IoTBuddy 154-0046-0B Web Configuration Manual User Guide

Contents

IoTBuddy

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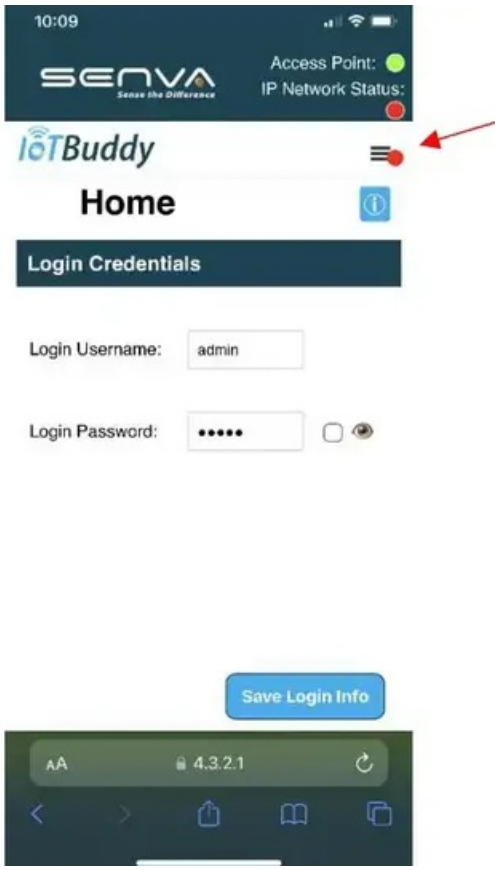


Product Information

Specifications:

- **Model**: IoTBuddy
- **Release Date**: 10/27/23
- **Connection Options**: Ethernet, Power over Ethernet (PoE), Wi-Fi
- Supports Modbus and analog devices

Product Usage Instructions

Wi-Fi Connection:
Follow the steps below to connect your IoTBuddy device to a Wi-Fi network:

Connect using QR Code to Access Point (AP):

1. Scan the QR code on the label of the IoTBuddy device to join its hosted network.
2. Open a browser and go to https://4.3.2.1.
3. A non-private connection status may appear; approve and visit the website.
    - You may need to refresh the page after clicking the visit website link.
4. Log in using the default credentials: admin / admin.

Manually Connect to Access Point (AP):

1. Open your Wi-Fi network settings and find the IOTB network that matches the serial number on your IoTBuddy label.

2. Enter the network security key: password.
3. Go to https://4.3.2.1.
4. Your browser may indicate a non-private connection. Find the proceed button near the bottom of the warnings.
    - You may need to click on advanced or show more first.
5. Log in using the default credentials: admin / admin.
    - You can change your username and password on the Login Info screen.
    - Save the changes, log out, and log in again with the new credentials.

Network Configuration:

1. Enter the SSID and credentials of the Wi-Fi network you want to connect IoTBuddy to.
2. You can change the access point password on this page if needed.
3. If you prefer a static IP assignment, enter the details in the Addressing section.

Frequently Asked Questions (FAQ):

1. **Q: How long does IoTBuddy host an access point?**
   A: IoTBuddy hosts an access point for 5 minutes after being powered on. To re-enable the access point, press the button on the device

Web Configuration Manual
IoTBuddy Senva Sensors 1825 NW 167Th
Place Beaverton, OR 97006

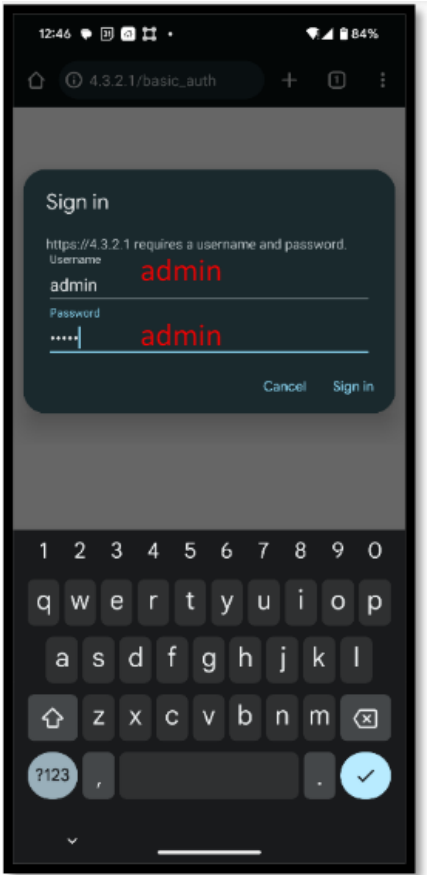
Rev.	Release Date	By	Description of Change	ECR
0A			Initial Release	—
0B	10/27/23		Updated Screenshots, Descriptions, and Menus	

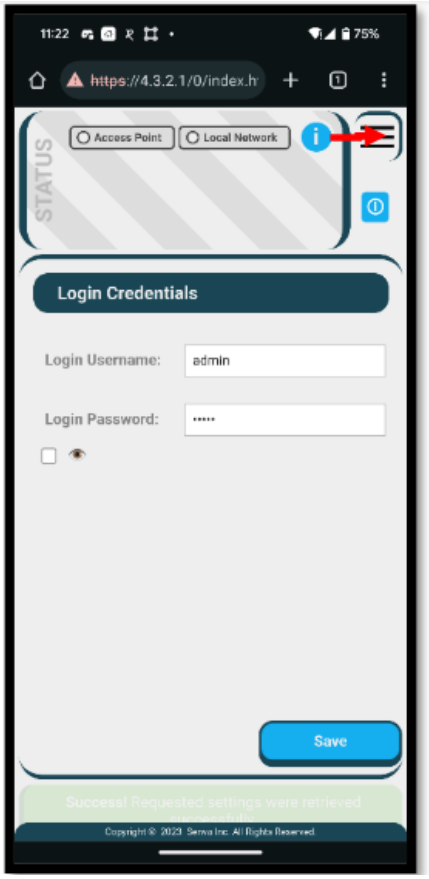
Wi-Fi Connection

Follow installation instructions to wire IoTBuddy to desired Modbus or analog device. The QR Code for the Manual is included below: Once powered, IoTBuddy will host an access point for 5 minutes. To re-enable the access point, press the button on the IoTBuddy.

Connect using QR Code to Access Point (AP):

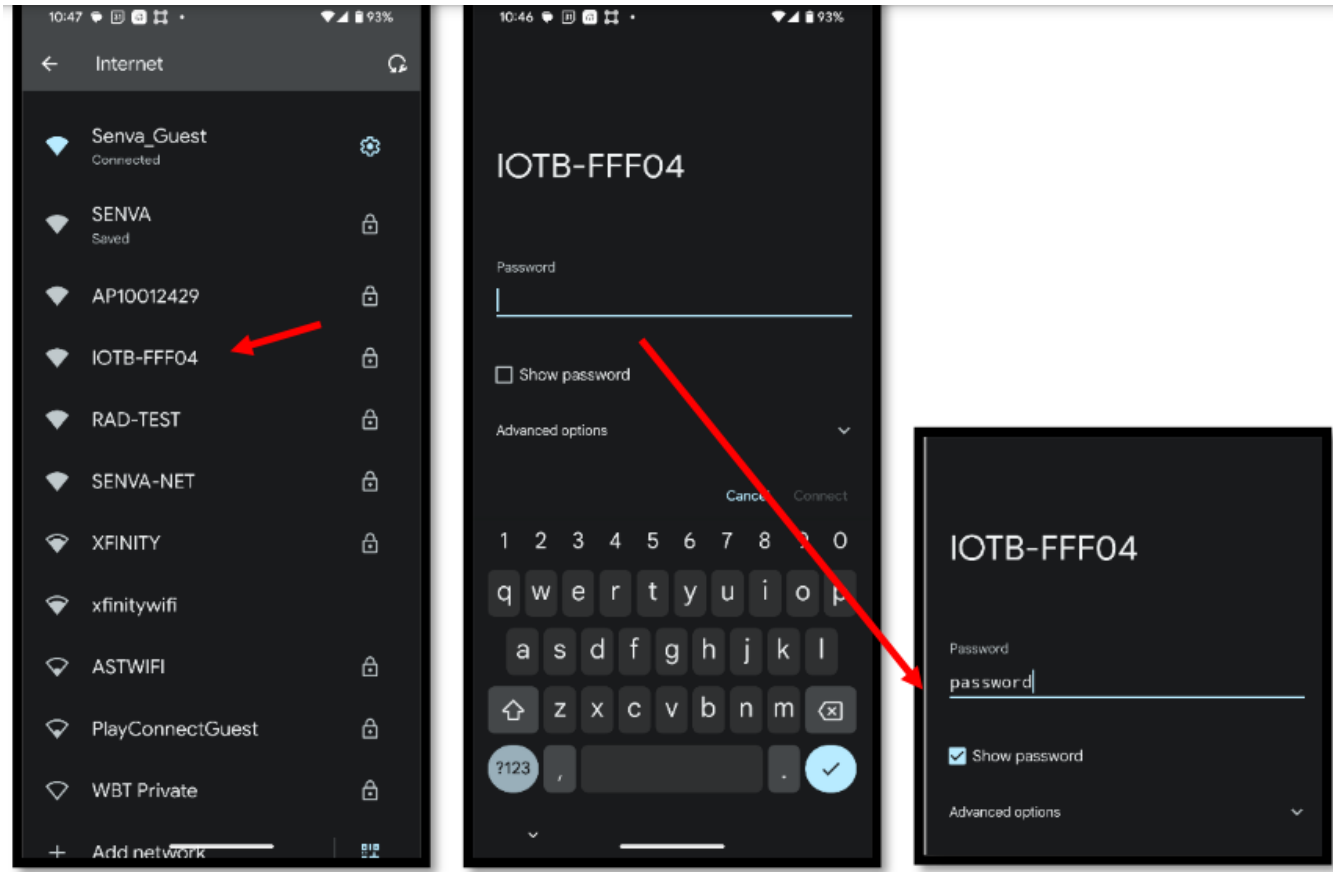
1. Scan the QR code on the label of the IoTBuddy device. This can be used to join the IoTBuddy's hosted network.
2. Open a browser; go to https://4.3.2.1
3. A non-private connection status may appear, please approve and "visit website"
    - You may need to hit "refresh" after clicking the "visit website" link.
4. Log in using the default credentials:
    - username: admin
    - password: admin
5. Navigate using the 3-line "hamburger" menu on the top right.
6. Refer to the other sections of this document for details of each setup screen.



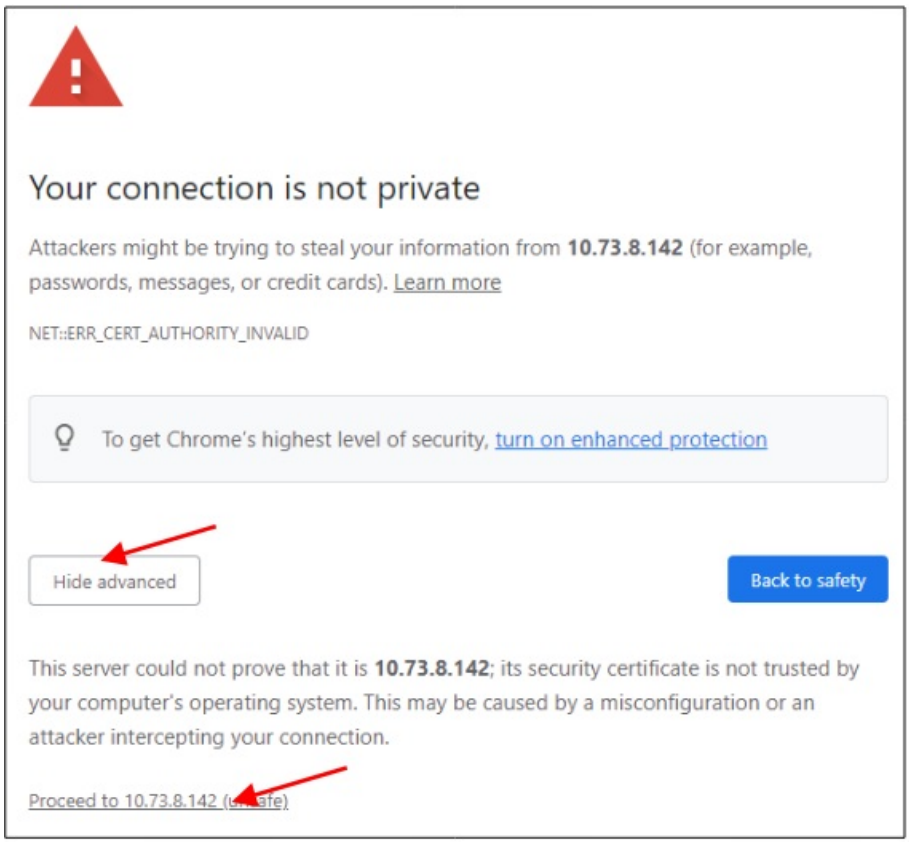


Manually Connect to Access Point (AP):

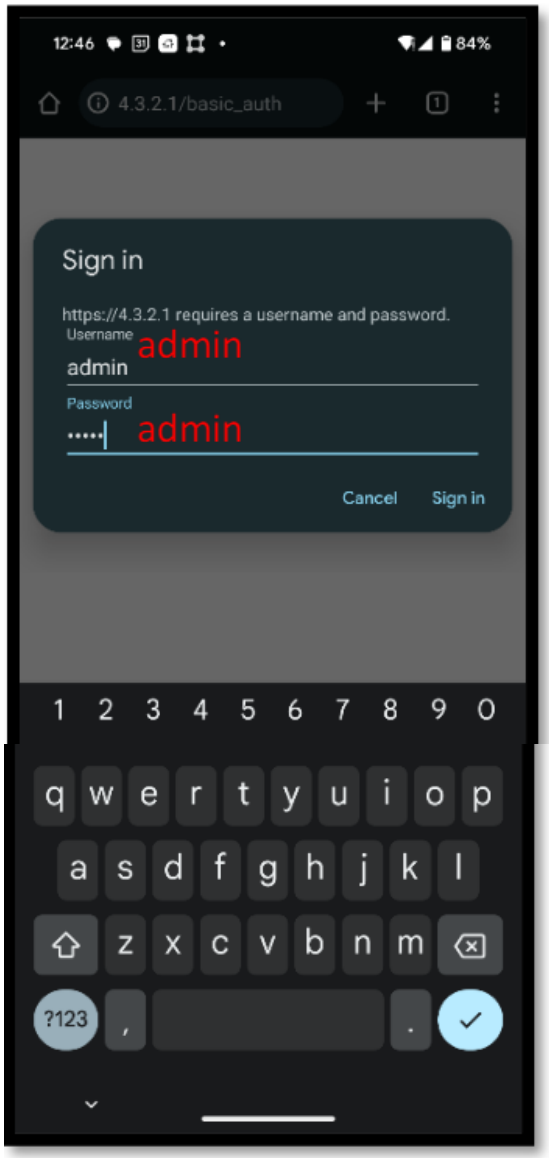
1. Open your Wi-Fi network page and find the IOTB that matches the serial number printed on your IoTBuddy label.
2. Enter the network security key: password

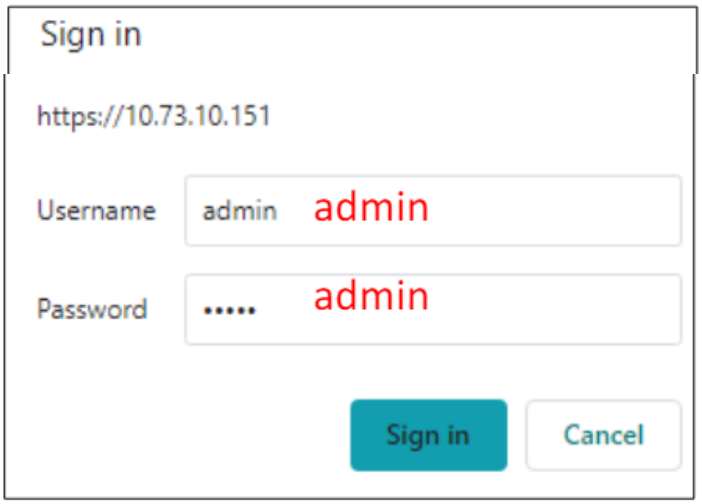


3. Go to https://4.3.2.1
4. Your browser may indicate a non-private connection. Find the “proceed” button near the bottom of the warnings; you may need to click the subtle link labeled “advanced” or “show more” first.

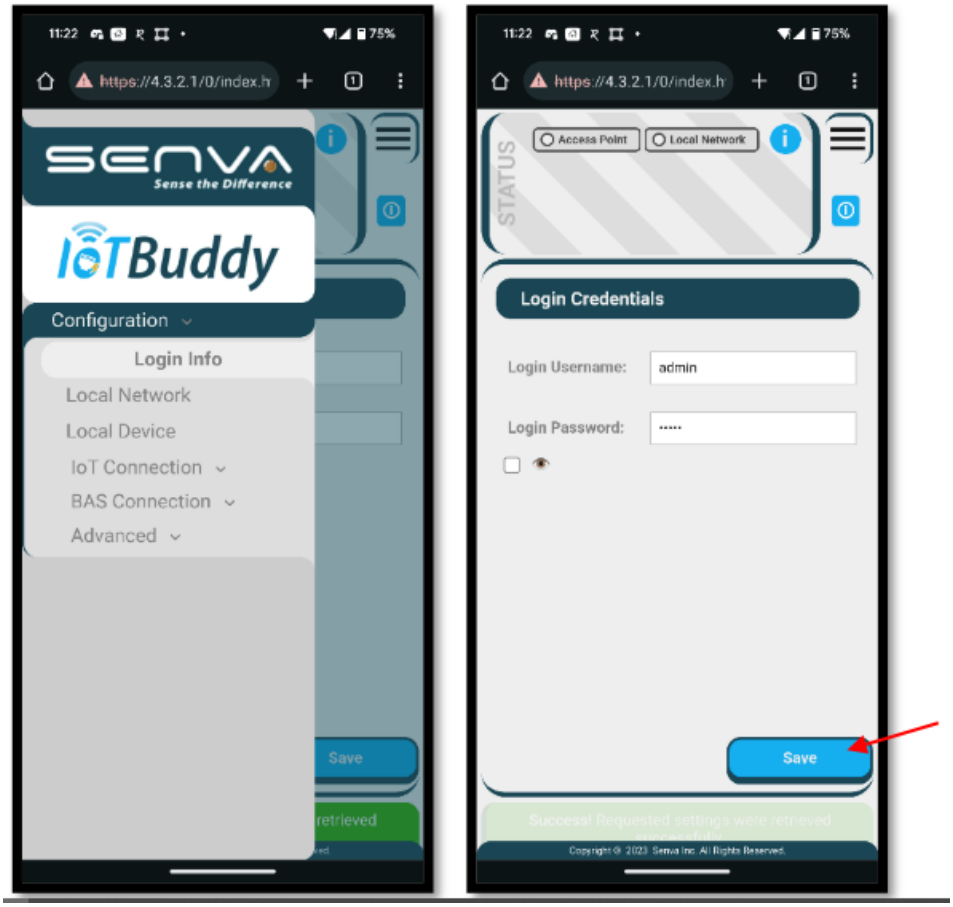


5. Log in using the default credentials:
    1. **username:** admin
    2. **password:** admin



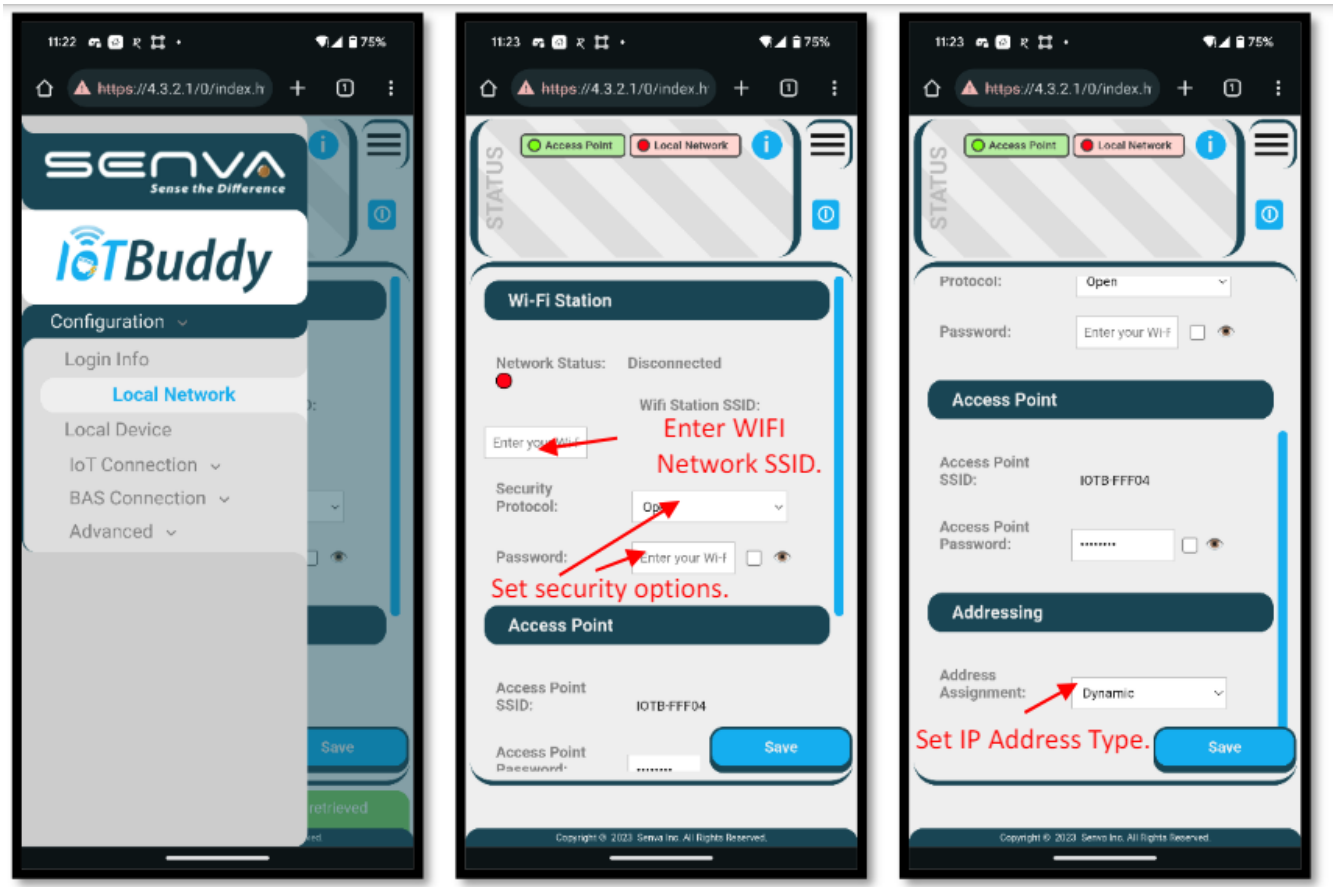


6. You may change your username and password on the Login Info screen. Once you click “Save,” you will be logged out and prompted to log in again with the new credentials.

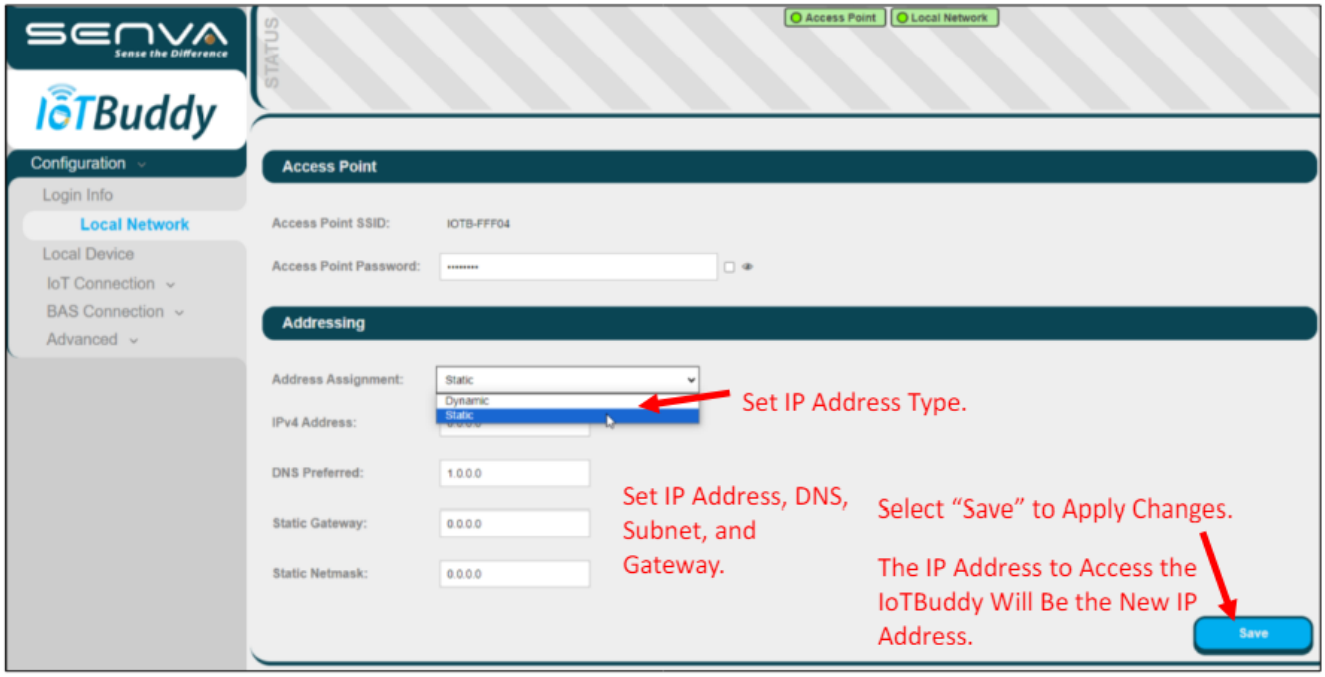


Network Configuration

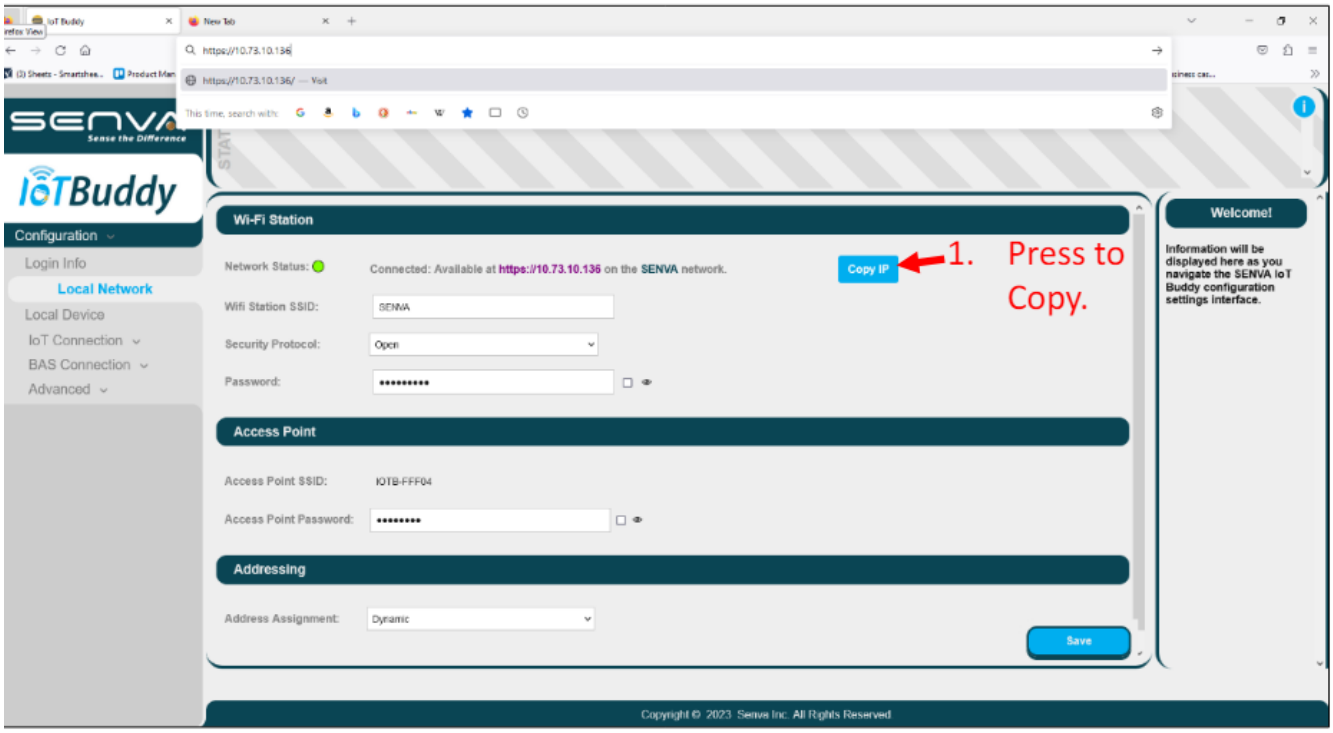
1. Enter the SSID and credentials for the existing Wi-Fi network you wish to connect to the IoTBuddy.
2. You may change your access point password on this page, if desired.
3. If you chose a static IP assignment, please enter it in the “Addressing” section.



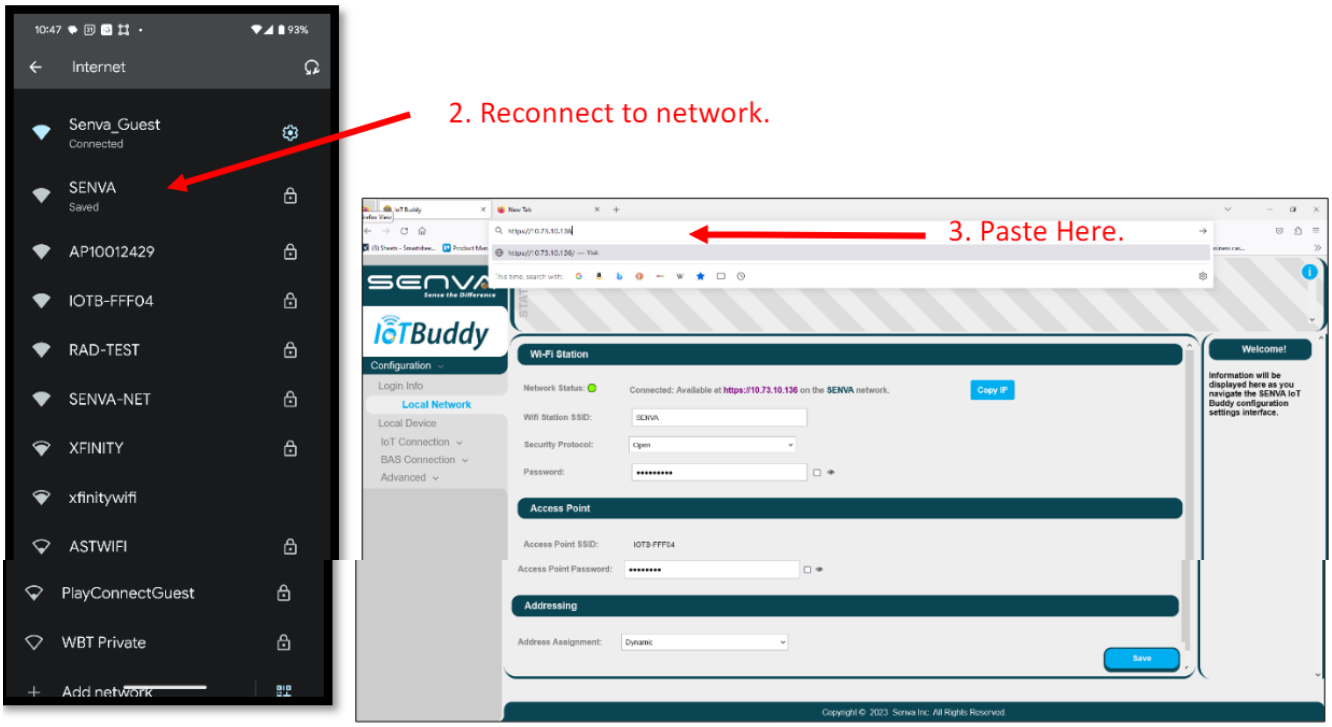
4. Changing the “Address Assignment” to Static allows for the IP address to be entered.



5. When you hit the “Save” button, you will need to disconnect and reconnect to the access point IOTB-xxxxxx. Reconnect, then click the “reload” button on your web browser.
6. For Static Connections: Enter the previously assigned IP address into your browser. You will be prompted with another non-private connection, please proceed. Log in again using your new login credentials.
   For DHCP Connections: Navigate to the network tab and hit the Copy IP button to copy your new IP address.

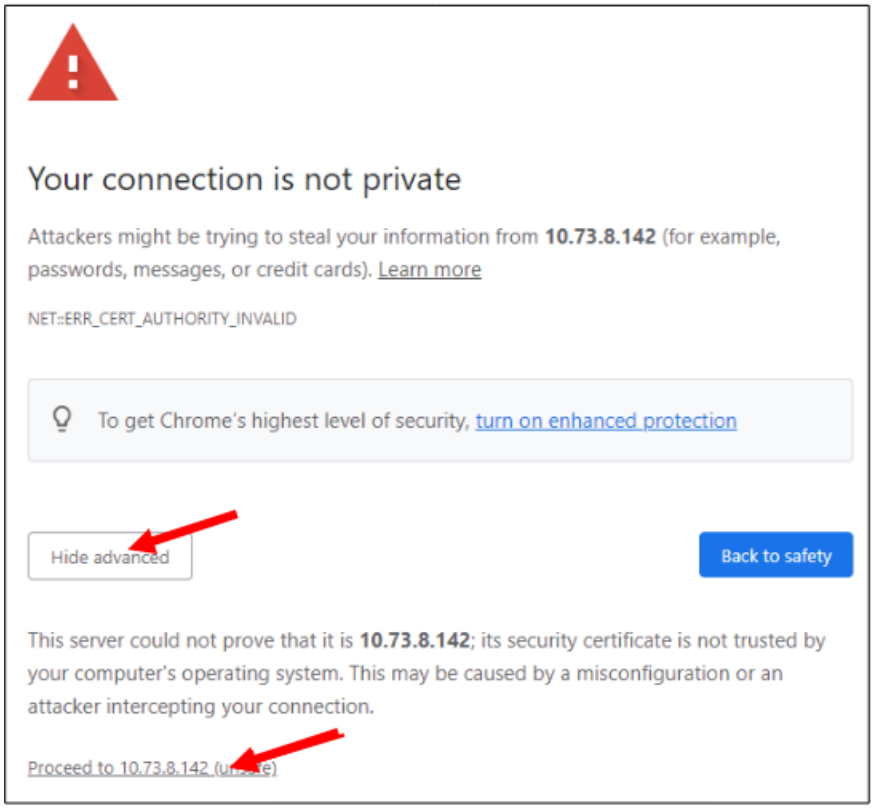


7. You may now connect to your designated Wi-Fi network. Paste the new IP address into your browser. You will be prompted with another non-private connection; please proceed. Log in again using your new login credentials.



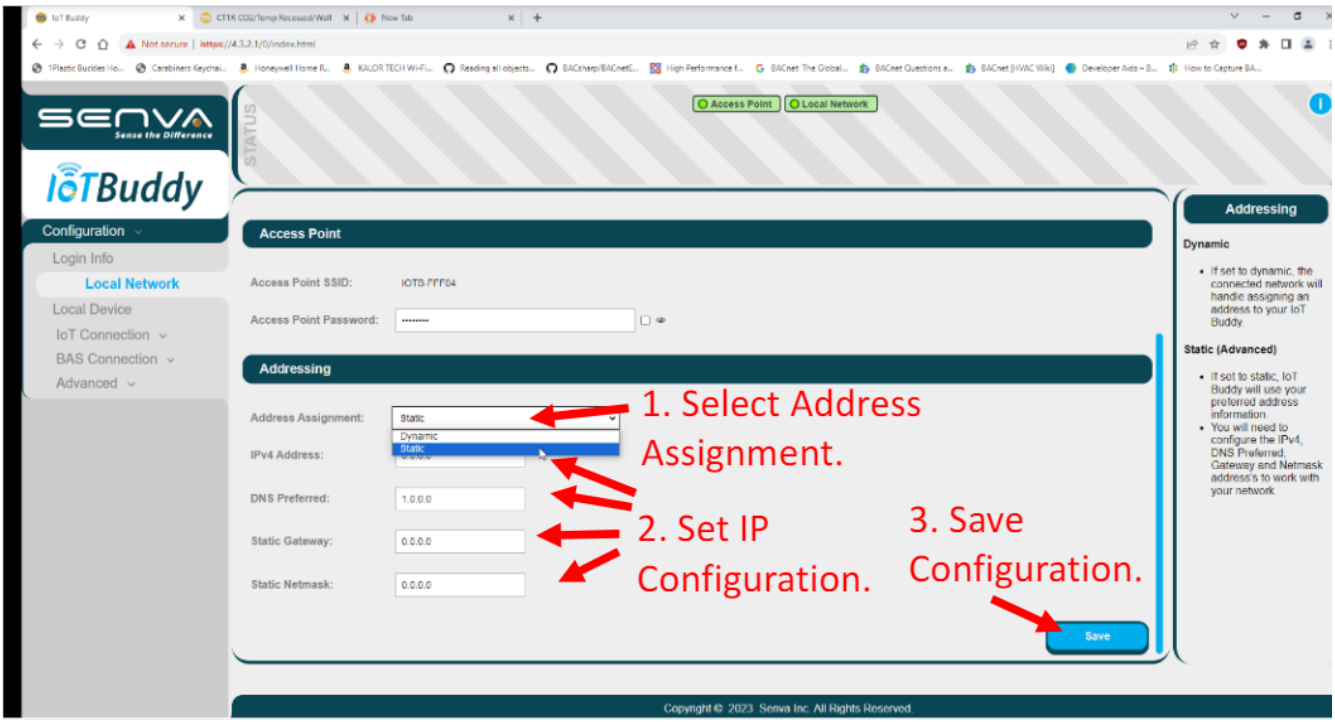
Ethernet or Power over Ethernet (POE) Connection
Follow installation instructions to wire IoTBuddy to desired Modbus or analog device.

1. For static IP addressing, connect RJ45 Ethernet plug to the IoTBuddy and directly to your computer. Press the button on the IoTBuddy once. Using a web browser, go to https://3.2.1.1.
    - It may take a few seconds before this address is accessible. You may then set up your desired static IP address using the web interface (see steps 4 through 7 found on pages 6 and 7 above).
    - **Note:** If a static IP address has already been assigned to the IoTBuddy, the currently assigned IP address will need to be used. The designated IP address can be easily retrieved Senva Sync app.
    - For DHCP, connect RJ45 Ethernet plug to IoTBuddy and to your network. Determine your automatically assigned IP address and enter it into your web browser using “https://”.
    - **Note:** The assigned IP address can be easily retrieved Senva Sync app.
    - Your browser may indicate a non-private connection. Click “Advanced” and then “Proceed to xx.xx.x.xxx (unsafe).” Once signed in, you will be able to update security settings to enhance privacy.
2. Your browser may indicate a non-private connection. Click “Advanced” and then “Proceed to xx.xx.x.xxx (unsafe).”



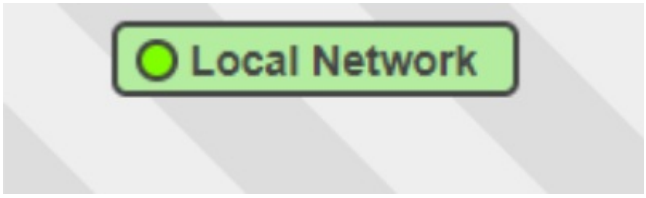
3. Log in using the default credentials:
    - **username:** admin
    - **password:** admin

4. You may change your username and password on the first screen. Once you click “Save” you will be logged out and prompted to log in again with the new credentials.
5. For static IP addressing, navigate to the “Local Network” tab. Select “Static” address assignment and enter the rest of your credentials in the associated boxes. Once you click “Save” you will be logged out and prompted to log in again, with the new IP address and credentials.



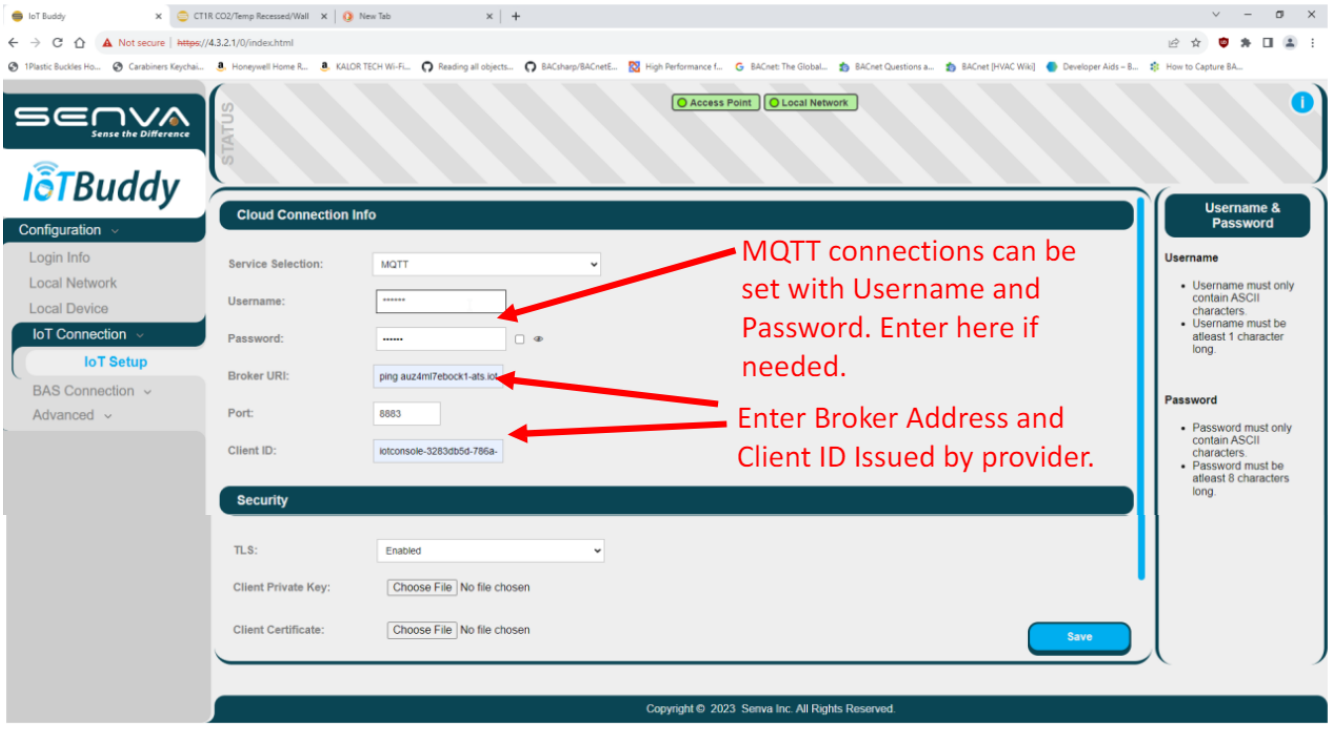
Note: The ethernet connection or the power to the IOTBuddy will need to be disconnected then reconnected for the new address to take effect.

6. Once connected, you will see the “Local Network” status icon at the top of the page turn green.

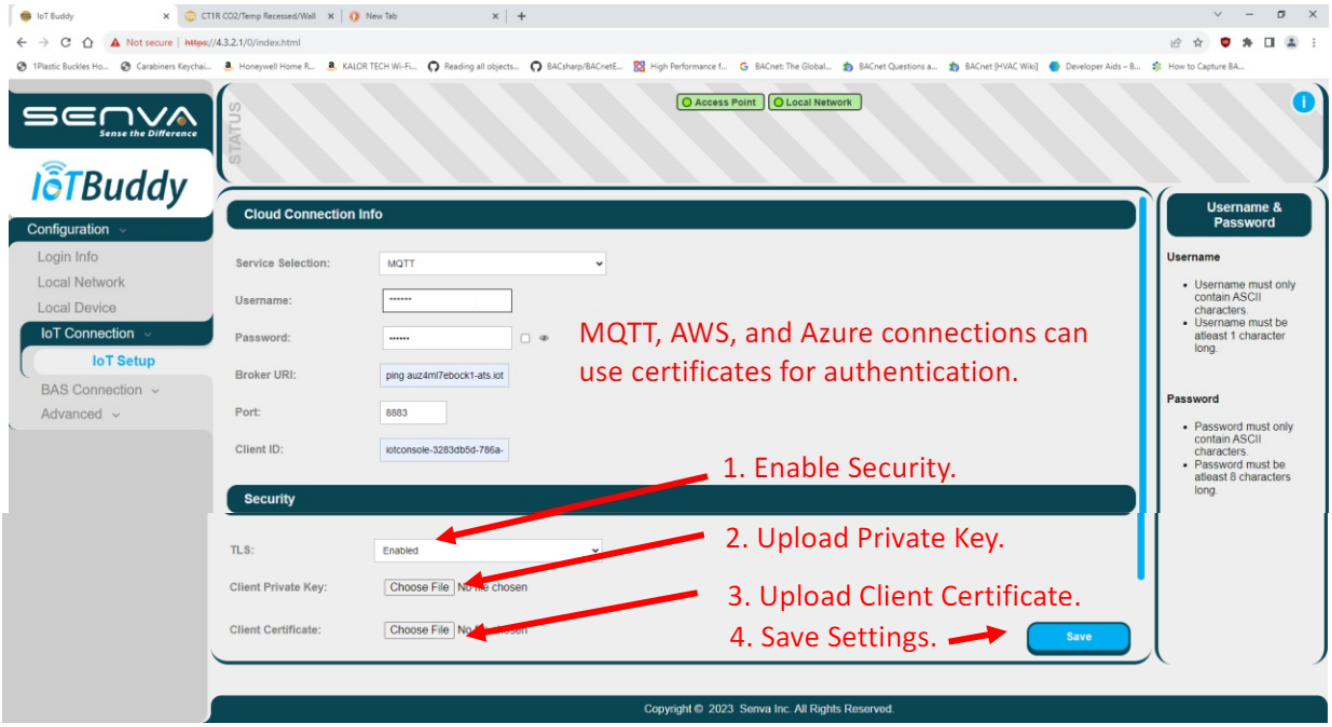


Cloud Service Setup (Remote Output Connection)

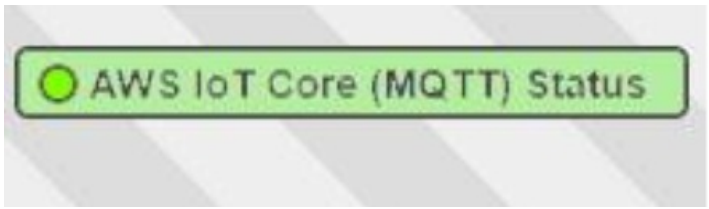
1. Choose your MQTT protocol from AWS IoT Core over MQTT, Azure IoT Hub over MQTT, or plain MQTT. Enter your cloud service or broker information.



2. Enter client certificates in the Security section if applicable.



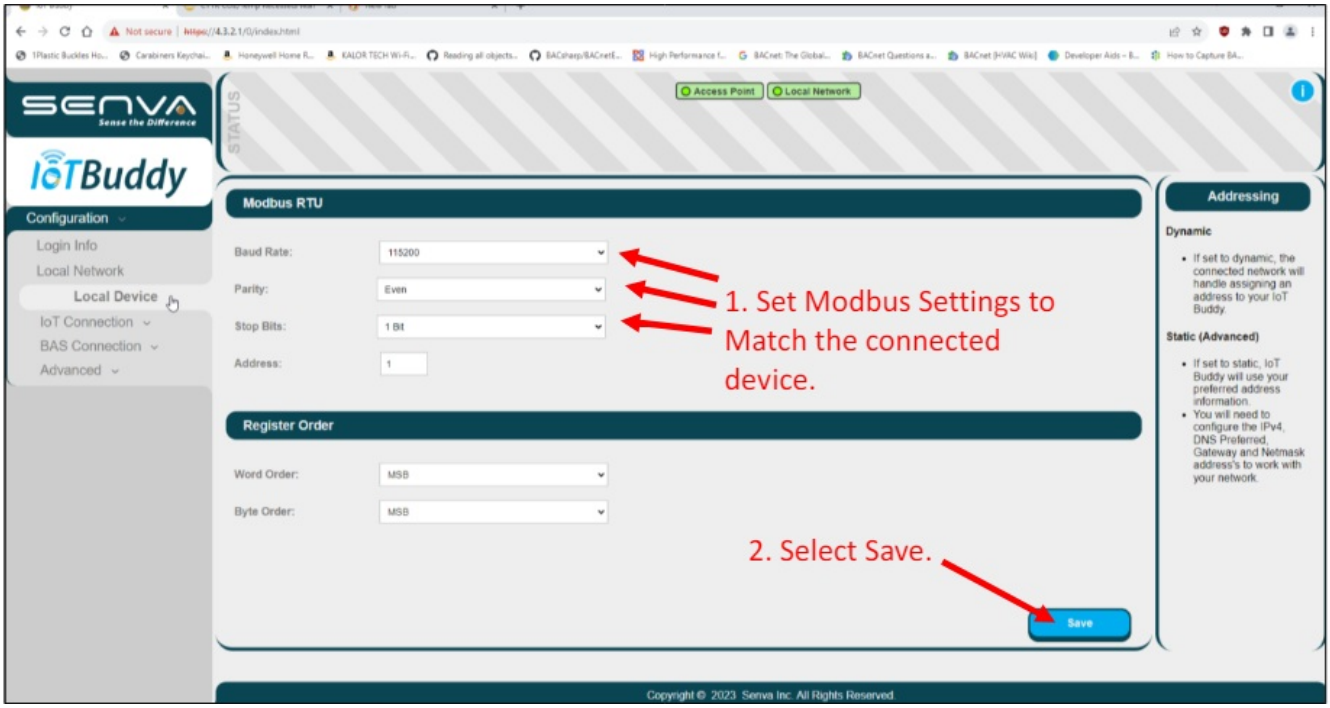
3. When you hit “save,” you should see the Connection Status icon at the top turn green.



Setting the Modbus Settings for the Connected Device

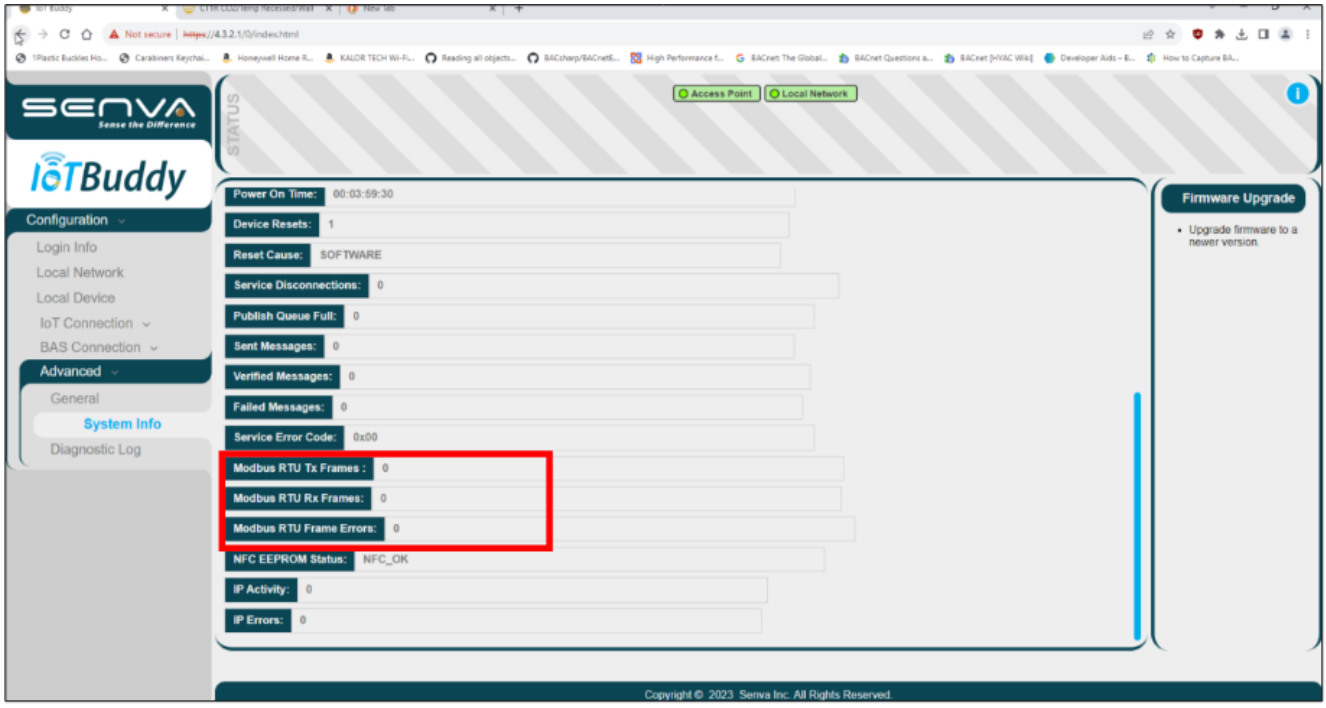
Modbus Settings (Local Device)

1. Navigate to the “Local Device” tab to enter Modbus settings. The Baud Rate, Parity, Stop Bits, and Address fields must match the Modbus device connected to the IoTBuddy.



2. Navigate to the “Advanced”, then” General”, then” System Info” tabs to verify Modbus communication. The

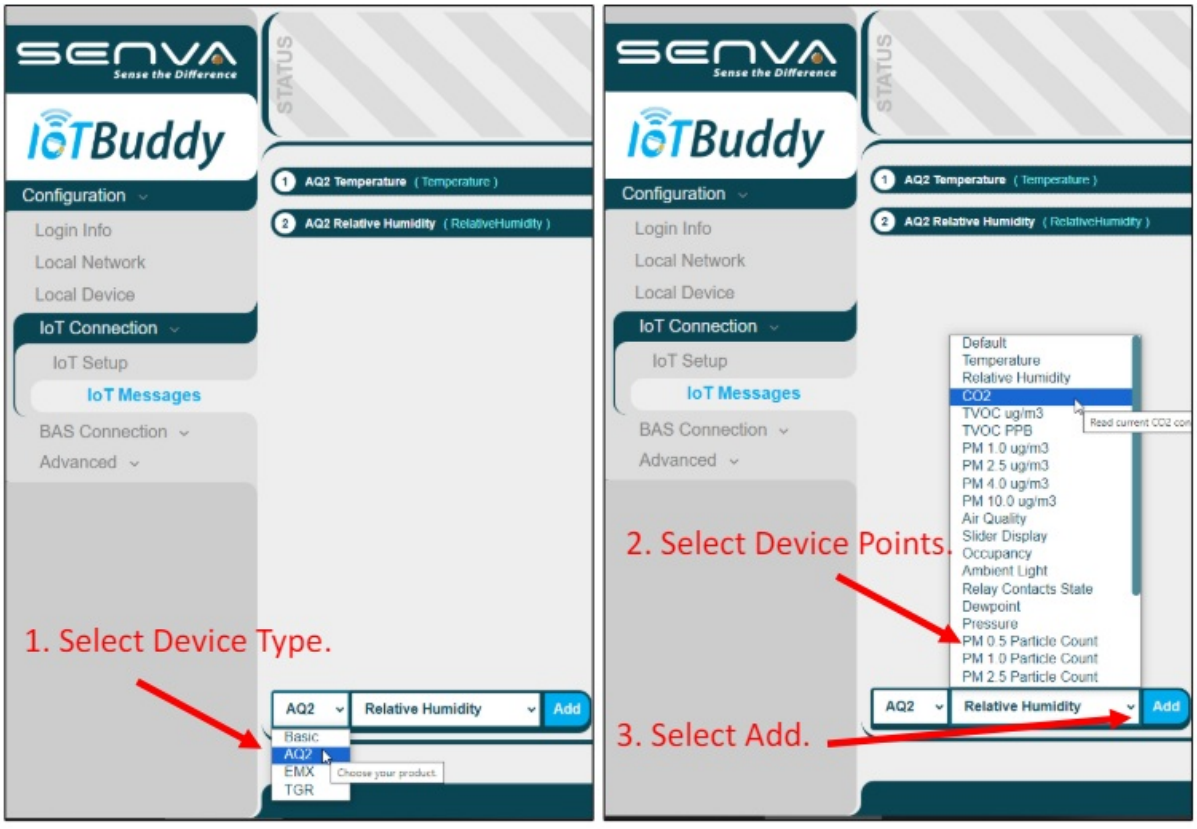
Modbus RTU TX and Modbus RTU RX values will begin to count when the points are fully defined, and proper communication is established.



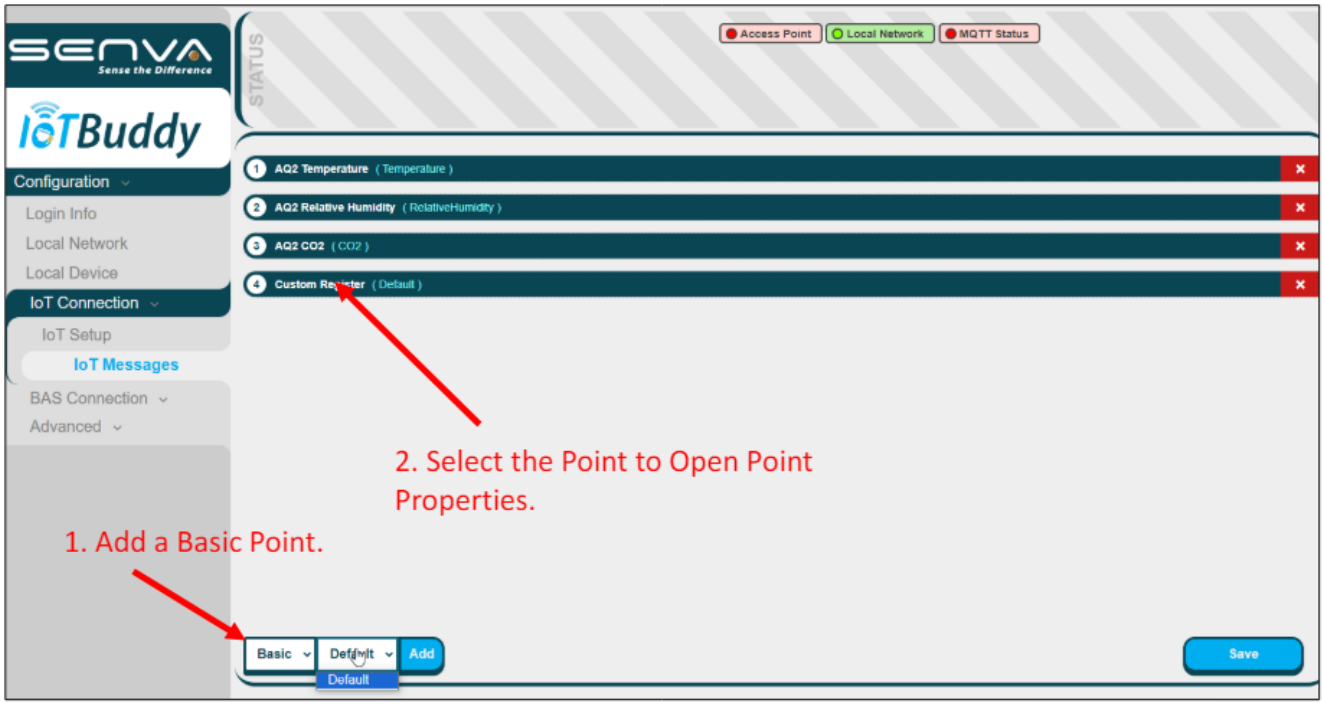
Setting the Data Point Settings for the Connected Device

Data Point Settings (Local Modbus Device)

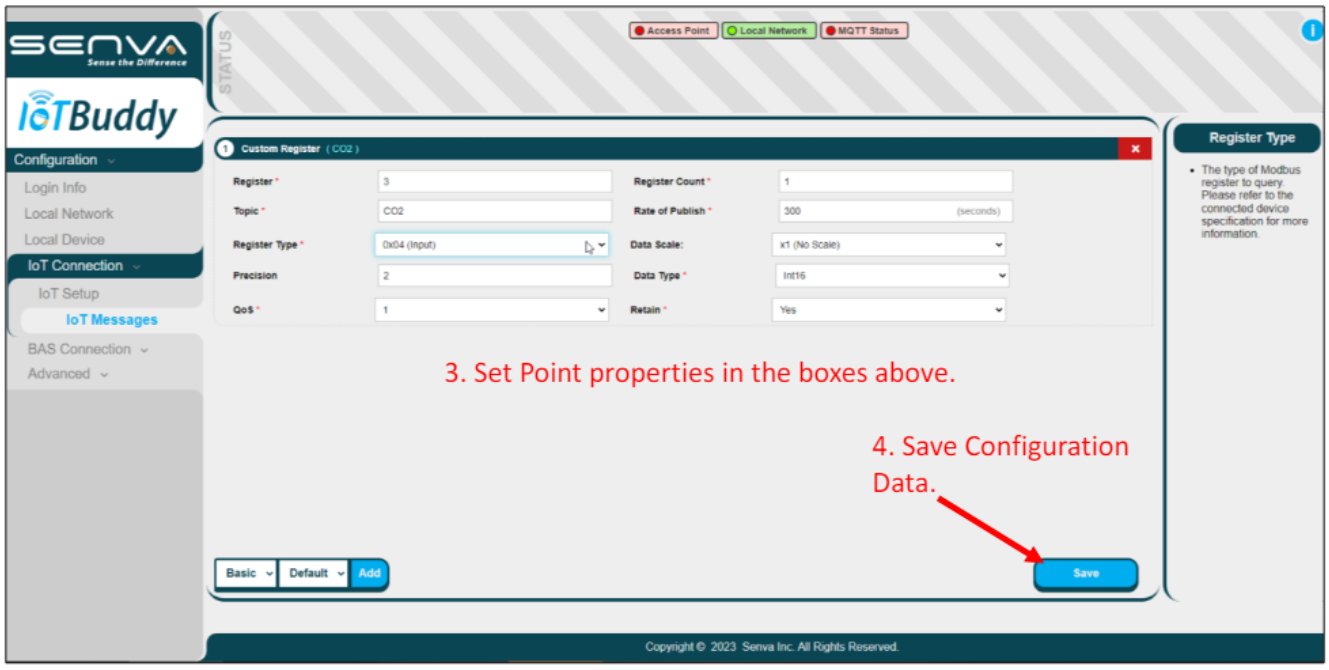
1. Under IoT Connection navigate to “IOT Messages” tab. You may choose one of the pre-configured Senva devices from the dropdown or choose “Basic” to manually enter the points you wish to monitor.
2. Pre-configured points can be selected.



Basic points can be added manually. Preconfigured point properties can also be edited.

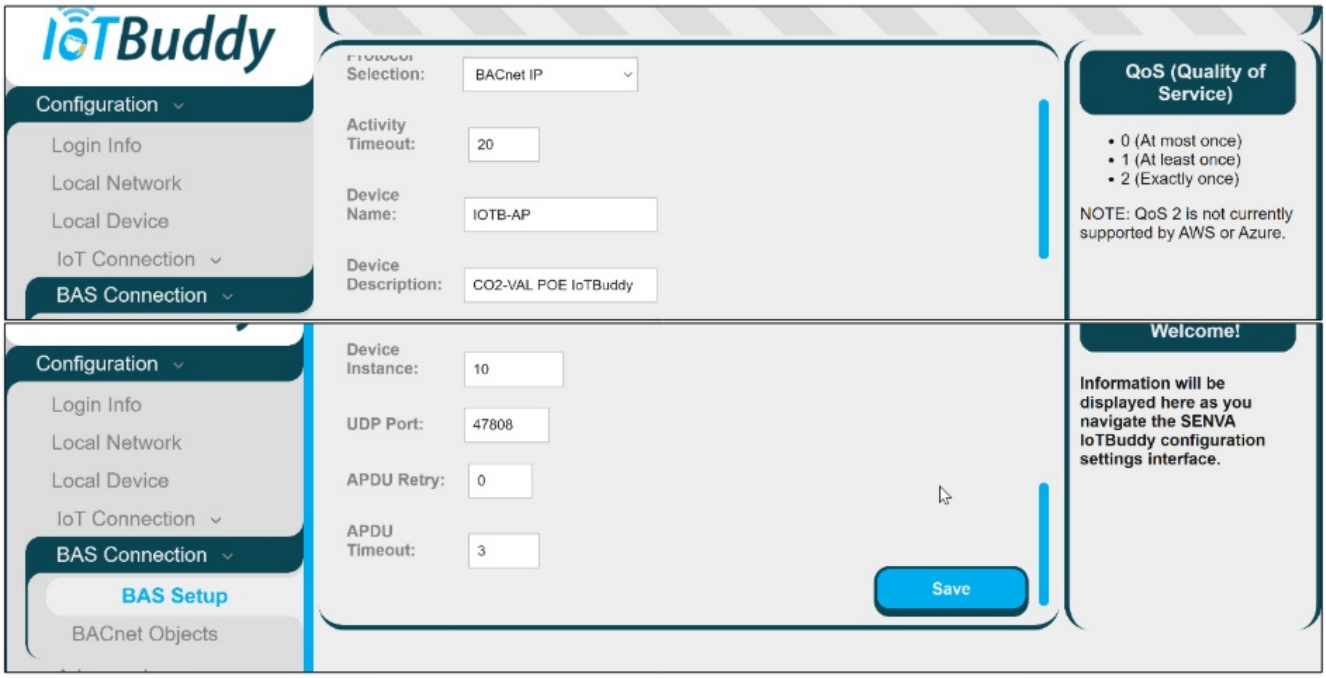


3. Adjust the settings for each point you wish to monitor. The right sidebar provides a detailed description of each field as it is selected.

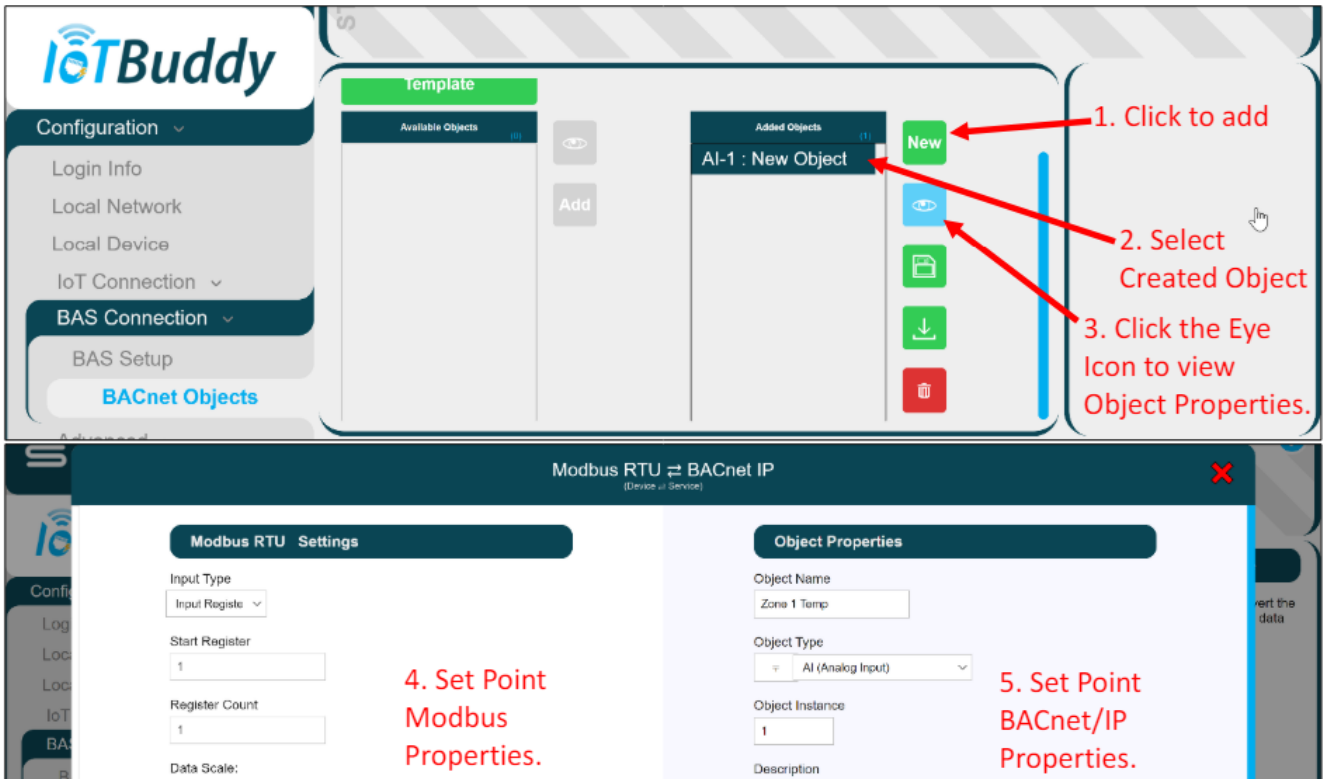


Data Point Settings (BACnet IP)

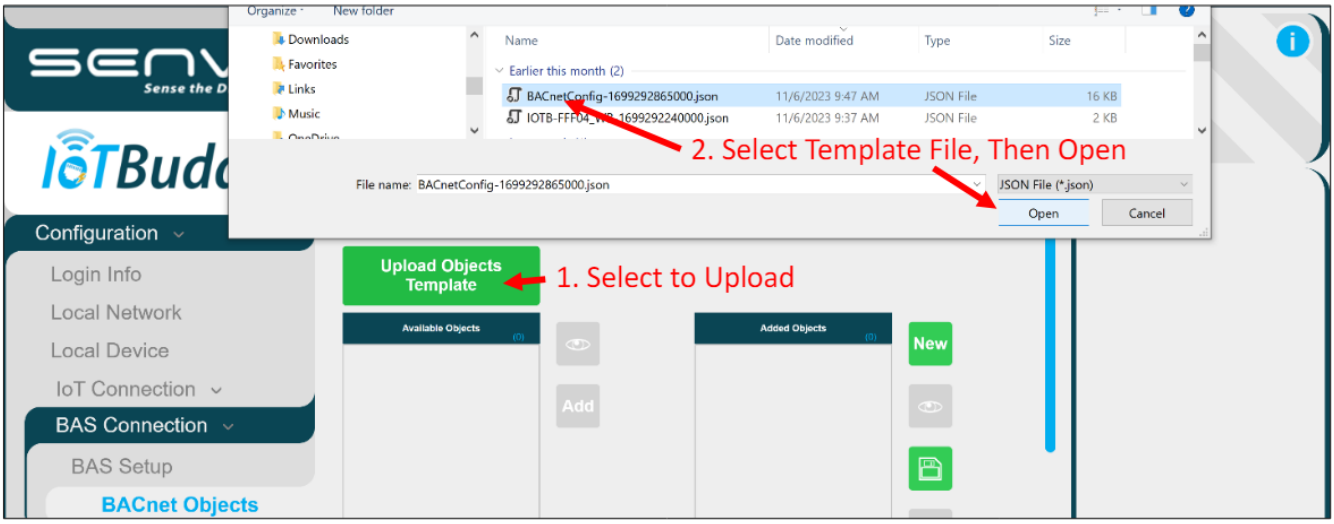
4. This section covers the BACnet IP setup. Modbus TCP setup is covered in the next section. Under BAS Connection navigate to the “BAS Setup” tab. You may select the protocol from the drop-down menu. Set each of the BACnet IP Properties and select “Save”. The default UDP Port for BACnet IP is 47808.

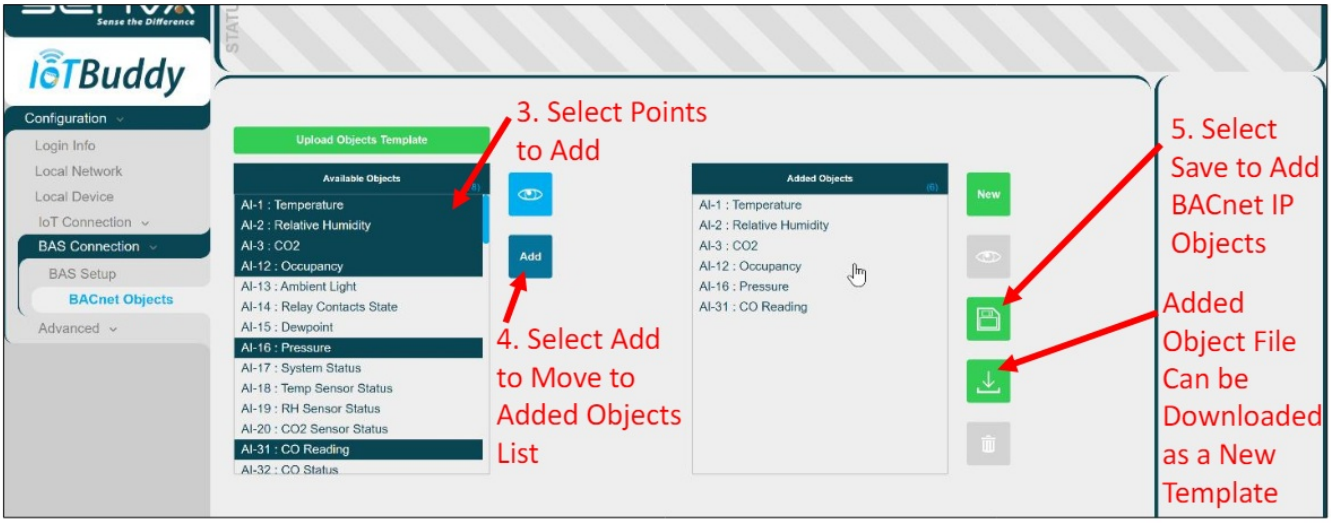


This section covers manually adding BACnet IP Points. Loading points from a template is covered in the next section. Under BAS Connection navigate to the “BACnet Objects” tab. Click the “New” button to create a new point. Then select the new point and click the eye icon to open a new window. In the window, set the object Modbus RTU properties, then set the BACnet IP properties. Select “Save” to commit the changes. Select the “Save” Icon to save the BACnet IP Points.



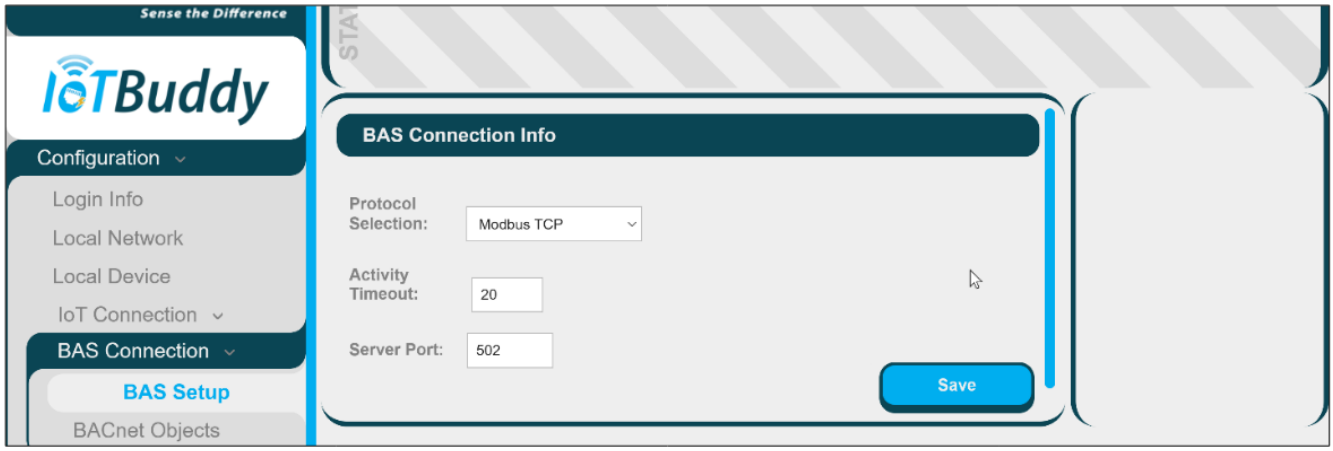
5. This section covers loading BACnet IP points from a template. Manually adding BACnet IP Points is covered in the previous section. Under BAS Connection navigate to the “BACnet Objects” tab. Click the “Upload Objects Template” button, then select the file to load and click “Open”. This will load a list of points into the “Available Objects” list. Then select the points that you wish to add and select “Add”. The Points will be added to the “Added Objects List”. Select the “Save” Icon to save the BACnet IP Points. See the previous section for directions on editing BACnet IP point properties, deleting points, and saving a new BACnet IP object template file.



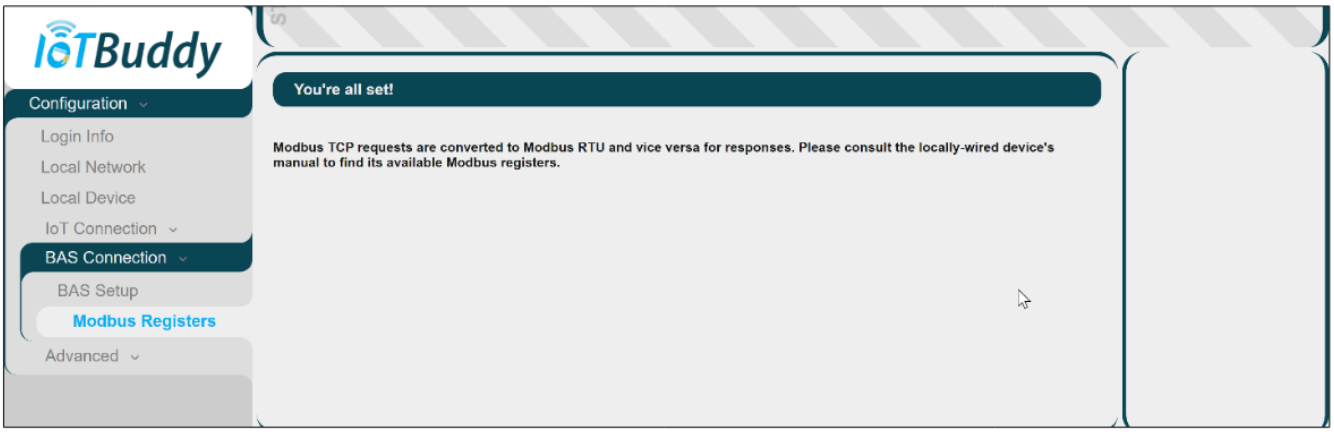


Data Point Settings (Modbus TCP)

6. This section covers the Modbus TCP setup. BACnet IP setup is covered in the previous section. Under BAS Connection navigate to the “BAS Setup” tab. You may the protocol from the drop-down menu. Set each of the Modbus TCP Properties and select “Save”.

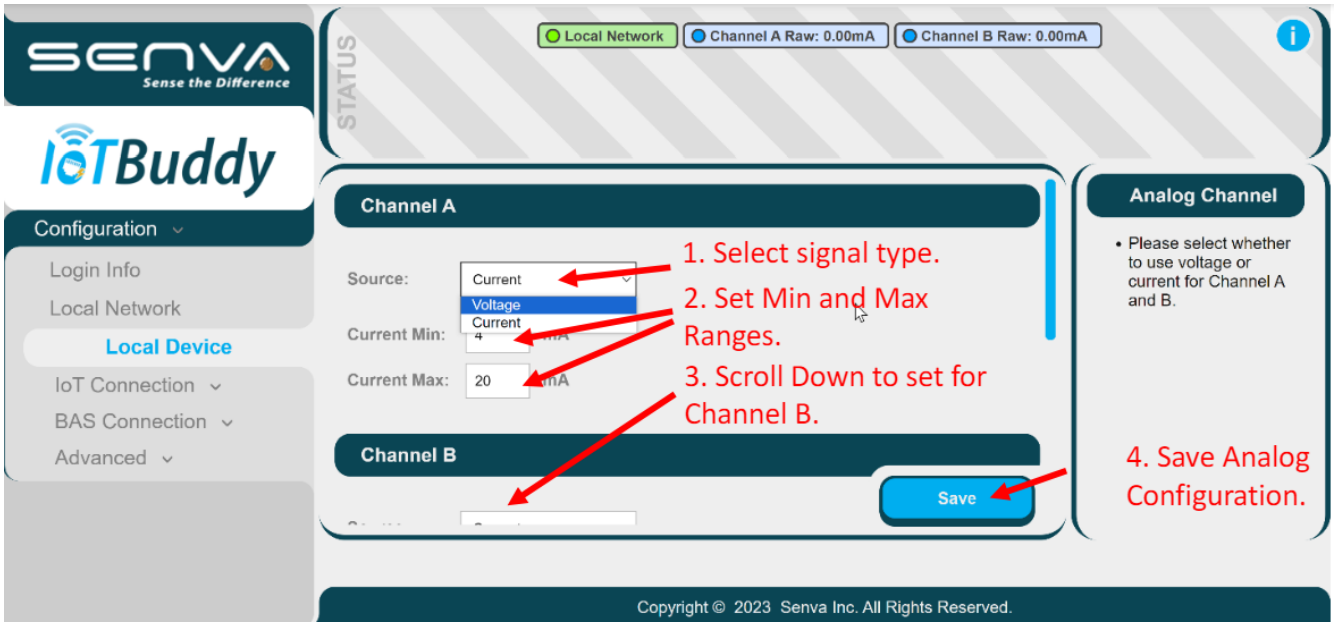


7. Under BAS Connection navigate to the “Modbus Registers” tab. This screen confirms that Modbus TCP connection is selected and active. The configuration for each point is detailed in the Modbus Setup on page 15 above.

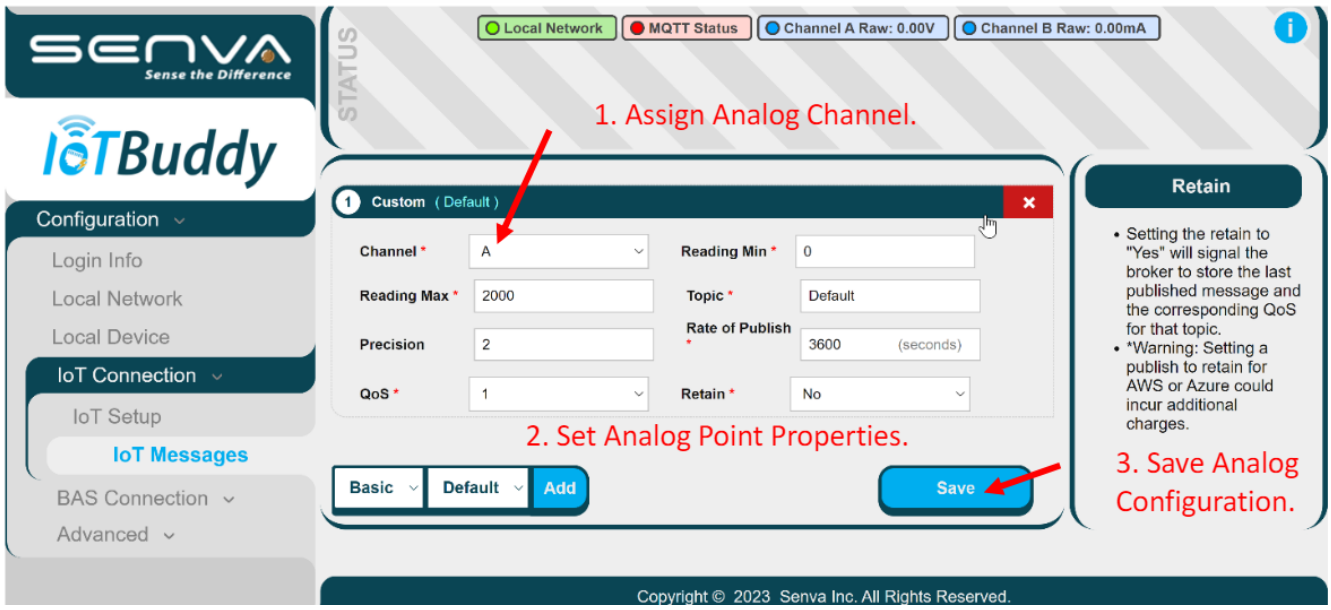


Analog Settings (Local Device)

1. Navigate to the “Local Device” tab. Select voltage or current from the dropdown and enter the range of the analog signal to be monitored on each channel. Channel A should correspond to your IoTBuddy’s white wire and Channel B should be yellow. The Black wire is common/ground for both channels.



2. Navigate to the “IoT Setup” tab. If needed, configure IoT connection (See Data Point Settings- BACnet IP on page 13 or Data Point Settings- Modbus TCP on page 14). Then select the “IoT Message Configuration” tab. You may choose one of the pre-configured Senva devices from the dropdown or choose “Basic” to manually enter the points you wish to monitor. Make sure to assign readings to either Channel A or Channel B.



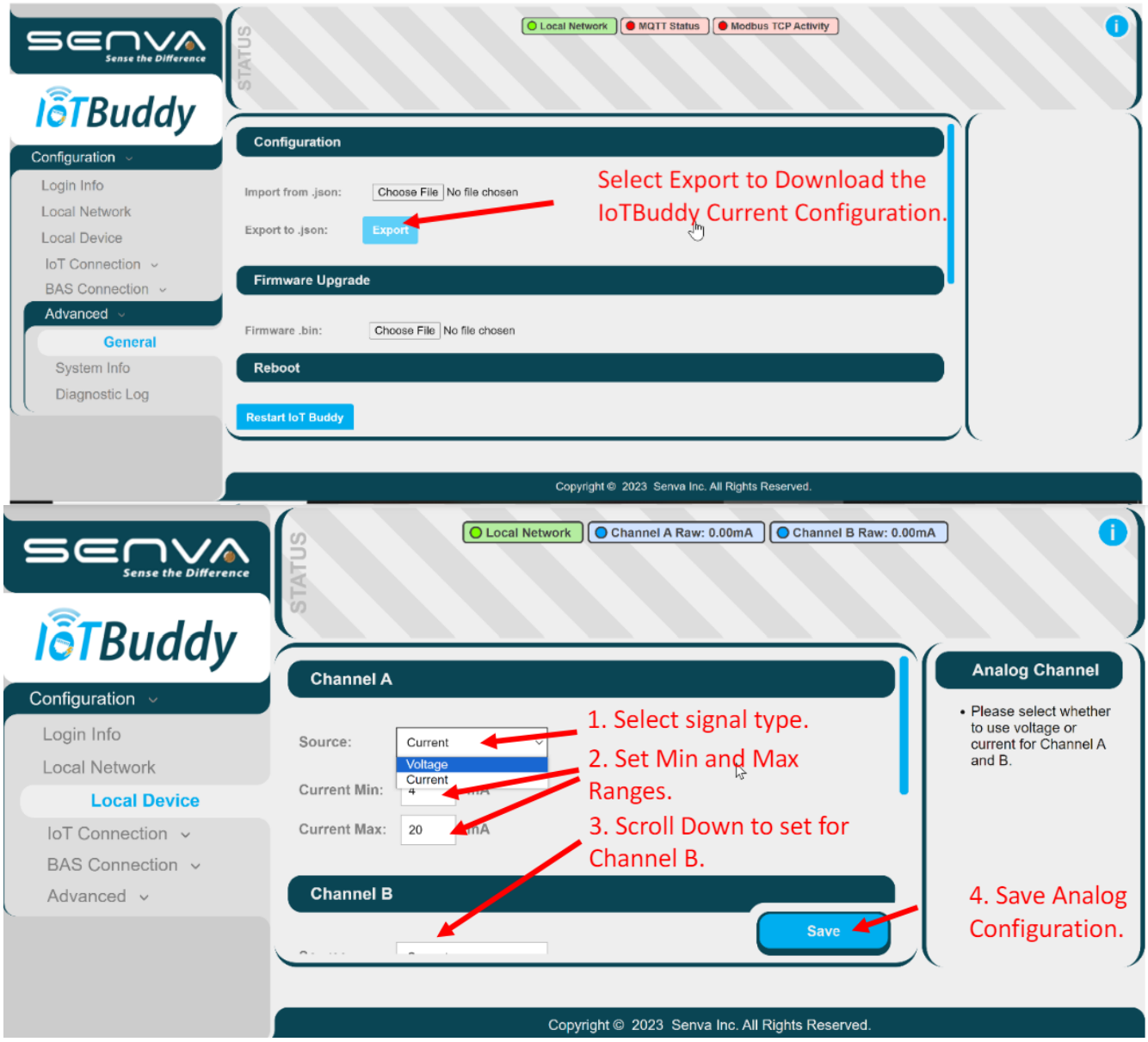
3. Once the points are fully configured, the raw Voltage for Milliamp readings from each channel can be read at the top of the page. The readings update when the page refreshes.

Loading Configuration/Firmware files into the IoTBuddy

Access and Steps

1. Log in to the IoTBuddy (See the sections on Wi-Fi Connection or Ethernet/POE Connection in the table of contents section for more info). Then select the “Advanced” tab. In the “General” tab there are sections for

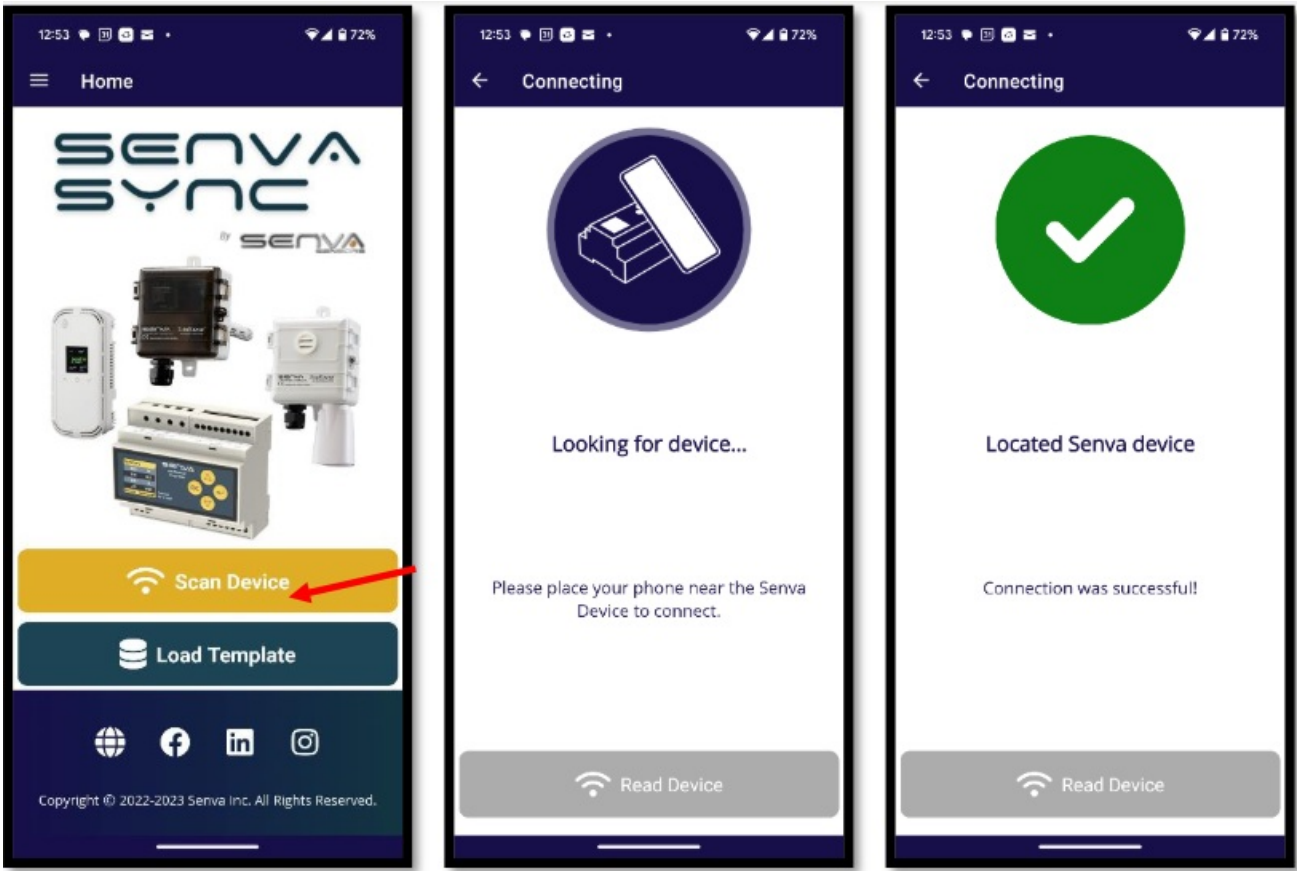
loading either creating configuration files for download, uploading configuration files or loading firmware files.



App Provisioning of the IoTBuddy

Setup

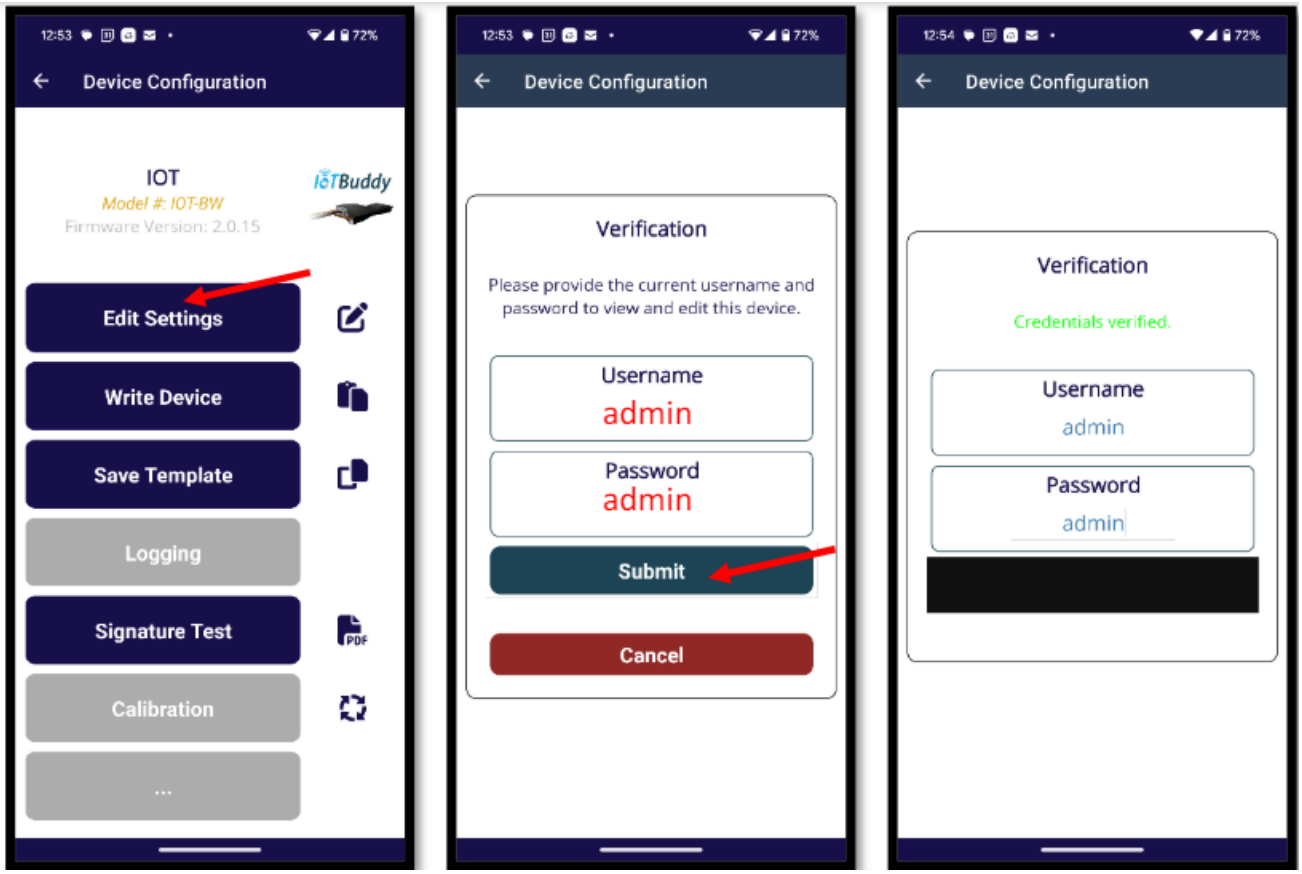
2. Open the Senva Sync app available on the Google Play Store for Android or the Apple App Store for iOS.
3. Tap ‘Scan Device’ and place your phone’s NFC adapter over IoT Buddy until a successful connection occurs and a green checkmark is displayed.



4. The device info will be displayed. Next tap ‘Edit Settings’.
5. Log in using the IoTBuddy credentials.

   The defaults credentials are:

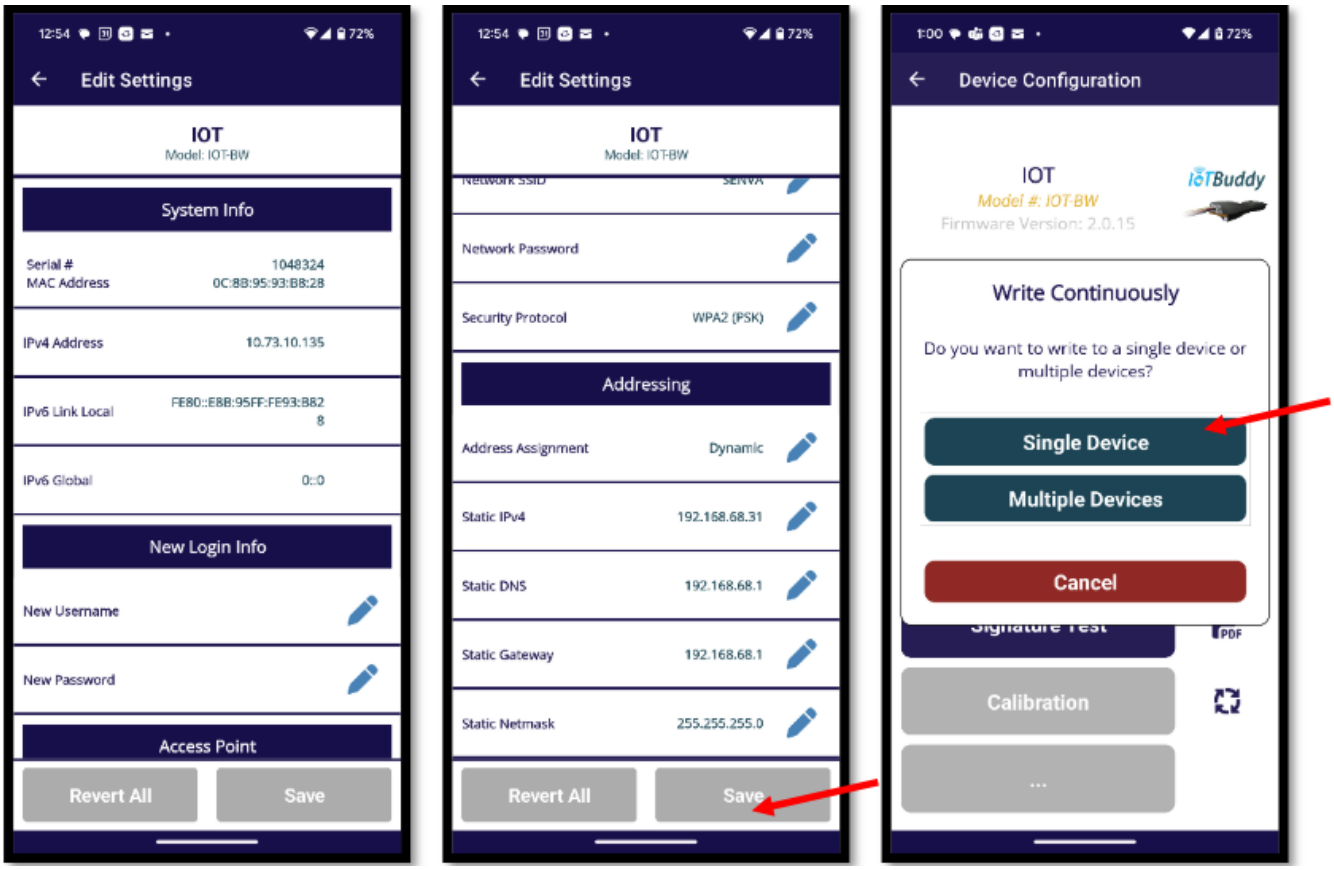
   1. **username:** admin
   2. **password:** admin
6. Credentials will be Verified.



7. Update available settings as needed.

- For WIFI devices, available settings are:
- Currently assigned IP addresses
- Login credentials for the IoTBuddy
- The Settings, Username, and Password for the IoTBuddy Access Point
- The Settings, Username, and Password for the Local Network WIFI
- IP Addressing Settings, DHCP or Static Ip.
- For ethernet and POE devices, available settings are:
- Currently assigned IP addresses
- Login credentials for the IoTBuddy
- IP Addressing Settings, DHCP or Static Ip.

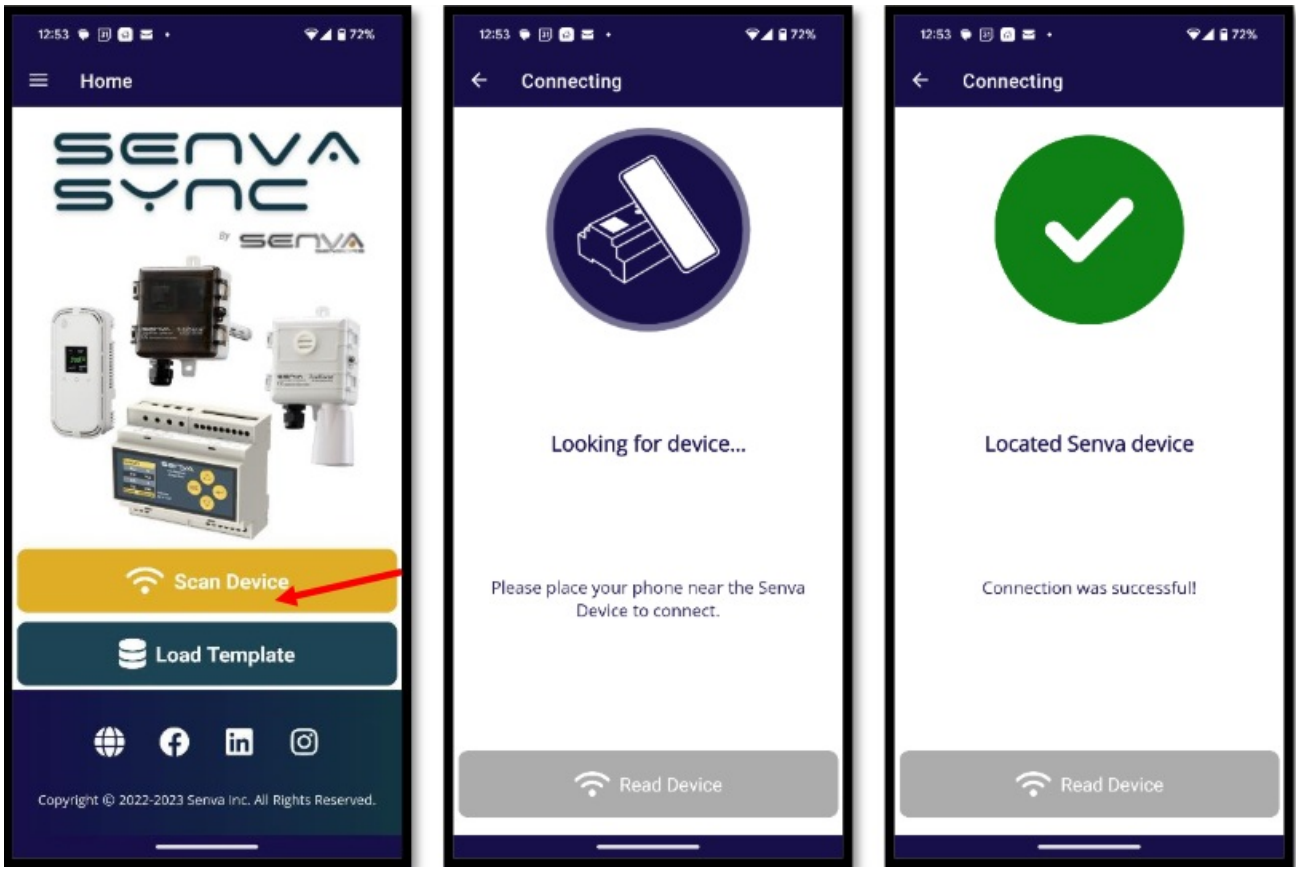
8. After changing the settings as needed, tap ‘Save’. When prompted to write a device, tap ‘Single Device’.



9. Place your phone’s NFC adapter over IoT Buddy to write the new settings to the IoTBuddy until a successful connection occurs and a green checkmark is displayed.

IP Address Retrieval using the Sync App

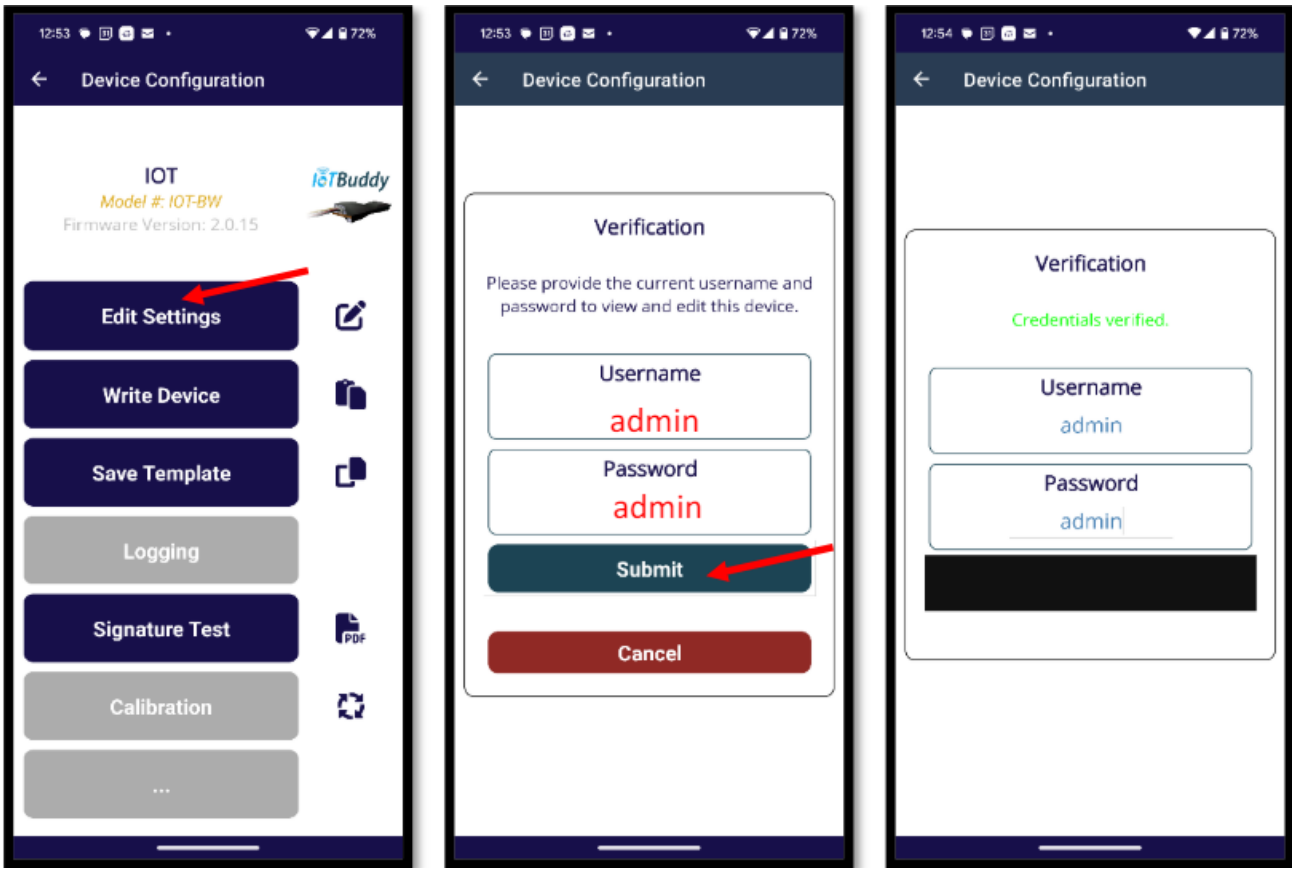
10. Wait at least 5 seconds for IoT Buddy to reboot after a write, then from the app’s home page, tap ‘Scan device’. Place your phone’s NFC adapter over IoT Buddy until a successful connection occurs and a green checkmark is displayed.



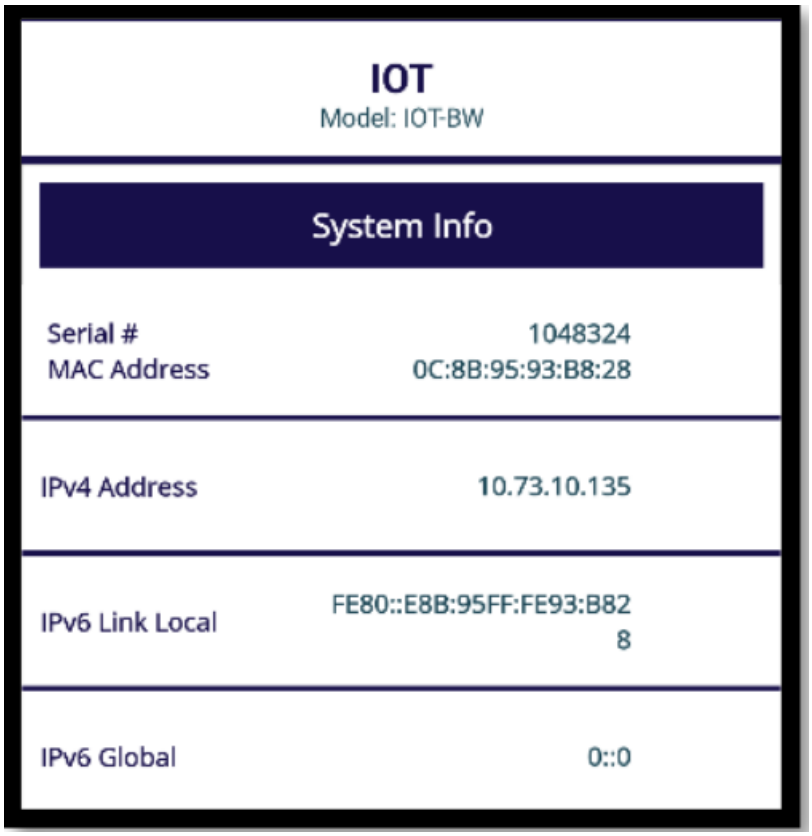
11. The device info will be displayed. Next tap ‘Edit Settings’.
12. Log in using the IoTBuddy credentials.

    The defaults credentials are:

    1. **username:** admin
    2. **password:** admin
13. Credentials will be Verified.



14. The currently assigned IP addresses will be displayed at the top under ‘System Info’.



IOTBuddy Web Configuration Guide
154-0054-0B

Documents / Resources

	[IoTBuddy 154-0046-0B Web Configuration Manual] [pdf] User Guide 154-0046-0B Web Configuration Manual, 154-0046-0B, Web Configuration Manual, Configuration Manual

References

- User Manual