

Connecting UniStream to



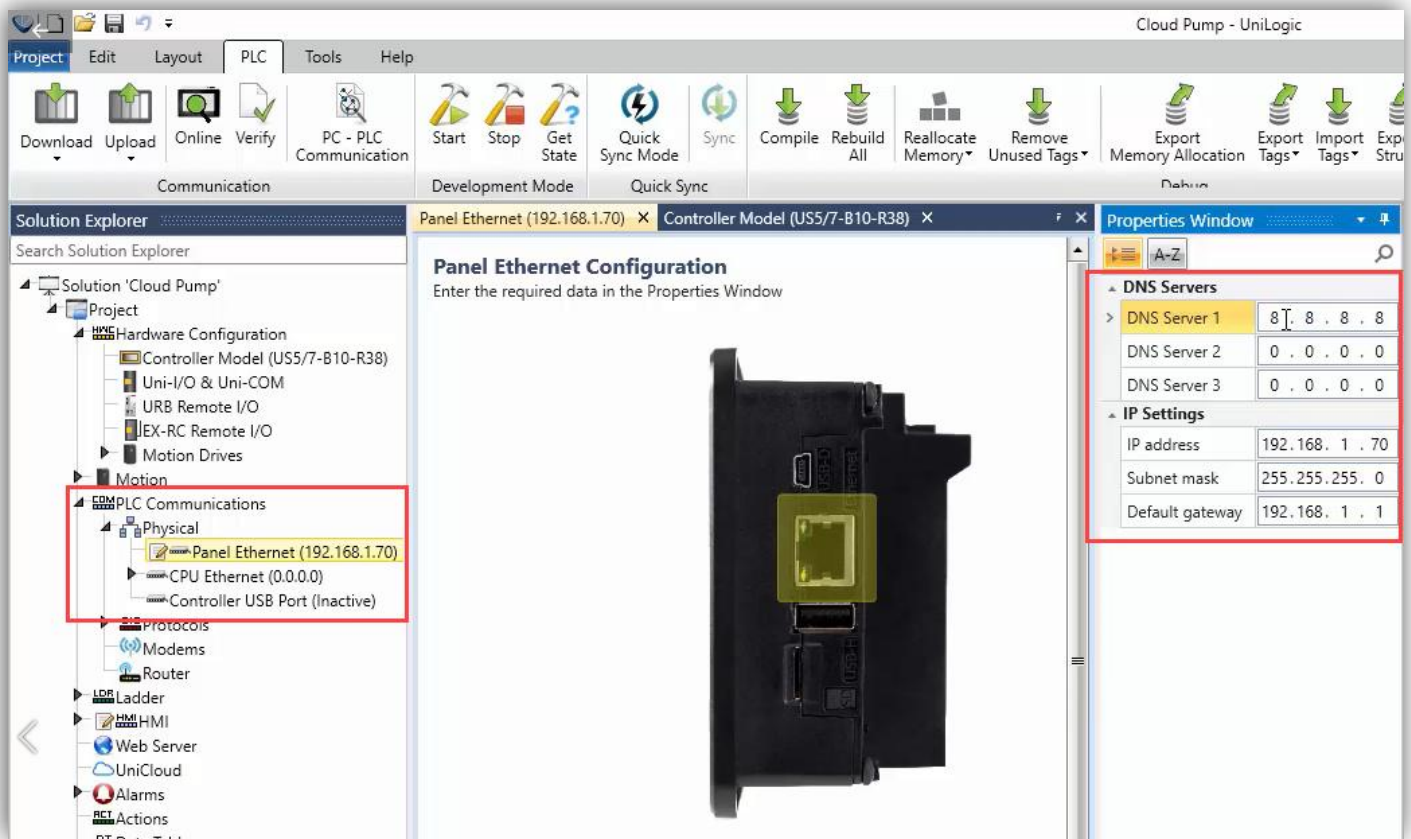
Step by step guide

This document is based on an UniStream sample application for Pumps. The application is available for [download](#); it has Tags and Alarms defined for your ease of use.

IP Address and DNS server settings

For the UniStream controller to communicate to the UniCloud, the IP Address and DNS server settings must be defined in the project.

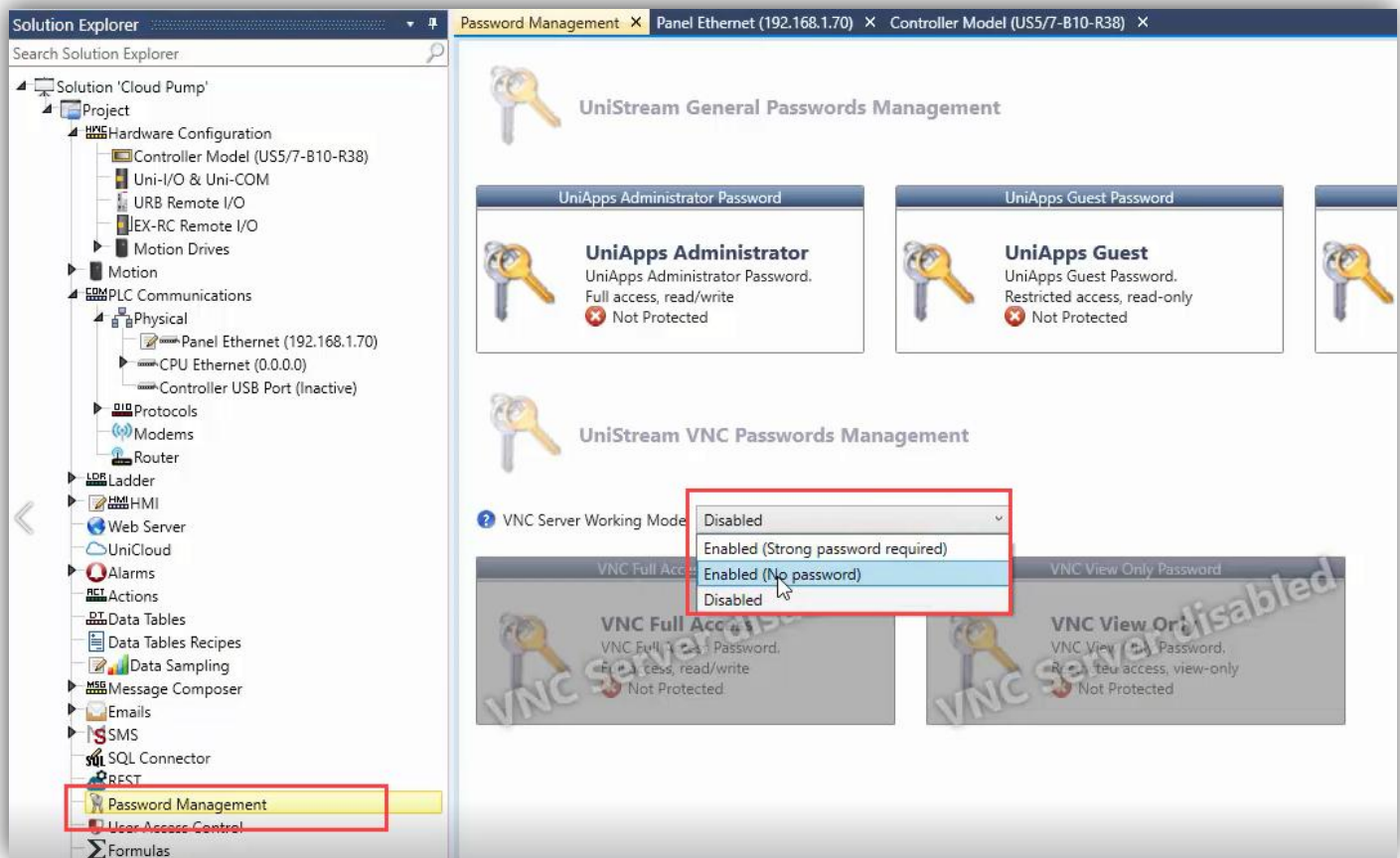
1. In the Solution Explorer, **navigate** to PLC Communications > Physical > Panel Ethernet.
2. In the Properties Window, **assign** the panel a unique and available IP address on the network.
3. **Define** the DNS server settings.



VNC access definitions

To enable the HMI to be accessible remotely over a VNC connection:

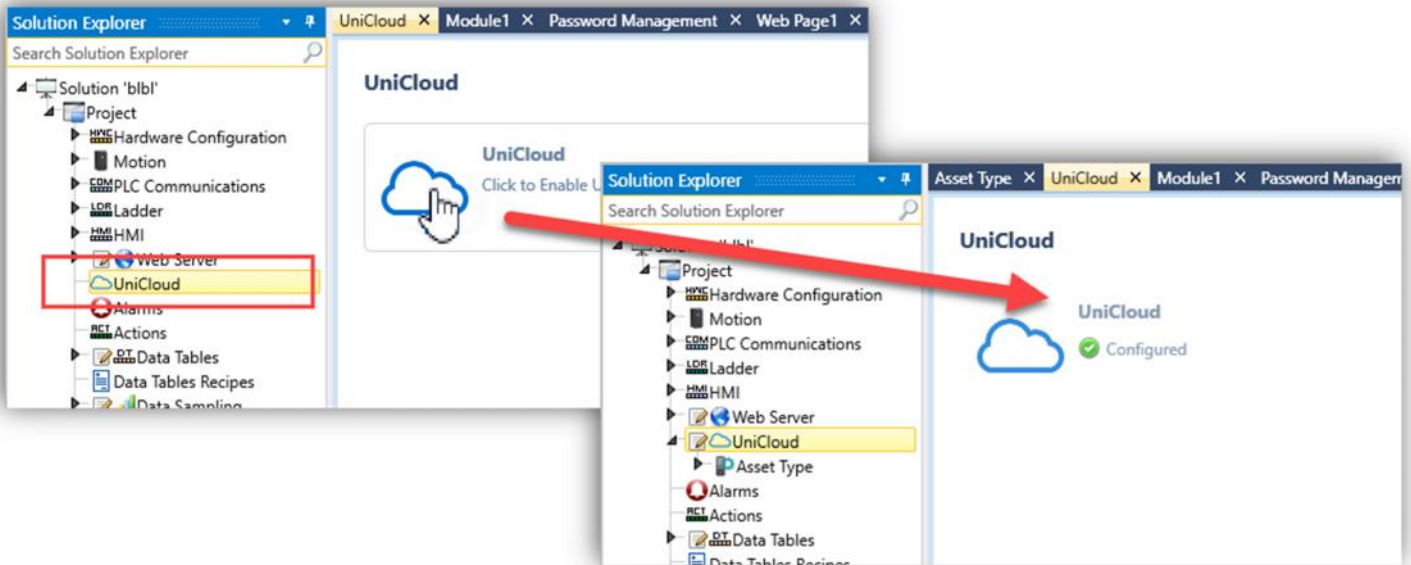
1. **Navigate** to Password Management
2. **Enable** VNC working mode.



The same applies for **Web Server**.

UniCloud Setup

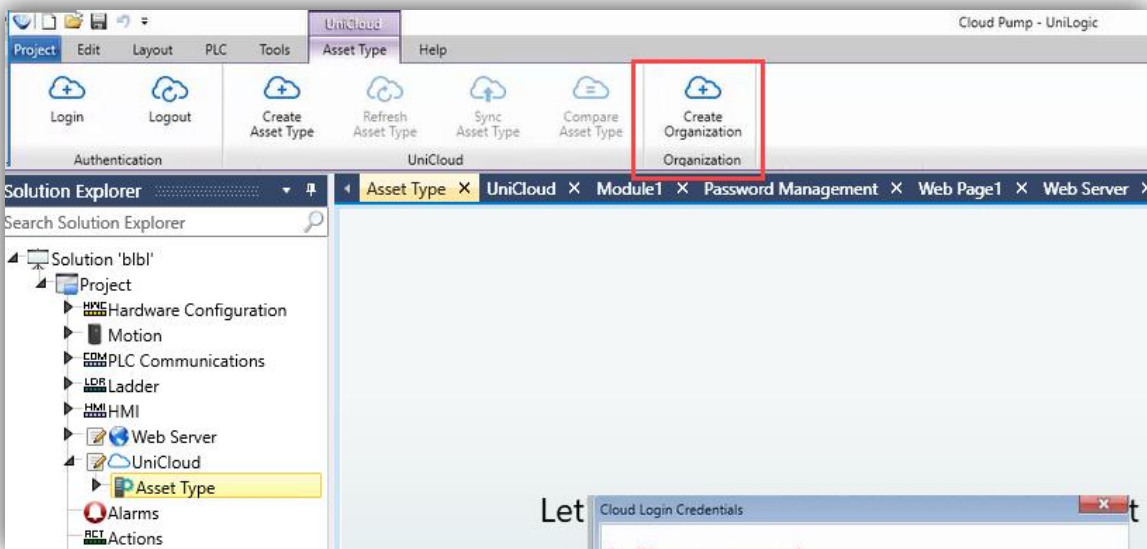
1. In the Solution Explorer, **navigate** to UniCloud.
2. **Click** to enable UniCloud integration.



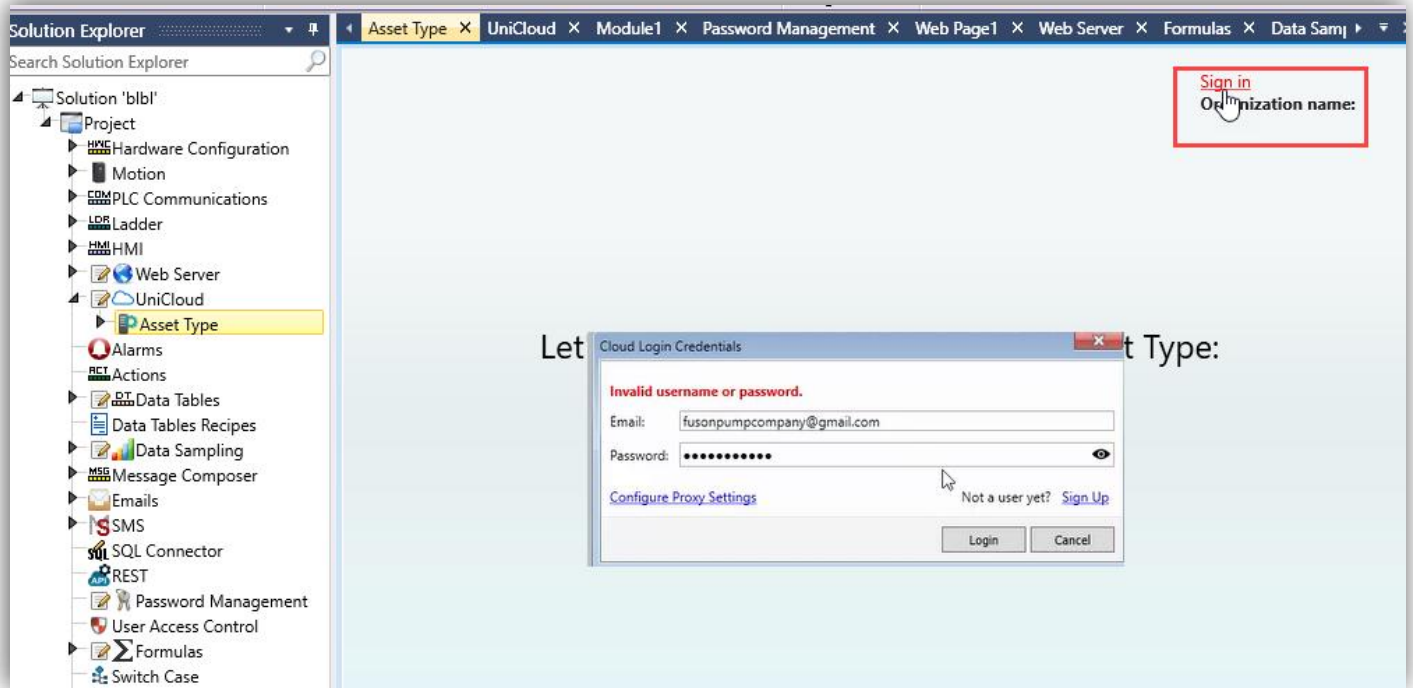
Sign into UniCloud & Create an Asset Type

Either create or sign into an existing UniCloud Organization:

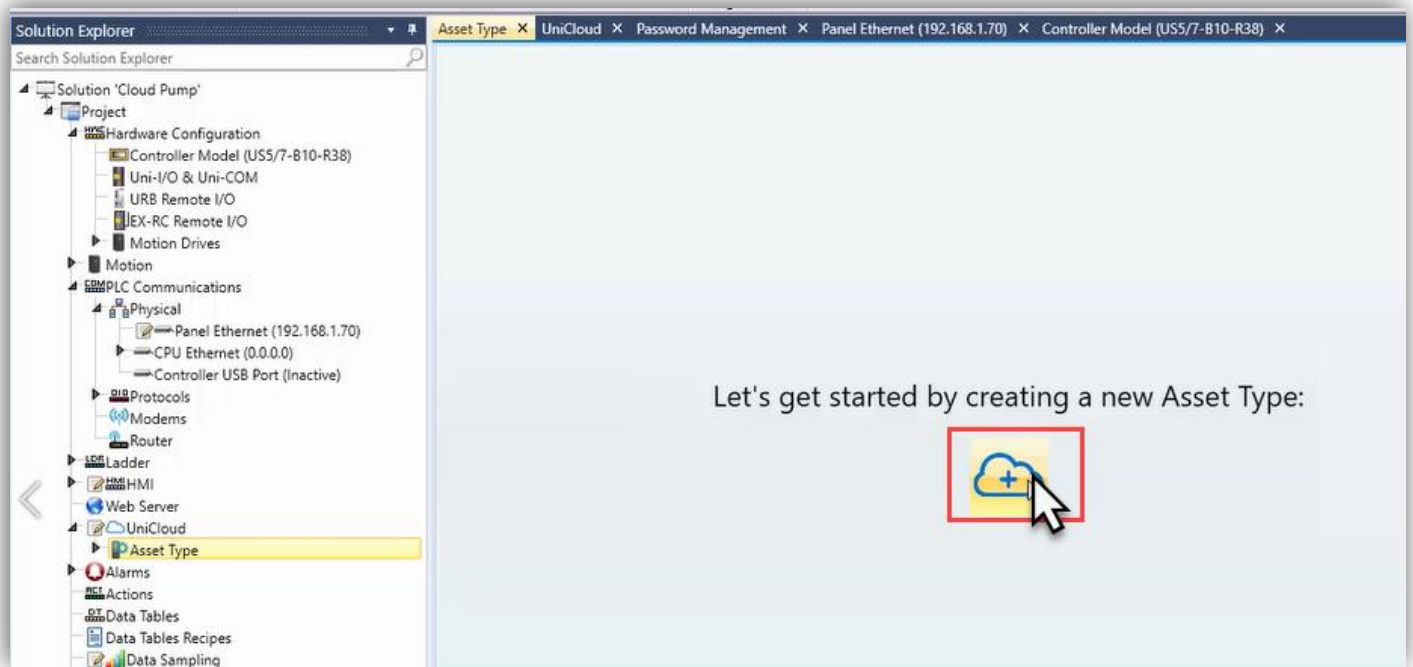
To create a UniCloud Organization, **click** Create Organization and sign up for UniCloud.,.



For returning users, click **Sign in** and enter the Cloud Credentials.

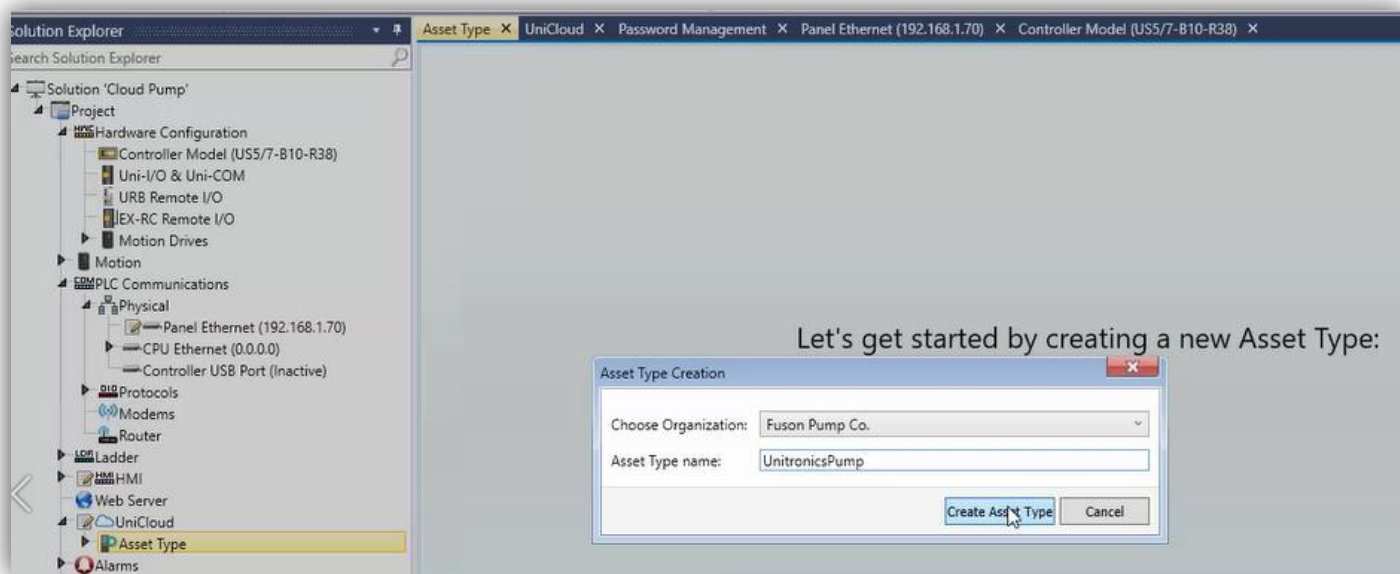


Once signed in, **create** an Asset Type.



An Asset Type is unique to the UniLogic project. It defines the structure of Tags and Alarms that will be communicated to the Cloud.

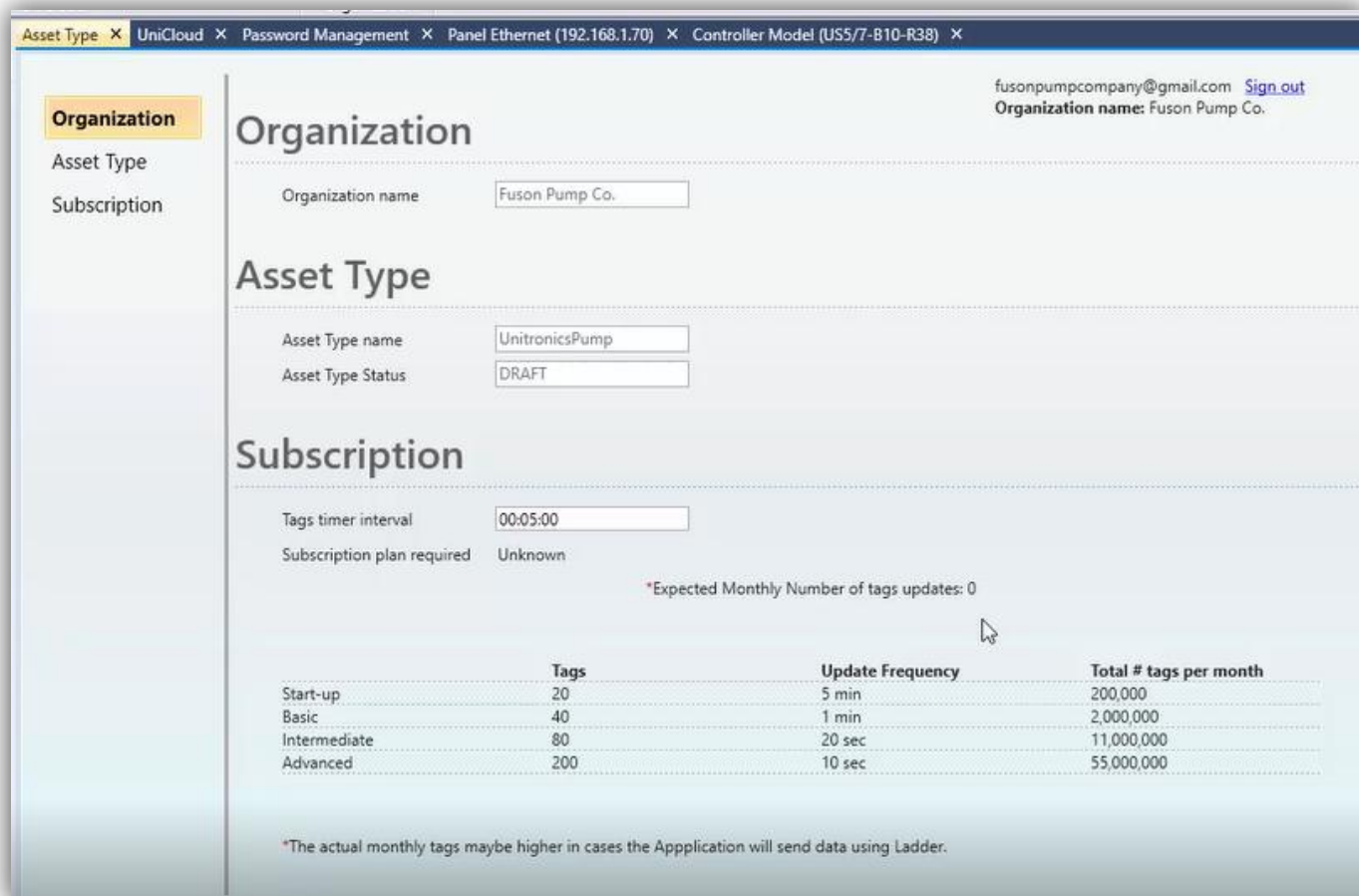
Give the Asset Type a name.



The Asset Type is created.

Here are its properties, including organization, name, and status.

Under Subscription, **define** the Tags Timer Interval. This is the frequency at which the tags will be communicated to the Cloud.

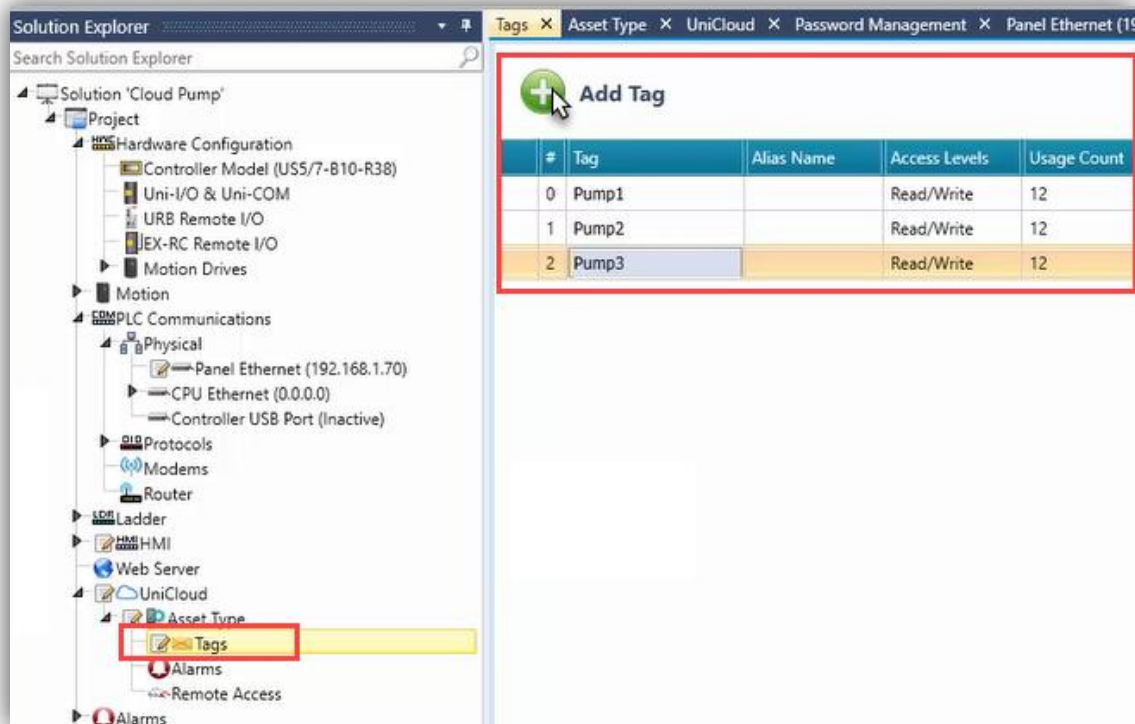


In the Solution Explorer, **navigate** to Asset Type.

Here, Tags and Alarms can be added.

Start with Tags.

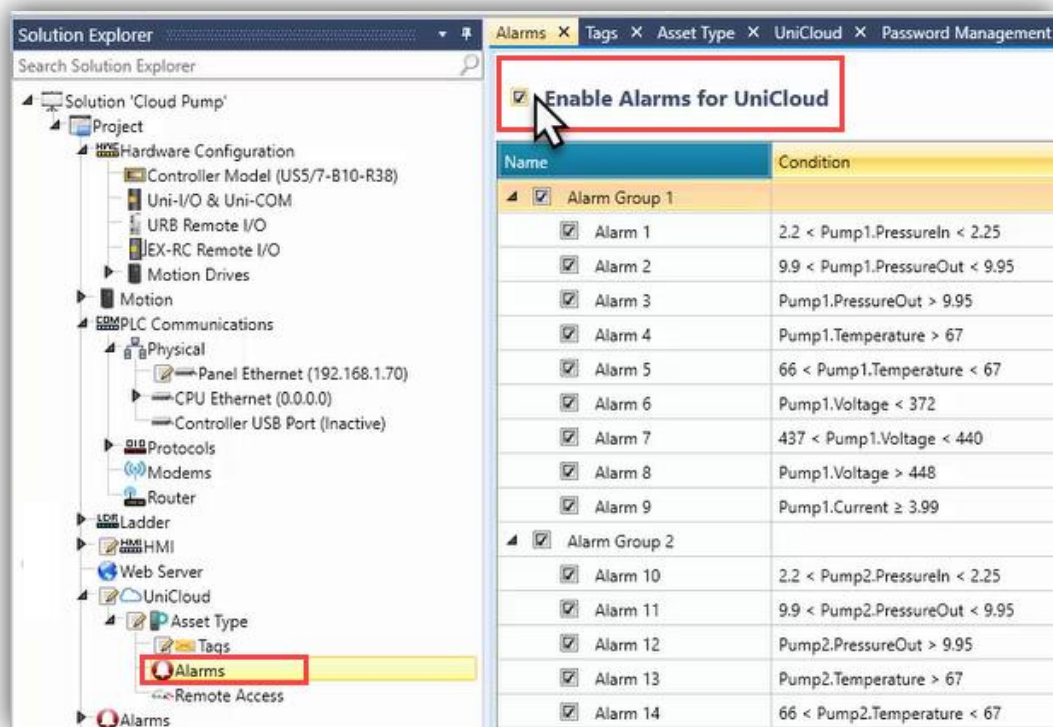
Individual tags, arrays, and Structs can be added here.



Alarms Setting

Navigate to Alarms. Enable Alarms for UniCloud.

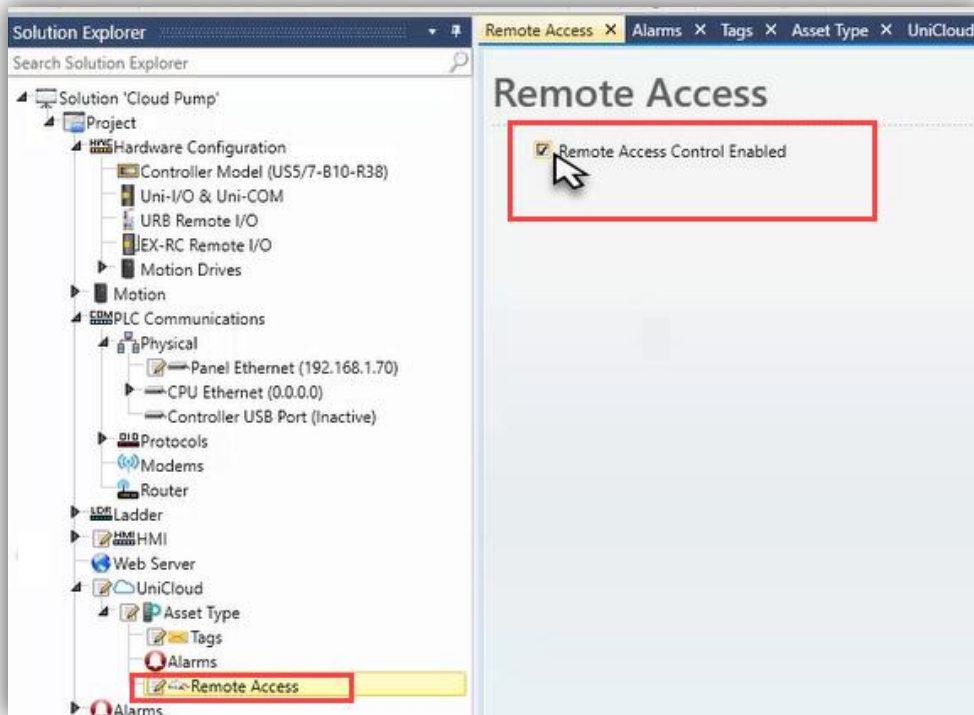
All Alarms that are checked will be included in the Asset Type.



Enable UniCloud Remote Access

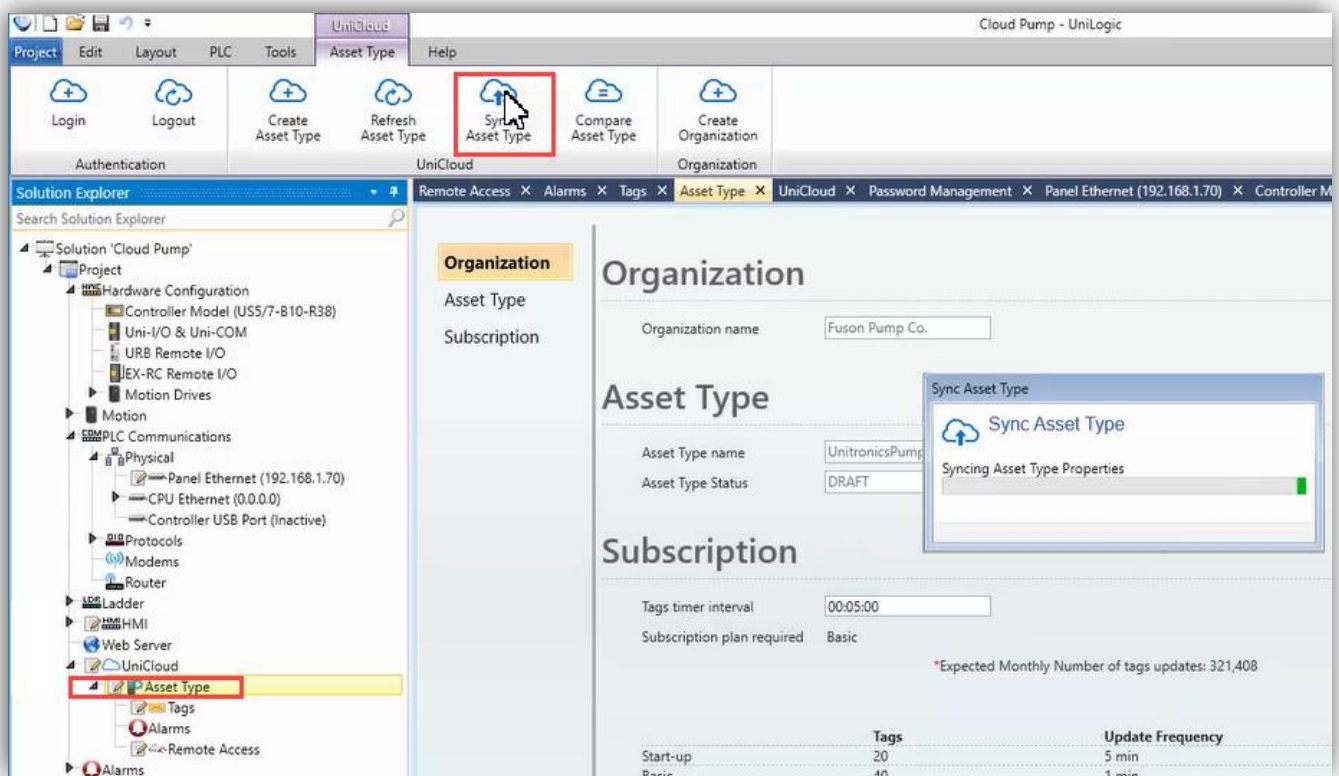
Navigate to Remote Access.

If desired, check the box for Remote Access Control.



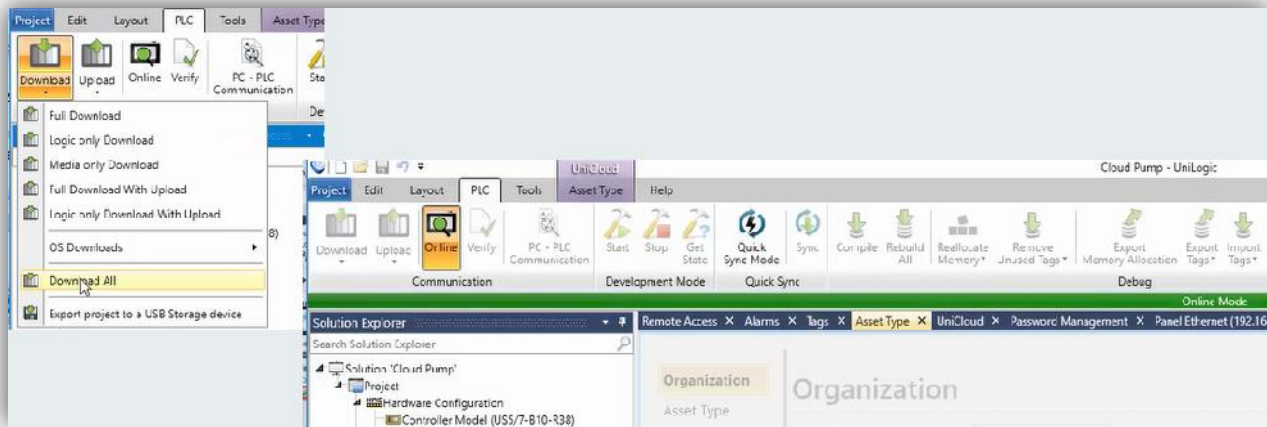
Navigate to Asset Type. Sync the Asset Type to the Cloud.

Under Subscription, an expected number of monthly tags is calculated, based on the Tags in the Tag Timer Interval defined. Based on this number, one can anticipate the subscription plan required.



Download application to UniStream

Download the program. The Download is complete.



UniStream PLC setup

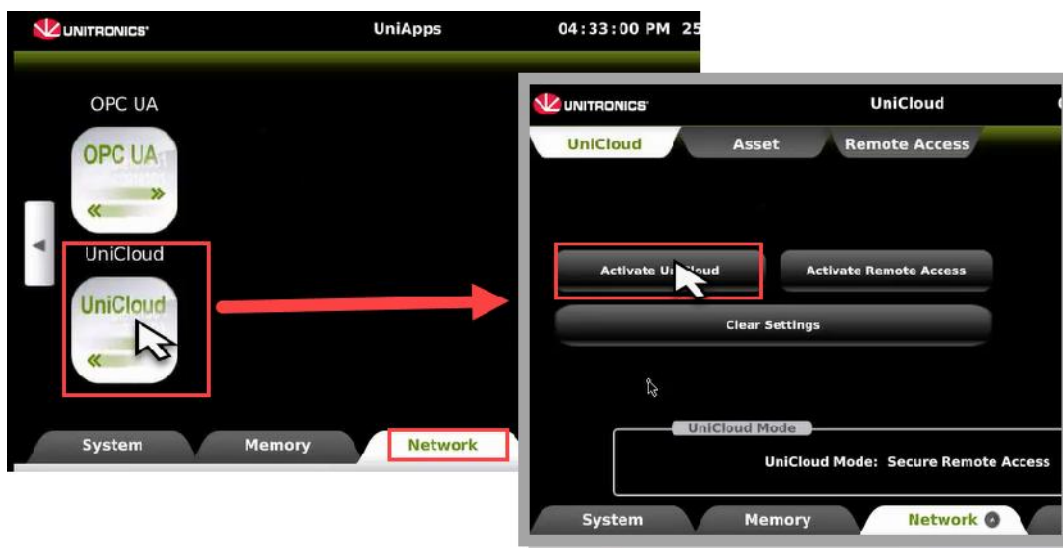
Access UniApps

On the HMI, hold the top right corner, enter UniApps >



Activate the PLC to work with UniCloud

Then > Network > UniCloud, and click Activate UniCloud.



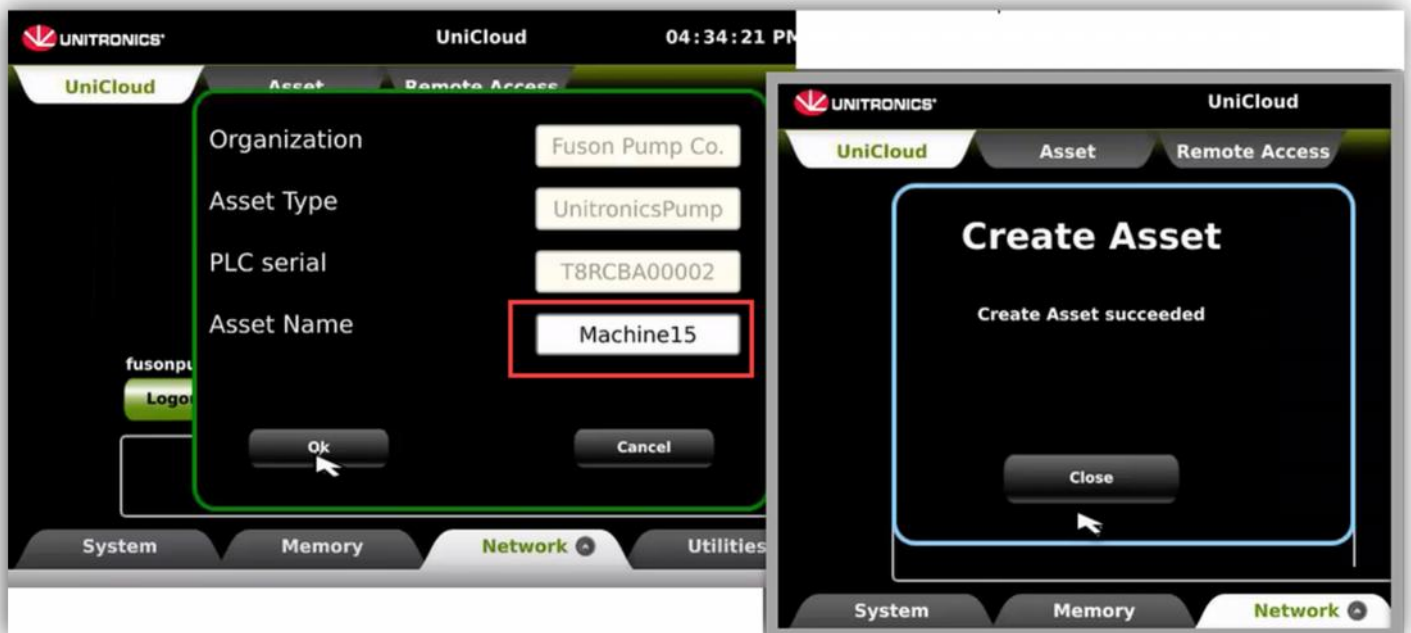
Step 1 will be to create the Asset in the UniCloud.

Provide the UniCloud credentials.



Assign this Asset a name, keeping in mind this program can be downloaded to many different machines.

The Asset was successfully created.



Step 2 - to activate UniCloud:

Load Certificate from UniCloud. The load succeeded.



At the top, click on Asset > Start sending data. This will connect the UniStream to the UniCloud.

The state change was successful.

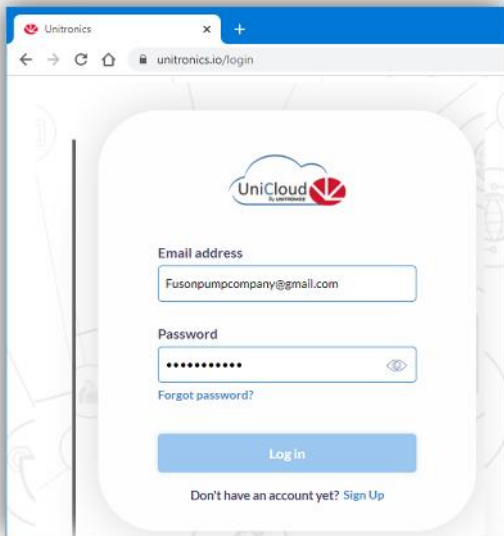


The communication status is now connected.



Login to UniCloud

Navigate to <https://www.unitronics.io/login> and sign into your Cloud account.

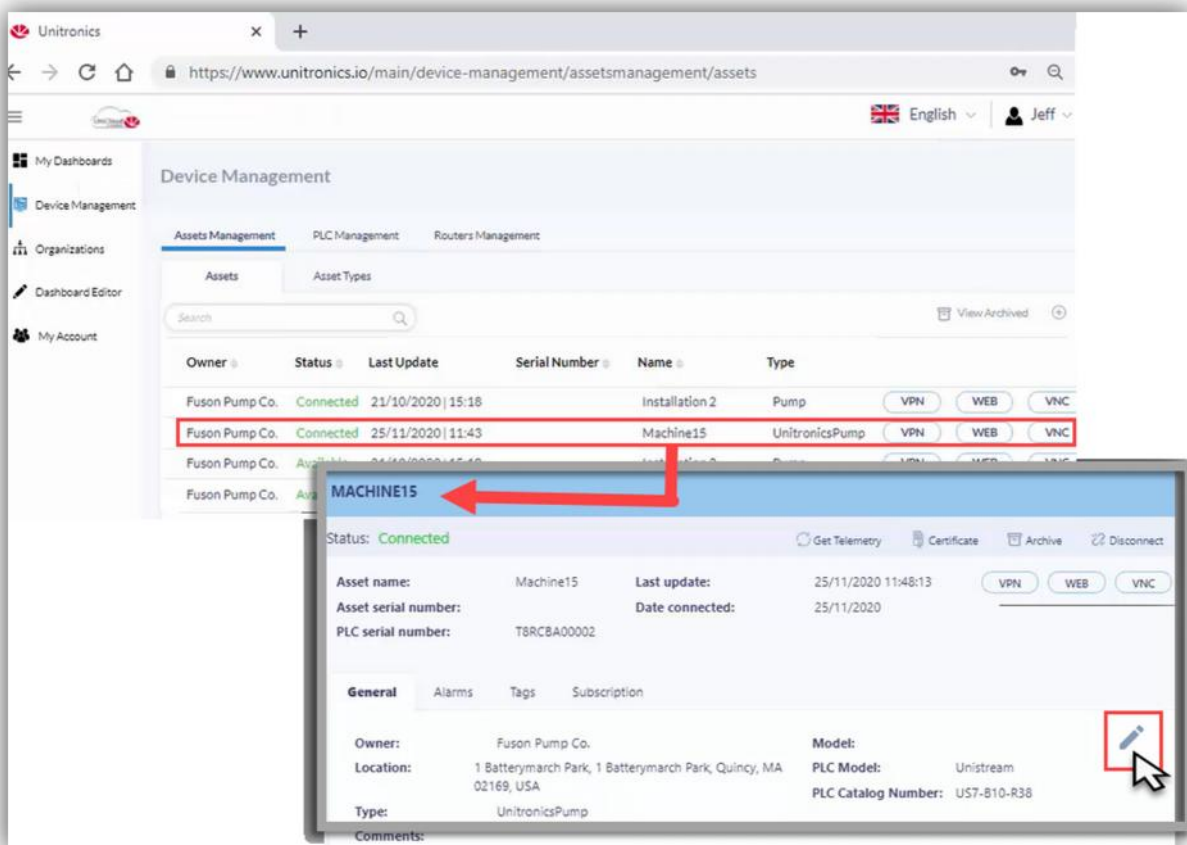


Once signed in, navigate to Device Management

Under the Assets tab, the new Asset, Machine15, type UnitronicsPump has been added.

The Status is Connected.

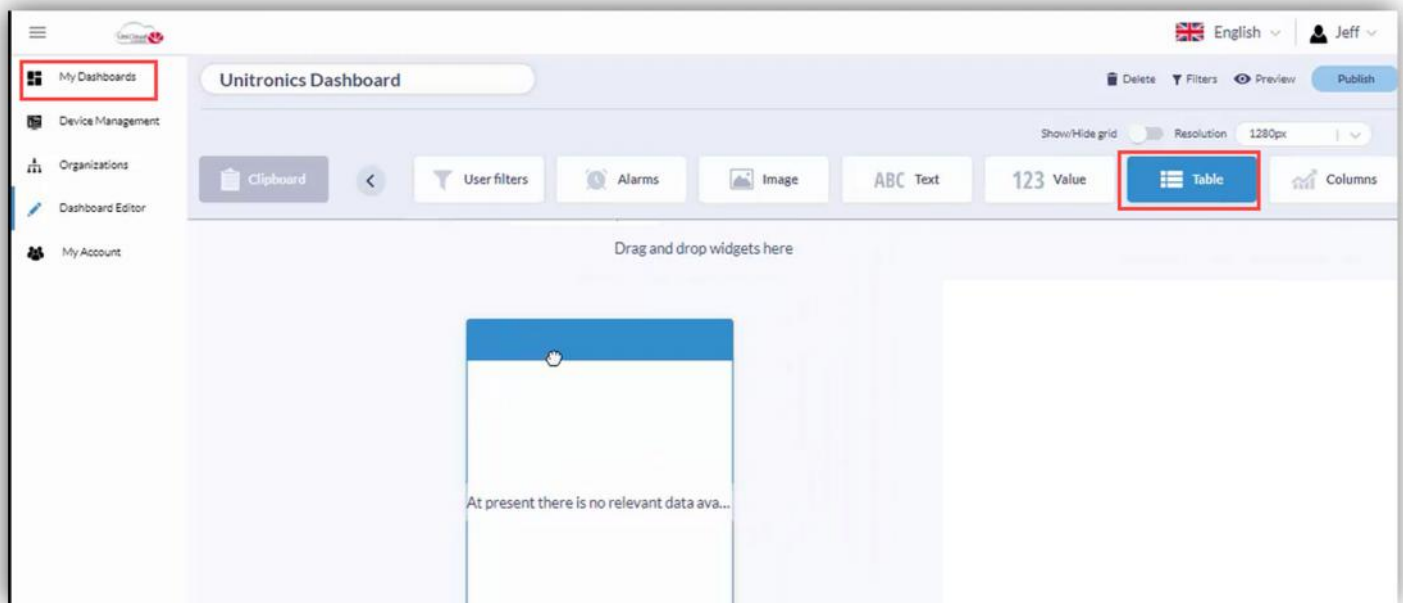
To change the Asset Properties, click on the Asset; things like Location, and custom serial numbers can be edited here.



Start Building your Dashboard

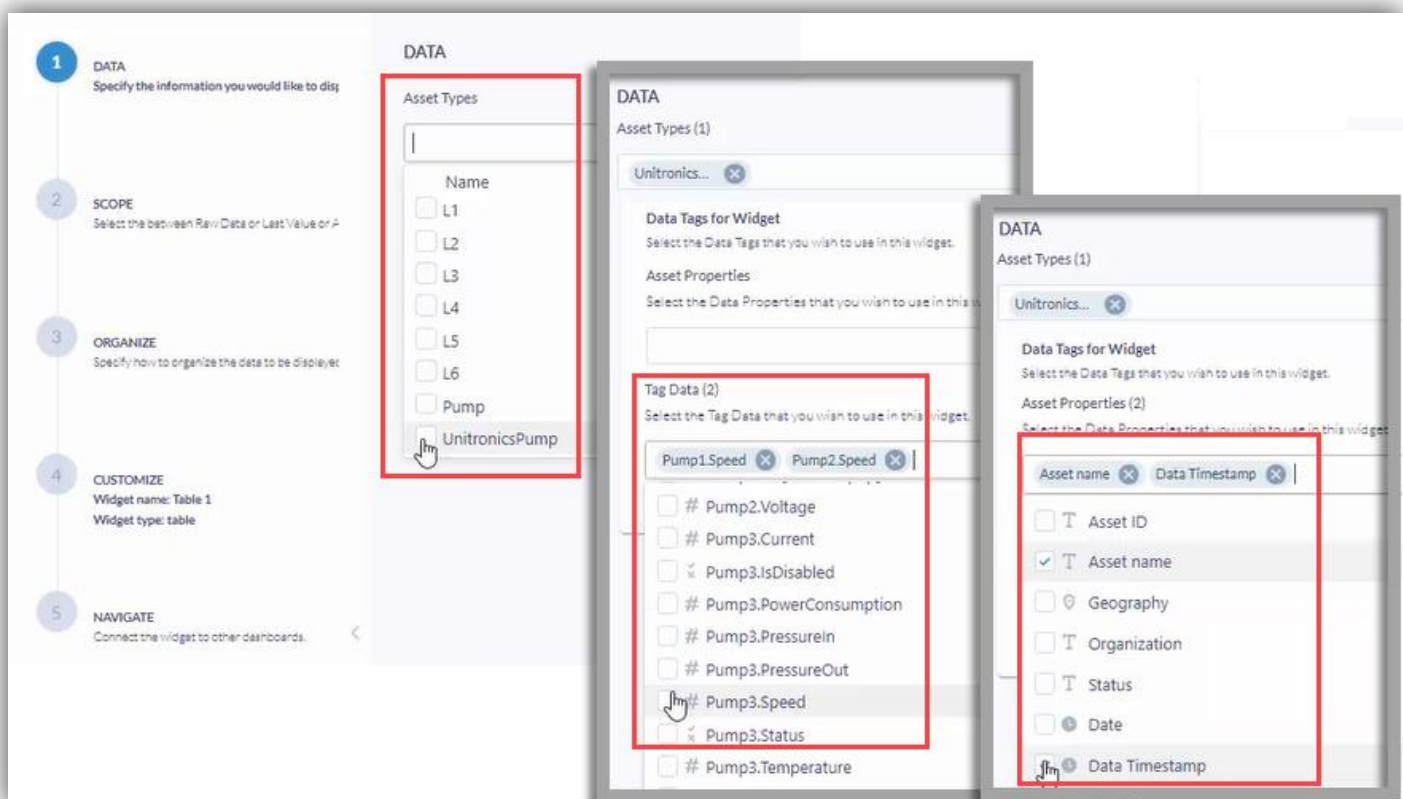
To use the Asset Type on a dashboard, navigate to Dashboard Editor.

Use the Widgets at the top to create a Dashboard. Let's use a Table to show the speed of the three pumps.



Define the:

1. Asset Type, UnitronicsPump, and the
2. Data for the widget Pump1 Speed, Pump2 Speed, and Pump3 Speed.
3. The Asset name, and the Data Timestamp.



DATA

Asset Types (1)

Unitronics...

Data Tags for Widget
Select the Data Tags that you wish to use in this widget.

Asset Properties (2)
Select the Data Properties that you wish to use in this widget.

Asset ID Data Times...

Tag Data (3)
Select the Tag Data that you wish to use in this widget.

Pump1.Spe... Pump2.Spe... Pump3.Spe...

Cancel Save as draft Back **Next**

SCOPE

☐ **Aggregated Data**
Group and perform calculations on your data.

☒ **Last Value**
View the latest value of the selected data.

Select this option when you want the widget to display either the last value of the selected data or perform calculations on it.

Cancel Save as draft Back **Next**

Under Data and Metrics, build a table structure.

ORGANIZE

Grouping & Measures

Available Data ⓘ

Pump3.Speed

Group By ⓘ

Drag and drop data here to group the information. You can group by textual data, dates, and Booleans; numerical data cannot be used for grouping. The order of the grouping is defined according to the tags order.

Data and Metrics ⓘ

+ T Asset name

+ T Asset ID

+ Data Timestamp

+ # Pump2.Speed

speed

A table is created with the Asset name,
Time and Date stamp, and the speed of the three pumps

ORGANIZE

Grouping & Measures

Available Data

Group By

Drag and drop data here to group the information. You can group by textual data, dates, and Booleans. Numerical data cannot be used for grouping. The order of the grouping is defined according to the tag order.

Data and Metrics

- AssetName
- AssetID
- Data.Timestamp
- Pump1.Speed

Filters

PREVIEW

Table 2

asset_name	asset_id	Data.Timestamp	Pump1.Speed	Pump2.Speed	Pump3.Speed
Machine15	507	2020-11-27 01:...	1725	1200	0

DATA PREVIEW

asset_name	asset_id	Data.Timestamp	Pump1.Speed	Pump2.Speed	Pump3.Speed
Machine15	507	2020-11-27 01:...	1725	1200	0

Unitronics Dashboard

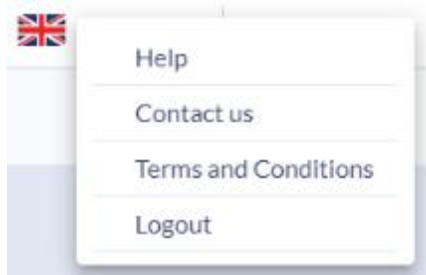
Clipboard
User Filters
Alarms
Image
ABC Text
123 Value
Table
Columns
Pie
Map
Radi

Table 1

asset_name	Data.Timestamp	Pump1.Speed	Pump2.Speed	Pump3.Speed
Machine15	2020-11-25 16:53:...	1725	1200	0

What next?

To learn more about UniCloud and how to continue building your dashboard open the drop-down menu with your name at the top right and select the Help option for further information.



For additional help you may always contact unicloud@unitronics.com