BAScontrol22C Controller Configuration

Setra CEMS Network Hardware Procedure

Before you get started:

- This is necessary to bring any Analog Devices (LITES, Analog SRHs, etc.) into the local network as well as the larger CEMS network if they are not wired directly into a FLEX or other BACnet device.
- The BAScontrol22C (NET-CTLR-22) has set defaults that may conflict with the rest of the network, especially if there is more than one present.

Initial Connection to the Controller

In order to change any settings within the controller or to set up the controller to handle the analog signals, it must first be connected to.

It is recommended that the following is done ***one controller at a time and independent of any other networking devices*** (Edge, Router, etc.).

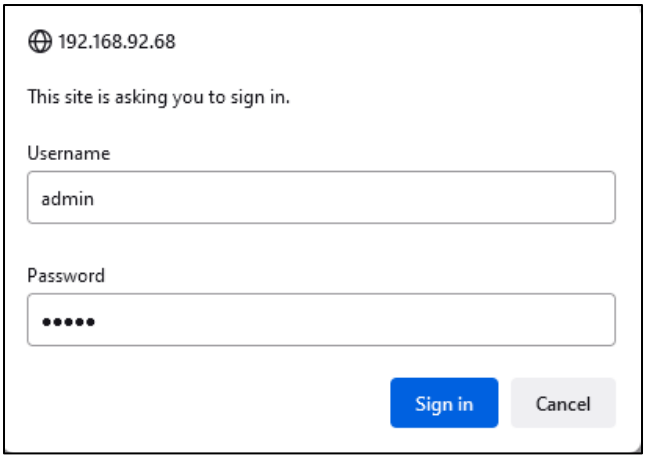
The following equipment is required:

- A computer with an Ethernet port or a USB to Ethernet converter.
- An ethernet cable.
- The controller with power applied.

1. Static your computers IP to be on the same subnet as the controller (NOTE: See the document How to Static an IP Address).
   The default network configuration is as follows:

Description	**Defaults**
IP Address	192.168.92.68
Subnet Mask	255.255.255.0

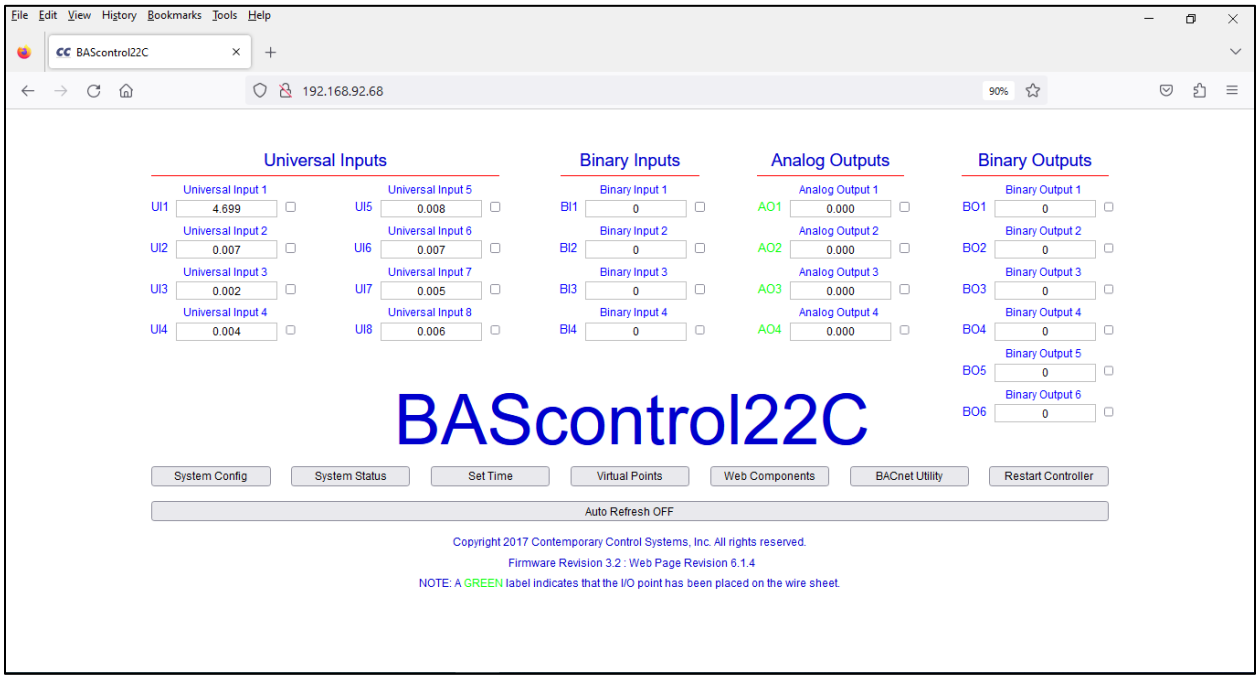
2. Type the IP address of the controller into the URL bar of an internet browser of your choice (Chrome, Firefox, etc.).
3. If the computer can see the controller on the network, a login prompt will appear.



The default login information is as follows:

Description	Defaults
Username	admin
Password	admin

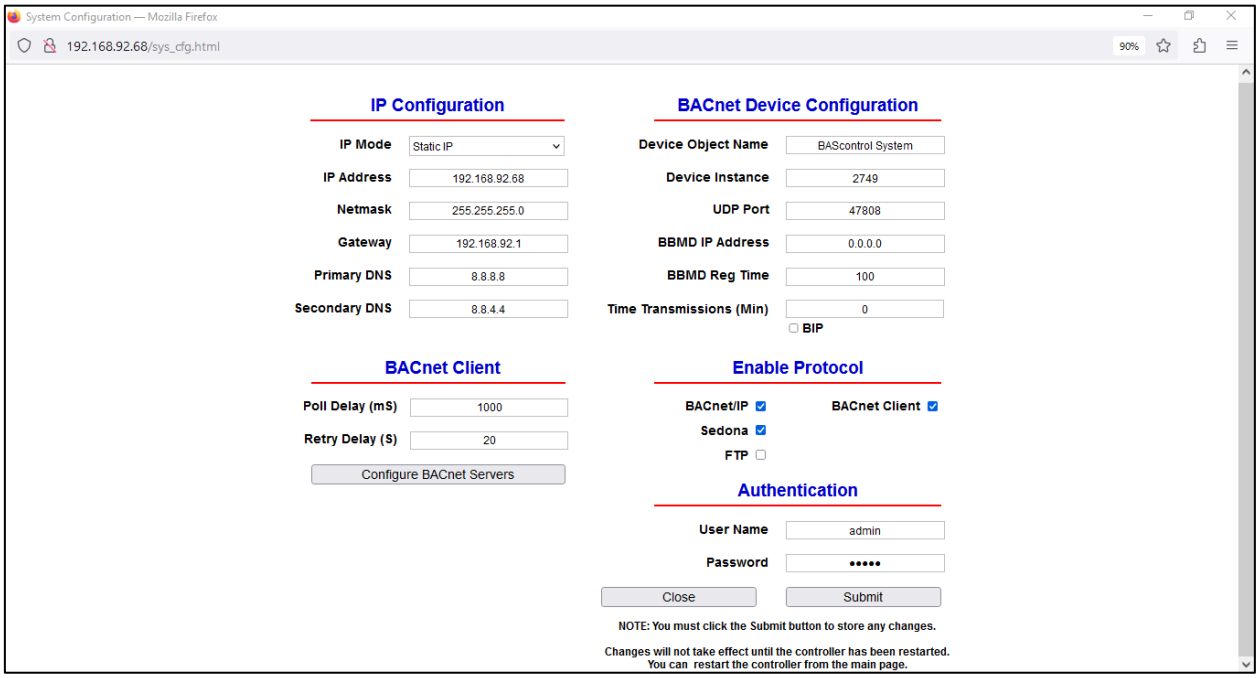
4. After logging in, a screen as follows should come up:



System Config Menu

Once connected it is important to configure the controller itself so that it will be discoverable on the CEMS BACnet network. All the following information should be filled in as to match the planned network in the shared project Excel spreadsheet.

1. Click the System Config menu on the main menu and a pop-up window should open that looks like the following:



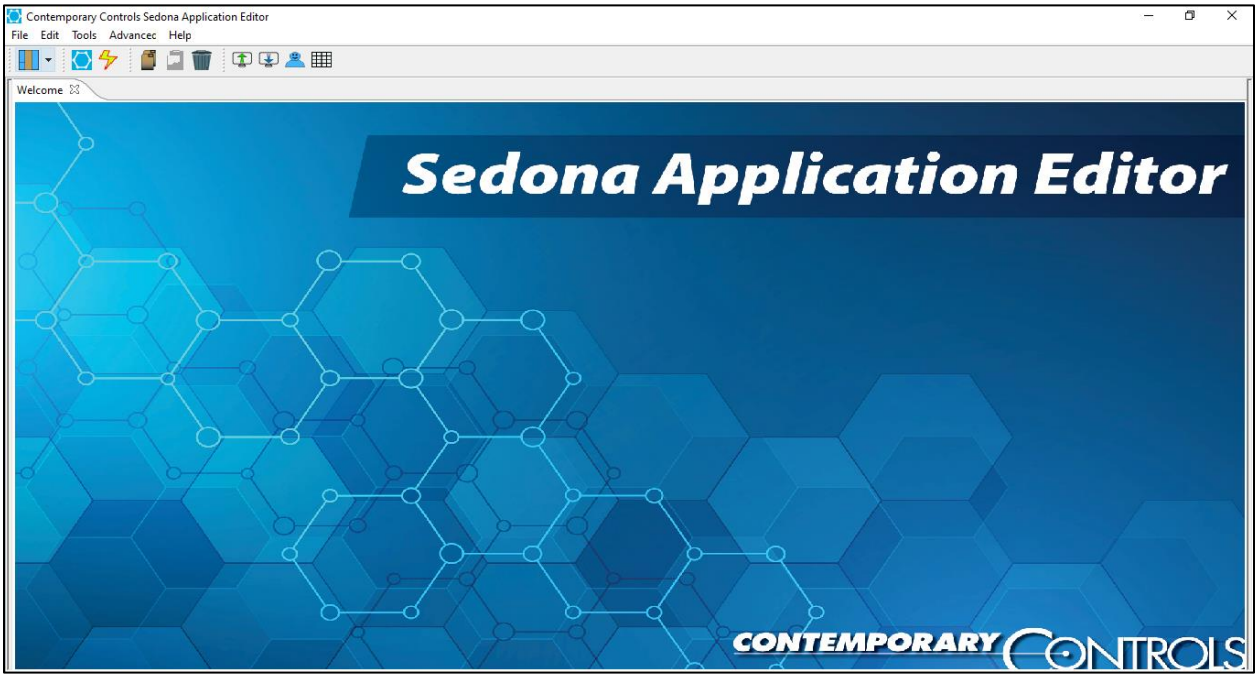
2. Once all the necessary information is filled in as per the information in the shared Excel sheet, press Submit and then Close.
3. Though this information has been changed, it has not yet been written to the Controller. In order to write the information to the Controller, the device will need to be power cycled. This can be done by pressing the Restart Controller button in the main menu.
4. NOTE: The computer will have to have its IP address changed to match the new IP address subnet of the controller if it was changed. The controller will now need to be connected to through its new IP address.

Setting Up Virtual Points

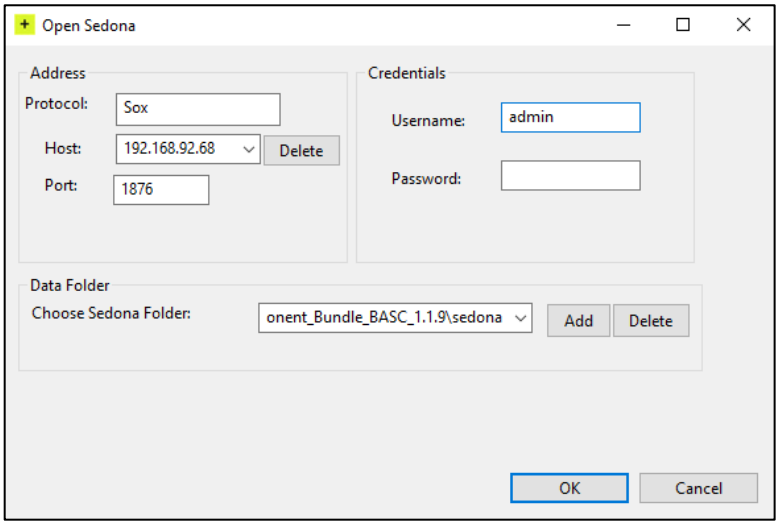
To set up the controller to convert the raw analog signal it is receiving into a BACnet object that can be read, the Universal Inputs need to be associated with Virtual Points.

To configure the Virtual Points, a specific software called Sedona Application Editor (SAE) will be needed. Please download the BAScontrolToolsetInstaller.

1. Download the software tools provided by Setra and open the SAE application. A window as follows should appear:

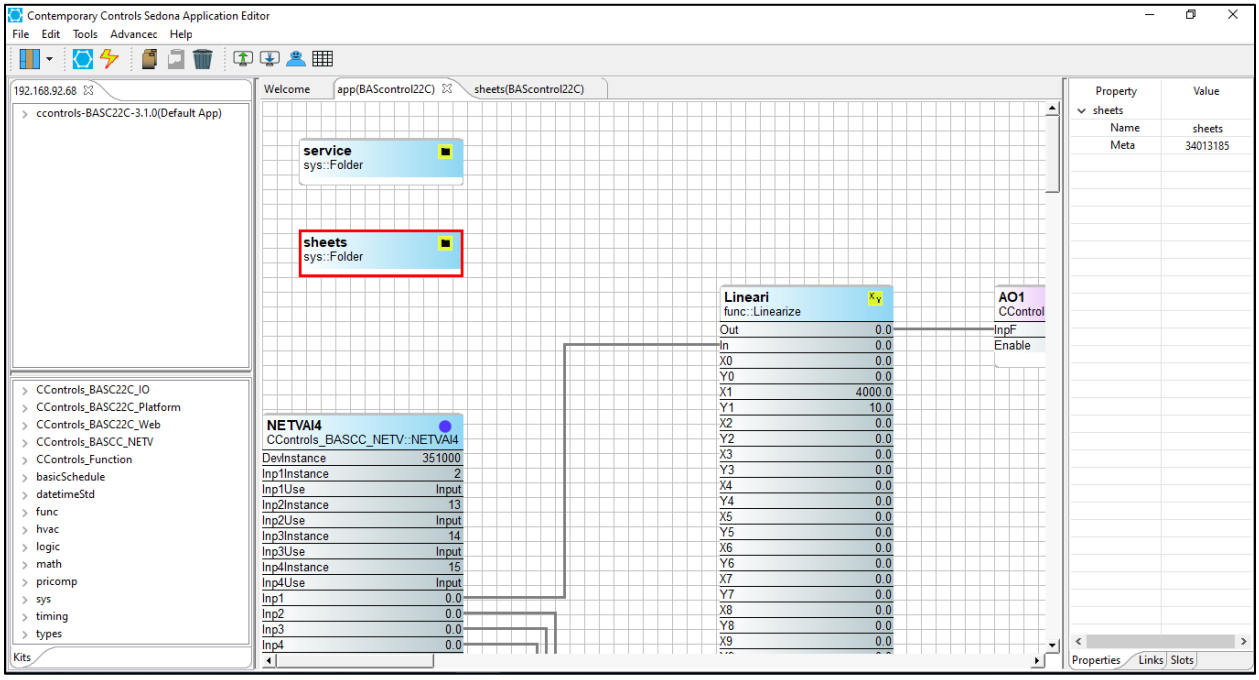


2. Press the button at the top left of the screen and a window as follows should appear:



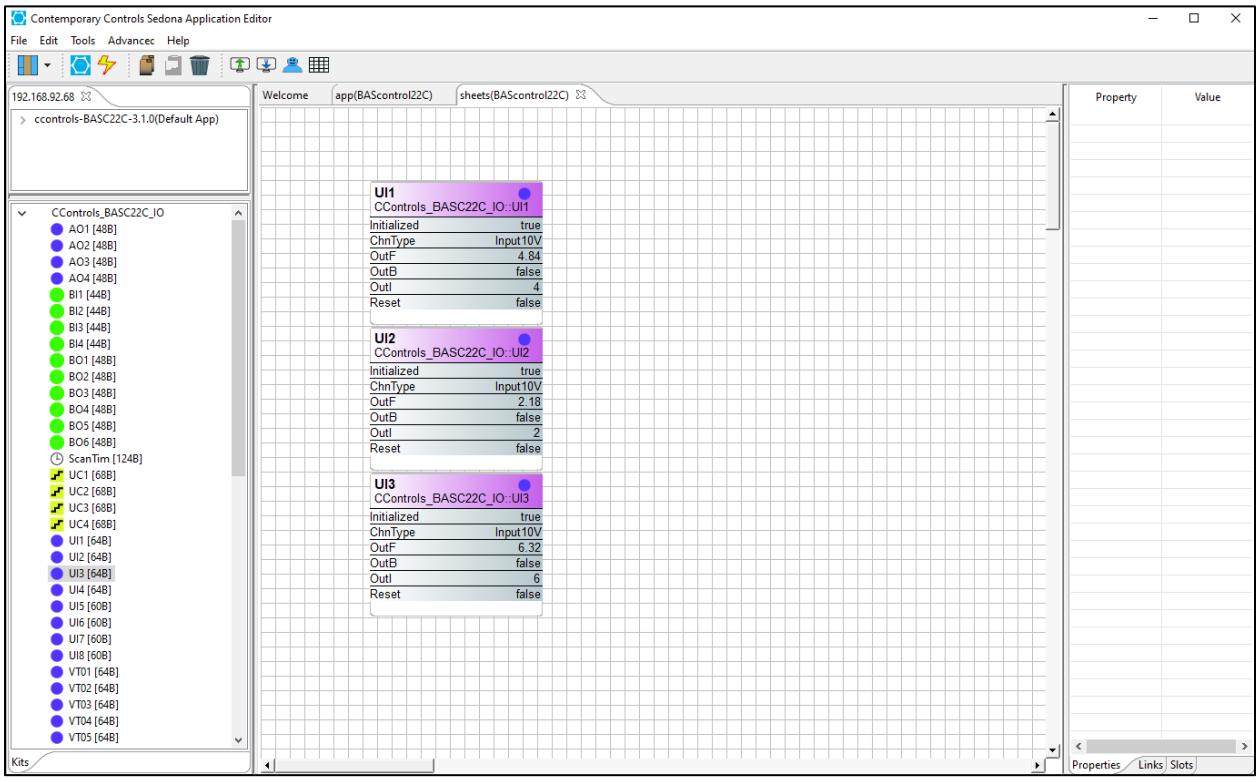
3. The Host: box will be the IP address of the controller and the Credentials will be the username and password used for the controller login. If the login information does not work initially, the default “admin” and “admin” can be used. Everything else should be left at default and then press OK.

4. A window similar to what follows should appear:



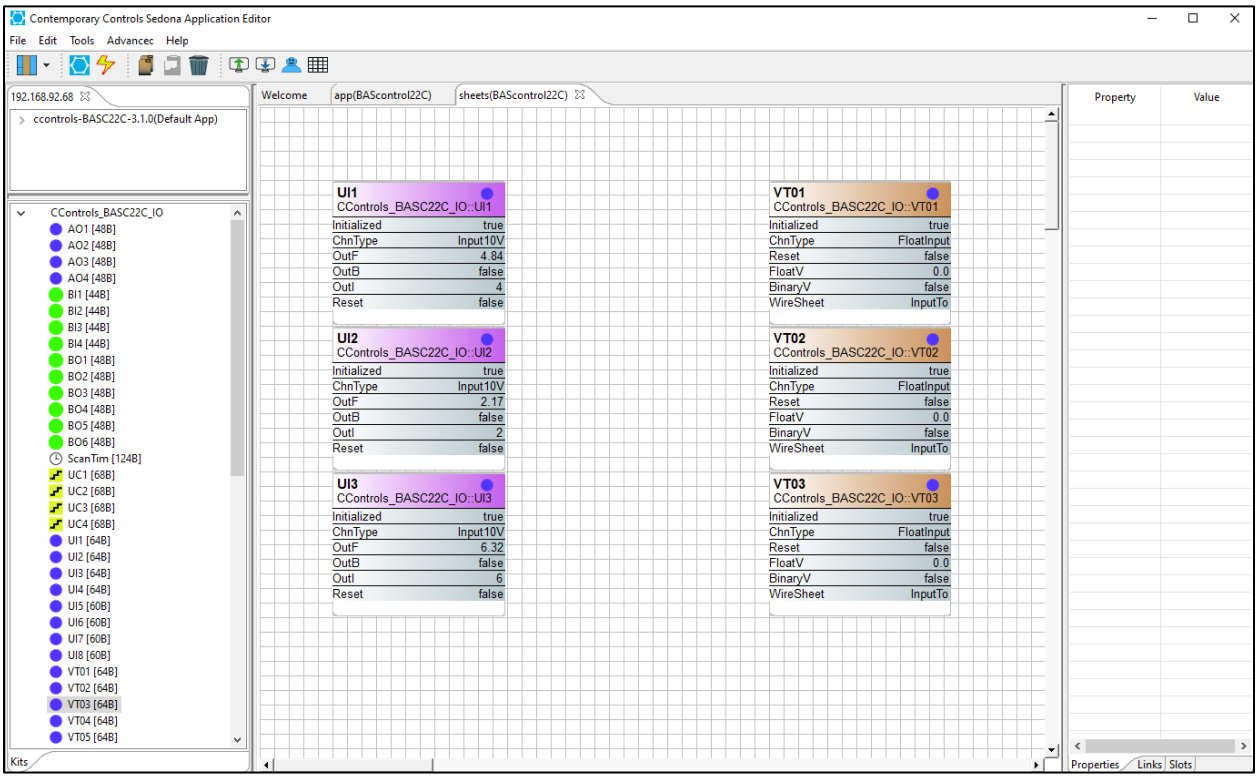
5. Double click the box that says *sheets* and a new tab will open up.
6. On the left side there is a window with drop down menus.
7. Drop down the one labeled *CControls_BASC22C_IO* (the top one) and all the input options should appear.

8. Drag and drop the UIs that are being used.



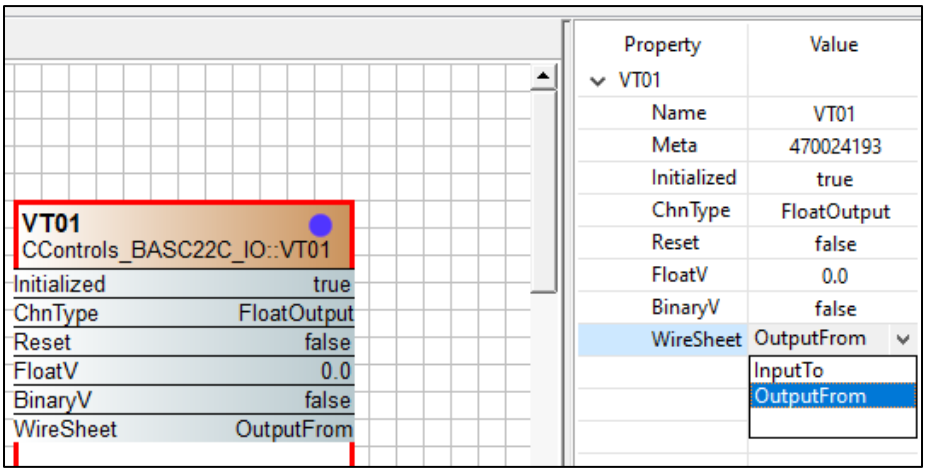
9. In this document, our example is setting up LITES and SRHs:
   The controller is being set up to receive a pressure from a 0-5V LITE and a temperature and humidity from a 0-10V analog SRH, so UI1, UI2, and UI3 will be used.

10. From the same drop-down menu, drag and drop an equivalent amount of VT (virtual) points. These are the virtual BACnet objects the analog inputs will

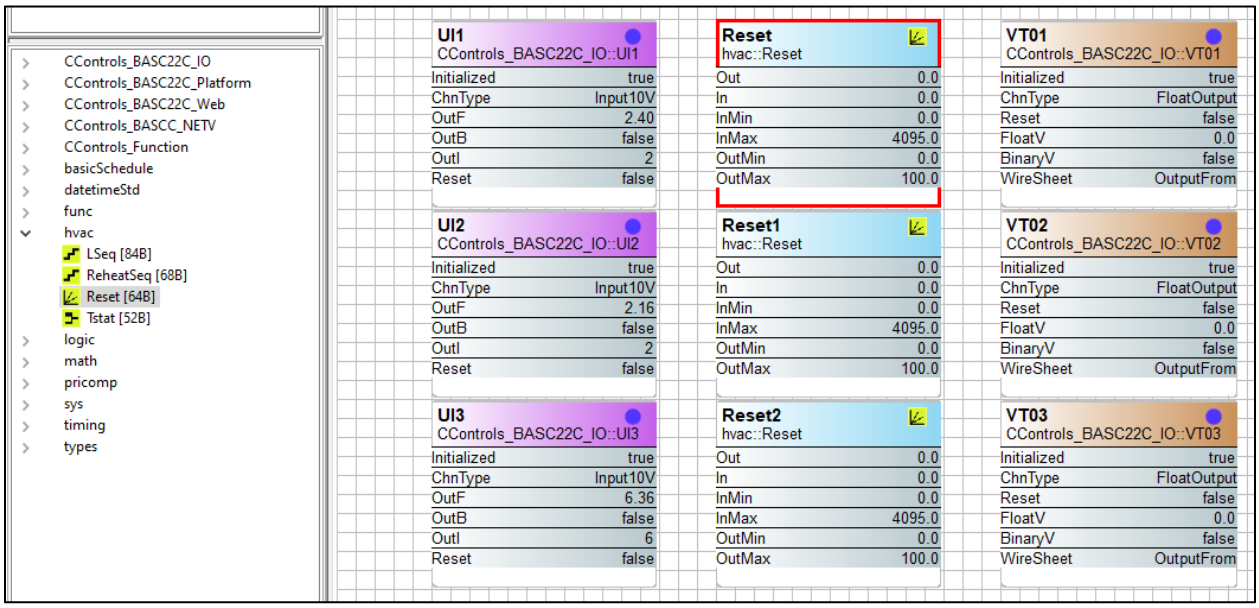


become.

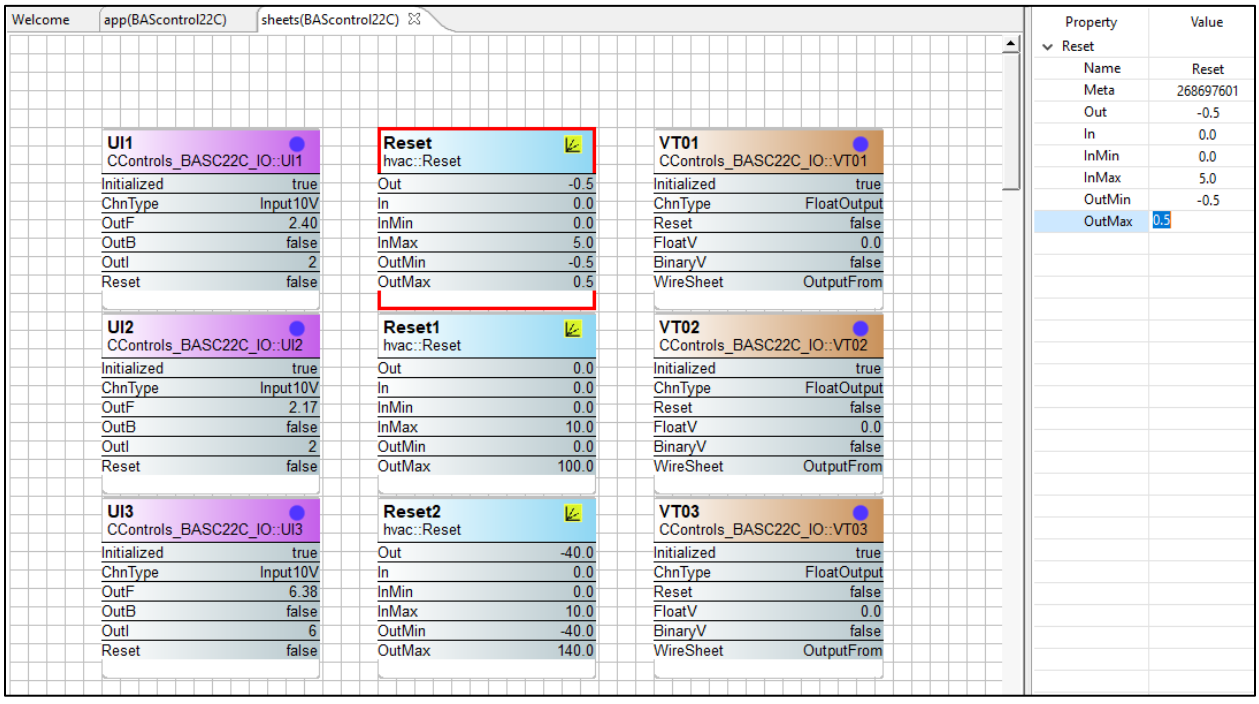
11. Click a VT block so that it is outlined in red.
12. On the right side of the window there is a menu with two columns, *Property* and *Value*.
13. Change the *WireSheet* to *OutputFrom* rather than *InputTo*.
14. Repeat this for each VT block.



15. On the left, drop down the *hvac* menu and drag an equivalent amount of *Reset* blocks in between each pair of UI and VT blocks.



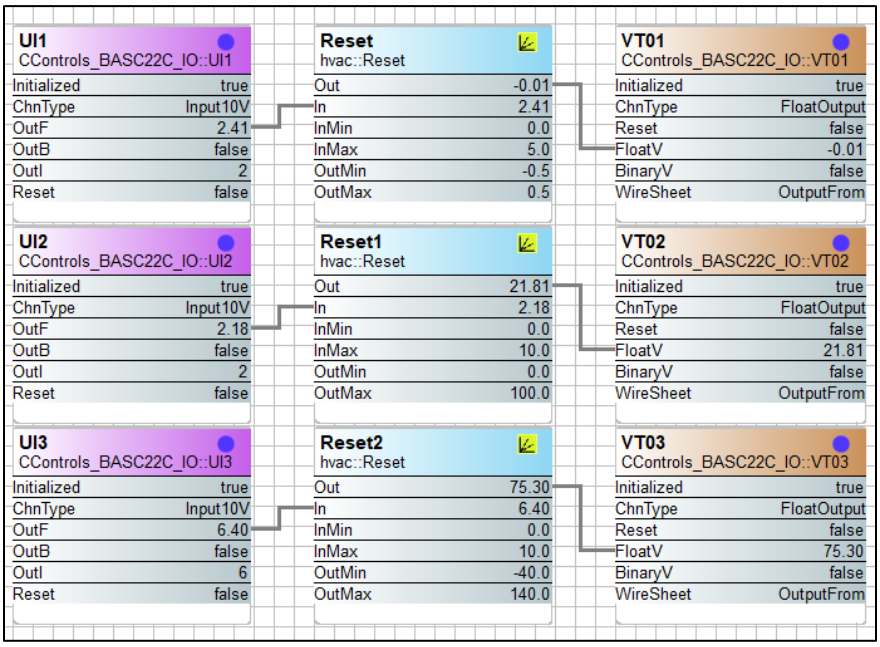
16. Highlight a *Reset* block so that it is outlined in red.



17. On the right side of the window there is a menu with two columns, *Property* and *Value*.
    a. Change the *InMin* to be the lower bound of the analog signal (ex. 0V for 0-10V).

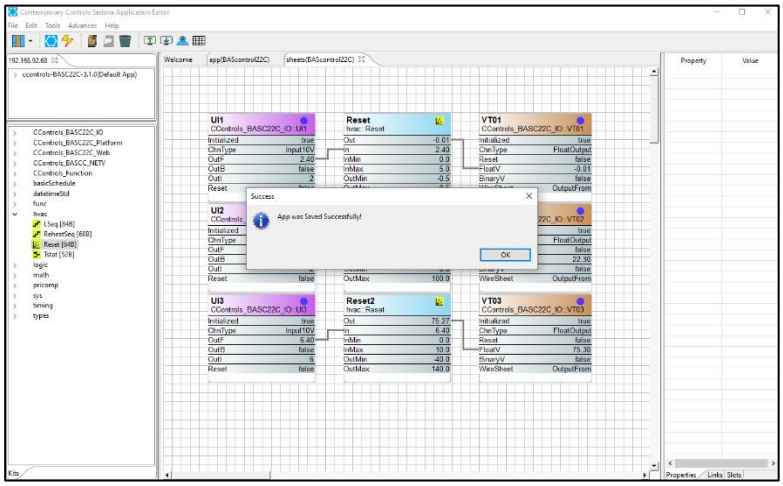
b. Change *InMax* to be the upper bound of the analog signal (ex. 10V for 0-10V).
c. The *OutMin* and *OutMax* will similarly be changed but for the range of the sensor (ex. -40F and 140F for temp).

18. Repeat this for each *Reset* block.
19. Using the mouse drag connections between the blocks as seen in the image below.

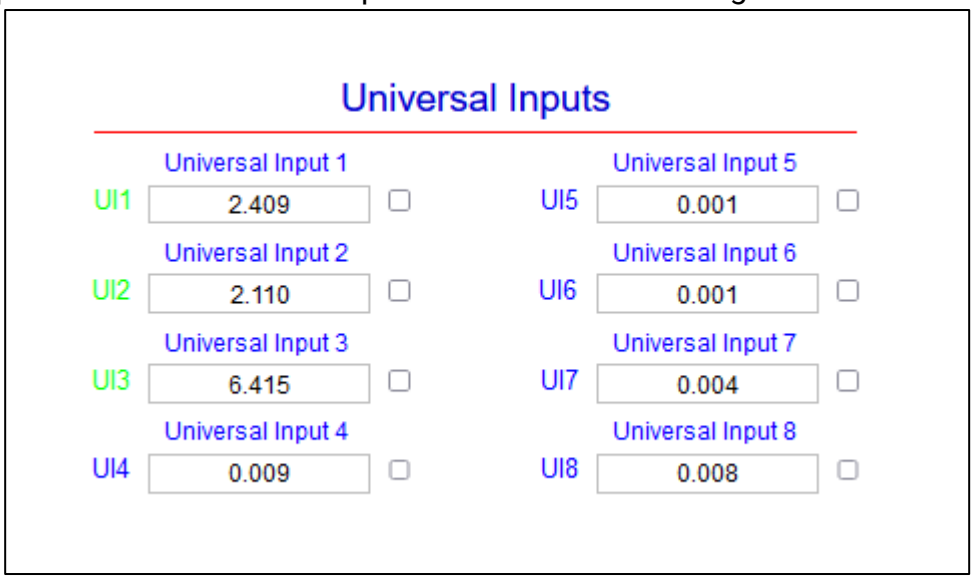


Notice in the VT blocks, there should now be the present values of the sensors if the units are wired correctly and have been configured correctly as per the steps above.

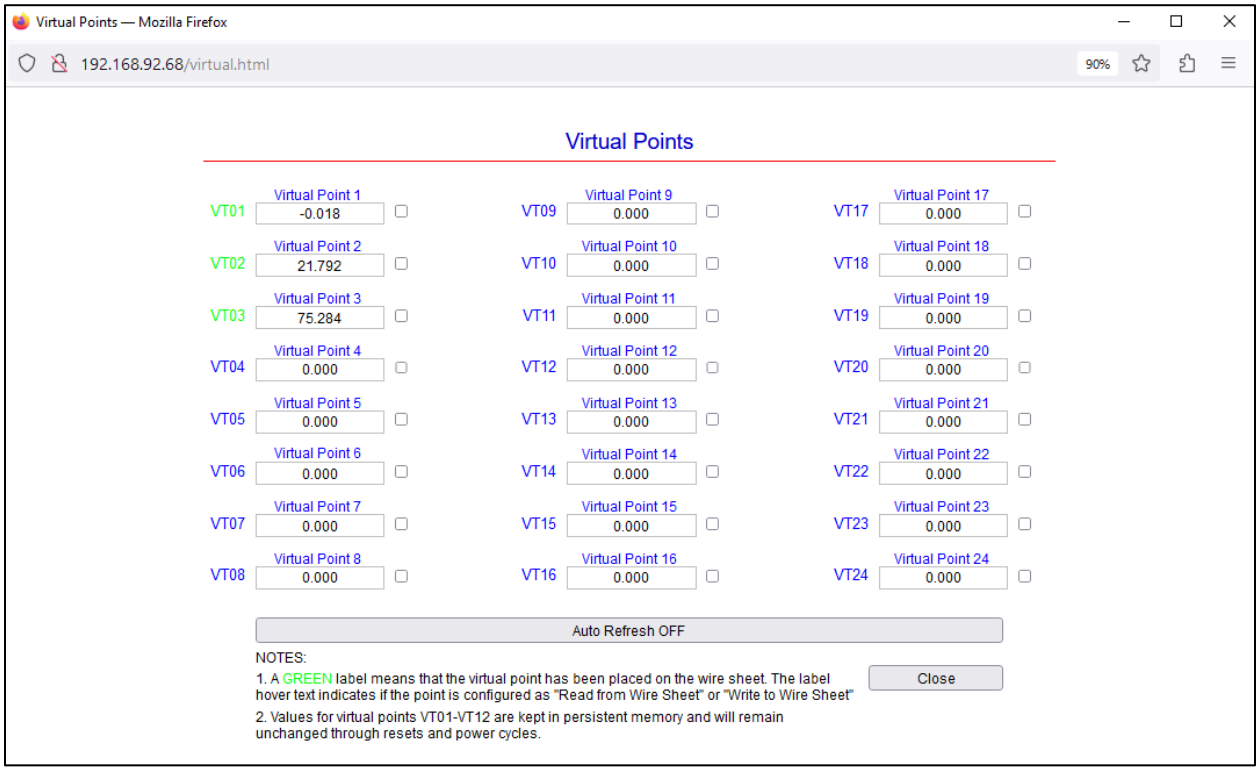
20. The configuration has been built but not yet written to the device. To write it to the device press the lightning bolt button in the top left of the window. After pressing this button, a window should pop up saying the operation was a success.



21. Go back to the web portal for the controller, there should now be values populated in the Universal Inputs section and the configured UIs should be green.

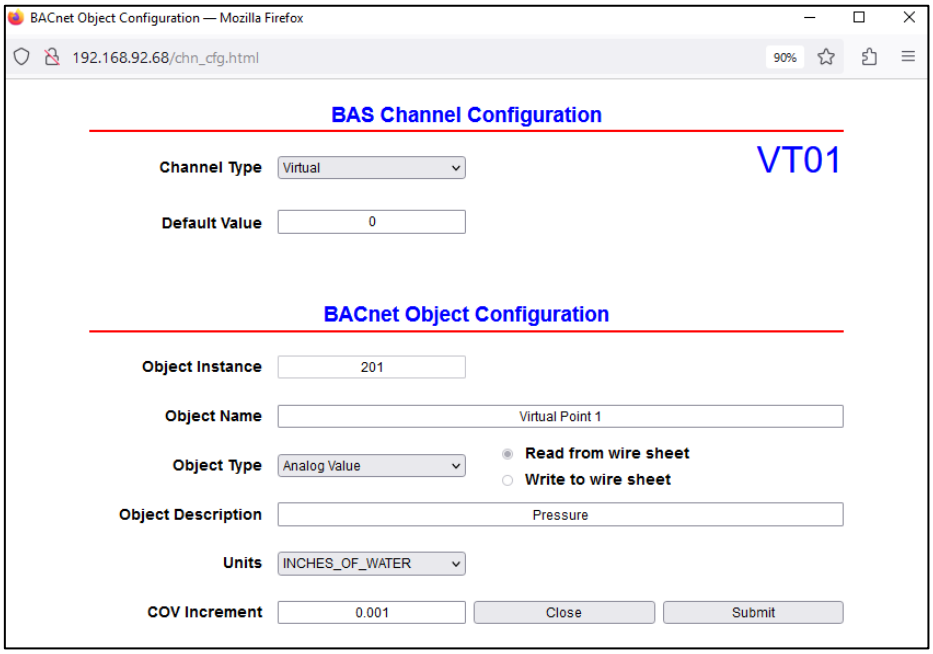


22. Click on the button that says *Virtual Points* and a new window should open up that displays the converted analog signals. The VTs should similarly be green.



23. Click the blue text that says *Virtual Point X* and another window should open up.

24. In this window the BACnet object information can be filled in.
    a. The *Object Name* and *Object Description* can be whatever is preferred.
    b. The *Object Type* must be *Analog Value*.
    c. The *Units* should match what the range was set to in the previous steps (ex. INCHES_OF_WATER for the pressure).
    d. Click submit, click close, and repeat for each virtual point.



25. The controller has now been fully configured.
    Note: If the Auto Refresh button is set to ON, live data should appear on the screen, otherwise it will stay at the data that was being read at the moment the window opened.