BASview 3

USER MANUAL







BASview 3 Introduction

- The BASview3 is a small building controller that can provide alarming, trending, scheduling, graphics and programming for a small facility or portion of a larger facility
- It can support up to 2000 nodes
- It has support for BACnet and Modbus
- It has one Ethernet port 24, VAC/VDC power input, Power and Status LEDs, and a rugged DIN rail mounted enclosure



All configuration of the BASview is performed using a standard web browser (Chrome recommended)



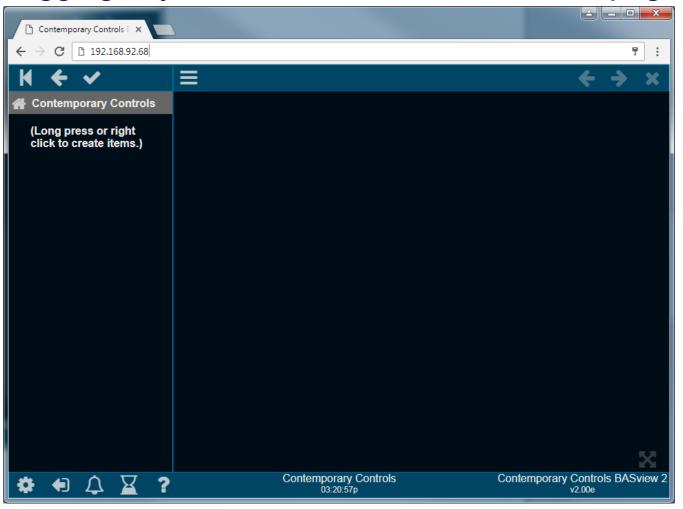
Login

- ❖ The default IP address of the BASview is 192.168.92.68
- You will be prompted to login
- The default login is
 - Username: admin
 - Password: pass



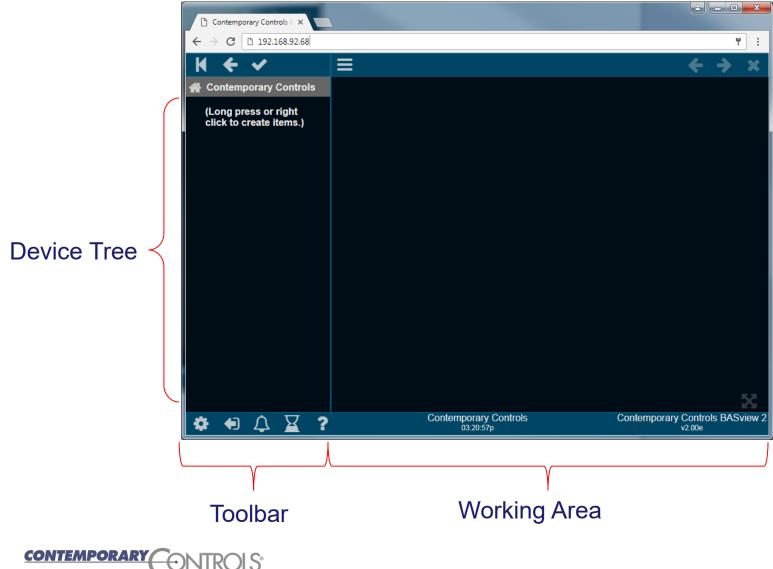
BASview 3 Webpage

After logging in you will see the BASview 3 webpage

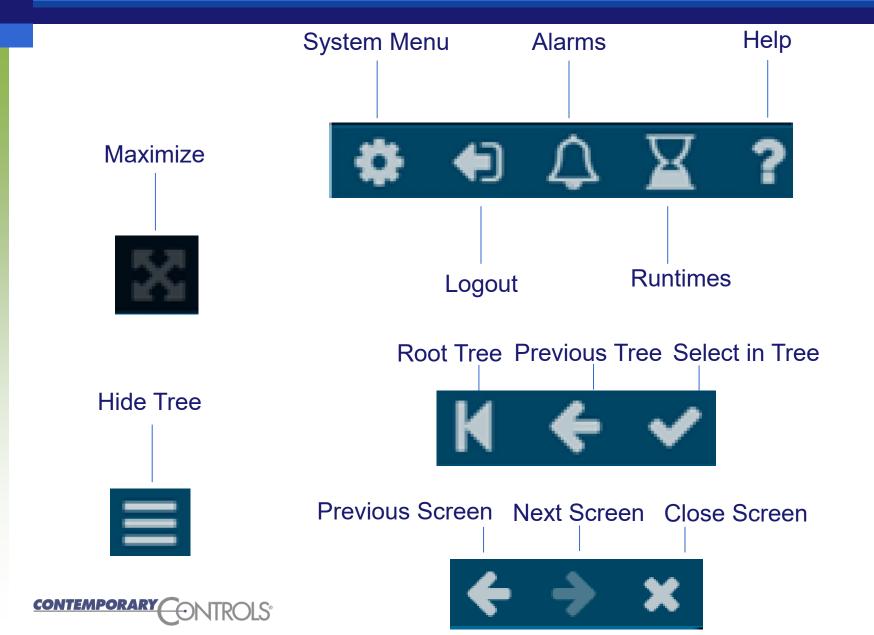




BASview 3 Screen

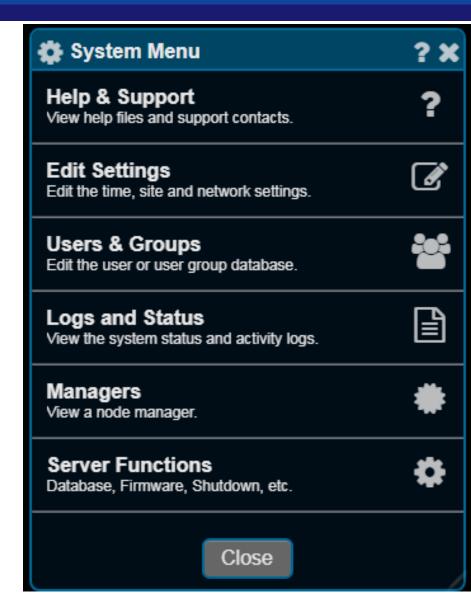


BASview 3 Toolbar and other main screen icons



System Menu

- System menu provides help, settings editing, user and group editing, viewing log and status, view the node managers, and server functions.
- In BASview 3 menus make sure you scroll up/down to see all available options. You can do this with the mouse roller ball or by selecting and dragging in the menu.





BASview 3 Help

The BASview 3 has a very good online help system. Press the ? on the toolbar and on all screens to access the help system

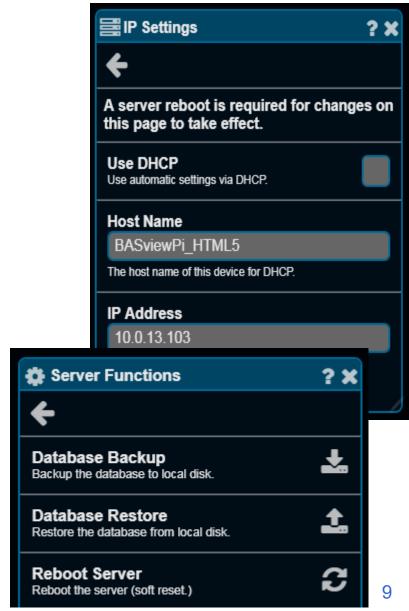






BASview 3 IP address setting

- Select System Menu, Edit Settings, Network Settings
- Enter your IP address settings (scroll up/down to see all options) and reboot
- ❖ For BACnet systems it is important to set the Broadcast setting to the broadcast address in your subnet
- To reboot go to System Menu, Server Functions, Reboot Server



BASview 3 Driver

- You need to load a driver to communicate with devices
- Right click in the device tree and select Create New Item. Then select New Driver.
- In the Pop up box select the appropriate driver and configure the driver





BASview 3 BACnet Driver Configuration

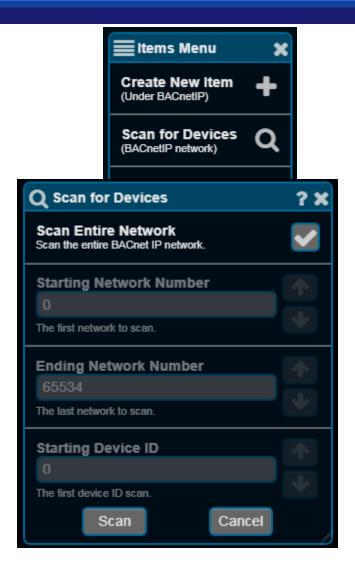
- Enter in your driver configuration
- For BACnet use a system-wide unique Device ID
- 47808 is the standard BACnet UDP port number
- Enter a label for the driver and press Finish





BASview 3 Discover Devices

- Left click the driver and right click the device tree and select Scan for Devices
- You can manually enter a BACnet device (Create New Item -> New Device) Or Scan for devices.
- Press the Scan button to discover BACnet devices
- Press Scan on the next window





BASview 3 BACnet Device Scan

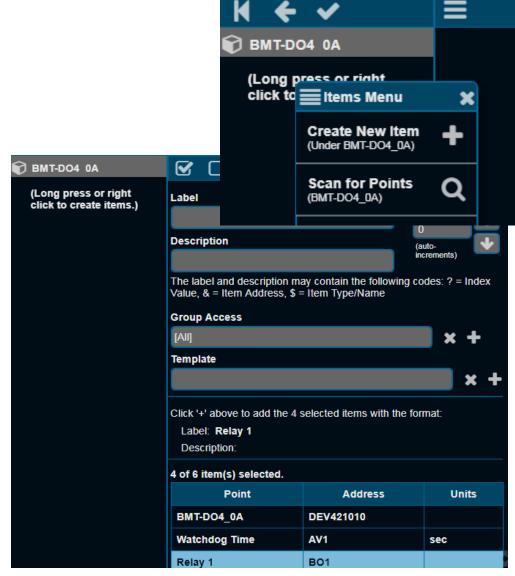
❖ Discovered devices will be shown in listbox. Select one at a time to change the name (label) and press +. Or select multiple (or select all with top left checkbox) and press + if names are ok.





BASview Add BACnet Points

- Left click one device and right click in the device tree and select Scan for Points
- Select one or multiple desired points
- Rename them in the label or leave at default and press + to add to BASview 3
- As they are added they will disappear from list. It only shows the unused points.



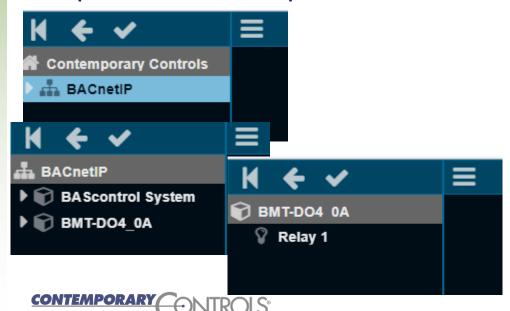


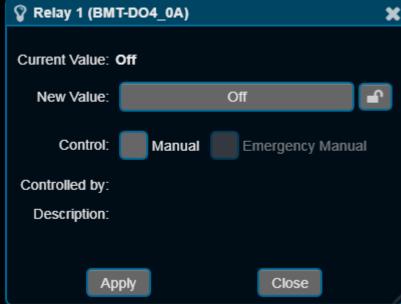
BASview 3 Manually Writing/Reading Points

- Left-click a point in the Device Tree
- Then modify its value, if writeable, from the point window and press the Apply button
- This can also be used to view the status of a point

The lock symbol can be used to view/modify the BACnet

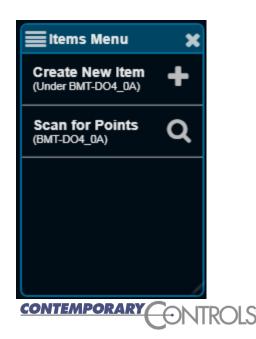
priorities for the point

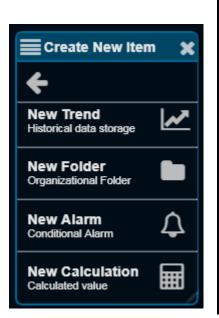


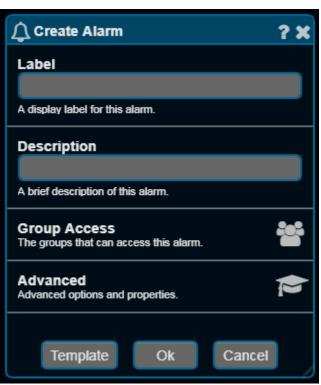


BASview 3 Alarms

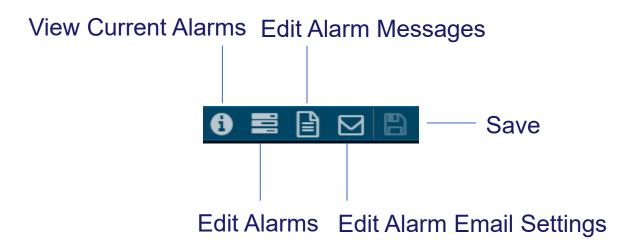
- In the Device Tree you can place Alarms at different levels
- ❖ You can place your alarms below the driver (right click on driver and select Create New Item. Then Select New Alarm.)
- You can place your alarms below the device (right click on the device and select Create New Item then select New Alarm)







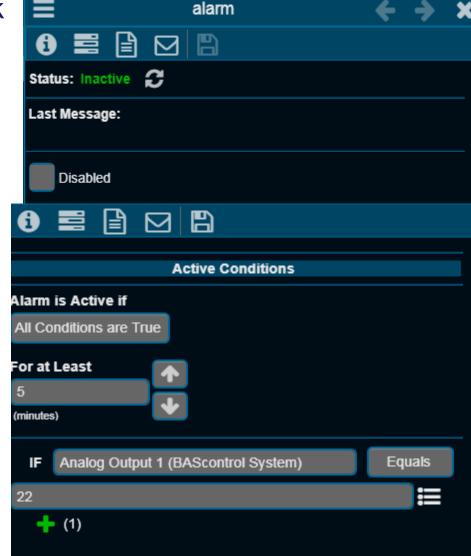
BASview 3 Alarm Menu





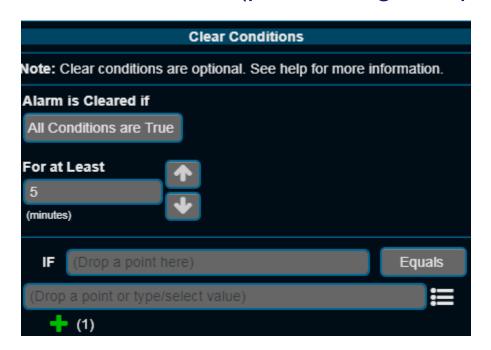
BASview 3 Alarms

- Name the alarm and press Ok
- Then left-click the newly created alarm
- ❖ Click Edit Alarms
- Drag/Drop a point from the device tree into the condition box
- Set the value box
- You can select equal, less than, greater than, not equal
- Set your time and add any additional conditions.
- ❖ Press Save



BASview 3 Alarm Clearing

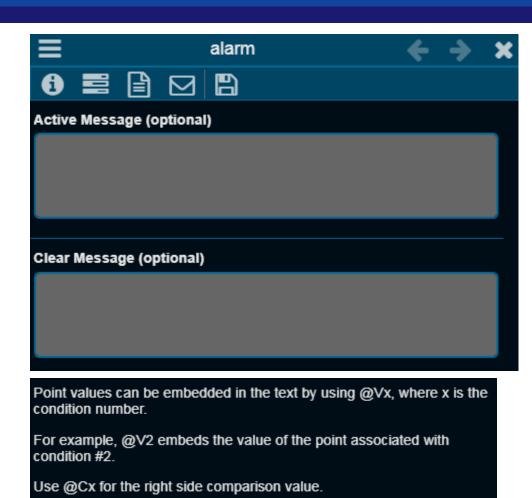
- Same as with alarm activation
- Drag/drop a point, set the valuation and set the condition value
- Set the time condition
- ❖ Add any additional conditions (press the green plus)





BASview Alarm Messages

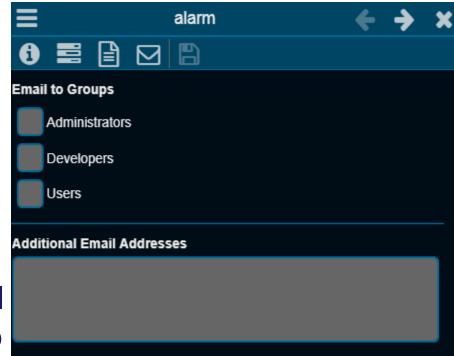
- The Alarms can have a message when they are set and when they are cleared
- Press the Edit Alarm Messages button and provide the Alarm messages
- Then press the Save button
- You can place point data in the message





BASview 3 Alarm Emails

- The BASview 3 can send emails when an alarm condition occurs and when the condition becomes in active
- ❖ In the alarm edit screen select the email icon
- Here you can select to email the alarm to a specific group or additional email addresses (make sure the setting menu email settings and user settings are correct)
- ❖ Press Save
 ONTROIS



BASview 3 Alarm Log

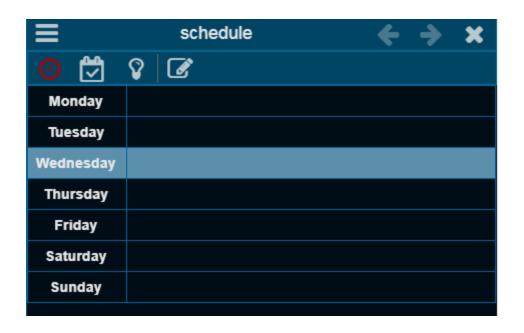
- ❖ When the Alarm icon is red and flashing, one or more alarms have occurred
- Left-click this icon and you will see the Alarm Log window.
 These alarms clear when the condition has cleared.
- You can edit the alarm here by left clicking the alarm entry
- You can search for alarms here
- ❖ To refresh the alarms press





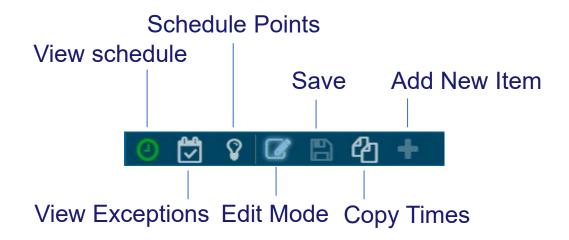
BASview 3 Schedule

- To create a schedule, right-click the driver or device and select New Schedule
- Name the schedule and select Ok
- Left-click the newly created schedule to configure it





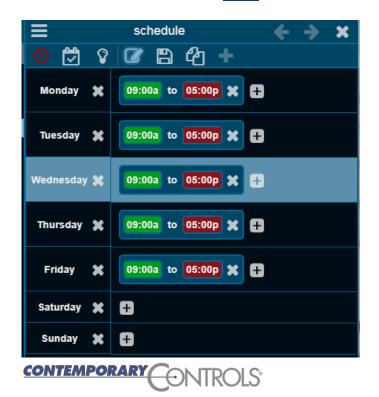
BASview 3 Schedule Menu

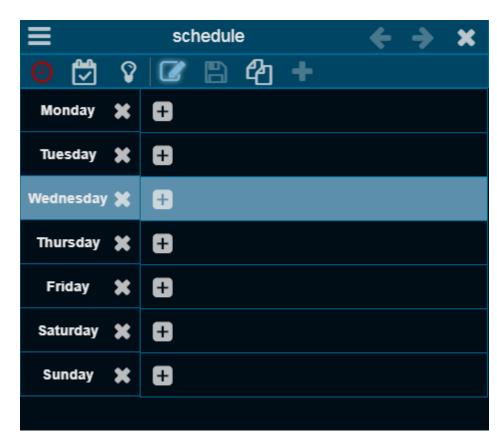




BASview Edit Schedule Time

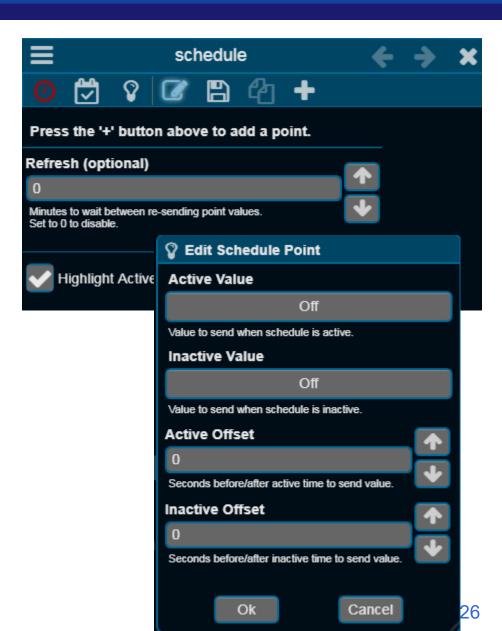
- ❖ Press the Pencil icon and the + icon for Monday
- Enter a start and stop occupied time
- ❖ Press the copy icon ☐ to copy this entry to the rest of the week
- ❖ Press save





BASview 3 Schedule Points

- ❖ Press the Point icon
- Press +
- Drag/drop a point from the device tree and fill out the schedule point edit box
- Press Save





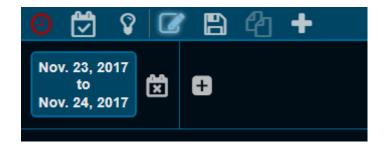
BASview 3 Schedule Time

- The Schedule will allow us to set the Active and Inactive time period
- ❖ When the schedule is in the Active period the BASview will send the Active value, you created previously, to the point in the device that you provided
- When the schedule is in the Inactive period the BASview will send the Inactive value, you created previously, to the device
- You can select this value to sent periodically to the device



BASview 3 Schedule Exceptions

- You can add Exceptions to your schedule
- ❖ Press the Exceptions button
- ❖ In the Exception Editor press + and enter the dates when your normal schedule will not apply and enter the active times for that date by pressing the + next to the date. Or leave it blank for unoccupied the entire day.

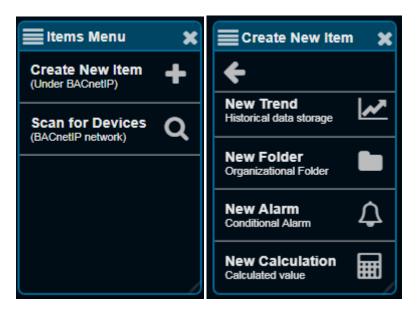






BASview 3 Trends

- You can trend any point in the Device Tree
- You can have your trend below the driver (right-click driver and select Create New Item and New Trend)
- You can have your trend below a device (right-click driver and Create New Item and select New Trend)





BASview 3 Trends

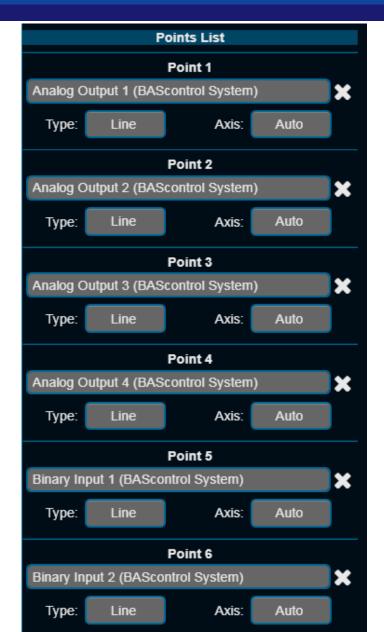
- After you create a trend provide a meaningful label in the Create Trend window and press Ok
- Left click the newly created Trend in the Device Tree and you will see the BASview Trend screen

∠ Create Trend	? X	
Label		
trend		
A display label for this trend.		
Description		
A brief description of this trend.		
Group Access The groups that can access this trend.	**	
Advanced Advanced options and properties.		
Template Ok Cano	el	



BASview 3 Trend Point Screen

- You will need to add points to the screen
- Right click the trend window and select Edit Settings
- You can Drag/Drop up to 6 points from the Device tree
- Drag a point from the Device Tree you want to trend
- You can have up to 6 points in one trend





BASview 3 Trend Point Frequency

- You can indicate how often the points will be trended (Record values every) and press save
- Each setting will give you a differing amount of days of storage before the oldest trend data starts getting overwritten with the latest trend data
- ❖ You can have multiple trends of the same points but using different frequencies. For example using 1 minute finer and 15 minute for less fine.

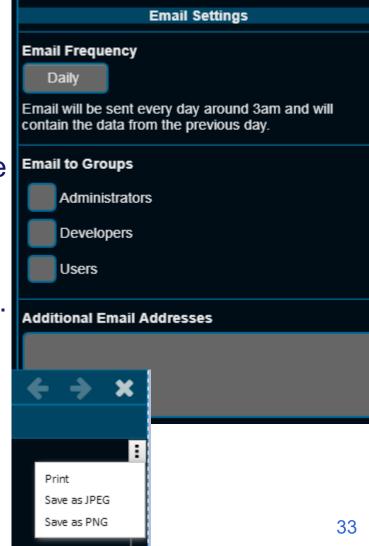
Chart Settings			
Record Values Every			
4 Hours (1,680 days total)			

	Frequency	Storage Time
	1 minute	7 days
	5 minutes	35 days
	10 minutes	70 days
	15 minutes	105 days
_	30 minutes	210 days
F	1 hour	420 days
	2 hours	840 days
	4 hours	1680 days
	6 hours	2520 days
	8 hours	3360 days
	12 hours	5040 days
	1 day	10080 days



BASview 3 Trend Screen

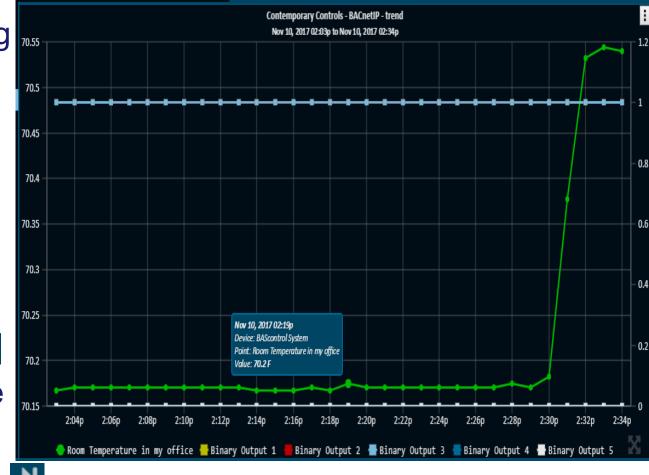
- After the Trend acquires data you can see graphs in the Trend screen
- You can select the date and time to view by right clicking and selecting Select Date/Time
- Hovering will show you the value/time
- You can zoom in by selecting in the graph and dragging
- You can export the data in a CSV file.
- You can email the trend data on a periodic basis
- You can also view in table format
- ❖ You can print or save as a PNG file



BASview 3 Trend Screen

- Can turn off individual lines
- Can view analog and boolean values on same graph with left/right y-axis (one for analog and one for boolean)
- ❖ Show values
- Up/down in time
- Fully forward/back N





BASview 3 Graphics/Dashboard

- The BASview 3 provides two ways to display current values on a user defined screen
 - Graphics are fixed in size and can provide animated views of the system (animated mechanical systems can be purchased from ControlPix or uploaded by the user such as floor plans or equipment photos.) along with real-time values of points in the system
 - Dashboards are dynamic in size and work well on smart phones or PCs. These usually just have values of points in the system. They can have mechanical equipment animations as well but these are typically hard to scale down to smart phones.



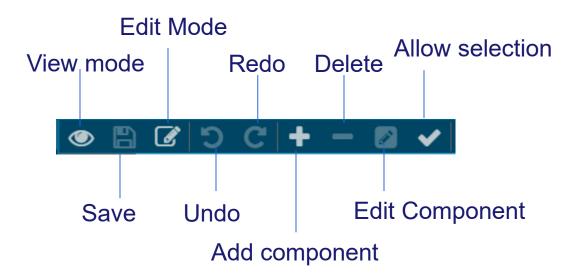
BASview 3 Graphics

- Graphics allow you to create a set of custom webpages with animated elements and values that display the status of the building
- Graphics also allow you to change the operation of the building in a graphical view
- Typically the end user is only provided access to one or more graphics
- ❖ The BASview 3 provides the integrator with the ability to create various logins for their end users and categories for end users (e.g. building engineer, building owner, etc.)
- These logins can have access to different graphic screens and can have different rights to the system



BASview 3 Graphics

- Right click in the tree and select Create New Item
- Select New Graphic
- Give it a label (name)
- Right click and select Edit Mode
- Menu





BASview 3 Users

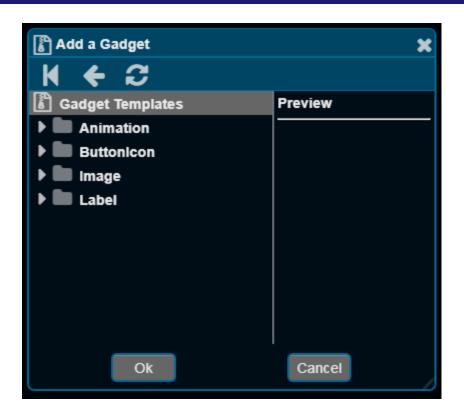
- Left click the System Menu
- *
- Select User & Groups
- Select Edit Groups
- Select your group or create new one
- You can block their access to the device tree and select their home screen (graphic or dashboard)





BASview 3 Creating Graphics

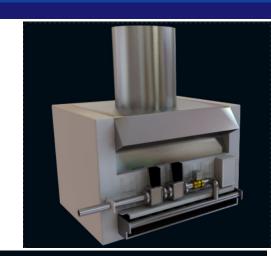
- Press Add component
- You can add an
 - Animation (animated GIF)
 - Button Icon
 - Image (JPG or GIF or PNG)
 - Label





BASview 3 Animated Icons

- Animated Icons can be standalone animated GIFs that animate when a point in the system is true, false, or at a specific level
- Animated Icons can be used with an image to animate that part of the image
- The first image is a boiler image from ControlPix (Controlpix.com). The image below it is the animated icon that changes based on a point in the system.
- ❖ Place the burner animated icon on the boiler image to make it appear as the boiler is active when the system point indicates an active boiler.

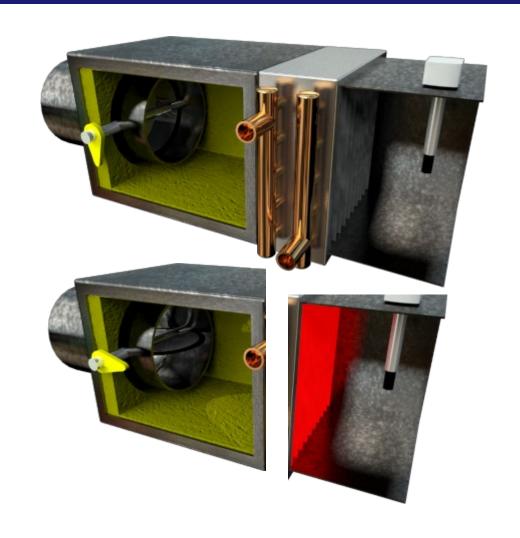






BASview 3 Animated Icons

- Here is a VAV from ControlPix (www.controlpix.com)
- You can add multiple PNG files to show different damper positions and coil temperatures based on system point values



BASview 3 Animated Icons

- You can also show two images for a point, one when the point is true and one when the point is false (or outside a specific range)
- You can also use an animated GIF and show a specific cell of the animation based on a system point value.



BASview 3 Graphics

- An image can also be the background of your graphic
- For example you can show a building floorplan and layer system values on top of the floor plan
- You could show the outside of the building



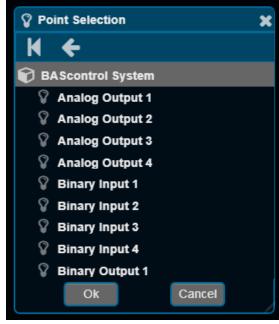




BASview 3 Graphics and Points

- You can typically add points in one of two ways
 - You can drag a point from the device tree and drop it on the graphical element while it is in edit mode
 - You can right click the graphic and select Edit Points (scroll down)
 - Press the + button and select your point from the provided menu



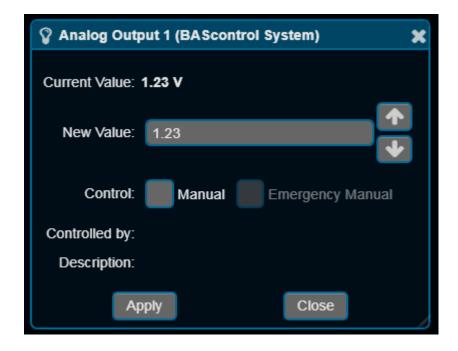




BASview 3 Button icons

- The button is tied to a point in the system
- Drag and drop this point onto the button in edit mode
- The button can show its value
- When pressed a popup box will appear and the user can edit the value of this point







BASview 3 Label

- A label can contain text and the value of a point in the system
- Drag and drop a point from the device tree onto the label while in edit mode

Room Temperature in my office = 71.6 F

When the graphic is active the current value of the point will be displayed and will change as the point changes in value



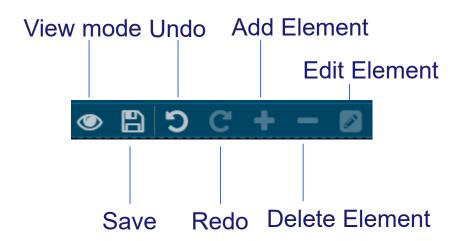
BASview 3 Dashboard

- With a BASview graphic the placement of each element is precisely defined
- With a BASview dashboard the elements are placed relative to one another and will appear in this order but they appear on separate lines based on the size of the screen and may change their size
- With the Graphic you were able to place 4 element types
- With the Dashboard there are many more types including containers to show your trends, your schedules and even other graphics



BASview 3 Dashboard

- Left click the tree and select Create New Item
- Select New Dashboard
- Provide a meaningful label
- Press Ok
- You will initially see a blank dashboard with just a title
- Dashboard menu





BasView 3 Dashboard

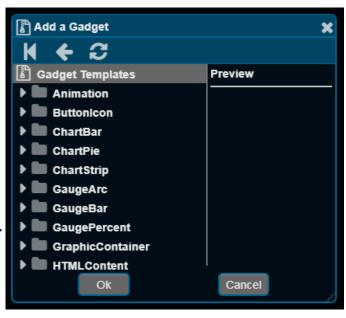
- Click the dashboard in the device tree
- Right click and select Edit Mode
- Click the title element
- Right click and select Edit Gadget and adjust its parameters
- Press the Add Element
- Select your gadget type
- Right click the gadget on the screen and select Edit Gadget
- You can change the order of the gadgets by dragging them before and after other gadgets



BASview 3 Dashboard Gadgets

- There are 22 dashboard/ graphic gadget types
 - Animation
 - ButtonIcon
 - ChartBar
 - ChartPie
 - ChartStrip
 - GaugeArc
 - GaugeBar
 - GaugePercent
 - GraphicContainer
 - HTMLContent
 - Image

- IndicatorIcon
- Label
- MultiState List
- MultiState Selector
- Panel
- PointGrid
- ScheduleContainer
- SlideBar
- SwitchRound
- SwitchSlide
- TrendContainer

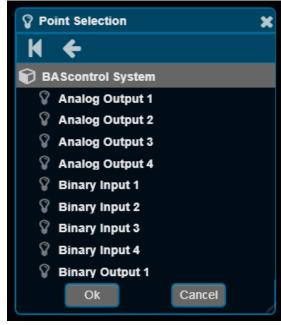




BASview 3 Dashboard and Points

- You can typically add points in one of two ways
 - You can drag a point from the device tree and drop it on the dahsboard element while it is in edit mode
 - You can right click the element and select Edit Points (scroll down)
 - Press the + button and select your point from the provided menu







BASview 3 Dashboard Animation

- This allows you to show animated GIFs and animate based on a point value or show two different images based a point value
- You can also show the point value
- You can change its color theme background and foreground colors



BASview 3 Dashboard ButtonIcon

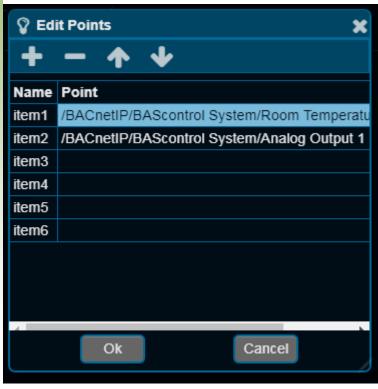
- You can have a button can be used to modify a point value
- You can show the live point value
- You can change the displayed button icon
- You can change the button's foreground and background color
- ❖ Drag and drop a point from the device tree onto the button in edit mode to set the button – point connection
- You can also edit the selected point by right clicking the button and selecting Edit Points

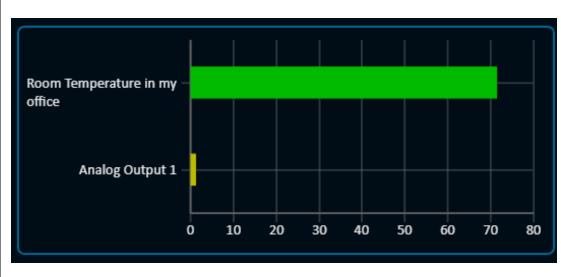




BASview 3 Dashboard ChartBar

- You can show a bar chart that compares the values of up to 6 points
- Drag and drop the points onto the ChartBar or right click the ChartBar and select Edit Points

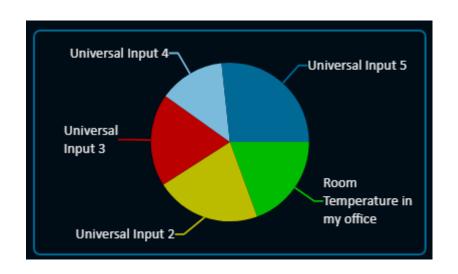






BASview 3 Dashboard ChartPie

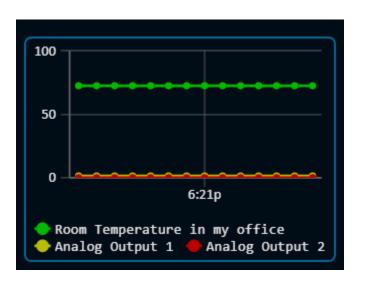
- ChartPie can be used to show a live pie chart composed of system point data
- Drag and drop the points onto the ChartPie in Edit Mode or right click the ChartPie in Edit Mode and select Edit Points





BASview 3 Dashboard ChartStrip

- ChartStrip will create a small live graph of up to 4 points
- You can hover over the points to get their values
- You can turn points on/off by clicking on their names
- You can change its size, reading interval, maximum number of readings, borders, legend, caption and theme





BASview 3 Dashboard GaugeArc

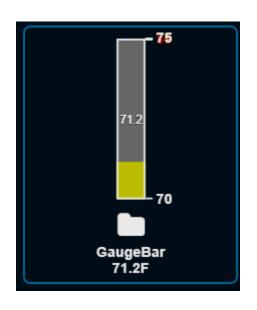
- GaugeArc can show the live value of a system data point
- Drag and drop the point from the device tree onto the GaugeArc in Edit Mode or right click the GaugeArc in Edit Mode and select Edit Points
- You can change many features of the GaugeArc such as range of value, colors, labels, units, etc.





BASview 3 Dashboard GaugeBar

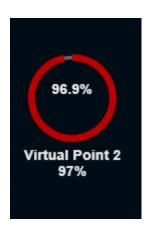
- GaugeBar can show the live value of a system data point
- It can flash if the value is outside the set range
- Drag and drop the point from the device tree onto the GaugeBar in Edit Mode or right click the GaugeBar in Edit Mode and select Edit Points
- You can change many features of the GaugeBar such as the range, colors, labels, etc.





BASview 3 Dashboard GaugePercent

- The GaugePercent can be used to show the live percentage in a system data point
- ❖ As the value gets closer to 100% the gauge will display red and flash
- When the value is lower it will show green
- You can change many features of the GaugePercent such as color, labels, etc.

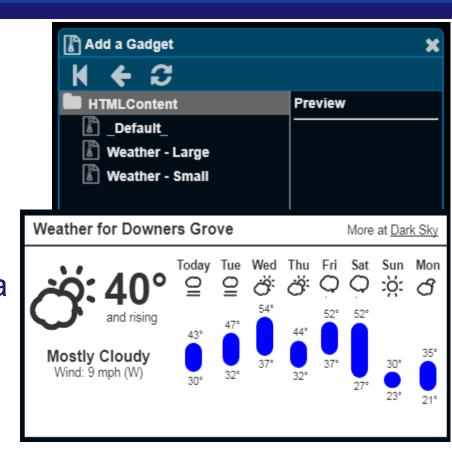






BASview 3 Dashboard HTMLcontent

- HTMLcontent can be used to allow you to customize the contents of a gadget in the BASview 3 with your own HTML
- You can also use this to display the local weather for a specific region
- When adding the gadget select Weather
- In the HTML content box change the "lat" (Latitude) and "long" (Longitude) values to those of your location



src="http://forecast.io/embed/#
color=blue&lat=41.80894&lon=-88
.0112&name=Downers Grove">
</iframe>

BASview 3 Dashboard Image

- Image can be used to display images based on live system data point values
- An image can be used when the point is off or low and another can be used when the point is on or high
- It can flash the image if the value is close to end of the range or show an additional image
- The caption can show the live value
- You can adjust the range, color, size, etc.



BASview 3 Dashboard IndicatorIcon

- The IndicatorIcon can be used to display an icon and value based on a live system data point
- You can select the on or normal range icon (defaults to checkmark)
- You can select the off or low range icon (defaults to minus)
- You can select the high limit icon (defaults to plus)
- You can set the range or allow a default range to be applied
- You can adjust captions, colors, etc.



BASview 3 Dashboard Label

- Label can be used to display the live value of a point from the device tree
- Label can also display full point info for a point
- You can adjust the format of the text, what is displayed, the font size, alignment, colors, range, etc.

```
Label = Room Temperature in my office

Value = 71.6

eValue = 71.6

Units = F

Address = Al1

Name = Pnt.Room_Temperature_in_my_office

NamePath = Dev.BAScontrol_System/Pnt.Room_Temperature_in_my_office

LabelPath = /BACnetlP/BAScontrol System/

Description =

Low Limit = 80.0

High Limit = 81.0

PointType = Analog

PointClass = Input

NodeType = Point
```



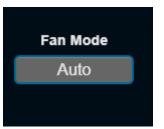
BASview 3 Dashboard MultiStateList

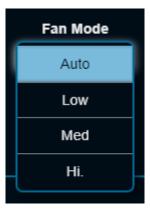
- MultiStateList displays a list of available states for a BACnet multistate point and allows the user to select a new state for the point
- You can change the font, color, border, caption, etc.



BASview 3 Dashboard MultiStateSelector

- MultiStateSelector displays the live state of a BACnet multistate
- It also provides a drop down for changing the value







BASview 3 Dashboard Panel

- This is a container for other dashboard gadgets
- Allows gadgets to be displayed vertically or horizontally
- You can adjust the title of the container, border, and colors



BASview 3 Dashboard PointGrid

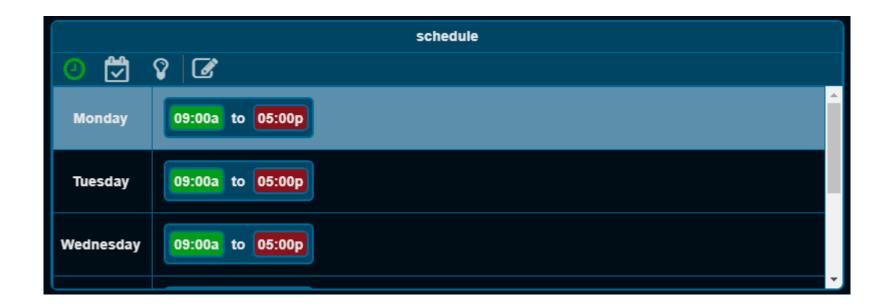
- PointGrid displays the live values for up to 8 points in a table format
- Shows the units and description
- You can change the caption, columns displayed, and colors used

PointGrid Example			
Point	Value	Units	Description
Room Temperature in my office	71.2	F	
Analog Output 1	6.09	٧	
Virtual Point 2	61		



BASview 3 Dashboard ScheduleContainer

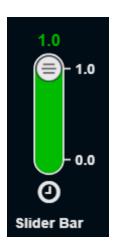
- ScheduleContainer can be used to show the schedule in the dashboard
- The Schedule can be edited
- Can set the minimum width and height and colors used





BASview 3 Dashboard SliderBar

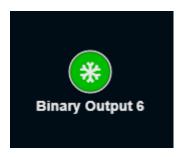
- The SliderBar can be used to display or modify the live status of a point
- When you slide the bar up/down it brings up an editor for the point to confirm the change
- Can be vertical or horizontal
- Can set the scale, icon, labels, display of current value, caption, border and colors





BASview 3 Dashboard SwitchRound

- SwitchRound is a round switch that allows a binary point to be modified
- Click the switch and it will bring up an edit box for the point
- It will display the current state (green for on, black for off)
- You can modify the size, icon, caption, colors, and border



BASview 3 Dashboard SliderSwitch

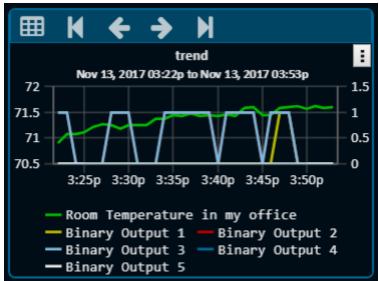
- SliderSwitch displays a slider switch for modifying the value of a binary point or for displaying the status of a binary point
- Can change the size, caption, color, or border





BASview 3 Dashboard TrendContainer

- TrendContainer can display a BASview 3 trend
- Can set the minimum width and height and color
- ❖ The trend container buttons work the same as in the trend – you can go to the first trend or page through trends or go to the last trend. You can temporarily turn on/off points in the trend to better understand the graphs. You can zoom and hover on the graphs.





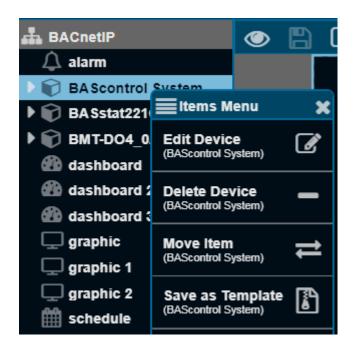
BASview 3 Templates

- One of the most important features of the BASview 3 are its templates
- Templates allow you to, basically, copy and paste "something" you have already created
- This is useful when you doing similar things over and over
- Your template can be as simple or as complex as you like
- You could have a device, its points, its schedule and its graphics all in one template
- ❖ For example if you had 48 VAVs you could create one VAV with its points, schedules, graphics, alarms and put this into a template which you can use 47 times



BASview 3 Templates Creating

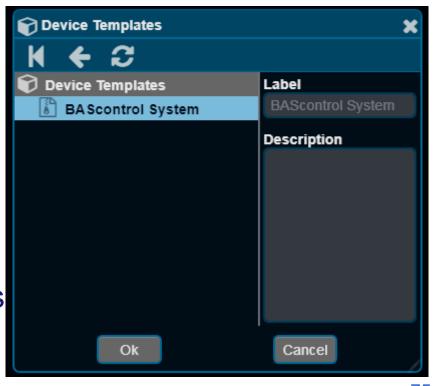
- ❖ To create a template go to the tree and select the portion of the tree which you want to make into a template and select Save as Template
- Anything below that point will be put into the template
- This can be devices, points, alarms, trends, schedules, graphics, programs, calculations, and runtimes





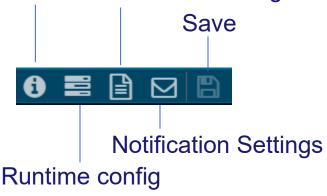
BASview 3 Using Templates

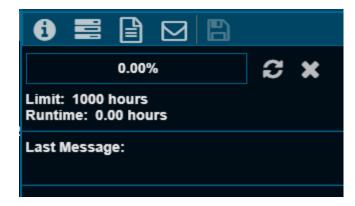
- To use the template add a new element to the tree using the highest element type in your template
- In our example we'll use Create New Item->New Device
- Press the Template button
- Select your template
- Then give it the appropriate label and settings (for a BACnet device its IP address and device ID)



BASview 3 Runtime

- The BASview 3 an be used to count the number of hours a particular piece of equipment has run (its runtime)
- You can set the runtime limit for the equipment
- When this runtime is exceeded an alarm is generated
- An email can also be generated
- Right click on the tree and select Create New Item. Then select New Runtime
- ❖ After it is created, left click it to set its properties View runtime Notification Message

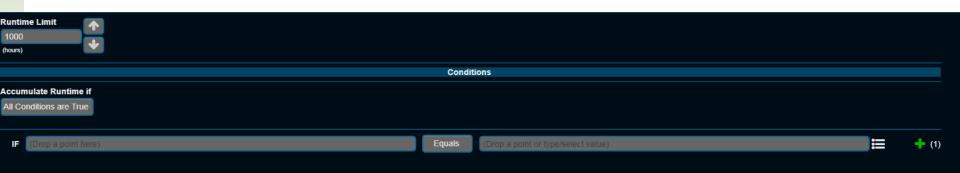






BASview 3 Runtime Configuration

- Set the conditions for runtime accumulations. Similar to the Alarms you can input the conditions that indicate that the equipment is active
- Also set the runtime limit





BASview 3 Runtime Message

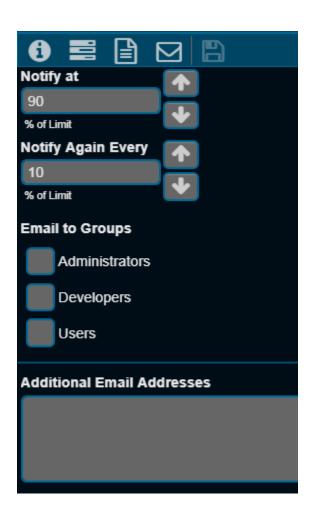
- This optional message can be set by the Notification Message button
- The message can contain value data as shown below

Point values can be embedded in the text by using @Vx, where x is the condition number. For example, @V2 embeds the value of the point associated with condition #2. Use @Cx for the right side comparison value. Use @R for the current runtime hours and @L for the runtime limit. See the help file for more formatting options.



BASview 3 Runtime notifications

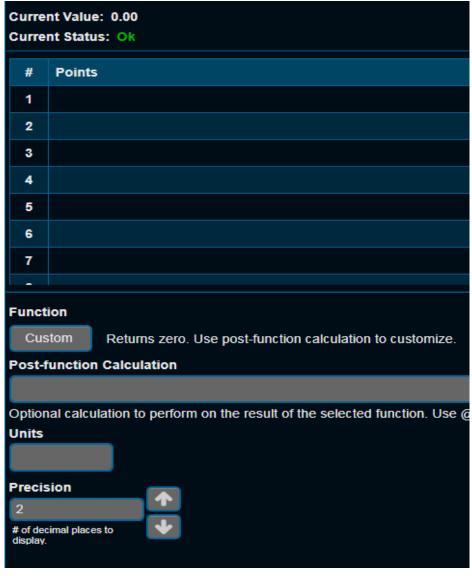
- Press the Notification Settings button
- You can indicate when the notifications are sent
- You can select which groups receive the message
- You can add additional email addresses
- Press the save button when finished





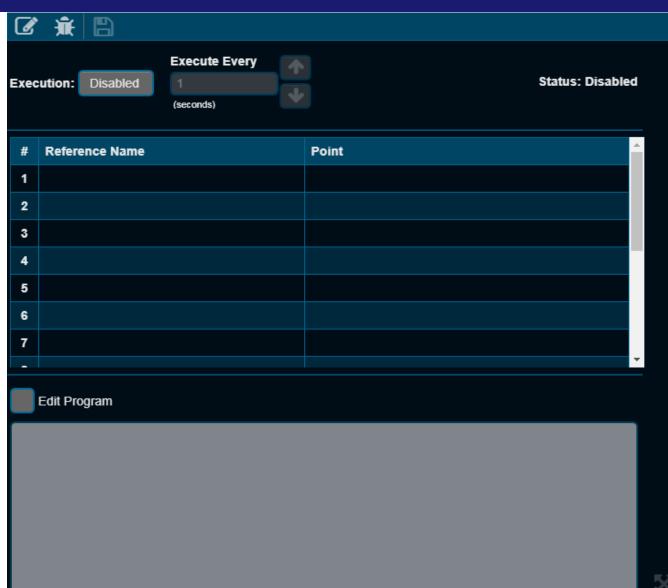
BASview 3 Calculations

- Calculations are handy way to manipulate a data point in the BASview 3
- You can see the max, min, average, median, or sum for a point
- You can convert to Fahrenheit or Celsius or enter your own conversion equation
- You can have up to 100 points from the device tree in the calculation
- Drag and drop points from the device tree



BASview 3 Programs

- The BASview supports user Python programs
- Create New Item -> New Program
- Provide a label (name)
- Left click to edit



Programs

- Drag points from the tree into the reference boxes
- Use the created Reference name in your program (e.g. @Analog_Output_1)
- You can read/write points from the tree
- Programs can execute periodically or on demand
- You can put print statements in the program and see the output in the debug tab (press the bug icon)





Backup and New Firmware

- You can back up your work or copy your work to a new BASview3 by selecting the System Menu and Server Functions. Then select Database Backup and the Database Restore selections.
- You can upload new firmware by selecting the Firmware Update selection in the same menu.

