



# Solstice Element Admin Guide

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**Table Of Contents**

- About Solstice ..... 1
- Manage Solstice ..... 4
- Network Requirements ..... 6
- Manage Solstice with Solstice Cloud ..... 10
- Create Categories and Assign Pods ..... 17
- Set Pod Locations ..... 20
- Manage Users and Roles in Solstice Cloud ..... 24
- Pod Settings and Templates ..... 28
- Welcome Screen Template ..... 37
- Features Template ..... 42
- Digital Signage Template ..... 50
- Ethernet Template ..... 56
- Proxy Template ..... 60
- WiFi Settings Template ..... 62
- Discovery Template ..... 66
- Security Template ..... 68
- Time/Locale Template ..... 72
- Advanced Template ..... 74
- Power Management Template ..... 79
- Message Center Template ..... 82
- Configure SSO in Solstice Cloud ..... 84
- Monitor Your Deployment ..... 88
- View and Manage USB Devices ..... 93

# About Solstice

Solstice is the Mersive award-winning collaboration software, installed on a dedicated hardware platform to deliver turnkey wireless content sharing and video conferencing tools. Plug any HDMI room display device into the Solstice Pod, and connect it to the network(s) that participants use to connect and share to the display. Users on the network can then follow on-screen directions to connect wirelessly to Solstice and share content.

Looking for information about the Mersive Collaboration Suite? Click [here](#).



## Solstice Product Suite

- **Solstice Pod:** The dedicated device installed on an organization's network and connected to an HDMI display monitor that runs the Solstice wireless collaboration software.
- **Solstice Cloud:** Cloud-based management allows administrators to easily manage, configure, monitor, and update Solstice deployments. [Learn More](#)
- **Solstice web app:** Updated browser-based sharing allows meeting participants to share a piece of content from their device to a Solstice display from their laptop without needing to download and install an app. [Learn More](#)
- **Solstice apps:** Apps installed on user laptops and mobile devices to enable robust sharing and management of content on the Solstice display. [Learn More](#) These apps are:
  - Mersive Solstice laptop/desktop app (Win, macOS)
  - Mersive Solstice mobile app (iOS)

- Solstice Mirror app (Android)
- **Solstice Discovery Service (SDS):** An IT-friendly, non-broadcast mechanism allows users to discover and click-to-connect to Solstice displays from the Mersive Solstice app to start sharing content. [Learn More](#)
- **Solstice Dashboard:** Windows-based local network management tool to monitor, configure, and update Solstice Enterprise Edition Pods and Windows Software instances on a shared network. This is legacy product provided for use when Solstice Pods cannot be managed in Solstice Cloud. (Not available for Solstice Element.)

## About Solstice Element

Solstice Element showcases the fundamentals of communication and collaboration found in Solstice. Up to two simultaneous users can quickly share unlimited content using laptops, tablets, and mobile devices to a Solstice Element-enabled display.

The Solstice Element Pod provides a solution for situations where simple wireless collaboration is desirable but the full range of advanced Solstice Small Group Edition or Solstice Unlimited features are not needed, such as breakout sessions and temporary presentation setups. Its digital signage capabilities also can provide an excellent opportunity to use an otherwise idle screen to display company branded visuals.

For easy installation, convenience, and to simplify device management, Element Pods are managed and configured utilizing Solstice Cloud.

Users can choose their preferred sharing method including:

- Mersive Solstice app available for Windows, macOS, Android, and iOS
- Laptop-based web browser
- AirPlay
- Miracast

### Solstice Element Features and Limitations

- Solstice Version: 6.X (Maintenance updates, e.g., 6.1.1 to 6.1.2, available; Major and Minor updates, e.g., 6 to 7 or 6.1 to 6.2, unavailable)
- Simultaneous user connections: 2
- Unlimited content sharing posts
- Digital signage playback
- Customizable welcome screen
- RSS feed display on Solstice welcome screen
- Extended dual-screen display or touch screen monitor support
- Ink annotation from tablets and mobile devices
- Central management in Solstice Cloud (analytics and monitoring not included)

Solstice Element Pods do not support the following features:

- Hybrid video conferencing support
- Room calendar integration
- API access to Solstice functionality
- Tier 1 support from Solstice Support team
- Solstice Active Learning display routing

# Manage Solstice

Solstice offers centralized management tools for your Solstice deployment in the Solstice Cloud portal. Explore this section to learn how to manage your deployment using Solstice Cloud and other available tools. Solstice deployments may also currently be managed over a local network, but Mersive strongly recommends using Solstice Cloud for management if at all possible.

## Key Terms

- **Solstice display:** The sharing space created by Solstice, shown on a flat panel monitor or projector connected via HDMI video cable to a Solstice Pod.
- **Solstice host:** Core Solstice software, running on a Solstice Pod.
- **User device:** Devices brought by users that can connect to a Solstice display with the [Mersive Solstice laptop app](#) (Windows, macOS), Solstice mobile apps (iOS, Android), the [Solstice web app](#) in a browser, or other [app-free methods](#).
- **Posts:** Individual pieces of information shared to a Solstice display, including desktop, application window, browser tab, or media files.

## Ways to Configure Solstice Displays

Mersive strongly recommends using the Solstice Cloud management portal, which can be accessed from any platform and location with access to the internet and offers configuration templates to define and apply common configurations to current and future Solstice Pods. Pod configuration options are:

- **Configure centrally via Solstice Cloud:** Solstice Cloud is a secure cloud-based management portal that enables the central manage a deployment of Solstice Pods from any location. With Solstice Cloud, administrators can easily deploy, configure, manage, monitor, and update Pods.
- **Configure individually:** Every Solstice display can be configured via the individual configuration panel accessed from the Settings icon in the lower right corner of the Solstice welcome screen. This can be accessed physically by connecting a USB mouse and keyboard to the Pod. Or it can be accessed remotely from the same network by entering the Pod's IP address in a web browser. If the presence bar at the bottom of the Solstice screen is hidden, long-click with a mouse or press the Esc key to show the presence bar and Settings icon.
- **Configure over local network using Solstice Dashboard:** For admins who need an on-premises solution, or who are unable to use cloud-based solutions like Solstice Cloud, Solstice Dashboard is a centralized management tool installed on a local machine or server that can be used to monitor, configure, and update groups of Solstice Enterprise Edition Pods on the local network. Solstice Dashboard should not be used to configure Solstice Pods already managed in Solstice Cloud. (Not available for Solstice Element.)

## Centrally Deploy and Manage the Mersive Solstice App

[Centrally Deploy Mersive Solstice App on Windows with MSI](#)

[Centrally Deploy Mersive Solstice App on Windows with SCCM](#)

[Configure Mersive Solstice App Defaults on macOS](#)

# Network Requirements

Solstice uses all TCP/IP standard network traffic to communicate across all the required and optional components of the Solstice system. The network(s) that Solstice is ultimately deployed on needs to allow peer-to-peer TCP connections. Additionally, for enterprise networks, firewall exceptions may need to be made and network ports may need to be open to allow certain Solstice capabilities to function.

## Firewall Exceptions

### URLs

You may also need to make firewall or proxy bypass exceptions for the following sites:

- Required for software updates, Solstice Cloud, default RSS feed, default digital signage feed:
  - `mersive.com`
  - `*.mersive.com`

Specific sites required for Solstice Cloud management (formerly known as Kepler):

- `kepler.mersive.com`
- `kepler-backend.mersive.com`
- `kepler-auth.mersive.com`
- `kepler-auth-svc.mersive.com`
- `kepler-onboarding.mersive.com`
- Required for pod activation, licensing, and subscription updates:
  - `kepler-backend.mersive.com` (Solstice 5.5.3 and Solstice 6+)
  - `manager.flexnetoperations.com` (Solstice 5.5.2 and lower) - Retired Aug 15 2023
- To detect captive portals, Solstice 6.0 and earlier may periodically attempt a connection to:
  - `clients3.google.com/generate_204`



Learn how to [disable captive portal checks](#) in Solstice versions 5.3 to 6.0.

## Programs

Windows deployments using a tool that limits program access, like an anti-virus program, device management service, or a local firewall such as Windows Defender Firewall, may need to whitelist or allow the following program files used by the Mersive Solstice app on Windows:

- `rsusbipclient.exe`
- `SolsticeClient.exe`



Windows installers for the Mersive Solstice app version 6 and later automatically add Windows Defender Firewall exceptions for `rsusbipclient.exe` and `SolsticeClient.exe`.

If the programs are not listed, add the programs manually using the installation path of the Mersive Solstice app. Example installation paths are as follows:



- MSI & SCCM (installed with admin access from [mersive.com/download/](https://mersive.com/download/)) app v5.3+ installers location:

```
C:\Program Files\Mersive Technologies, Inc\Solstice\Client
```

- Quick Connect app (installed with user access from v5.3–5.5.2 Solstice Pods or [mersive.com/download/](https://mersive.com/download/)) location:

```
C:\Users\%username%\AppData\Local\Mersive\SolsticeClient
```

## Open Network Ports

Depending on which features your end-users will use, certain network ports/routes must be open for Solstice to work correctly.

### TCP

- **7**: Used for gateway check. (Feature deprecated on Pods running Solstice version 5.3.2 and later.)
- **80, 443**: Used if the Solstice host is allowed to connect to the internet for license activation and software upgrades. When pushing a local update file to the Pod, these ports need to be open between the Pod and the Dashboard. These ports are also used by the OpenControl API to interface with 3rd party systems. When network encryption is enabled, the Solstice Dashboard sends SLR updates via port 443.



If you are using a Solstice Pod or Solstice Dashboard on 4.1 or later, communication to Mersive's license server only occurs over https/port 443.

- **1337**: Used for integrating a personal Microsoft 365 calendar with the Mersive Solstice user app.
- **6443**: Used for browser-based sharing connections.
- **7236**: Miracast WiFi Direct control port used to establish and manage sessions between the source device and the Pod.
- **7250**: Port on which the Pod listens for Miracast packets when Over Existing Network mode is enabled.
- **6000–7000, 7100, 47000, 47010**: Should allow inbound AirPlay® traffic to the Solstice host.
- **53100, 53101, 53102**: Used by default for basic communications between the Solstice host and end user devices. The base port (53100 by default) can be changed in the [Network Settings](#) of the Pod's local configuration panel or Solstice Dashboard.



Changing the Solstice base port for a Pod also changes the sequential streaming port (Solstice base port +1) and notification port (Solstice base port +2) used by Solstice. You must ensure that all three ports are opened on your network.

- **53200, 53201, 53202**: Used by the Solstice host and end user devices to communicate the Solstice Discovery Service (SDS) host if SDS discovery mode is enabled.



Browser-based sharing can use any non-privileged TCP port from 1024 to 65535. (Also see UDP port usage for browser-based sharing.)

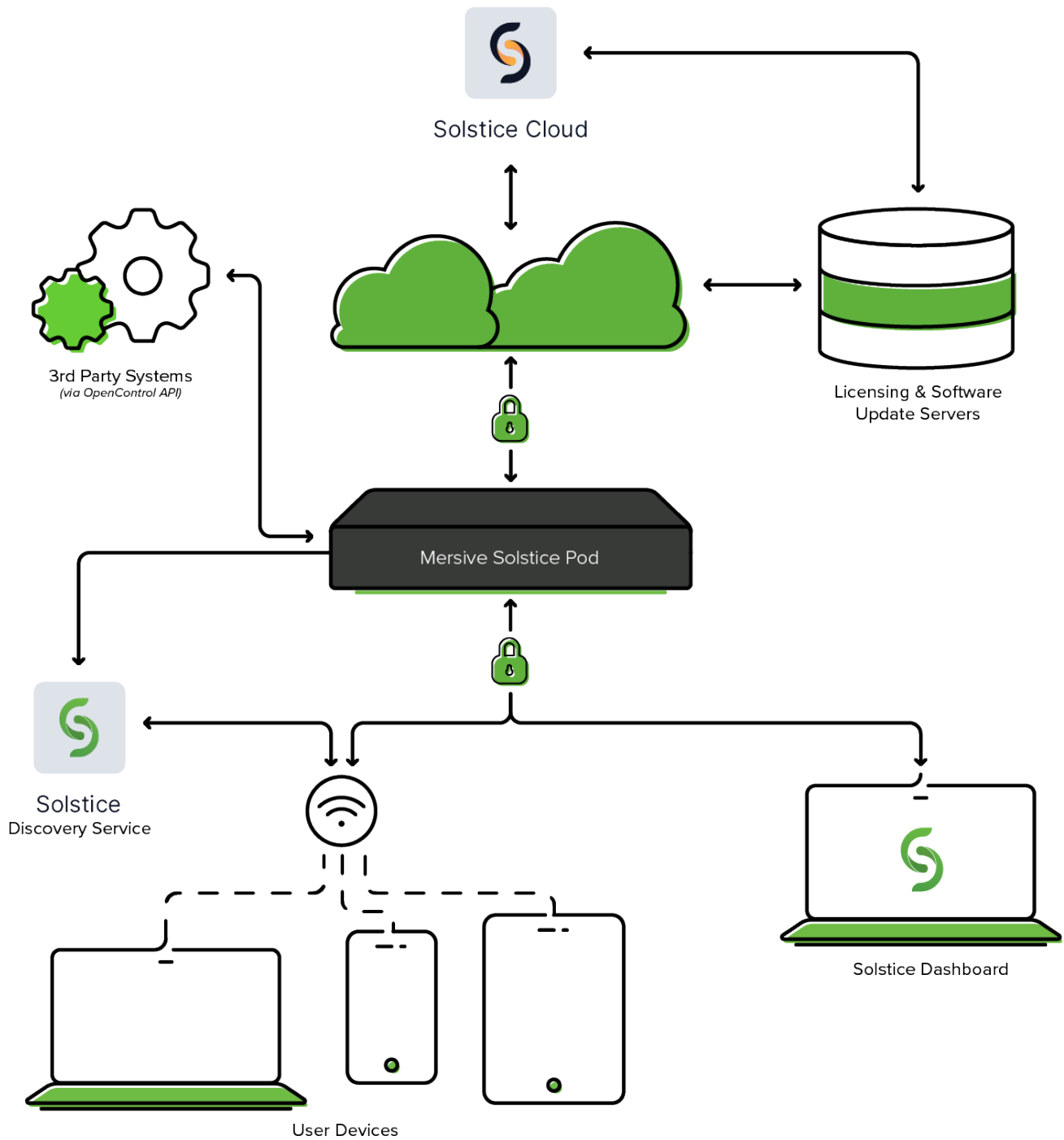
## UDP

- **123:** Used to communicate with an NTP server.
- **5353:** Required for iOS mirroring via the Bonjour protocol. It is not required when using the Solstice Bonjour Proxy. Also, if Miracast Over Existing Network mode is enabled, this port is used for multicast DNS (mDNS). mDNS is broadcast to the local subnet of each network interface the Pod is connected to. If the computer that is attempting to make an infrastructure connection is on a different subnet, this broadcast fails. If this happens, a workaround is to create a DNS entry to the Pod's hostname.
- **6000–7000, 7011:** Should allow inbound AirPlay® traffic to the Solstice host.
- **55001:** Used for display discovery if broadcast discovery mode is enabled.



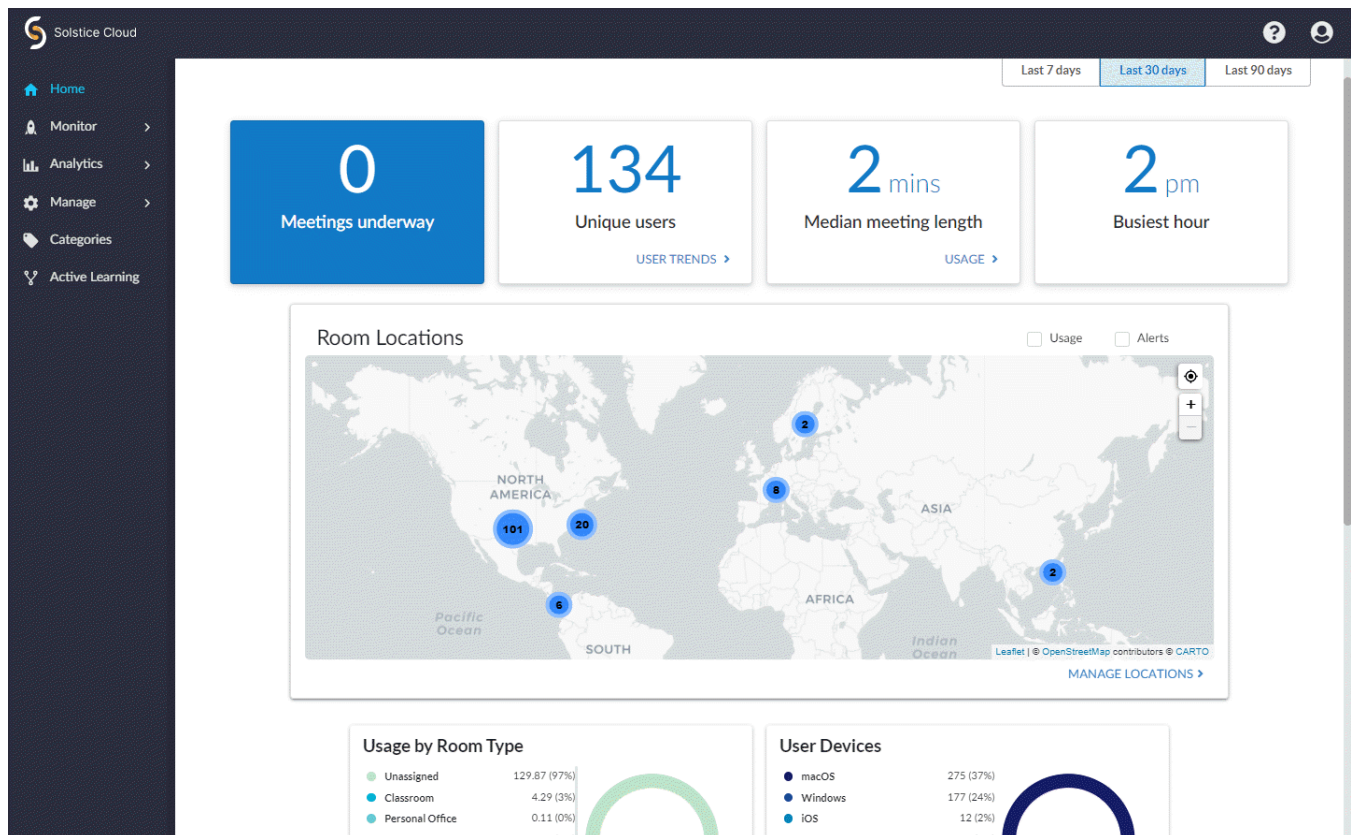
Both Miracast and browser-based sharing capabilities can use any non-privileged UDP port from 1024 to 65535. (Also see TCP port usage for browser-based sharing.)

# Network Diagram



# Manage Solstice with Solstice Cloud

Solstice Cloud is a secure and scalable portal that helps organizations to optimize their Solstice-enabled meeting and learning spaces for greater usability, productivity, and return on investment. This is done through its easy-to-use management capabilities. Solstice Cloud allows administrators to easily deploy, monitor, and update Solstice Pods from anywhere in the world using custom categories, configuration templates, and scheduled software updates. After deployed, usage data is securely collected from Solstice Pods and can be compared across room type or location to provide insight into room usage, participation, and meeting or class duration.



Your organization can quickly start using Solstice Cloud at any time by first creating a Solstice Cloud organization, then onboarding your Solstice Pods into the Solstice Cloud management portal from the new Solstice Deploy app. Mersive recommends creating your Solstice Cloud organization using the email address for the person who will be the main Solstice Cloud administrator for the new Solstice deployment. This will be your organization's main administrator account for Solstice Cloud management.

The initial Solstice Cloud administrator account can then invite other users to join Solstice Cloud management for your organization in a variety of user roles. Inviting any additional users from the master account allows those users to access the same set of Pods and data for your organization. For more information, see [Manage Users and Roles in Solstice Cloud](#).

## Requirements

- To onboard Pods into Solstice Cloud, Pods must have internet access and be running Solstice version 3.4 or later.
- Deployment management capabilities are available for every Solstice Pod on version 4.5 or later.
- Standard Solstice Cloud capabilities, including deployment management, are available at no charge for every Pod in perpetuity.


## How To

New Solstice Cloud management organizations can now be created directly in Solstice Cloud with any valid email address that isn't already assigned to a Solstice Cloud account. Solstice Pods can then be onboarded directly into Solstice Cloud using the new Solstice Deploy tool.

### Create a New Solstice Cloud Organization


To create the new Solstice Cloud organization:

1. Go to the Solstice Cloud organization creation page at [cloud.mersive.com/create-org](https://cloud.mersive.com/create-org).

 Solstice Cloud

[← Back](#)

Email\*

Create password\* 

Repeat password\*

I agree to the [Terms of Service](#) and have read the [Privacy Policy](#).


Create Account and Login

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2. Enter a valid **Email** that is not currently registered in Solstice Cloud management. This will be used for the initial administrator account for the new Solstice Cloud organization.

Double check the entered email address for typos. A mistyped email address for this account may make the new organization inaccessible without support from Mersive.

3. Enter a password in **Create password**. then enter it again in **Repeat password**.

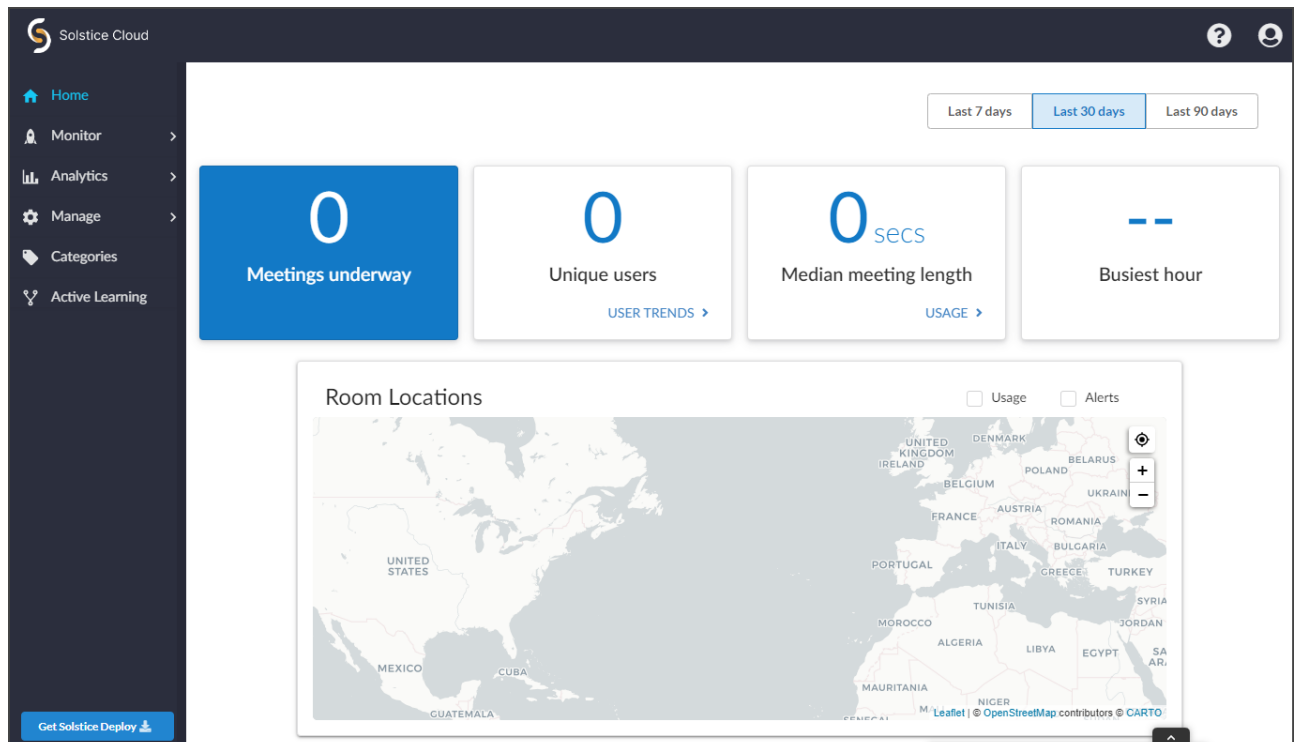
The entered passwords must be the same, and must meet the password rules listed by hovering over the  icon above the first password box.

4. Check the box to agree to the Terms of Service and Privacy Policy, then click **Create Account and Login**.
  - a. If the entered passwords do not match each other, or do not meet the Solstice Cloud password rules, a new Solstice Cloud organization cannot be created. Fix the highlighted issue and try again.
  - b. If the email address entered already has a Solstice Cloud account, you will be directed to instead log in to Solstice Cloud with your existing account.
5. If the process is successful, you will be logged in to the new Solstice Cloud organization with your new Admin account.
6. Continue to the next section to onboard Pods with the Solstice Deploy app.

### Add Pods to Solstice Cloud with Solstice Deploy

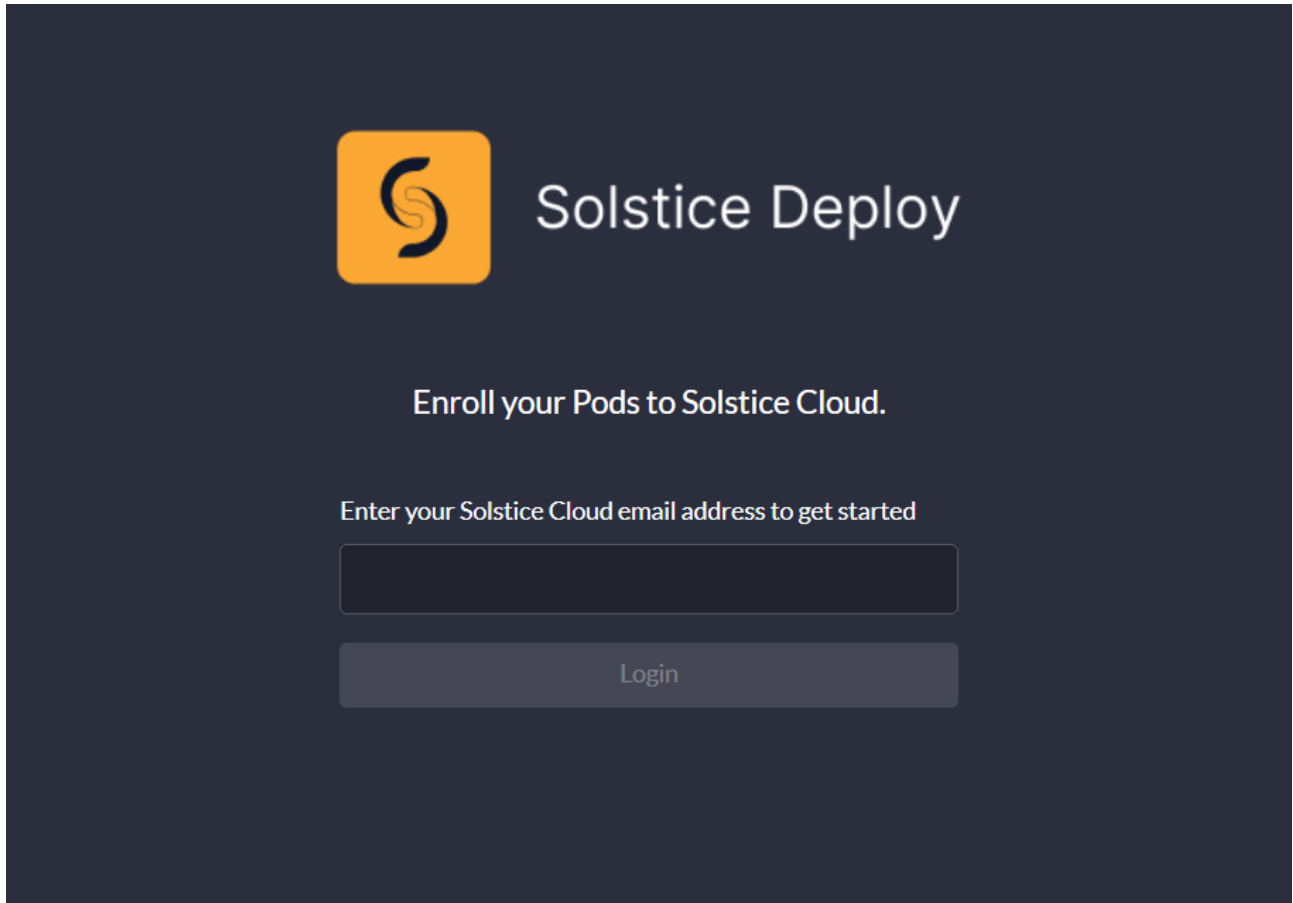
After you have a Solstice Cloud organization and primary administrator account, you are ready to start enrolling Solstice Pods to be centrally managed in Solstice Cloud. Administrators can download the Solstice Deploy app for Windows or macOS from the Solstice Cloud portal.


1. Go to [cloud.mersive.com](https://cloud.mersive.com) and log in to Solstice Cloud with an Admin level account. The Solstice Cloud home page appears.



2. Select **Get Solstice Deploy** in the lower left.

3. Run the downloaded file (e.g., `solsticedeploy-latest.exe`) to install Solstice Deploy on your Windows or macOS device. The Solstice Deploy app starts after the installation is complete.



 Before proceeding to the remaining steps, check that you are ready to enroll Solstice Pods into Solstice Cloud:

1. Solstice Pods must be connected to a network via Ethernet with access to the internet.
2. The device running the Deploy app must be connected to the same network and able to communicate with the Pods.

4. In the Solstice Deploy app, enter the email address of a Solstice Cloud administrator account, then click **Login**.
5. Enter the password for this admin account and **Login with password**.
6. Set the **Advanced Settings** as appropriate for your Solstice deployment:
  - Enter an **Admin password** to find Solstice Pods with that password configured.
  - If your organization is using SDS for Solstice Pod discovery, enter the **Solstice Discovery Service** host IP address to help find Solstice Pods.
7. There are two ways to select the Solstice Pods on your network to be added to Solstice Cloud.
  - Select **Find Pods** to have Solstice Deploy search the network for Pods to be added to Solstice Cloud.



This workflow is strongly recommended since it offers the option to configure Advanced Network Settings, enabling Solstice Pods in less-common network scenarios to be enrolled into Solstice Cloud with Solstice Deploy.

1. Search results will appear, containing Pods that are 1) found on the attached network and 2) aren't yet in Solstice Cloud. Some Pods may take longer to appear in the list than others.
2. Once the list is complete, you may optionally select Pods and choose **Advanced network settings** to pre-configure Ethernet network settings needed for the selected Solstice Pods to communicate with Solstice Cloud. Pods can be configured to use a static IP address, VLAN, 802.1x authentication, or HTTP and HTTPS proxies.



See [Ethernet Template](#) and [Proxy Template](#) configuration topics to learn more about how Solstice Pods use these configuration options.

Some settings must be set individually for each Solstice Pod. In this case, you will be prompted to enter a value for each selected Pod.

When the network configuration settings for the chosen Solstice Pods have been entered, select **Apply network settings** to save your settings and return to the list of Pods.



← Back Solstice Deploy

Add Pods — Enroll Pods — Summary

### Select Pods you want to enroll

2/3 Pods selected

| <input type="checkbox"/>            | ID               | IP Address    | Display name         | Hardware  |
|-------------------------------------|------------------|---------------|----------------------|-----------|
| <input checked="" type="checkbox"/> | bfd1f7b548064c95 | 192.168.0.14  | 00 Pod G2i           | Pod Gen2i |
| <input checked="" type="checkbox"/> | 965f03723ff48b89 | 192.168.0.123 | 00 New Pod Auth Test | Pod Gen3  |
| <input type="checkbox"/>            | 524c9cefc03e0344 | 192.168.0.121 | 00 Test Pod          | Pod Gen3  |

**Advanced network settings** ▶

Enroll Pods


Apply default templates and enroll Pods


If a red icon appears, one or more Pods are missing information required to communicate with Solstice Cloud. To continue, edit the advanced network settings for affected Pods.

3. Make sure the Pods you wish Solstice Deploy to enroll into Solstice Cloud are selected and proceed to the [next step](#) below.
- OR to use a list of IP addresses to select Solstice Pods to be enrolled into Solstice Cloud management, choose **Enter Pods Manually**.
  1. Enter a comma-separated list of IP addresses for Solstice Pods you want to add to Solstice Cloud. (Copying and pasting is strongly recommended.)
  2. If the listed Pod(s) have an admin password configured, enter it in **Admin password**. Then proceed to [next step](#) below.
8. After you have designated which Solstice Pods to add to Solstice Cloud using one of the options above, you may enroll the Pods into Solstice Cloud with or without applying default configuration templates:

- Select **Enroll Pods** to add the listed Solstice Pods in Solstice Cloud without any configuration template assignments. You may always configure templates and apply them after the Solstice Pods have been enrolled in Solstice Cloud management.
- OR select **Apply default templates and enroll Pods** to assign predefined default templates to the listed Solstice Pods as they are added into Solstice Cloud management (for Pods running Solstice 5.0+).

Click **Yes, I'm sure** to confirm this option.

 Applying default templates will overwrite any previous Pod configurations, including any Ethernet settings configured in 'Advanced network settings' above. If any listed Pods have configurations you wish to save, do not apply default templates.

 Default template settings should be configured in Solstice Cloud before applying them to Solstice Pods. Learn more about [Templates in Solstice Cloud](#).

9. A progress bar appears for each Solstice Pod being enrolled into Solstice Cloud. This process can take some time, depending on the number and type of Pods being enrolled and whether default templates are being applied.
10. When Solstice Deploy has finished trying to enroll all listed Solstice Pods, a results summary appears.

Each summary bar can be expanded to show details for Pods in that category (enrolled or failed). Failure details are provided for Pods that failed the enrollment process.

11. Solstice Pods that were successfully enrolled now appear and can be managed in Solstice Cloud.

## Create Categories and Assign Pods

Categories provide the ability to classify individual Solstice Pods, and the collaboration spaces they create, in your Solstice deployment in ways that are meaningful to you. Mersive strongly recommends assigning Pods to categories after you import them into the Solstice Cloud management portal. After they are created, categories can be used to filter, sort, and compare usage data among different Solstice instances to help drive business decisions. For example, categories can be used to schedule software updates for Pods selected by location or department, allowing you to choose the best update times for that group.

Solstice Cloud allows you to categorize Pods by location and create your own custom categories. Creating a robust category scheme enables you to drill down into your deployment usage data in meaningful ways.

Mersive recommends that you follow these guidelines when assigning categories.

- Create categories that can be applied to all Pods (e.g., create a "City" category instead of a "Denver" category).
- Start with broad categories then drill down into more specific ones (e.g., create a category for Country, City, Building, then Department or Floor).

Here is an example location category plan:

| Automatic |          |                    | Custom      |             |          |
|-----------|----------|--------------------|-------------|-------------|----------|
| Country   | City     | Building           | Department  | Room Type   | Bookable |
| US        | Denver   | Denver HQ          | Marketing   | Conference  | Yes      |
| US        | New York | NY Office          | Sales       | Huddle      | No       |
| Italy     | Milan    | Corso Vittorio     | Product     | Office      |          |
| UK        | London   | 141 Sussex Gardens | Engineering | Public Area |          |
| Beijing   | China    | Jiang Jun Si Lu    | Chemistry   |             |          |

## How To

### Add a New Category

1. In the left sidebar of Solstice Cloud, select **Categories**.
2. Click **Add Category**.
3. To create a category from one of the recommended options:
  - a. Click **Choose from recommended**. Options are Room Type (huddle, conference, etc.), Display Type (flat panel, 4K, etc.) or Interaction (mouse, touch, etc.). Each pre-configured type can be used one time.
  - b. Select one of the recommended categories, then click **Next**. A note about managing the new category may appear. Click **Got It** to proceed to category configuration.
  - c. Click **Add new** at the top of the options table to add more options. Click the trashcan icon beside any existing options in the table that you do not want to keep.

Options within a category should always be mutually exclusive because only one option can be selected for each Pod. Avoid creating overlapping options that can be simultaneously true of a single Pod.


- d. Click **Done**. The added category now appears in the Category Manager table.
  - e. Click **Back** to return to the category overview charts.
4. To create your own custom category:
- a. If given the choice, Click **Create custom**. If all of the pre-configured recommended categories are already added, you go straight to entering the Category Name in the next step.
  - b. Enter the **Category Name**, then click **Next**.
  - c. Enter in the **Options**. For example, if you are creating a category to group Pods based on the floor of the building they are on, you can enter Level 1, Level 2, etc.

Options within a category should always be mutually exclusive because only one option can be selected for each Pod. Avoid creating overlapping options that can be simultaneously true of a single Pod.

- d. To add another option, click in the last option field and press the **Enter** key.
- e. After you are done entering options, click **Save & Apply**.
- f. A note about managing the new category appears. Click **Got it**. The added category appears in the Category Manager table.
- g. Click **Done** and **Back** to return to the category overview charts.








### Assign Pods to Category Options

As much as possible, choose the best category for each Pod from the beginning, as changing the assigned category of a Pod can affect the accuracy of historical data.

1. In the left sidebar of Solstice Cloud, select **Categories**. Any Solstice Pods that are imported into Solstice Cloud for your organization appears in the Category Manager table.
2. To select which previously added categories display in the Category Manager table, click the expand  icon next to Manage Columns.
3. Check the boxes for categories to view. The selected categories appears as columns in the table.
4. To add an individual Solstice Pod to a category:
  - In the row for the desired Pod, click the down arrow in the corresponding category column and select an option from the list that appears. Each Pod can be assigned to only one option per category.
5. To add Solstice Pods to categories in batches:
  - a. Check the box to the left of the Name for each Pod to be assigned to the same category option. Check the box at the top of this column to select all the Pods in the table.

Start typing in the Search box at the top of the table to filter for Pods with names that contain the matching letters or words.
  - b. In the row for any of the selected Pods, choose the option from the desired category column.
  - c. Click **Save** to confirm you want to assign the category option for the number of Pod displays you selected and return to the Category Manager table.
6. Repeat steps 3–5 to assign groups of Pods to other category options.

## Manage a Category

1. In the left sidebar of Solstice Cloud, select **Categories**. Any Solstice Pods that are imported into Solstice Cloud for your organization appears in the Category Manager table.
2. At the top of the screen, click the left  and right  icons to find the desired category, then click anywhere on the pie chart to view details of that category.
3. Click the pencil icon  above the category options to access tools to edit the options, change the category name, or delete the category.
4. To change the name of the selected category:
  - a. Click the category name and select **Rename Category**.
  - b. Click **Done** when finished making changes to view the updates to the selected category.
  - c. Click **Back** to return to the full list of categories and overview charts.
5. To add a category option:
  - a. Click **Add new...** in the top row of the options table.
  - b. Enter the name of the new category option and click the check icon  to save the new category option. Click the gray X icon  to cancel the addition of the new category option.
  - c. Click **Done** when finished.
  - d. Click **Back** to return to the full list of categories.
6. To edit the name of an existing option:
  - a. Click the existing option name in the table.
  - b. Make changes to the name and click the check icon  to save the new name. Click the gray X icon  to cancel any changes and keep the existing option name.
  - c. Click **Done** when finished to view the updates to the selected category.
  - d. Click **Back** to return to the full list of categories.
7. To delete the selected category:
  - a. Click the category name and select **Delete Category**.
  - b. Click **Yes - Delete** to confirm deletion and return to the full list of categories.

## Set Pod Locations

Location features in Solstice Cloud may automatically group your Pods into categories for Country, City, and Building. These categories are just like other categories, except that they are populated automatically and don't require editing. If these categories aren't intuitive enough, you can create and assign Pods to location-based and other categories to manage and help end users connect to Solstice displays.

For administrative purposes, Solstice Cloud admins can easily segment groups of Pods based on their location while managing template configurations, monitoring uptime, and more. An interactive map can show Pods based on their location, and admins can fine tuning the location of a Pod and identify which floor of the building the Pod is on. Pods must be managed in Solstice Cloud to use these location tools.

## Pod Location Views

There are two different ways to view the locations of Solstice Pods included in your organization in Solstice Cloud. These views can be found in Solstice Cloud under **Manage > Location**.

In the map that appears, the following views are available in the bottom left corner:

- **Cluster by Pods** shows all Solstice Pods in your organization clustered by location. Click on a Pod cluster to zoom in on Pods in that location.
- **Cluster by Buildings** shows Solstice Pods in your organization clustered by building assignment. Zoom in to view finer building location details, including individual Pod locations within buildings (within two stops of maximum zoom).

Clicking the dot representing an individual Pod shows that Pod's configuration settings. You can then perform the following location-related actions from the Pod configuration page.

## How To

### Set the Initial Location of a Pod

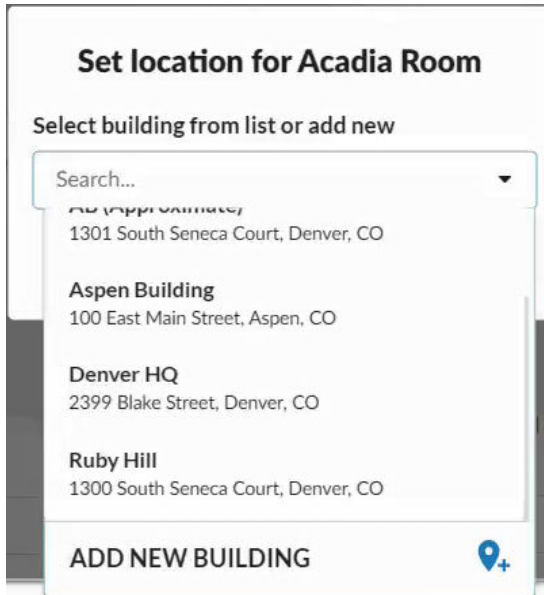
If a Solstice Pod has never been assigned to a location, its configuration page prompts you to assign the Pod to a building.

1. In the left sidebar of Solstice Cloud, navigate to either **Manage > Pods** or **Manage > Location**.
2. In the Pods table that appears, open the Pod configuration page by clicking the name of the Pod you want to assign a location to.

If you manage a large number of Pods, you can reduce the number of Pods displayed in the table by entering all or part of the Pod name in the search box or by setting a filter.

3. The map at the top of the Pod Configuration Settings page indicates the Pod's location is not set, and a **Set location** box appears.

- a. From the **Select building** menu, choose the appropriate building for the selected Pod and click **Next**.



- b. If the desired building is not in the list, click **Add New Building** and follow the prompts. (See details on how to [add a building \[22\]](#) below.) You can then select it from the list.
  - c. Click **Next**.
4. The location is now set for the Pod, and the map zooms in on the Pod's location. From here, you can view and [change \[21\]](#) or [fine-tune \[22\]](#) the location of a Pod.

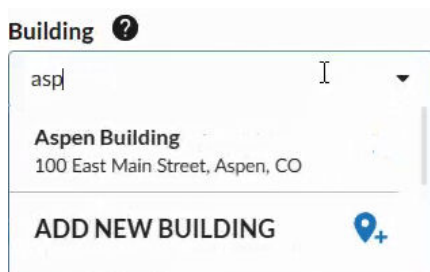
### Change the Location of a Pod

If a Solstice Pod is previously assigned to a location, the bottom of the map on its configuration page shows the building, floor, city, and country for that Pod. The building and floor selections can be modified.

1. In the left sidebar of Solstice Cloud, navigate to **Manage > Location**.
2. Scroll down to the Pods table, and click the name of a Pod that has an assigned location in the Building column.

Click the Building column header twice to sort Pods already assigned to buildings to the top of the table.

3. Below the map of the Pod's location, location details appear. Click into the **Building** field without clicking the arrow. The field changes to a search box, and you can start typing the name of the desired building in the field.



4. From the filtered building list that appears, select the desired building.
5. If the desired building is not in the list, click **Add New Building** and follow the prompts. (See details on how to [add a building \[22\]](#) below.) You can then select it from the list.
6. The map zooms in on the Pod's new location.
7. Select the appropriate **Floor** for the Pod, as needed. If the desired floor does not appear in the menu, click **Add New Floor** and enter the floor number. Then click **Save**.

### Fine-Tune a Pod's Location

After a Solstice Pod is assigned to a location, the Pod's configuration page shows a zoomed-in map of that location. If the Pod appears in the wrong place in the building, its location can be fine tuned.

1. In the left sidebar of Solstice Cloud, navigate to **Manage > Location**. Scroll down to the Pods table, and click the name of a Pod that has an assigned location in the Building column.

Click the Building column header twice to sort Pods already assigned to buildings to the top of the table.

2. On the map of the Pod's location, click **Fine-tune Location** in the upper right. The cursor changes to a hand icon.
3. Click and drag in the map area to reposition the map until the Pod's location dot appears in the correct location in relation to the building.
4. Click **Save**.

### Add a Building Location

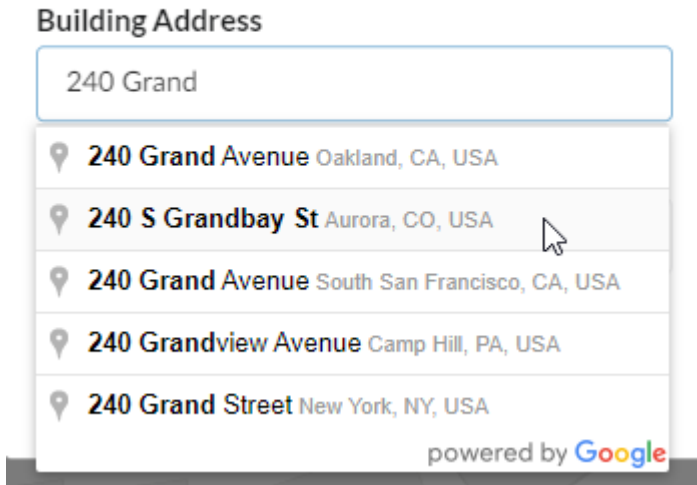
If the building where a Solstice Pod is located does not appear in the existing list of buildings in Solstice Cloud, you can easily add it.

1. Follow the directions above for [setting \[20\]](#) or [changing \[21\]](#) a Pod's location assignment. If the desired building doesn't appear in the **Building** menu, click **Add New Building**.



2. In **Building Address**, start typing the address of the building to be added. From the list of possible matching addresses that appears, select the correct address.

## Add new building



3. If desired, enter a reference name for the new building (e.g., Headquarters) in **Building Name**.
4. Click **Save**.

### Name a Pod for Its Location

Mersive recommends assigning Pods names that correspond with the location or room the Pod is in, such as North Conference Room, to help meeting participants easily identify the appropriate Solstice Pod display for their location.

Mersive recommends assigning Pods names that correspond with the location or room the Pod is in, such as North Conference Room, to help meeting participants easily identify the appropriate Solstice Pod display for their location.

1. To change the name of a Pod in Solstice Cloud, use the left sidebar menu to navigate to either **Manage > Pods** or **Manage > Location**.
2. In the Pods table that appears, find the Pod you want to rename and click the link in the Name column. The Pod's Configuration Settings page opens.




If you manage a large number of Pods, you can reduce the number of Pods displayed in the table by entering all or part of the Pod's name in the search box, or by setting a filter.

3. In the box that shows the Pod's identifying details, enter a **Pod Name** in the text box that corresponds with the location or room the Pod is in.
4. Click **Save**.

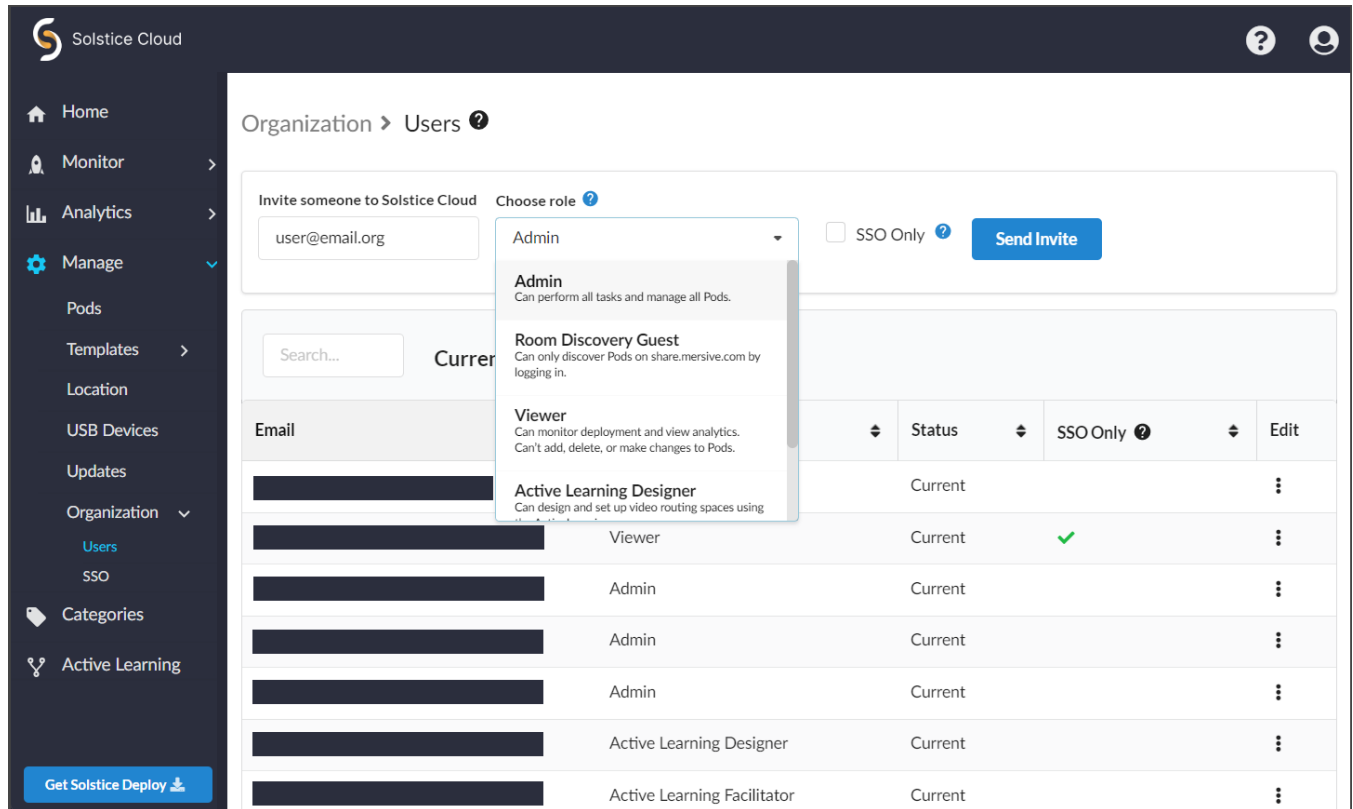
## Manage Users and Roles in Solstice Cloud

Solstice Cloud provides the ability to invite users to your Solstice Cloud organization and manage their level of access. Administrators can configure authentication with Okta or Microsoft Azure AD as an SSO identity provider. The How To section below details how to configure users to authenticate with and without SSO. See [Configure Single Sign-On \[84\]](#) for how to configure your Solstice Cloud organization to connect with an SSO identity provider.

Each user account is assigned a role that determines the level of access and permissions that user has. Users may only add or edit user accounts that are at or below the access level of their own accounts. The following roles and permissions are available to assign to users in your organization:

 Solstice Active Learning functionality is not supported on Solstice Element Pods.

- **Admin:** Can perform all tasks and manage all Pods within the associated Solstice Cloud organization. This level is best reserved for users that administrate an entire Solstice deployment.
- **Room Discovery Guest:** Discovery-only account that can log in on the [Solstice Web app](#) (share.mersive.com) for a list of Solstice Pods to share content to in the associated Solstice Cloud organization.
- **Viewer:** Can monitor the Solstice deployment but cannot add, delete, or make changes to Pods in the deployment. A viewer's access can be restricted to certain groups of Pods.
- **Active Learning Designer:** Can use the Solstice Active Learning app to virtually design and set up video routing spaces. Designers can also facilitate routing sessions.
- **Active Learning Facilitator:** Can use the Active Learning app to conduct video routing sessions.




## How To


### Invite Users and Set Roles and Authentication


1. Log in to Solstice Cloud with an Admin account.
2. In the left navbar, go to **Manage > Organization > Users**.
3. In the **Invite someone to Solstice Cloud** field, enter the email address of the user to invite to access your organization's Solstice Cloud account.
4. From the **Choose role** list, select the role and corresponding permissions to apply to the user. A user's role can be changed at any time.
5. If your organization is configured to use single sign-on (SSO), you have a choice of how to authenticate the new user.
  - a. To always authenticate the new user with SSO, select **SSO Only**.
  - b. To allow the new user the option of authenticating with a password, do not select **SSO Only**.
6. Click the button to invite or add the new user:
  - a. If SSO is not configured for your organization, or if SSO Only is not selected, click **Invite User**. Solstice Cloud sends an email invite with a link to set up an account to the email address provided.

- b. If SSO Only is selected, click **Add User**. The user's account is added to authenticate only with single sign-on.


 Note that a user added as SSO Only cannot later be changed to authenticate with a password. The user account must be removed and re-invited without SSO Only selected to enable password authentication.

### Edit User Roles and Authentication

1. Log in to Solstice Cloud with an Admin account.
2. In the left navbar, go to **Manage > Organization > Users**.
3. In the **Edit** column of the Current Solstice Cloud Users table, click the vertical ellipsis  icon.
  - a. To change the user's role, click **Role**, then select the new role to apply to the user account. The role change is automatically saved.
  - b. To set a user to always authenticate with single sign-on (SSO), click **SSO Only**. A green check appears in the SSO Only column of the user table and after SSO Only in the edit menu.

 To change a user originally added as SSO Only to authenticate with a password, the SSO Only user account must be removed. Then the user can be re-invited without selecting SSO Only.

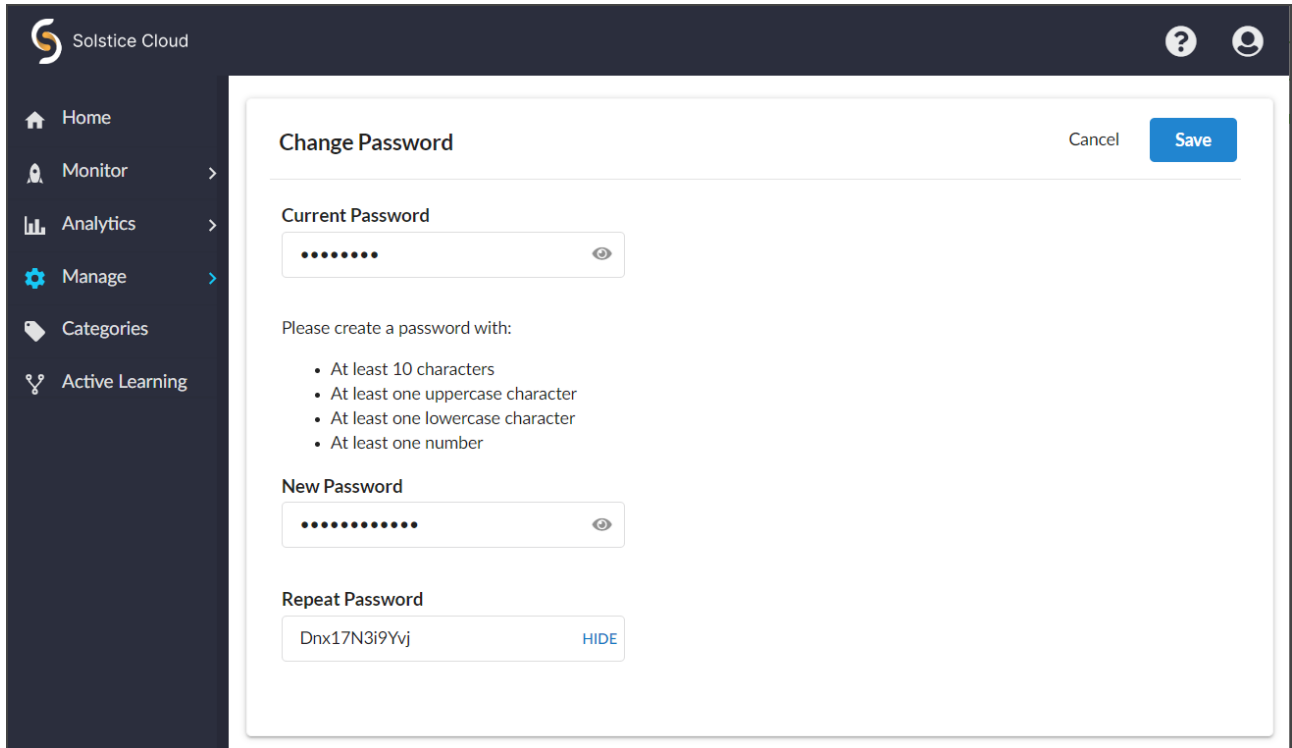
### Delete a User Account

1. Log in to Solstice Cloud with an Admin account.
2. In the left navbar, go to **Manage > Organization > Users**.
3. In the **Edit** column of the Current Solstice Cloud Users table, click the vertical ellipsis  icon.
4. Click **Delete User**. A prompt appears to confirm you want to delete the account.
5. Click **Delete**. The user account is deleted.


### Change Your Account Password

1. Log in to your Solstice Cloud account.

2. Click the **User**  icon in the top-right corner and select **Change Password** from the menu.



If you do not see the Change Password option, your account may be set to SSO Only authentication.

3. Enter your **Current Password** at the top of the page.
4. Then enter a **New Password** that follows the listed password rules.
5. Retype your new password in **Repeat Password**.
6. You may view a password you have entered by clicking the eye  icon next to it. Click **Hide** to stop showing the entered password.
7. Click **Save** to apply the new password to your Solstice Cloud account.

## Pod Settings and Templates

Solstice Cloud administrators can manage Solstice Pods in their organization remotely from anywhere. Related configuration options are grouped together into sets that can be changed for individual Pods or saved into templates to be easily assigned to multiple Pods in a Solstice deployment. There are configuration sets for Ethernet and Wi-Fi network settings, security settings, appearance settings, and more. Solstice Cloud templates can be applied to Pods managed by Solstice version 4.5 or later.

While most settings can be configured by applying templates, there are certain settings or values that are unique to each Pod. Unique-to-Pod settings, such as static IP addresses or DNS hostnames, must be set for each Pod individually. When creating templates, settings that need to be configured individually are labeled as shown in the example below.

### See Example of a Unique-to-Pod Setting

|  |                      |                                 |
|--|----------------------|---------------------------------|
| <b>IP Address</b>                          | <b>Gateway *</b>     | <b>Network Prefix Length *</b>  |
| <input type="text" value="Unique To Pod"/> | <input type="text"/> | <input type="text" value="24"/> |
| <b>DNS 1 *</b>                             | <b>DNS 2</b>         |                                 |
| <input type="text"/>                       | <input type="text"/> |                                 |




Check out the [Create Categories \[17\]](#) topic to learn how to apply templates more efficiently across your deployment. This topic outlines how to create and use categories and categories best practices, allowing you to efficiently apply configuration templates to Solstice Pods based on location, room type, and your own custom categories.

## Solstice Cloud Template Updates

There are multiple ways to change settings for an individual Solstice Pod managed in Solstice Cloud:

1. Create a template for that settings category containing the desired settings and assign the template to the Pod. To do this, see the [Create a New Template \[29\]](#) directions.
2. Use the Pod Configuration page to view and modify unassigned settings categories for the Pod. To do this, see the [Change Unassigned Settings for a Pod \[34\]](#) directions.

3. Edit non-template configuration settings for the individual Pod. To do this, see the [Configure Individual Pod Settings \[35\]](#) directions.

 Solstice administrators should be aware that the Cloud settings for a Solstice Pod take precedence and overwrite any conflicting settings on the Pod itself.

In the case of a settings mismatch for a Pod between Solstice Cloud and the Pod's own settings, Cloud settings always "win." The only exception is when a settings change in a Cloud template causes Solstice Cloud to be unable to connect to the Pod. In this case, the settings in that template set are rolled back to the last working configuration for that Pod. Pod and template status indicators alert users when this case occurs.

## How To

### Define Default Templates

Each required Solstice Cloud configuration category contains one *Default* template. Mersive recommends configuring this template with the most common set of configuration options for the Solstice Pods in your organization's deployment. Then use the [Duplicate a Template \[30\]](#) option to create variations of the template for groups of Pods that use different configuration options.

- For example, use the default Time/Locale template to configure the time zone for Pods in the main office, then duplicate the template and modify the duplicates for Pods located in other time zones.

Default templates are also used for pre-configuring Pod settings before the Pods are shipped. For customers in Mersive's Pre-Provisioning Program, Solstice Pods automatically import into their Solstice Cloud account, significantly reducing the time needed for Pod deployment upon arrival. Reach out to your sales representative for inquiries into the Pod Pre-Provisioning Program.

1. In the left sidebar menu of Solstice Cloud, click **Manage > Templates**.
2. From the list of configuration categories that appears below Templates, select the category to configure.
3. Click the first template in the list, named **Default**, to see the available configuration options.
4. Configure the default settings as appropriate for the majority of Solstice Pods in your deployment.
5. Click **Save**. A green box confirming that the template was updated will briefly appear.


### Create a New Template

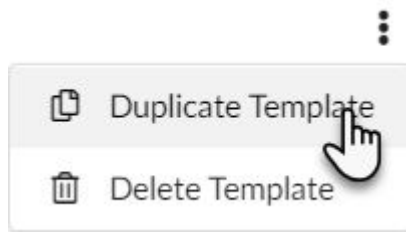
1. In the left sidebar menu of Solstice Cloud, click **Manage > Templates**. A list of available configuration templates appears in the sidebar.
2. From the list of configuration categories that appears below Templates, select the category to configure.
3. Click **Create New Template**.
4. Enter a descriptive **Template Name**. For example, you could name the template by location (London Office) or appearance (Mountain Theme), as appropriate for its purpose.
5. Configure the settings to be applied to the Solstice Pods using this template.

6. Click **Save**.

 Most settings can be configured collectively in templates, but you may occasionally see settings or values labeled "Unique to Pod" that need to be set for each Pod individually. See [Apply a Template to Pods](#) for details.


### Duplicate a Template

1. In the left sidebar menu of Solstice Cloud, click **Manage > Templates**.
2. From the list of configuration categories that appears below Templates, select the category to configure.
3. For the template to duplicate, click the vertical ellipsis  icon, then select **Duplicate Template**.



4. Give the duplicated template a descriptive **Template Name**, ideally related to its purpose, and change the configuration settings as needed.
5. Click **Save**.


### Apply a Template to Pods

 Solstice administrators should be aware that the Cloud settings for a Solstice Pod take precedence and overwrite any conflicting settings on the Pod itself.

In the case of a settings mismatch for a Pod between Solstice Cloud and the Pod's own settings, Cloud settings always "win." The only exception is when a settings change in a Cloud template causes Solstice Cloud to be unable to connect to the Pod. In this case, the settings in that template set are rolled back to the last working configuration for that Pod. Pod and template status indicators alert users when this case occurs.

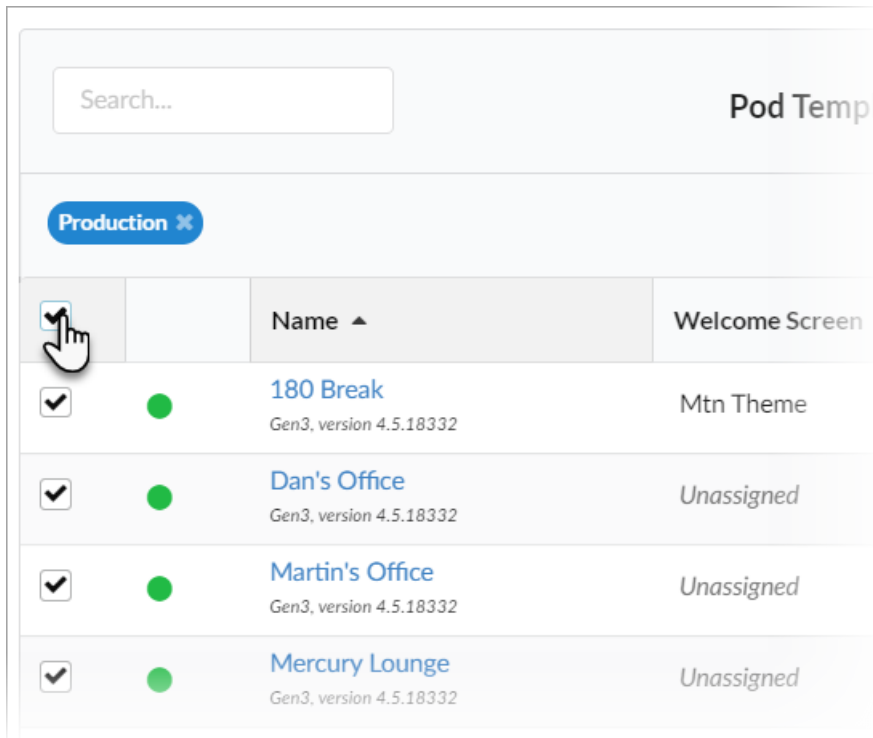
1. In the left sidebar menu of Solstice Cloud, click **Manage > Pods**.

The Pod Template Assignments table displays. This table is used to apply templates across your deployment. You can apply a template to multiple Pods at once.

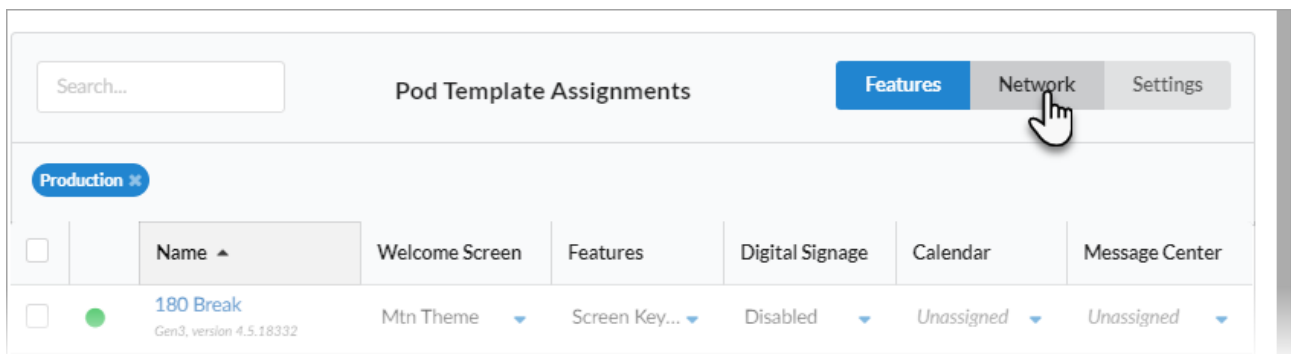
 Filter Solstice Pods in your deployment by default categories or categories you have created to apply templates efficiently to similar Pods. Filters allow you to apply templates by criteria such as location or campus, depending on the categories you have created and assigned to Pods.



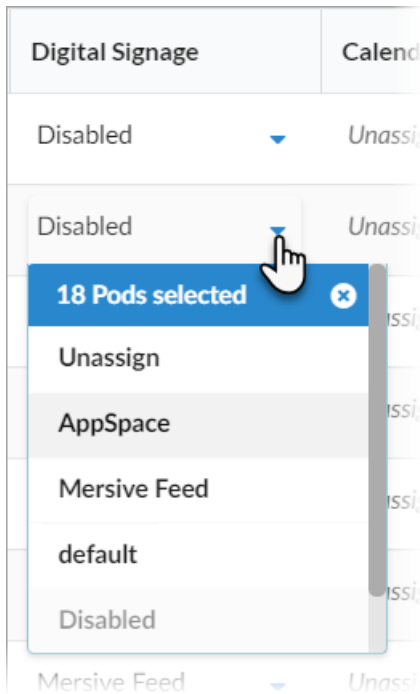
- 2. Select the Pods you want to apply the template to. You can select each Pod's checkbox individually, or select the checkbox in the header row of the table to select all Pods showing in the table.



- 3. For each template you want to apply, go to the corresponding template type column (e.g., Welcome Screen). You can view different groups of templates by selecting a template category in the upper right corner of the table.

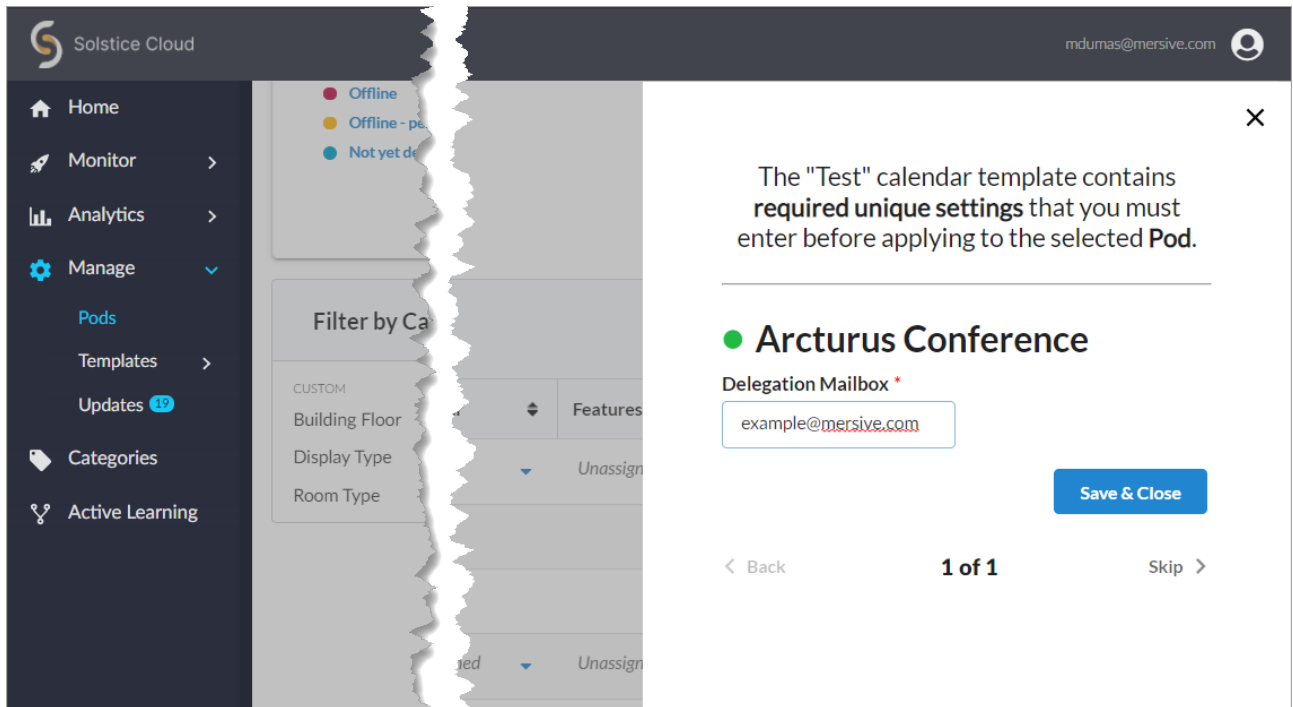


4. Select the template with the desired configuration from the list in the appropriate column for one of the selected Pods. This applies the template to all the selected Pods in the table.



5. Click **Confirm** when to confirm applying the selected template to all selected Pods.
6. As changes are being applied, the pending changes 🕒 icon appears next to the template(s) being applied. After the changes are applied, the Pod's normal status resumes.
  - If a Pod is offline, any changes made are applied when the Pod comes back online.
  - If a settings change in a Cloud template causes Solstice Cloud to be unable to connect to the Pod, the Pod's settings for that template is rolled back to their previous configuration. A failure icon ❗ shows that the template could not be applied.

7. If a template you applied has any unique-to-Pod settings that need to be applied each Pod individually, a pop-up pane appears prompting you to enter the needed information for each affected Pod. After you complete all of the settings screens, click **Save & Close**.



Solstice checks the settings selected for a Pod in Solstice Cloud management against the settings on the Pod itself approximately once an hour, as well as upon Pod reboot.

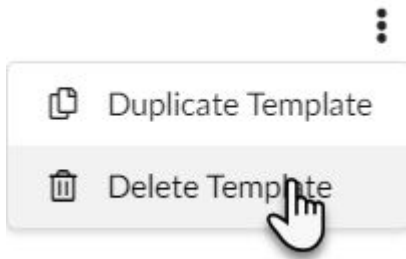
### Edit a Template

1. In the left sidebar menu of Solstice Cloud, click **Manage > Templates**. A list of available configuration templates appears in the sidebar.
2. From the list of configuration categories that appears below Templates, select the category to configure.
3. Click on the template to edit.
4. Edit or update any of the template's settings.
5. Click **Save**. If the template is applied to any Pods, clicking Save applies any changes to those Pods.

### Delete a Template

1. In the left sidebar menu of Solstice Cloud, click **Manage > Templates**. A list of available configuration templates appears in the sidebar.
2. From the list of configuration categories that appears below Templates, select the category to configure.


- For the template to delete, click the vertical ellipsis  icon, then select **Delete Template**.

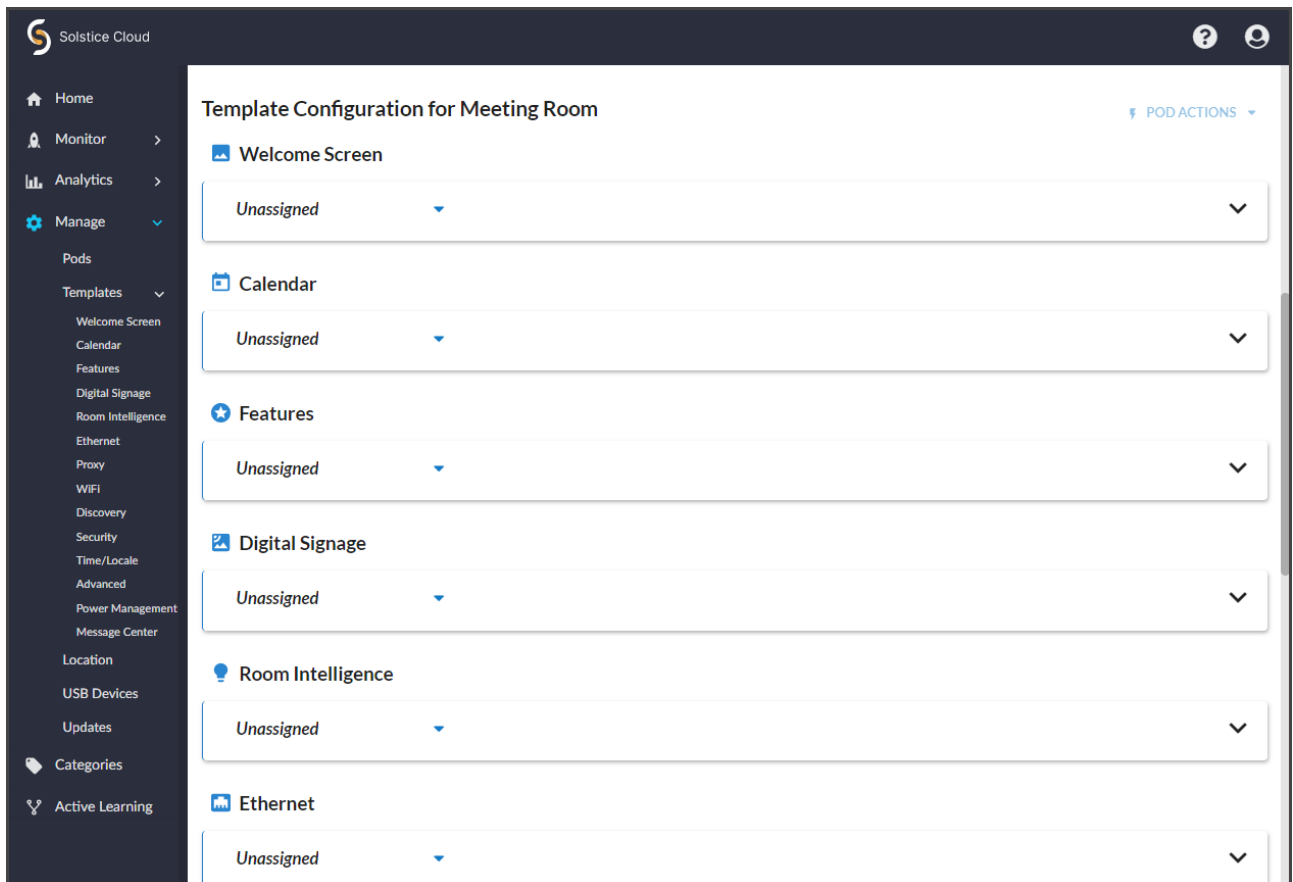


- In the confirmation pop-up that appears, click **Delete**.

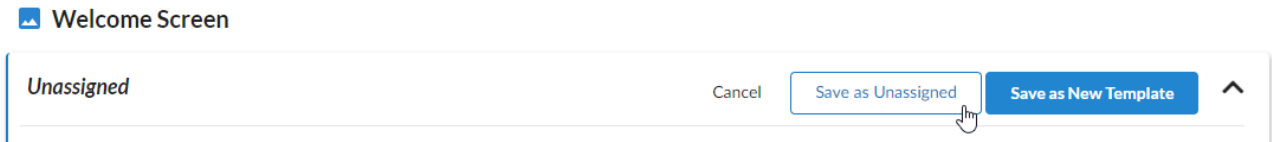
### Change Unassigned Settings for a Pod

To apply settings to an individual Pod without assigning a template:

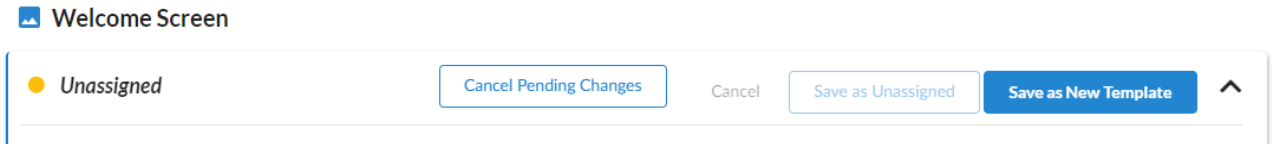
- In the left sidebar menu of Solstice Cloud, click **Manage > Pods**.
- In the Pod Template Assignments table, click the name of the Pod you want to configure.
- Scroll down to the Template Configuration section and click the  icon to expand the options available for a particular settings category.



- Configure the settings as desired and then click **Save as Unassigned**.



- A message appears confirming the Pod configuration is updated. Until the configuration is successfully applied to the Pod, an option is available to Cancel Pending Changes.

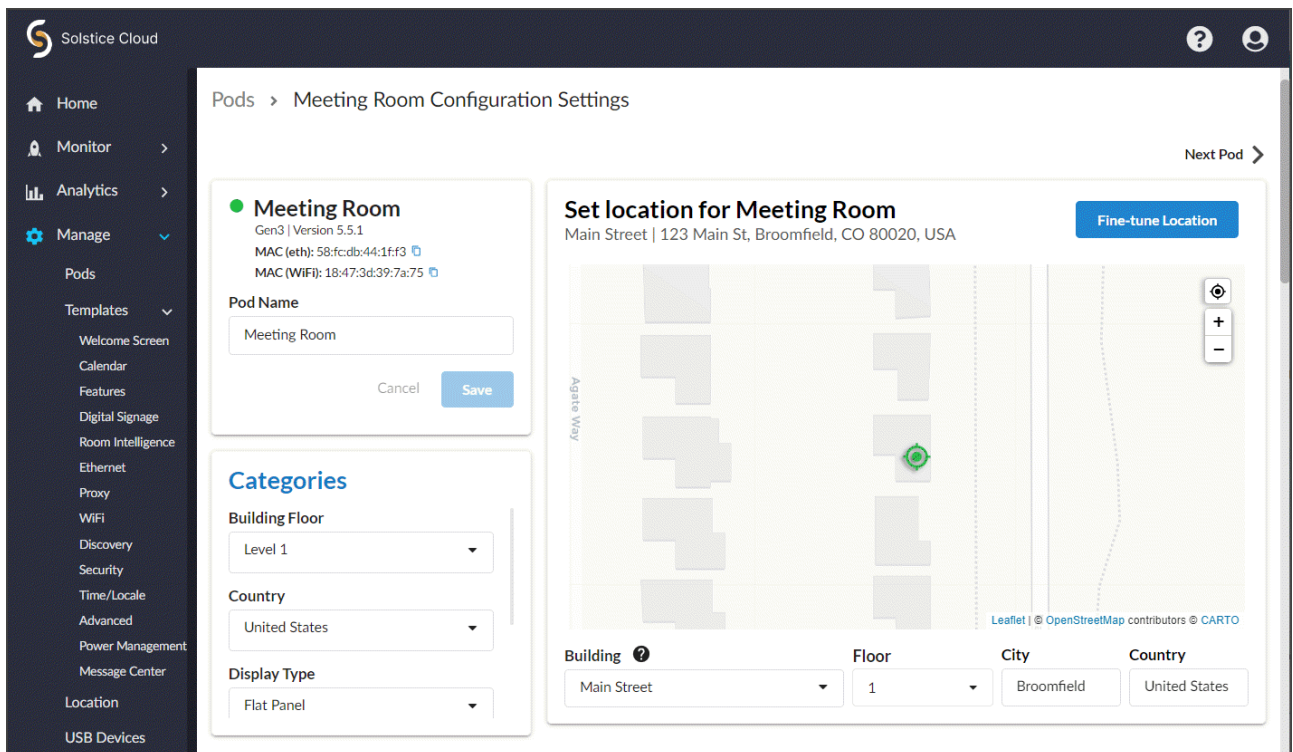


### Configure Individual Pod Settings

For each Solstice Pod, some settings are maintained outside of the configuration template sets, including the Pod's name, location, and categories the Pod is assigned to. The directions below describe how to edit these settings for an individual Pod.

Location and category assignments can also be managed for multiple Pods. See the [Create Categories and Assign Pods \[17\]](#) and [Set Pod Locations \[20\]](#) topics for more information.

- In the left sidebar menu of Solstice Cloud, click **Manage > Pods**.
- In the Pod Template Assignments table, click the name of the Pod you want to configure.



3. To update the Solstice display name that appears on the Pod's welcome screen and in the list of available Solstice displays in the Mersive Solstice app:
  - In the configuration section containing the Pod's name, enter the desired **Pod Name**.
4. In the location section, set and update location information for the selected Pod:
  - a. Use the **Building** list to select a previously defined location or create a new building profile.
  - b. You can also select an existing or create a new **Floor**.
  - c. Click **Fine-Tune Location**, then zoom into and drag the map to more accurately locate the target icon for the selected Pod in the correct building outline.
5. View and manage category options for the selected Pod in the Categories section. Categories in Solstice Cloud management are highly customizable. See [Create Categories and Assign Pods \[17\]](#) for more details.
6. After clicking **Save**, the status icon next to the Pod's name changes to the working indicator. When Solstice Cloud confirms that the changes are successfully applied to the Pod, the indicator returns to green (online).

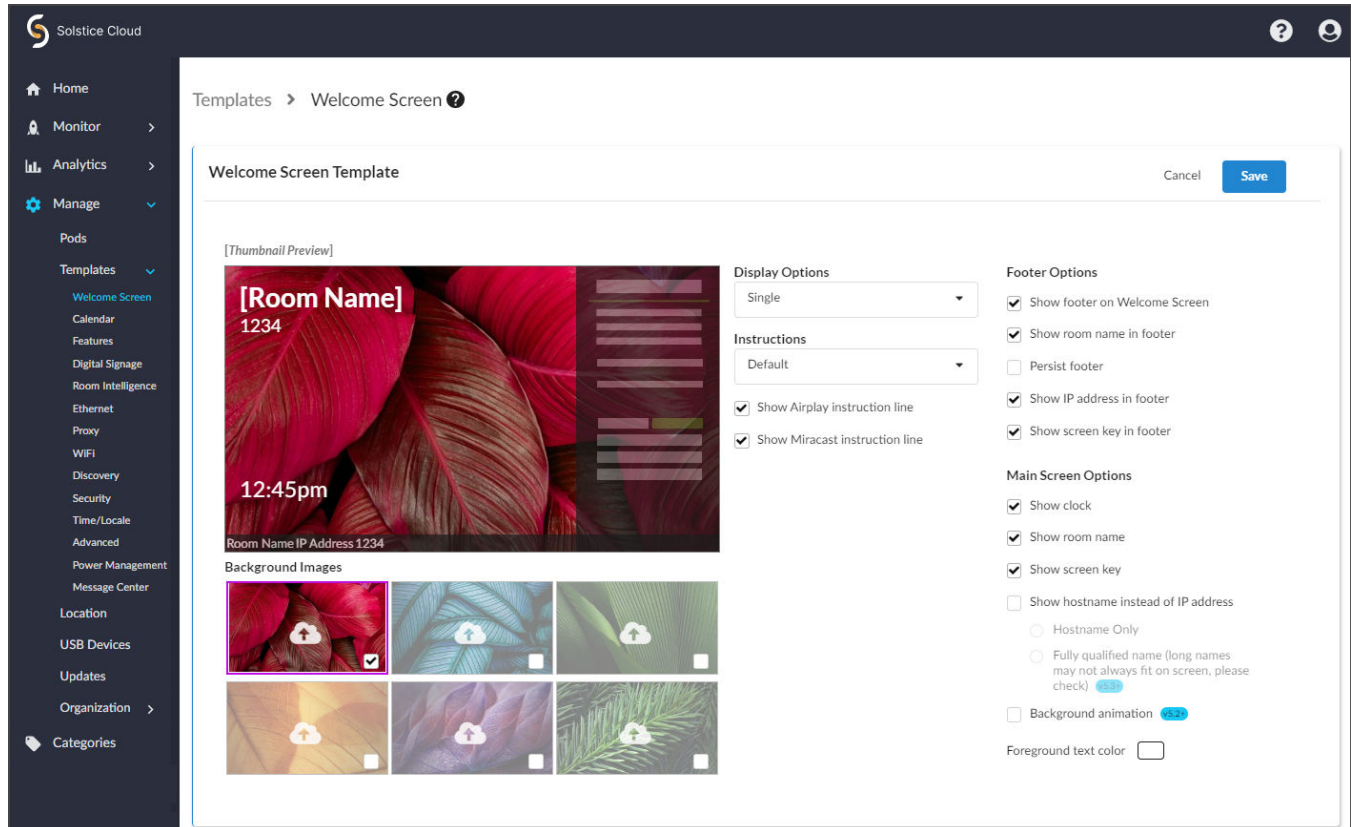
### Perform Other Pod Actions

A number of other actions can be applied to one or more Solstice Pods from the Pod Actions menu available from Pod Template Assignments in Solstice Cloud.

1. In the left sidebar menu of Solstice Cloud, click **Manage > Pods**.
2. In the Pod Template Assignments table, check the box in the left column to select one or more Solstice Pods.
3. From the **Pod Actions** menu that appears above the right side of the table, you can perform the following actions on the selected Pod(s):
  - Reboot Pod(s) – Pod(s) perform a hardware reboot.
  - Disconnect all users – All users are disconnected from selected Pod(s).
  - Clear Screen – All content shared to Solstice is cleared for the selected Pod(s). Users are not disconnected.
  - Power Management: Wake – Wake suspended Pod(s). This re-enables the HDMI signal to display monitors.
  - Power Management: Suspend – Disconnects all users from selected Pod(s) and suspends the HDMI signal to display monitors.
  - Delete Pod(s) – Remove selected Pod(s) from Solstice Cloud management for the logged-in organization.

# Welcome Screen Template

The Welcome Screen template gives you many options to customize the appearance of your Solstice display welcome screen to match your organization's branding by changing or uploading background images, adding custom connection instructions, choosing the text color, and more.



## How To

### Access This Page


- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > Welcome Screen**.

### Create a New Template

- Click **Create New Welcome Screen Template**.
- Enter the template name. For example, you could name the template by location (London Office) or descriptively (Mountain Theme).

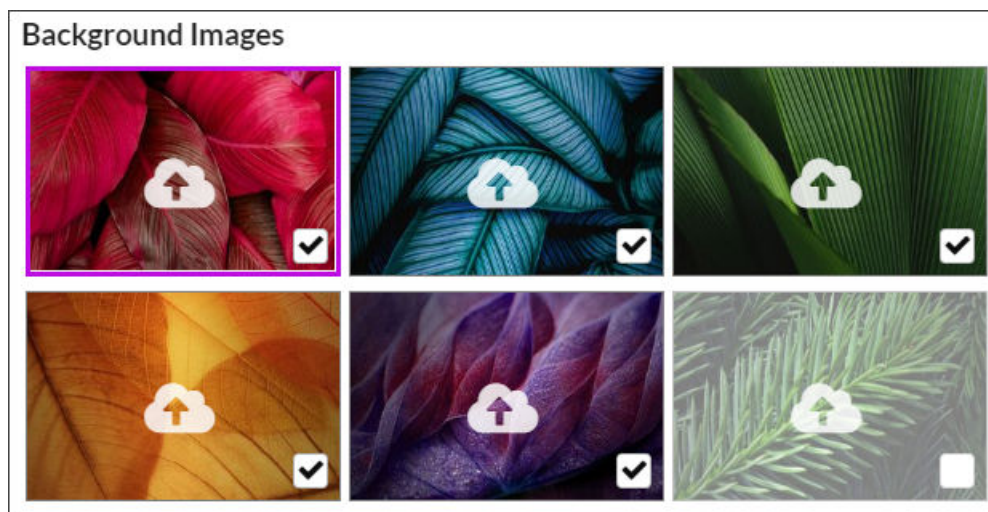


3. After you are done creating and customizing your template, click **Save** in the top right corner of the template. After a template is saved, it can be assigned to Pods. Templates can be edited or deleted at any time.

 You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

## Manage Background Images

The **Thumbnail Preview** displays how the Solstice welcome screen looks with the current settings. This preview changes as you edit options on the page. Below the preview, you can manage the **Background Images**. You can have up to six background images, and the welcome screen rotates through the images that are enabled.



1. To change the background image to one of your own, click on the upload icon for that background image. Then browse to the image file and select.
2. Disable background images from the rotating display by deselecting the checkbox in the lower right corner of the background image preview.
3. Click **Save**.

The Solstice screen measures 1920x1080 pixels at 1080p and 3840x2160 at 4K. Refer to the pixel maps if you are using the Solstice footer and/or sidebar overlay to ensure Solstice elements do not overlap important aspects of custom background images (.png or .jpg) or digital signage. [See Solstice screen pixel maps](#).


Check out [How to Customize the Solstice Welcome Screen](#) for more ways to update information and display options on the Solstice Pod's welcome screen.

## Manage Display Options

If you are using two monitors, you can control how the screens are displayed. Display options are available for Pods that are connected to a single display monitor, or dual (two) display monitors.




1. From the **Display Options** list, select how you want Pods assigned to this template to appear on connected monitors based on your preferences and Pods' display configuration:
  - **Single** (default): Select this setting for Pods connected to a single display monitor.
  - **Dual - Mirror**: Select to have Pods display the same (mirror) content on two connected display monitors.
  - **Dual - Extend**: Select to have Pods treat two connected displays as a single collaboration panel. Content can be shared to both displays and moved between them. Solstice intelligently knows where one display ends and the next begins and does not break a content post across the two displays.
  - **Dual - Seamless Extend**: Select to have content posted across two displays as if they are a single seamless display. This mode is recommended for video walls or other setups where there is no bevel or seam between the two displays.

 Extend and Seamless Extend modes for Solstice Pods with dual display monitors do not currently affect the Solstice welcome screen, causing the Solstice welcome screen to always appear mirrored on both monitors. However, Extend and Seamless Extend settings do still apply to the Solstice sharing space, allowing shared content posts to be spread out and moved around across both monitors.

An issue on newer Gen3 Solstice Pods that made sharing appear in Dual - Mirror mode rather than Dual - Extend or Dual - Seamless Extend mode has been resolved in Solstice 6.1.2.

2. Click **Save**.

 Dual output display options are only available for Gen3 Pods with dual HDMI out.

### Customize Connection Instructions

Connection instructions give end-users the information they need to connect to Solstice. You can customize these instructions according to how your organization has configured Solstice to allow users to quickly connect.

1. From the Instructions list, select how you want the connection instructions to appear on the welcome screen for meeting participants.
  - **Default**: Selecting this setting displays Solstice's default connection instructions to meeting attendees on the welcome screen.
  - **Show custom instructions**: Allows the creation of custom connection instructions specific to your organization's Solstice configuration.

- When **Show custom instructions** is selected, a rich text field appears below, allowing you to enter and format custom connection instructions.



You can include responsive variables, which will be automatically replaced with Pod-specific information, in your custom instructions. Available variables are [RoomName], [ScreenKey], [WifiNetworkName], [WifiIP], [EthNetworkName], and [EthIP]. Note that variables are case sensitive.

You can use the following as a starting point for your custom instructions:

```
To get started:  
1. Browse to share.mersive.com  
2. Enter [EthIP] or [WifiIP]  
3. Enter the Screen Key [ScreenKey] and connect  
4. Share content to this screen!
```

- To hide Airplay instructions, uncheck **Show Airplay instruction line**.
- To hide the Miracast instructions, uncheck **Show Miracast instruction line**.
- Click **Save**. A message displays confirming that the Pod configuration are updated.

### Set Footer Options

The footer at the bottom the Solstice welcome screen shows information for users to easily discover and connect to that Solstice Pod's display. Solstice allows you to set whether or not this presence bar shows, as well as the information it contains.

- Select the following options as appropriate to your Solstice configuration and preferences:
  - Show footer on Welcome Screen:** Displays the presence bar as a footer on the welcome screen.
  - Show room name in footer:** Displays the room/display name.
  - Persist footer:** Footer always displays, even during collaboration sessions.
  - Show IP address in footer:** Displays the Pod's IP address or DNS hostname.
  - Show screen key in footer:** If a screen key is enabled on a Pod, this option displays the 4-digit screen key required to connect to the Pod.
- Click **Save**.

### Manage Main Screen Options

These options control elements that display on the Solstice welcome screen, such as the clock or the room name.

- Watch the thumbnail preview to see how the footer changes as you select or deselect the following options:
  - Show clock
  - Show room name
  - Show screen key (if screen key is enabled)
- Select **Show hostname instead of IP address** to show the hostname of the Pod rather than its IP address on the welcome screen. (No preview available.)

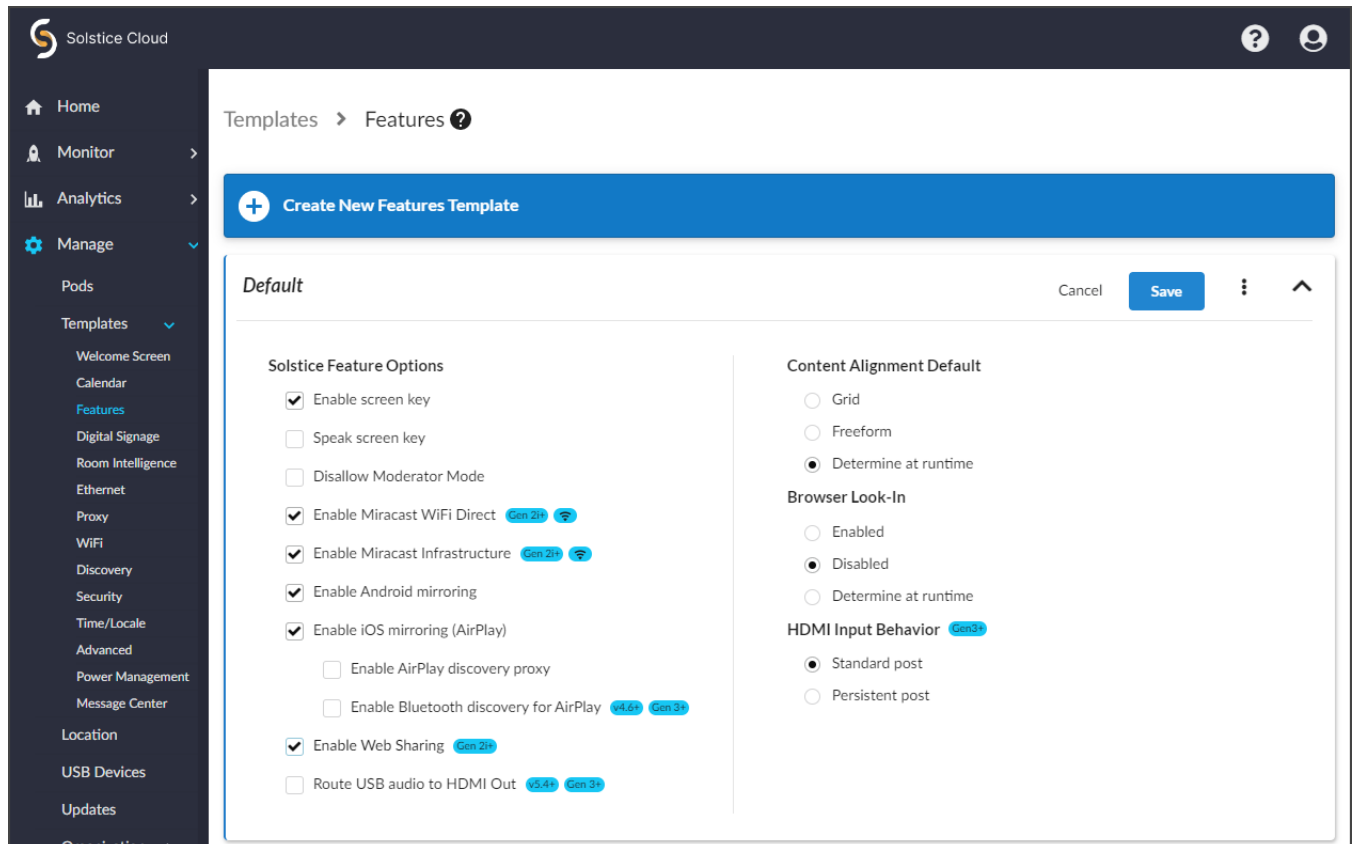
- Choose **Hostname Only** to show only the name of the individual Pod.
  - Choose the **Fully qualified name** option to show the Pod's fully qualified domain name.
3. Select **Background animation** to enable a slow-moving pan back and forth on the selected background image(s) to mitigate potential display burn-in (particularly useful when using only one background image).
  4. To change the color of the text on the welcome screen, find the **Foreground text color** option under the **Main Screen Options** and click on the color preview box (white by default). You can either select a color using the color picker or enter the 6-digit hex code of the color to use.



5. Click **Save**.

# Features Template

The Features template allows you to configure options for how attendees view and interact with the Solstice display. It includes options that determine how attendees can connect to the meeting, as well as how they view and share content on their personal devices. Miracast and AirPlay support can also be enabled. For more information on how to configure Solstice to support sharing with AirPlay and Miracast, see [Enable Sharing with AirPlay \[46\]](#) and [Enable Sharing with Miracast \[47\]](#).



## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > Features**.

### Create a New Features Template

- Click **Create New Features Template**.
- Enter the **Template Name**. For example, name the template by location (London Office) or descriptively (Mountain Theme).

3. After you are done creating and customizing your template, click **Save** in the top right corner of the template. After a template is saved, it can be assigned to Pods. Templates can be edited or deleted at any time.



You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

### Enable Screen Key

When enabled, this option requires in-room users to enter the randomly generated screen key on the Solstice display before they can connect. An accessibility option to speak the screen key can also be selected.

1. In the **Solstice Feature Options** section, select **Enable screen key**.
2. If desired, select the **Speak screen key** option read the screen key aloud when a user attempts to connect to the display. If multiple connection attempts occur in short succession, the screen key is spoken a maximum of one time every 10 seconds.
3. Click **Save**.

### Disallow Moderator Mode



Moderator Mode allows you to approve or deny requests from users to join the session or post content to the display. Moderator Mode is enabled by default.

1. To disable Moderator Mode, select **Disallow Moderator Mode**.
2. Click **Save**.


### Enable Miracast

Users can mirror their Windows device screens to a Solstice Pods via Miracast in two ways: either over the existing network infrastructure the Pod is connected to, or directly to the Pod via a wireless P2P stream.

- To enable Miracast mirroring, apply the appropriate settings for your Pods' network configuration based on the table below.


| Network Configuration                              | Miracast Configuration in Solstice Cloud  |
|--|---|
| Ethernet Only (recommended)                        | <ul style="list-style-type: none"> <li>Select both <b>Enable Miracast Infrastructure</b> and <b>Enable Miracast WiFi Direct</b>.</li> </ul> <div style="background-color: #e1f5fe; padding: 5px; margin-top: 5px;"> <p> WiFi must also be enabled on Pods for Miracast discovery. In the WiFi configuration, select <b>Enable WiFi</b>, choose <b>Existing Network</b>, set Security Type to <b>Open</b>, and leave <b>SSID</b> blank. (The wireless interface will only be used for Miracast discovery.)</p> </div> <div style="background-color: #ffe0b2; padding: 5px; margin-top: 5px;"> <p> Turning off Miracast WiFi Direct and then back on in quick succession for a Solstice Pod may result in it temporarily appearing multiple times in the Windows Connect and Wi-Fi connection panels. To resolve this issue, refresh the list of available Miracast WFD devices by turning Wi-Fi off and back on for affected Windows devices.</p> </div> |
| Wirelessly Attached to Existing Network Only       | <ul style="list-style-type: none"> <li>Select <b>Enable Miracast Infrastructure</b>.</li> </ul>   |
| Ethernet + Wirelessly Attached to Existing Network | <ul style="list-style-type: none"> <li>Select <b>Enable Miracast Infrastructure</b>.</li> </ul>   |
| Ethernet + Wireless Access Point                   | Miracast not supported. When the Pod is acting as an access point, Miracast discovery cannot operate. Contact Mersive to discuss other options like attaching your Pod to an existing network.  |
| Wireless Access Point Only                         | Miracast not supported. When the Pod is acting as an access point, Miracast discovery cannot operate. Contact Mersive to discuss other options like attaching your Pod to an existing network.  |

- Click **Save**.

 For more about Miracast and configuring it for your organization's needs, see [Enable Sharing with Miracast \[47\]](#).

### Enable Android Mirroring

Android mirroring allows screen mirroring from an Android mobile device using the Solstice Mirrorapp to the Pod display, depending on your network configuration and preferences.

 Some Android apps may block audio capture, preventing the streaming of their audio to Solstice.


- Select **Enable Android mirroring**.
- Click **Save**.

### Enable iOS Mirroring (AirPlay)


There are a number of available options for allowing iOS users to mirror their device screens to a Pod display, depending on your network configuration and preferences.

- To allow users to mirror their iOS device screen to the Pod, select **Enable iOS mirroring (AirPlay)**.
- Select the **Enable AirPlay discovery proxy** option if your network does not allow use of Apple's Bonjour.

3. Select the **Enable Bluetooth discovery for AirPlay** option to allow end-users to discover the Solstice display without having to first connect to the network.

 This option provides another alternative for discovery in environments that do not allow UDP broadcast traffic or Apple's Bonjour protocol. Available starting on Solstice 4.6 and Gen3 Pods. Users must still connect to the same network as the Pod to stream content via AirPlay.

4. Click **Save**.

 For more information on how to configure AirPlay, see [Enable Sharing with AirPlay \[46\]](#).

### Enable Web Sharing via Browser

Enabling this option allows users to connect to a Solstice display and share content without installing the Mersive Solstice app by using a web browser, either using `http://[Solstice URL]:6443` (Solstice 5.5.2 and earlier) or with the redesigned [Solstice web app](#) at `share.mersive.com`.

The Solstice web app is supported on Solstice Pods running Solstice 6 and later. It is secured with a new default SSL certificate. Upgrading a Solstice Pod to Solstice 6+ replaces the old Mersive default certificate, but does not overwrite customer-installed certificates.

1. Select **Enable Web Sharing**. (Available on Gen2i and Gen3 Pods.)
2. Click **Save**.

### Route USB Audio to HDMI Out

When a USB device with audio output, such as a composite camera, is connected to a Gen3 Solstice Pod, audio output for the Pod is routed through the USB port to the USB device by default. However, starting in Solstice 5.4 you can choose for audio to instead be routed to the HDMI output, or HDMI outputs if the Pod is connected to more than one display monitor.

1. Check **Route audio to HDMI Out** to redirect USB audio to the HDMI Output(s).
2. Click **Save**.

### Select Content Alignment Default Options


These settings determine how content shared to Solstice is aligned on the display.

1. Select one of the following options:
  - **Grid**: The content alignment is set to grid mode, which automatically aligns content into a grid-like pattern. End-users can not change the alignment.
  - **Freeform**: The content alignment is set to free-form mode, which allows content to be moved around without being restricted to a grid. End-users can not change this setting.
  - **Determine at runtime** (recommended): Allows end-users to set the preferred content alignment mode when they use the Solstice app.
2. Click **Save**.

## Select Browser Look-In Options

These options are used to specify whether end-users can view collaboration sessions remotely using a web browser.

1. Select one of the following options:
  - **Enabled:** End-users can view collaboration sessions remotely using a web browser by entering the IP address on the Solstice display.
  - **Disabled:** End-users can not view collaboration sessions remotely.
  - **Determine at runtime:** When a collaboration session begins, end-users can decide if the collaboration session may be viewed remotely.


 If the security of your collaboration sessions is a concern, Mersive recommends selecting **Disabled**.

2. Click **Save**.


## Select HDMI Input Behavior Options

You can set the default behavior for a wired source connected to the HDMI-in port of a Solstice Gen3 Pod. This is useful if you want to use a persistent wired input source such as a dedicated in-room computer, an integrated video room system device, or a digital signage media player between collaboration sessions.

1. Select one of the following options HDMI input behavior mode options:
  - a. **Standard Post** (default): If a wired HDMI-in source is connected to the Solstice Pod, it is treated as a standard Solstice content post. For example, choose this if guest users often use the HDMI-in port to connect to the Solstice sharing space without network access.
  - b. **Persistent Post:** A wired HDMI-in source persistently connected to the Solstice Pod, appears full screen while there are no other posts shared to Solstice. When another post is shared, the wired HDMI-in source is automatically moved off screen to the dock. When all wireless posts are deleted, the wired HDMI-in source automatically returns to full screen. This mode is designed to support wired inputs that should appear anytime users are not actively sharing content to Solstice.

 In Persistent Post mode, the post from the HDMI-in port is docked during wireless sharing but cannot be deleted. To remove the post, unplug the wired HDMI-in source.

2. Click **Save**.

 Want to enable Solstice occupancy data? See the [Room Intelligence Template](#).

## Enable Sharing with AirPlay

Screen mirroring for Mac and iOS devices is available through Solstice's support for AirPlay® mirroring. This allows users to wirelessly stream their screen to the Solstice display in real-time without having to install an app. If your network does not allow UDP broadcast traffic or Apple's Bonjour protocol, Solstice provides an AirPlay discovery proxy alternative that can be used instead.



## Network Routing Requirements


The following network ports/routes are required to support AirPlay streaming to Solstice Pods.

- **TCP ports 6000-7000, 7100, 47000, and 47010:** Allow inbound AirPlay traffic to the Solstice host.
- **UDP port 5353:** Required for iOS mirroring via the Bonjour protocol. It is not required when using the Solstice Bonjour Proxy.
- **UDP ports 6000-7000, and 7011:** Allow inbound AirPlay traffic to the Solstice host.



For more information on all of the network ports that Solstice uses, see [Open Network Ports](#).

## How To Enable Sharing with AirPlay in Solstice Cloud

1. Log in to [Solstice Cloud](#). In the left sidebar navigation, expand the **Manage** category and select **Pods**.
2. From the table, click the name of the Pod to set up for Miracast. Scroll down to the **Template Configuration** section and click the  icon to the right of **Features**. If the Pod is previously assigned to a Features template, click **Edit** to change its Features settings individually.
3. To allow users to mirror their iOS device screen to the Pod, check **Enable iOS mirroring (AirPlay)** in the left column.
4. If your network does not allow UDP broadcast traffic, check one of the following options:
  - **Enable AirPlay discovery proxy**- Uses an alternative discovery proxy if the network does not allow the use of Apple's Bonjour. Note: This option may not support video sharing.
  - **Enable Bluetooth discovery for AirPlay** - Allows Bluetooth-enabled Apple devices to discover and connect to the Pod using Bluetooth. The Solstice display appears in their device's list of available Bluetooth devices. However, users still need to connect to the same network as the Pod to stream content via AirPlay.
5. Save the AirPlay settings changes with the option that best fits your situation:
  - Click **Save as Unassigned** to save the Pod's settings uniquely (not assigned to a template).
  - Click **Save as New Template** to create a Miracast-enabled template that other Pods can be assigned to in the Pods table.

## Enable Sharing with Miracast

Screen mirroring for Windows devices is available through Solstice's support for Miracast streaming. This allows users to wirelessly mirror or extend their screen to the Solstice display in real-time without having to install an app.

Solstice's support for Miracast works in two stages. In the discovery stage, a Miracast-enabled device searches for active Miracast receivers nearby for the user to connect and stream to. This requires the Solstice Pod's wireless network interface card to be enabled and not acting as a wireless access point. In the second stage, the device streams content to the Miracast receiver using either an existing network (Miracast over Existing Network) or a peer-to-peer wireless connection (WiFi Direct).

Solstice's Miracast support has three modes:

- **Over Existing Network/Infrastructure and WiFi Direct (recommended).** Allows Pods to dynamically select best video streaming mode. Most robust device connection and setup configuration. Windows and Android devices supported.
- **Over Existing Network/Infrastructure.** Leverages existing network to support larger number of simultaneous Miracast users. All Miracast traffic is subjected to network security and monitoring. Windows 10 and later devices supported.
- **WiFi Direct.** Good for use cases where one Miracast device is used at a time. Windows and Android devices supported.

## Network Routing Requirements

The following network ports/routes are required to support Miracast streaming to Solstice Pods.

- **TCP port 7236:** WiFi Direct control port used to establish and manage sessions between the source device and the Pod.
- **TCP port 7250:** Port on which the Pod listens for Miracast packets when Over Existing Network mode is enabled.
- **UDP port 5353:** If Miracast Over Existing Network mode is enabled, this port is used for multicast DNS (mDNS). mDNS is broadcast to the local subnet of each network interface the Pod is connected to. If the computer that is attempting to make an infrastructure connection is on a different subnet, this broadcast will fail. If this happens, a workaround is to create a DNS entry to the Pod's hostname.
- For Gen2i Pods, confirm that port **32768:60999** is also open.
- Ensure that the IP address space for WiFi Direct (**192.168.49.\***) is not behind a firewall.



Miracast may use any non-privileged UDP port from 1024 to 65535 for video streaming.


## Important Considerations

- Miracast requires that the Pod be located in close proximity to the display. Miracast discovery operates over a range of approximately 150–200 feet. Only Pods within this range appear in the Miracast source list on the client device.
- Many factors can affect the performance of Miracast streaming. For more information on Miracast performance by configuration and use case, view the [Miracast Performance Tech Note](#).

## How To Enable Sharing with Miracast in Solstice Cloud

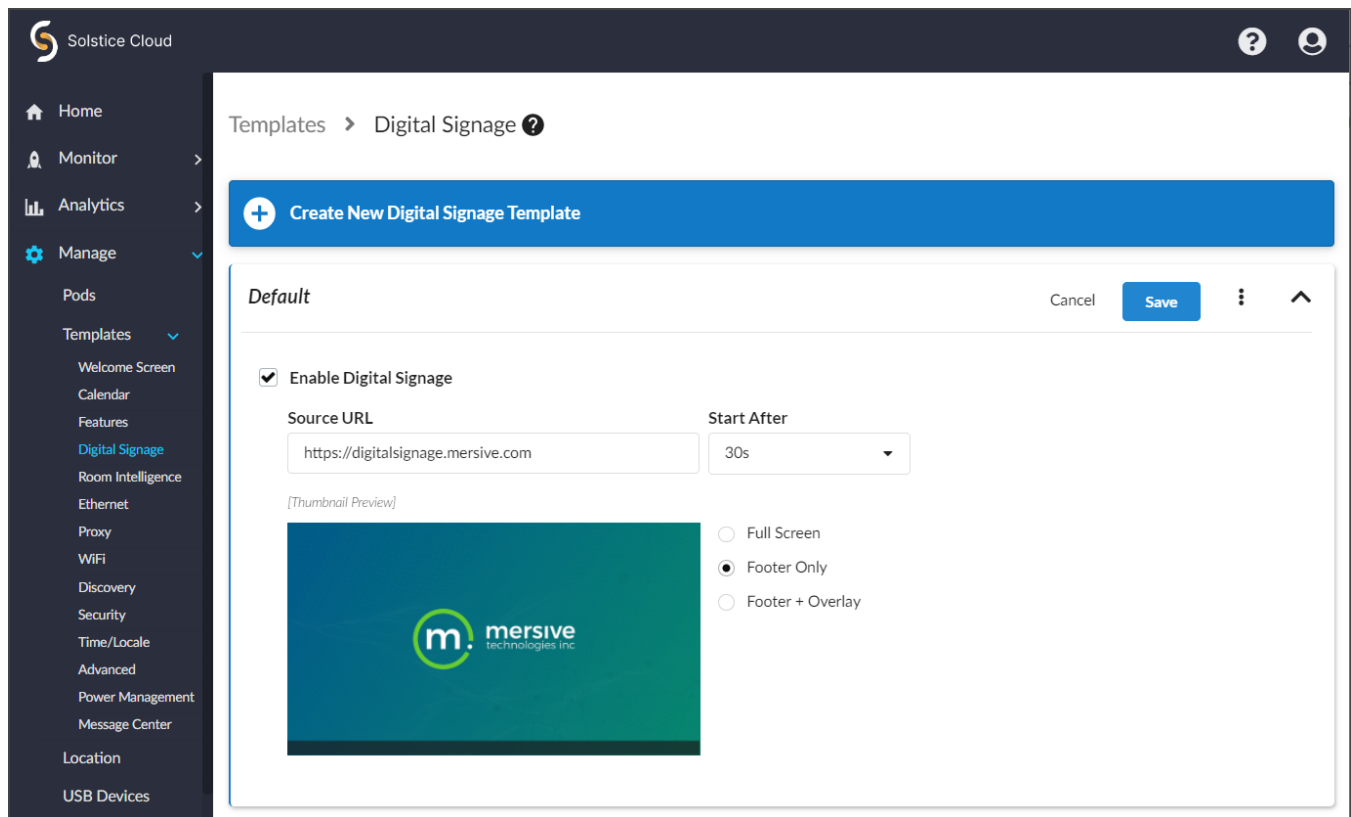
1. Log in to [Solstice Cloud](#). In the left sidebar navigation, expand the **Manage** category and select **Pods**.

- From the table, click the name of the Pod to be set up for Miracast. Scroll down to **Template Configuration** section and apply the following settings, according to your network configuration based on the table below.

| Pod's Network Configuration                        | Pod Configuration for Miracast in Solstice Cloud   |
|--|--|
| Ethernet Only (recommended)                        | <ol style="list-style-type: none"> <li>Expand the WiFi settings. Select <b>Enable WiFi</b>, choose <b>Existing Network</b>, and set Security Type to <b>Open</b>. This enables the wireless antenna for Miracast discovery. Do not enter an SSID to attach the WiFi interface to an existing network. This interface remains idle and is used for the Miracast discovery stage. Use one of the Save options (see step 3 for details) to update the Pod.</li> <li>Expand the <b>Features</b> settings and select <b>Enable Miracast Infrastructure</b> and <b>Enable Miracast WiFi Direct</b>.</li> </ol> <div style="background-color: #fff9c4; padding: 5px; margin-top: 10px;">  Turning off Miracast WiFi Direct and then back on in quick succession for a Solstice Pod may result in it temporarily appearing multiple times in the Windows Connect and Wi-Fi connection panels. To resolve this issue, refresh the list of available Miracast WFD devices by turning Wi-Fi off and back on for affected Windows devices.                 </div> |
| Wirelessly Attached to Existing Network Only       | <ul style="list-style-type: none"> <li>Select <b>Enable Miracast Infrastructure</b>.</li> </ul>  |
| Ethernet + Wirelessly Attached to Existing Network | <ul style="list-style-type: none"> <li>Select <b>Enable Miracast Infrastructure</b>.</li> </ul>  |
| Ethernet + Wireless Access Point                   | Miracast not supported. When the Pod is acting as an access point, Miracast discovery cannot operate. Contact Mersive to discuss other options like attaching your Pod to an existing network.   |
| Wireless Access Point Only                         | Miracast not supported. When the Pod is acting as an access point, Miracast discovery cannot operate. Contact Mersive to discuss other options like attaching your Pod to an existing network.   |

- Save the Miracast settings changes with the option that best fits your situation:
  - Click **Save as Unassigned** to save the Pod's Features settings uniquely (not assigned to a template).
  - Click **Save as New Template** to create a Miracast-enabled Features template that other Pods can be assigned to in the Pods table.

# Digital Signage Template



Solstice digital signage allows you to show HTML-based signage on Solstice displays when they are not being used for wireless collaboration or conferencing. It can add digital signage feeds to your Solstice-enabled meeting rooms, huddle rooms, and transitional spaces without the additional cost or complexity of deploying dedicated signage hardware. See [Integrating Digital Signage](#) for more technical details about digital signage with Solstice.

In Solstice 5.5.2 and later, digital signage functionality can be used to show a custom webpage in place of the Solstice welcome screen when a Solstice display is not in use for content sharing. See [Solstice Dynamic Digital Signage](#) for examples and more information.

## How To

### Access This Page

- In Solstice Cloud, go to the left sidebar navigation panel and click **Manage > Templates > Digital Signage**.

### Create a New Digital Signage Template

1. Click **Create New Digital Signage Template**.
2. Enter the **Template Name**. For example, name the template by location (London Office) or descriptively (Mountain Theme).

3. Click **Save**.



You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

### Set Digital Signage Options

1. Select the **Enable Digital Signage** checkbox. This activates the digital signage options.
2. In the **Source URL** field, enter the URL of the digital signage feed or source content.
3. In **Start After**, select the amount of time after which you want the digital signage feed to start playing.
4. To the right of the thumbnail preview, select a digital signage display mode. The thumbnail preview shows a preview of how the digital signage feed appears on the Solstice display.
  - **Full Screen:** Signage content is displayed full screen on the Solstice display. No Solstice connection information is shown — users must know Solstice display name or IP address to connect.
  - **Footer Only:** Only the Solstice welcome screen footer is shown over the signage content. Users familiar with Solstice can see the Solstice display name and/or IP address in the footer area to connect and share content. The source URL must be viewable within an IFrame.
  - **Footer + Overlay:** The Solstice welcome screen footer and sidebar overlay are shown on top of digital signage to provide users with full connection instructions and/or room calendar information. The source URL must be viewable within an IFrame.
5. Click **Save**.



Some signage providers require you to register each Solstice display playing the digital signage feed as a signage endpoint. Refer to your digital signage content provider's instructions to complete this process as needed.

## Digital Signage on Solstice

Solstice displays can be configured to show company branding and communications when not in use for meetings and collaboration sessions. Most digital signage feeds that are accessible using a web-based URL can be shown on one or more Solstice instances, allowing displays that would otherwise be idle to instead increase brand knowledge, inform employees and visitors, and facilitate important messaging. In this topic, you find technical information about using digital signage features in Solstice and directions for how it can be configured for a variety of digital signage feeds.

When enabled, Digital Signage in Solstice defaults to Mersive's Solstice Pod information feed at <https://digitalsignage.mersive.com>. URL-based digital signage feeds such as Tripleplay, Appspace, and Carousel, as well as Google Slides and YouTube feeds, are supported. Solstice digital signage also supports custom static welcome screens at a web URL.



Certain individual feeds, even from supported sources, may not work with Solstice. If the URL you are attempting to run is resource intensive, stability and performance can be negatively affected. Solstice version 5.5.2 and later will cache up to 2 GB of content. (Solstice versions 4.4 to 5.5.1 cache up to 1 GB of content.)

In Solstice 5.5.2 and later, digital signage functionality can be used to show a custom webpage in place of the Solstice welcome screen when a Solstice display is not in use for content sharing. See [Solstice Dynamic Digital Signage](#) for examples and more information.

## Requirements

- Solstice Pods with Enterprise Edition Licenses
- Solstice version 4.0 or later, with Solstice 5.5.2 strongly recommended
- Source URL content must be compatible with Android's Chromium-based WebView (Chromium version 94.0.4606.71).
  - Test your URL in Solstice and verify that it is playing well on a single display before rolling out to other Solstice Pods and/or leaving signage enabled on the Pod.

## Layout Options

Solstice digital signage provides three layout modes: Full Screen, Footer Only, and Footer + Overlay. Footer Only and Footer + Overlay modes render the source content in an HTML iFrame. Many content sources work in all modes without an issue. However, an embedded URL must be generated for use in an iFrame to use sources such as Google Slides and YouTube for digital signage in Footer Only and Footer + Overlay modes.

Try Full Screen mode if you are having issues in Footer Only and Footer + Overlay modes. See how to set digital signage configuration options in [Solstice Cloud](#) and [Solstice Dashboard](#).

How to find the embedded URL that appears successfully in an iFrame for Solstice digital signage in footer/overlay modes from common sources:

- **Google Slides** - When publishing the Google Slides presentation to the web, select the Embed option. This creates HTML code with the presentation URL within an iFrame. Copy the URL from this code to enter in the Solstice digital signage configuration.
- **YouTube** - View the Embed code for a video from sharing options. Copy the embed URL from the "src" attribute to enter in the Solstice digital signage configuration. Add URL parameters as needed. Turning on `autoplay` and `loop` options and turning off `controls` is recommended for digital signage. Find more parameters details in [Google documentation](#).

The following URL shows an embed link with the parameters noted above, as well as an optional `playlist` parameter to play more than one YouTube video:

```
https://www.youtube.com/embed/<VIDEO_ID>?playlist=<VIDEO_ID> ,  
<Additional_VIDEO_IDs>&loop=1&autoplay=1&controls=0
```

The Solstice screen measures 1920x1080 pixels at 1080p and 3840x2160 at 4K. Refer to the pixel maps if you are using the Solstice footer and/or sidebar overlay to ensure Solstice elements do not overlap

important aspects of custom background images (.png or .jpg) or digital signage. [See Solstice screen pixel maps.](#)

## Supported Authentication Methods

Some signage systems provide mechanisms to identify the device with which it is communicating. This can be helpful to tailor content to groups of devices, to prevent unauthorized access to the feed content.

The Solstice digital signage playback supports the following authentication methods:

| Scheme                  | Description  |
|-------------------------|--|
| Open                    | The signage URL is not protected by an authentication scheme. The content will load in any network-connected browser for any user.   |
| URL-Based               | The signage URL is protected by a URL-based parameter. In this case, the content will only load when the URL parameter is provided.  |
| Cookie or Local Storage | The signage URL loads an initial page that presents a unique identifier for the Pod. The signage administrator will record the code and enter it into the signage provider's device-management console. After this process is complete, a cookie or other browser-based persistent mechanism, like local storage, is used to store the identification information. |
| MAC Address             | Primarily relevant to an on-premises signage system, the administrator can configure the Pod MAC address as part of the device configuration in the management console. This process may be automated by the signage system; however, the signage server and Solstice Pod must typically be on the same VLAN.  |

## How To

### Configure Digital Signage in Solstice Cloud

1. Log in to [Solstice Cloud](#).
2. Go to **Manage > Pods** and click the name of the Pod you want to show digital signage content on.
3. Scroll down and click the down arrow to expand the **Digital Signage** settings.
4. Check **Enable Digital Signage** and select a display mode:
  - **Full Screen:** Signage content is displayed full screen on the Solstice display. No Solstice connection information is shown — users must know Solstice display name or IP address to connect.
  - **Footer Only:** Only the Solstice welcome screen footer is shown over the signage content. Users familiar with Solstice can see the Solstice display name and/or IP address in the footer area to connect and share content. The source URL must be viewable within an IFrame.
  - **Footer + Overlay:** The Solstice welcome screen footer and sidebar overlay are shown on top of digital signage to provide users with full connection instructions and/or room calendar information. The source URL must be viewable within an IFrame.
5. In **Source URL**, enter the URL for the digital signage feed to be displayed.
6. In **Start After**, select the amount of time after which you want the digital signage feed to start playing.
7. Click **Save as Unassigned**, or you can **Save as New Template** to create a digital signage template you can apply to multiple Pods.



Some signage providers require you to use a unique code to register your signage endpoints. Refer to your signage content provider's instructions to complete this process as needed.

### Configure Digital Signage in Solstice Dashboard

1. In Solstice Dashboard, select the Pod(s) you want to show digital signage on from the list of Your Solstice Instances.
2. Go to the **Digital Signage** tab.
3. Check **Enable** to interact with the digital signage settings.
4. Choose a digital signage display mode from the list of options:
  - **Full Screen:** Signage content is displayed full screen on the Solstice display. No Solstice connection information is shown — users must know Solstice display name or IP address to connect.
  - **Footer Only:** Only the Solstice welcome screen footer is shown over the signage content. Users familiar with Solstice can see the Solstice display name and/or IP address in the footer area to connect and share content. The source URL must be viewable within an IFrame.
  - **Footer + Overlay:** The Solstice welcome screen footer and sidebar overlay are shown on top of digital signage to provide users with full connection instructions and/or room calendar information. The source URL must be viewable within an IFrame.
5. In the **Source URL** field, enter the URL of the digital signage feed or web content to be displayed between Solstice sessions.
6. In the **Start After** menu, select the amount of time after which you want the digital signage feed to start playing.
7. Click **Apply**.



Some signage providers require you to use a unique code to register your signage endpoints. Refer to your signage content provider's instructions to complete this process as needed.

### Integrate a 3rd-Party Digital Signage Partner Feed

Follow the links below for specific directions for integrating digital signage feeds from one of our digital signage partners:

- [Solstice + Appspace](#)
- [Solstice + Carousel](#)

### Validate the Digital Signage Feed

1. Physically go to the location of the Solstice Pod where you enabled signage.
2. Confirm the signage feed is visible.
3. Connect to a Solstice Pod and the room camera and mic, then share a piece of content.
4. Disconnect and confirm the signage feed automatically reappears, plays the entire feed, and restarts the feed from the beginning.



## Exit Digital Signage Mode

If you need to exit digital signage mode to access the Pod's local configuration panel, you can do so by plugging a USB mouse into the Pod and long-clicking with the left mouse button.

## Video Formats for Signage Providers

Video content is supported if it is in one of the following formats and configured to auto-start. The maximum video quality is 1080p at 60 frames per second and up to 20 Mbps.

- H.264 Baseline Profile Level 3
- VP8
- VP9

# Ethernet Template

Solstice leverages existing Ethernet networks to support collaboration in meeting rooms and learning spaces. These advanced network settings allow you to configure Solstice to meet the requirements of your IT security policy and network topology.

The Solstice Pod supports secure access to two independent network interfaces. Each is configured independently and uses its own routing table, supporting secure simultaneous access to the Pod from two segmented networks (for example, from a corporate and a guest network). When this dual-network configuration is chosen, the Firewall feature should be enabled.

The Ethernet template allows you to customize settings for Ethernet, 802.1x, and VLAN options and batch apply the settings across your deployment.

The screenshot displays the Solstice Cloud interface for configuring an Ethernet template. The left sidebar shows navigation options: Home, Monitor, Analytics, Manage (expanded), Pods, Templates (expanded), Welcome Screen, Calendar, Features, Digital Signage, Room Intelligence, Ethernet (selected), Proxy, WiFi, Discovery, Security, Time/Locale, Advanced, Power Management, Message Center, Location, USB Devices, Updates, and Categories. The main content area is titled 'Templates > Ethernet' and includes a 'Create New Ethernet Template' button. Below this, the 'Default' configuration section is visible, featuring a 'Cancel' button and a 'Save' button. The configuration includes:

- Enable Ethernet
- Network Name:  DNS Hostname:
- Allow admin configuration access
- Enable 802.1x
- EAP Method:  PEAP  TLS  TTLS
- Phase 2 Authentication:
- 
- Username:  Password:
- Enable VLAN 1  Enable VLAN 2  Enable VLAN 3

## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > Ethernet**.

## Create New Ethernet Template

1. Click **Create New Ethernet Template**.
2. Enter the Template Name. For example, name the template by location (London Office) or descriptively (Mountain Theme).
3. Click **Save**.



You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

## Edit Ethernet Options

1. To activate the options, select the **Enable Ethernet** checkbox.
2. Change the **Network Name** to the one that users see in the list of available networks on their device.
3. To use Domain Name System (DNS) resolution and have a DNS entry to resolve to the Pod's IP address, you can enter it in the **DNS Hostname** (for example, hostname.domain) after this template is assigned to a Pod.



The DNS Hostname is unique to each Pod, and can be added only after this template is applied to a Pod. You need to enter this information for each Pod that uses this template.



Check the option to show this hostname instead of IP address in the connection directions on the Solstice display in the [Welcome Screen Template \[37\]](#) configuration.

4. To allow admin access to make configuration changes on this network, select the **Allow administrative configuration access** checkbox.
5. Select either **DHCP** for the Pod to be dynamically assigned an IP address, or select **Static IP** to enter your network configuration manually.
6. If you selected Static IP, enter the **Gateway**, **Network Prefix Length** and **DNS 1** fields. Because it is unique to each Pod, enter the IP Address after this template is applied to a Pod.



The IP Address is unique to each Pod, and can be added only after this template is applied to a Pod. You need to enter this information for each Pod this template is applied to.

7. Click **Save**.


## Enable 802.1x Authentication



You must ensure that the Pod has access to a timeserver so that it can validate the certificate.

1. Select the **Enable 802.1x** checkbox to see options appear.
2. Select the **EAP Method**: PEAP, TLS, or TTLS


- a. For PEAP or TTLS methods:
  - From the **Phase 2 Authentication** list, select one of the phase 2 authentication types: None, MSCHAPV2, or GTC.
  - Click the **Replace CA Certificate** button, then browse to and select the certificate.
- b. For the TLS method:
  - Click the **Replace CA Certificate** button, then browse to and select the certificate.
  - Click the **Replace User Certificate** button, then browse to and select the certificate.

 Supported certificate file types are .cer, .der, .pem, .crt, .pfx, and .p12.


3. If required, enter the **Username** and **Password**.
4. Click **Save**.

### Connect a Pod to a VLAN


In addition to handling the usual untagged Ethernet traffic on the default VLAN for the connected switch port, Solstice Pods can communicate using tagged traffic over the wired Ethernet interface on up to three additional VLANs.

 A default VLAN for the physical switch port must be configured within the switch port's settings. Configure this default VLAN as the primary Ethernet network.

1. Click the checkbox **Enable VLAN 1**. This activates other fields.
2. In the **Network Name** field, enter the name of the network that users see.
3. In the **Tag** field, enter the VLAN ID number.
4. To use Domain Name System (DNS) resolution and added a DNS entry in your DNS server to resolve to the Pod's IP address, you can enter in the **DNS Hostname** (for example, hostname.domain) after this template is assigned to a Pod. The DNS Hostname for that Pod shows on the display's welcome screen instead of an IP address.

 The DNS Hostname is unique to each Pod, and can be added only after this template is applied to a Pod. You need to enter this information for each Pod that uses this template.

5. To allow administrative access on this VLAN, select the **Allow admin configuration access** checkbox.
6. Select either **DHCP** for the Pod to be dynamically assigned an IP address, or select **Static IP** to enter your network configuration manually.
7. If you selected Static IP, enter appropriate information in the **Gateway**, **Network Prefix Length**, and **DNS 1** fields.

 The IP Address is unique to each Pod, and can be added only after this template is applied to a Pod. You need to enter this information for each Pod that uses this template.

1. If attaching the Pod to additional VLANs, select the **Enabled** checkbox beside **VLAN 2** or **VLAN 3**, then repeat steps 2 through 7.

2. If using SDS, go to Manage > Templates > **Discovery** on the left sidebar and enter in the **SDS Host IP** address for each SDS server instance. For more information on SDS, see [Discovery Templates \[66\]](#).

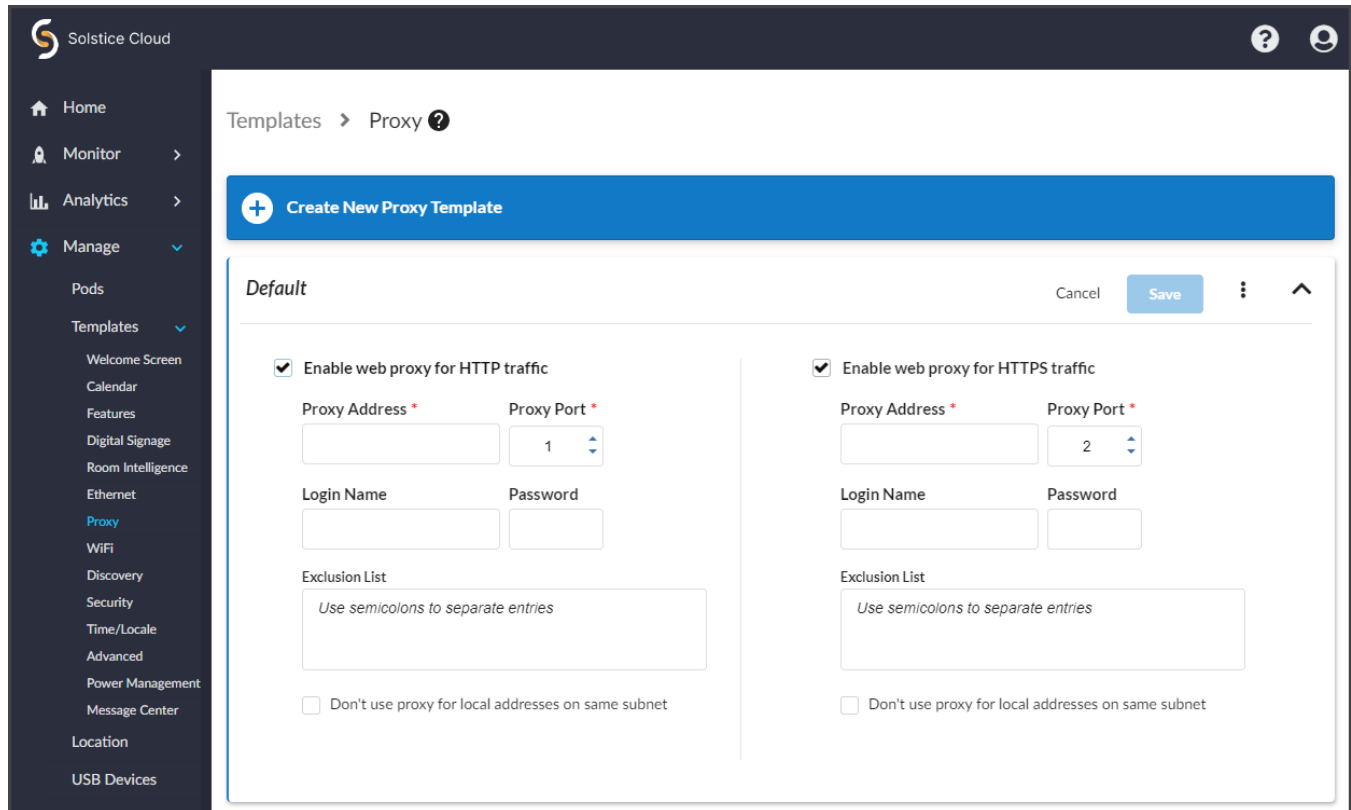


One SDS server instance is required per VLAN using SDS version 3.1 or later. The order of the SDS Host IP addresses entered does not matter.

3. Click **Save**.

# Proxy Template

The Proxy template provides a method to configure Solstice displays deployed behind a secure web proxy to reach the licensing and over-the-air (OTA) update servers. Options to enable the web proxy for both http and https traffic are available.



## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > Proxy**.

### Create New Proxy Template

- Click **Create New Proxy Template**.
- Enter the Template Name. For example, you could name the template by location (London Office) or descriptively (Mountain Theme).
- Click **Save**.



You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

### Edit Proxy Settings (HTTP or HTTPS)

1. Select the **Enable web proxy for HTTP or HTTPS traffic** checkbox.
2. In the **Proxy IP Address** field, enter the proxy server IP address.
3. In the **Proxy Port** field, enter in the network port required to connect with your proxy server.
4. In the **Login Name** and **Password** fields, enter in login credentials for your proxy server.
5. To manually configure an exclusion list for the proxy server, enter in the IP addresses to bypass the proxy server into the **Exclusion List** field. Multiple IP addresses can be added using semi-colons to separate the entries.
6. If you need addresses on the same subnet as the Pod to bypass the proxy server, select the **Don't use proxy for local addresses on same subnet** checkbox.

# WiFi Settings Template

Solstice is designed to leverage existing WiFi networks to support wireless collaboration in meeting rooms and learning spaces. The Solstice Pod supports secure access to two independent network interfaces: one for attaching the Pod to a network via Ethernet, and one to attach to a wireless network. Mersive recommends attaching the Pod to your main enterprise network via Ethernet for best performance, while the secondary wireless network can be used for guest access or a backup network.

This template is used to configure the wireless network. Within this template, there are two wireless options, but only one can be applied:

- **WAP (Wireless Access Point):** When in WAP mode, the Pod acts as a wireless access point, creating a local network on the Pod with no internet access that users can discover in their list of available networks, allowing them to connect directly to the Pod without needing an external network. Pods are shipped with WAP enabled by default for easy initial configuration. However, for performance reasons, Mersive highly recommends disabling WAP mode. This can be done by disabling WiFi altogether, or by applying the Existing Network option.
- **Existing Network:** This option connects the Pod to an existing network wirelessly. This is best used when there is no Ethernet jack in the room, or if you want to connect a secondary guest network. If enabling WiFi, using the Existing Network option is strongly recommended.

The screenshot displays the Solstice Cloud admin interface. On the left is a dark sidebar with navigation options: Home, Monitor, Analytics, Manage (expanded), Pods, Templates (expanded), Welcome Screen, Calendar, Features, Digital Signage, Room Intelligence, Ethernet, Proxy, WiFi (highlighted), Discovery, Security, Time/Locale, Advanced, Power Management, Message Center, Location, USB Devices, Updates, Categories, and Active Learning. The main content area is titled 'Templates > WiFi' and features a blue 'Create New WiFi Template' button. Below this is a 'Default' configuration form with the following settings:

- Enable WiFi
  - Allow admin configuration access Gen 21+
  - WAP  Existing network
- SSID
  - Unique To Pod  Hide SSID
- Security
  - Open WPA2
- Frequency
  - 2.4 GHz 5 GHz
- Channel
  - 6
- DNS Hostname
  - Unique To Pod

Buttons for 'Cancel', 'Save', and a menu icon are visible at the top right of the configuration form.



## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > WiFi**.

### Create New WiFi Template

1. Click **Create New WiFi Template**.
2. Enter the Template Name. For example, you could name the template by location (London Office) or descriptively (Mountain Theme).
3. Click **Save**.





You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

### Edit WiFi Options


1. To connect the Pod to a wireless network, select the **Enable WiFi** checkbox.
2. To allow admin access to make configuration changes on this network, select the **Allow admin configuration access** checkbox.
3. Select one of the following radio buttons:
  - **WAP**: The Pod acts as a wireless access point. Proceed to step 4.
  - **Existing network**: This option connects the Pod to an existing network wirelessly. Proceed to step 5.
4. If you selected **WAP**:
  - a. In the **SSID** field, enter in an easily identifiable name for the network. For example, you could name it the same as the Pod so that users can easily find it.
  - b. If you want, you can select the **Hide SSID** checkbox. This prevents the network name from being displayed in a device's list of available networks.
  - c. Under **Security** select one of the following options:
    - **Open**: The WAP network is open with no password protections to connect.
    - **WPA2**: Allows you to secure the network by creating a network password. When selected, a field to enter the **WPA2 Password** appears.
  - d. Under **Frequency**, select either the 2.4 GHz or 5GHz wireless band.
  - e. Next select the wireless channel for the WAP network from the **Channel** list.

- f. To use Domain Name System (DNS) resolution and have a DNS entry to resolve to the Pod's IP address, you can enter it in the **DNS Hostname** (for example, hostname.domain) after this template is assigned to a Pod.


 The DNS Hostname is unique to each Pod, and can be added only after this template is applied to a Pod. You need to enter this information for each Pod that uses this template.

 Check the option to show this hostname instead of IP address in the connection directions on the Solstice display in the [Welcome Screen Template \[37\]](#) configuration.

- g. Click **Save**. Skip the following steps.
5. If you selected **Existing Network**:
  - a. Enter the network name in the **SSID** field.
  - b. In the **Security Type** list, choose the appropriate option: **Open**, **WEP**, **WPA/WPA2**, or **802.1x EAP**.


 If you chose **802.1x EAP**, see the [Enable 802.1x Authentication \[64\]](#) how-to below for more information on this configuration.

- c. If prompted, enter the **Password** for this network.
6. Select either **DHCP** for the Pod to be dynamically assigned an IP address, or select **Static IP** to enter your network configuration manually.
7. If you selected Static IP, enter the **Gateway**, **Network Prefix Length** and **DNS 1** fields.

 Note that the IP Address and DNS Hostname are unique to each Pod and need to be configured for every Pod. After this template is applied to your Pods, you are prompted to enter this information for the each Pod the template is applied to.

8. Click **Save**.

### Enable 802.1x Authentication

 You must ensure that the Pod has access to a timeserver so that it can validate the certificate.

1. Select the **Enable 802.1x** checkbox to see options appear.
2. Select the **EAP Method**: PEAP, TLS, or TTLS
  - a. For PEAP or TTLS methods:
    - From the **Phase 2 Authentication** list, select one of the phase 2 authentication types: None, MSCHAPV2, or GTC.
    - Click the **Replace CA Certificate** button, then browse to and select the certificate.
  - b. For the TLS method:
    - Click the **Replace CA Certificate** button, then browse to and select the certificate.

- Click the **Replace User Certificate** button, then browse to and select the certificate.



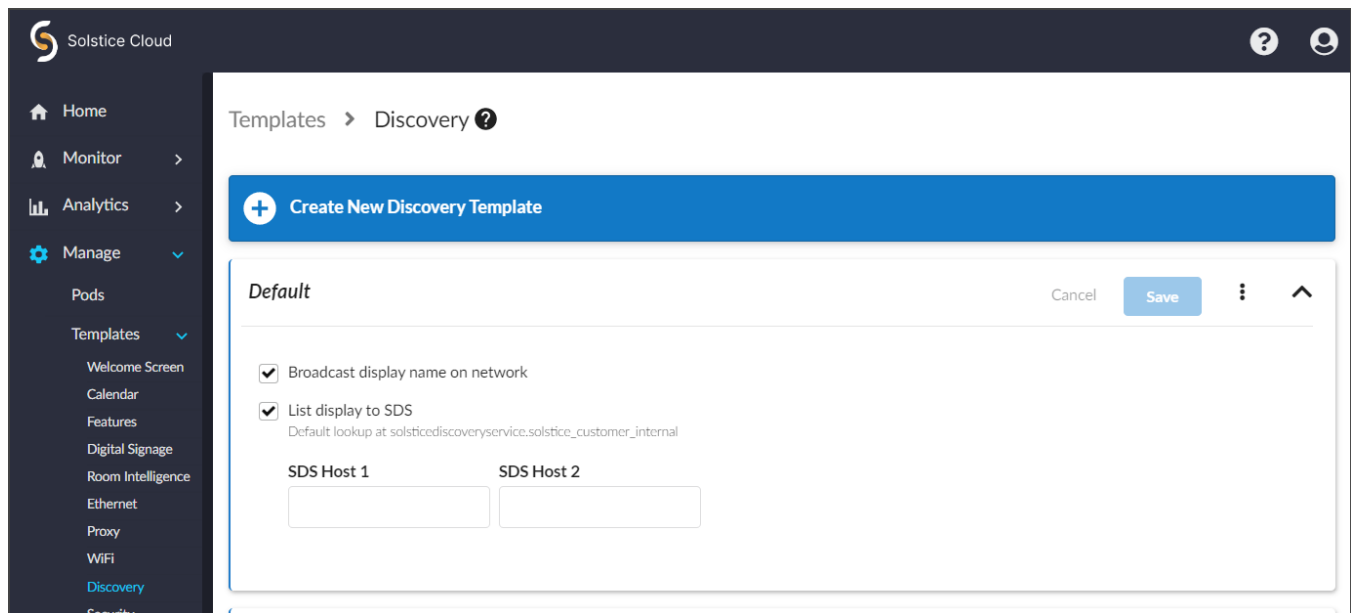
Supported certificate file types are .cer, .der, .pem, .crt, .pfx, and .p12.

3. If required, enter the **Username** and **Password**.
4. Click **Save**.

# Discovery Template

Display discovery refers to the ability for a user to "discover" what Solstice displays are available to connect to. A user can always connect to a Pod by typing the Pod's IP address into the Solstice App. However, Solstice discovery can streamline the connection process by listing all Pods available for connection and enabling users to simply click a Pod's name to connect. This template allows you to configure the settings for two discovery methods that enable this click-to-connect functionality: broadcast discovery or Solstice Discovery Service (SDS).

The Solstice Discovery Service (SDS) is an IT-friendly, non-broadcast mechanism that allows users to discover and click-to-connect to Solstice displays from their own devices to start sharing content. SDS makes connecting to a Solstice display fast and easy for users, especially those on networks that don't allow broadcast traffic. For more information on how to implement and configure SDS, see our [Solstice Discovery Service \(SDS\) Guide](#).



## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > Discovery**.

### Create New Discovery Template

- Click **Create New Discovery Template**.
- Enter the Template Name. For example, name the template by location (London Office) or descriptively (Mountain Theme).

3. Click **Save**.



You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

### Enable/Disable Broadcast Discovery

Broadcast discovery is only recommended for single network configurations that do not use a switch and that allow UDP broadcast traffic. If you do not want Solstice to use broadcast discovery, you can disable it in the Discovery template. However, Mersive strongly recommends using Solstice Discovery Service (SDS) if broadcast discovery is disabled, to ensure that users can find and connect to Solstice displays.

1. Enable or disable the **Broadcast display name on network** option.
2. Click **Save**.

### Set the SDS Information to List the Display on SDS

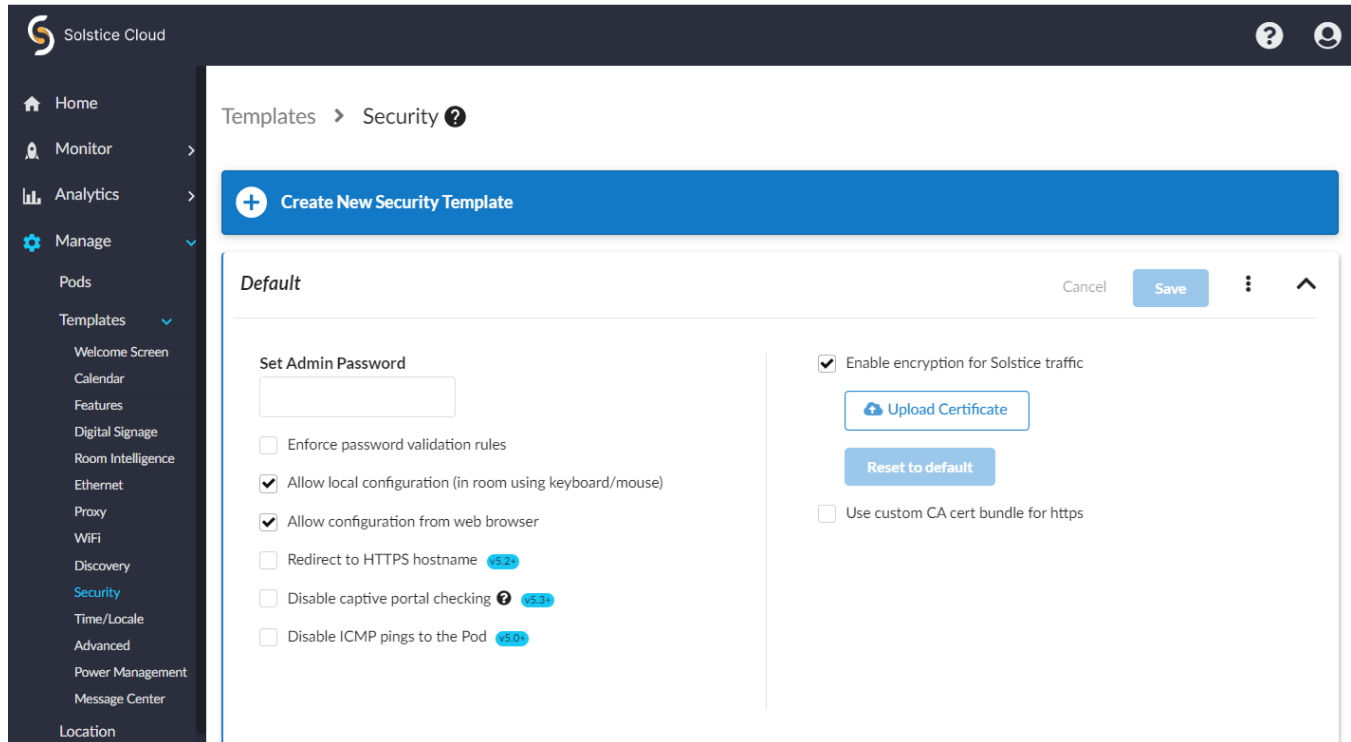
1. You need to find the static IP address of the SDS host machine. To find this, open a Command Prompt window on the Windows host machine or Windows server that SDS is installed on. Type **ipconfig** then press Enter. The IP address is listed in the results that appear.
2. In your Solstice Cloud Discovery template, select the **List display to SDS** option.
3. In the **SDS Host field**, enter the IP address of the SDS host machine.
4. Click **Save**.



If you have multiple instances of SDS, repeat the steps above for each instance.

# Security Template

A Solstice Pod is a network-attached device that provides straightforward and secure wireless access to existing display infrastructure by leveraging a host IT network. By configuring your Pods according to these guidelines, users can quickly connect and share content to the displays in Pod-enabled rooms while still maintaining network security standards. Pods that are not configured properly can be vulnerable to user and network security breaches, including unauthorized user access, screen capture and recording, unauthorized changes to configuration settings, and denial-of-service attacks.



## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > Security**.

### Create New Security Template

- Click **Create New Security Template**.
- Enter the **Template Name**. For example, you could name the template by location (London Office) or descriptively (High Security).
- Click **Save**.



You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

### Password Protect Configurations

To protect Pod configurations, you can set an admin password that is required to make configuration changes. After an admin password is set, you are required to enter the password to change configuration settings. This password is also required to retrieve usage logs from your Pod or to perform a factory reset.

1. In the **Admin Password** field, enter in the password to use to change the Solstice display's configuration, or remove the password entirely.

Mersive highly recommends that you set the same administrator password for all of your Pods.

2. To enforce password validation rules (8-character minimum, one uppercase and one lowercase character, one number or special character), select the **Enforce password validation rules** option.
3. Click **Save**.

### Enable/Disable Local Configurations


If you have chosen not to set an admin password to protect Pod configurations, you can still prevent users from making changes by disabling local configuration (in-room using a keyboard or mouse) or from a web browser. However, disabling both of these options means that you can only configure the Pod using Solstice Cloud, which requires network connectivity.

1. To enable in-room configuration, select the **Allow local configuration** checkbox. To disable it, uncheck this box.
2. To enable configuration from a web browser, select the **Allow configuration from web browser** checkbox. To disable it, uncheck this box.
3. Click **Save**.


### Redirect to HTTPS Hostname

Solstice admins have the option to enable Solstice to redirect a user who enters the HTTP version of the Solstice host's IP address or DNS hostname (e.g. http://111.22.3.44) to the secure HTTPS DNS hostname (e.g. https://hostname.domain) when the Pod's certificate is validated by the web browser. This ensures that internal users have a secure connection to the Solstice QuickConnect page. This feature is available starting in Solstice 5.1.

1. Select the **Redirect to HTTPS hostname** checkbox to enable this functionality.
2. Click **Save**.

 This feature requires that Solstice admins enter a valid DNS hostname in the Pod's network settings and have a valid client-to-server certificate on the Pod. To enter a Pod's DNS Hostname, go to Manage > Pods, click on the Pod's name, and update the **Ethernet** and/or **Wifi** sections (depending on your network configurations). Be sure to **Save** your changes in each section.

### Disable Captive Portal Checking

 Solstice versions 6.1 and later no longer perform captive portal checks. The directions below detail how to disable this functionality in earlier versions.

Periodically, each Pod checks to see if it has access to the internet. However, if you want to eliminate this network traffic, you can disable these checks. This option is available starting in Solstice 5.3.

1. To disable these checks, select the **Disable Captive Portal Checking** checkbox.
2. Click **Save**.



To apply this setting to all your Pods at once, go to Manage > Pods and select the checkbox at the top of the first column. This checks all the Solstice Pods available to you in the list. Click **Settings** to show the **Security** column and select the Security template with captive portal checking disabled for any one of the selected Pods. You are prompted to confirm the change on the number of selected Pods.

### Disable ICMP Pings

Disables the ability to ping Pods over the wireless access point (WAP), wireless, or Ethernet networks and prevents ICMP/Ping flooding that could lock up the Pod. This feature is disabled by default.

1. To disable the ability to ping Solstice Pods, check **Disable ICMP pings to the Pod**.
2. Click **Save**.

### Enable Encryption for Solstice Traffic

This setting allows for the encryption of Solstice network traffic between the Pod and user devices using a standard RSA/SHA cipher with a 2048-bit private key. This also includes network traffic related to configuration via either the Solstice Dashboard or the Pod's web-based configuration (if enabled). When this option is enabled, the Solstice Dashboard also sends SLR updates via port 443.

By default, the Pod is loaded with a self-signed TLS certificate that is used when the Pod receives TLS connections. However, there is an option to upload a custom TLS certificate to be used instead. When this encryption option is disabled, the Pod still uses the TLS certificate for HTTPS traffic. For more information about certificate management in Solstice, see [Enterprise Certificate Management](#).



An issue existed in Solstice 5.5 and 5.5.1 where loading a custom PFX (.p12) certificate to encrypt Solstice client/server traffic caused a fatal boot loop. Installing a custom .p12 certificate should be avoided for Solstice Pods running these versions of Solstice. (PEM certificates can still be used.) Mersive resolved this issue in Solstice 5.5.2.

1. To turn on network encryption, select the **Enable encryption for Solstice traffic** checkbox.
2. To upload a custom TLS certificate to be used instead of the Pod's default self-signed certificate, click the **Upload Certificate** button, then browse to and select the certificate file.
3. Click **Save**.

### Use a Custom CA Certificate Bundle for HTTPS

This option allows you to load a self-signed CA certificate bundle onto one or more Pods to be used for HTTPS communications and to validate the Pod's access to external data connections such as digital signage feeds, RSS feeds, and Solstice Cloud. This is especially important for networks that use a MITM proxy that intercepts HTTPS requests. The custom CA bundle is used in addition to the Pod's built-in CA certificates, which are suitable for most internet access.



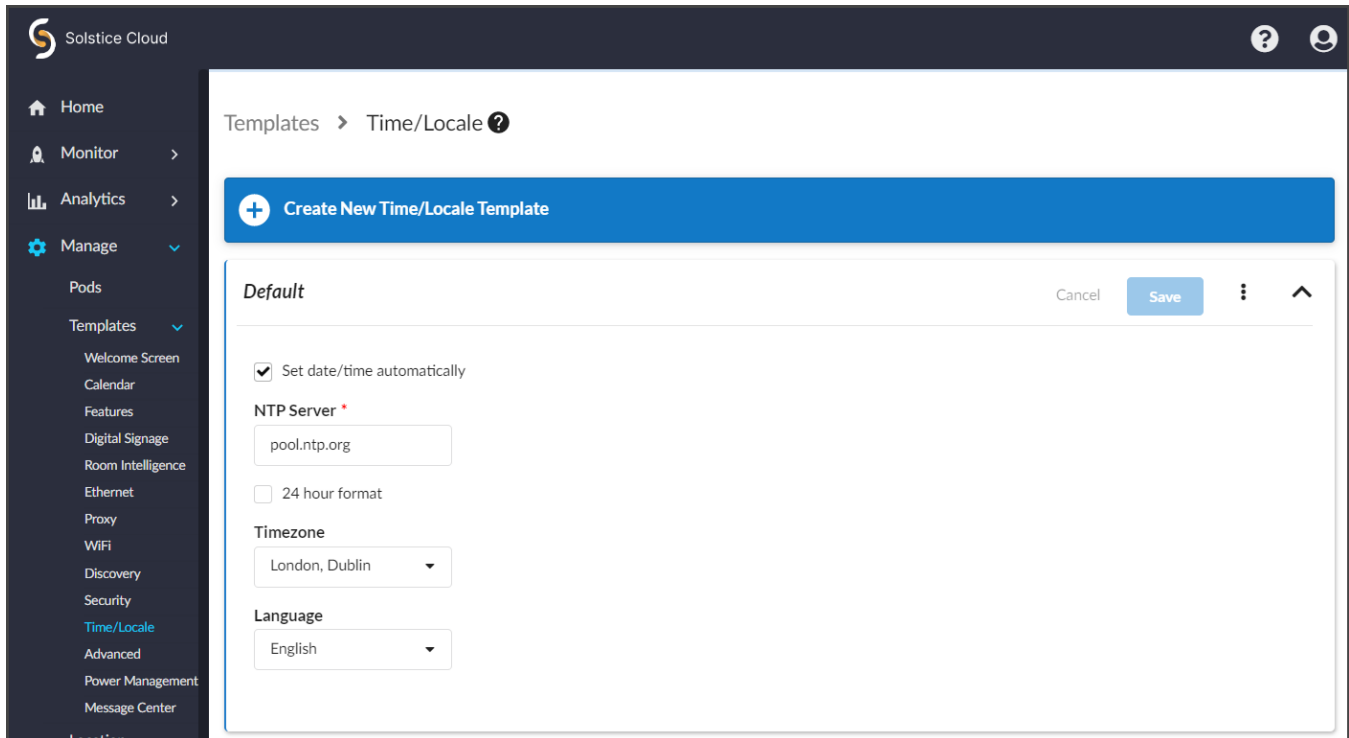


Solstice supports PFX and PEM certificate formats. Note that only PEM certificates with the .crt file extension are supported.

1. Select the **Use custom CA cert bundle for HTTPS** checkbox.
2. Click **Upload custom CA cert bundle**.
3. In the file explorer that opens, browse and select the CA certificate bundle, then click **Open**.
4. Click **Save**.

# Time/Locale Template

The Time/Locale Template page allows you to set various system preferences for your Solstice display, including timezone and language settings.



## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > Time/Locale**.

### Create a New Time/Locale Template

- Click **Create New Time/Locale Template**.
- Enter the **Template Name**. For example, you could name the template by specific location (London Office) or geographic area (Rocky Mountain).
- Click **Save**.



You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

### Set the Pod's Date and Time Automatically

1. To set the date and time using a time server, enable the **Set date/time automatically** checkbox and enter the time server URL in the corresponding field (the default time server URL is pool.ntp.org).
2. If you want the time to show in 24 hour format (4:00 pm is displayed as 16:00), select the **24 hour format** checkbox.
3. From the **Timezone** list, select the timezone the Pod is in (for example, Eastern Time).
4. Click **Save**.



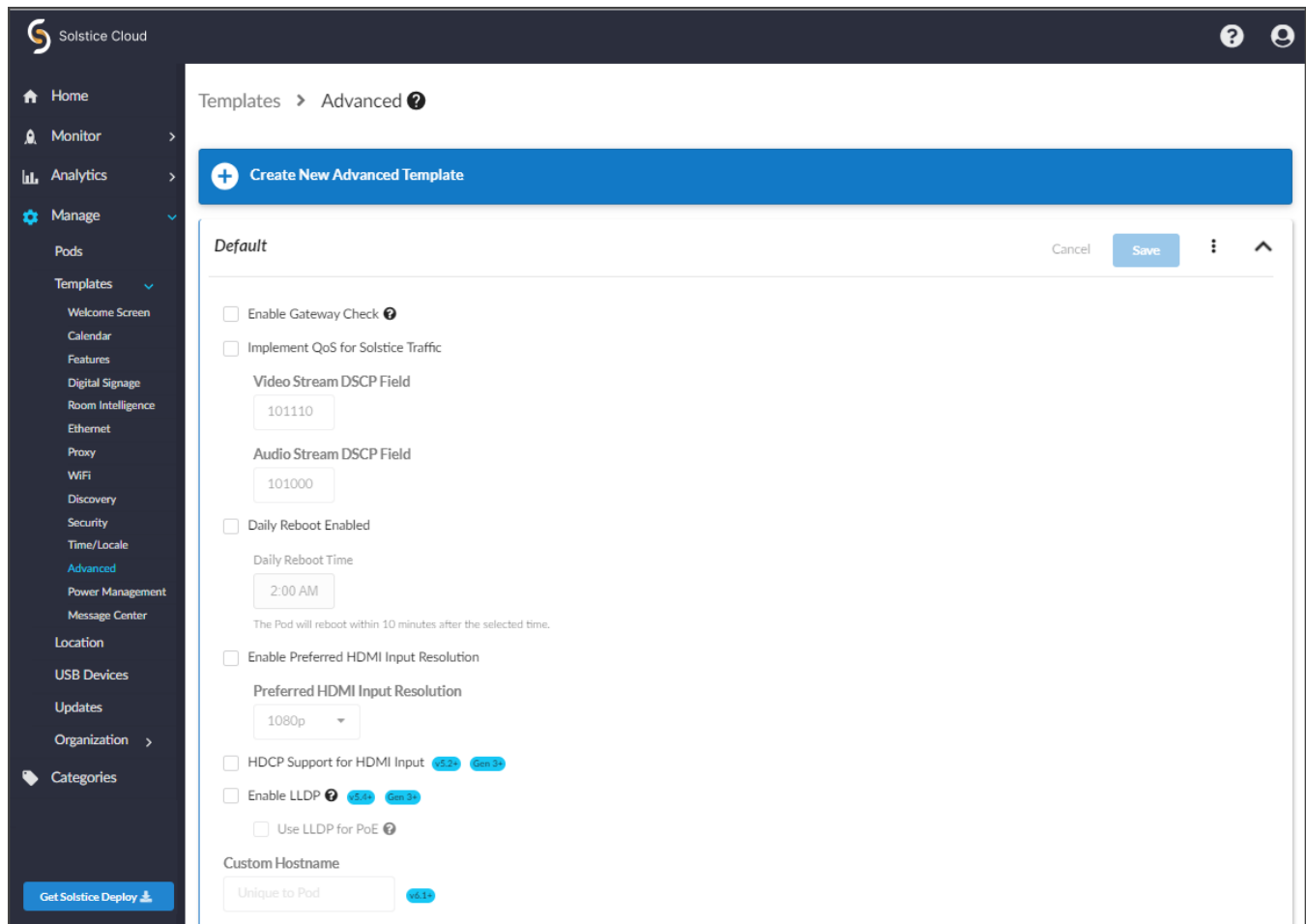
Check that Solstice displays have a good connection to the configured network time server. Network issues that prevent the Solstice from reliably reaching the time server may cause minor issues such as the screen key displaying randomly.

### Change the Pod's Language Settings

1. Information is shown on Solstice Pod displays in English by default. To change this, use the **Language** menu below Timezone.
2. Click the arrow and select a supported language from the list.
3. Click **Save**.

# Advanced Template

The Advanced Template offers an advanced suite of settings for Solstice Pods in your deployment. Features include implementing quality of service to help prioritize Solstice traffic on your enterprise network, automatically rebooting Pods to maximize performance, enabling HDCP support to play high resolution video, and using LLDP for PoE power management. Custom hostnames can be set in the Advanced settings for individual Pods.



## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > Advanced**.

### Create New Advanced Template

- Click **Create New Advanced Template**.
- Enter the Template Name. For example, name the template by location (London Office) or descriptively (Mountain Theme).

3. Click **Save**.



You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

### Implement Quality of Service (QoS)

Quality of service (QoS) packet headers can be enabled to allow Solstice traffic to be differentiated and prioritized on enterprise networks by using the IETF-defined QoS header information. The Solstice Pod does not manage QoS traffic into or out of the Pod. It simply adds QoS tags to the packet headers, which allows routers on the network to better manage heavy network traffic.

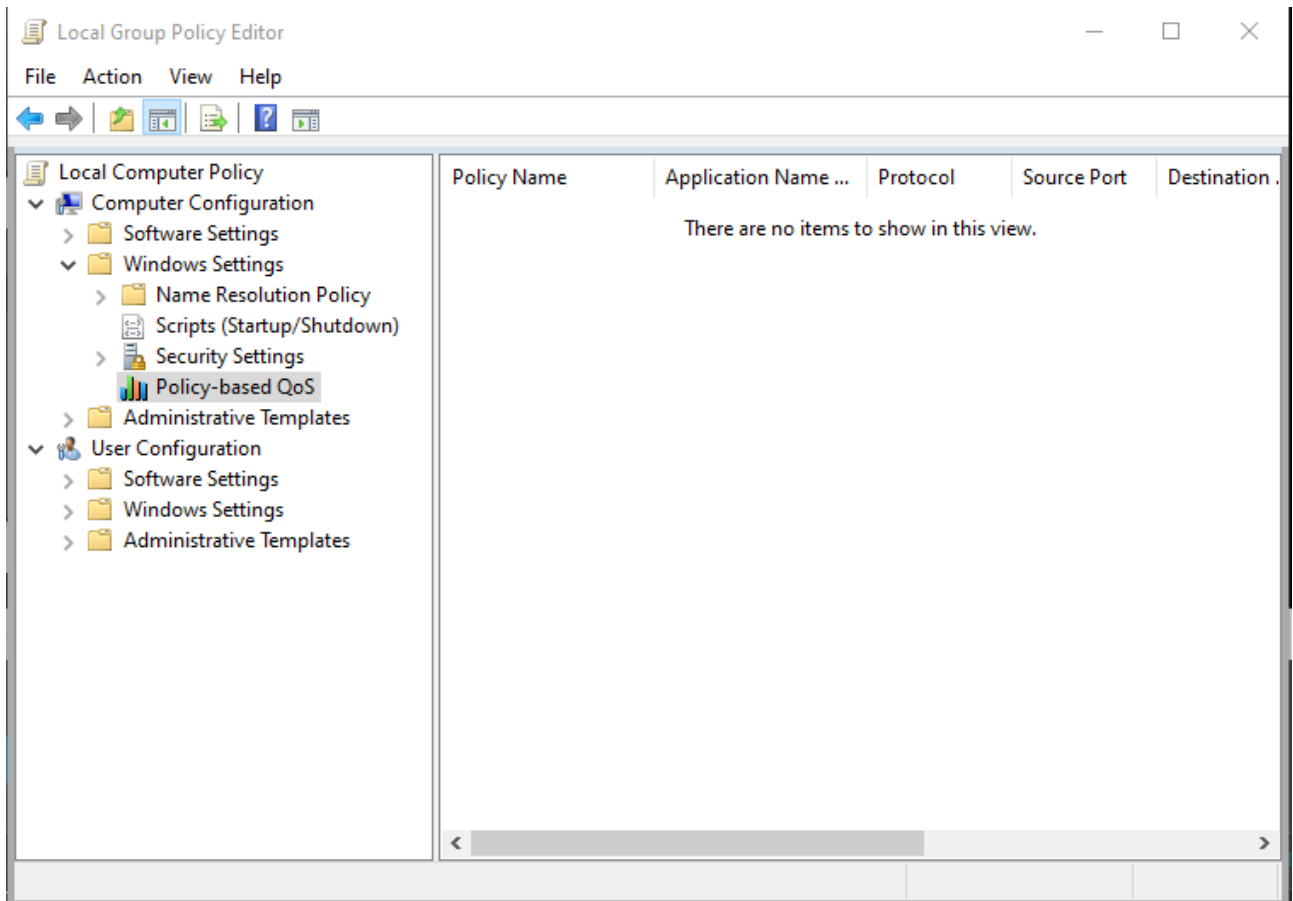
1. Select the **Implement QoS for Solstice Traffic** checkbox.
2. In the corresponding fields that appear below, enter the 6-digit binary QoS video and audio stream bit settings.  
By default, the Video Stream DSCP field is set to 101 110, which is Expedited Forwarding with a precedence value of 46. The Audio Stream DSCP field defaults to 101 000, which is CS5 with a precedence value of 40. Packets with a lower precedence value might be dropped by QoS-enabled routers on the network in favor of higher precedence packets. See [commonly used DSCP values](#) described in RFC 2475 by the IETF.
3. Click **Save**.

### Implement Quality of Service (QoS) for Mersive Solstice app on Windows

Windows allows you to put QoS information into the packets being sent from the Solstice client by creating a local group policy on your computer.

1. On your Windows computer, press **Windows logo key + R**.

- In the Local Group Policy Editor navigate to **Local Computer Policy | Computer Configuration | Policies | Windows Settings | Policy-based QoS**.



- Right-click **Policy-based QoS** and select **Create new policy**.
- On the first page of the Create a QoS policy wizard, enter a name for this policy in the **Policy name** field.
- With the **Specify DSCP Value** check box selected, enter a value of 46.

The precedence value of 46 corresponds to "Expedited Forwarding." However, you can enter other values defined in the DSCP Pool 1 Codepoints defined by the IETF.


- Click **Next**.
- Under **The QoS policy applies to** label, select **Only applications with this executable name** and enter **SolsticeClient.exe**.
- Click **Next**.
- On the source and destination IP addresses page, click **Next**.
- On the protocol and port numbers page, choose **TCP and UDP** from the list and then click **Finish**.

Packets from the Solstice client are now tagged with QoS headers with a precedence value of 46.

### Schedule Daily Reboots

Enable and schedule daily Pod software reboots to refresh the Pod's memory usage and maximize system performance. If users are connected and sharing content to a Pod at the scheduled reboot time, that Pod's reboot is skipped until the next scheduled reboot time.


1. Select **Daily Reboot Enabled** to turn on and schedule daily reboots.
2. In the **Daily Reboot Time** field, enter in the time you want the Pods to restart each day.

 Daily reboots will take place within 10 minutes after the selected time.

3. Click **Save**.

### Enable HDCP Support


On Solstice Gen3 Pods, the HDMI input is HDCP-compliant, which means a laptop or other device can connect to the HDMI-In port and pass digitally protected content through the Pod. HDCP support is disabled by default.

 This feature is available for all Gen3 Pods (serial number MPOD8000A2xxxxxx or higher) on Solstice 5.2 or later.


1. To enable HDCP support on Pods assigned to this template, select the **HDCP Support for HDMI Input** checkbox.
2. Click **Save**.

### Set Preferred HDMI Input Resolution

The HDMI-in port on Gen3 Solstice Pods can be configured for a preferred input resolution, up to 1080p.

 Do not change the Preferred HDMI Input Resolution for a Solstice Pod while there is an active HDMI-In connection to the Pod. This can disable the HDMI-In port in some cases.


1. Select **Enable Preferred HDMI Input Resolution** to configure the HDMI input resolution for Pods assigned to this template.
2. Select your **Preferred HDMI Input Resolution** for HDMI input, **1080p** (default), **720p**, or **VGA**.
3. Click **Save** to apply the new HDMI input resolution setting to Pods.

 The HDMI-in port on Pods affected by this change must be reset for the new resolution preference to take effect. This can be done by physically disconnecting and reconnecting the HDMI cable from the HDMI-in port or rebooting the Pod (Manage > Pods > Pod Actions).

### Enable LLDP for PoE Management

This setting enables LLDP support in Solstice versions 5.4 and later, which allows a PoE switch and a Gen3 Solstice Pod to signal and negotiate available power.

1. Check **Enable LLDP** to turn on information reporting from Gen3 Solstice Pods over Link Layer Discovery Protocol.
2. Check **Use LLDP for PoE** to enable Gen3 Pods to use LLDP to report and negotiate their Power over Ethernet requirements with a PoE/PoE+ switch.


 Only enable this option for Pods that use Power over Ethernet as a sole power supply and when the switch supplying power supports LLDP (Link Layer Discovery Protocol) and LLDP-MED (Media Endpoint Discovery).

3. Click **Save**.

### Set Custom Hostname for a Solstice Pod

Starting in Solstice 6.1, administrators can change the hostname by which an individual Solstice Pod identifies itself to the local network, including in LLDP reporting (see above) and for security certificates, in Solstice Cloud.

Set a custom hostname by going to the Manage > Pods table, selecting the Pod's name, and scrolling down to the Advanced settings. Enter a **Custom Hostname** for that Pod and use the associated **SAVE** button to apply the change. Do not click Save as Unassigned or Save as New Template at the top of the settings section since this will remove the previously assigned template for that Pod.

 Hostnames for Solstice Pods can be up to 32 characters long. They must start with a letter, end with a number or letter, and can contain uppercase and lowercase English-language characters, as well as numbers and dashes.

Learn more about configuring [individual Pod settings in Solstice Cloud \[35\]](#).



# Power Management Template

Power management templates allow you to schedule when a Pod's display monitor turns off after being idle for the specified amount of time. Solstice can do this using one of two methods: suspending the HDMI signal being sent to the display, which allows the display monitors to use their own sleep settings, or by sending an RS-232 command to the display to turn off. The display turns back on if any activity occurs.

If a calendar integration is enabled on the Pod, and a meeting is scheduled, the Pod does not suspend the display. Even if no one has connected to the Pod, and even if a Pod that is configured to detect room occupancy does not detect anyone in the room, the display does not suspend until after the scheduled meeting has ended.

The screenshot shows the Solstice Cloud interface for configuring a Power Management Template. The left sidebar contains navigation options like Home, Monitor, Analytics, Manage, Pods, and Templates. The main content area is titled 'Templates > Power Management' and features a 'Create New Power Management Template' button. The configuration is for a 'Default' template and includes the following settings:

- Enable Display Power Management
- Select How Power Management is Enabled: Based on set schedule
- Weekdays** (M T W Th F Sa Su):
  - Suspend After Inactive: [Dropdown]
  - All Day
  - Start Time: 2:00 AM, End Time: 6:00 AM
- Weekend** (M T W Th F Sa Su):
  - Suspend After Inactive: [Dropdown]
  - All Day
  - Start Time: 2:00 AM, End Time: 2:00 AM
- Choose Suspend Method:
  - Suspend HDMI Signal
  - RS-232
    - Display on command: [Text Input]
    - Display off command: [Text Input]

## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Templates > Power Management**.

## Create a New Power Management Template

1. Click **Create New Power Management Template**.
2. Enter the **Template Name**. For example, you could name the template by location (London Office) or descriptively (Mountain Theme).
3. Click **Save**.



You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

## Schedule Display Power Management

1. To activate options, on the Power Management template select the **Enable Display Power Management** checkbox.
2. From the **Select How Power Management is Enabled** list, select **Based on set schedule**.



Notice that there are separate settings for weekdays and weekends, although the same options are available for each. For either weekdays or weekends, use the following steps 1 and 2.

3. From the **Suspend After Inactive** list, select the amount of time the Pod is idle before the display is suspended. For example, you can select "10 Minutes" for the Pod to be suspended after 10 minutes of inactivity.
4. Select the hours during which this display power management setting will be active on Weekdays:
  - a. For this setting to be active all day, select the **All Day** checkbox. Mersive highly recommends only using this option on weekends.
  - b. For this setting to only be active during certain hours, deselect the **All Day** checkbox and enter in a **Start Time** and **End Time**. As a note, these fields use a 24-hour clock. Mersive highly recommends only scheduling during hours where no collaboration sessions occur. For example, a corporate office could enter in a Start Time of 19:00 (7:00 pm) and an End Time of 06:00 (6:00 am).
5. Select the hours during which this display power management setting is active on Weekends.
6. From the **Choose Suspend Method** options, select the method to use to signal display monitors to turn off:
  - **Suspend HDMI Signal** - The Solstice Pod suspends the HDMI out signal, allowing the display monitors to use their own sleep settings.
  - **RS-232** - The Solstice Pod sends the RS-232 commands you enter to the display monitor to turn it on and off.
7. If the RS-232 option is selected, enter in the RS-232 codes to turn your display monitor on and off in the corresponding fields that appear below. Solstice uses them to turn the display on or off. ASCII and HEX codes are both supported.



Administrators need to know the specific RS-232 code for the control they are trying to pass. For details on those controls, please consult the user manual for the display.

8. Click **Save**.


## Configure Room Occupancy-Based Power Management

Occupancy-based display power management allows Solstice to leverage its room occupancy detection capability to automatically sleep or wake the room display when employees enter and exit the meeting room. To enable this capability, you first need to:


- Plug a supported USB camera into the Pod on Solstice version 5.1 or later
- Ensure occupancy data is enabled for the Pod (Features template)

To enable display power management based on room occupancy:

1. From the Power Management template, select the **Enable Display Power Management** checkbox.
2. From the **Select How Power Management is Enabled** list, select **Based on room occupancy**.
3. From the next list, select the amount of time after the room is determined to be unoccupied before the display is suspended.

 Mersive advises against using the Immediate option, as this could trigger the display to turn off if the camera is temporarily blocked. Occupancy is detected every 10 seconds, so there may be a delay before the display reawakens.

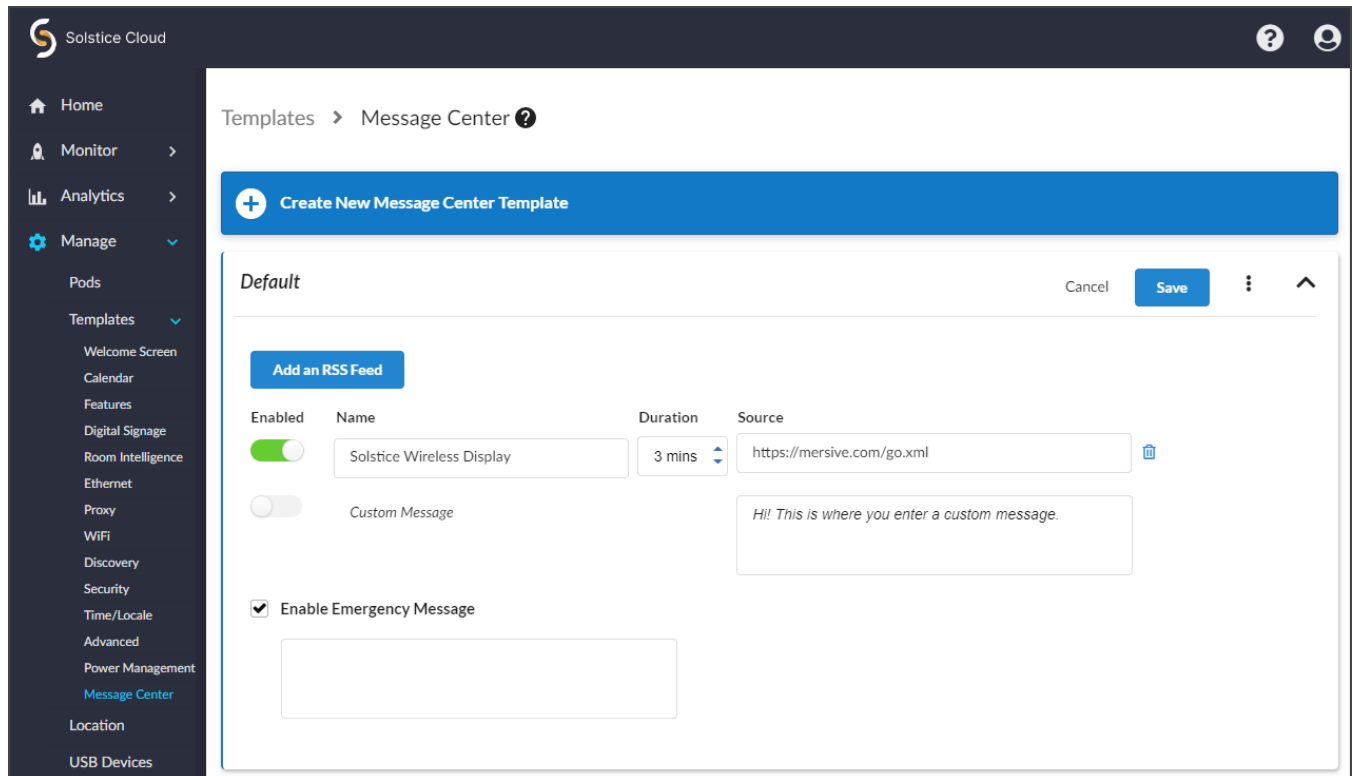
4. From the **Choose Suspend Method** options, select the method to use to signal display monitors to turn off:
  - **Suspend HDMI Signal** - The Solstice Pod suspends the HDMI out signal, allowing the display monitors to use their own sleep settings.
  - **RS-232** - The Solstice Pod sends the RS-232 commands you enter to the display monitor to turn it on and off.
5. If the RS-232 option was selected, enter in the RS-232 codes to turn your display monitor on and off in the corresponding fields that appear below. Solstice uses them to turn the display on or off. ASCII and HEX codes are both supported.

 Administrators need to know the specific RS-232 code for the control they are trying to pass. For details on those controls, please consult the user manual for the display.

6. Click **Save**.

# Message Center Template

This feature allows you to add an RSS feed to a Solstice Pod's Welcome screen that scrolls across the top. You can also create and publish an emergency message that is broadcast to all Pods it is published to.



## How To

### Access This Page

- From the Solstice Cloud Home page, in the left sidebar navigation panel, click **Manage > Templates > Message Center**.


### Create Message Center Template

- Click **Create New Message Center Template**.
- Enter the Template Name. For example, you could name the template by location (London Office) or descriptively (Mountain Theme).
- Click **Save**.




You can also start by duplicating an existing template and making changes to it. Click on the three dots on the right side of the template you want to start with, and choose **Duplicate Template**.

## Add an RSS Feed to the Welcome Screen

 Configured Custom Message may fail to display in Solstice 5.5.2 and higher when the default Solstice Wireless Display RSS feed is disabled.

The following will work around this issue until Mersive puts a resolution in place:  
Add an RSS feed after the disabled default feed, enter the Source address `http://mersive.com/blank.xml`, and enable the blank feed. The enabled Custom Message following the blank feed should display.

1. To add a new RSS feed, click the **Add an RSS Feed** button. A new row appears.
2. Enter in the **Name** of the RSS feed.
3. Set the **Duration** the RSS feed appears before displaying the next feed or custom message.
4. Enter in the **Source** RSS URL. The URL must point to a valid XML file with a root element type of `<rss>`.
5. To have a custom message display in the top banner, toggle the slide switch to enabled (it is green when enabled), and enter your message in the Custom Message field.
6. Click **Save**.
7. To disable any of the RSS feeds or the custom message, toggle the Enabled option off. The toggle slides to the left and turn grey to indicate it is disabled.
8. To delete any of the RSS feeds, click the Delete  icon located to the right of the Source field.

## Publish an Emergency Message

In the event of an emergency, Solstice can push an emergency message to Solstice displays that appears across the top as an emergency banner. To publish an emergency message, you first create a message as part of a template, and then assign that template to the pods you want to receive the emergency message.

1. Open an existing template or create a new template, then select the **Enable Emergency Message** checkbox.
2. In the field below, enter in the text of the emergency message.
3. Click **Save**. If this template is already applied to Pods, it is immediately broadcast to those Solstice displays.
4. Close the template, then click **Assign Pods** OR go to **Manage > All Pods**.
5. Select the Pods you want to publish the emergency message to, then click the list in the Message Center column and select your template. The emergency message is immediately broadcast to those Solstice displays, and overrides any content shared on those displays.
6. To disable the emergency message, you can either unassign the emergency message template, or you can deselect the Enable Emergency Message checkbox within the assigned message template.

# Configure SSO in Solstice Cloud

Administrators may request access to configure SSO (single sign-on) in Solstice Cloud and their chosen identity provider (IdP). This allows users to log in to Solstice Cloud management using their existing SSO credentials. Okta and Microsoft Azure AD are currently supported as identity providers. SSO configuration requires both entering information from Solstice Cloud into the IdP configuration and entering information from the IdP into Solstice Cloud, and it should be coordinated with your organization's Okta or Azure administrator.

Use the directions below to connect your Solstice Cloud organization with an SSO identity provider. See [Manage Users and Roles \[24\]](#) for Solstice Cloud SSO user configuration information.

**SSO Setup Instructions**

In order to setup SSO for your organization, choose **SAML 2.0** in your identity provider. Information listed under **Identify Provider Info** can be used for setup with your identity provider. Fill out the fields under **Solstice Cloud Info**, all of which are required. You may upload or copy your certificate information which will be stored in Solstice Cloud.

**Add Single Sign-On Provider** Cancel Save

| <p><b>Solstice Cloud info</b></p> <p>Identity Provider<br/>Okta</p> <p>Identity Provider Issuer * ?<br/>http://okta.com/[oktald]</p> <p>Sign On URL * ?<br/>https://[domain].okta.com/[app-info]/sso/saml</p> <p>Verification Certificate * ?<br/><span>Upload certificate</span></p> <p>or</p> <p>Paste certificate here</p> | <p><b>Identity Provider info</b></p> <p>Service Provider URL * ?<br/>https://kepler-ss0-staging.mersive.com/saml/okta</p> <p>Service Provider Entity Id * ?<br/>https://kepler-ss0-staging.mersive.com/kepler/sp</p> <p><b>Custom SAML Attributes</b> ?</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>orgId *</td> <td>0d140b1d-887d-4268-9d52-43e0522a16f0</td> </tr> <tr> <td>email *</td> <td>user.email</td> </tr> </tbody> </table> | Name | Value | orgId * | 0d140b1d-887d-4268-9d52-43e0522a16f0 | email * | user.email |
|---|---|------|-------|---------|--------------------------------------|---------|------------|
| Name  | Value   |      |       |         |                                      |         |            |
| orgId *   | 0d140b1d-887d-4268-9d52-43e0522a16f0  |      |       |         |                                      |         |            |
| email *   | user.email  |      |       |         |                                      |         |            |

## Configure Solstice Cloud for SSO with Okta or Azure

Single sign-on (SSO) configuration requires both entering information from Solstice Cloud into the identity provider (IdP) configuration and entering information from the IdP into Solstice Cloud. The Solstice Cloud SSO setup page is accessible only to Admin-level Solstice Cloud users. An IdP administrator for your organization needs to create a new application integration for Solstice Cloud in Okta or Microsoft Azure and assign each Solstice Cloud user to the new Solstice Cloud app.

1. Log in to Solstice Cloud with an Admin account.

2. Use the left navbar to go to **Manage > Organization > SSO**.
3. Select the **Identity Provider** used by your organization, either **Azure** or **Okta**.

Selecting an Identity Provider populates the Service Provider URL on the right side of the panel.

4. Use the **Identity Provider info** on the right side of the Solstice Cloud configuration panel to create an (enterprise) application integration for Solstice Cloud in your identity provider as follows:
  - a. Select **SAML 2.0** as the authentication method.
  - b. Copy and paste the **Service Provider URL** value into the configuration for the new application SAML integration:
    - Okta – *Single sign-on URL*
    - Azure – *Reply URL*
  - c. Also in the SAML settings for the new application, enter the **Service Provider Entity Id**:
    - Okta – *Audience URI (SP Entity ID)*
    - Azure – *Identifier (Entity ID)*
  - d. Using the values listed on the Solstice Cloud SSO Setup panel, define the **Custom SAML Attributes** for the new application:
    - Okta – *Attribute Statements*
    - Azure – *Attributes and Claims*

Enter the Custom SAML Attributes into your IdP as follows:

- i. Create a new attribute.
- ii. Enter the listed attribute **Name** as the new attribute name.
- iii. Enter the attribute **Value** into the value field (called *Source attribute* in Azure).
  - The **orgId** attribute value is specific to Solstice Cloud and should always be copied and pasted.

Microsoft Azure may require double quotes around this value.

- The **email** attribute value should be mapped to the IdP value that holds SSO users' email addresses. This is usually *user.mail*, but can be different depending on your SSO identity provider configuration.



Copying and pasting all values from the Solstice Cloud SSO Setup page is strongly recommended to ensure each value is transferred exactly as listed. For example, the Custom SAML Attribute *orgId* must contain a capital *I*.

- e. Finish the application integration setup to have your identity provider generate a SAML sign-on URL and signing certificate.
5. Now you can enter the SAML setup information generated by the new Solstice Cloud application integration in your IdP into the boxes under **Solstice Cloud info** on the left side of the SSO Setup panel.
    - a. Locate the SAML setup information associated with the Solstice Cloud application you just configured in your identity provider:
      - Okta – view the SAML setup instructions
      - Azure – in SSO dev test information

- b. Enter the sign-on URL from your identity provider into the **Sign On URL** field:
  - Okta – *Identity Provider Single Sign-On URL*
  - Azure – *Login URL*
- c. Enter the identity provider identifier or issuer on the Solstice Cloud SSO Setup panel:
  - Okta – enter the *Identity Provider Issuer* value into the **Identity Provider Issuer** field
  - Azure – enter the *Azure ID Identifier* value into the **Azure ID Identifier** field
- d. Copy or download the X.509 certificate from your identity provider:
  - Okta – appears with the two values above in SAML setup instructions
  - Azure – download the certificate (.cer or .cert file) from the *SAML Certificates* section

Then enter it under **Verification Certificate** in one of these ways:

- Paste the copied certificate into the text entry box.
  - Click **Upload Certificate** and select the file you downloaded from your IdP.
6. When the Solstice Cloud info on the left of the setup panel is complete, click **Save** to store the SSO configuration for your Solstice Cloud organization.
  7. Be sure to also assign users defined in your identity provider to the application you just configured. If a user is not assigned to the Solstice Cloud application in Okta or Azure, they can not log in with SSO to Solstice Cloud, regardless of their Solstice Cloud user configuration.

After users are assigned for SSO access to Solstice Cloud in your identity provider, they can log in to Solstice Cloud using SSO authentication. See below for more about logging in to Solstice Cloud with SSO.

## Solstice Cloud SSO Login Flow

After you configure Solstice Cloud and your SSO identity provider (Okta or Microsoft Azure) to connect to one another, users assigned to the Solstice Cloud application in the identity provider can log in using SSO.

First, the Solstice Cloud login page asks for the user's email address to determine if that user is configured to log in with a password, SSO, or either.

After the user has entered their email address and clicked **Log In**, there are a number of login scenarios based on their account configuration in Solstice Cloud.

If an SSO identity provider is not successfully configured for a user's associated Solstice Cloud organization:

- Any user logging in is only prompted for a Solstice Cloud password.

If an SSO identity provider is successfully configured for a user's associated Solstice Cloud organization:

- A user whose Solstice Cloud account is set to SSO Only is authenticated directly with the configured SSO identity provider.
- A user not set to SSO Only has the choice to log in with a configured Solstice Cloud password or log in with SSO.



- A user whose email address is associated with the Solstice Cloud application in the identity provider but has no corresponding account in Solstice Cloud is logged in to Solstice Cloud with Viewer-level access.

**i** Note that a user added as SSO Only cannot later be changed to authenticate with a password. The user account must be removed and re-invited without SSO Only selected to enable password authentication.

A user who has is not assigned to the Solstice Cloud app in the configured SSO identity provider sees a login error if they try to log in with SSO.

# Monitor Your Deployment

The Monitor section of Solstice Cloud provides tools for monitoring your organization's Solstice deployment and alerting you to technical issues so they can be resolved before impacting meeting productivity.

The following pages are available under Monitor in the left navigation bar of Solstice Cloud:

- **Availability** provides a list of all Solstice Pods in your deployment with monitoring tools such as connectivity status and graphs to identify Pods that are offline or experiencing uptime issues. Uptime/downtime details are available for each Pod with an active Solstice Subscription. Solstice Element Pods and other Pods outside of subscription will appear in the list with limited details.
- **Deployment** allows you to quickly see which Pods in your deployment need software updates or are outside of Solstice Subscriptions. Solstice Subscriptions cannot be applied to Solstice Element Pods.
- **Alerts** allow you to passively monitor your deployment by enabling email alerts triggered by Solstice display events such as reboots or periods of unreachability. A log of past alert events is also available for review at any time. Solstice Elements Pods will not be included in alerts.

**Deployments**  
164/164 Pods

**Solstice Subscription**

|               |             |
|---------------|-------------|
| Current       | 138 (84.1%) |
| Expired       | 25 (15.2%)  |
| Expiring Soon | 1 (0.6%)    |

**On Latest Version (v5.4)**

|                |             |
|----------------|-------------|
| Upgradeable    | 137 (83.5%) |
| Latest Version | 27 (16.5%)  |

**Solstice Discovery Service (SDS)**

| SDS Instance | Display Count |
|--------------|---------------|
| 10.0.0.135   | 1             |
| 10.0.0.56    | 1             |
| 10.0.0.96    | 3             |
| 10.0.10.56   | 2             |
| 10.0.21.141  | 2             |
| 10.0.21.35   | 1             |
| 10.0.50.17   | 16            |
| 10.211.55.3  | 3             |

| Status | ID               | Name        | MAC (Ethernet)    | MAC (Wi-Fi)       | SDS      | SDS Host 1 | Hardware | License   | Subscription | Import Date | Delete |
|--------|------------------|-------------|-------------------|-------------------|----------|------------|----------|-----------|--------------|-------------|--------|
| ●      | ddd416d8d33295e9 | 10.0.20.222 | 58:fc:db:45:25:e3 | 74:12:b3:5b:4a:1d | Disabled | --         | Pod Gen3 | Unlimited | 2022/11/04   | 2021/10/07  | 🗑️     |
| ⚠️     | eda8f1a05be8172  | 10.0.20.24  | 58:fc:db:45:25:dd | --                | Enabled  | 10.0.50.17 | Pod Gen3 | Unlimited | 2021/10/31   | 2021/10/05  | 🗑️     |
| ⚠️     | aa1d7c1e195096ef | 10.0.20.25  | 58:fc:db:45:26:12 | 74:12:b3:5b:59:89 | Disabled | --         | Pod Gen3 | Unlimited | 2021/10/31   | 2021/10/05  | 🗑️     |
| ●      | e1ff687cd14813a5 | 10.0.50.150 | 58:fc:db:42:32:4d | 90:32:4b:31:f1:53 | Enabled  | 10.0.50.17 | Pod Gen3 | Unlimited | 2023/05/21   | 2020/05/19  | 🗑️     |

## Data Availability for Solstice Element Pods

Solstice Element Pods, which are sold without subscriptions, will appear marked with a ⚠️ icon in most monitoring, analytics, and management tables. Only limited Solstice Cloud management is included for Element Pods, and a Solstice Subscription cannot be applied to them. Element Pods appear in Solstice

Cloud with limited functionality and without access to advanced analytics and real-time monitoring data about Solstice Pod usage, future Solstice releases, or Mersive's customer support.

## How To

### Quickly View Unavailable Pods

To view the status of your Solstice Pods at a glance, including whether they are available or unavailable:

1. In the left navigation bar of Solstice Cloud, go to either **Monitor >Availability** or **Monitor >Deployment**.
2. In the table that appears after the graphs, the **Status** column (furthest to the left) shows the status of each Pod managed in Solstice Cloud: online, offline, or outside of a subscription.
3. Click the **Status** column header row to sort Pods together by status.
4. In **Monitor >Deployment**, you can mouse over a status icon to see more details about the status of that Pod.



### Configure Automated Email Alerts

Solstice Cloud allows you to configure automated email alerts if certain events occur, such as a Pod going offline. These alerts can be set to match the needs of your deployment and allow you to quickly detect and resolve issues.



Automated alerts do not apply to Solstice Element Pods.

You can set up email alerts to go to certain email addresses by assigning specific Pods to a category and then configuring email alerts for that category. For example, you could assign all the Pods at your Seattle headquarters to a category option for that location. Then you could configure an email alert to be sent to your Seattle-based IT administrator if there are technical issues with any of those Pods.

1. In the left sidebar menu of Solstice Cloud, go to **Monitor > Alerts**.
2. Under **Alert Settings**, toggle the email alerts to receive to enabled. The toggle switch and filter options turn blue when the alert is enabled.
3. To receive email alerts only for certain displays in your Solstice Cloud deployment:
  - a. Click **filter**  next to the corresponding email alert. The categories that Pod alerts may be filtered by appears as menus.
  - b. Select options in each category to define which Pods to receive alerts for. Selected options appear below the menus.
  - c. To remove an individual selected filter option, click the  icon next to the option. Use **remove all** to clear all the previously selected filters.

## View Deployment Details and Manage Columns

Many details about Solstice Pods in your deployment managed in Solstice Cloud can be viewed on the Monitor > Deployment page, including hardware and software versions and subscription status. Use the Manage Columns feature to choose which details you want to see in the Deployment table:

1. In **Monitor > Deployment**, scroll down to the Deployment table that appears below the graphs.
2. Click **Manage Columns** in the upper right corner of the table. An area below the table title bar appears, displaying a checkbox for each available data option that can be displayed for your Solstice deployment.

| Deployment                             |  |  |   |  |                                     |   |                                     |                                     |   |                                |                                |                                | Manage Columns                 |  |                                    |   |                                      |
|--|--|--|---|--|-------------------------------------|---|-------------------------------------|-------------------------------------|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|------------------------------------|---|--------------------------------------|
| <input checked="" type="checkbox"/> ID | <input type="checkbox"/> Serial number | <input checked="" type="checkbox"/> MAC (Ethernet) | <input checked="" type="checkbox"/> MAC (Wi-Fi) | <input type="checkbox"/> IP (Ethernet) | <input type="checkbox"/> IP (Wi-Fi) | <input checked="" type="checkbox"/> SDS | <input type="checkbox"/> SDS Host 1 | <input type="checkbox"/> SDS Host 2 | <input checked="" type="checkbox"/> Version | <input type="checkbox"/> Tag 1 | <input type="checkbox"/> Tag 2 | <input type="checkbox"/> Tag 3 | <input type="checkbox"/> Tag 4 | <input checked="" type="checkbox"/> Subscription | <input type="checkbox"/> Tag Count | <input checked="" type="checkbox"/> Import Date | <input type="checkbox"/> Deploy Date |
| Status                                 | ID                                     | Name   | MAC (Ethernet)                                  | MAC (Wi-Fi)                            | SDS                                 | SDS Host 1                              | Version                             | Hardware                            | License                                     | Subscription                   | Import Date                    | Delete                         |                                |  |                                    |   |                                      |
|  | a218674018a81912                       | Screen Share #1                                    | 58:fc:db:42:df:70                               | ec:5c:68:cd:31:b9                      | Enabled                             | 10.128.1.229                            | 6.1                                 | Pod Gen3                            | Unlimited                                   | 2026/12/31                     | 2021/09/14                     |                                |                                |  |                                    |   |                                      |
|  | 652d0924e80b5213                       | Cayte's Pod  | 58:fc:db:42:78:91                               | 48:5f:99:48:eed7                       | Enabled                             | --                                      | 5.5.2                               | Pod Gen3                            | Unlimited                                   | 2023/07/31                     | 2022/08/31                     |                                |                                |  |                                    |   |                                      |
|  | 7d0bb213dfa1519a                       | Elbert   | 58:fc:db:42:a3:a6                               | 48:5f:99:0b:ba:fb                      | Disabled                            | --                                      | 5.2.1                               | Pod Gen3                            | Unlimited                                   | 2023/08/31                     | 2021/03/17                     |                                |                                |  |                                    |   |                                      |

Solstice Pod deployment details that can be viewed in the Deployment table include:

- a. Solstice Subscription status and details – Pods without an active Solstice Subscription will show a triangle icon in the **Status** column. A circle graph overview of Pod subscription statuses also appears above the table. Solstice Elements Pods sold without a subscription do not appear in the graph. They will appear with the icon and limited data in the Deployment table.

Click the sort icon at the top of the Status column to show Pods with the same subscription status grouped together.

- b. Pod **Hardware** and software **Version** – the Hardware column lists the generation of a Solstice Pod, and the Version column displays the precise version of Solstice software running on that Pod. The On Latest Version graph above the table shows how many Pods are upgraded to the most recently released version versus those that can be upgraded.
- c. A Pod's **ID** and **Serial number** may be needed for troubleshooting and subscription renewals.
- d. View a Pod's **IP** and **MAC** addresses on attached Wi-Fi and Ethernet networks.
- e. See whether **SDS (Solstice Discovery Service)** is enabled and **SDS Host 1** and **SDS Host 2** settings for a Pod.
- f. **Import Date** and **Deploy Date** columns show the date a Pod was imported into Solstice Cloud and deployed.
- g. **Search Tags** appear as **Tag** columns, and a **Tag Count** can also be shown.
- h. Use the icon in the **Delete** column (furthest to the right) to remove a Pod from Solstice Cloud management.





Solstice Pods can also be deleted from the [Pod Actions](#) menu available from Manage > Pods.



Use the horizontal scroll bar at the bottom of the Pod details table to view all columns of Solstice Pod data.

3. Select the data options you want to appear as columns in the Deployment table. Changes immediately appear in the table below.
4. When the desired details appear in the Pods table, click **Manage Columns** again to hide the checkboxes.

### Filter Pods by Category

1. Click the  button in the upper left. The Filter by Category pane opens over the right side of the page.
2. Click the  icon for each category to reveal the available category options.
3. Select the options you want to filter for in each category.
4. Click the  icon to view the table with the selected filters applied.
5. Selected filters appear in blue lozenges to the right of the Filter button at the top of the page. To remove a previously set filter, click the  icon for the filter you want to remove from the displayed data.



The Filter by Category section lists all the categories that have been defined in Solstice Cloud. Clicking on any of the categories displays all the defined options for that category and indicates how many displays have that option set. When you select one or more options under that category, the table shows all Pods that belong to ANY of the selected options.

However, when you make selections in a second category, the table only lists Pods that belong to either option selected in the first category AND either option selected in the second category.

### Export a CSV File of Monitoring Data

In both the Monitor > Deployment and Monitor > Availability tables (accessible from the left sidebar menu of Solstice Cloud), the Solstice Pods details displayed in the data table can be exported. Most details for Solstice Elements Pods will show as not available.

When you have sorted, filtered, and managed columns in a Pods details table to see the data you want, you may export that data in a comma separated values file that can be opened with any spreadsheet app. The CSV file includes both the Pods displayed on the current page as well as Pods contained on additional pages that may not be currently displayed on the screen. For example, if your table is set to show 25 items per page, but there are 30 pods in the list, data for the five currently undisplayed Pods are exported along with the 25 you are currently viewing.

1. Scroll down to the Pods details table that appears below the graphs.

| Deployment                            |                                      |               |                   |               |          |              |           |           |              |             |        | Manage Columns |
|---------------------------------------|--------------------------------------|---------------|-------------------|---------------|----------|--------------|-----------|-----------|--------------|-------------|--------|----------------|
| Status                                | ID                                   | Name          | MAC (Ethernet)    | IP (Ethernet) | SDS      | SDS Host 1   | Version   | Hardware  | Subscription | Deploy Date | Delete |                |
| <span style="color: red;">●</span>    | 4dae9b8a71b84afc                     | ABPod         | 58.fc.db:44:1f:f3 | 192.168.0.14  | Disabled | --           | 5.4.31069 | Pod Gen3  | 2024/04/29   | 2021/04/30  |        |                |
| <span style="color: red;">●</span>    | d3990445-bab1-eda8-178b-21a6fa50d7fc | Peeled Podado | --                | 192.168.3.250 | Disabled | --           | 3.5.0     | Pod Gen2i | 2030/05/30   | 2020/05/19  |        |                |
| <span style="color: red;">●</span>    | 81f5ed1d40f04f11                     | Round Table   | --                | --            | Enabled  | 192.168.2.50 | 4.2.14160 | Pod Gen2i | 2023/06/29   | 2020/05/19  |        |                |
| <span style="color: orange;">▲</span> | 6cfcf31c6815ab05                     | SolsticePod   | --                | --            | Disabled | --           | 5.2.25324 | --        | --           | --          |        |                |

EXPORT TO CSV
Items per page: 25 50 100
Page 1 of 1

2. When the table displays all the Pods and associated columns data you want see in your preferred sort order, click **Export to CSV**. For example, to show all the data for all the Pods being managed by Solstice Cloud:
  - a. Near the Filter button at the top of the page, remove all previously set filters by clicking the icon to remove all blue category and search filters.
  - b. Or clear the search filter in the table by clicking the icon in the Search box.
  - c. Click **Manage Columns**, and select all the check-boxes.
  - d. At the bottom of the table, click **Export to CSV**. (Data in many Monitor > Deployment table columns will not be exported to the CSV file for Pods with lapsed subscriptions. Click the 'Learn More' link from the icon hover tooltip to generate a subscription renewal request.)

Use the horizontal scroll bar at the bottom of the Pod details table to view all columns of Solstice Pod data.

3. Your browser downloads the CSV file to its default downloads location or prompts you to choose a location for it, depending on your personal browser settings.

# View and Manage USB Devices

Solstice Cloud allows you to easily view which Pods in your deployment are connected to which kinds of USB devices, both audio/video devices and other devices, such as input and storage peripherals. Knowing which Pods have connected cameras allows you to then enable Solstice video conferencing and occupancy sensing in the options for those Pods.

## USB Devices Summary Data


Solstice Cloud reports the number and type of USB devices connected to the Solstice Pods in your organization, both online and offline, as well as details about specific USB devices that are used on Pods in your organization. The three boxes at the top of the USB Devices page contain summary data about USB devices connected to your Pods.


- **Online USB Devices** The summary box on the left reports the number and type of USB devices connected to Pods in your organization that are currently online. Solstice categorizes these devices into A/V (audio/video) and Non-A/V types.
- **USB Device Status** The circle chart in the Device Status box provides an at-a-glance summary of online/offline status for all USB devices that are plugged into both online and offline Pods in your organization.
- **USB Device Models** The right box summarizes the numbers of specific USB device models you have connected to your Pods, provided in both a list and a handy graph. This makes it easy to see which devices you have the most of in your Solstice deployment.

Below the USB devices summary information, the **USB Plug Event History** graph shows the number of the times USB devices are plugged in to or unplugged from your organization's Pods each day for the last 30 days. Hover over the lines for a particular day to see exact plug-in/unplug event numbers.

## USB Devices Table Details

The Devices table at the bottom of the USB Devices page provides more details about each of the USB devices that have been connected to the Solstice Pods in your organization, including each device's details, current status, and the readiness of the associated Pod for Solstice conferencing and occupancy sensing functionality.

The USB Devices data can be sorted by the values in each column to find Pods and USB devices that meet various criteria by clicking the  icon in the column header. Possible sorts include:

- Alphabetically by the **Pod** name (default)
- Alphabetically by **USB Device** (groups similarly named USB devices together)
- By online/offline status in the **USB Status** column: A red dot  indicates the USB device is offline. Hovering over a red or green status dot shows the status in text format.
- By the date and time in the **Since** column, when the USB device was last plugged in to or unplugged from the Pod

- By whether the Pod connected to a USB device is **Occupancy Ready**: A green check ✓ indicates the software and configuration requirements to report conference space occupancy data in the [Solstice Cloud Analytics](#) information have been met. Hover over the **No** ⓘ status to see which requirements for occupancy sensing are not yet met.

**i** No video or audio data from an attached camera ever leaves the Solstice Pod. All processing occurs locally, and only aggregated occupancy data is sent to Solstice Cloud.

## How To



### Access This Page

To view available information about USB Devices connected to Solstice Pods in your organization:




1. Log in to [Solstice Cloud](#).
2. In the left sidebar menu, click to expand the **Manage** options.
3. Select **USB Devices**.

### Filter for A/V or Non-A/V Devices


The USB Device data provided in Solstice Cloud can be filtered by type of USB device, either audio/video (A/V) or non-A/V devices, such as input and storage peripherals.

1. In the left summary box that lists the number of USB Devices Online, click one of the two links at the bottom that list the number of **A/V devices** or **Non-A/V devices**.
2. A button for the selected filter appears under the page title, to the right of . The summary boxes at the top of the page and the table at the bottom of the page now show only USB devices that match the selected type.
3. Click  in the filter button to clear a selected filter and display more general USB devices data.

### Filter USB Devices by Pod Categories

1. Click the  button in the upper left. The Filter by Category pane opens over the right side of the page.
2. Click the  icon for each category to reveal the available category options.
3. Select the options you want to filter for in each category.
4. Click the  icon to view the table with the selected filters applied.



5. Selected filters appear in blue lozenges to the right of the Filter button at the top of the page. To remove a previously set filter, click the  icon for the filter you want to remove from the displayed data.



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