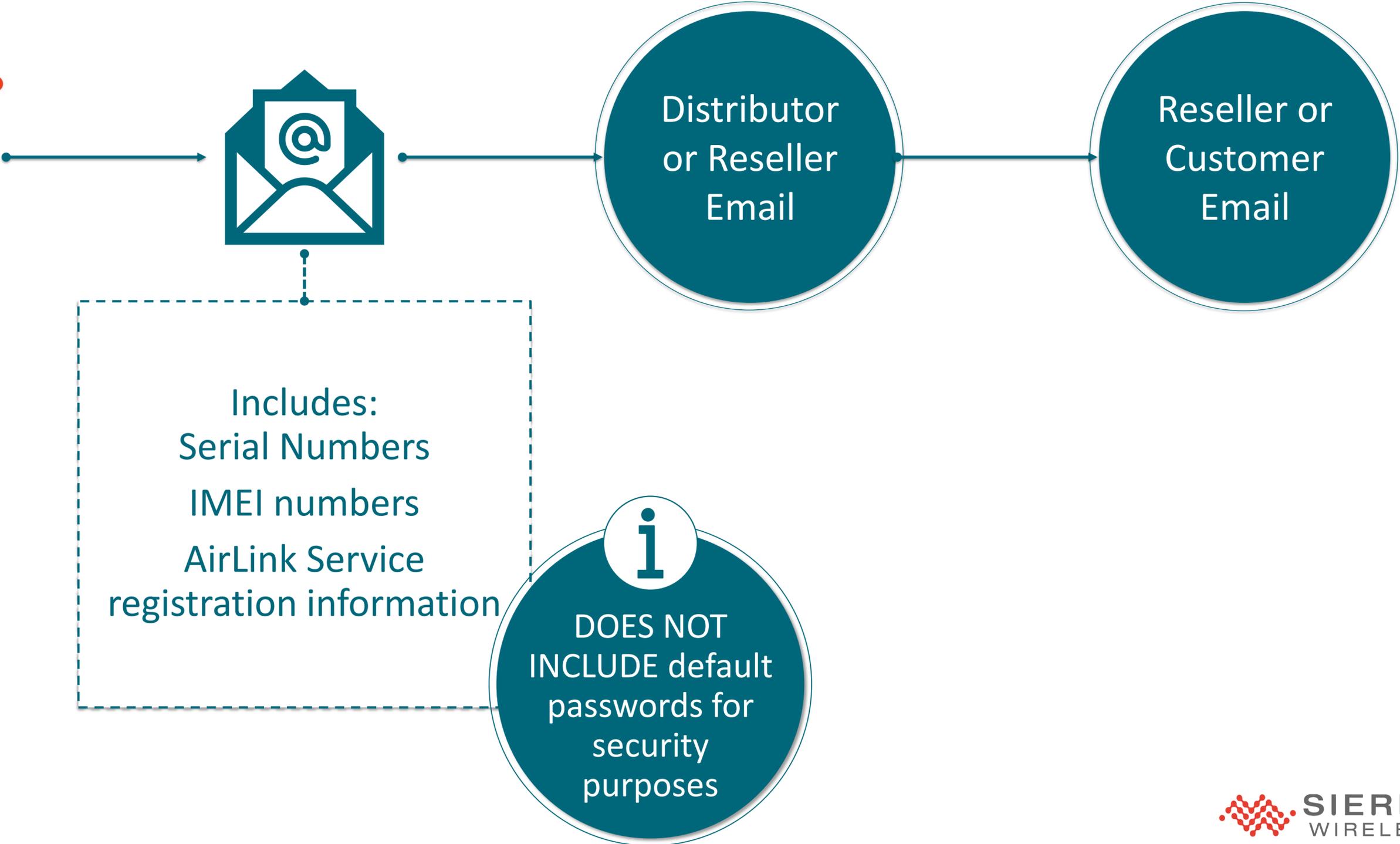
LPWA IMEI

XP cartridge radio IMEIs  
(1 or 2) attached during production



6P1504500602A139; 359414100159698; 8 12320 00615 6; 1104786; 350546850112507; 350546850112457;

# Other Sources of Label Information



# BASIC XR AND AIRLINK OS USE

Basic Abilities on XR and AirLink OS  
Specific Status Information  
Basic Configuration Settings  
Working with Templates Locally

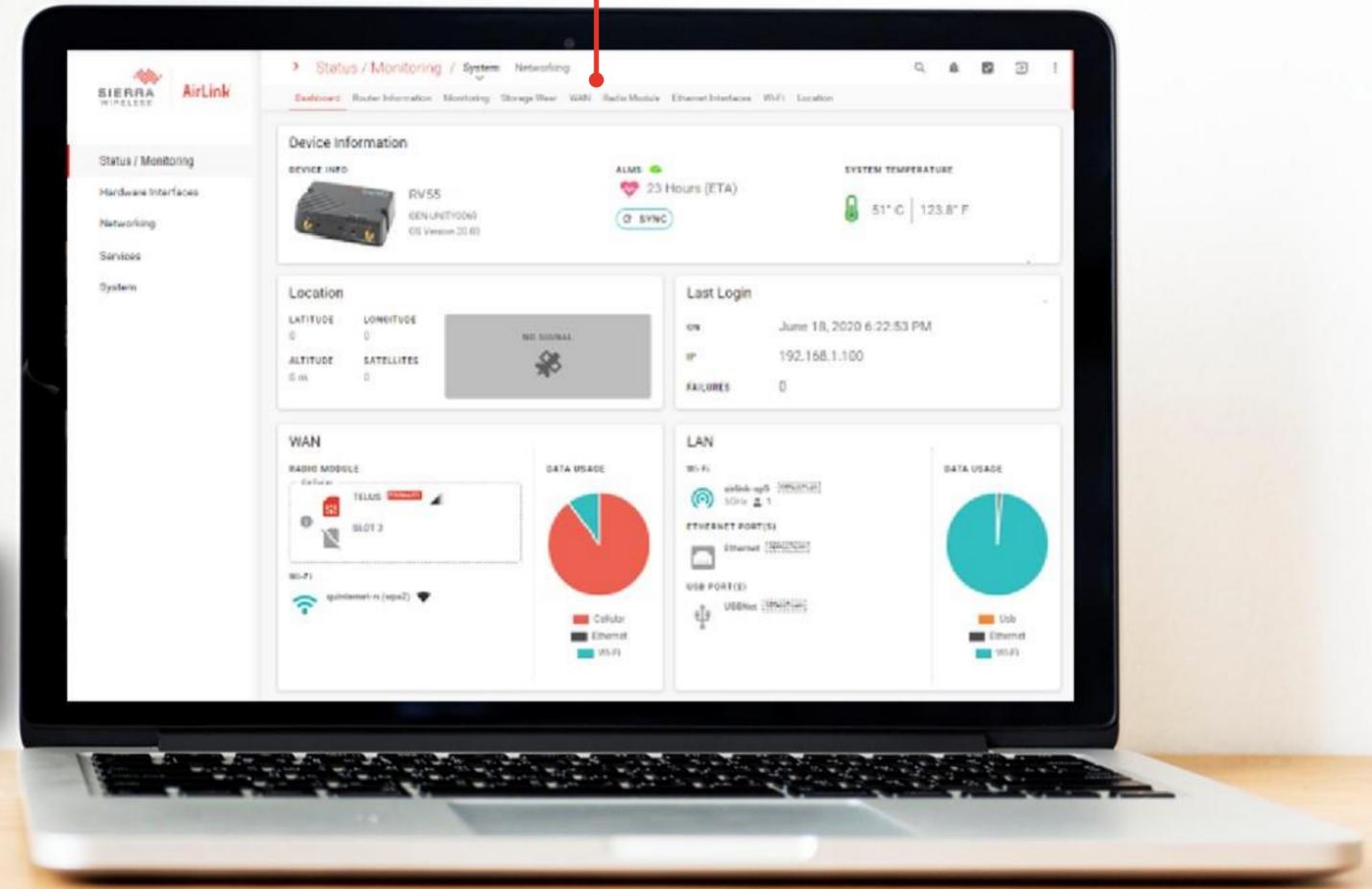


# Basic Skills and Abilities



## Specific Configuration Settings

Working with the XR Series Router



# Working with the XR Series Router

Things you should be able to do with an XR Series router:

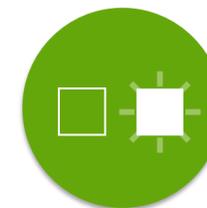


Physical Setup

SIM cards, antennas, connectors



Perform a factory reset



Understand typical LED behavior



Register router for AirLink Services



Save and load a configuration template



Upgrade AirLink OS



Capture system information for a support ticket  
logs, template, TS package



Understand WAN default priority



Attach an XP cartridge

# Find Information on The Source



AirLink OS software to upgrade without using ALMS



Configuration Guides  
Hardware Guides  
LED behavior  
Physical setup  
Factory reset (button)

>> AirLink XR Series  
Hardware User Guide



41114042  
Rev 4

Link: <https://source.sierrawireless.com>

# Set Up the XR Series Router

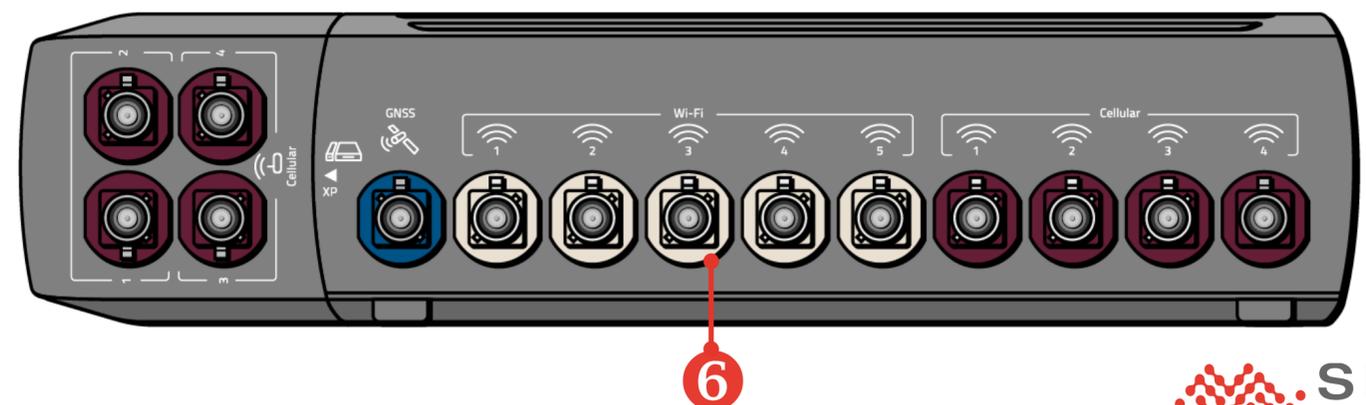
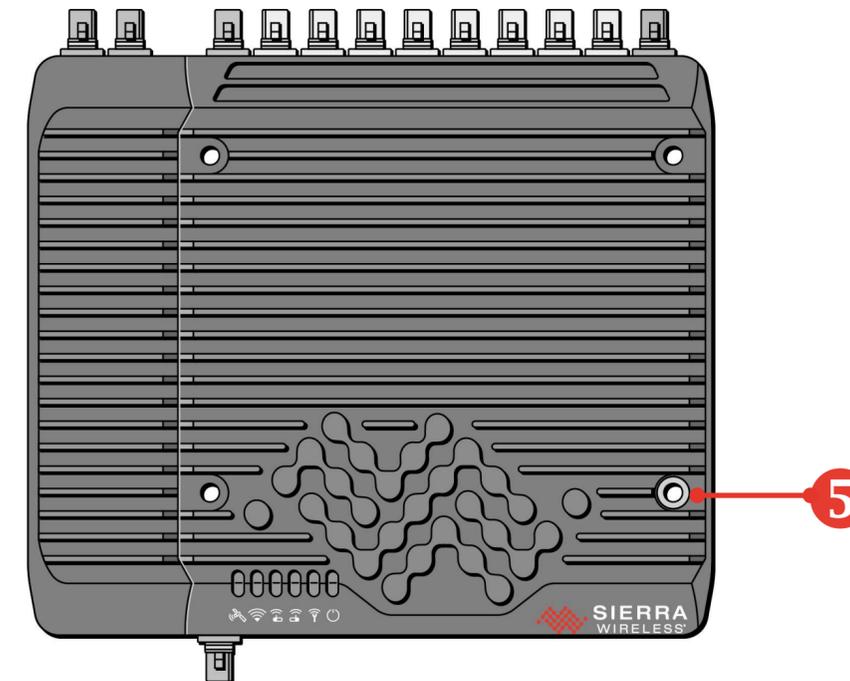
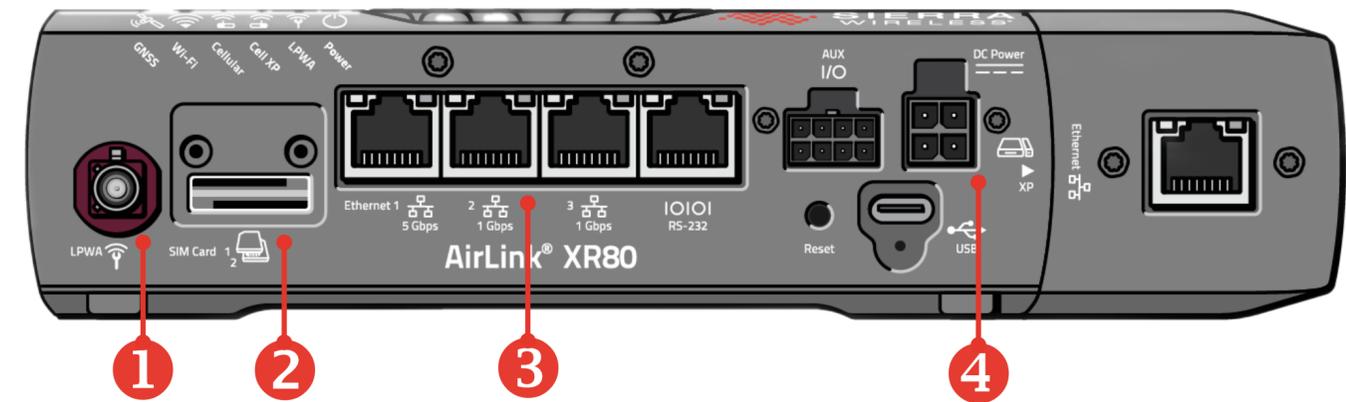
The complete setup includes:

1. Attach LPWA antenna
2. Insert SIM card(s)
3. Connect required Ethernet cables
4. Connect power (AC or DC)
5. Secure the router
6. Connect required antennas

**i**

These steps may not always occur in this sequence. It depends on the project needs.

Some items are dependent on the installation type: fixed or mobile, cabling required, and the specific wiring of the power harness.

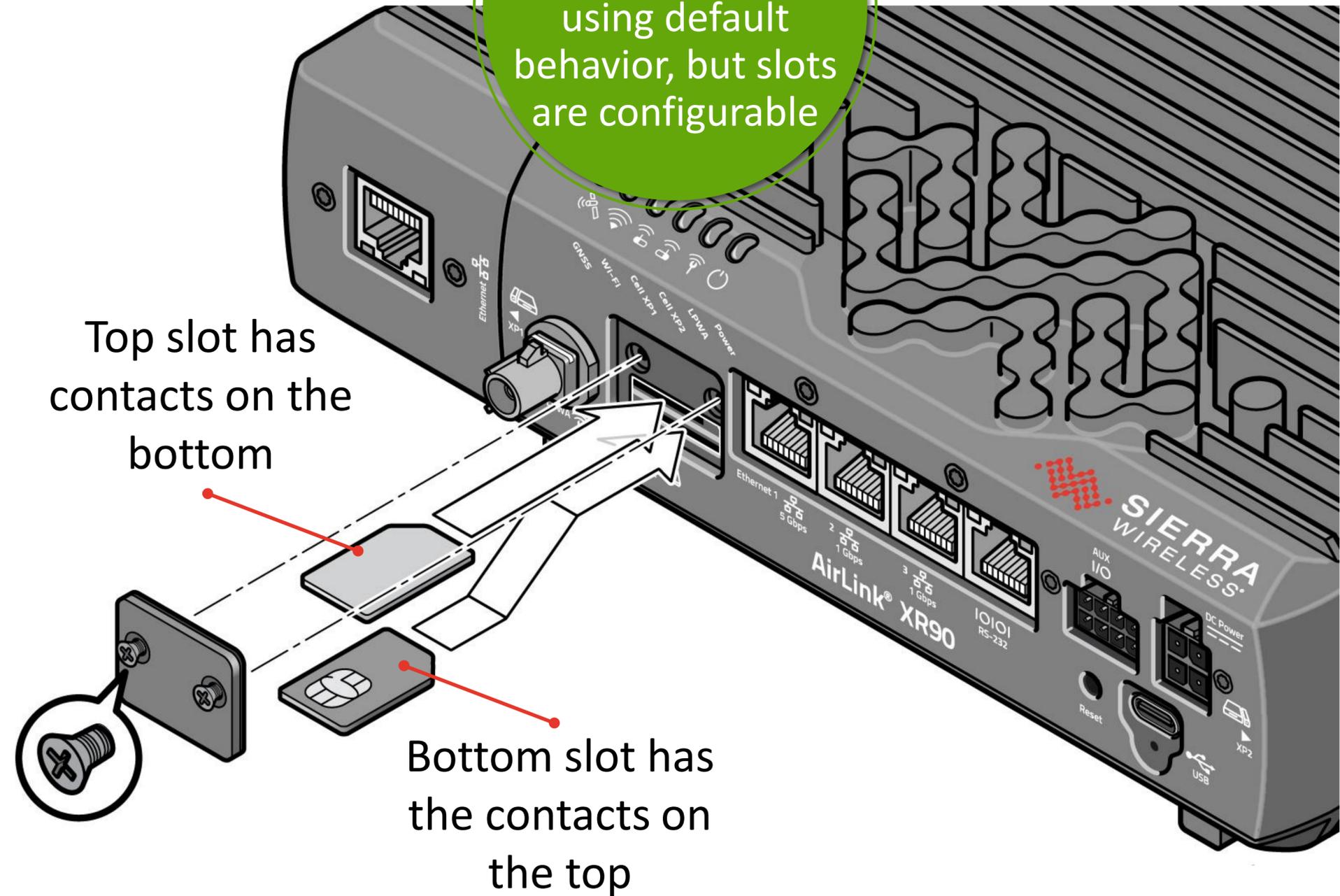


# 2 Insert the SIM cards

Primary SIM and secondary SIM installation:

- Primary in the top slot
- Secondary in the bottom slot.

**i** Configuration is not needed if using default behavior, but slots are configurable

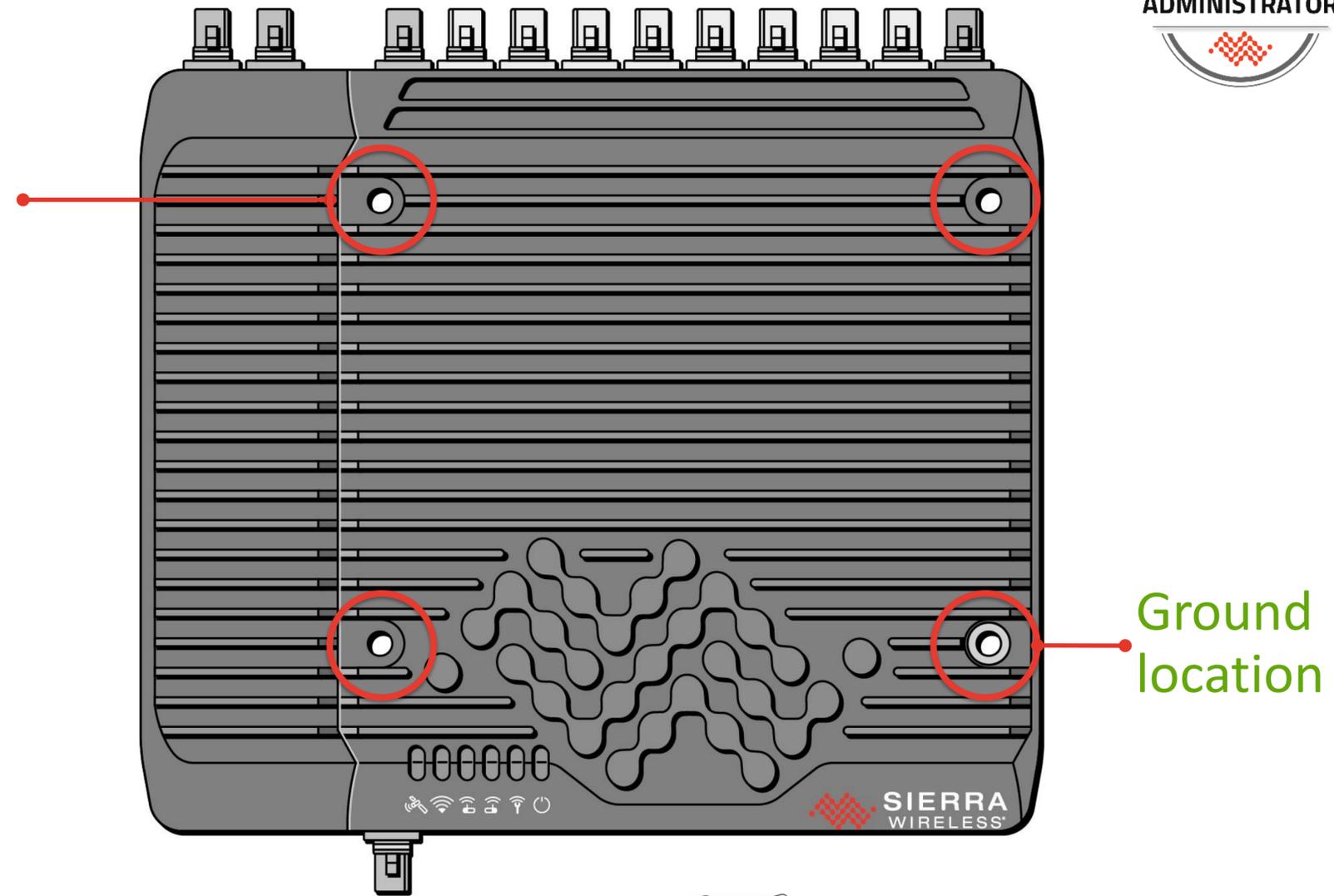


# 5 Secure the Router

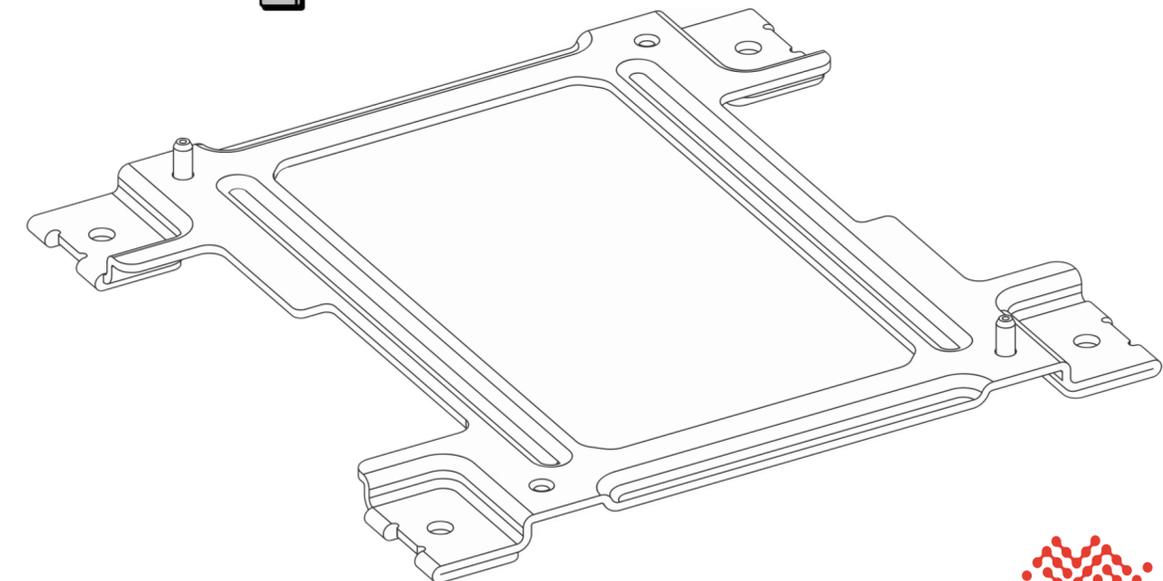
The router has 4 bolt holes  
*All XR Series models have  
same layout and spacing*

Plan for:

- Access to antenna connectors and Ethernet ports
- Bend radius of antenna cabling
- Visibility of LEDs for troubleshooting
- Possible addition of an XP cartridge in the future
- Ground connection
- Protection of cable connectors
- Physical security



**i**  
A  
quick-disconnect  
bracket is  
available



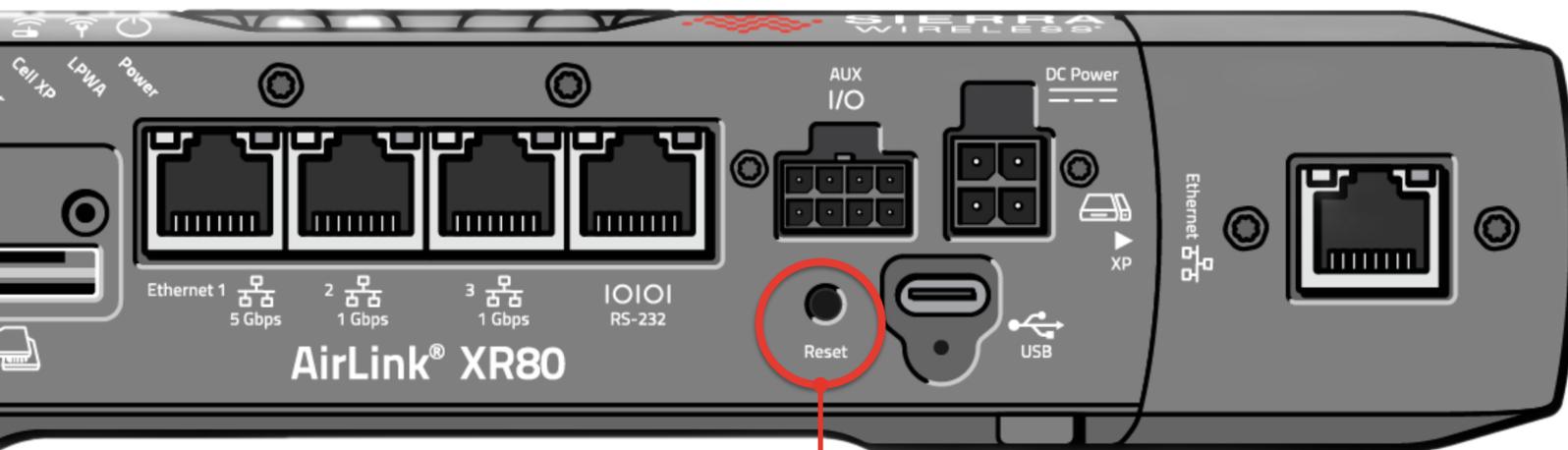
# Factory Reset: Two Ways

Apply a Factory Reset in two ways:

1

## Hardware:

Press and hold the Reset button for between 20-40 seconds. Release while Power LED is blinking Yellow

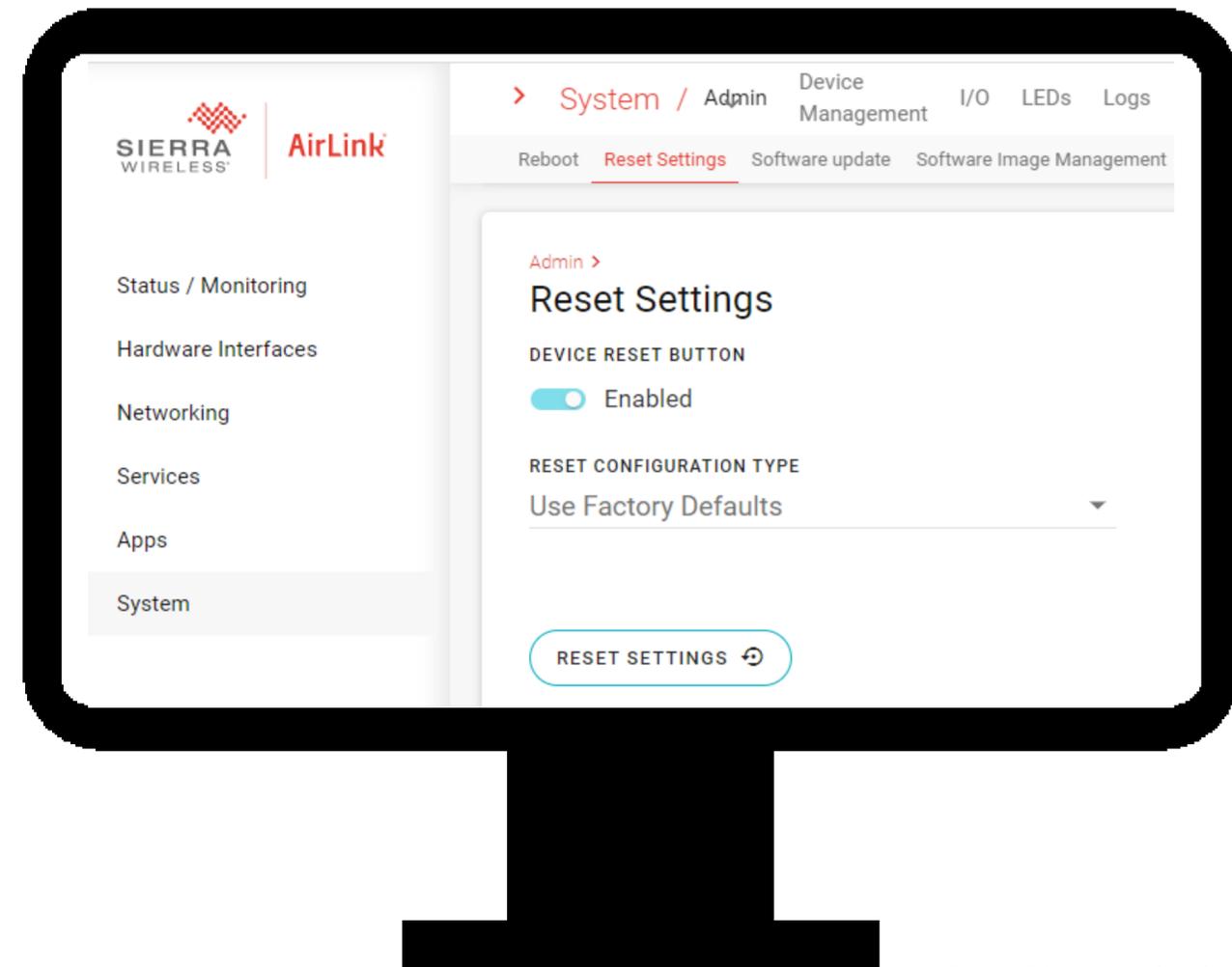


Reset button

2

## AirLink OS:

Go to **System > Admin > Reset Settings**



# Default Priority for Multi-WAN

The XR Series support custom routing over different WAN links. Managing that level of detail is beyond basic use.

For basic use, understand what the default behavior is when multiple WAN links are available.

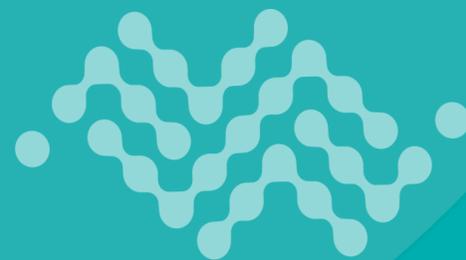
Interface	Order, if present
Ethernet	<ul style="list-style-type: none"> <li>Eth 1</li> <li>Eth 2</li> <li>Eth 3</li> <li>Eth XP/XP1</li> <li>Eth XP2</li> </ul>
Wi-Fi WAN	<ul style="list-style-type: none"> <li>Wi-Fi 5GHz</li> <li>Wi-Fi 2.4GHz</li> </ul>
Cellular	<ul style="list-style-type: none"> <li>Cell INT/XP1</li> <li>Cell XP/XP2</li> </ul>

**i**  
This may impact where SIM are inserted or need additional configuration

# SPECIFIC STATUS INFORMATION

Using the Dashboard

Using Other Parts of Status/Monitoring



# Specific Configuration Settings



> Status / Monitoring / System Networking Services

Dashboard Device Information Monitoring Storage Wear WAN Voltage & Temperature Radio Module Wi-Fi Ethernet Interfaces

### Device Information

DEVICE INFO



**XR90**  
6P0214005602AC22  
OS Version 2.0

ALMS COMM. STATUS

LAST a few seconds ago

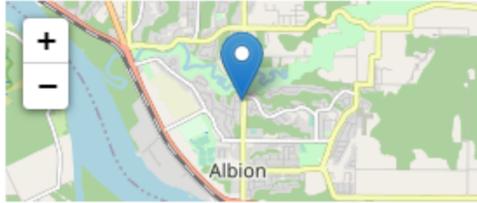
NEXT 00:14:47 (ETA)

[CHECK NOW](#)

SYSTEM TEMPERATURE

67° C | 152.6° F

### Location

LATITUDE	LONGITUDE	
49.19639	-122.5572	
ALTITUDE	SATELLITES	
18 m	17	

### Last Login

ON	February 24, 2021 2:58:23 PM
IP	192.168.1.102
FAILURES	0

### WAN

RADIO MODULE

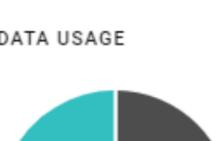
LPWA R2C

DATA USAGE 

### LAN

Wi-Fi

Wi-Fi AP 2.4GHz [DEFAULT PLAN]  
2.4GHz 0

DATA USAGE 

# Dashboard



Device model, serial number, AOS version

1

> Status / Monitoring / System Networking Services

Dashboard Device Information Monitoring Storage Wear WAN Voltage & Temperature Radio Module Wi-Fi Ethernet Interfaces

**DEVICE INFO**



XR80  
6Q1065006502AC24  
OS Version 3.0

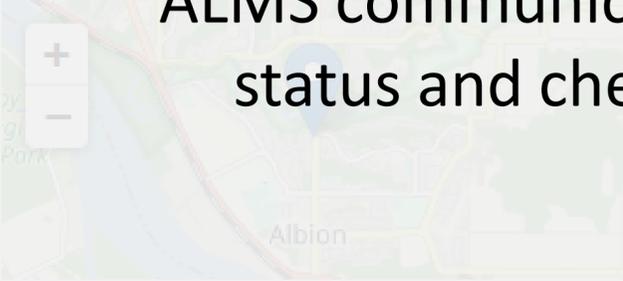
**ALMS COMM. STATUS**   
LAST 5 minutes ago  
NEXT 00:09:57 (ETA)   
[CHECK NOW](#) 

**SYSTEM TEMPERATURE**  
 60° C | 140° F

**Location**

LATITUDE	LONGITUDE
49.19647	-122.55718

**ALTITUDE** 23 m  
**SATELLITES** 17



**Last Login**

ON	February 28, 2022 11:51:42 PM
IP	172.25.0.100
FAILURES	0

**WAN**

RADIO MODULE: Cellular, Fido

**LAN**

Wi-Fi: Wi-Fi AP 2.4GHz [DEFAULT LAN], 2.4GHz, 0  
Wi-Fi 2.4GHz SSID 1 [DEFAULT LAN]

ALMS communication status and check

2

# Dashboard



Location details **3**  
(implies working status)

The screenshot displays the 'Status / Monitoring / System' page in the XR Solution Administrator interface. The breadcrumb trail includes 'Dashboard', 'Device Information', 'Monitoring', 'Storage Wear', 'WAN', 'Voltage & Temperature', 'Radio Module', 'Wi-Fi', and 'Ethernet Interfaces'. The main content area is divided into several sections:

- DEVICE INFO:** Shows a device image, model 'XR80', ID '6Q1065006502AC24', and 'OS Version 3.0'.
- ALMS COMM. STATUS:** Indicates 'LAST 5 minutes ago' and 'NEXT 00:09:57 (ETA)' with a 'CHECK NOW' button.
- SYSTEM TEMPERATURE:** Shows '60° C | 140° F'.
- Location:** A map of Albion, Ontario, with a blue location pin. To the left of the map, the following coordinates are listed:

LATITUDE	LONGITUDE
49.19647	-122.55718

ALTITUDE	SATELLITES
23 m	17
- Last Login:** A table showing login details:

ON	February 28, 2022 11:51:42 PM
IP	172.25.0.100
FAILURES	0
- WAN:** Includes 'RADIO MODULE' (Cellular, Fido) and 'DATA USAGE' charts.
- LAN:** Includes 'Wi-Fi' settings (2.4GHz) and 'DATA USAGE' charts.

# Dashboard

Wi-Fi AP status including SSID, client count, segment (Bridge)

Cell network status hover over the "i" **4**

WAN Wi-Fi (STA) status **5**

Ethernet WAN status **6**

The dashboard is divided into two main sections: WAN and LAN. The WAN section includes a 'RADIO MODULE' area with three cellular providers: Fido, ROGERS, and AT&T (marked as 'ROAMING'). Below this is a 'Wi-Fi' section showing 'Wi-Fi Client 2.4GHz' and 'LabNetAX (wpa3)'. The 'ETHERNET PORT(S)' section lists 'Ethernet 3' and 'XP Ethernet'. The LAN section features a 'Wi-Fi' area with six APs: 'Wi-Fi AP 2.4GHz', 'Wi-Fi 2.4GHz SSID 1', 'Wi-Fi 2.4GHz SSID 2', 'MySSID', 'Wi-Fi 5GHz SSID 1', and 'Wi-Fi 5GHz SSID 2'. Below this are 'ETHERNET PORT(S)' for 'Ethernet 1 (5G)' and 'Ethernet 2', and a 'USB PORT(S)' section for 'USBNet'. Two 'DATA USAGE' pie charts are present, one for WAN and one for LAN. The WAN chart shows Cellular (red), Ethernet (black), and Wi-Fi (teal). The LAN chart shows USB (orange), Ethernet (black), and Wi-Fi (teal). Red callout boxes with numbers 4, 5, 6, 7, and 8 point to specific elements: 4 points to the 'i' icon in the Fido cellular status; 5 points to the 'LabNetAX (wpa3)' Wi-Fi client status; 6 points to the 'Ethernet 3' WAN port status; 7 points to the WAN 'DATA USAGE' pie chart; 8 points to the 'Ethernet 1 (5G)' LAN port status.

Ethernet LAN status including segment

# Status Information Apart from the Dashboard

Question	Where to look
Is my Cell link connected?	Status* > System > Radio Module > Cellular : Adapter Status
Is my Station Wi-Fi connected?	Status* > System > Wi-Fi : Clients : States
Is my GPS/Location working?	Status* > Services > Location
Is my VPN connected?	Networking > VPN > IPsec Tunnels : Status ( <b>Dashboard in 4.0</b> )
Am I reporting to ALMS?	System > <b>ALMS</b> > LWM2M (changed in 4.0)
Is my Wi-Fi broadcasting?	Status* > System > Wi-Fi : Wi-Fi AP
How many clients are connected?	Status* > Networking > Neighbor

Status\* is used as a short form for Status / Monitoring



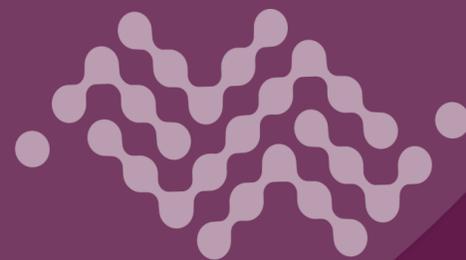
# Specific WAN Link Details

Question	Where to look
Will this link support IPv4, IPv6 or both?	WAN table (Status* > System > WAN)
What is my current IP address on a specific link?	WAN table (Status* > System > WAN)
What DNS servers are being used on a specific link?	WAN table (Status* > System > WAN)
What link is currently used for traffic?	Multi-WAN table (Status* > Networking > Multi-WAN)
What phone number is associated with a given cellular link?	Radio Module status (Status* > System > Radio Module)
Am I connected on 5G?	Radio Module status (Status* > System > Radio Module)
What channel is my Wi-Fi using?	Wi-Fi status (Status* > System > Wi-Fi)

Status\* is used as a short form for Status / Monitoring

# BASIC CONFIGURATION SETTINGS

Definition of Basic Settings  
Procedures for Each Setting



# AirLink OS Basic Configuration Settings



Things you should be able to do in AirLink OS:



Change a Cellular APN



Change LAN addressing



Set up Wi-Fi Station (client) profile



Set up Wi-Fi Access Point (SSID, security, band)



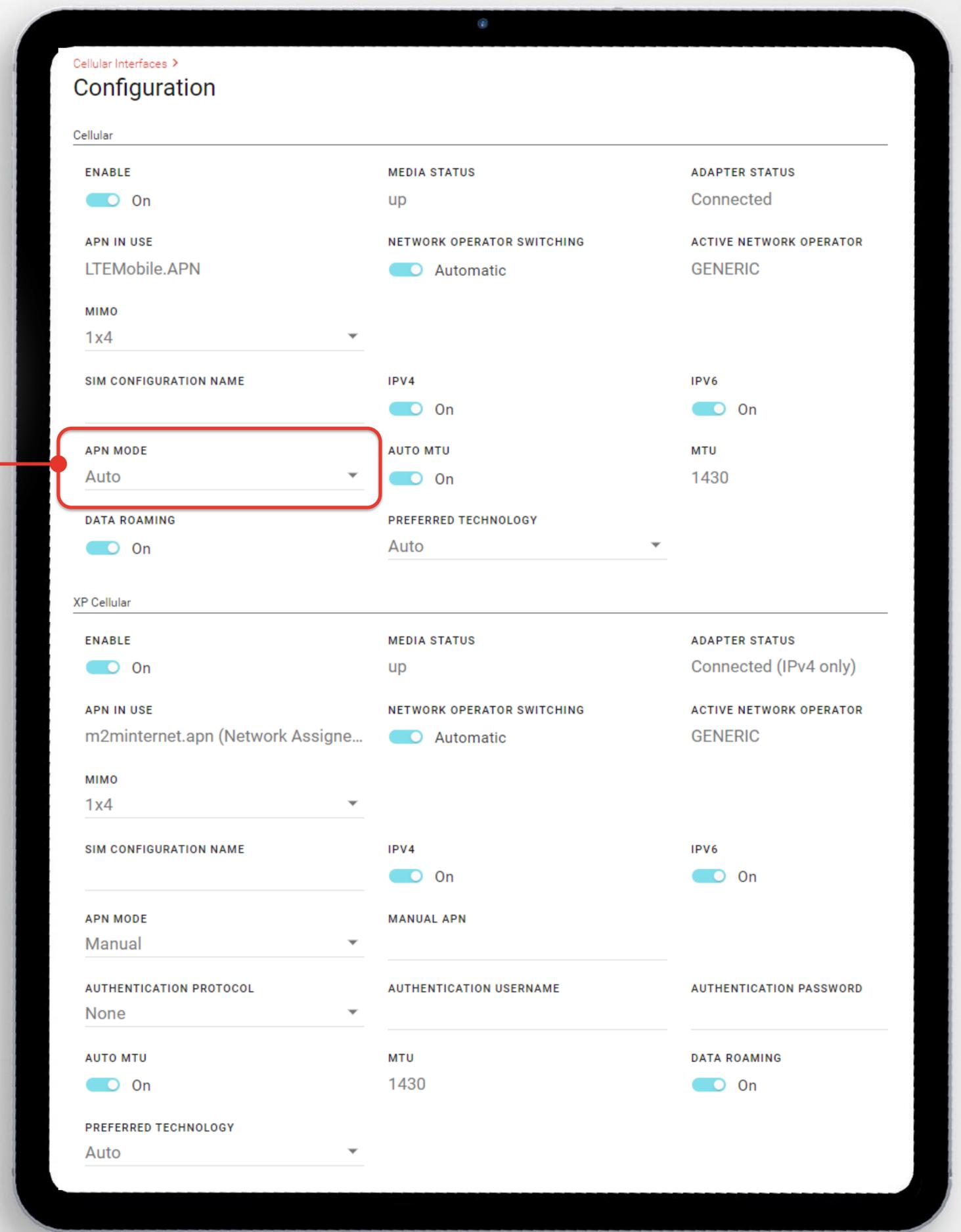
Set router shutdown (time, voltage)



Set up location reporting to CAD

# Cellular APN

“Auto” APN mode determines the Primary Operator and uses a look-up table to provide the most common APN.



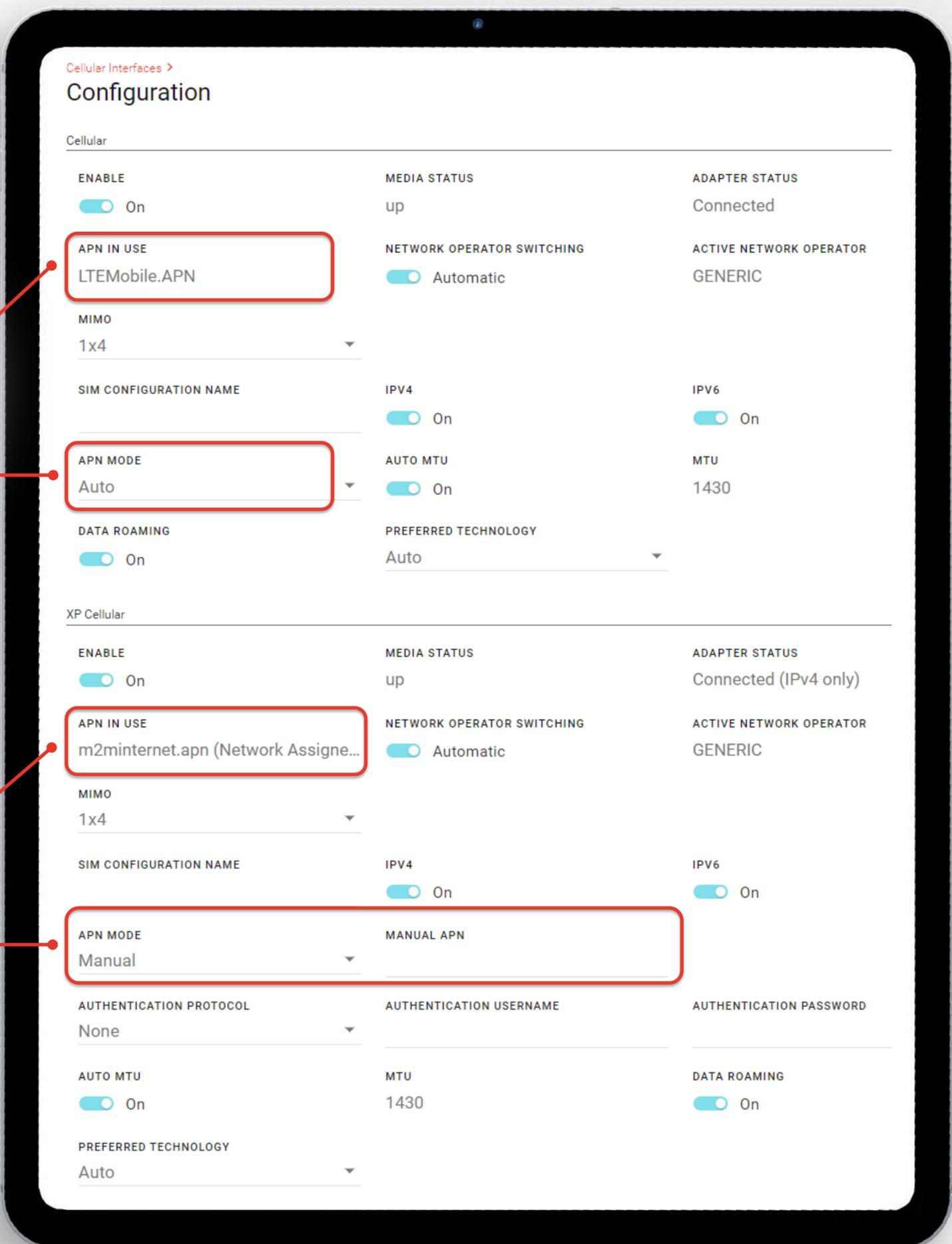


# Cellular APN

This example shows

One instance where the Auto APN is working

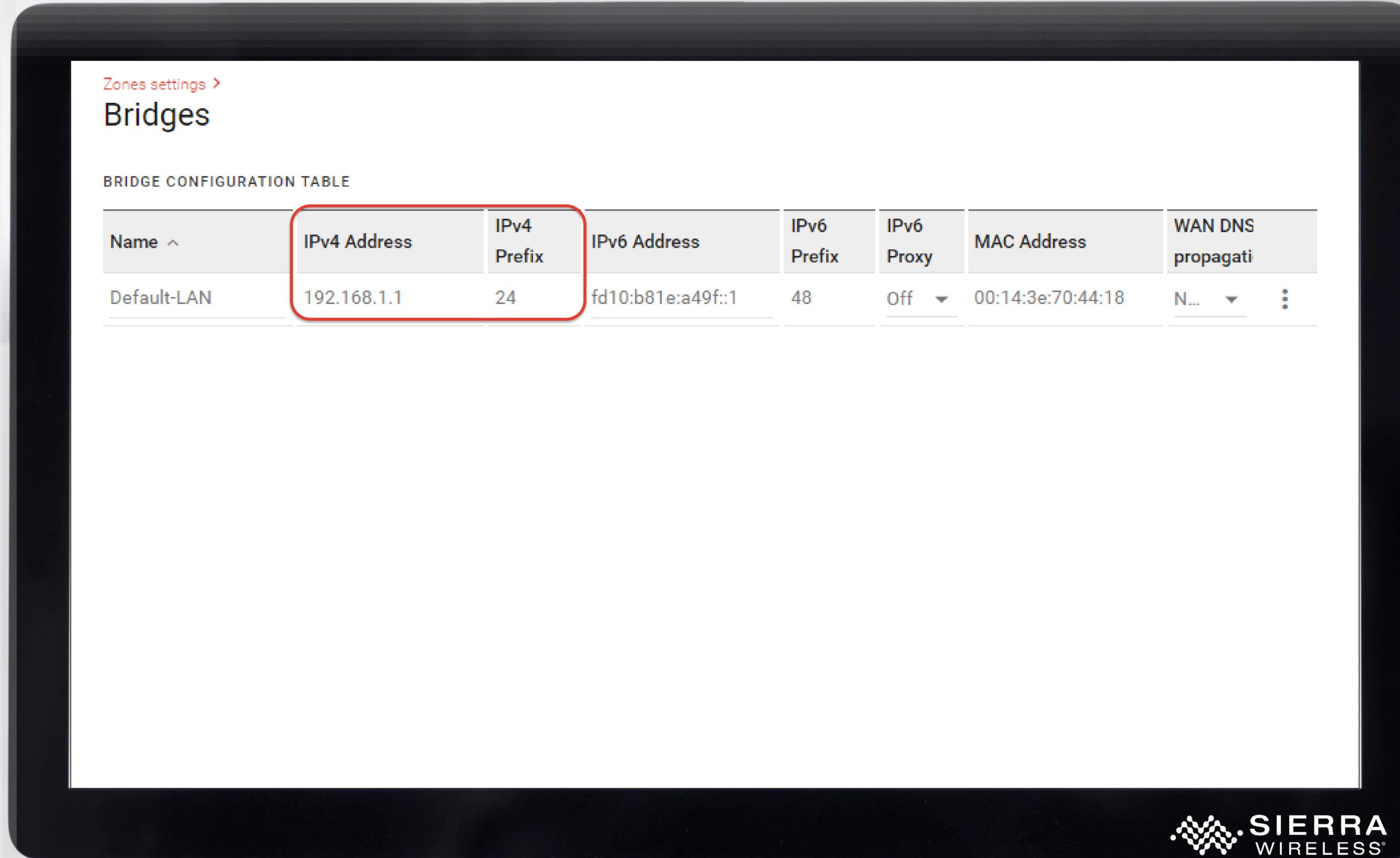
One instance where an APN is assigned by the network



# Change LAN Addressing

Set by default to:

- 192.168.1.1  
(Default Gateway)
- 192.168.1.0/24  
(Network)



Zones settings >  
Bridges

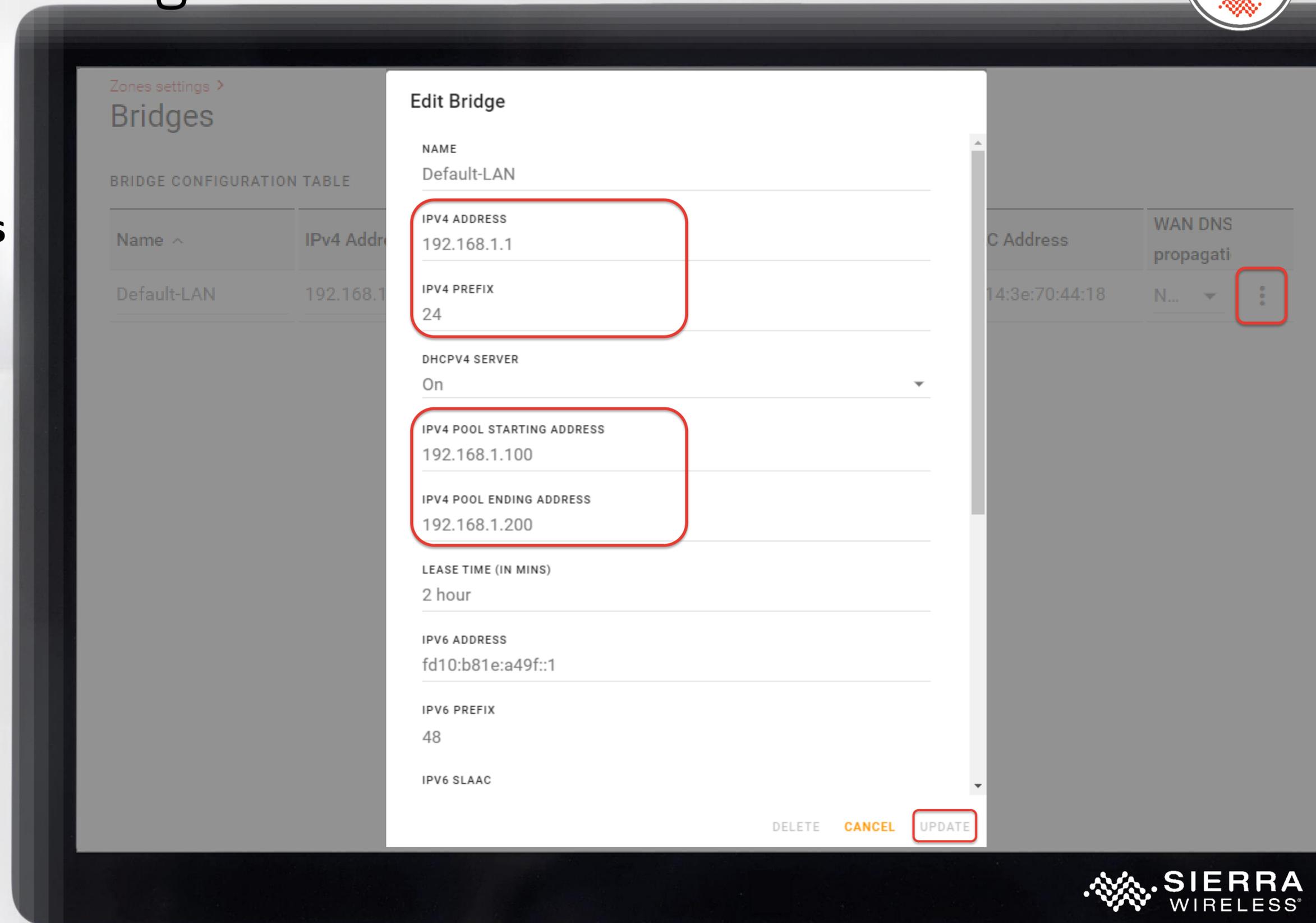
BRIDGE CONFIGURATION TABLE

Name ^	IPv4 Address	IPv4 Prefix	IPv6 Address	IPv6 Prefix	IPv6 Proxy	MAC Address	WAN DNS propagati
Default-LAN	192.168.1.1	24	fd10:b81e:a49f::1	48	Off ▼	00:14:3e:70:44:18	N... ▼ ⋮

# Change LAN Addressing

To change the addressing of the Default LAN:

1. Go to **Networking > Zones settings > Bridges**
2. In the **Bridge Configuration Table** click the three dots
3. Provide the new intended IPv4 address and prefix
4. Provide the new DHCP starting and ending addresses
5. Click **Update** to save and take effect immediately

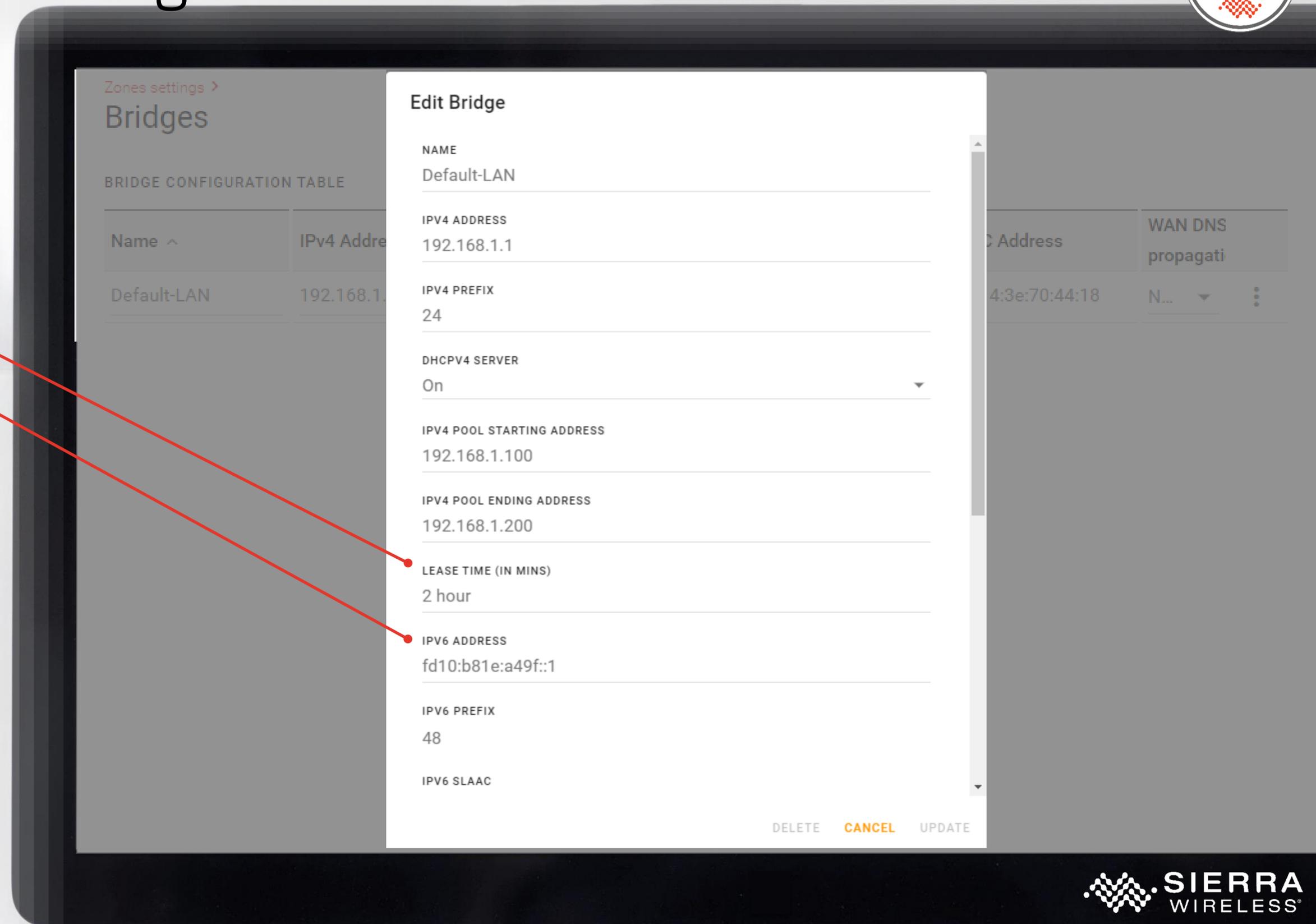


# Change LAN Addressing

There are other settings that you can change including:

- **DHCP Lease Time**
- All IPv6 properties

but nothing further is required change the addressing of the existing IPv4 Default LAN



# Set Up WAN/STA Wi-Fi

Recommended workflow:

1. Go to **Hardware Interfaces > Wi-Fi Interfaces**
2. Enable the 2.4 and/or 5GHz clients
3. Look for desired SSIDs in the **Scanned SSIDs** table
4. Click the **+** button for all desired SSIDs and enter the password  
*This was improved in 4.0.*  
*Those SSIDs will be written to the Client SSID Database and used by the radio(s) to connect right away.*

The screenshot displays the 'WI-FI INTERFACES' configuration page. A red circle '1' highlights the 'WI-FI INTERFACES' header. A red circle '2' highlights the 'Enable' column, where the 'On' toggle for both 2.4GHz and 5GHz Client modes is selected. Below this, the 'USE ADDITIONAL SSIDS' and 'DISABLE APS ON CLIENT ASSOCIATION' options are shown as 'Off' and 'Disabled' respectively. The 'WI-FI RADIO CONFIGURATION' table shows settings for 2.4GHz and 5GHz radios, including BSSID, Physical mode, Channel Bandwidth, MIMO, DFS Channels, and Transmit Power Level. Below this is the 'Client SSID Database' section, which has a 'SELECTED SSIDS' table with one entry 'LabNetAX' and a 'CREATE SSID' button. The 'SCANNED SSIDS' table lists various SSIDs, with 'LabNetAX' highlighted by a red box and a red circle '3'. A red circle '4' highlights the '+' button next to the 'LabNetAX' entry in the scanned SSIDs table.

Enable	Status	Name	MAC Address	Mode	LAN Segment
<input checked="" type="checkbox"/> On	Connected: Lab...	Wi-Fi Client 2.4G...	00:14:3e:71:d9:66	Client	
<input type="checkbox"/> Off	Disabled	Wi-Fi AP 2.4GHz	06:14:3e:71:d9:66	Access Poi...	Defau...
<input checked="" type="checkbox"/> On	Connected: Lab...	Wi-Fi Client 5GHz	00:14:3e:71:d9:64	Client	
<input type="checkbox"/> Off	Disabled	Wi-Fi AP 5GHz	06:14:3e:71:d9:64	Access Poi...	Defau...

Radio	Radio BSSID	Physical	Channel Bandwidth	MIMO	DFS Channels	Transmit Power Level
Wi-Fi 2.4GHz	00:14:3e:7...	b/g/n/...	40 MHz	4x4		100%
Wi-Fi 5GHz	00:14:3e:7...	n/ac/ax	80 MHz	4x4	<input type="checkbox"/> Disabled	100%

SSID	Security Mode	Status	Priority
LabNetAX	wpa2	online	

SSID	Security Mode	Bands
Click For Virus	wpa2	2.4GHz + 5GHz
Green	wpa2	2.4GHz
LabNetAX	wpa2	2.4GHz + 5GHz
psgrwifi	wpa2	5GHz
TELUS0435	wpa2	2.4GHz

# If you do not see an expected Wi-Fi network

Channels available for outdoor use vary by country

XR Series routers are currently locked down by region

DFS channels are disabled by default



The XR Series have been certified as outdoor-use routers. This limits the available 5GHz Wi-Fi channels



DFS channels require special handling to ensure they do not interfere with radar installations

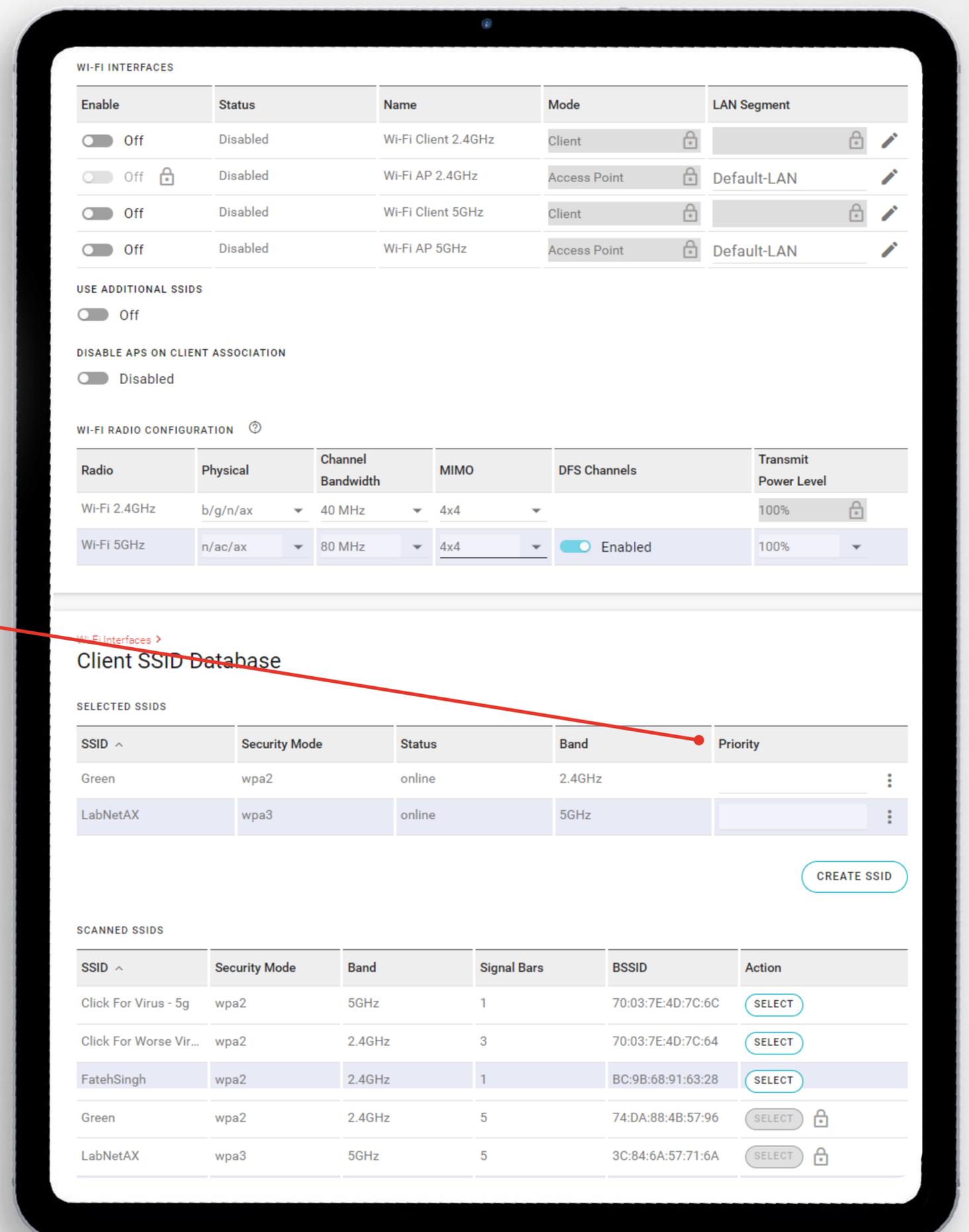
# Set Up WAN/STA Wi-Fi

Any available STA network will automatically be joined.

If there are multiple profiles for a single band, the first profile found connects.

Use **Priority** to rank multiple networks in the desired order.

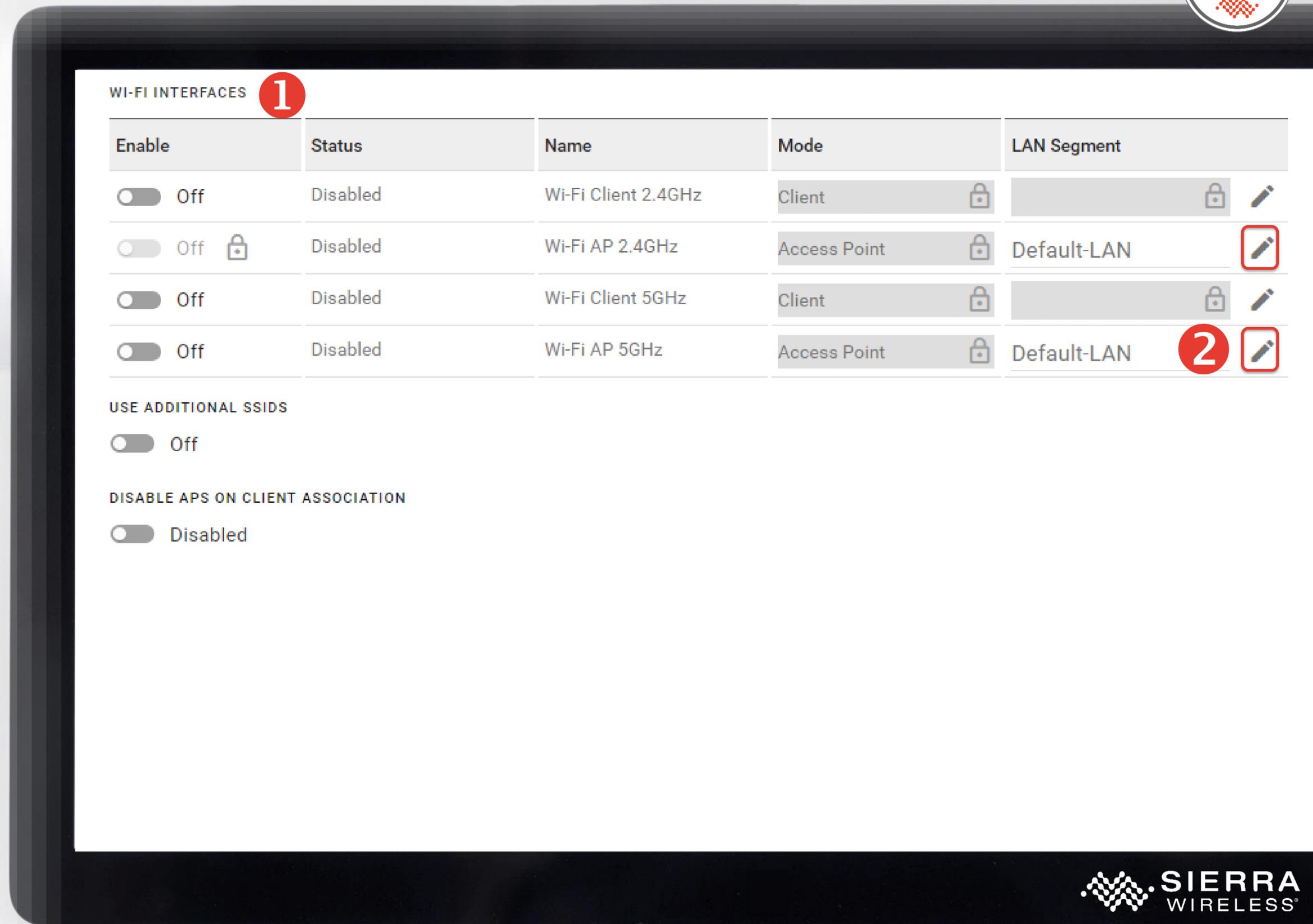
**i**  
5GHz STA will be preferred over 2.4 GHz STA for traffic



# Set Up Wi-Fi Access Point

Recommended workflow:

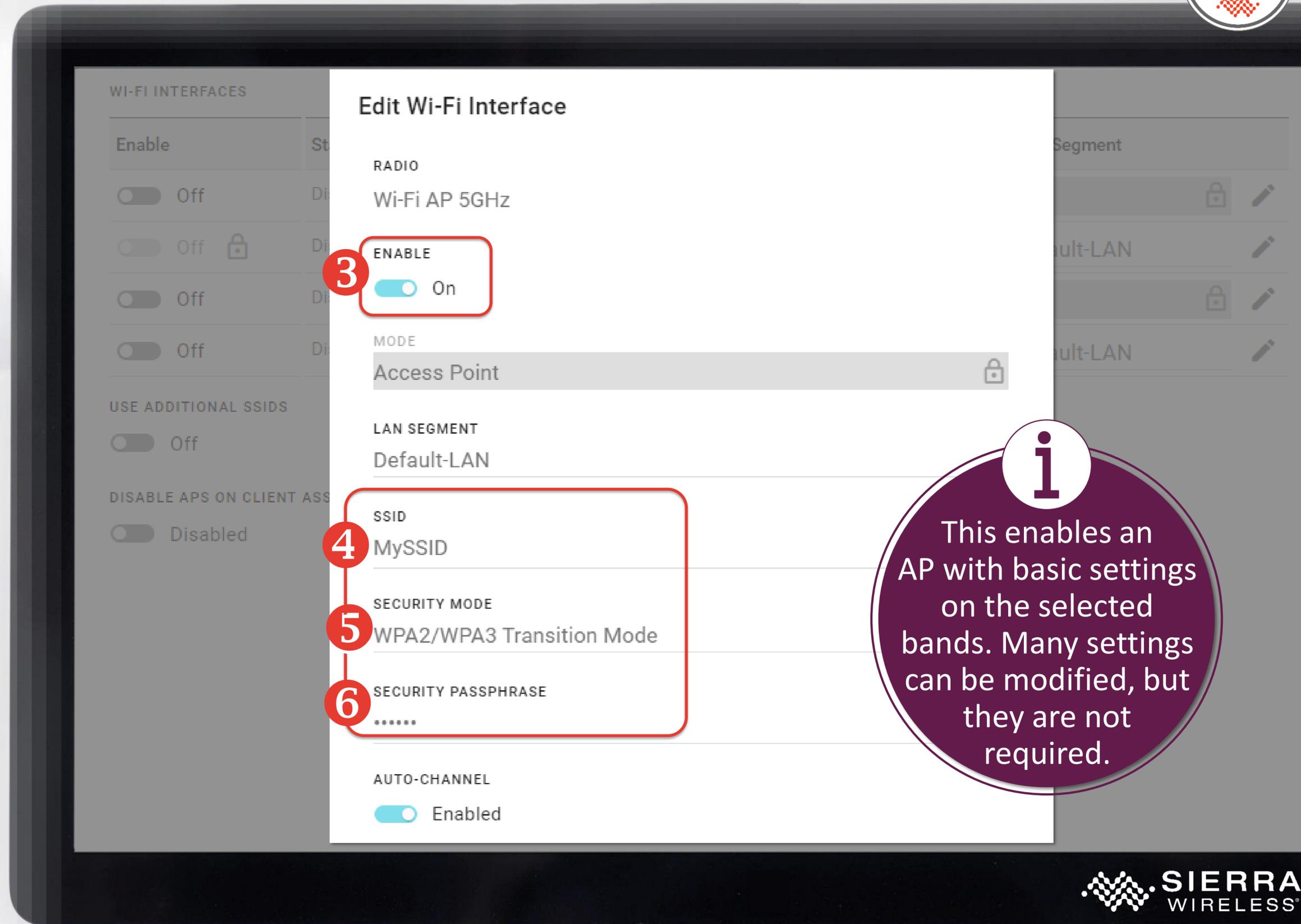
1. Go to **Hardware Interfaces > Wi-Fi Interfaces**
2. Click on the pencil for the 2.4 and/or 5GHz Access Points.  
(The **Edit Wi-Fi Interface** screen appears.)



# Set Up Wi-Fi Access Point

Recommended workflow:

3. Click **Enable**
4. Enter your preferred **SSID**
5. Select the desired **Security Mode**
6. Enter the passphrase
7. Click **Update** to save and enable



**i** This enables an AP with basic settings on the selected bands. Many settings can be modified, but they are not required.

# Set Up Router Shut-Down

To change the shut-down thresholds:

1. Go to **System > MCU > Voltage Threshold**
2. In the **Standby Voltage** field, enter the voltage at which to shut down
3. In the **Resume Voltage** field, enter the voltage at which the router should start up again
4. Under **Power Management**, in the **Power Sources** table, click on the three dots on the Ignition line

The screenshot displays the 'Voltage Threshold' configuration page under 'MCU > Power Management'. It includes an 'ENABLE' toggle (checked), a 'DELAY' of 30 s, a 'STANDBY VOLTAGE' of 9 V, and a 'RESUME VOLTAGE' of 10.5 V. Below this is the 'Power Management' section with 'VERSION' 01.04.8fae24f3a5 and 'STANDBY LED' toggle (checked). At the bottom is a 'POWER SOURCES' table with one entry for 'Ignition' which is 'Enabled' and 'On'. A red box highlights the three-dot menu icon on the right of the 'Ignition' row.

**i**

By default, the router starts based on ignition sense (white wire) and shuts down 3 seconds after ignition off or when voltage drops below 9 VDC and resume operation at 10.5 VDC.

# Set Up Router Shut-Down

To change the shut-down thresholds:

- 5. In the **Update Edit Source Delay** dialog box, type the number of seconds the router should maintain operation after ignition off

The screenshot shows the XR Solution Administrator interface. At the top, there are two tabs: 'Voltage Threshold' and 'Power Management'. The 'Voltage Threshold' tab is active, showing settings for 'ENABLE' (Enabled), 'DELAY' (30 s), and 'STANDBY VOLTAGE' (9 V). Below this, the 'Power Management' tab is visible, showing 'VERSION' (01.04.8fae24f3a5) and 'STANDBY LED' (Enabled). A dialog box titled 'Update Edit Source' is open, showing 'POWER SOURCE' (Ignition), 'ENABLED' (Enabled), and 'DELAY' (3 s). The 'DELAY' field is highlighted with a red box, and a red circle with the number '5' is next to it, indicating the step number.

# Set Up Location Reporting



Location services are enabled by default, but you need to be able to specify certain details to set up CAD/AVL reporting for an end user.

General **Reporting**

Location >  
**Reporting**

TAIP ID

---

LOCAL REPORTING

Service ^	Destination IPv4 Address (Multicast Only)	Destination Ports	Destination LAN Segments	Reporting Interval	Report Type	Sentences
UDP B... ▾		65...	...	5 s	NMEA ▾	GGA GSA RMC ▾

REMOTE REPORTING SERVER

Protocol ^	Destination Hostname or IP	Destination Port	Reporting Interval	Report Type	Sentences
UDP ▾		22335	5 s	NMEA ▾	GGA GSA RMC ▾

# Set Up Location Reporting

To set up location reporting, you need to know:

- A. TAIP ID  
(optional, if using TAIP)
- B. Reporting target (local or remote address, including network ports)
- C. Protocol and sentences



General **Reporting**

Location > Reporting

TAIP ID **A**

LOCAL REPORTING

Service ^	Destination IPv4 Address (Multicast Only)	Destination Ports	Destination LAN Segments	Reporting Interval	Report Type	Sentences
UDP B... <b>B</b>		65...	...	5 s	NMEA <b>C</b>	GGA GSA RMC

REMOTE REPORTING SERVER

Protocol ^	Destination Hostname or IP	Destination Port	Reporting Interval	Report Type	Sentences
UDP <b>B</b>		22335	5 s	NMEA <b>C</b>	GGA GSA RMC

# Set Up Location Reporting

To set up CAD/AVL reporting:

1. Go to **Services > Location > Reporting**
2. Provide the details according to the information available.

**i**  
 Future releases or AirLink OS will include additional options.

**1**

Location > Reporting

TAIP ID

**2**

**LOCAL REPORTING**

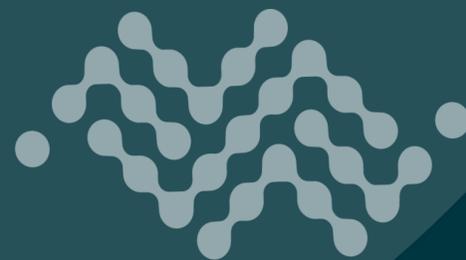
Service ^	Destination IPv4 Address (Multicast Only)	Destination Ports	Destination LAN Segments	Reporting Interval	Report Type	Sentences
UDP B...		65...	...	5 s	NMEA	GGA, GSA, RMC

**REMOTE REPORTING SERVER**

Protocol ^	Destination Hostname or IP	Destination Port	Reporting Interval	Report Type	Sentences
UDP		22335	5 s	NMEA	GGA, GSA, RMC

# WORKING WITH TEMPLATES: ON ROUTER AND IN ALMS

About AirLink OS Templates  
Modes for Creating Templates  
When to Use Each Mode



# What You Can Do with Templates, and From Where

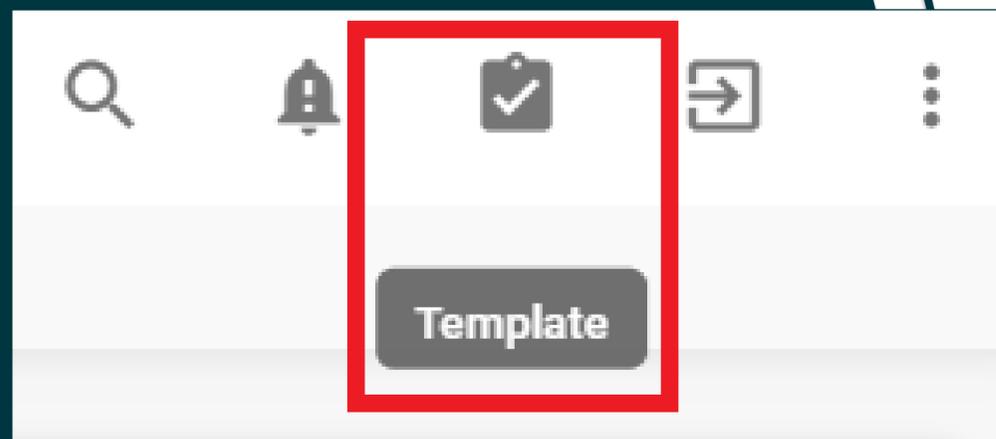
What you can do	Locally	From ALMS Configuration view	From ALMS Develop > Templates
Create a complete template from router	Yes	Yes	Yes
Create a partial template	Yes	Yes	Yes
Save a template to local file	Yes	Yes	No
Save a template to ALMS account	No	Yes	Yes
Modify a template	Yes	Yes	Yes
Load a template from local file	Yes	Yes	No
Apply an ALMS account template	No	No	Yes
When we will cover	This week	Next week	

# About AirLink OS Templates and Passwords

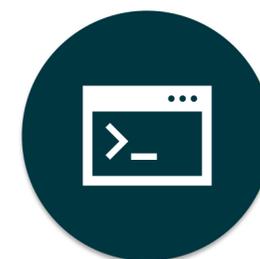
For security purposes,  
passwords are **not**  
normally saved in template files.

ALMS provides a workflow  
for secure mass deployment  
of passwords to routers,  
including unique password  
per router.

# About AirLink OS Templates



Templates can be saved and loaded locally



JSON (XML format)

Different from  
ALEOS or MGOS



Template creation  
process has evolved:  
Look and feel and  
capability



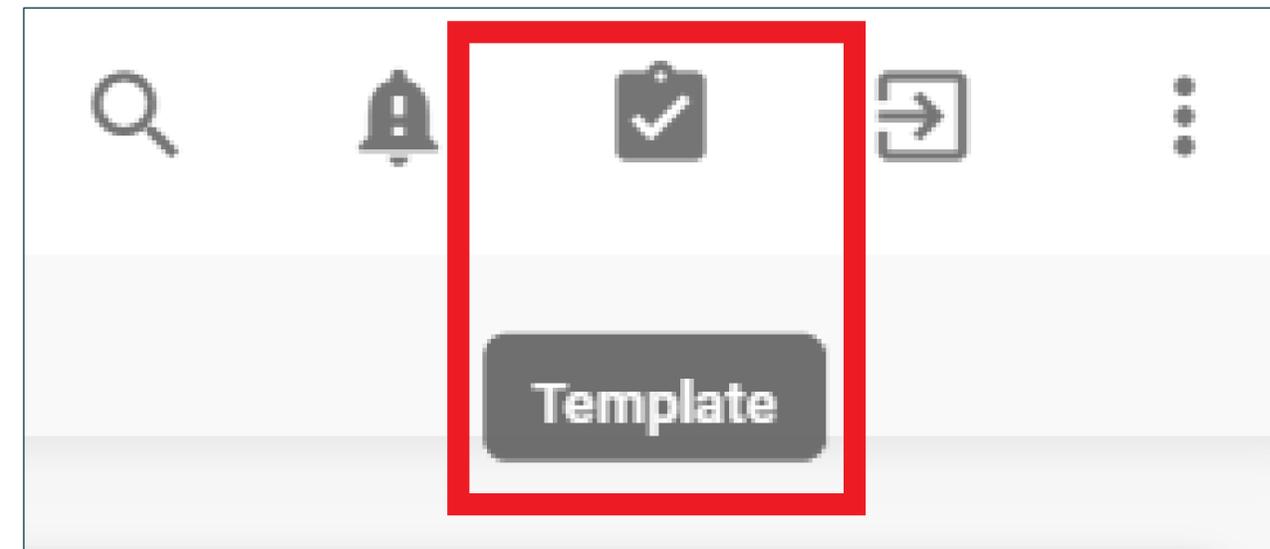
Last week's lab  
covered setting  
configuration  
parameters  
manually in  
sequence

# About AirLink OS Templates: Working Locally

Click the Clipboard/Checkmark icon to enter Template mode.

Local template creation is fine for prototyping and testing

You can apply a template to a router and then enter Configuration mode through ALMS to save a template for mass deployment



**i**

There are new tools for creating and working with templates locally and within ALMS

# Template Mode

Template mode in AirLink OS is clearly indicated by bright blue frame and bar

SIERRA WIRELESS AirLink

You are in template mode.

> Hardware Interfaces / General Cellular Interfaces Wi-Fi Interfaces Ethernet Interfaces USB Interfaces Serial Interfaces

Configuration SSID Database

REGION

US: United States of America

OUTDOOR

Disabled

WI-FI INTERFACES

Template choices	Enable	Status	Name ^	Antenna Bank	Mode	LAN Segm
<input type="checkbox"/>	<input type="checkbox"/> On	XR90-1 (wp...	Wi-Fi A 5GHz		<input type="checkbox"/> Acces	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/> Off	Disabled	Wi-Fi AP 2.4...	<input type="checkbox"/> A	<input type="checkbox"/> Ac	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/> Off	Connected: ...	Wi-Fi B 5GHz		<input type="checkbox"/> Client	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/> On	Disabled	Wi-Fi Client ...	<input type="checkbox"/> B	<input type="checkbox"/> Cli	<input type="checkbox"/>

TAGS

CANCEL  > 2 field(s) templated

EXPORT TO FILE

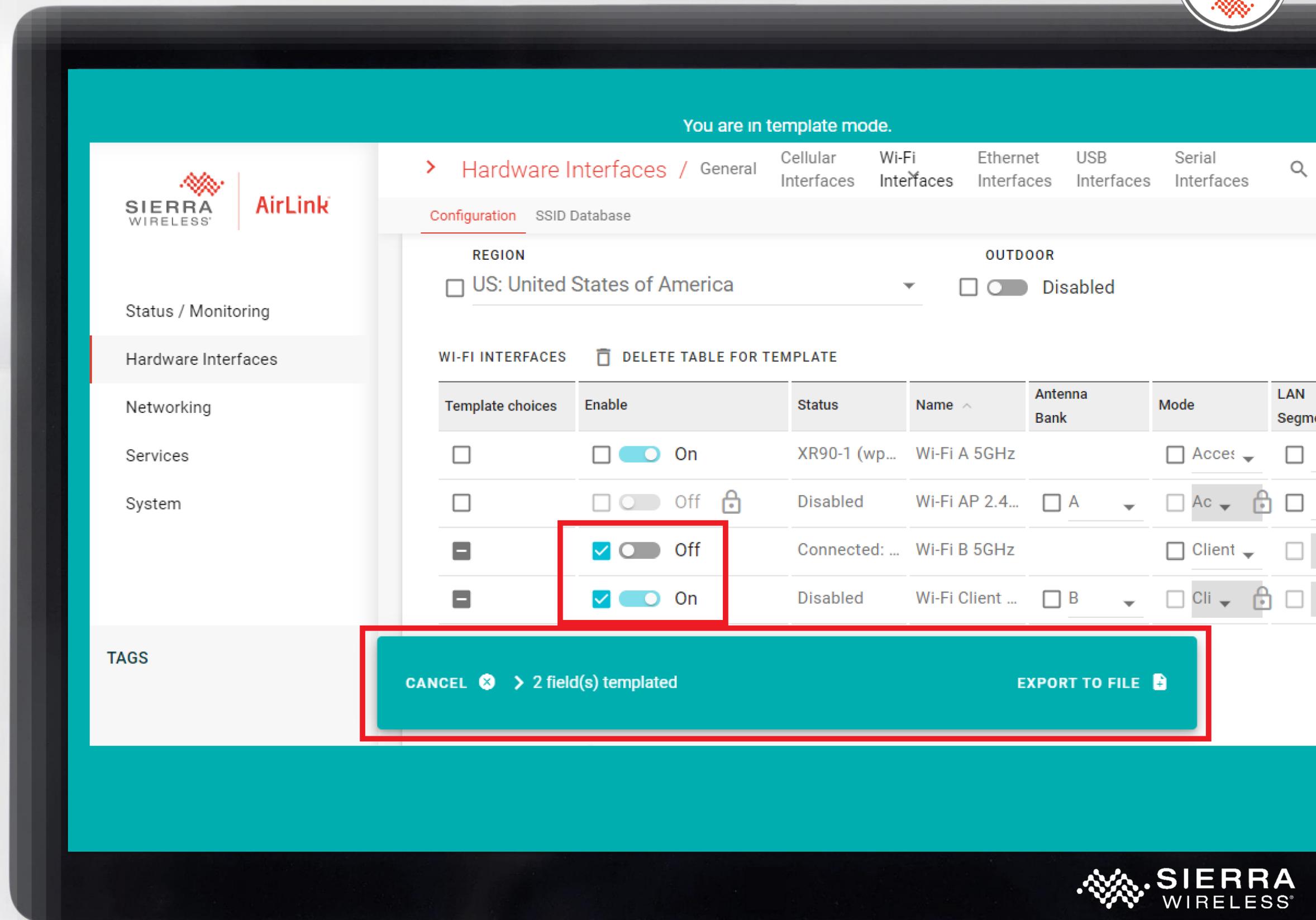
# Template Mode

Changes are not applied to the system while you are creating the template

Working locally on the router, templates can only be saved to a local file

Locally saved template can be:

- Reloaded locally and modified to add additional settings
- Loaded in ALMS Configuration view and saved to ALMS account for deployment



# Mode 1: Create a Template from Scratch

Switches to Template mode and lets you specify and capture configuration changes

Capture settings two ways:

1

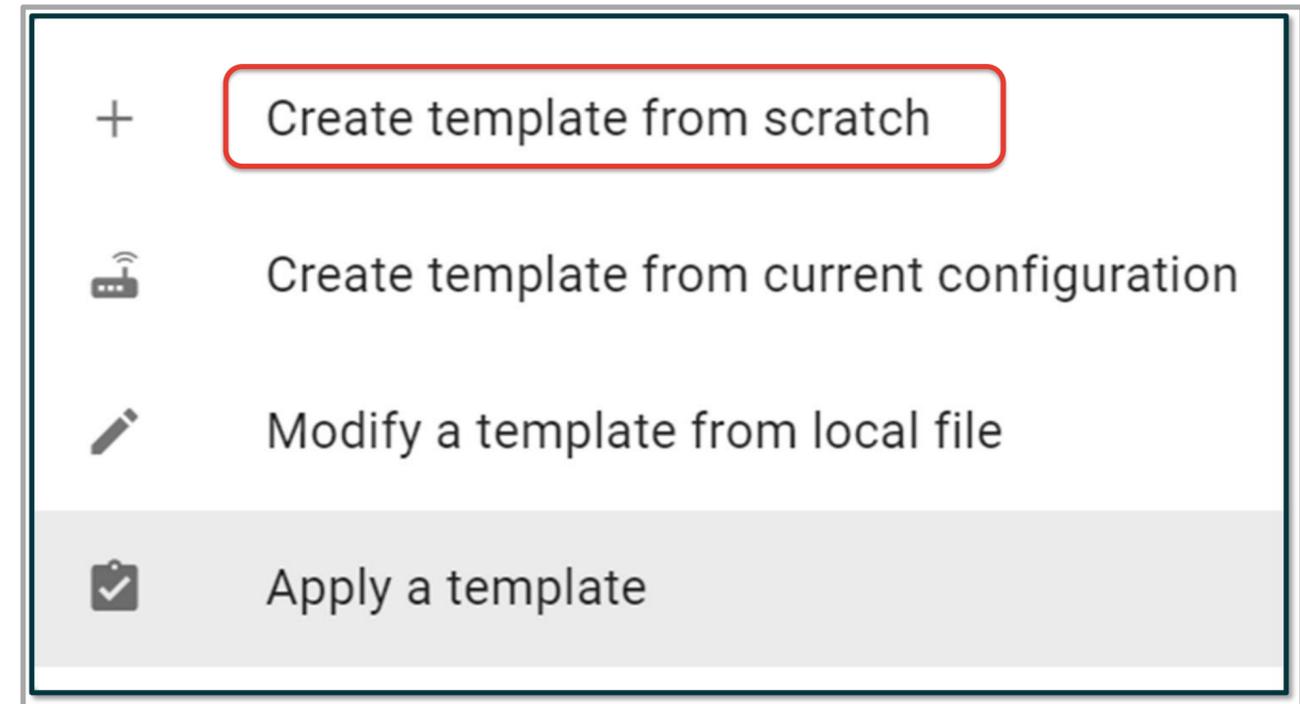
Choose settings already present on router

2

Make changes from the current configuration

Save changes when all template elements are captured

-  Changes are not applied to the system
-  *This is like creating a partial template, previously only available on management platforms*



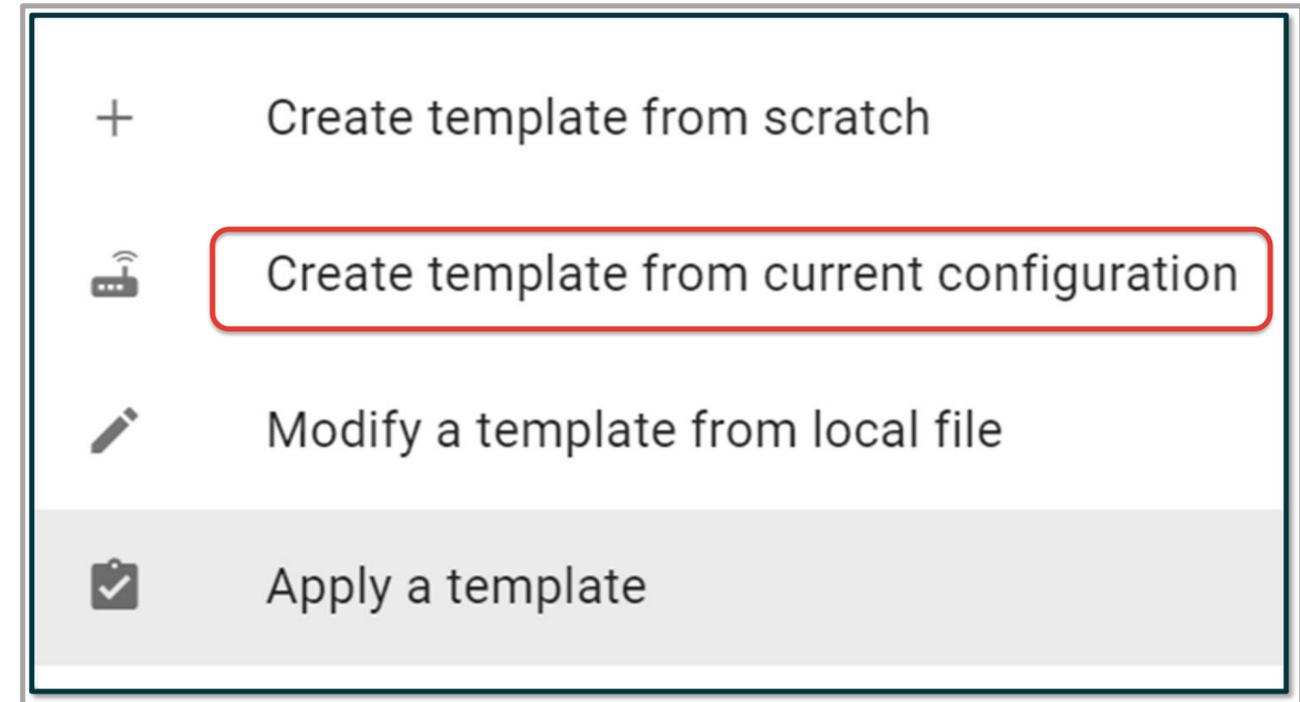
# Mode 2: Create a Template from Current Configuration



Used for a full device configuration

**i** Similar to creating and saving a complete template in ALEOS or MGOS but with one significant difference: it only captures the **non-default** settings.

**i**  
This feature may not work with engineering builds of AirLink OS.



# Mode 3: Modify a Template from a Local File

Very similar to **Create template from scratch**

Apply a saved template as a starting point and modify it by adding, removing, or revising changes

Existing elements of the template are clearly identified for easy access



You are in template mode.

SIERRA WIRELESS | AirLink

> Hardware Interfaces / General Cellular Interfaces Wi-Fi Interfaces Ethernet Interfaces USB Interfaces Serial Interfaces

Configuration

Configuration	Cellular Interfaces	Wi-Fi Interfaces	Ethernet Interfaces	USB Interfaces	Serial Interfaces
<input type="checkbox"/> Wi-Fi AP 5GHz	<input type="checkbox"/> On	<input type="checkbox"/> Default-...			
<input checked="" type="checkbox"/> Wi-Fi Client 2.4GHz	<input checked="" type="checkbox"/> On	<input type="checkbox"/> [locked]			
<input type="checkbox"/> Wi-Fi Client 5GHz	<input type="checkbox"/> On	<input type="checkbox"/> [locked]			
<input type="checkbox"/> XP Cellular	<input type="checkbox"/> On	<input type="checkbox"/> [locked]			
<input type="checkbox"/> XP Ethernet	<input type="checkbox"/> On	<input type="checkbox"/> [locked]			

Cellular Interfaces > Configuration

Cellular

ENABLE MEDIA STATUS

UNSELECT Templated Wi-Fi Interfaces ▾  
Enable: On

UNSELECT Templated Selected SSIDs ▾  
SSID: Green  
Security Mode: WPA2  
Security Passphrase: 10719Green

CANCEL ✕ ^ 4 field(s) templated EXPORT TO FILE 📄

A template within a  
template

SIM template

*Added in 3.1, enhanced in 4.0*

There is now a specific SIM template within AirLink OS that must be used to set up connections that do not work using Auto APN mode.

Using PLMN (Primary Land Mobile Network) is recommended for SIM templates, but other options are available.

See the Q4/4.0 update training for full details of the SIM template.

# WHAT'S NEXT

Knowledge Check

Online Quiz

Lab Exercise #2 and Submission



# What You Should Know

- What information is on what labels, and why
- Location of specific status information in AirLink OS:  
Link and interface states | Network states (LAN and WAN) | Current routing status | Subsystem states: location, CPU, temperature
- How to perform basic configuration settings
- How to create, save, and load templates locally
- How to perform basic operations

# Introduction to Lab Exercise #2

In this lab exercise you will:

- Create and save a configuration template locally
- Perform a factory reset locally on the XR Series router
- Deploy a configuration template locally
- Perform a software upgrade locally (downloaded from Source)
- Back out of a software upgrade
- Capture log files locally
- Use network troubleshooting tools in AirLink OS
  - Ping
  - IP Capture in basic mode



# Take the Online Quiz

As part of the certification program, you are required to demonstrate mastery of requirements to work with the XR Series routers



Complete the online quiz with >80% prior to the start of the next session



You do not need to complete the lab exercise prior to taking the quiz, because it is based on the presentation content

**END OF SESSION 2**

**Thank you!**

