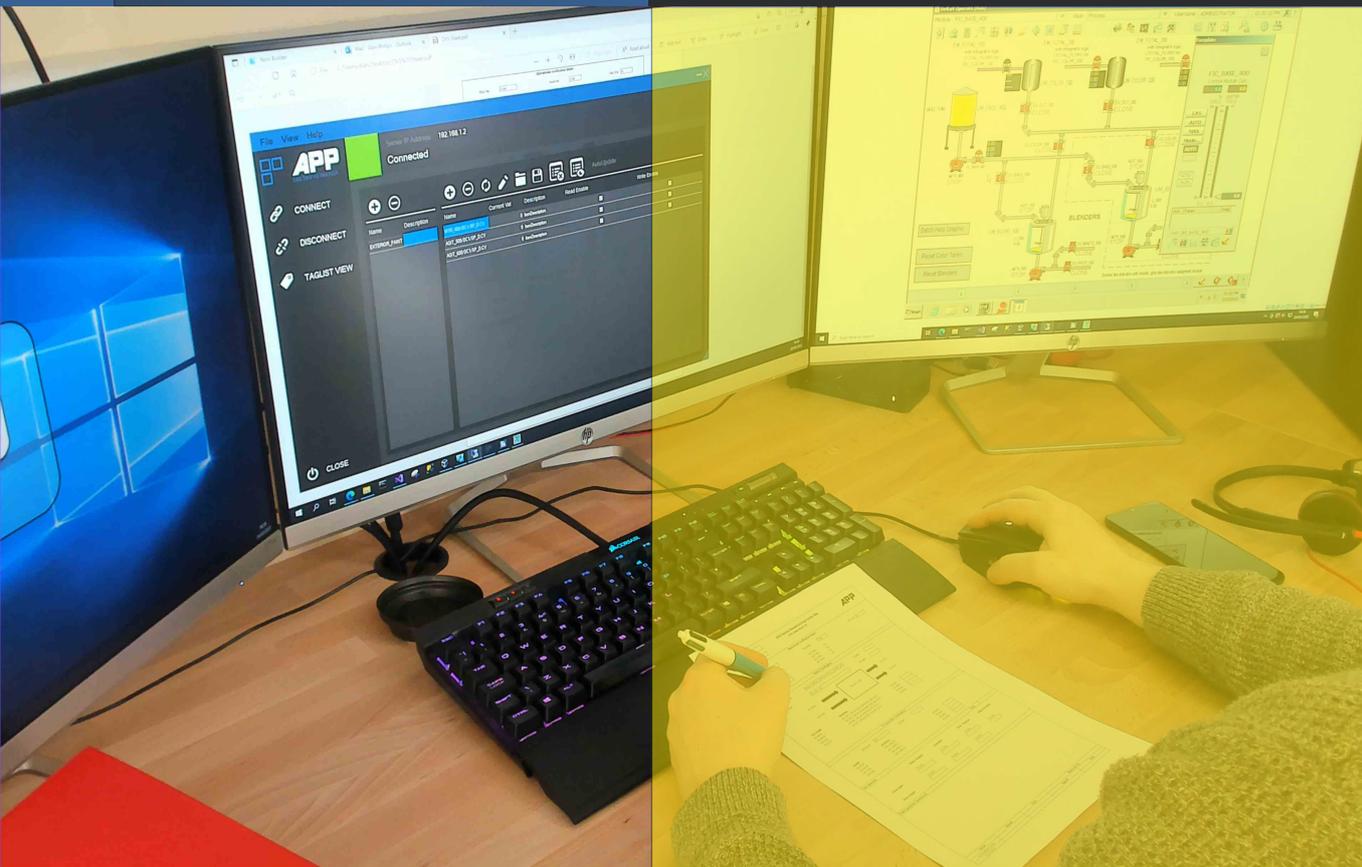


APP

DV IO Watch



USER MANUAL VERSION - 2.4.0.3

APPLIED PROJECTS ENGINEERING

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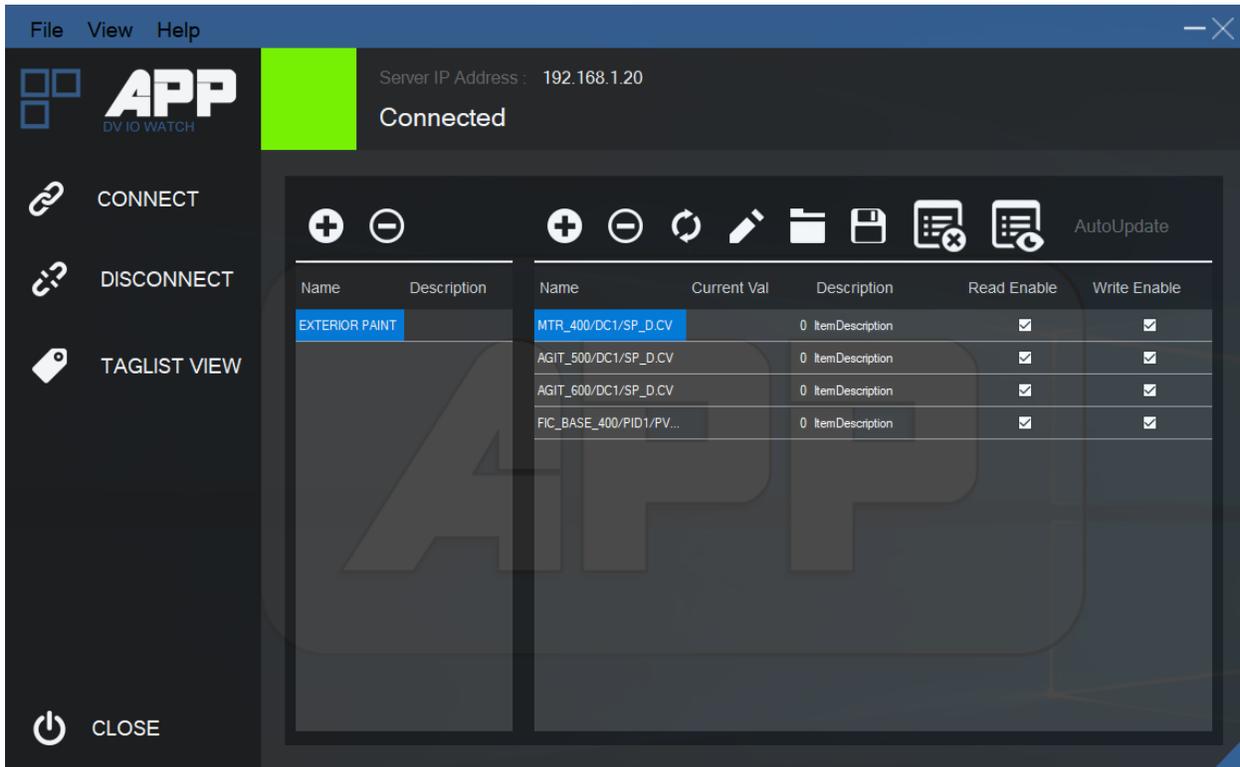
First time use of the Application

DV IO Watch is used to retrieve and display realtime data from a DeltaV system without the need to use a DeltaV interface directly. Before you can use DV IO Watch software, at least one DeltaV Node must be correctly installed and configured and must be running.

Whether you are a process automation engineer, validation professional or manager, the DV IO Watch Application can help you explore, analyze, and verify process data. All of this can be performed from your desktop computer or using a HMI in the field. The DV IO Watch Application is intended to make the exercise of verifying large datasets of IO linked to DeltaV streamlined and efficient for users during Qualification and troubleshooting.

DV IO Watch Functional Overview

The application has been specifically designed to be simple to use with easy steps required to view and update the realtime values of tags in the DeltaV system.



Tags are displayed in an excel style TagList Grid in the center of the screen. The Tags are categorized by system in the left hand Tag Group Grid

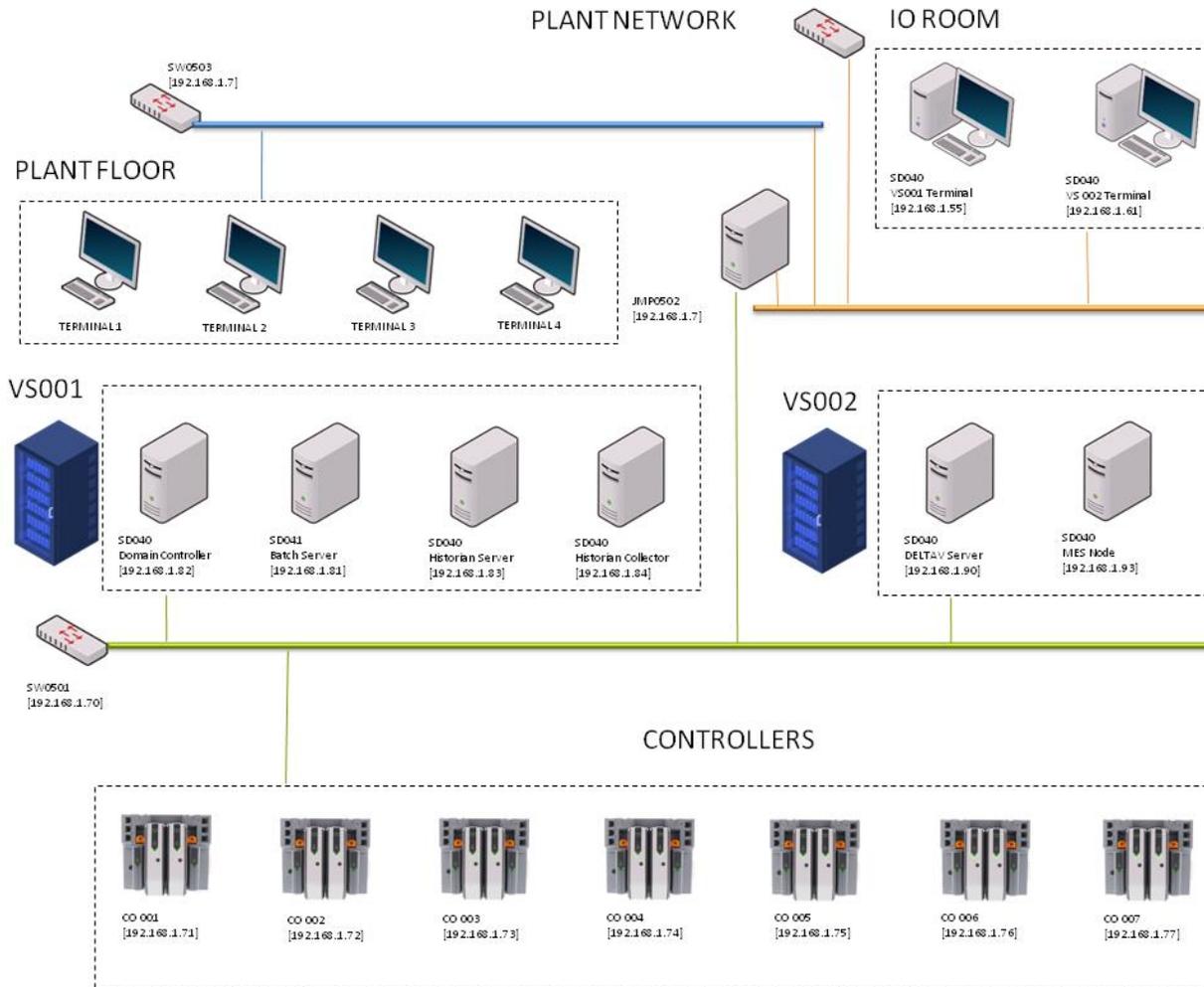
Menu Sidebar

CONNECT	The connect button reaches out to a DeltaV OPC Server. A connection is made to a system by identifying the IP Address
DISCONNECT	Breaks the connection to an existing DeltaV OPC server
TAGLIST VIEW	Reduces the size of the screen for convenience to the user

Network Connection Overview

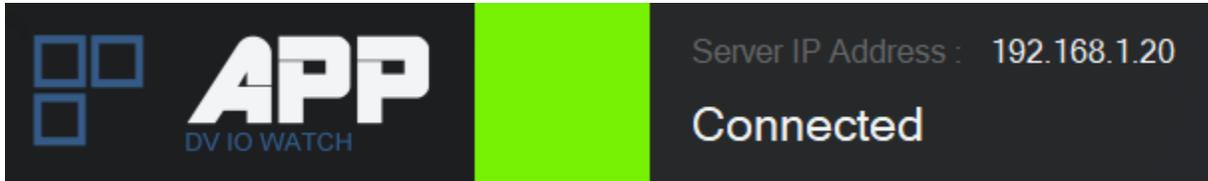
The DV IO Watch application is intended to be used locally or over a network where a client connection is made to the DeltaV Node. Below is an example of an Architecture with typical elements found such as the DeltaV nodes with OPC server installed by default.

DV IO Watch connects directly to the DeltaV system giving real time feedback on the IO Status.

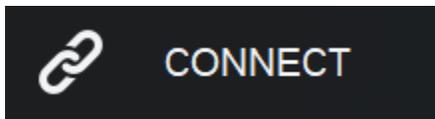


Connecting to a DeltaV Node

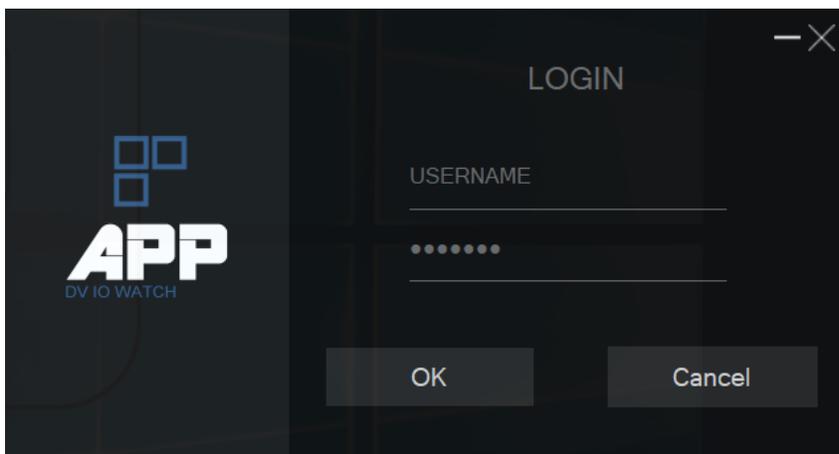
Step1 - Enter the IP Address of the deltav server



Step 2 - Select the "CONNECT" Button

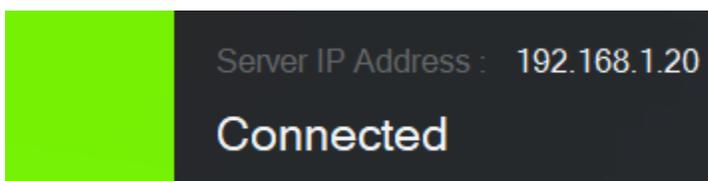


Step 3 – Enter in an existing DeltaV account username and password



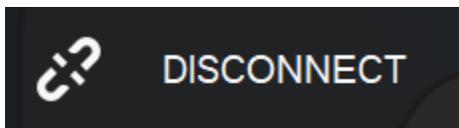
Note – The DV IO Watch application requires user access to the DeltaV System which is administrated remotely

Step 4 – Verify the Connected status appears on the Main Screen

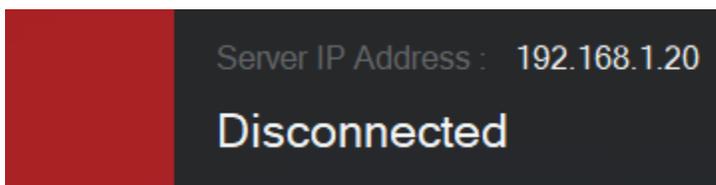


Disconnecting from a DeltaV Node

Step1 - Select the "DISCONNECT" Button



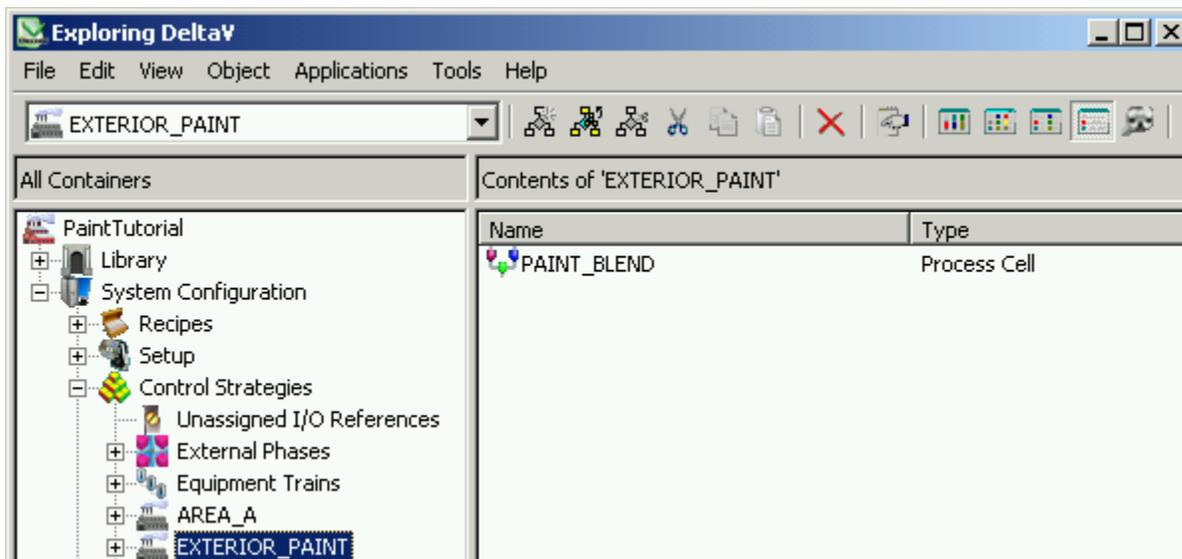
Step 2 - Verify the "Disconnected" status appears on the Main Screen



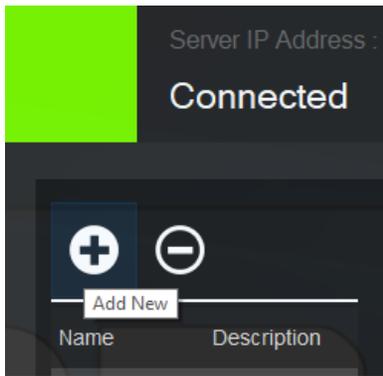
Creating a Tag Group

There are 2 grids on the main screen which represent individual tags and separate lists identified by name. Having separate lists allows systems to be representative of different systems such as a Mixing Tank, Cleaning or HVAC System.

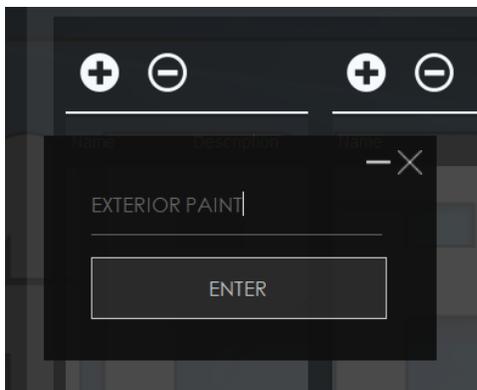
Note – As an example, the exterior paint system which is included in DeltaV as a training system will be used in selecting variables for the TAG LIST



Step1 – Select the plus icon above the TagGroup grid

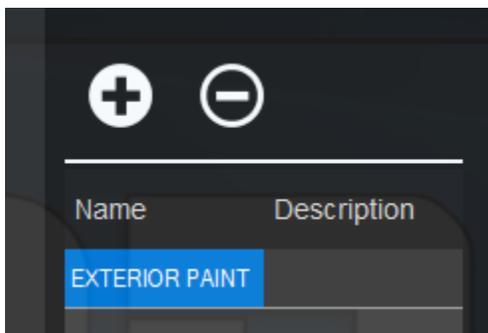


Step 2 - Enter the name for the TAG LIST and select 'ENTER'



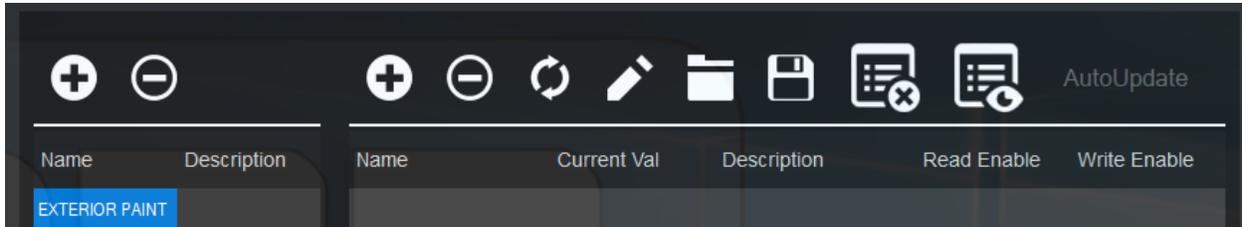
Step 3 - Verify the name for the TAG LIST is displayed in the Grid

Note – Multiple TAG LISTS can be created where required



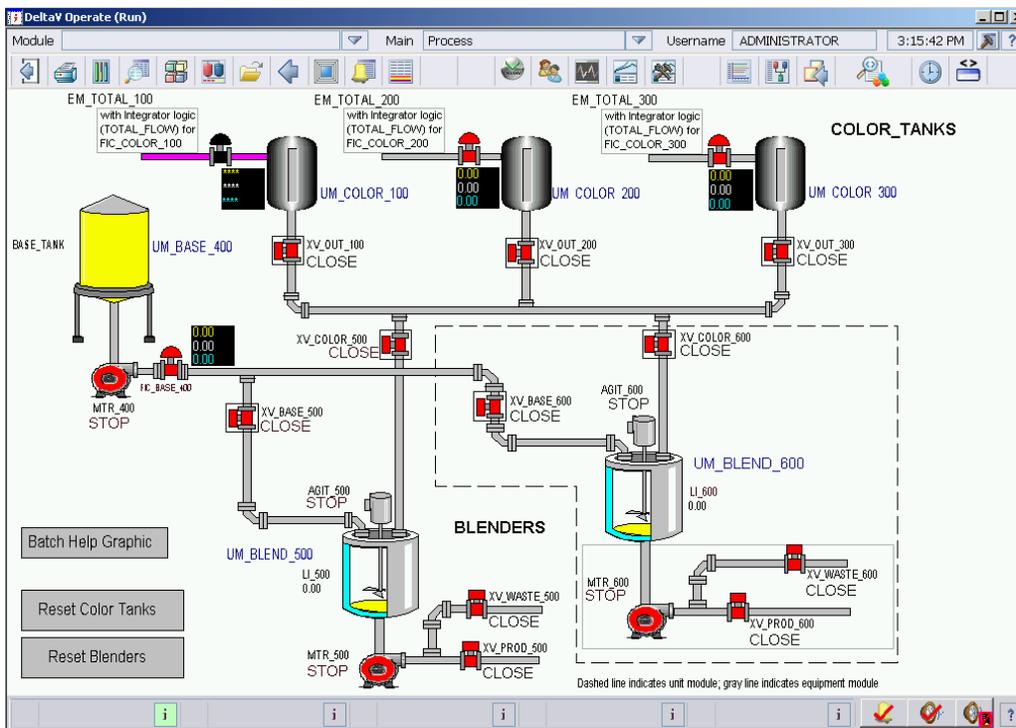
Creating Tags to Watch

Once a tag list has been created, individual tags are added to the Tag Grid which allows real-time monitoring and updating of values.

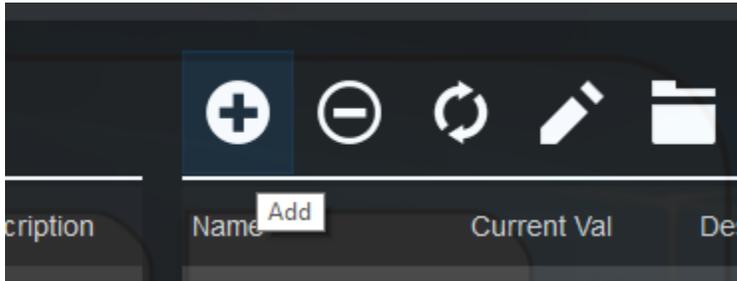


Step 1 – Select the TAG LIST in the Tag List Grid

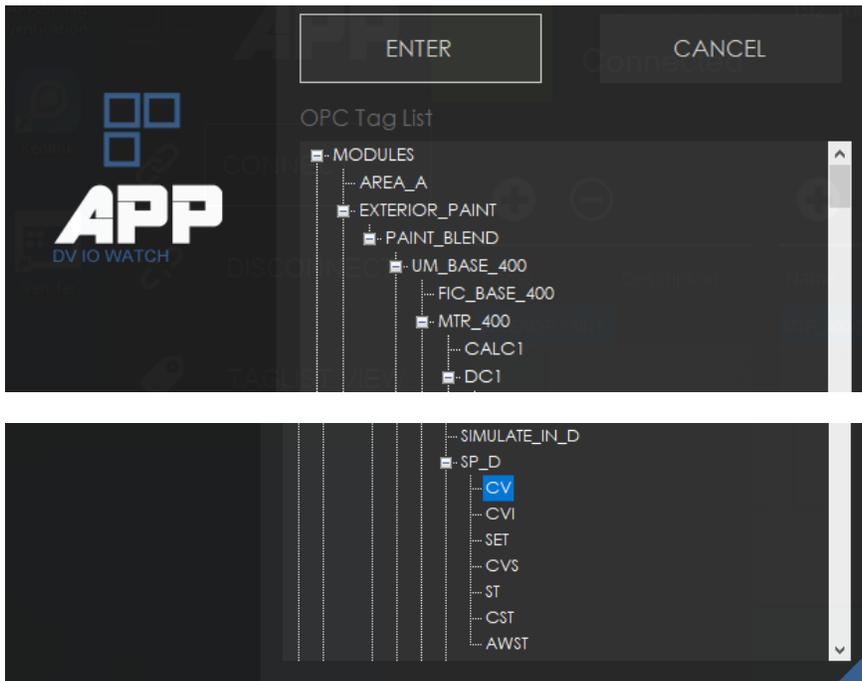
Note – EXTERIOR_PAINT will be used as an example. The motor MTR_400 will be turned on and off to demonstrate communication



Step 2 – Select the PLUS icon

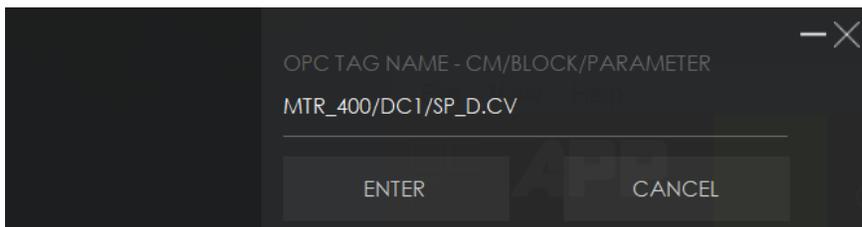


Step 3 – Expand the modules by selecting (double click) the relevant path to the desired TAG



Note – In the example shown, [EXTERIOR_PAINT/ PAINT_BLEND/ UM_BASE_400/ MTR_400, DC1/ SP_D/ CV] has been selected

Step 3 – Select the TAG (double click) to display the Tag Name in the textbox and select 'ENTER'

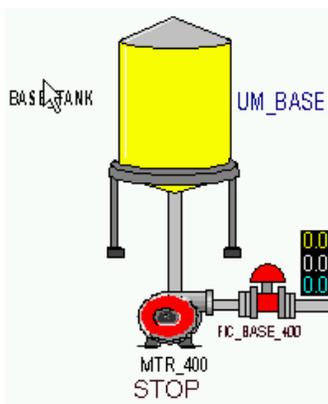


Step 4 – Verify the TAG is displayed in the TAG Grid and enter a description if required

Name	Current Val	Description	Read Enable	Write Enable
MTR_400/DC1/SP_D.CV		MTR 400 ON - OFF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Modifying and Watching Tags to through the Application

Step 1 – Verify the TAG state to confirm the live connection. (In the example the MTR_400 running value can be viewed using the HMI on DeltaV Operate Run. In example the MTR_400 is in automatic mode). The example shows the motor state is OFF



Step 2 – Enter the Value in the currentval column in the TAG Grid. (1 has been entered as an example for the MTR_400)

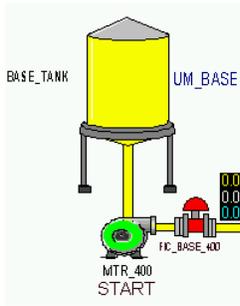
Name	Current Val	Description	Read Enable	Write Enable
MTR_400/DC1/SP_D.CV	1	MTR 400 ON - OFF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Step 3 – Select the write icon

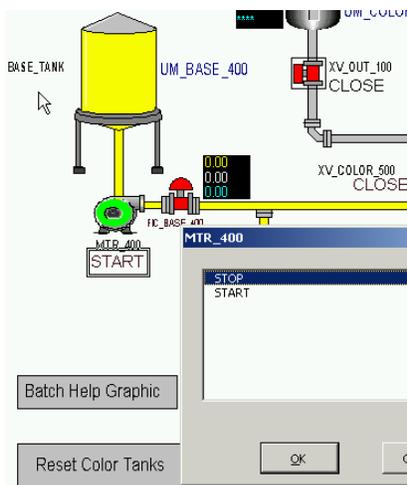


Note – Only Tags with “Write Enable” checkbox checked will be updated. Individual Tags can be updated by double clicking on the tag name.

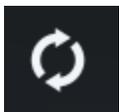
Step 4 – Verify the MTR_400 state is START and the motor image has turned from RED to GREEN



Step 5 – To verify the application can read tags, open the tag on screen and select the state required. (STOP has been selected in the example)



Step 5 – Select the update values button



Step 6 – Verify the TAG value updated correctly on the TAG Grid. (The currentval updated to 0 in the example shown – MTR_400 STOP)

Note – Only Tags with "Read Enable" checkbox checked will be read

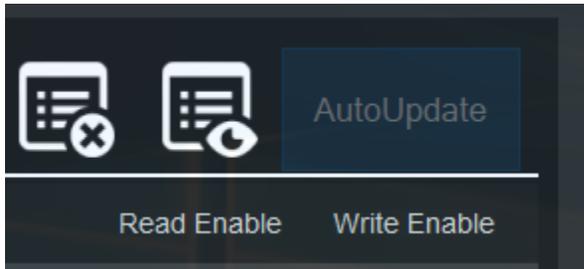
Name	Current Val	Description	Read Enable	Write Enable
MTR_400/DC1/SP_D.CV	0	MTR 400 ON - OFF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

AutoUpdate

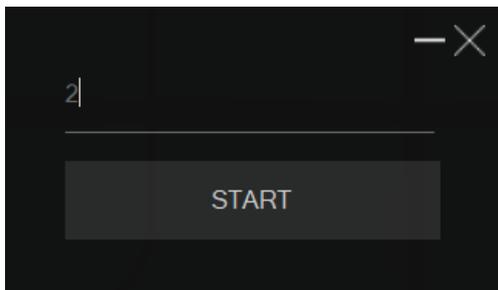
An AutoUpdate function can be used to consistently request the values displayed on screen be shown to the user based on a set time frame.

Note - The update frequency must be in range of 1 – 30 sec only. Only Tags with “Read Enable” checkbox checked will be read

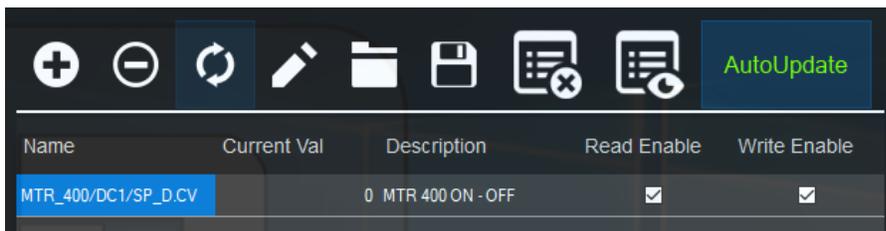
Step 1 – Select the 'AutoUpdate' Button



Step 2 – Enter a Time value and select 'START'



Step 3 – Verify the AutoUpdate is green and the values are updating



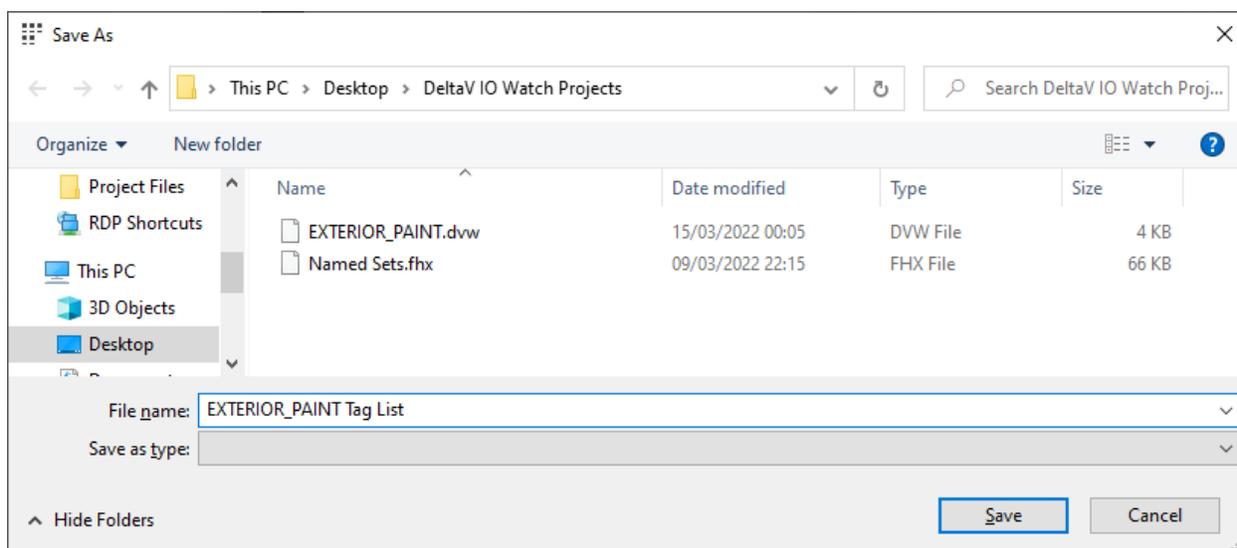
Saving a TAG list to a CSV File

When a Tag List is developed, the user has the option to save the list so they do not need to recreate the list at another time.

Step 1 – Select the floppy disk icon



Step 2 – Name the list, navigate to a suitable folder location and select the save button



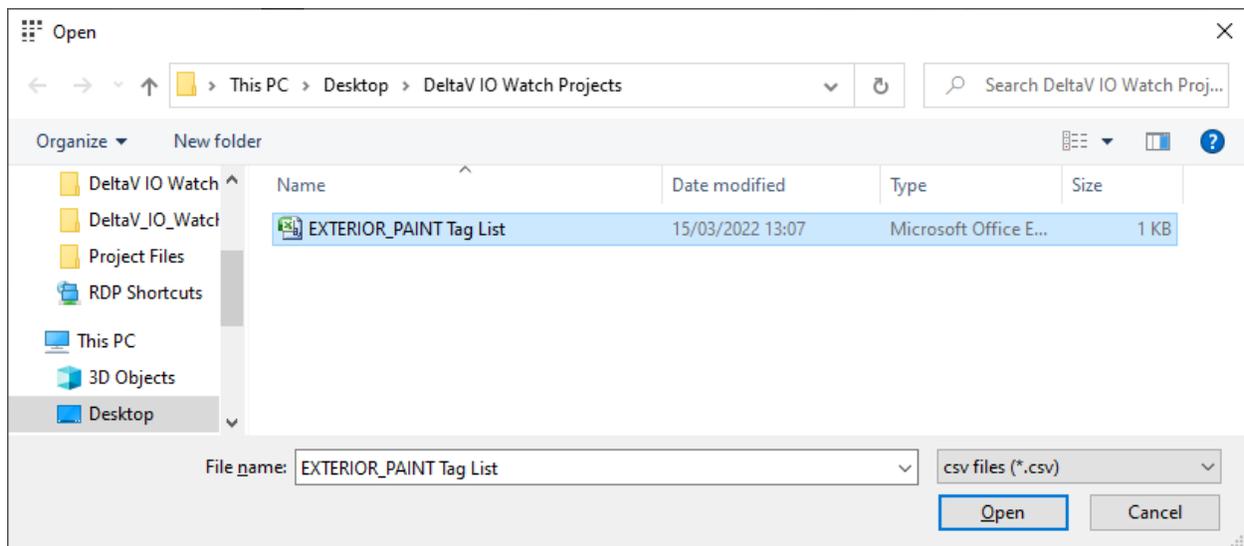
Loading a TAG list from a CSV File

When a Tag List is developed, the user has the option to save the list so they do not need to recreate the list at another time.

Step 1 – Select the folder icon



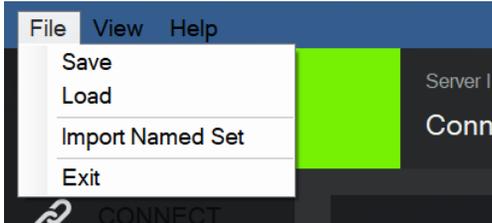
Step 2 – Select the list and select the Open button



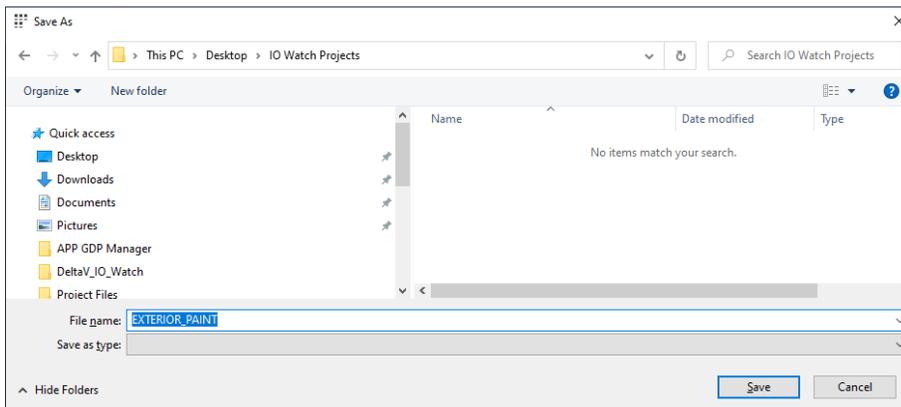
Saving an IO Watch Project

When a number of groups and lists have been created, the user has the option to save the configuration so they do not need to recreate the list at another time.

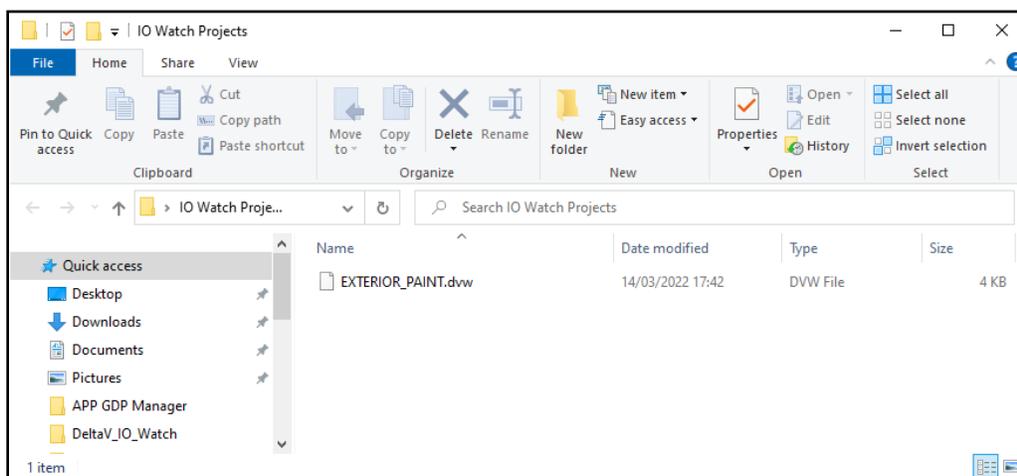
Step 1 – Select 'File' menu and select 'Save'



Step 2 – Select the location to save the Project and Give this a name



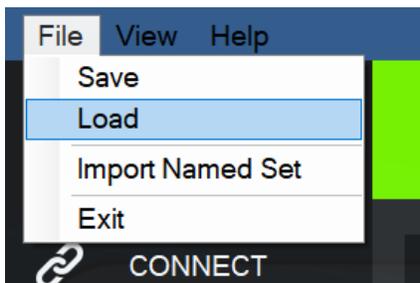
Step 3 – Verify the project has been saved with the name provided



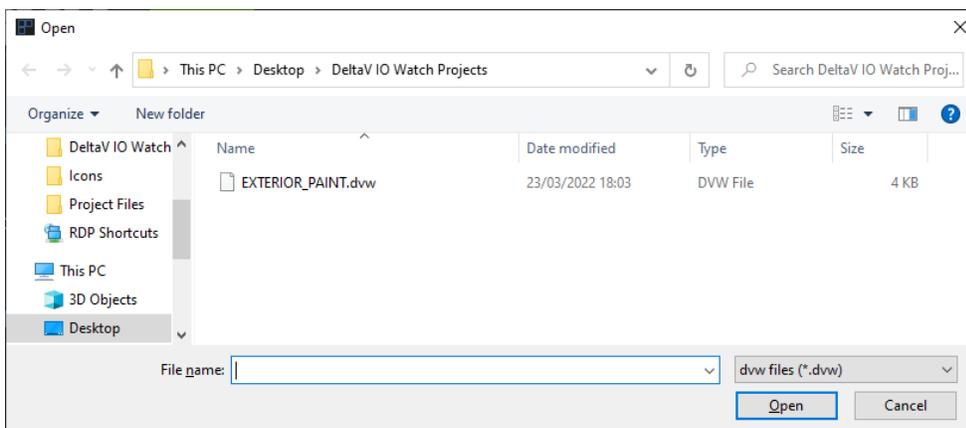
Loading a DV IO Watch Project

A configuration can be loaded from a previous save to allow a large configuration be used on multiple systems.

Step 1 – Select 'File' menu and select 'Load'



Step 2 – Select the location of the project and select 'Open' (File extension dwv)



Importing a DeltaV Named Set

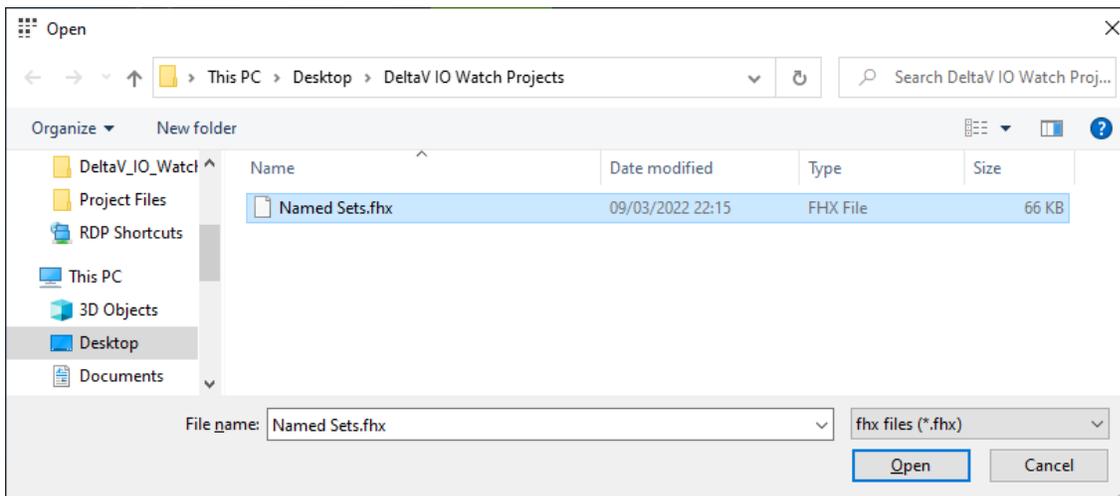
Name Sets are used to abbreviate a state in DeltaV. An example of this would be to replace 0 -1 logic for ON – OFF to become START – STOP in a drop down on the Grid.

Note – Name Sets are exported from the DeltaV node through the explorer

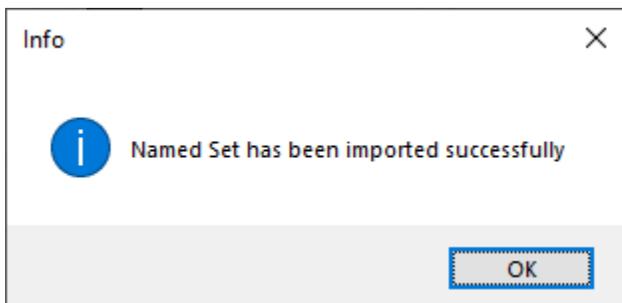
Step 1 – Select 'File' menu and select 'Import Named Set'



Step 2 – Select the Named Set file (Extension with fhx)



Step 3 – Verify the import has occurred successfully



Contact Applied Projects Engineering Technical Support

APP Support Contact Information

The support page provides contact information should you need to contact an APP Technical Support representative.

Ports and Firewalls

APP solutions are designed to work transparently through firewalls, enabling a connection with any computer. However, with certain highly secured networks, some configuration may be necessary

Port 58080 must be open for outbound TCP traffic on the remote system's and local user's firewalls. More ports may be available depending on your build

Internet security software such as software firewalls must not block executable files from downloading. Some examples of software firewalls include McAfee Security, Norton Security, and Zone Alarm. If you do have a software firewall, you may experience some connection issues. To avoid such issues, configure your firewall settings.

Tech Support

At APP, we are committed to offering the highest quality service by ensuring that our customers have everything they need to operate with maximum productivity.

If you should still have difficulty making a connection, contact APP Technical Support at contact@appliedprojectsengineering.com

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