



CampbellCloud

Your Cloud-Based Solution for Managing
Environmental Monitoring Networks



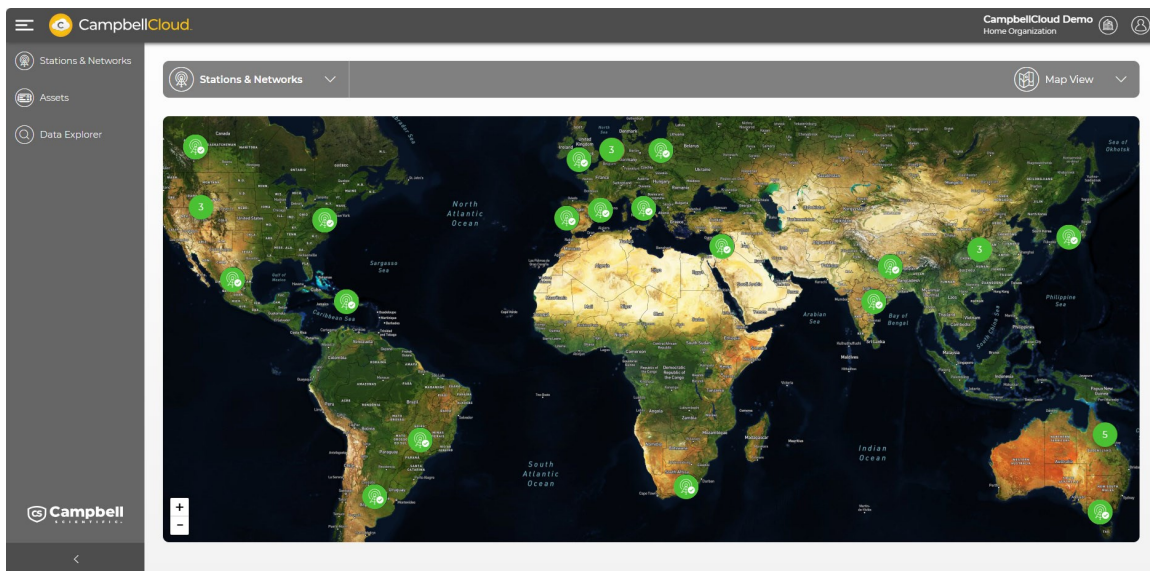
Table of contents

1. Introduction	1
2. Cloud administrator	2
2.1 Creating a CampbellCloud organization account	3
2.2 Changing default organization settings	5
2.3 Adding users	8
2.4 Adding a security group to an organization account	10
2.5 Configuring user settings	14
3. Become a CampbellCloud user	17
4. CampbellCloud UI	19
5. Applications	20
5.1 Stations & Networks	20
5.1.1 Navigating Stations & Networks	21
5.1.2 Station summary	22
5.2 Assets	24
5.3 Data Explorer	26
5.4 Security groups	29
6. CampbellCloud tasks	29
6.1 Changing user settings	30
6.2 Renaming the default network	33
6.3 Adding a station to a network	35
6.3.1 Adding an asset to a station	40
6.3.2 Setting favorite measurements on a station	46
6.4 Adding an asset	49
6.5 Linking an asset to a different station	54
6.6 Changing the Overdue Comms Alert setting	57
6.7 Viewing historical data using Data Explorer	60
6.8 Viewing status information	67
6.8.1 Viewing status information in Assets summary	67
6.8.2 Viewing status information in Data Explorer	70
6.9 Displaying and customizing units of measurement	72

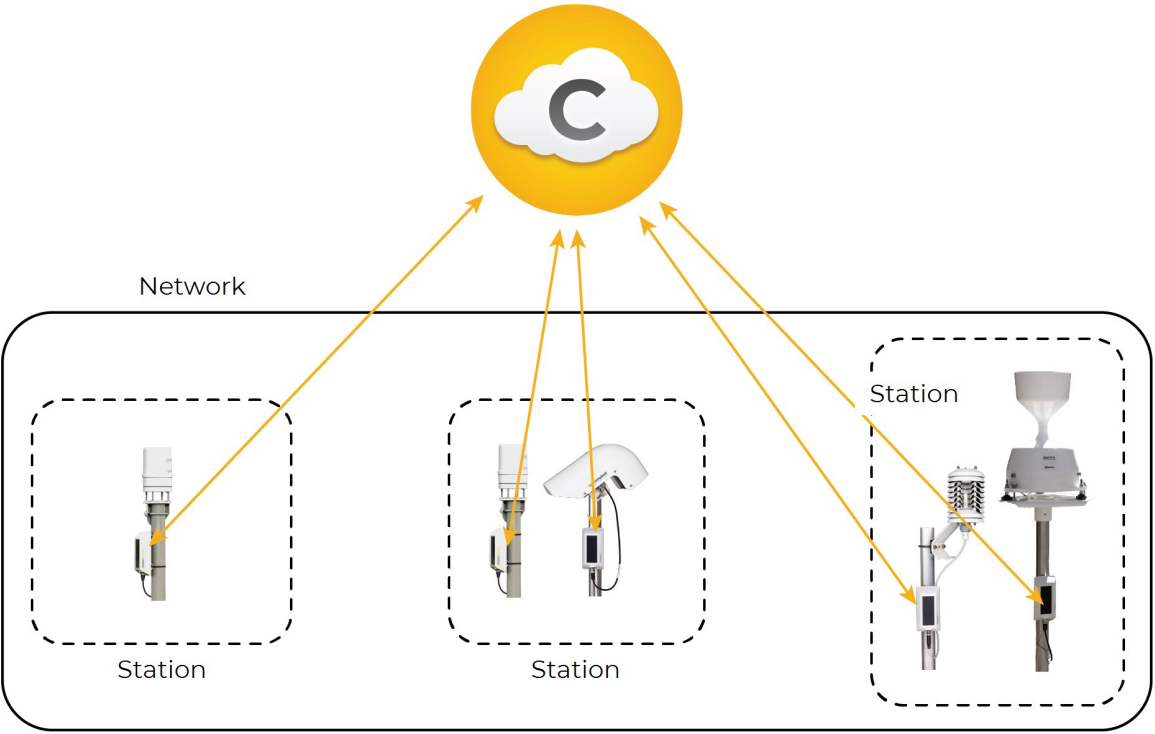
6.9.1 Configure Measurement Properties	73
6.9.2 Changing default display units for an individual user	76
7. FAQs	79
8. Glossary	82

1. Introduction

CampbellCloud (Cloud) provides a secure and resilient cloud-based service for remotely managing networks of environmental monitoring stations. With cross-browser compatibility and no software to install, CampbellCloud is accessible to everyone and provides a modern, user-friendly user interface (UI) with self-manage subscription capabilities that allow organizations to be up and running in minutes. This service is designed around the latest technologies to ensure data security and accessibility. It is structured to be cost-effective, offering a simple, low monthly subscription that scales according to the user's needs, whether it's for a single data logger or a large network of stations.



The following figure shows a network consisting of three stations. Each station has one or more assets associated with it.



2. Cloud administrator

In order to use CampbellCloud you must be associated with an organization account, either as the account administrator or as an account user. The account is free to set up.

The organization account administrator will be responsible for providing the subscription-management billing information. The account administrator may also be the owner, or a user with privileges.

NOTE:
In this context, an organization is an individual, business, or organization that uses CampbellCloud services to manage a network of stations.

Some administrator tasks are described in the following sections.

- 2.1 Creating a CampbellCloud organization account 3
- 2.2 Changing default organization settings 5
- 2.3 Adding users 8

2.4 Adding a security group to an organization account	10
2.5 Configuring user settings	14

2.1 Creating a CampbellCloud organization account

If you are not the account administrator but need to join an account as a user, an account administrator should invite you to join the account. The email invitation will be from *hello@campbell-cloud.com* and will include instructions to join the account as a user.


NOTE:

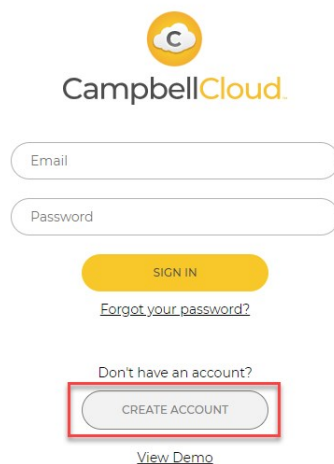
If you are not the account administrator, proceed to the [Become a CampbellCloud user](#) (p. 17) section.

CAUTION:

If you or your organization already has a **CampbellCloud** organization account, do not create another one.

If you are the administrator, follow these steps to create an account:

1. Using a web browser go to <https://iot.campbell-cloud.com> .
2. Click **REGISTER**.
3. Click **CREATE ACCOUNT**.



The image shows the CampbellCloud login and registration interface. At the top is the CampbellCloud logo, which consists of a yellow circle with a white 'C' and a cloud icon. Below the logo are two input fields: 'Email' and 'Password'. Below these fields is a yellow 'SIGN IN' button. Under the 'SIGN IN' button is a link that says 'Forgot your password?'. Below that is the text 'Don't have an account?'. Under this text is a button labeled 'CREATE ACCOUNT', which is highlighted with a red rectangular border. At the bottom of the form is a link that says 'View Demo'.

- If you are the person who will be responsible for the organization account, click **CONTINUE TO SIGN UP**.



Existing Organization Account

If your organization already has a CampbellCloud account, click "CANCEL SIGN UP" and contact your account administrator to be invited to that account.


CANCEL SIGN UP

New Organization Account


Create a new CampbellCloud account for your organization with you as the owner. Creating an account is free.* No payment details are required when signing up.

CONTINUE TO SIGN UP

- Fill out the form.



Create an Account for Your Organization

Your Organization Details	Your User Details (account owner)
Organization Name *	First Name *
Billing Street Address *	Last Name *
Billing City *	Email *
Billing Province/State *	Password *
Billing Postal/Zip Code *	Confirm Password *
Billing Country * 	<input type="checkbox"/> I have read and agree to the CampbellCloud Organization Terms of Use
Billing Email *	<input type="checkbox"/> I have read and agree to the CampbellCloud End User Terms of Use


CANCEL **CREATE ACCOUNT**

- Read and select the check box for each agreement.

7. Click **CREATE ACCOUNT**.
8. You should receive an email confirmation from *hello@campbell-cloud.com*.
9. Click **Verify your email**. A new browser tab will open.
10. Click **SIGN IN** and proceed to CampbellCloud.

NOTE:

Your user name is the email you signed up with.

For more information on creating a CampbellCloud organization account, watch an instructional video at: <https://www.campbellsci.com/videos/cloud02> .

2.2 Changing default organization settings

Organization settings can be adjusted to tailor data views to specific organizational needs. These settings will affect all users in the organization.

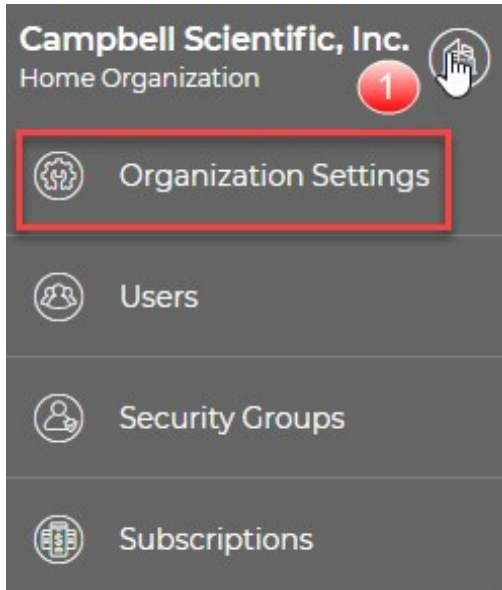
NOTE:

To control a specific user's settings see: [Configuring user settings](#) (p. 14).

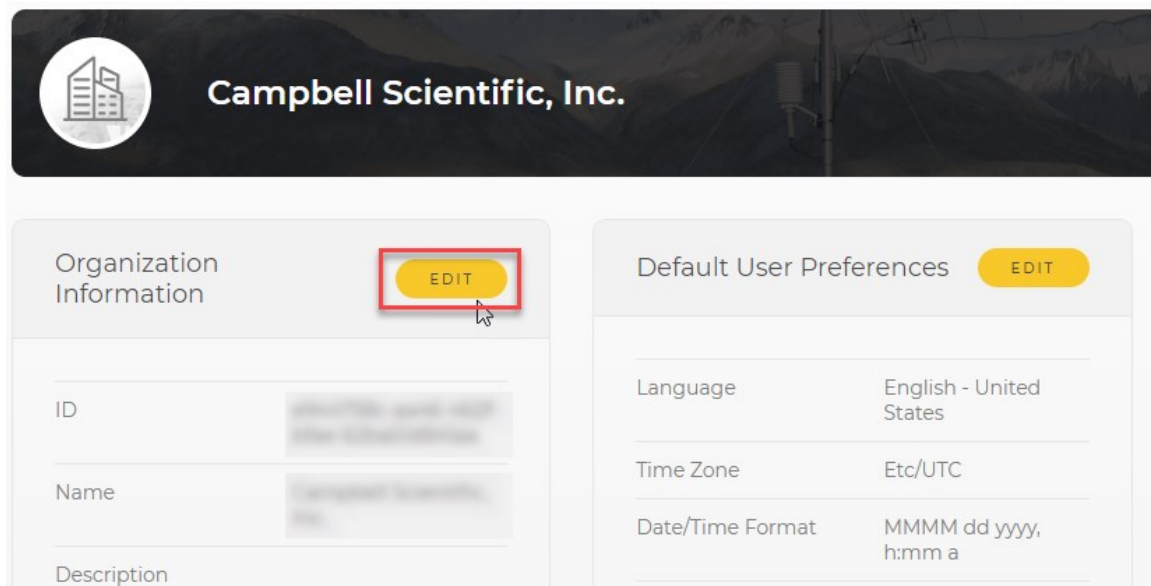
1. On the CampbellCloud home page, click on the organization name in the upper right corner.



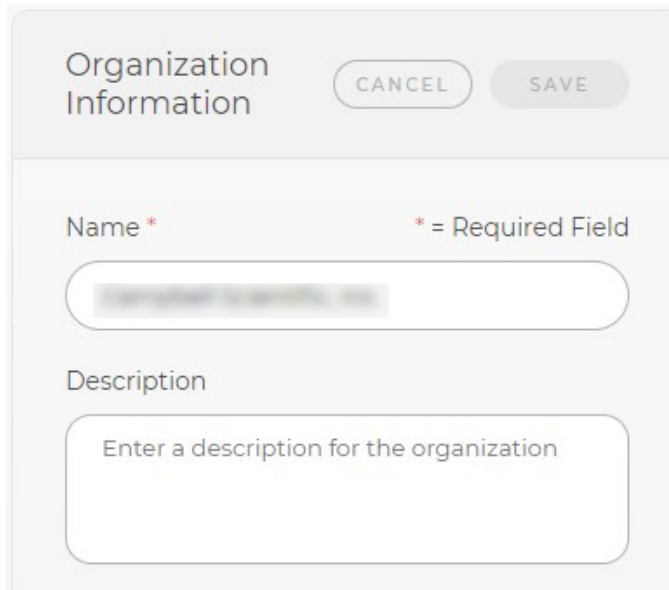
2. Select **Organization Settings**.



3. A new page appears with **Organization Information** and **Default User Preferences** sections.
The organization name was assigned when setting up the organization account. To change the organization name or add a description of the organization, click **EDIT** next to **Organization Information**.



4. An organization name is required, but a description is optional. Click **SAVE** to save changes and return to the **Organization Settings** screen.



The image shows a form titled "Organization Information" with a light gray background. At the top right of the form are two buttons: "CANCEL" and "SAVE". Below the title, there are two input fields. The first field is labeled "Name *" and has a red asterisk. To the right of this label is a legend: "* = Required Field". The input field for "Name" contains the text "Campbell Cloud, Inc.". The second field is labeled "Description" and contains the placeholder text "Enter a description for the organization".

Organization Information

CANCEL SAVE

Name * * = Required Field

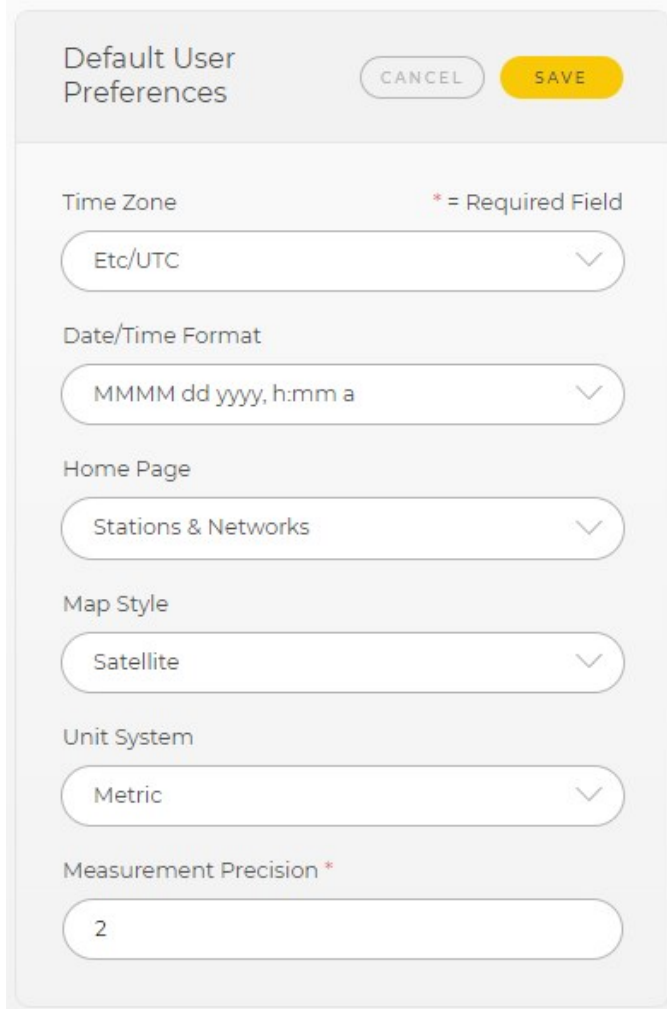
Campbell Cloud, Inc.

Description


Enter a description for the organization

5. An account administrator can set default user preferences for all individuals in their organization. That way, every user will have a similar experience. Individual users may be given permission to edit their own settings. See [Changing user settings](#) (p. 30).

To change the default user preferences, click **EDIT** next to **Default User Preferences**. This screen allows modifications to time zones, date/time format, home page displayed, map style, unit system, and measurement precision. Click **SAVE** to save changes and return to the **Organization Settings**.



The screenshot shows a 'Default User Preferences' form. At the top, there is a title 'Default User Preferences' and two buttons: 'CANCEL' and 'SAVE'. Below the title, there are several settings, each with a label and a dropdown menu. The settings are: 'Time Zone' (set to 'Etc/UTC'), 'Date/Time Format' (set to 'MMMM dd yyyy, h:mm a'), 'Home Page' (set to 'Stations & Networks'), 'Map Style' (set to 'Satellite'), 'Unit System' (set to 'Metric'), and 'Measurement Precision' (set to '2'). A red asterisk next to 'Measurement Precision' indicates it is a required field. A legend at the top right of the form states '* = Required Field'.

For more information on changing default organization settings, watch an instructional video at: <https://www.campbellsci.com/videos/cloud01> .

2.3 Adding users

Most organizations will have several, or many, users associated with their organization. Account administrators can invite users to join their organization.

1. On the CampbellCloud home page, click on the organization name in the upper right corner.



2. Select **Users**.
3. Click .



4. Enter the new user's details. Click **NEXT**.

Add User

User Details

Please enter the new user's name and email.


First Name * * = Required Field

Last Name *

Email

CANCEL **NEXT**

5. If Security Groups have already been set up you can add the user to specific groups. If not, click **FINISH**.

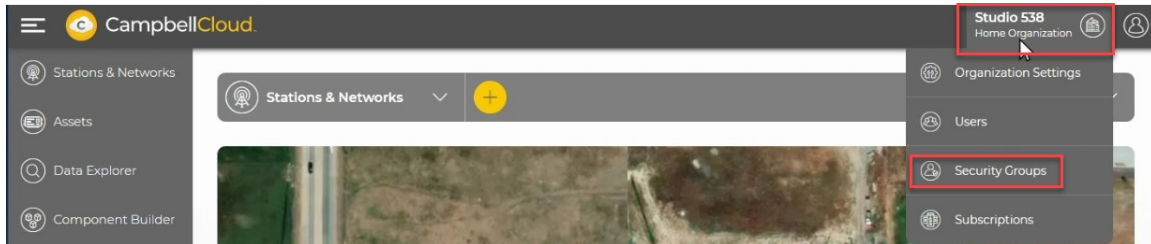
For more information on adding a new user, watch an instructional video at: <https://www.campbellsci.com/videos/cloud03> .

2.4 Adding a security group to an organization account

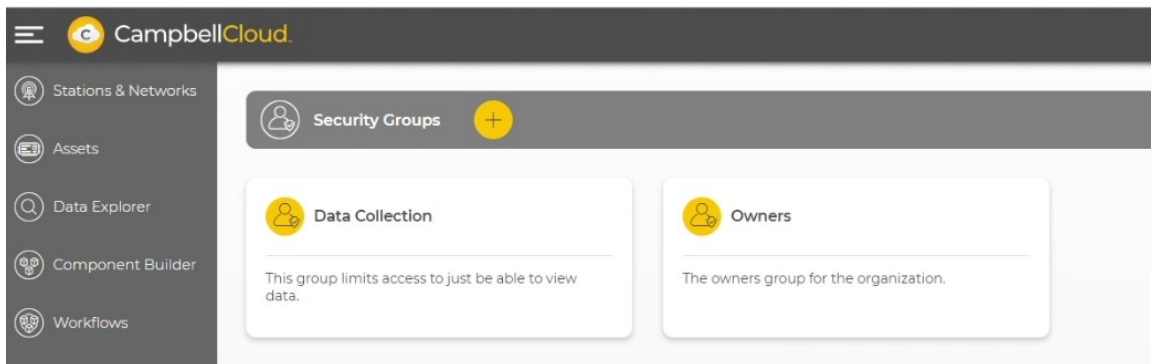
Security groups can be set up in CampbellCloud to restrict specific users' access to certain applications, data, or locations. This ensures that unauthorized users cannot modify network or station settings. For more information about specific applications, see [Applications](#) (p. 20).

Follow these steps to add a new security group:

1. Go to the **CampbellCloud** home page and click on the organization name in the upper, right corner.
2. Click **Security Groups**.



3. A list of existing security groups appears. Click on  at the top of the page to add a new security group.



4. Enter a name and optional description for the new security group, then click **NEXT**.

Add Group

Group Details

Please enter a name for the new security group. You can also enter an optional description.

Name * * = Required Field

Description

CANCEL NEXT

5. A new page appears with a list of applications that users could have access to. Select the applications you want to grant access to for this group. Scroll down in this same window to see a list of permissions. These permissions allow administrators more granular control of which application settings users have access to. For example, selecting **Users** as the application, and then selecting **User-update** allows users to update their own settings, such as preferred time zone, when logged into CampbellCloud.

The screenshot shows a modal window titled "Add Group" with a sub-header "Group Permissions". Below the header is a descriptive text: "Select the permissions you want to grant to this group. 'Applications' provide access to different parts of the software. 'Permissions' grant access to more granular functionality." The main content area is a scrollable list of permissions. At the top, there is a dropdown menu labeled "Permissions" with "Users" selected. Below this is a "Filter Permissions" input field. The list of permissions includes: "Group - update" (unchecked), "User - create" (unchecked), "User - delete" (unchecked), and "User - update" (checked). At the bottom of the modal are three buttons: "CANCEL", "BACK", and "NEXT".

6. Click **NEXT**.

7. Select which users in your organization you want to add to this new security group.

The screenshot shows a dialog box titled "Add Group" with a sub-header "Group Users". Below the header, there is a text instruction: "Select the users you want to add to this group. The users you add will have access to the functionality you granted permissions to on the previous screen." Below this instruction is a list of users, each with a checkbox and a name field. Two users are visible, both with checkboxes selected. At the bottom of the dialog, there are three buttons: "CANCEL", "BACK", and "FINISH".

8. Click **FINISH**. A new page appears. Click **FINISH** to proceed, or **CREATE GROUP** to create another security group.

The screenshot shows a dialog box titled "Add Group" with a sub-header "Next Steps". Below the header, there is a text instruction: "Select the next action you want to take." Below this instruction, there are two options, each with a text label and a button. The first option is "Finish and view all groups." with a "FINISH" button. The second option is "Create another group." with a "CREATE GROUP" button.

For more information on adding a new security group, watch an instructional video at: <https://www.campbellsci.com/videos/cloud04> .

2.5 Configuring user settings

A CampbellCloud account administrator has the option to configure individual user settings.

NOTE:

This is different than configuring the organization settings. See [Changing default organization settings](#) (p. 5).

Follow these steps to configure one user's settings.

1. On the CampbellCloud home page, click on the organization name in the upper right corner.



2. Select **Users**. A list of users in the organization appears.
3. Click on the user name.



Name	Account Email	Status	Created
User	@gmail.com	Active	2023/11/15
	@campbellsci.com	Active	2023/08/30

4. A new page opens. Click **EDIT** next to **User Information**, **User Preferences**, or **Security Groups**.

The screenshot shows a user management interface. At the top, there's a header with a 'Users' icon and a 'View all Users' link. Below this is a user profile card for 'User' with a placeholder icon and 'Time on Platform: 3 months'. The main area contains three panels:

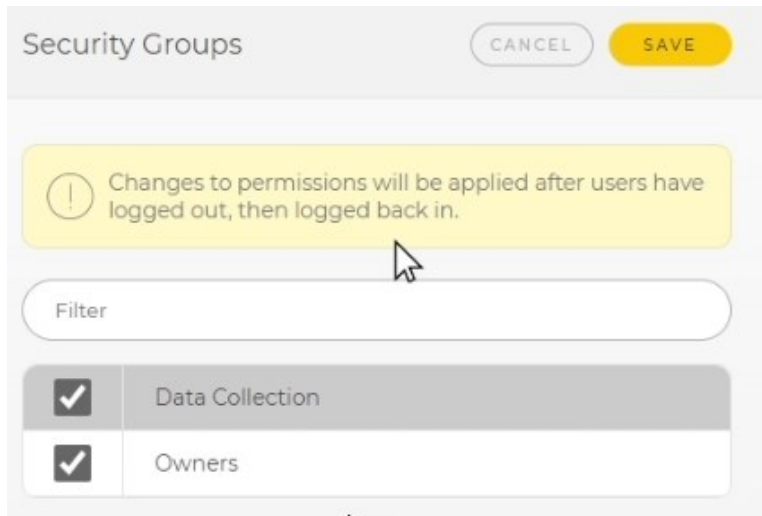
- User Information**: Fields for First Name, Last Name (User), Email (@gmail.com), Status (Active), and Registration Date (2023/1/15). An **EDIT** button is in the top right.
- User Preferences**: Fields for Home Page (Stations & Networks), Language (English - United States), Time Zone (America/Denver), Date/Time Format (MMMM dd yyyy, h:mm a), Map Style (Satellite), and Measurement Precision (2). An **EDIT** button is in the top right.
- Security Groups**: A yellow warning box states 'Changes to permissions will be applied after users have logged out, then logged back in.' Below is a 'Filter' input and a list of groups: Owners, test, and View data only (checked). An **EDIT** button is in the top right.

5. **User Preferences** include default home page, language, time zone, date/time format, map style, and measurement precision.

The screenshot shows the 'User Preferences' form. At the top, there are 'CANCEL' and 'SAVE' buttons. A mouse cursor is pointing at the 'SAVE' button. The form contains the following fields:

- Home Page**: A dropdown menu with 'Stations & Networks' selected. A red asterisk indicates it is a required field.
- Time Zone**: A dropdown menu with 'Etc/UTC' selected.
- Date/Time Format**: A dropdown menu with 'MMMM dd yyyy, h:mm a' selected.
- Map Style**: A dropdown menu with 'Satellite' selected.
- Measurement Precision**: A text input field with '2' entered. A red asterisk indicates it is a required field.

6. **Security Groups** determine which groups a user has access to when using CampbellCloud.



Security Groups	
Changes to permissions will be applied after users have logged out, then logged back in.	
Filter	
<input checked="" type="checkbox"/>	Data Collection
<input checked="" type="checkbox"/>	Owners

7. **SAVE** any changes before leaving.

For more information on an account administrator changing an individual user's preferences, watch an instructional video at: <https://www.campbellsci.com/videos/cloud06> .

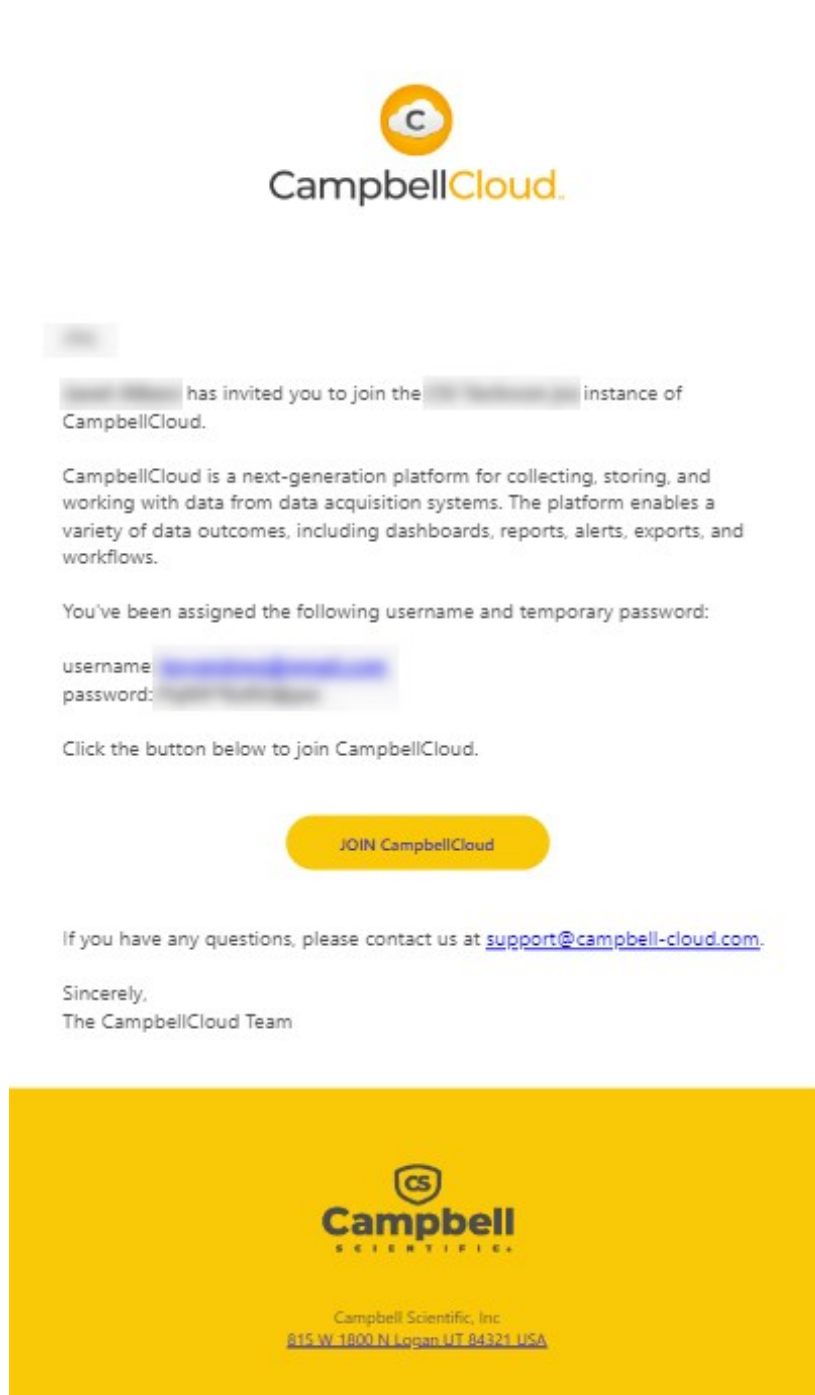
3. Become a CampbellCloud user

Every CampbellCloud user must be associated with an organization. Your organization administrator should invite you to be a member. Shortly thereafter you will receive an email from *hello@campbell-cloud.com*.

NOTE:

Organization owners are automatically set up as users. If you are the owner and need to set up the organization see [Creating a CampbellCloud organization account](#) (p. 3).

The email you receive should look similar to the following:



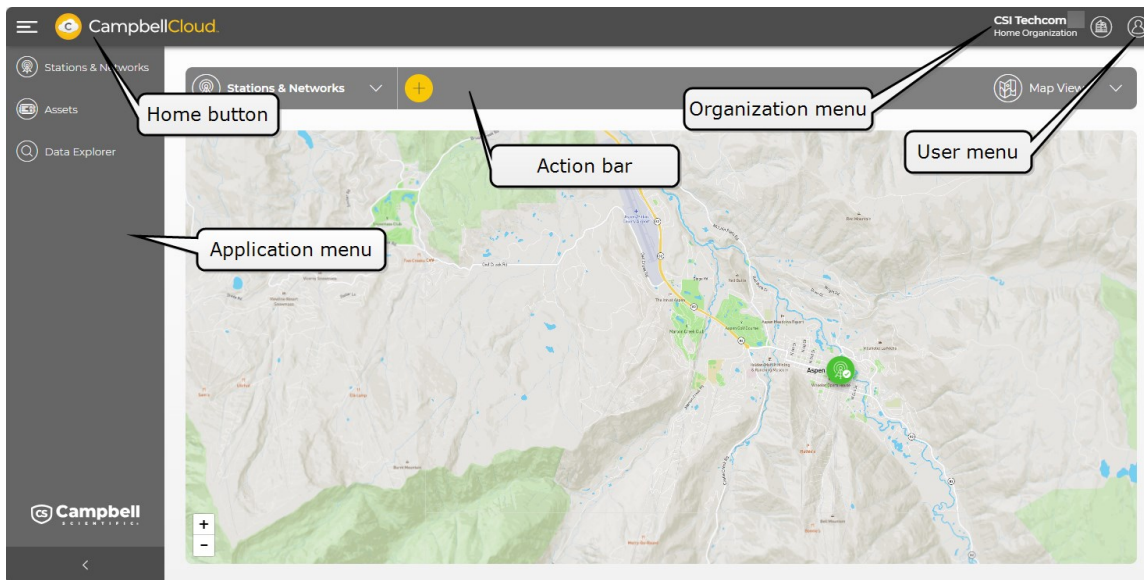
Click **JOIN CampbellCloud**.

Your organization administrator assigned you to one or more security groups. Each security group has a defined set of permissions. Contact your organization administrator for more information.

For more information on becoming a CampbellCloud user, watch an instructional video at: <https://www.campbellsci.com/videos/cloud03> .

4. CampbellCloud UI

Once signed in to CampbellCloud, a screen similar to this appears:



Application menu – displays specific applications. Expand and collapse the menu using the > at the bottom.


Action bar – used to perform actions within an application, such as adding and deleting stations in the **Stations & Networks** application, for example.

Organization menu – a dropdown menu which contains the **Organization Settings**, **Users**, **Security Groups**, and **Subscriptions** applications.

User menu – a dropdown menu which contains the **My Settings** application, the **Sign out** button, and options for submitting **Feedback**, a **Bug**, and **Support** requests.

NOTE:

Users are automatically signed out after being inactive for 40 minutes.

Home button – the CampbellCloud icon  acts as your home button. Select this to navigate back to your home screen. Users with correct permissions can change their default home screen via the **My Settings** application.

5. Applications

Applications (Apps) in CampbellCloud provide grouped functionality to enable users to perform specific tasks. Apps are accessed via the left-hand **Application** menu or the **Organization** dropdown menu on the top menu bar, depending on the specific application required.

Security groups can be set up by account administrators to restrict specific users' access to certain applications, data, or locations. For more information, see [Adding a security group to an organization account](#) (p. 10).

The following sections describe some Cloud apps.

5.1 Stations & Networks	20
5.1.1 Navigating Stations & Networks	21
5.1.2 Station summary	22
5.2 Assets	24
5.3 Data Explorer	26
5.4 Security groups	29

5.1 Stations & Networks

The **Stations & Networks** application is used for managing stations and networks. Its key functions include the following:

- Creating and viewing networks and stations
- Monitoring network status and station alerts through summary maps
- Viewing the latest data through station summaries
- Reviewing detailed station health and status information

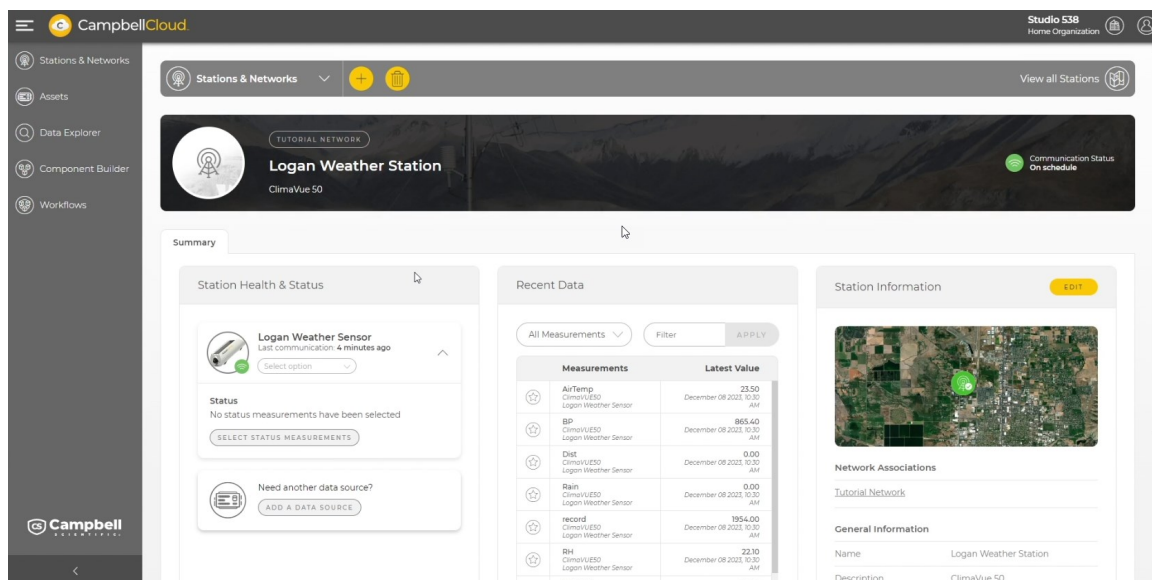
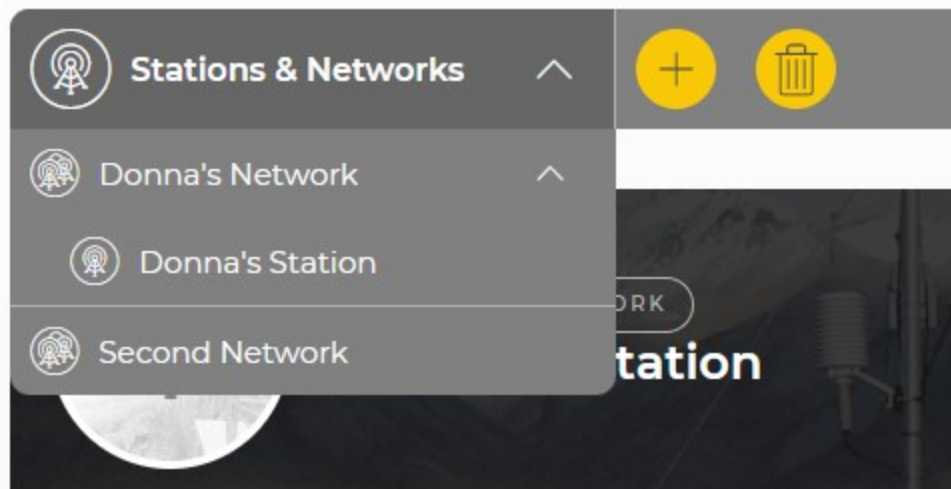


Figure 5-1. CampbellCloud Station Summary

5.1.1 Navigating Stations & Networks

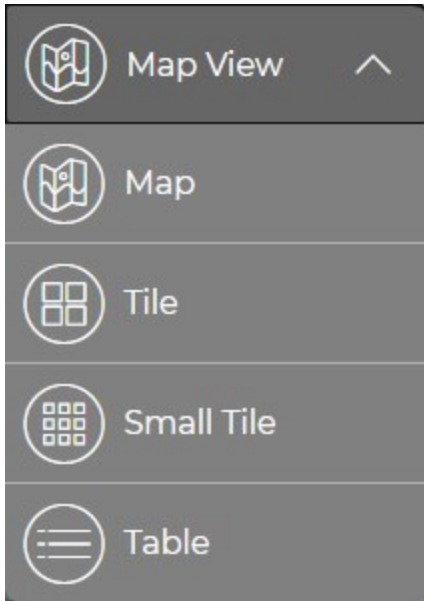
Select which network or specific station to view from the **Stations & Networks** dropdown menu.



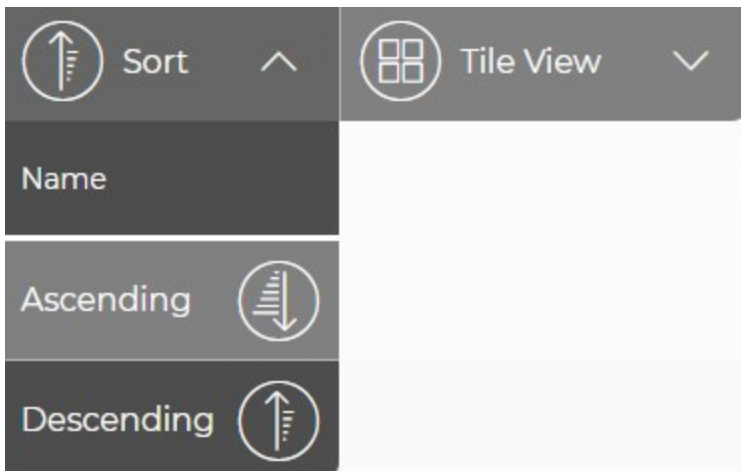
Use the dropdown menu in the upper right to select the format to view your stations:

- **Map** – displays the stations on a map. Click on the station icon to display the favorite measurements.
- **Tile** – displays a tile providing overview information for each station.

- **Small Tile** – displays a small tile for each station showing only the station name and network.
- **Table** – displays the stations as lines in a table which provides the station name, most recent data, last communication, description, and when the station was created.



For all options except **Map**, use the **Sort** dropdown menu to specify whether to sort in **Ascending** or **Descending** order.



5.1.2 Station summary

Selecting a station in any view will switch your view to that station summary as shown in [Figure 5-1](#) (p. 21).

Favorite measurements are set in the **Recent Data** section. This affects which measurements are shown for the station when in **Map** (see [Figure 5-2](#) [p. 24]), **Table**, and **Tile** views.

Recent Data

All Measurements

Filter

APPLY

	Measurements	Latest Value
	Donna's Aspen	April 19 2024, 10:20 PM
	Rain Donna's Aspen	0.00 April 19 2024, 10:20 PM
	record Donna's Aspen	6007.00 April 19 2024, 10:20 PM
	RH Donna's Aspen	13.20 April 19 2024, 10:20 PM
	RHTemp Donna's Aspen	22.60 April 19 2024, 10:20 PM
	Solar Donna's Aspen	7.00 April 19 2024, 10:20 PM
	Strikes Donna's Aspen	0.00 April 19 2024, 10:20 PM
	TiltNS Donna's Aspen	-90.00 April 19 2024, 10:20 PM
	TiltWE Donna's Aspen	90.00 April 19 2024, 10:20 PM
	VP Donna's Aspen	3.60 April 19 2024, 10:20 PM
	WindDir Donna's Aspen	72.40 April 19 2024, 10:20 PM
	WindSpd Donna's Aspen	0.06 April 19 2024, 10:20 PM
	WindSpdMax Donna's Aspen	0.07 April 19 2024, 10:20 PM

Click to "favorite" a measurement

15 measurements

VIEW IN DATA EXPLORER

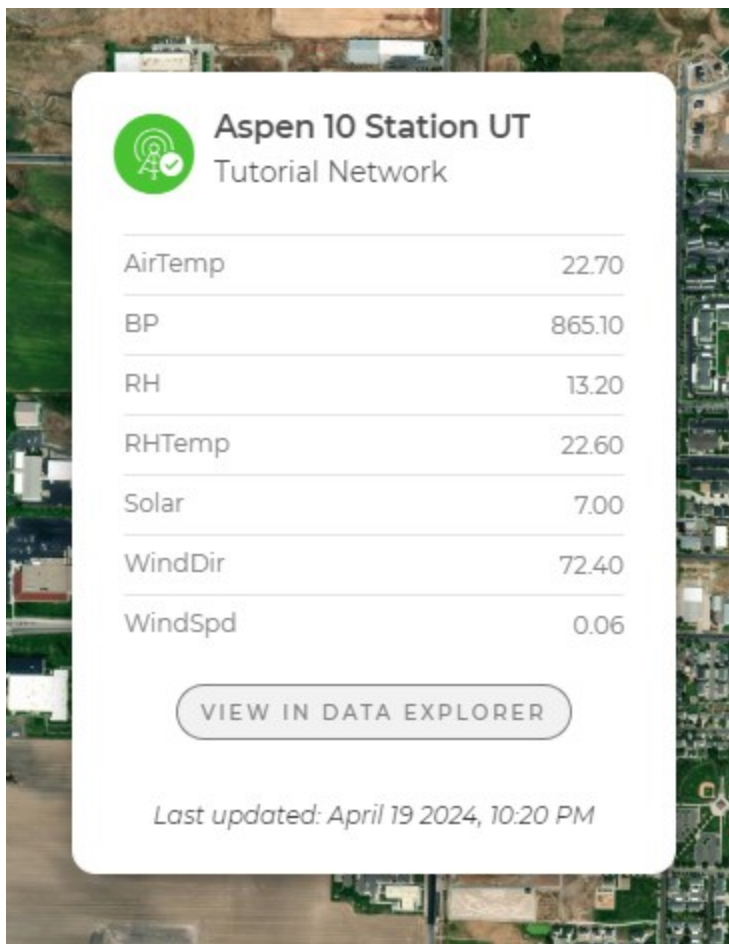


Figure 5-2. Network map view showing station favorites

While showing station favorites from the **Map** view or **Tile** view, click a measurement to see the last six hours of that measurement in a **Data Explorer** line chart. Click **View in Data Explorer** to see the last six hours of all favorite measurements in a **Data Explorer** table.

5.2 Assets

The **Assets** application is used to manage assets (data sources such as the Aspen 10, or other hardware). Assets, once onboarded, will appear in a tabular view.

Click on the asset name to see its details.

Assets					
<div> Filter Sort List View </div>					
Asset Name	Model	Serial	UID	Status	Station
<div>Aspen10</div>	Aspen10			Active	Station Aspen CO

On the main **Assets** page, click the name of the asset to view its health and status **Summary**, **Asset Properties**, **Measurement Properties**, and **Subscription** information.

The screenshot shows the 'Summary' tab selected. It contains three main sections: 'Asset Health and Status' with status details and a 'SELECT STATUS MEASUREMENTS' button; 'Recent Data' with a filter and a table of measurements; and 'Asset Information' with an 'EDIT' button and general information.

Measurements	Latest Value
AirTemp ClimaVUE50	23.30 December 27 2023, 1:40 PM
BP ClimaVUE50	873.50 December 27 2023, 1:40 PM
Dist ClimaVUE50	0.00 December 27 2023, 1:40 PM
Rain ClimaVUE50	0.00 December 27 2023, 1:40 PM
record ClimaVUE50	5514.00 December 27 2023, 1:40 PM

General Information	
Name	Aspen 10
Description	ClimaVue 10
Model	ASPEN10
Serial Number	621

The **Asset Properties** tab provides access to the overdue communications alert time setting. Additionally, **Asset Configuration** information, such as recipe name and version, operating system version, and cellular version are shown.

NOTE:

Changes made to an asset affect all users who have access to that asset.

Click the toggle switch to turn on or off the recipe and operating system automatic updates. A yellow switch indicates that automatic updates are on.

The screenshot shows the 'Asset Properties' tab selected. It contains two main sections: 'Asset Settings' with an 'EDIT' button and fields for Timezone and Overdue Comms Alert; and 'Asset Configuration' with fields for Recipe, Automatic Updates (toggle), and Operating System.

Timezone	Etc/UTC
Overdue Comms Alert (minutes)	60

Recipe	
RecipeName	ClimaVUE50 (529) Recipe
RecipeVer	1fd3bc2d-b325-4d83-b033-b4b0438ba9e6
Automatic Updates	<input checked="" type="checkbox"/>
Operating System	
OSVersion	ASPEN10.Std.1.0.12

The **Measurement Properties** tab provides a list of measurements. Clicking on an individual measurement opens a measurement properties window that can be used to configure measurement **Classification**, **Subclassification**, **Units**, **Aggregate Type**, and **Precision**.

Use measurement **Classifications**, **Subclassifications**, and **Units** in conjunction with **My Settings > Unit Preferences** to affect how your measurements are displayed throughout Cloud. The **Measurement Properties** must be set to match the data being sent to CampbellCloud. For an Aspen 10, this comes from the recipe. See [Recipes](#) in the Aspen 10 manual for more information.

See [Changing user settings](#) (p. 30).

Field	Table	Alias	Units	Classification	Sub Classification
AirTemp	ClimaVUE50	airtempclimavue50			
BP	ClimaVUE50	bpclimavue50			
BattCapacity	Status	battcapacitystatus			
BattCharge	Status	battchargestatus			
BattCurrent	Status	battcurrentstatus			
BattStateOfCharge	Status	battstateofchargestatus			
BattStateOfHealth	Status	battstateofhealthstatus			
BattTemp	Status	batttempstatus			
BattVoltage	Status	battvoltagestatus			

Measurement Properties CANCEL SAVE

Alias * * = Required Field

battcapacitystatus

Units

Classification

NOTE:

Adding measurement units may reduce the number of measurements that can be displayed at one time on a **Data Explorer** graph. See [Data Explorer](#) (p. 26).

For detailed instructions on adding an asset to CampbellCloud, see [Adding an asset](#) (p. 49).

5.3 Data Explorer

The **Data Explorer** application allows rapid exploration of your stored Cloud data through table, chart, and map views. It features a menu with a structured hierarchy of Network > Station > Measurements and includes a quick search filter. Users can apply time-based filters for efficient navigation and visualization of data over selected time frames. Additionally, there is an option to export the displayed data to comma-separated values (CSV) files. See [Viewing historical data using Data Explorer](#) (p. 60) for details.

NOTE:

Up to 15,000 data points per measurement can be displayed.

The precision displayed in CampbellCloud defaults to 2. For some measurements, it may be necessary to increase the precision. You can change the precision for a single measurement from the **Measurement Properties** in [Assets](#) (p. 24). You can change the precision for all measurements (except those with the precision set in **Measurement Properties**) by [Changing user settings](#) (p. 30).

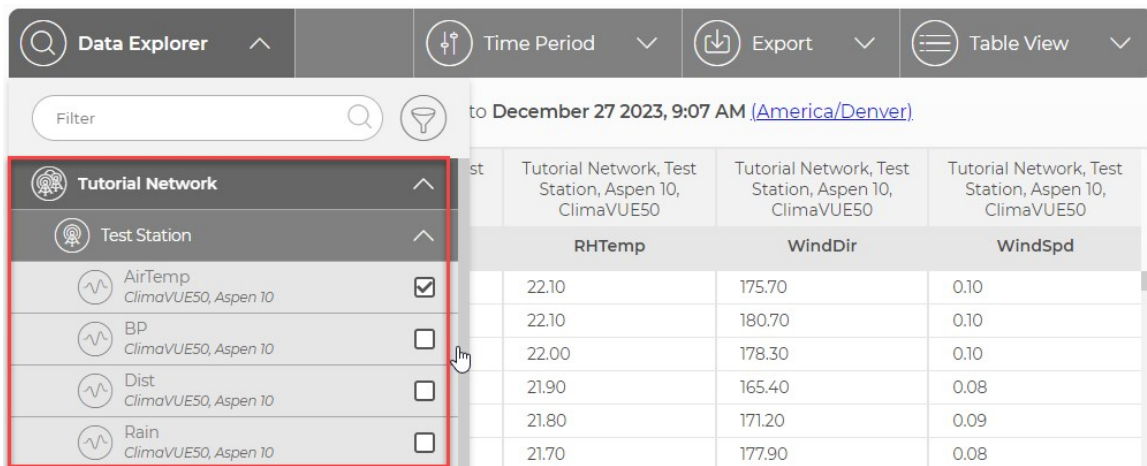


Figure 5-3. Data Explorer application menu

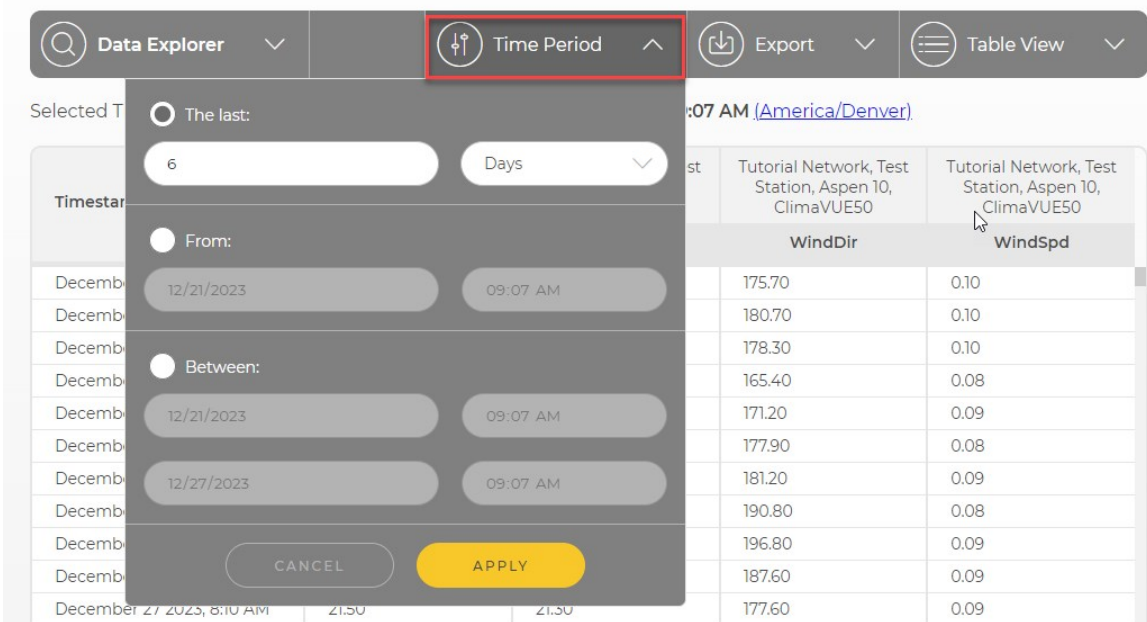


Figure 5-4. Data Explorer application - time-based filters

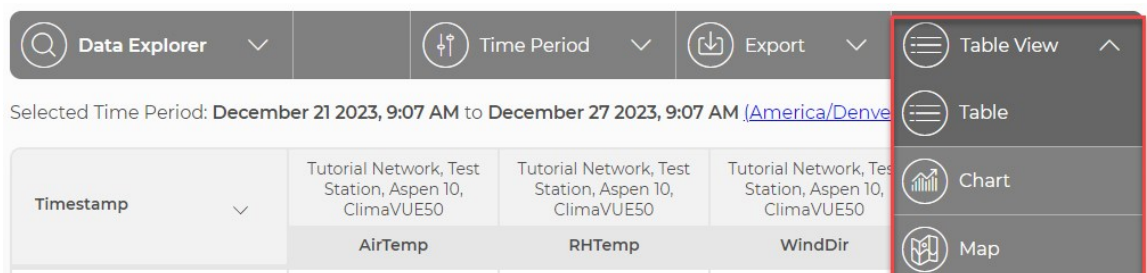


Figure 5-5. Data Explorer view options menu

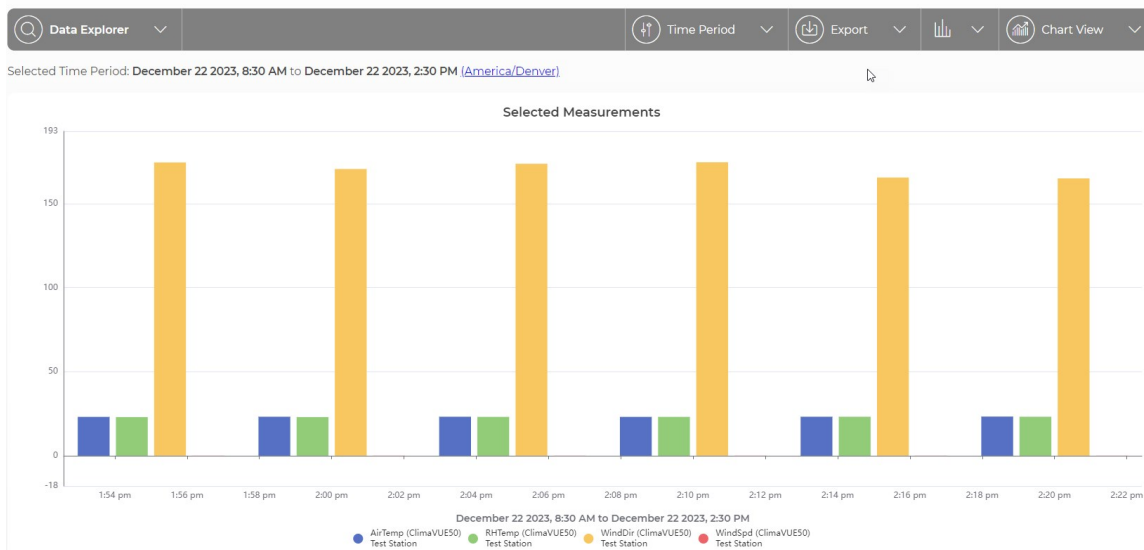


Figure 5-6. Data Explorer application - chart view

Selected Time Period: December 08 2023, 9:37 AM to December 08 2023, 3:37 PM (America/Denver)

Timestamp	AirTemp
December 08 2023, 3:30 PM	23.60
December 08 2023, 3:25 PM	23.60
December 08 2023, 3:20 PM	23.70
December 08 2023, 3:15 PM	23.70
December 08 2023, 3:10 PM	23.60
December 08 2023, 3:05 PM	23.60
December 08 2023, 3:00 PM	23.60
December 08 2023, 2:55 PM	23.70

Figure 5-7. Data Explorer application - Table View

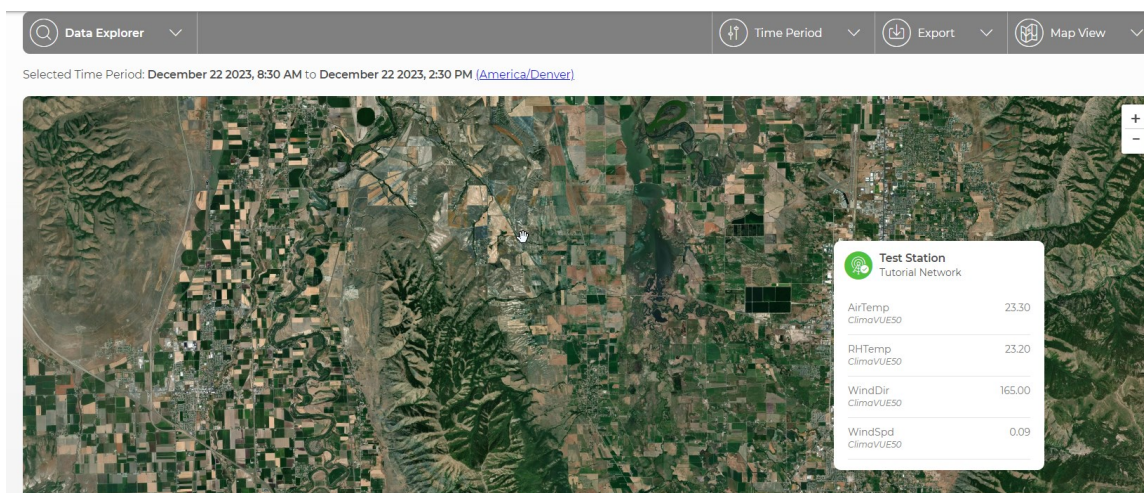


Figure 5-8. Data Explorer application - Map View

See [Viewing historical data using Data Explorer](#) (p. 60) for more details.

5.4 Security groups

Security groups can be created to control user access to CampbellCloud applications. By creating and configuring these groups, administrators can limit the access of certain users, ensuring that sensitive data or critical areas of the network or station remain secure and are not modified by unauthorized personnel. Each group can have specific permissions and access rights. Users are then assigned to these groups based on their role, responsibility, and the level of access they require. For instructions on adding and configuring security groups, refer to [Adding a security group to an organization account](#) (p. 10).

6. CampbellCloud tasks

Access to applications, and features of those applications, is controlled by Security Groups. Contact your organization administrator for details about your specific permissions.

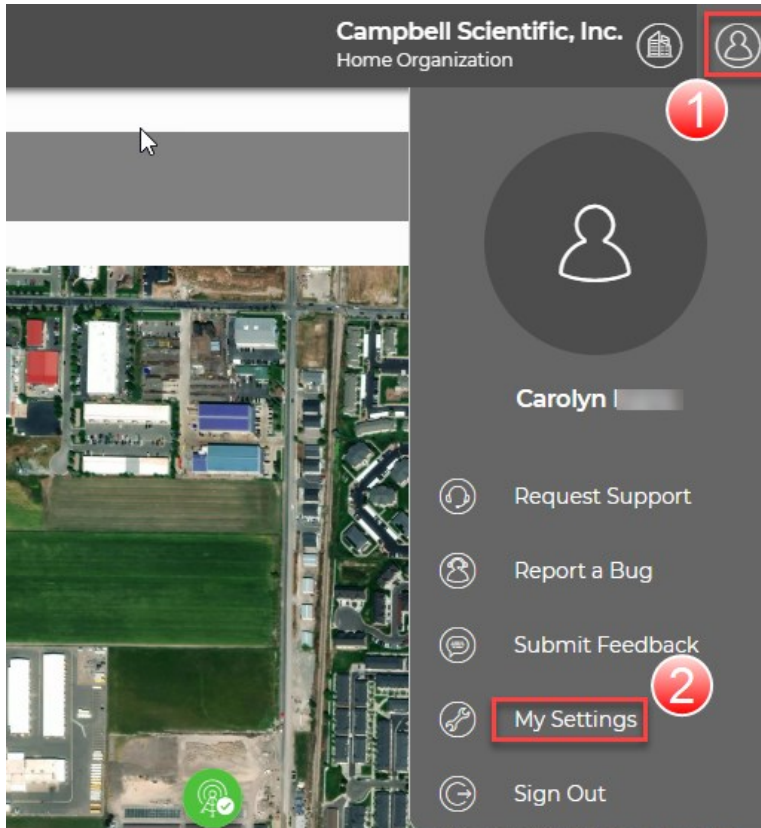
Some typical tasks are described in the following sections.

6.1 Changing user settings	30
6.2 Renaming the default network	33
6.3 Adding a station to a network	35
6.3.1 Adding an asset to a station	40
6.3.2 Setting favorite measurements on a station	46
6.4 Adding an asset	49
6.5 Linking an asset to a different station	54
6.6 Changing the Overdue Comms Alert setting	57
6.7 Viewing historical data using Data Explorer	60
6.8 Viewing status information	67
6.8.1 Viewing status information in Assets summary	67
6.8.2 Viewing status information in Data Explorer	70
6.9 Displaying and customizing units of measurement	72
6.9.1 Configure Measurement Properties	73
6.9.2 Changing default display units for an individual user	76

6.1 Changing user settings

Provided a Cloud administrator has granted the required permissions, individuals within an organization can modify their own user settings based on individual preferences. Note that the user settings are initially determined by the **Default User Preferences** in the **Organization Settings**. See [Changing default organization settings](#) (p. 5).

1. After logging into CampbellCloud, click the user icon in the upper-right corner of the screen (User menu) and select **My Settings**.



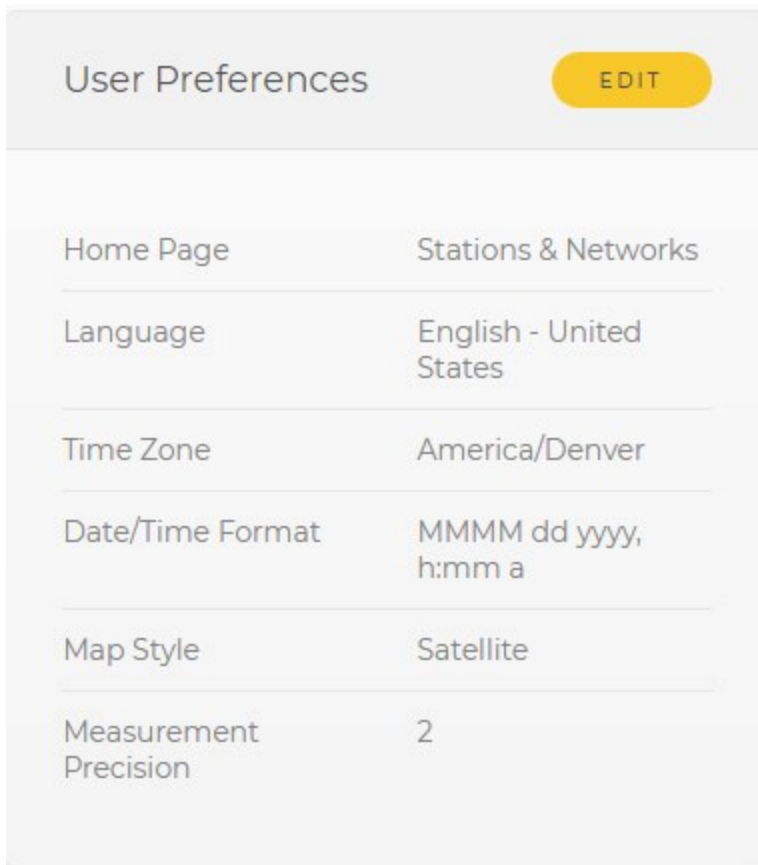
2. Click **EDIT** next to **User Information** to change the user name. Click **CANCEL**, or **SAVE** if a change was made.

User Information

EDIT

First Name	Carolyn
Last Name	
Email	
Status	Active
Registration Date	September 19 2023

3. Click **EDIT** next to **User Preferences**. Set which page will become your home page, language, time zone, date/time format, map style, and measurement precision.





User Preferences	
Home Page	Stations & Networks
Language	English - United States
Time Zone	America/Denver
Date/Time Format	MMMM dd yyyy, h:mm a
Map Style	Satellite
Measurement Precision	2

4. Click **CANCEL**, or **SAVE** if a change was made. CampbellCloud will now use those preferred settings while you are logged into CampbellCloud.

5. Click **EDIT** next to **Unit Preferences**. Select **Metric**, **Metric (British)**, or **US Customary** for the **Unit System**. This setting works in conjunction with measurement classifications. See [Assets](#) (p. 24). In addition to changing the **Unit System** for all measurements, you can change the displayed units for individual measurements using the selection boxes next to each measurement after **EDIT** is clicked.

Unit Preferences	
Unit System	
Metric	
Classification	
Filter	
Temperature Air temperature (near surface)	°C - Degrees cels...
Temperature Dew point temperature	°C - Degrees cels...

6. Click **CANCEL**, or **SAVE** if a change was made.
7. Click the home button  or any app in the left column (Application menu) to exit.

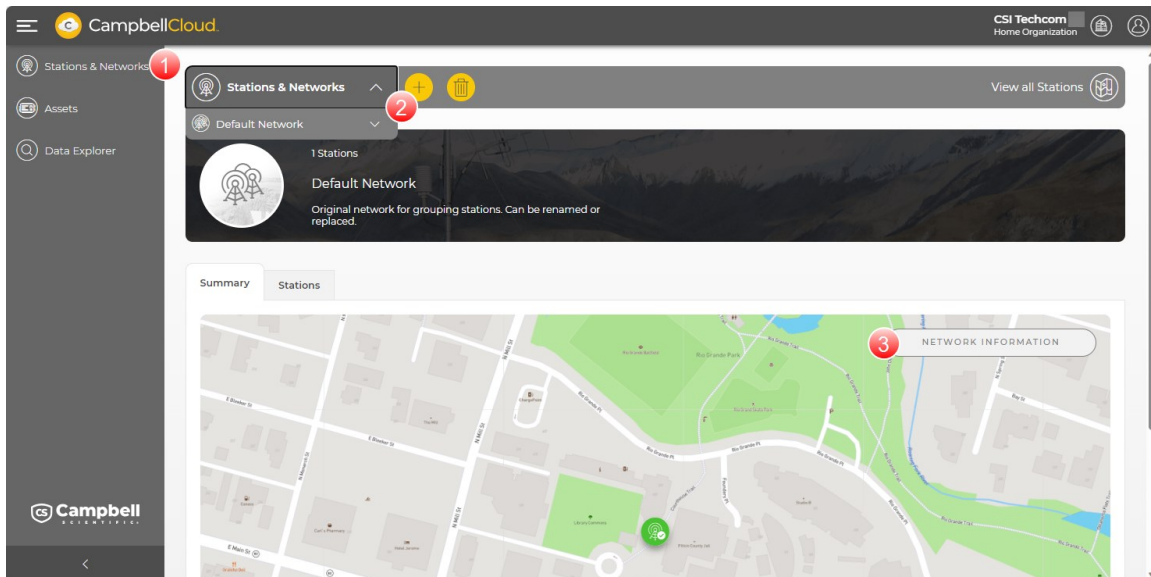
For more information on an individual changing their preferences, watch an instructional video at: <https://www.campbellsci.com/videos/cloud07> .

6.2 Renaming the default network

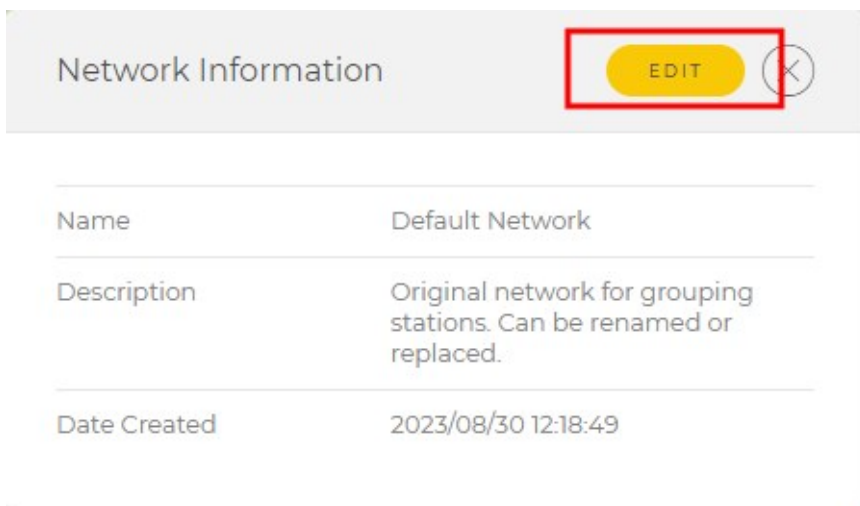
When an account is created, a default network is automatically associated with the account. Best practice is to rename the default network with a name that is meaningful to the organization. The following procedure demonstrates renaming the default network.

1. Select **Stations & Networks** from the application menu on the left.
2. In the **Stations & Networks** dropdown menu, select **Default Network**.

3. Click **Network Information**.



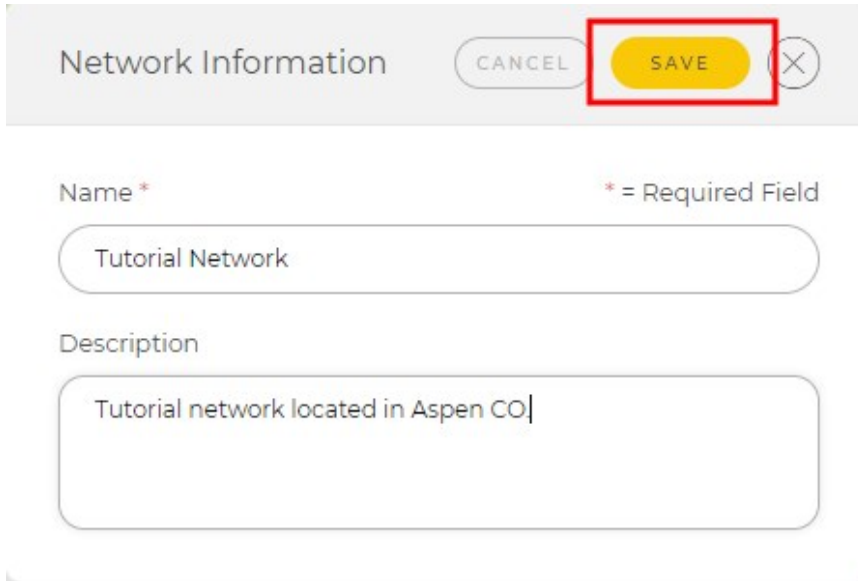
4. Click **EDIT**.



5. Enter a meaningful network **Name**.

6. (Optional) Enter a **Description** of the network.

7. Click **SAVE**.



Network Information


CANCEL SAVE

Name * * = Required Field

Tutorial Network

Description

Tutorial network located in Aspen CO|

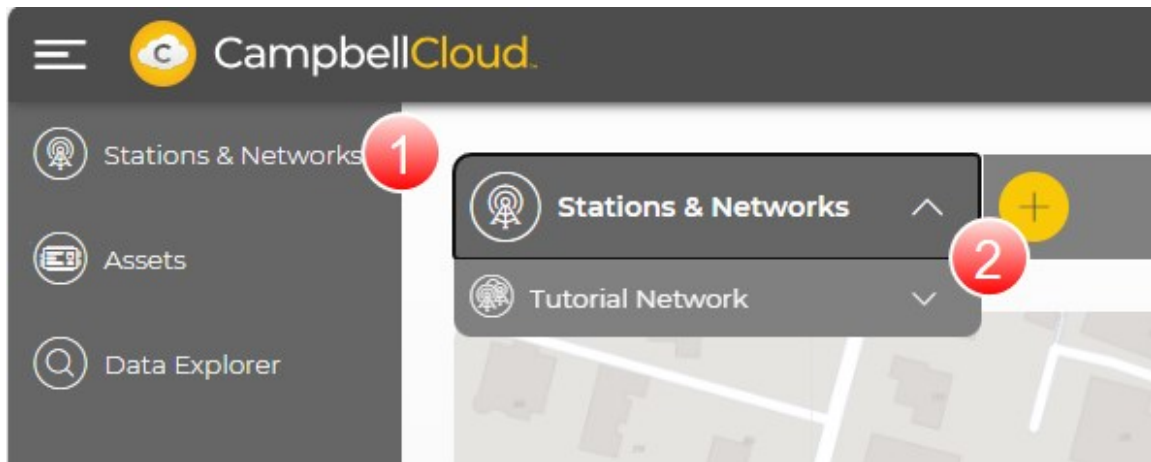
8. A message **Network saved successfully** appears to confirm the name change. Click the home button  or any app in the left column (Application menu) to exit.

For more information on renaming the default network in CampbellCloud, watch an instructional video at: <https://www.campbellsci.com/videos/cloud08> .

6.3 Adding a station to a network

A network collects data from stations contained in the network. In this example, a station named *Tutorial Station* is added to a network named *Tutorial Network*.

1. Select **Stations & Networks** from the application menu on the left.
2. In the **Stations & Networks** dropdown menu, select the renamed default network (see [Renaming the default network](#) [p. 33]). In this example the default network was renamed *Tutorial Network*.



3. **No Stations Found** appears. Click **ADD A STATION**.
4. Enter a **Name** for the station.
5. (Optional) Enter a **Description** of this station. This could include a description of the sensor (s) at the station, the station location, or other meaningful information.

6. Click **NEXT**.

Add Station

General Information

Enter a name for your station. You can also enter an optional description.

Name * * = Required Field

Description

7. Enter the location of the station, including elevation (meters); or drag and drop the pin on the map to the desired location. Click **FINISH**.

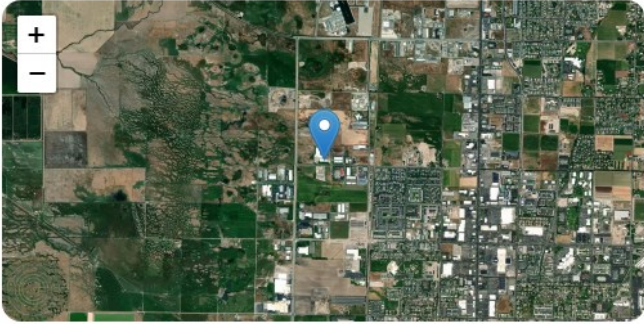
NOTE:

For the pin to be visible on the map, browser permissions must be set to allow access to location. Stations without location information will appear under **Hidden Stations** on the network map.

Add Station

Location

Select the location of your station on the map below, or enter the latitude and longitude of your station in decimal degrees and elevation in meters. Stations created without location information will appear under Hidden Stations on the network map.



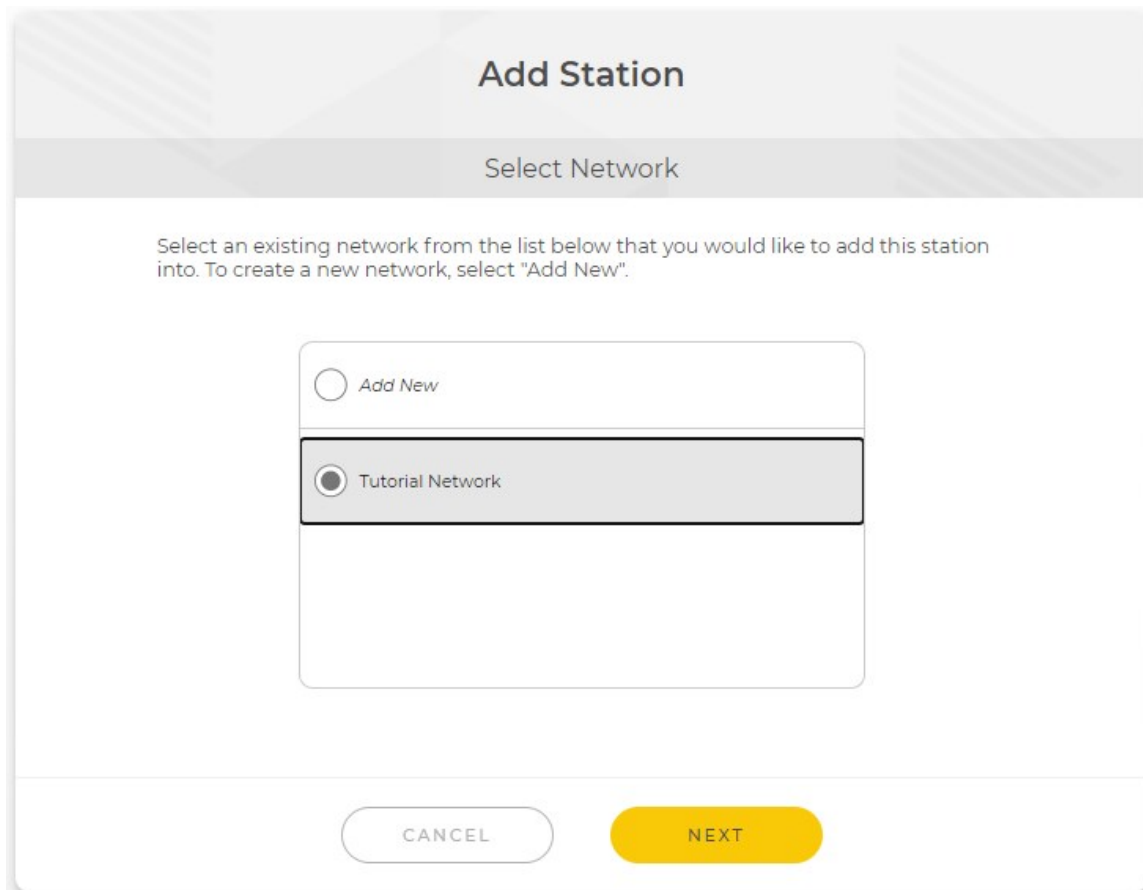
Latitude

CANCEL

BACK

FINISH

8. Select the network the station is being added to.



The image shows a software dialog box titled "Add Station". Below the title bar is a section labeled "Select Network". Inside this section, there is a text instruction: "Select an existing network from the list below that you would like to add this station into. To create a new network, select 'Add New'." Below the text is a list of two options, each with a radio button. The first option is "Add New" with an unselected radio button. The second option is "Tutorial Network" with a selected radio button; this option is highlighted with a grey background. At the bottom of the dialog box are two buttons: "CANCEL" and "NEXT". The "NEXT" button is yellow, while the "CANCEL" button is white with a grey border.

9. Click **NEXT**.

10. The station has been added to the network. You now have the option to associate an asset with the station or to finish later.

Add Station

Next Steps

If you would like to add a data source to this station now, click ASSOCIATE ASSET, otherwise click FINISH. You can add a data source later via the station summary view in Stations & Networks.

Associate a data source asset to the station.

ASSOCIATE ASSET

Finish for now.

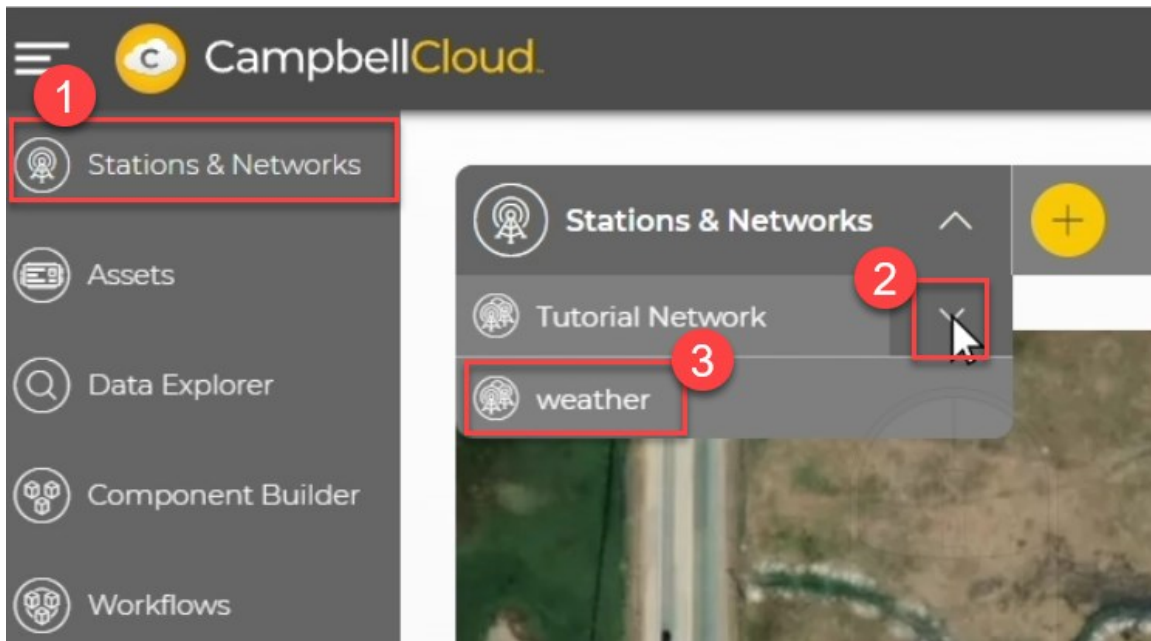
FINISH

For more information on adding a station to a network, watch an instructional video at: <https://www.campbellsci.com/videos/cloud09> .

6.3.1 Adding an asset to a station

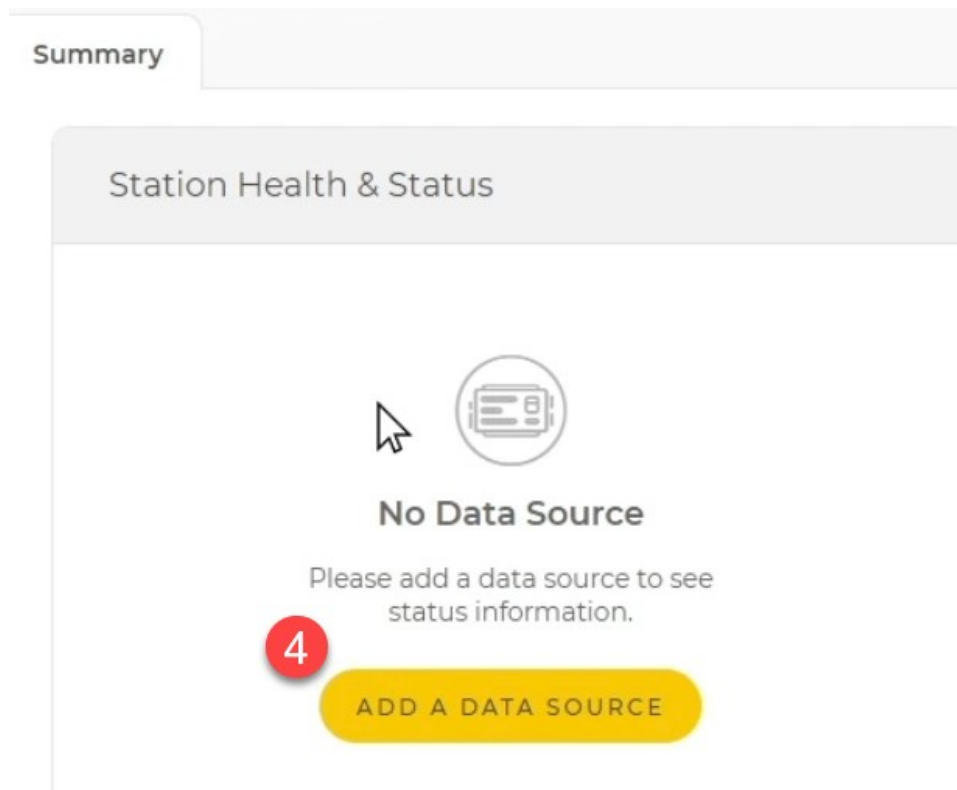
Data sources are provided through assets, such as the Aspen 10. Assets can be added to stations directly in CampbellCloud or through the CampbellGO app. The steps below demonstrate adding an asset to a station directly in CampbellCloud. In this example, an Aspen 10 asset is added to a station named *weather*.

1. On the CampbellCloud home screen, select **Stations & Networks** from the application menu.



2. In the **Stations & Networks** dropdown menu, select the network you wish to add a data source to.
3. In the list of stations under the network, click on the name of the station.

4. If no data source exists for that station, you will be prompted to add a data source. Click **Add Data Source**.



5. The **Add Data Source** window opens. To add a new asset, select **Add New**, then click **NEXT**.

Add Data Source

Select Asset

Please select an existing asset or create a new asset to add to your station.

+ Add New

No existing assets found.

CANCEL NEXT

6. Enter the UID number of the Aspen 10. Click **NEXT**.

Add Data Source

Asset Identification


Please enter the UID of your asset. This is usually located on a white sticker on your device below a QR code.

6

Enter UID *

* = Required Field

CYQF-



CANCEL

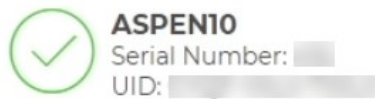
NEXT

7. CampbellCloud verifies that the asset has not already been added to another station. Click **NEXT**.

Add Data Source

Asset Identification


The system is verifying your asset.



CANCEL

7

NEXT



8. Enter a **Name** and optional **Description** for the asset. Click **FINISH**.

Add Data Source

Asset Details

Please provide a name and a description for your asset.

ASPEN10
Serial Number: 416
UID: CYQF-YALV-TWLX

Name * * = Required Field

Logan Weather Sensor

Description

ClimaVue 50

CANCEL FINISH

For more information on adding a data source to a station, watch an instructional video at: <https://www.campbellsci.com/videos/cloud12> .

6.3.2 Setting favorite measurements on a station

Stations may have multiple data sources, and some sensors take multiple measurements rather than a single measurement. In these instances, certain measurements may be more important than others. CampbellCloud allows adding the measurements of most interest to a favorites list.

1. In the **Stations & Networks** app, choose your network and station on which to set favorite measurements.



2. View the latest measurements in **Recent Data**, where each measurement is marked with a starred circle. Clicking the star toggles that measurement as a favorite or not.

Summary

Station Health & Status

Donna's Aspen
Last communication 9 minutes ago

Actions

Status
Timestamp: April 19 2024, 5:53 PM
BattCapacity: 4.80
BattCharge: 0.44
BattCurrent: 0.00
BattStateOfCharge: 64.00
BattStateOfHealth: 100.00
BattTemp: 22.95
BattVoltage: 3.20
CellHrlyAllowedUpTime: 191.00
CellHrlyUpTime: 188.00
CellLastRegTime: 18.00
CellLastUpTime: 13.00
CellOperator: AT&T
CellSigQuality: -18.00
CellSigStrength: -97.00


Recent Data

All Measurements Filter APPLY

	Measurements	Latest Value
★	AirTemp Donna's Aspen	22.50 April 19 2024, 10:00 PM
★	BP Donna's Aspen	865.30 April 19 2024, 10:00 PM
★	Dist Donna's Aspen	0.00 April 19 2024, 10:00 PM
★	Rain Donna's Aspen	0.00 April 19 2024, 10:00 PM
★	record Donna's Aspen	6003.00 April 19 2024, 10:00 PM
★	RH Donna's Aspen	13.70 April 19 2024, 10:00 PM
★	RHTemp Donna's Aspen	22.50 April 19 2024, 10:00 PM
★	Solar Donna's Aspen	6.00 April 19 2024, 10:00 PM
★	Strikes Donna's Aspen	0.00 April 19 2024, 10:00 PM

Station Information

EDIT



Network Associations
Tutorial Network

General Information
Name: Aspen 10 Station UT
Description: Aspen 10 w/ ClimaVue 50

- Once favorites are selected, the Recent Data view can be filtered to show **All Measurements** or **Favorites Only**. Use **Filter** to search measurement names.

The screenshot shows the 'Recent Data' interface. At the top, there is a dropdown menu currently set to 'All Measurements' and a 'Filter' input field with an 'APPLY' button next to it. Below the dropdown, a filter menu is open, showing 'All Measurements' and 'Favorites Only' (which is highlighted with a red box). The main table displays measurement data with columns for measurement names and their latest values. The table includes entries for BP, Dist, and Rain, all from Donna's Aspen station, dated April 19, 2024, at 10:00 PM.

		Latest Value
		22.50 <i>April 19 2024, 10:00 PM</i>
★	BP <i>Donna's Aspen</i>	865.30 <i>April 19 2024, 10:00 PM</i>
☆	Dist <i>Donna's Aspen</i>	0.00 <i>April 19 2024, 10:00 PM</i>
☔	Rain	0.00


Measurements in the favorites list also appear in the **Stations & Networks** view when you view a station.

The screenshot shows the 'Aspen 10 Station UT' view under the 'Tutorial Network'. It features a list of measurements and their current values. Below the list is a button labeled 'VIEW IN DATA EXPLORER' and a timestamp indicating the last update.

AirTemp	22.50
BP	865.30
RH	13.70
RHTemp	22.50
Solar	6.00
WindDir	77.00
WindSpd	0.06

[VIEW IN DATA EXPLORER](#)

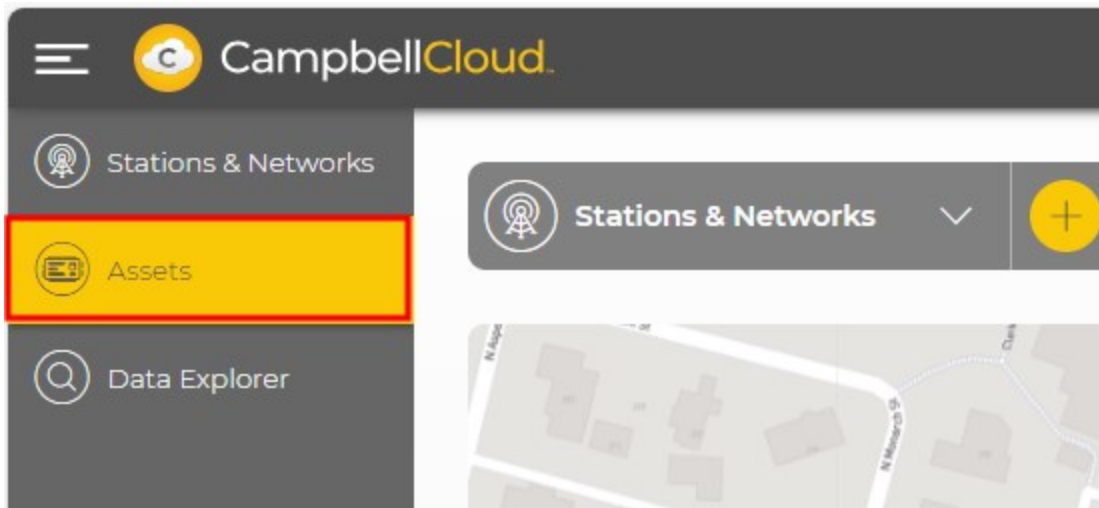
Last updated: April 19 2024, 10:00 PM

For more information on setting favorite measurements, watch an instructional video at: <https://www.campbellsci.com/videos/cloud13> .

6.4 Adding an asset

Data sources are provided through assets, such as the Aspen 10. Assets can be added to stations directly in CampbellCloud or through the CampbellGO app. The steps below demonstrate adding an asset directly in CampbellCloud.

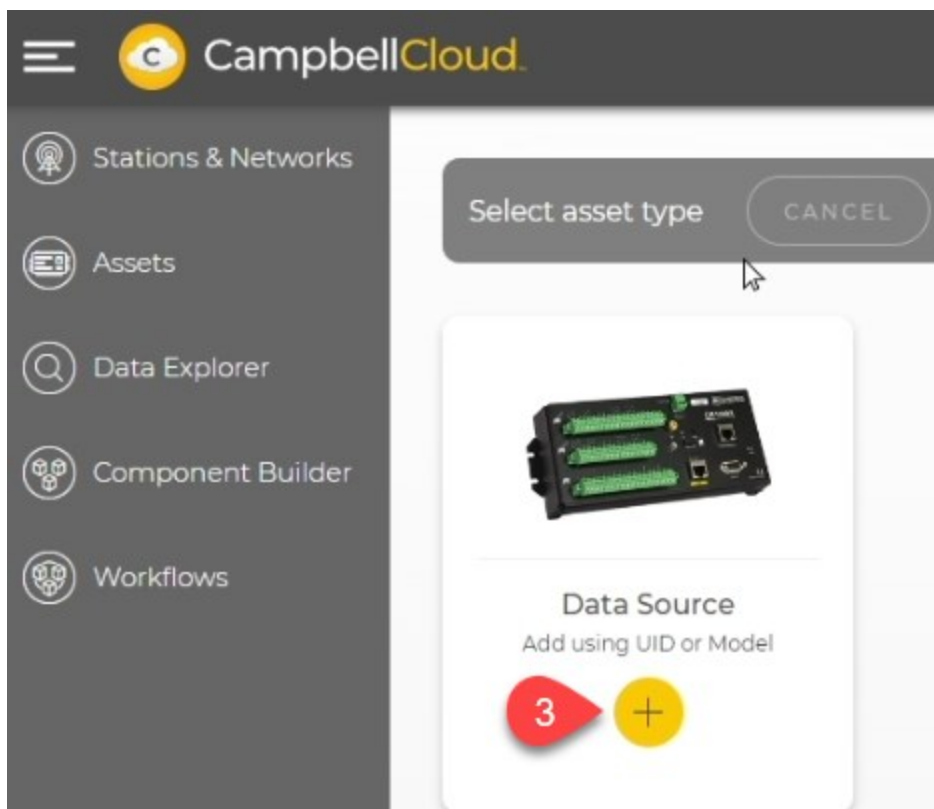
1. On the CampbellCloud home screen, select **Assets** from the application menu.



2. Click .



3. Click  below **Data Source**.



4. Enter the UID number off the Aspen 10. Click **NEXT**.

Add Data Source

Asset Identification

Please enter the UID of your asset. This is usually located on a white sticker on your device below a QR code.

4

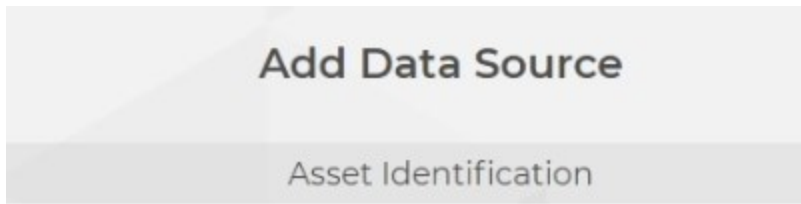
Enter UID *

* = Required Field

CANCEL

NEXT

5. CampbellCloud verifies that the asset has not already been added to another network. Click **NEXT**.



The system is verifying your asset.



6. Enter a **Name** and optional **Description** for the asset. Click **FINISH**.

Add Data Source

Asset Details

Please provide a name and a description for your asset.

ASPEN10
Serial Number: 416

Name * * = Required Field

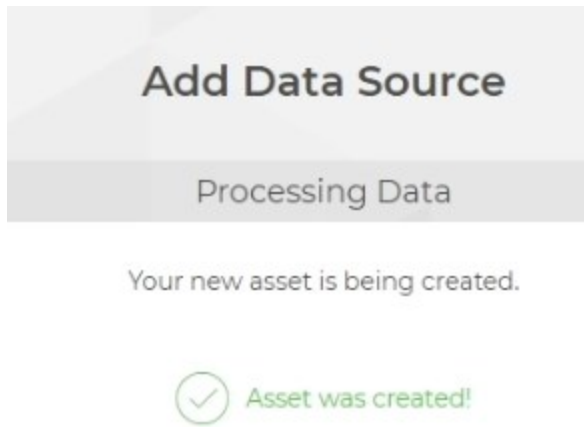
Aspen 10

Description

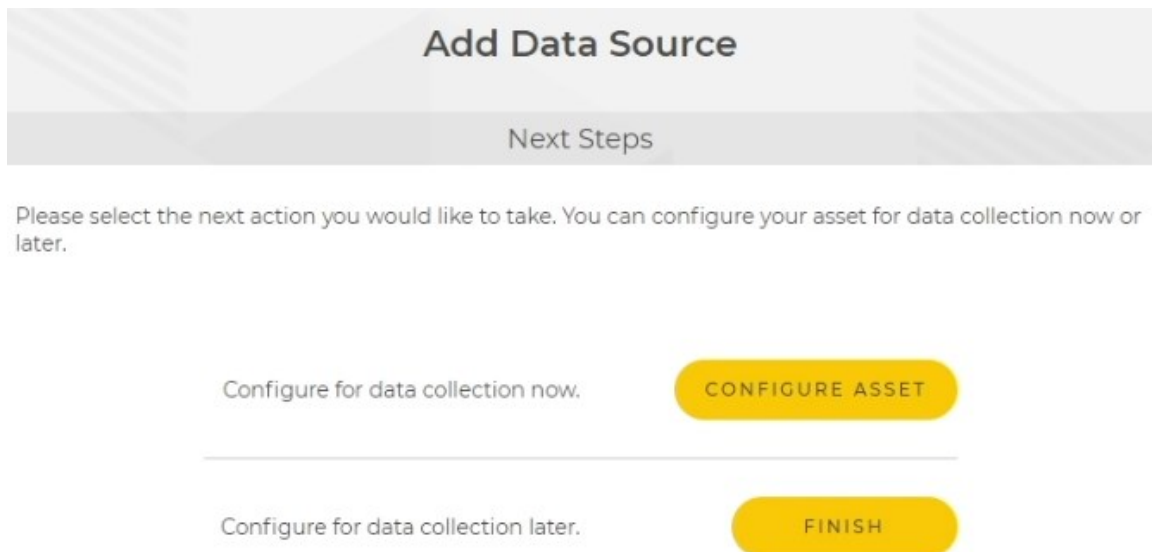
ClimaVue 50

CANCEL 6 FINISH

7. A message will appear indicating the asset was created.



8. Some assets require additional configuration. The Aspen 10 does not. Click **FINISH**.



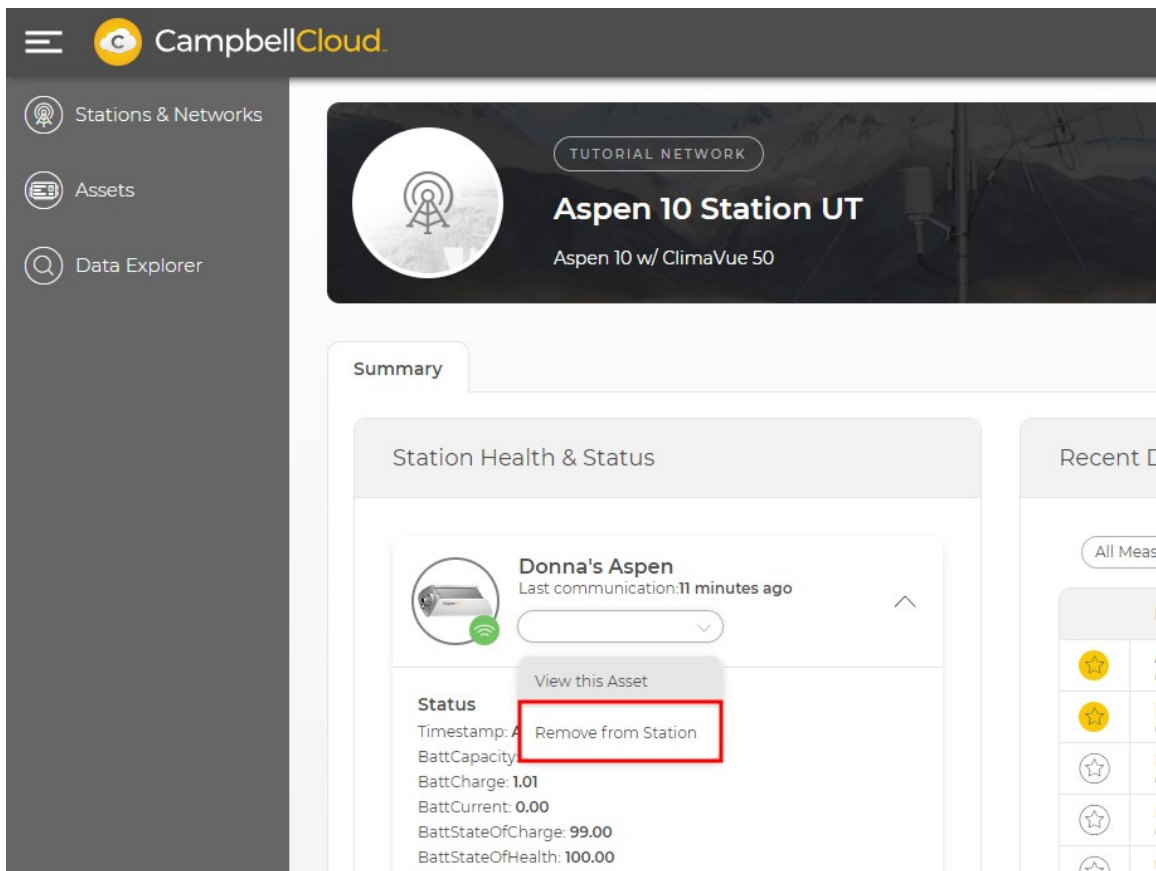
9. This data source is now available to add to a station.

For more information on adding an asset directly in CampbellCloud, watch an instructional video at: <https://www.campbellsci.com/videos/cloud10> .

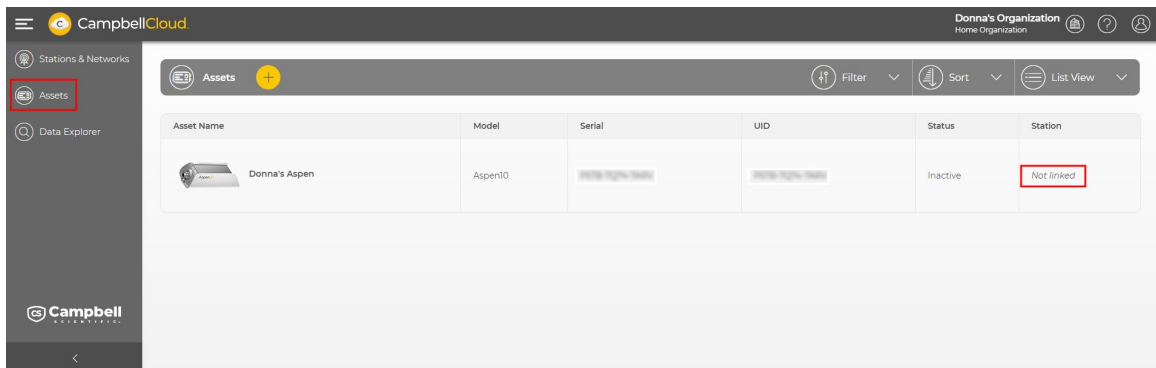
6.5 Linking an asset to a different station

To change the station an asset is linked to in CampbellCloud, follow the steps below.

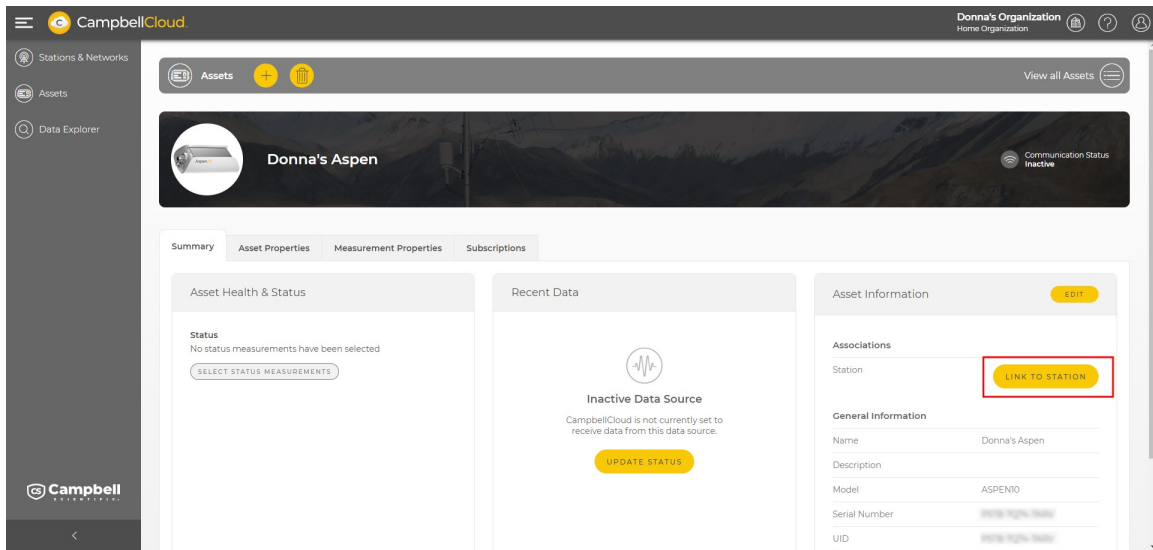
1. From [Stations & Networks](#) (p. 20), navigate to the station summary.
2. Under **Station Health & Status**, select **Remove from Station** from the **Actions** menu.



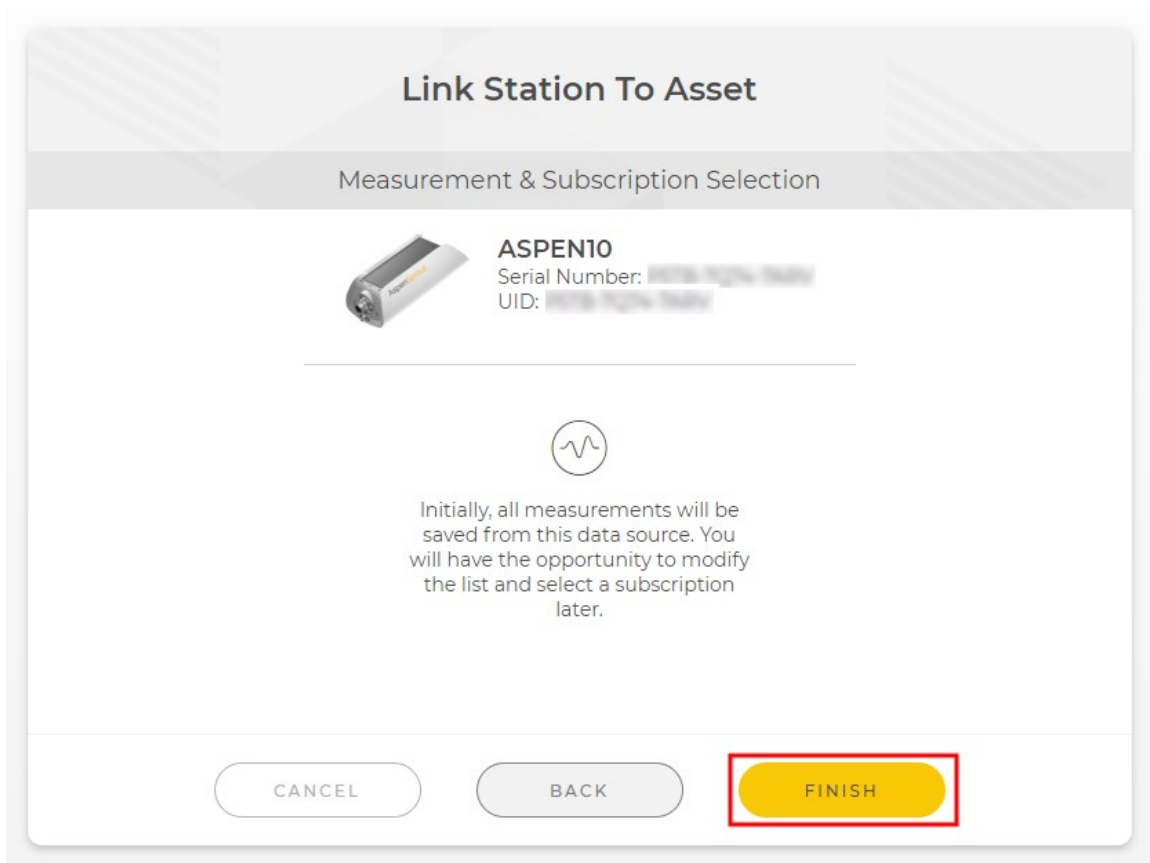
3. Navigate to **Assets** and select the asset you just unlinked.



4. Under **Asset Information**, click **Link to Station**.



5. Click **Finish**.



6. Select a station from the list of existing stations to link the asset to an existing station or click **Add New** to create a new station. (See [Adding a station to a network](#) [p. 35].) Once you've selected an option from the list, click **Next**.

Link Station To Asset

Select Station

Select an existing station from the list below. To create a new station, select "Add New".

- ☐ Add New
- ☐ Aspen 10 Station UT

CANCEL NEXT

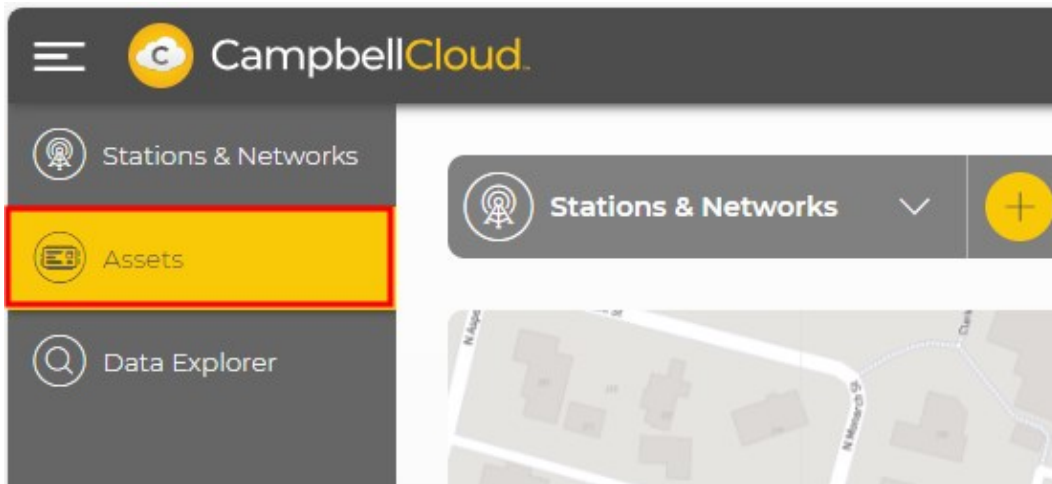
6.6 Changing the Overdue Comms Alert setting

Knowing when there is a communications or sensor problem that is preventing data from reaching Cloud is important to prevent data loss. In CampbellCloud, the amount of time that passes before notifying the user that communications are overdue can be customized.

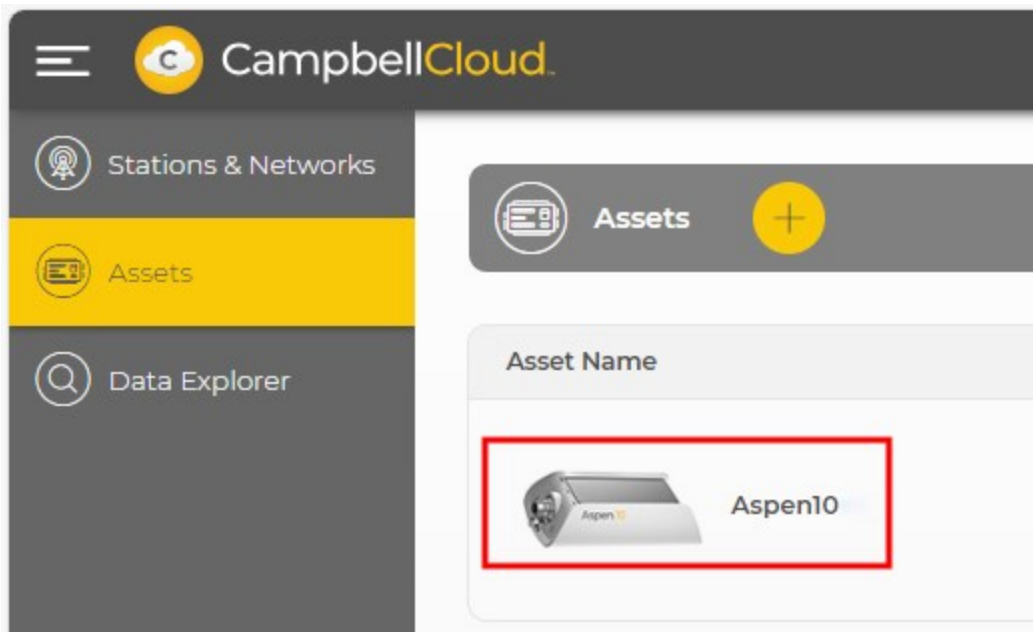
NOTE:

Changes made to an asset affect all users who have access to that asset.

1. On the CampbellCloud home screen, select **Assets** from the application menu.



2. Select the asset for which you need to modify the overdue communications alert time.




3. Select **Asset Properties**.

The screenshot shows the 'Asset Properties' tab selected. The 'Asset Settings' section is highlighted with a red callout '3'. The 'Overdue Comms Alert (minutes)' field is set to 30. An 'EDIT' button is highlighted with a red callout '4'.

4. Click **EDIT** next to **Asset Settings**.
5. Change the **Overdue Comms Alert** to an appropriate amount of time to pass before reporting the station comms as overdue.

The screenshot shows the 'Asset Settings' form. The 'Overdue Comms Alert (minutes)' field is highlighted with a red callout '5' and a yellow box. The 'SAVE' button is highlighted with a red callout '6'.

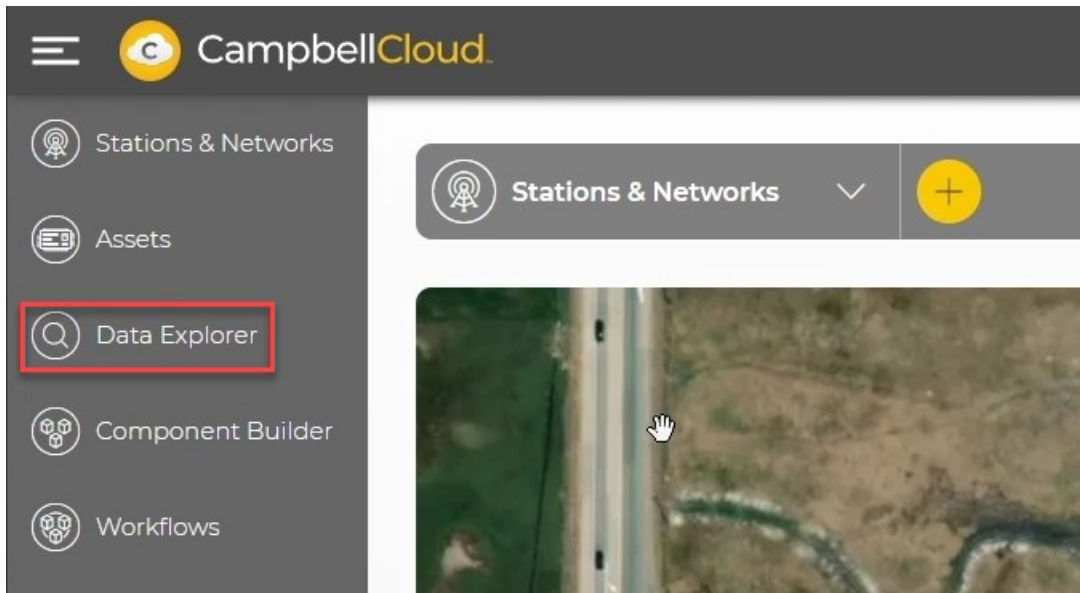
6. Click **SAVE** to save the new setting.
7. All data sources associated with a station have individual **Overdue Comms Alert** times. CampbellCloud will issue an overdue comms alert for the worst-case status. For example, if a station has two data-source assets, and one of these assets has a communications status of **On schedule**, and the other has a communications status of **Overdue**, **Overdue** will be shown at the station level.

For more information on changing the overdue comms alert time, watch an instructional video at: <https://www.campbellsci.com/videos/cloud05> .

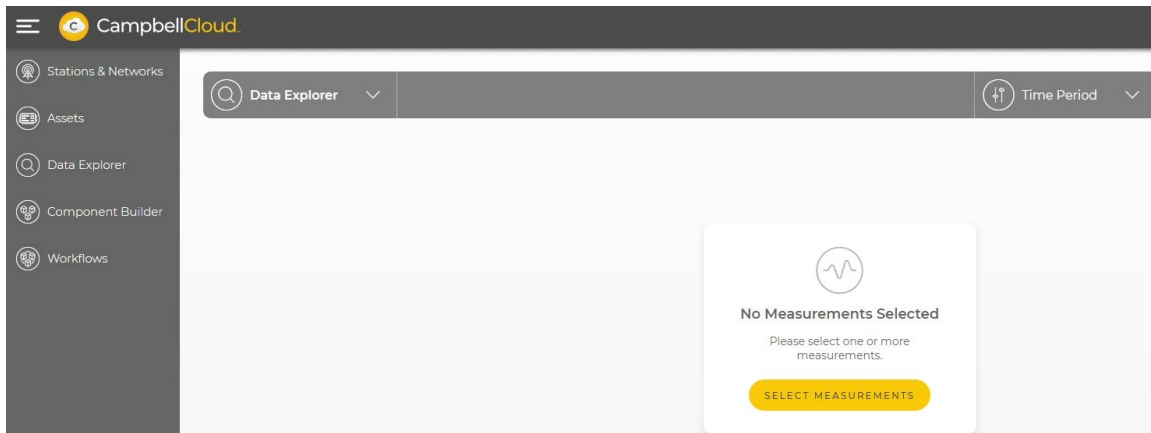
6.7 Viewing historical data using Data Explorer

Use the **Data Explorer** app in CampbellCloud to view historical data.

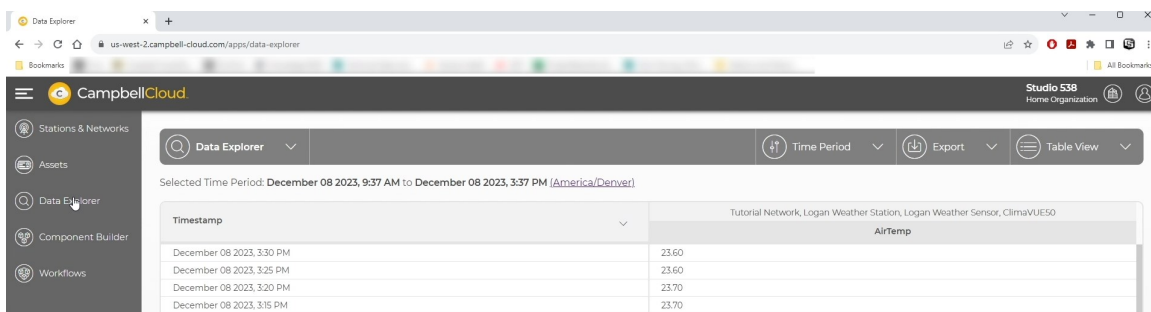
1. Click **Data Explorer** from the application menu.



2. The display switches to **Data Explorer**. If a station has not previously been viewed, you will be prompted to **SELECT MEASUREMENTS**.



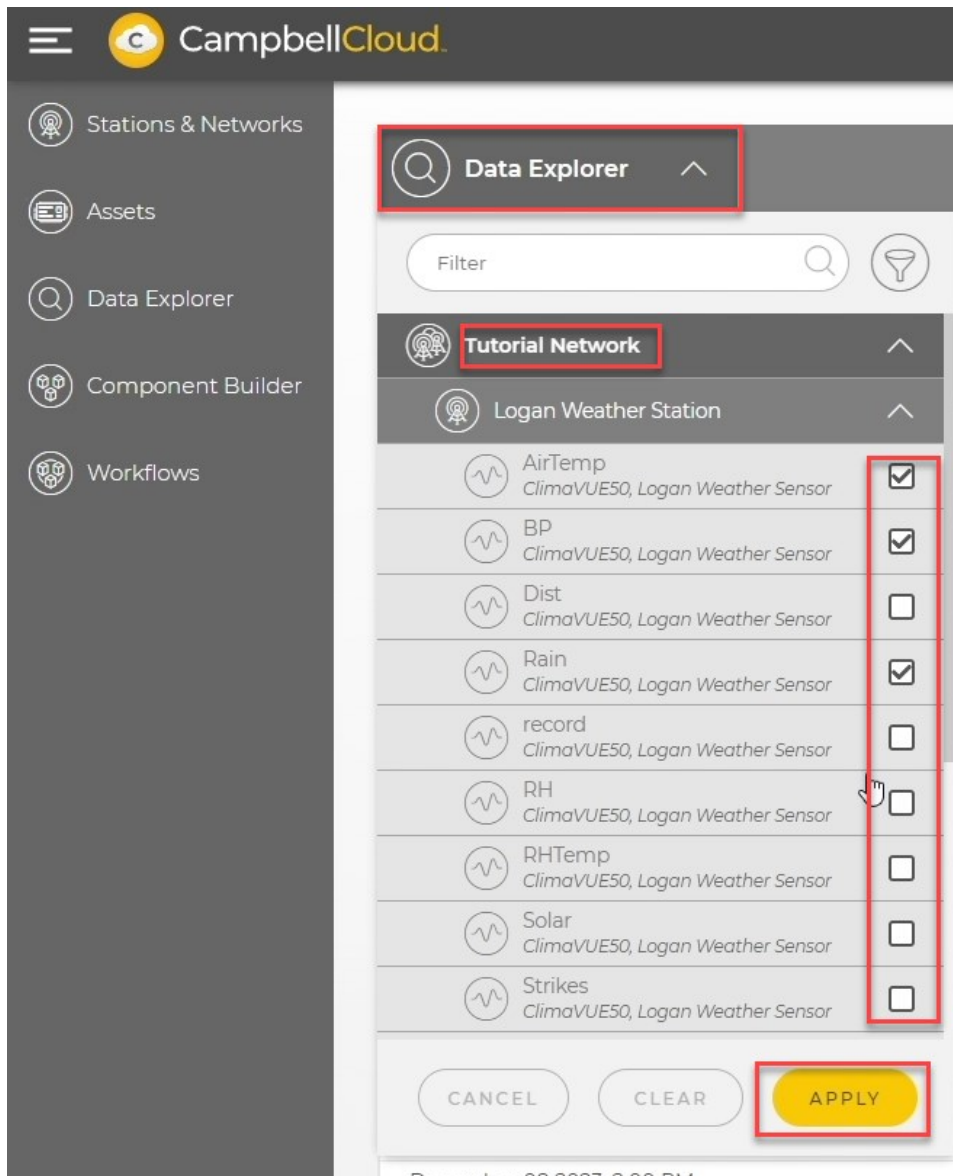
If you are viewing a station that has been previously viewed, the last measurements viewed from that station will be shown. In this example, the air temperature measurement from the ClimaVue™50 is displayed.



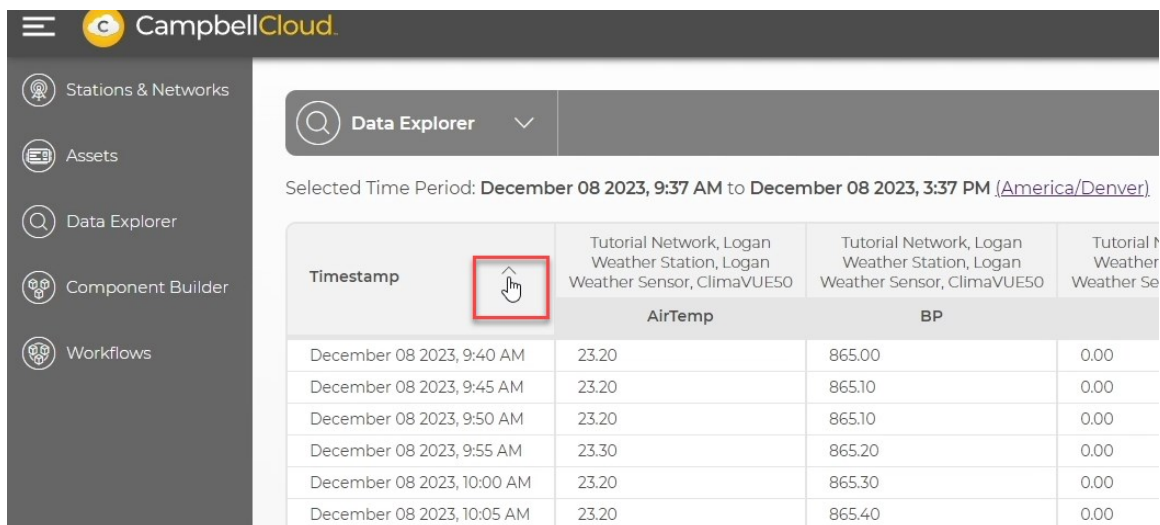
3. To view additional measurements, click the dropdown menu for **Data Explorer**, then select the network and then the station. All the available measurements for the station are shown. Click the check box next to each measurement you wish to view and click **APPLY**.

NOTE:

Up to 15,000 data points per measurement can be displayed.



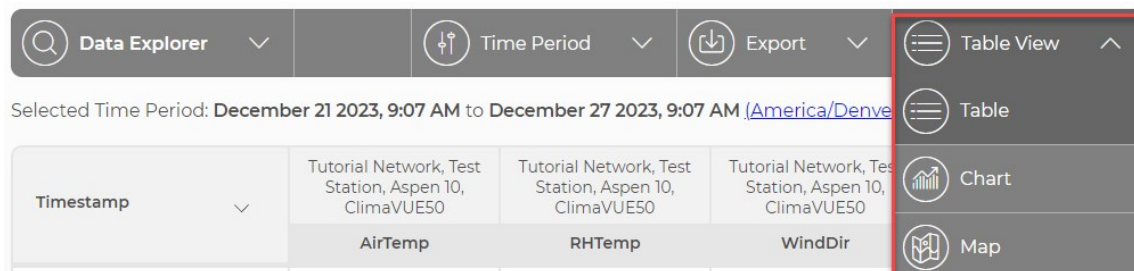
4. By default, the most recent measurement is shown at the top. To show the oldest data first, click on the arrow next to **Timestamp**.



The screenshot shows the CampbellCloud Data Explorer interface. On the left is a sidebar with navigation links: Stations & Networks, Assets, Data Explorer, Component Builder, and Workflows. The main area has a search bar labeled 'Data Explorer' and a selected time period: 'December 08 2023, 9:37 AM to December 08 2023, 3:37 PM (America/Denver)'. Below this is a table with four columns: 'Timestamp', 'Tutorial Network, Logan Weather Station, Logan Weather Sensor, ClimaVUE50', 'Tutorial Network, Logan Weather Station, Logan Weather Sensor, ClimaVUE50', and 'Tutorial Network, Logan Weather Station, Logan Weather Sensor, ClimaVUE50'. The table has a sub-header row with 'AirTemp' and 'BP'. A red box highlights the sort arrow icon next to the 'Timestamp' header.

Timestamp	Tutorial Network, Logan Weather Station, Logan Weather Sensor, ClimaVUE50	Tutorial Network, Logan Weather Station, Logan Weather Sensor, ClimaVUE50	Tutorial Network, Logan Weather Station, Logan Weather Sensor, ClimaVUE50
	AirTemp	BP	
December 08 2023, 9:40 AM	23.20	865.00	0.00
December 08 2023, 9:45 AM	23.20	865.10	0.00
December 08 2023, 9:50 AM	23.20	865.10	0.00
December 08 2023, 9:55 AM	23.30	865.20	0.00
December 08 2023, 10:00 AM	23.20	865.30	0.00
December 08 2023, 10:05 AM	23.20	865.40	0.00

5. To switch from **Table** to **Chart** or **Map** view, click the down arrow next to your current view and select a different option.



The screenshot shows the CampbellCloud Data Explorer interface with the view selection dropdown menu open. The menu has four options: 'Table View', 'Table', 'Chart', and 'Map'. The 'Table View' option is currently selected. The background shows a table with columns: 'Timestamp', 'Tutorial Network, Test Station, Aspen 10, ClimaVUE50', 'Tutorial Network, Test Station, Aspen 10, ClimaVUE50', and 'Tutorial Network, Test Station, Aspen 10, ClimaVUE50'. The sub-headers are 'AirTemp', 'RHTemp', and 'WindDir'. A red box highlights the dropdown menu.

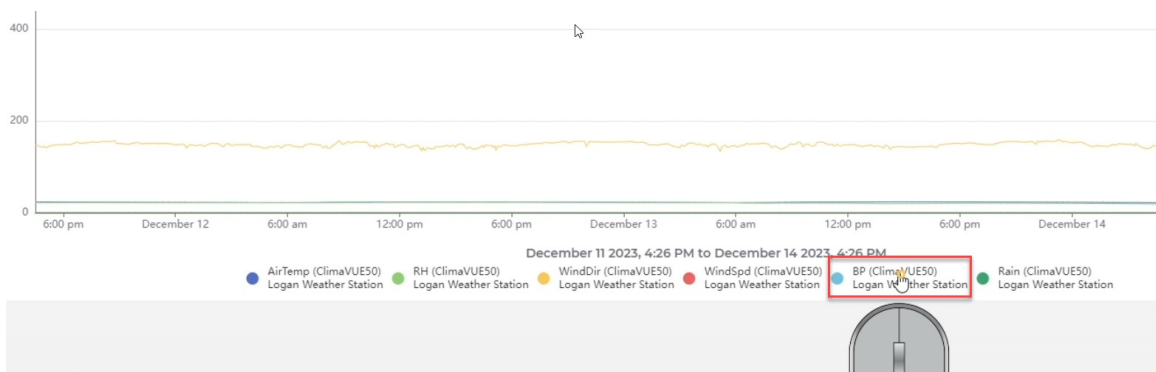
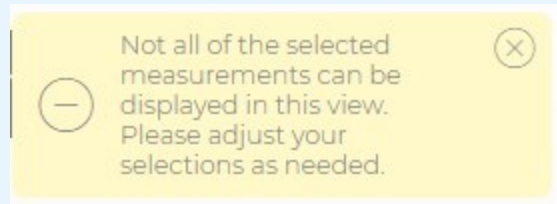
Timestamp	Tutorial Network, Test Station, Aspen 10, ClimaVUE50	Tutorial Network, Test Station, Aspen 10, ClimaVUE50	Tutorial Network, Test Station, Aspen 10, ClimaVUE50
	AirTemp	RHTemp	WindDir

6. In **Chart** view, clicking a measurement along the bottom will toggle that measurement on and off.

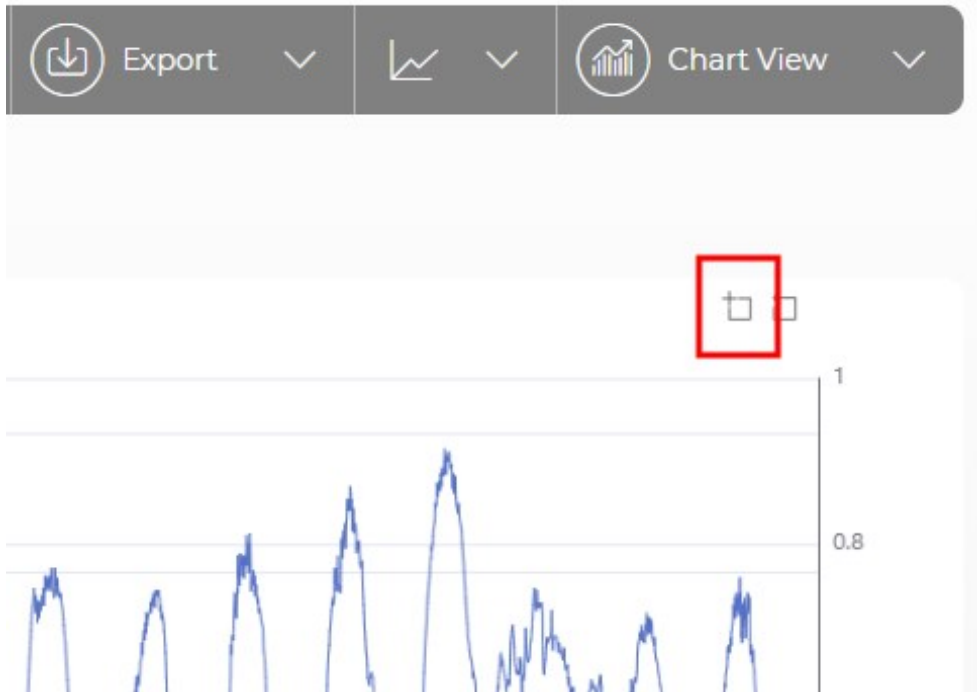
NOTE:

When units are assigned to measurements, they are displayed on the left and right axes. Only measurements with those specific units are charted at one time. For example, temperatures in °C and relative humidity in % can be displayed simultaneously. However, if rain in mm was selected, it would not be charted.

You may see the following error:



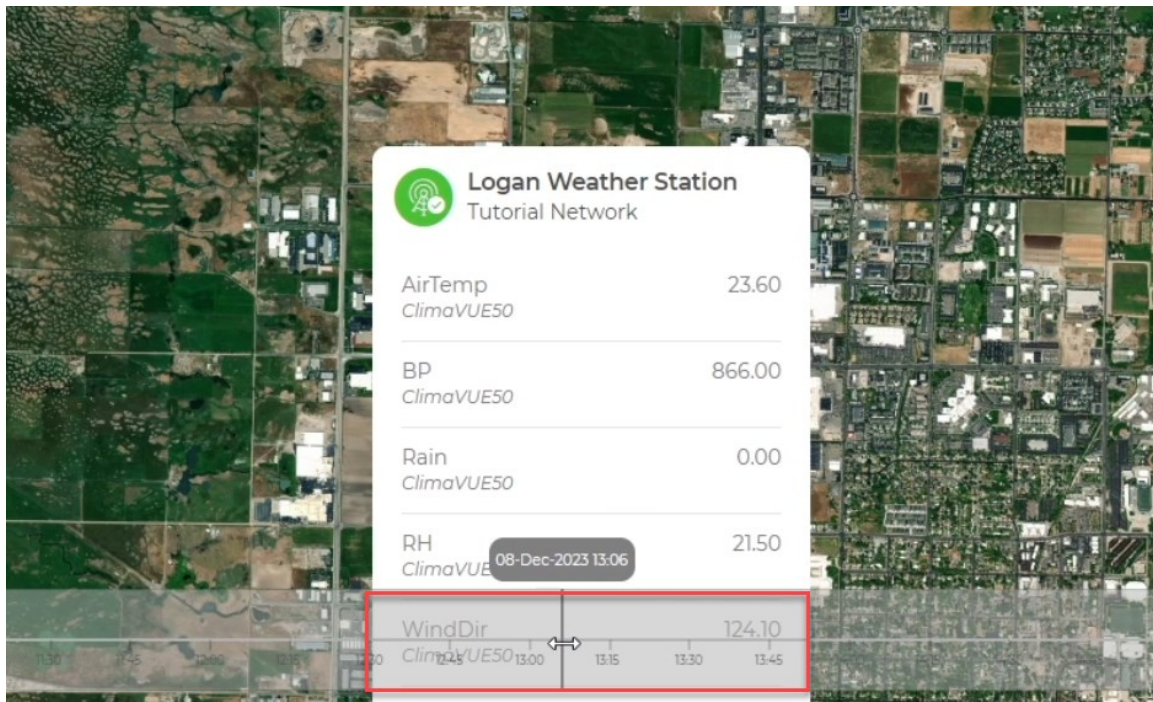
7. Zoom in on specific data in **Chart** view by toggling the **Zoom** feature then using your mouse to select the specific time period.



8. Once zoomed in, drag the scroll bar at the bottom to view other locations of the graph at the current zoom level. Use **Zoom Reset** to return to previous zoom levels.



9. A slider bar along the bottom of the **Map** view allows scrolling through the data to show the measurements at different times.



10. Menus along the top of the screen also allow selection of the **Time Period** being displayed.

Data Explorer

Time Period

Export

Table View

Selected Time Period: The last: 6 Days

From: 12/21/2023 09:07 AM

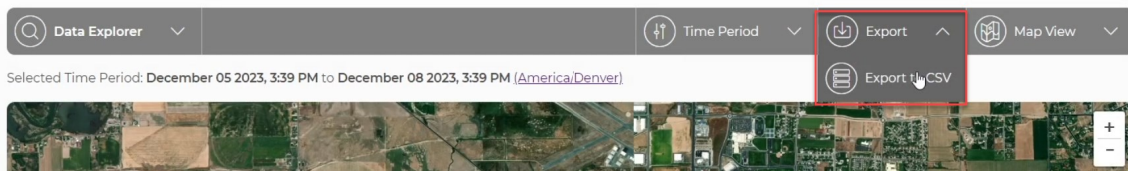
Between: 12/21/2023 09:07 AM


12/27/2023 09:07 AM

CANCEL APPLY

Time Period	WindDir	WindSpd
December 21, 2023, 8:10 AM	175.70	0.10
December 21, 2023, 8:15 AM	180.70	0.10
December 21, 2023, 8:20 AM	178.30	0.10
December 21, 2023, 8:25 AM	165.40	0.08
December 21, 2023, 8:30 AM	171.20	0.09
December 21, 2023, 8:35 AM	177.90	0.08
December 21, 2023, 8:40 AM	181.20	0.09
December 21, 2023, 8:45 AM	190.80	0.08
December 21, 2023, 8:50 AM	196.80	0.09
December 21, 2023, 8:55 AM	187.60	0.09
December 21, 2023, 9:00 AM	177.60	0.09

11. There is also an option to **Export** the data as a comma-separated values (CSV) file for further data processing.



For more information on viewing historical data using Data Explorer, watch an instructional video at: <https://www.campbellsci.com/videos/cloud15> .

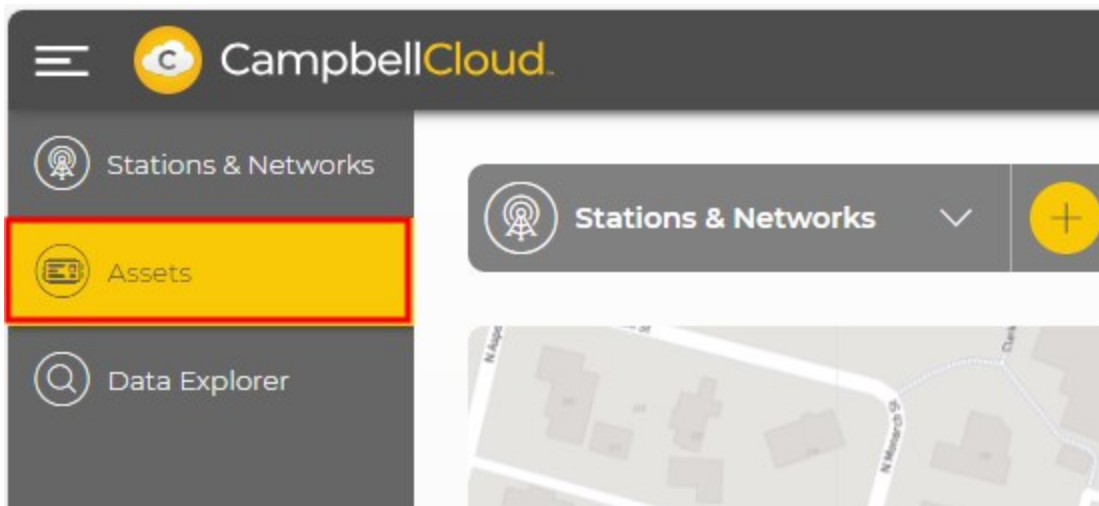
6.8 Viewing status information

The Status table contains data about the health of an asset including battery and cellular information. This information can be viewed in several Cloud apps.

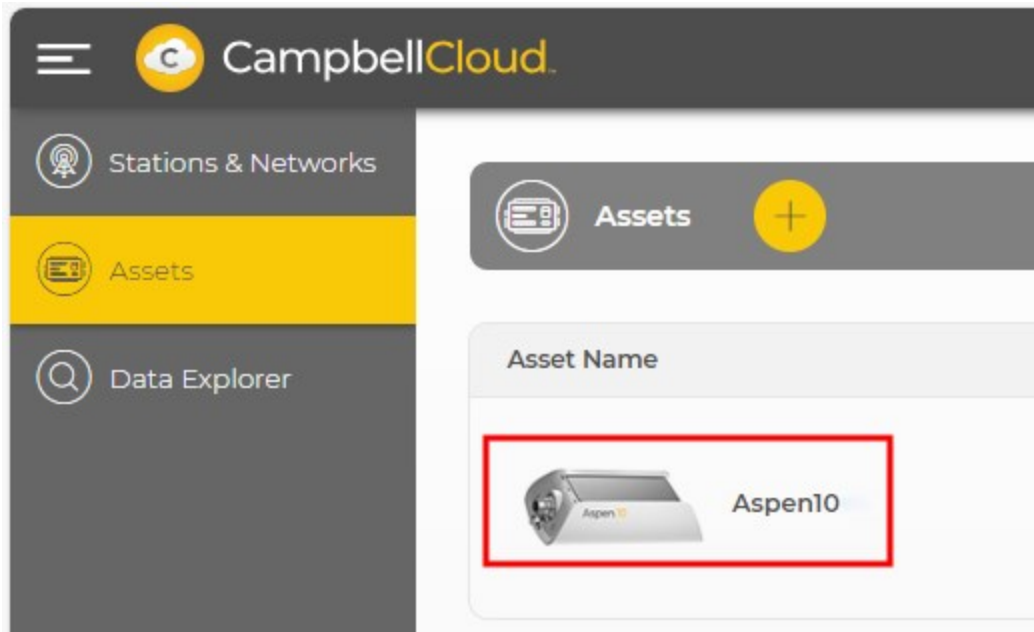
6.8.1 Viewing status information in Assets summary

Status table information can be displayed in the **Assets** app.

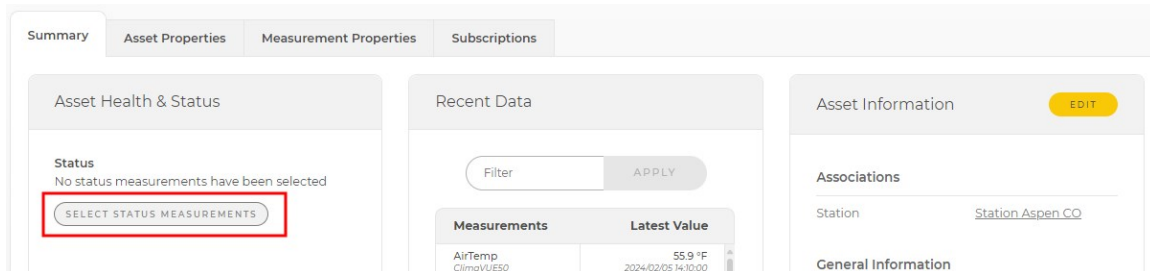
1. Select **Assets** from the applications menu.



2. Select the asset.



3. On the **Summary** tab, the first column is labeled **Asset Health and Status**. Currently, no status measurements are being displayed. Click **SELECT STATUS MEASUREMENTS**.



4. Every field in the status table is shown. Select the fields you want to have displayed on the summary tab by clicking the box to the left of each measurement. Click **UPDATE**.

Summary **Asset Properties** **Measurement Properties**

Asset Health & Status

Status
Select one or more measurements to display.

Search

<input type="checkbox"/>	CellOperator
<input checked="" type="checkbox"/>	CellSigQuality
<input checked="" type="checkbox"/>	CellSigStrength
<input type="checkbox"/>	GNSSNumSat
<input type="checkbox"/>	MqttSuccessRate

CANCEL **UPDATE**

5. The selected status measurements are shown. Add or remove status measurements at any time by clicking **SELECT STATUS MEASUREMENTS** again.

Asset Health and Status

Status

Timestamp: December 08 2023, 10:30 AM

BattCharge: 0.00

BattStateOfCharge: 94.00

BattVoltage: 3.32

CellOperator: Verizon Wireless

CellSigStrength: -73.00

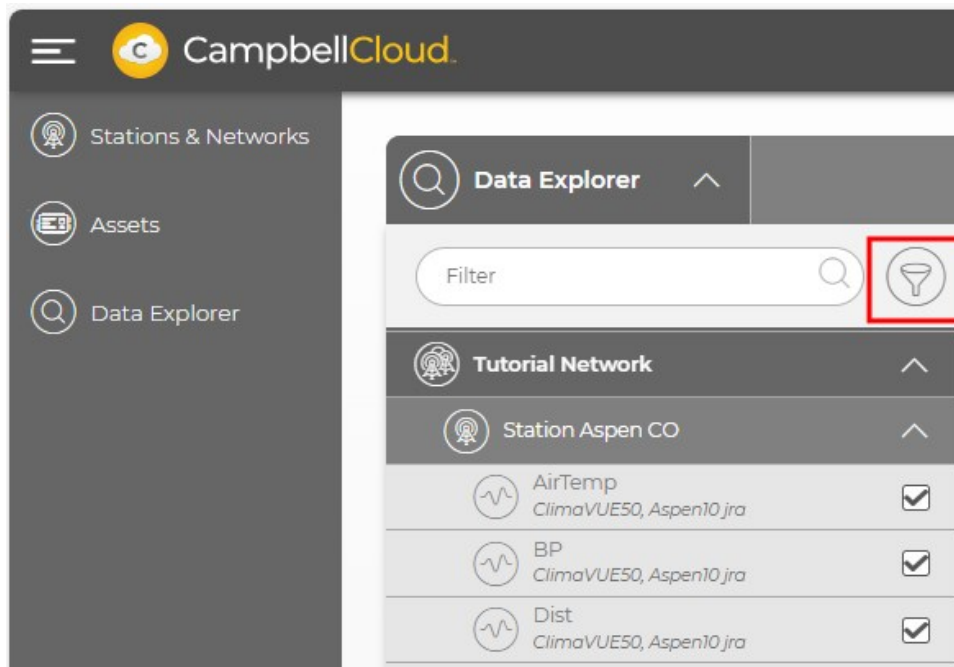
SELECT STATUS MEASUREMENTS



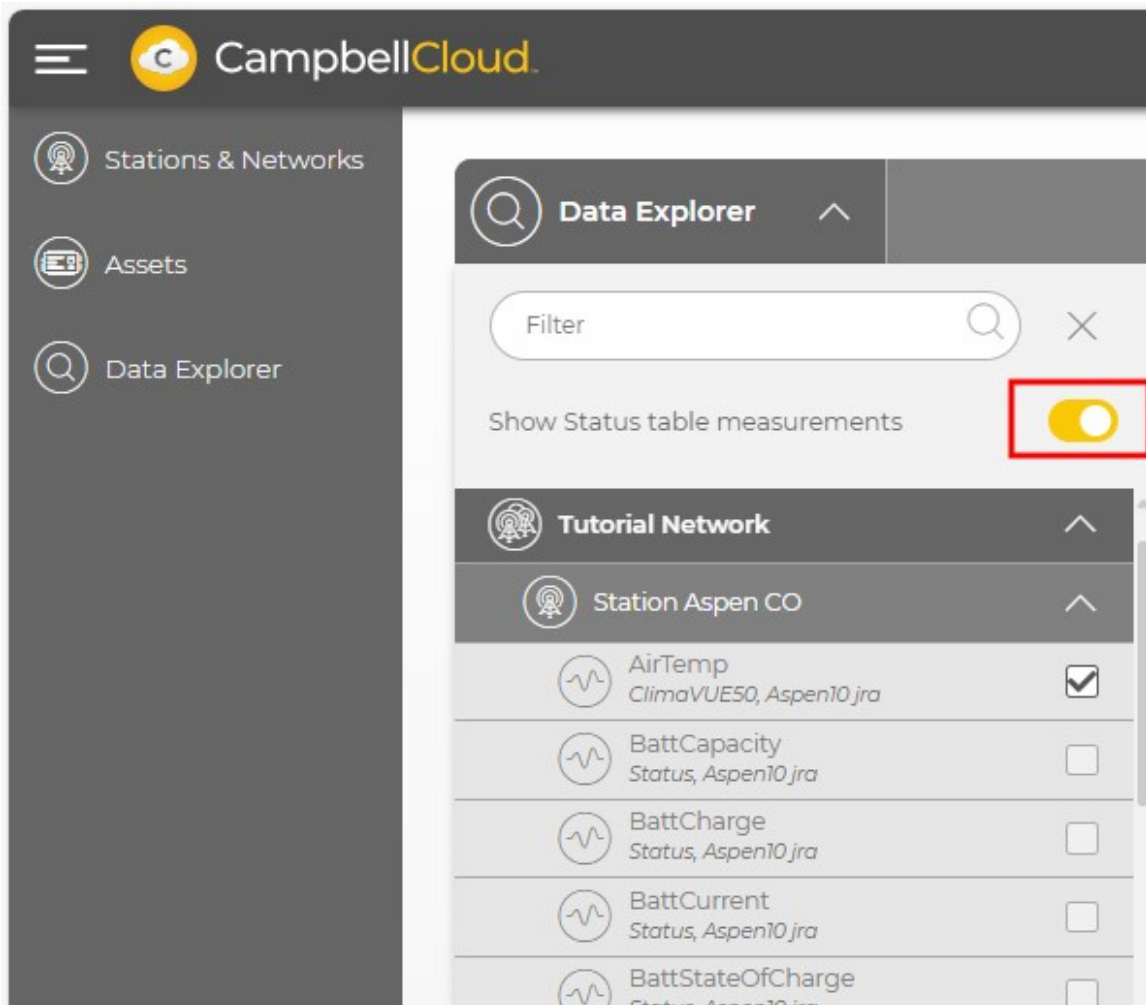
6.8.2 Viewing status information in Data Explorer

Status table information can also be displayed in Data Explorer.

1. Select **Data Explorer** from the applications menu and then select the network and station to display. In this case, *Tutorial Network*, followed by *Station Aspen CO*. To view Status data, click the funnel next to the network name.



2. Click the toggle switch next to **Show Status table measurements** to enable viewing Status measurements. A yellow switch indicates that Status table measurements are included in the list. Select which Status table measurements to display by clicking the check box next to the fields you want to view.



NOTE:

Up to ten sensor and status measurements at a time may be displayed in Data Explorer.

3. Click **APPLY**.

4. In a **Data Explorer** table, columns for the Status table information are added to the right of sensor measurements.



The screenshot shows the 'Data Explorer' interface. At the top, there's a search bar and a 'Data Explorer' dropdown. To the right are buttons for 'Time Period', 'Export', and 'Table View'. Below these, a selected time period is shown: 'December 15 2023, 4:16 PM to December 18 2023, 4:16 PM (America/Denver)'. The main table has columns for various sensors: Rain, RH, WindDir, WindSpd, BattCapacity, BattCharge, BattCurrent, and BattStateOfCharge. Each sensor column has a header indicating the source: 'Tutorial Network, Logan Weather Station, Aspen 10, ClimaVUE50'. The 'Status' columns are highlighted with red boxes. The table contains three rows of data for the specified time period.

Timestamp	Tutorial Network, Logan Weather Station, Aspen 10, ClimaVUE50	Tutorial Network, Logan Weather Station, Aspen 10, ClimaVUE50	Tutorial Network, Logan Weather Station, Aspen 10, ClimaVUE50	Tutorial Network, Logan Weather Station, Aspen 10, ClimaVUE50	Tutorial Network, Logan Weather Station, Aspen 10, ClimaVUE50	Tutorial Network, Logan Weather Station, Aspen 10, ClimaVUE50	Tutorial Network, Logan Weather Station, Aspen 10, ClimaVUE50	Tutorial Network, Logan Weather Station, Aspen 10, ClimaVUE50
	Rain	RH	WindDir	WindSpd	BattCapacity	BattCharge	BattCurrent	BattStateOfCharge
December 18 2023, 4:10 PM	-	-	-	-	5.52	1.02	0.27	82.00
December 18 2023, 4:10 PM	.00	19.00	142.80	0.08	-	-	-	-
December 18 2023, 4:05 PM	.00	18.80	147.80	0.08	-	-	-	-

NOTE:

Status measurements are often taken at different times than sensor measurements. In Table view you will notice what appear to be duplicate timestamps and missing measurements. These are neither; it is the nature of showing two time intervals in the same table.

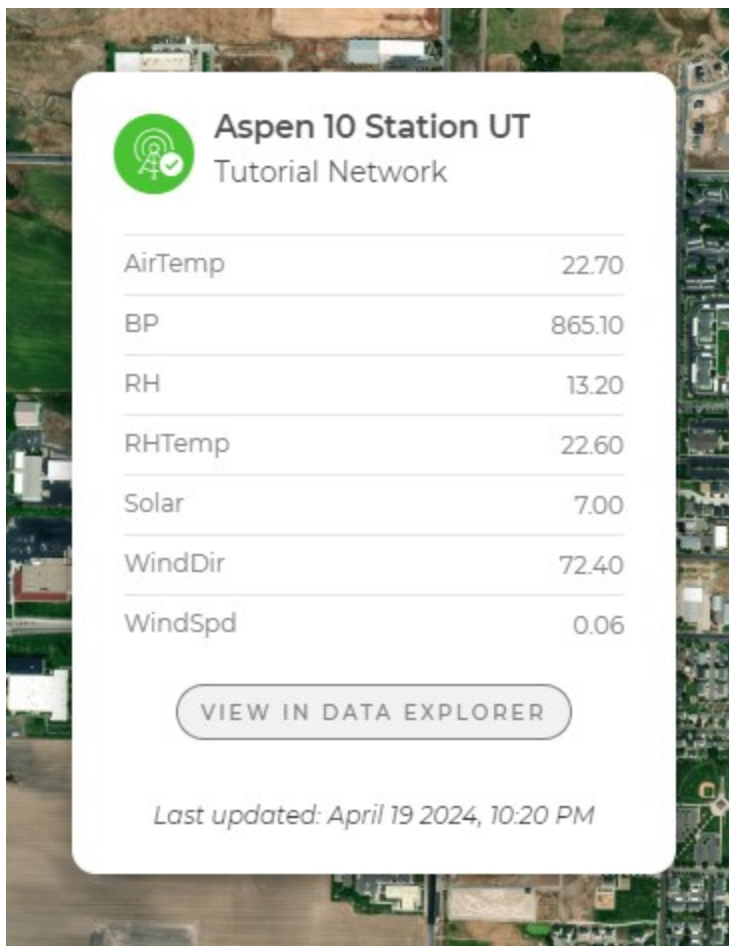
5. Toggle **Show status table measurements** again to remove Status table measurements from table view.

6.9 Displaying and customizing units of measurement

By default, **CampbellCloud** stores and displays data as it is received from an asset. Aspen 10 assets send data based on their specific sensor recipe. Refer to [Aspen recipes](#) in the Aspen 10 manual for specific sensor information. Generally, data sent from a sensor connected to an Aspen is in metric units. However, the RainVue 10-IN and RainVue 20-IN sensors are exceptions, as they send data in US Customary units. **Cloud** always stores data as it is received.

This section explains the steps needed to change the units that are displayed in and exported from **Cloud**.

The following image shows data from a ClimaVue 50 without any changes. Because the ClimaVue 50 recipe sends data in metric units, that is how it's displayed in **Cloud**. To change how the data is displayed you must configure the **Measurement Properties**, as described in the next section.




6.9.1 Configure Measurement Properties

Measurement Properties inform *CampbellCloud* about the measurements it is receiving from an asset.

1. Select the **Assets** application.



2. Click on the asset name to see its details.

Assets						
Filter						
Sort						
List View						
Asset Name	Model	Serial	UID	Status	Station	
 Aspen10	Aspen10			Active	Station Aspen CO	

3. Select the **Measurement Properties** tab.

The screenshot shows the Aspen10 asset page in the CampbellCloud interface. The top navigation bar includes 'Assets', a plus icon, and a trash icon. Below this, a banner for 'Aspen10' is displayed, featuring a circular image of the device and the text 'Aspen10 w/ ClimaVUE'. The main content area has four tabs: 'Summary', 'Asset Properties', 'Measurement Properties' (which is highlighted with a red box), and 'Subscriptions'. Below the tabs is a table with columns: 'Field', 'Table', 'Classification', and 'Subclassification'. The table lists several measurements, including 'BattStateOfHealth', 'BattVoltage', and 'BattCurrent', all with a 'Status' classification.

4. The **Measurement Properties** tab provides a list of measurements. Clicking on an individual measurement opens a measurement properties window that can be used to configure measurement **Classification**, **Subclassification**, **Units**, **Aggregate Type**, and **Precision**.

Configure the **Measurement Properties** for each measurement based on the sensor recipe. See [Aspen recipes](#) in the Aspen 10 manual for the specific sensor Measurement Properties to use.

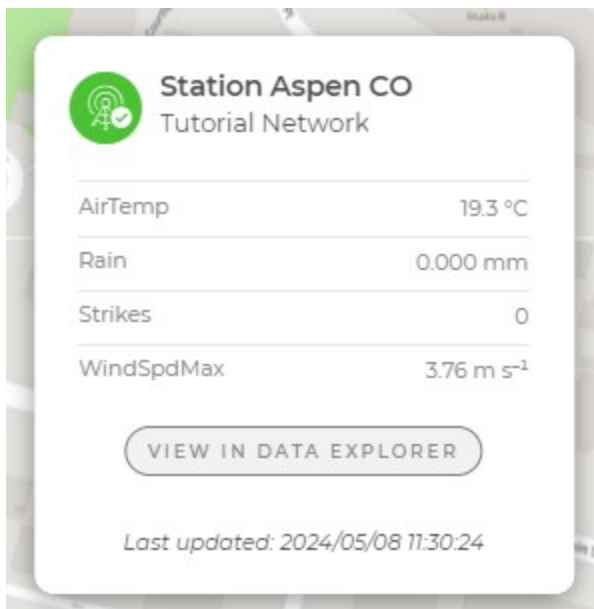
The screenshot shows the 'Measurement Properties' configuration window for the Aspen10 asset. The window has a tabbed interface with 'Summary', 'Asset Properties', 'Measurement Properties' (selected), and 'Subscriptions'. The main table lists measurements with columns for 'Field', 'Table', 'Classification', 'Subclassification', 'Units', 'Aggregate', and 'Precision'. The 'AirTemp' measurement is highlighted in yellow. To the right of the table is a 'Measurement Properties' panel with fields for 'Classification' (set to 'Temperature'), 'Subclassification' (set to 'Air temperature (near surface)'), 'Units' (set to 'Degrees celsius (°C)'), 'Aggregate Type' (set to 'Average'), and 'Precision' (set to '0'). The panel also includes 'CANCEL' and 'SAVE' buttons.

WARNING:

Since the units in **Assets > Measurement Properties** need to align with the units of the asset recipe, it is crucial to inspect the asset recipe summary and input the appropriate units for the sensor, even if the unit in the recipe differs from the desired display unit. See [Aspen recipes](#) in the Aspen 10 manual for specific sensor measurement properties.

For instance, the ClimaVue 50 recipe yields temperature measurements in degrees Celsius. Consequently, to prevent any disparity between the display unit and the measured value, the units specified in **Measurement Properties** must be degrees Celsius for temperature measurements made with the ClimaVue 50.

5. Once **Measurement Properties** are configured and saved you will see units associated with measurements throughout **Cloud**. If the units are displayed as desired, no further action is required. To change the display units to a different unit system, see [Changing default display units for an individual user](#) (p. 76).



6.9.2 Changing default display units for an individual user

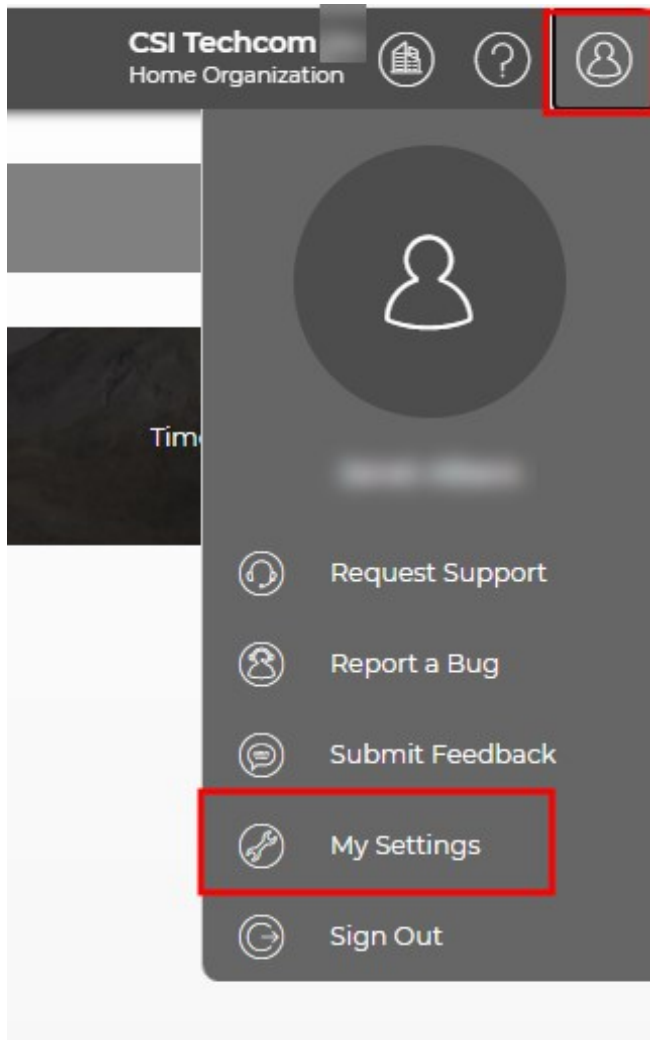
NOTE:

Most users will not need to change the display units. These steps are only necessary if there are no Organization Default Units or if the Organization Default Units are not preferred. Individual **User Preferences** within the **My Settings** application override any Organization Default preferences.

See [Changing default organization settings](#) (p. 5) for more information.

If a **Cloud** Administrator has granted the necessary permissions, individuals within an Organization can customize their user settings according to their own preferences, as demonstrated in the following steps.

1. Click on the **User** icon in the top right corner of the **Home Page** then **My Settings**.



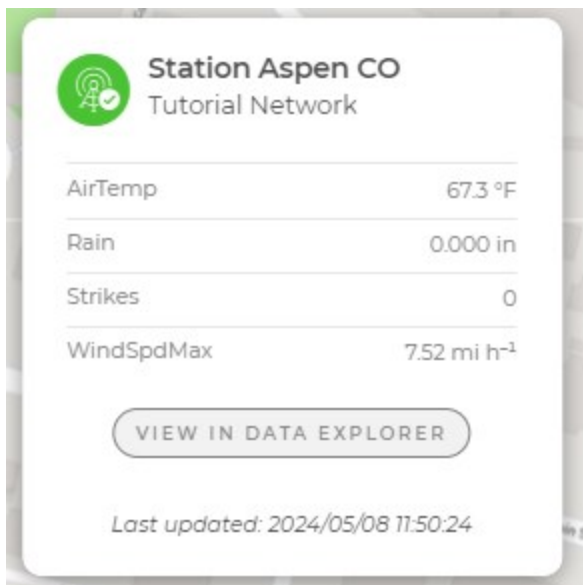
2. Click **EDIT** in the top right corner of **User Preferences**.

The screenshot shows the 'My Settings' page with three main panels. The 'Unit Preferences' panel is highlighted with a red box. It contains a 'Unit System' dropdown menu, a 'Metric' dropdown menu, a 'Classification' dropdown menu, and a 'Filter' input field. Below these are two columns of settings: 'Temperature' and 'Pressure'.

3. From the drop-down menu for **Unit System**, select the desired system, in this example, **US Customary**. Then **SAVE**.

The close-up shows the 'Unit Preferences' dialog box with 'CANCEL' and 'SAVE' buttons. The 'Unit System' dropdown menu is open, displaying a list of options: 'Metric', 'Metric (British)', and 'US Customary'. The 'US Customary' option is highlighted with a red box.

4. Now measurements are displayed in US Customary units throughout *Cloud*.



For more information on displaying and customizing units of measurement in CampbellCloud, watch an instructional video at: <https://www.campbellsci.com/videos/cloud18> .

7. FAQs

Frequently asked questions

Is there an API?

CampbellCloud can be accessed through API calls. For more information see: <https://campbell-cloud.com/api/v1/docs/> .

Is there a complete list of measurement classifications and subclassifications?

See: <https://campbell-cloud.com/classifications> .

What is a hidden station?

Stations without location information will appear under **Hidden Stations** on the network map. See [Adding a station to a network](#) for more information.

Can you change the station that an asset is linked to?

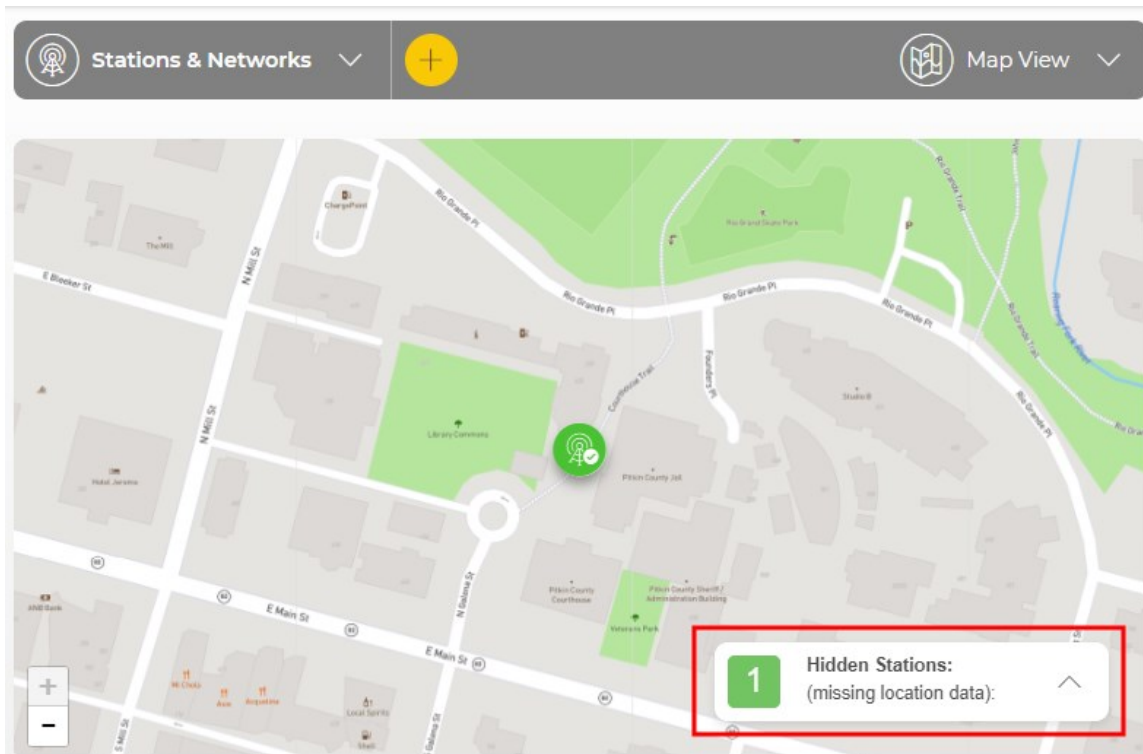
Yes. See [Linking an asset to a different station](#).

Why are my units not being displayed correctly?

In order for units to be displayed correctly, the **Measurement Properties** for the asset must be configured. See [Displaying units](#).

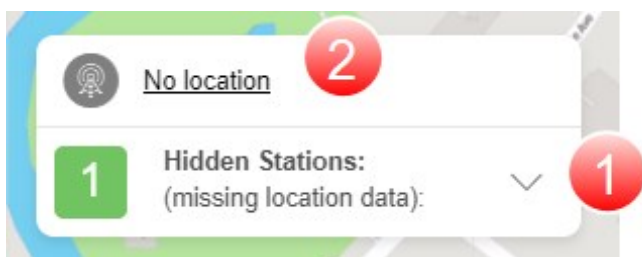
Why isn't my station showing up on the map?

Stations without location information will appear under **Hidden Stations** on the network map.

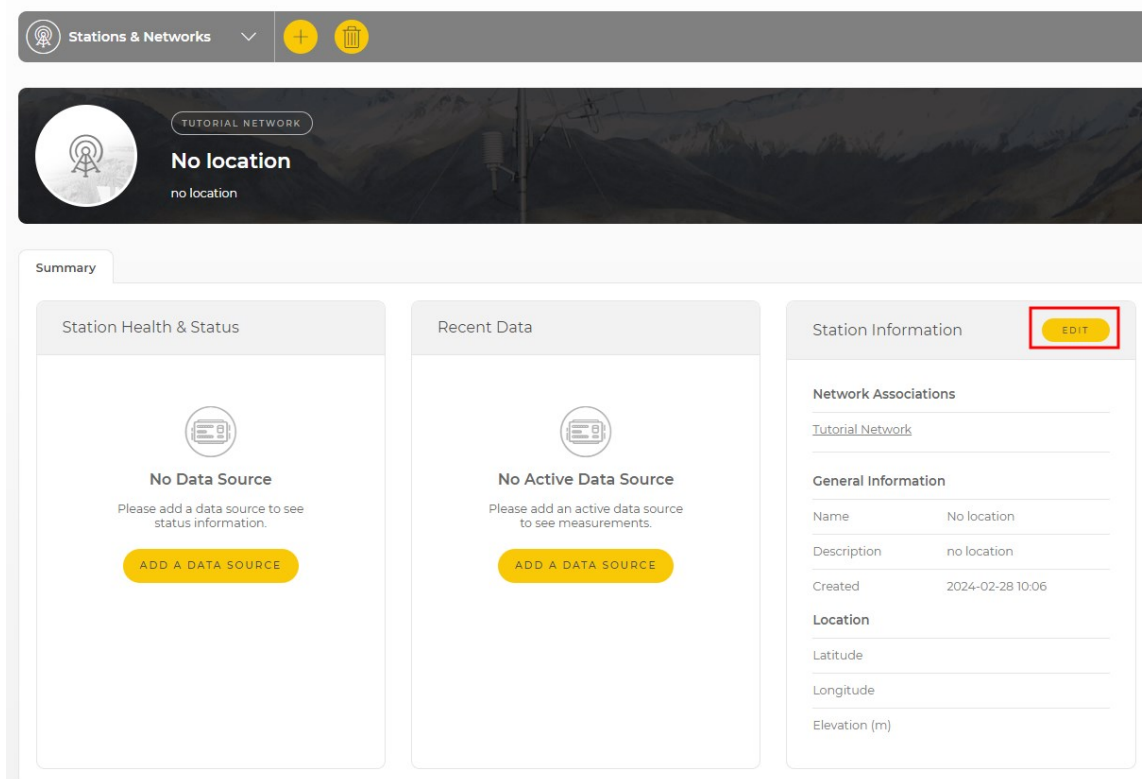


To add location information follow these steps:

1. Click the arrow to display stations without locations.
2. Select a station to edit. It is called *No location* in this example.



3. Click **EDIT**.



4. Enter the Station **Latitude**, **Longitude**, and **Elevation (m)**.

5. **SAVE** your changes.

See [Adding a station to a network](#) for more information.

8. Glossary

A

administrator

Administrators have access to all functionality across the range of applications in CampbellCloud. By default, an Owners security group is created with a new CampbellCloud Organization account. Users within the Owners group have all permissions enabled.

Aggregate Type

Denotes the aggregate type for the incoming measurement into CampbellCloud. For example, if the incoming measurement is a minimum value (for example, minimum battery voltage), set aggregate type to minimum.

API

Application Programming Interface

application

Also called app for short. A group of functions for related tasks.

asset

Primarily this is a data source such as a data logger or Aspen 10. It can also be another piece of hardware.

C

CampbellGo

A companion mobile field app for CampbellCloud, available for iOS and Android

Classification

Refers to the primary classification of a measurement, such as temperature, relative humidity, or precipitation.

D

data source

An asset that sends data to CampbellCloud. This includes data loggers and the Aspen 10 edge device.

H

Hidden station

Stations that are missing location data. They cannot be geo-located on a map.

N

network

A group of one or more stations.

NFC

Near field communications

O

onboard

A collective term for the tasks that have to complete successfully in order for a data source asset to be correctly configured and send data to CampbellCloud. These tasks may be automated or require manual user input depending on the data source type. For data logger data sources, these tasks include asset claiming, automated sensor identification, cellular communications registration, secure CampbellCloud communications, program retrieval, successful sensor measurement, and confirmation that CampbellCloud received data.

organization

An entity (individual, business, or group) that uses CampbellCloud services to manage a network of stations owned by the entity. Every user must be associated with an organization.

P

Precision

Specifies the number of decimal places shown for a measurement.

Q

QR code

Quick response barcode

R

recipe

A set of files that include the Aspen 10 program, settings and configuration for a specific sensor and application.

S

security group

An application used to control user access to applications and their associated permissions. Users can be in more than one security group.

station

A group of one or more assets

Subclassification

Refers to the secondary classification of a measurement. For example, a temperature classification can have multiple subclassifications, such as air temperature, dew point temperature, or soil temperature

U

UID

Unique identifier

Units

Specifies the unit type of the incoming measurement into CampbellCloud. For example, if the asset is sending a temperature measurement to CampbellCloud in degrees Celsius, Units must be set to degrees Celsius.

user

Individuals who have been added to an organization account. Users are assigned permissions via the Security Groups application.

Global Sales and Support Network

A worldwide network to help meet your needs



Campbell Scientific Regional Offices

Australia

Location: Garbutt, QLD Australia
Phone: 61.7.4401.7700
Email: info@campbellsci.com.au
Website: www.campbellsci.com.au

Brazil

Location: São Paulo, SP Brazil
Phone: 11.3732.3399
Email: vendas@campbellsci.com.br
Website: www.campbellsci.com.br

Canada

Location: Edmonton, AB Canada
Phone: 780.454.2505
Email: dataloggers@campbellsci.ca
Website: www.campbellsci.ca

China

Location: Beijing, P. R. China
Phone: 86.10.6561.0080
Email: info@campbellsci.com.cn
Website: www.campbellsci.com.cn

Costa Rica

Location: San Pedro, Costa Rica
Phone: 506.2280.1564
Email: info@campbellsci.cc
Website: www.campbellsci.cc

France

Location: Montrouge, France
Phone: 0033.0.1.56.45.15.20
Email: info@campbellsci.fr
Website: www.campbellsci.fr

Germany

Location: Bremen, Germany
Phone: 49.0.421.460974.0
Email: info@campbellsci.de
Website: www.campbellsci.de

India

Location: New Delhi, DL India
Phone: 91.11.46500481.482
Email: info@campbellsci.in
Website: www.campbellsci.in

Japan

Location: Kawagishi, Toda City, Japan
Phone: 048.400.5001
Email: jp-info@campbellsci.com
Website: www.campbellsci.co.jp

South Africa

Location: Stellenbosch, South Africa
Phone: 27.21.8809960
Email: sales@campbellsci.co.za
Website: www.campbellsci.co.za

Spain

Location: Barcelona, Spain
Phone: 34.93.2323938
Email: info@campbellsci.es
Website: www.campbellsci.es

Thailand

Location: Bangkok, Thailand
Phone: 66.2.719.3399
Email: info@campbellsci.asia
Website: www.campbellsci.asia

UK

Location: Shephed, Loughborough, UK
Phone: 44.0.1509.601141
Email: sales@campbellsci.co.uk
Website: www.campbellsci.co.uk

USA

Location: Logan, UT USA
Phone: 435.227.9120
Email: info@campbellsci.com
Website: www.campbellsci.com