



XiO Cloud[®] Provisioning and Management Service

User Guide
Crestron Electronics, Inc.

Original Instructions

The U.S. English version of this document is the original instructions.
All other languages are a translation of the original instructions.

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Introduction

The XiO Cloud® service allows all supported Crestron® devices across an enterprise to be managed and configured from one central, secure location in the cloud. The XiO Cloud service may be used to view the status of a device, to configure various device and network settings, to manage licenses, and to update device firmware.

The XiO Cloud service is an IoT (Internet of Things)-based platform that provides the following benefits for an enterprise:

Quick Deployment

- Configure new or replacement devices before installation
- Retrieve device settings automatically
- Drag-and-drop naming, configuration, and organization

Remote Management

- Change settings for multiple devices across the enterprise simultaneously
- Update firmware for all devices across the enterprise simultaneously
- View cloud audit logs to identify and resolve issues quickly

Instant Monitoring

- View live status of all connected devices from anywhere at any time
- Monitor device changes in real time
- No extra configuration tools are required for monitoring

Confident Evolution

- Interactive dashboards provide real-world usage data
- No programming is required for data gathering
- Optimize workplace technology experiences

For more details and additional resources, refer to <https://www.crestron.com/xiocloud>.

Select a License Type

The XiO Cloud service can be configured using one of two different license types: device-based and room-based. Each license type is described below.

NOTE: Starting with the July 2020 release of XiO Cloud, only room-based licenses may be purchased for new XiO Cloud accounts. Existing XiO Cloud accounts may continue to use device-based licenses or can be switched over to room-based licenses at any time.

Device-Based Licenses

Device-based licenses come in standard and premium tiers and are billed yearly. Each device that connects to the XiO Cloud service requires purchase of one standard or premium license.

The following features are provided in each tier:

Standard Tier

- Full device settings and status feedback (if supported by the device)
- Firmware upgrades
- Scheduled actions
- License management
- Ability to add users with different access levels/permissions
- Audit logs for all changes made from the service

Premium Tier

- All of the features provided in the standard tier
- Interactive dashboards that require no programming
- SMS and email alerts

If a feature is not available in the selected service tier, a message indicating this is displayed when the feature is selected in the XiO Cloud service.

For more information on pricing tiers, refer to <https://www.crestron.com/xiocloud>.

Room-Based Licenses

Room-based licenses provide various features that are billed monthly. Each room in XiO Cloud requires purchase of one SW-XIOC-EM license. Additional licenses can then be purchased for the room or account depending on the desired functionality. Different rooms can have different license combinations.

The following features are provided in each room-based license:

- **SW-XIOC-EM (Endpoint Management):** Provides the functionality required to deploy and manage devices, including device settings, firmware upgrades, custom code deployment, and actions such as firmware update. **Required for all rooms in a XiO Cloud room-based installation.**
- **SW-XIOC-S (Support):** Provides tools for managing support for rooms, including device status, remote viewing and control for touch screens, email and SMS alerts, and certain dashboards.
- **SW-XIOC-API (REST API):** Provides access to a REST API used to pull device status into other services. The API license must be purchased for all rooms in an account to use this functionality.
- **SW-XIOC-WA (Workplace Analytics):** Provides access to dashboards that show how a room or space is used within an organization. **This feature is currently provided as a complimentary beta with each SW-XIOC-EM license.**

Refer to the table on the following page for a comparison matrix showing the features provided by each license type.

Room-Based License Comparison Matrix

Included with XiO Cloud Account	Included with SW-XIOC-EM License	Included with SW-XIOC-S License	Included with SW-XIOC-API License
Provision users locally within the XiO Cloud interface	Configure settings for individual devices	Monitor live device status	Obtain status of devices via REST API
Assign different access levels to different users using role-based access control	Configure settings for groups of devices	Receive email and SMS alerts	Obtain organizational structure via REST API
Hide groups of devices from certain users	Update firmware for devices	View and control touch screens remotely	Obtain account details via REST API
Utilize single sign-on using corporate credentials	Schedule actions such as reboot for devices	View device functionality dashboards	
Claim single devices using MAC address and serial number pairs	Schedule firmware updates for devices		
Claim devices in bulk by uploading MAC address and serial number pairs in CSV format	Load and manage custom control system and touchscreen programs and projects		
Organize devices by group, subgroup, and room	View an activity log of all changes made to devices via XiO Cloud		
Download a full inventory of devices, rooms, and groups in CSV format	Includes complimentary beta of SW-XIOC-WA license		
Name devices when claiming them in bulk via CSV			
Unclaim devices that are no longer being managed			

Log in to the Service

A registered XiO Cloud account is required to use the XiO Cloud service. To register for an account, contact your Crestron sales representative.

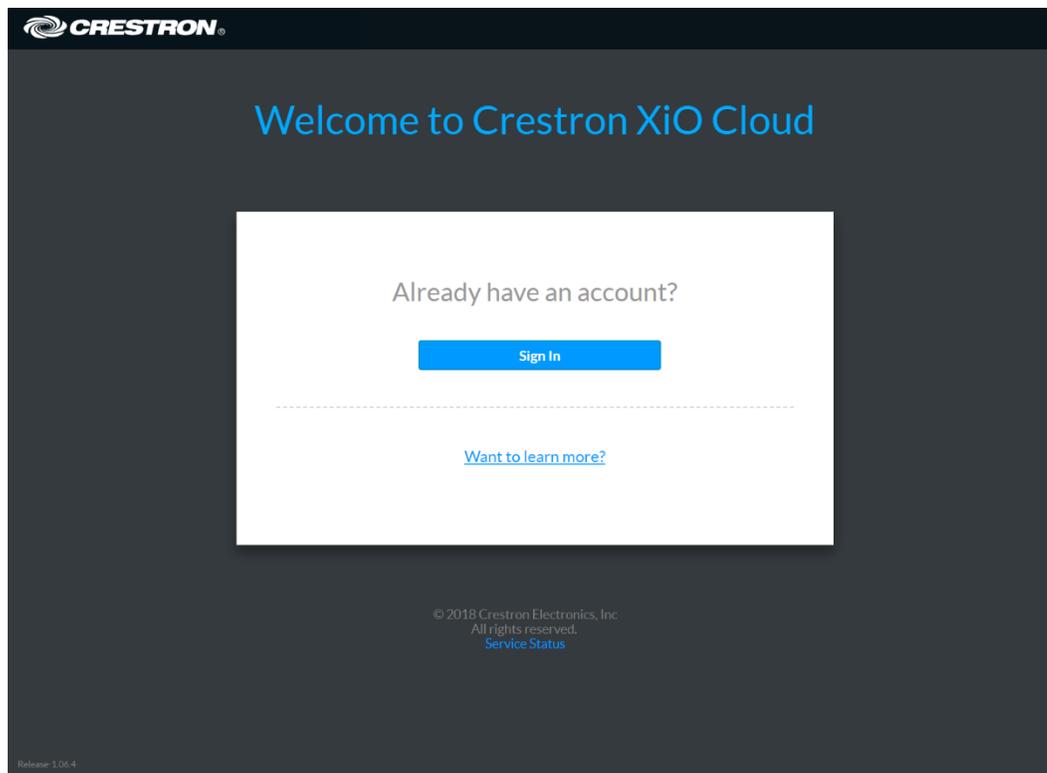
The first individual at an organization to register for the service will receive an email from Crestron that provides a username and a temporary password. These credentials are used for the initial login.

Additional users are added from within the XiO Cloud service. For information about managing, adding, and deleting users, refer to [Manage Users \(on page 50\)](#).

To log in to the XiO Cloud service:

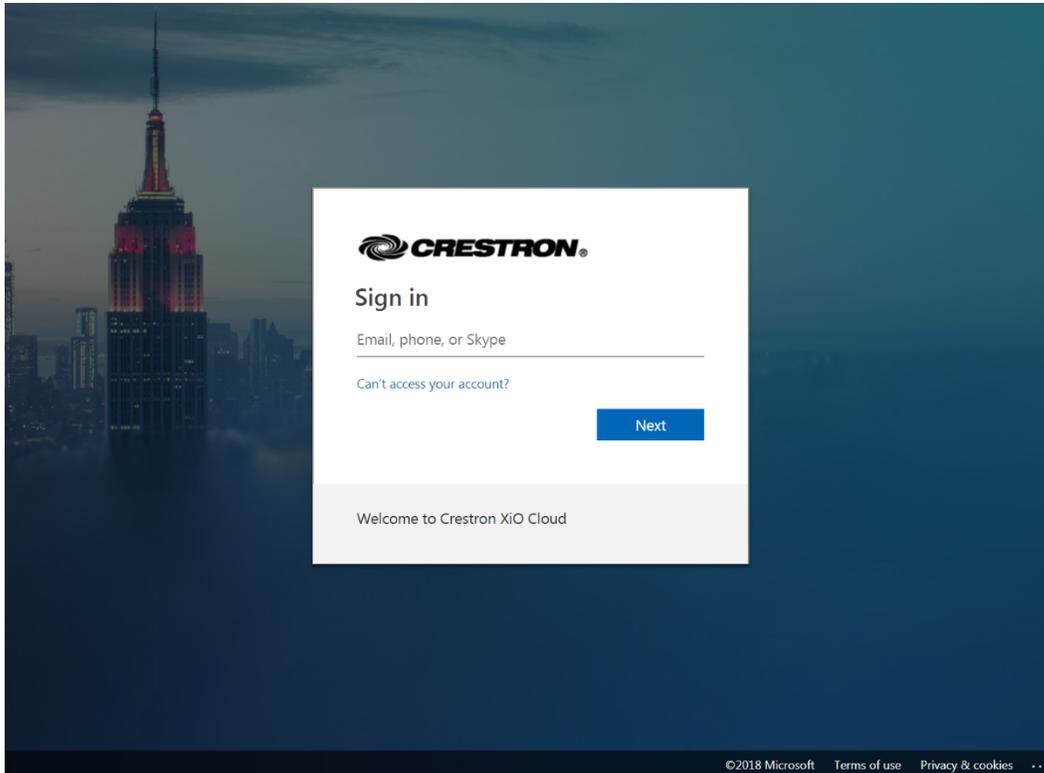
1. Navigate to <https://portal.crestron.io>. The XiO Cloud landing page is displayed.

XiO Cloud Landing Page



2. Click **Sign In**. A Microsoft® Azure® service page for entering login credentials is displayed.
Crestron uses Microsoft Azure services to manage login credentials for the highest level of enterprise security.

Sign In Page



3. Enter the username (provided in the email) in the text field, and then click **Next**.
4. Enter the temporary password (provided in the email) in the text field, and then click **Next**.

If this is the first login, the user is asked to change his or her password and to provide an email address and mobile number. The email address and phone number are used for account recovery if the username or password is forgotten.

Upon successful login, the user is redirected to the XiO Cloud service.

XiO Cloud Service Page

The screenshot displays the Crestron XiO Cloud Service interface. On the left is a dark sidebar with the 'ENVIRONMENT' menu, listing various system components such as '24DaysHeartBeat', '3Series', 'Automation_Test_PRO3', and 'AMP_8150_Model'. The main content area is titled 'Automation_Test_PRO3' and features the 'AMP_8150 Model' configuration page. At the top right of this page is an 'Action' dropdown menu. Below the title is a navigation bar with tabs for 'Status', 'Settings', 'Activity Log', and 'Scheduled Actions'. A red status indicator reads 'The system is currently offline'. The 'Device' section is expanded, showing the following details:

Model	AMP-8150
Serial Number	1744NEJ04511
Firmware version	1.00.272.004

Below the device details are sections for 'Network' and 'Alerts'. At the bottom of the page, the footer contains the copyright information '© 2018 Crestron Electronics, Inc. Release-1.07.53' and links for 'Service Status', 'Privacy Statement', and 'Cloudware License'.

Build the Environment

The XiO Cloud service provides an environment that represents the organizational structure of an enterprise.

The XiO Cloud service environment consists of groups, rooms, and devices. Groups and rooms provide an organizational hierarchy for devices according to geographic location, department, or any other structure that is appropriate for the organization. Devices may be associated with groups or rooms once they are claimed by the service. Once devices are associated with groups or rooms, actions may be performed simultaneously for all devices within a group or room.

NOTE: The ability to add rooms is provided for room-based XiO Cloud accounts only.

Use the following procedures to build the XiO Cloud service environment.

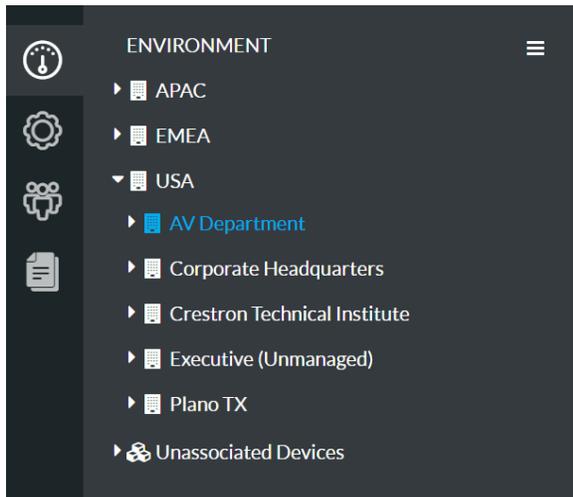
Create the Group Tree

The group tree is in the environment panel, which may be accessed by clicking the dashboard icon on the left side of the page.

The group tree is the primary organizational structure of the XiO Cloud environment. Top-level groups and rooms appear in the group tree once they are added to the environment. One or more subgroups or rooms may also be added under each group.

The group tree is located under the **ENVIRONMENT** menu on the left side of the configuration pages. Groups, subgroups, and rooms are ordered alphabetically.

Environment Menu

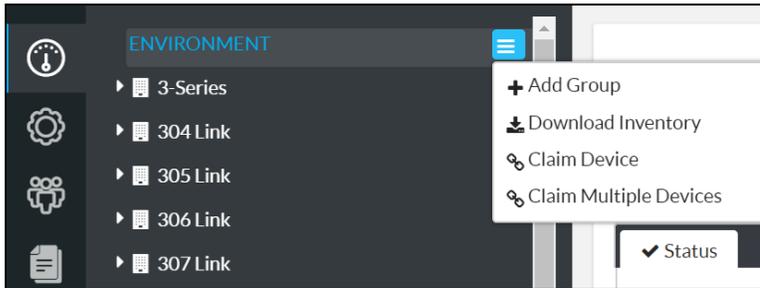


Create a Top-Level Group

To create a top-level group:

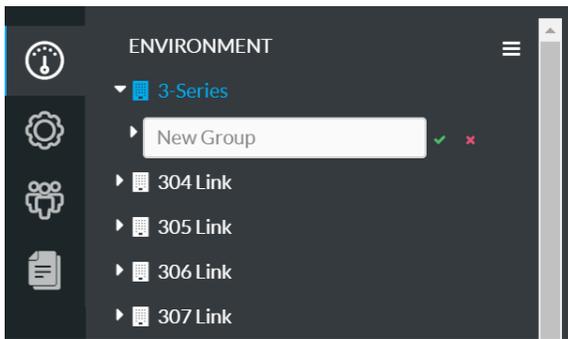
1. Click the **ENVIRONMENT** menu button  to display a drop-down menu.

Environment - Drop-Down Menu



2. Click **Add Group**. A new group is added to the group tree.

Environment - New Group



3. Enter a descriptive group name in the **New Group** text field. A group name must be at least three characters long.

NOTE: Each group name must be unique. If a duplicate group name is entered, a notification is displayed stating that the group name already exists.

4. Click the green check icon  or click **Enter** to save the group. Click the red **x** icon  to discard the group.

The group is reordered alphabetically in the top level of the group tree after it is added.

Select the group from the group tree to view and configure group settings. For more information, refer to [Configure Settings for a Group of Devices \(on page 31\)](#).

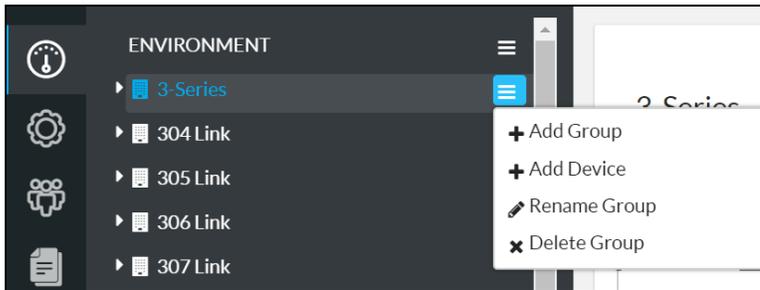
Create a Subgroup

One or more subgroups (or devices) may be added under the top-level group. A group hierarchy may contain up to eight levels. A group may contain either subgroups or devices, but not both.

To add a subgroup:

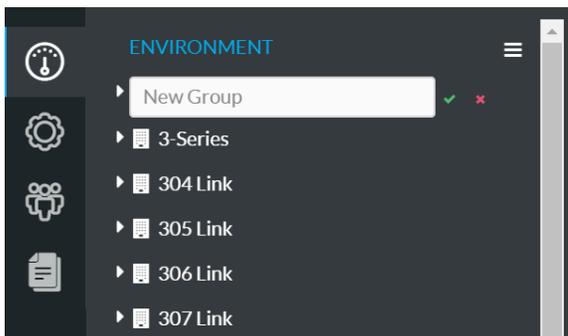
1. Position the cursor over the group name in the **ENVIRONMENT** menu to reveal its context menu.
2. Click the context menu button  for the group to display a drop-down menu.

Group - Drop-Down Menu



3. Click **Add Group**. A new subgroup is added under the selected group.

Group - New Group



4. Enter a descriptive subgroup name in the **New Group** text field. A subgroup name must be at least three characters long.
5. Click the green check icon  or click **Enter** to save the subgroup. Click the red x icon  to discard the subgroup.

The subgroup is reordered alphabetically within its parent group after it is added.

Select the subgroup from the group tree to view and configure subgroup settings. For more information, refer to [Configure Settings for a Group of Devices \(on page 31\)](#).

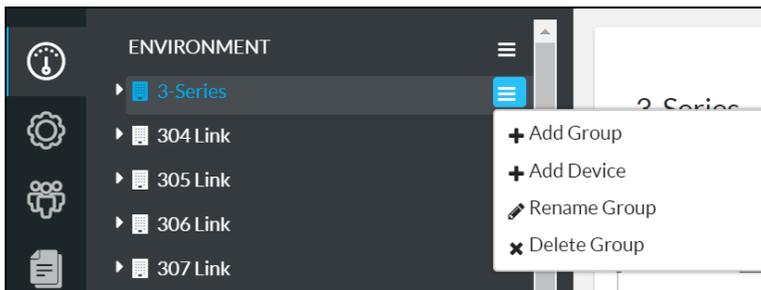
Rename a Group

Each group in the XiO Cloud service has a unique name, which allows the group to be identified and organized within the service. A group may be renamed as needed.

To change the group name in the group tree:

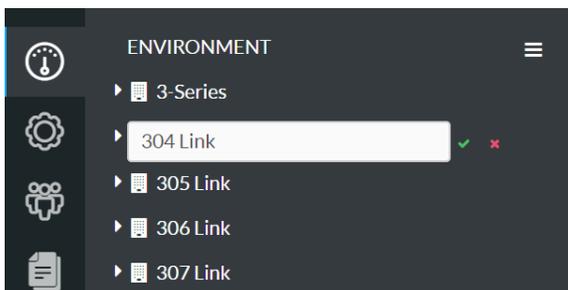
1. Position the cursor over the group name in the **ENVIRONMENT** menu to reveal its context menu.
2. Click the context menu button  for the group to display a drop-down menu.

Group - Drop-Down Menu



3. Click **Rename Group**. The group name becomes an editable text box.

Group - Edit Group Name



4. Enter a new group name in the text box. A group name must be at least three characters long.
5. Click the green check icon  or click **Enter** to save the group name. Click the red **x** icon  to discard the changes.

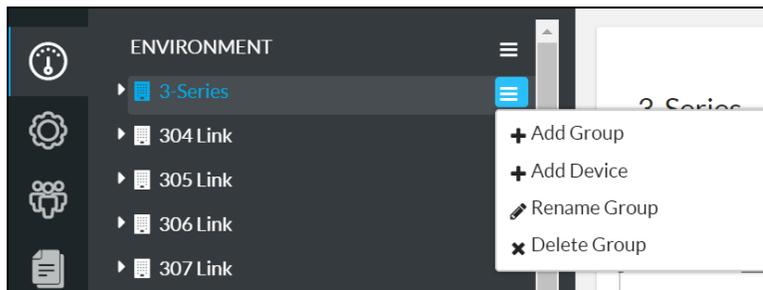
Delete a Group

Groups may be deleted from the XiO Cloud service environment as needed. A group that contains a device or a subgroup may not be deleted until the devices or subgroups are removed.

To delete a group from the group tree:

1. Position the cursor over the group name in the **ENVIRONMENT** menu to reveal its context menu.
2. Click the context menu button  for the group to display a drop-down menu.

Group - Drop-Down Menu



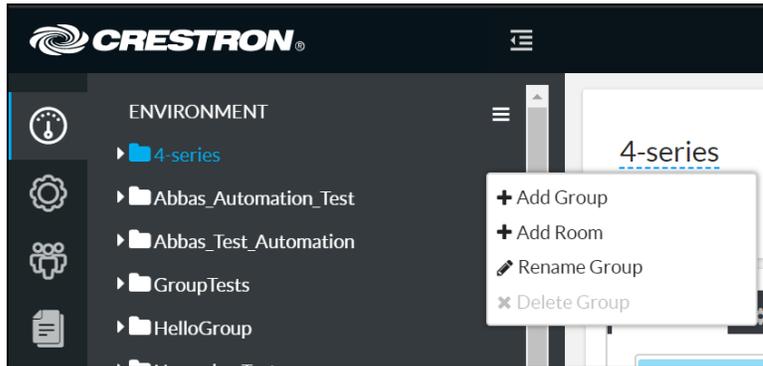
3. Click **Delete Group**. A confirmation dialog box is displayed.
4. Click **Yes** to delete the group or click **No** to cancel the deletion.

Create a Room

To create a room for room-based accounts:

1. Click the **ENVIRONMENT** menu button  to display a drop-down menu.

Environment - Drop-Down Menu



2. Click **Add Room**. A new room is added to the group tree.
3. Enter a descriptive group name in the **New Room** text field. A room name must be at least three characters long.

NOTE: Each room name must be unique. If a duplicate room name is entered, a notification is displayed stating that the room name already exists.

4. Click the green check icon  or click **Enter** to save the room. Click the red x icon  to discard the room.

The room is reordered alphabetically in the top level of the group tree after it is added.

Select the room from the group tree to view and configure group settings. For more information, refer to [Configure Settings for a Group of Devices \(on page 31\)](#).

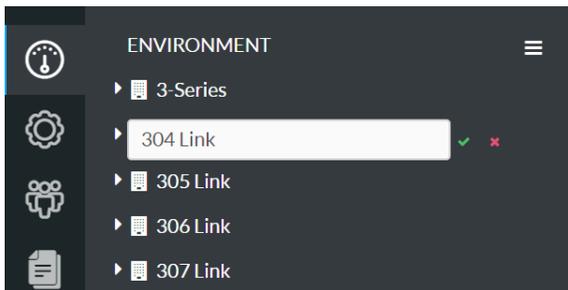
Rename a Room

Each room in room-based XiO Cloud accounts has a unique name, which allows the room to be identified and organized within the service. A room may be renamed as needed.

To change the room name in the group tree:

1. Position the cursor over the group name in the **ENVIRONMENT** menu to reveal its context menu.
2. Click the context menu button  for the group to display a drop-down menu.
3. Click **Rename Room**. The group name becomes an editable text box.

Room - Edit Room Name



4. Enter a new group name in the text box. A room name must be at least three characters long.
5. Click the green check icon  or click **Enter** to save the room name. Click the red x icon  to discard the changes.

Delete a Room

Rooms may be deleted from a room-based XiO Cloud account environment as needed. A room that contains a device or a subgroup may not be deleted until the devices or subgroups are removed.

To delete a room from the group tree:

1. Position the cursor over the group name in the **ENVIRONMENT** menu to reveal its context menu.
2. Click the context menu button  for the group to display a drop-down menu.
3. Click **Delete Room**. A confirmation dialog box is displayed.
4. Click **Yes** to delete the group or click **No** to cancel the deletion.

Claim Devices

Devices must be claimed by the XiO Cloud service before they may be managed by the service. Devices may be claimed individually or as a group.

Claim a Single Device

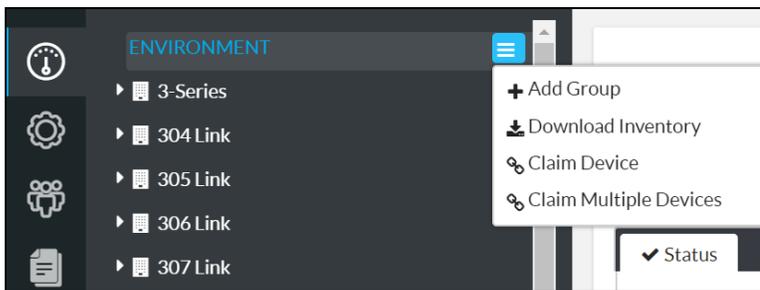
To claim a single device:

1. Record the MAC address and serial number of the device. The MAC address and serial number are labeled on the shipping box or on a sticker attached to the device.

NOTE: Use the MAC address labeled *MAC Address*.

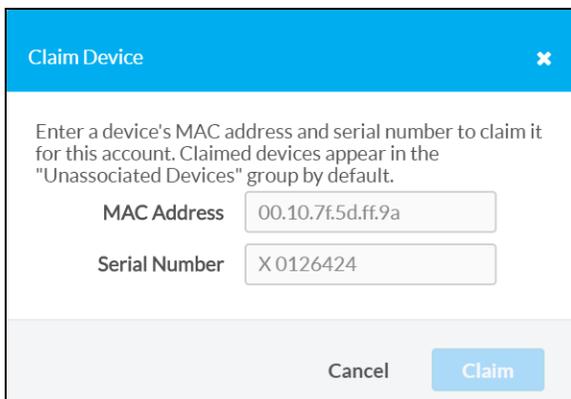
2. In the XiO Cloud service, click the **ENVIRONMENT** menu button  to display a drop-down menu.

Environment - Drop-Down Menu



3. Click **Claim Device**. The **Claim Device** dialog box is displayed.

Claim Device Dialog Box

A screenshot of the 'Claim Device' dialog box. The dialog box has a blue header with the title 'Claim Device' and a close button (X). The main content area contains the following text: 'Enter a device's MAC address and serial number to claim it for this account. Claimed devices appear in the "Unassociated Devices" group by default.' Below this text are two input fields: 'MAC Address' with the value '00.10.7f.5d.ff.9a' and 'Serial Number' with the value 'X 0126424'. At the bottom of the dialog box, there are two buttons: 'Cancel' and 'Claim'.

4. Enter the MAC address and serial number recorded in step 1 in the **MAC Address** and **Serial Number** fields, respectively.
5. Click **Claim**. A success message is displayed if the claim is successful.

NOTE: If an error message is displayed stating that the device does not exist, connect the device to a network that has access to the Internet, wait 15 minutes, and then try again.

6. Click **X** to close the dialog box. The hostname of the claimed device is displayed in the device tree under the group **Unassociated Devices**.

Unassociated Devices



The device may now be managed and assigned to a group or room.

Claim Multiple Devices

To claim multiple devices:

1. Record the MAC address and serial number of each device as a comma delimited CSV file. The MAC address and serial number are labeled on the shipping box or on a sticker attached to the device.

NOTE: Use the MAC address labeled *MAC Address*.

The CSV file should be formatted as shown below:

CSV File Format

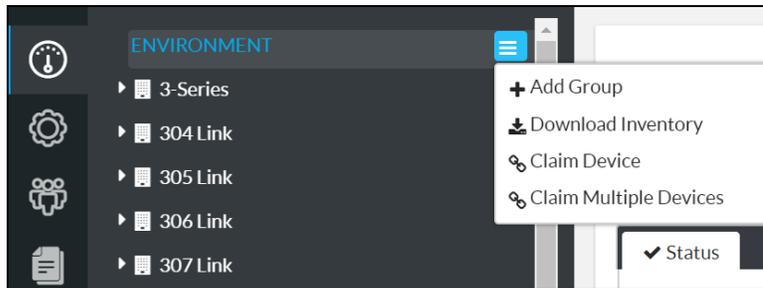
```
MAC Address,Serial Number
00.10.7e.8b.81.b6,17284712
00.10.7e.8b.8c.87,17284570
00.10.7e.96.83.93,1716JBG01207
00.10.7e.96.92.0a,1716JBG01550
00.10.7e.8b.87.c1,17284670
```

NOTE: An optional third column may be added to the CSV file with custom device names. After being claimed, the device will take the custom name from the CSV file instead of its default name. For example, if adding a custom device name to the first example above, the formatting would be `00.10.73.8b.81.b6,17284712,[custom device name]`

2. Save the CSV file to a location that may be accessed by the computer used to access the XiO Cloud service.

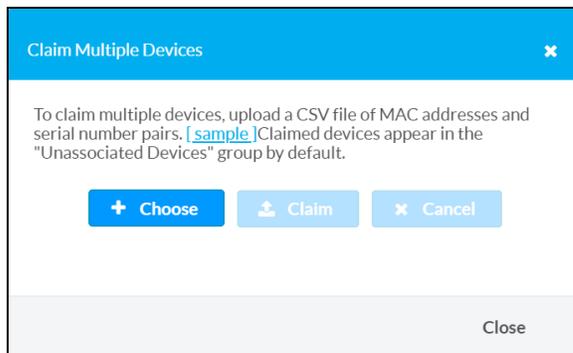
3. In the XiO Cloud service, click the **ENVIRONMENT** menu button  to display a drop-down menu.

Environment - Drop-Down Menu



4. Click **Claim Multiple Devices**. The **Claim Multiple Devices** dialog box is displayed.

Claim Multiple Devices Dialog Box



5. Click **Choose**, and then select the CSV file created in step 1.
6. Click **Claim** to claim all of the devices listed in the file. A message indicating the claim status of each device is displayed.

NOTE: If an error message is displayed stating that a device does not exist, connect that device to a network that has access to the Internet, wait 15 minutes, and then try again.

7. Click **X** to close the dialog box. The hostnames of the claimed devices appear in the device tree under the group **Unassociated Devices**.

Unassociated Devices



The devices may now be managed and assigned to a group or room.

Unclaim Devices

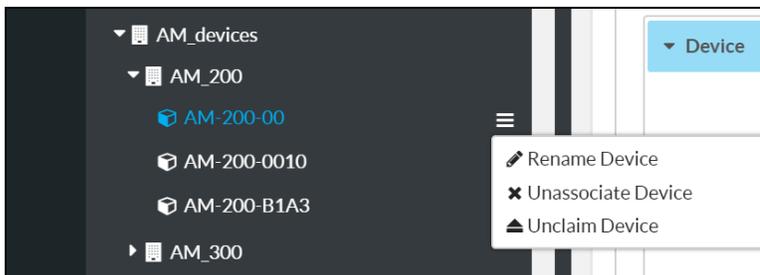
Devices may be unclaimed to remove them from a user's account. Once a device is unclaimed:

- The device is no longer counted against the allotted number of devices for the account
- The device may be claimed by another account.
- The XiO Cloud service no longer enforces any settings on the device.

To unclaim a device:

1. Position the cursor over the device in the **ENVIRONMENT** menu to reveal its context menu.
2. Click the context menu button  of the device to display a drop-down menu.

Device - Drop-Down Menu



3. Click **Unclaim Device**. A confirmation dialog box is displayed.
4. Click **Yes** to unclaim the device, or click **No** to cancel.

NOTE: If a device that has any licenses on it is unclaimed, the licenses remain with the account and not the device. The licenses are removed from the device once it is unclaimed, and the licensed functionality is no longer available on the device.

Add Devices to Groups or Rooms

Devices may be added to groups or rooms after they are claimed by the XiO Cloud service. Once devices are added to groups or rooms, all devices within a group or room may be monitored and controlled at once.

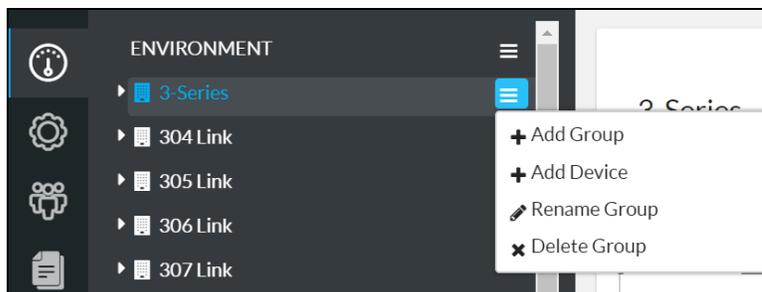
NOTE: For room-based accounts, devices may only be added to rooms and not groups. For device-based accounts, devices may be added only to groups that do not contain any subgroups.

Two methods may be used to add devices to a group: Devices may be added via the context menu for the group or room, or devices may be dragged from the **Unassociated Devices** group into another group or room.

To add devices to a group or room via its context menu:

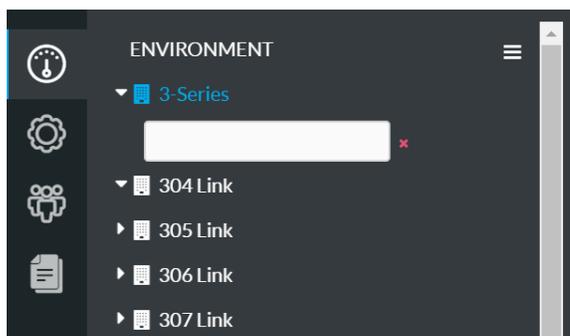
1. Position the cursor over the group or room name in the **ENVIRONMENT** menu to reveal its context menu.
2. Click the context menu button  for the group or room to display a drop-down menu.

Group - Drop-Down Menu



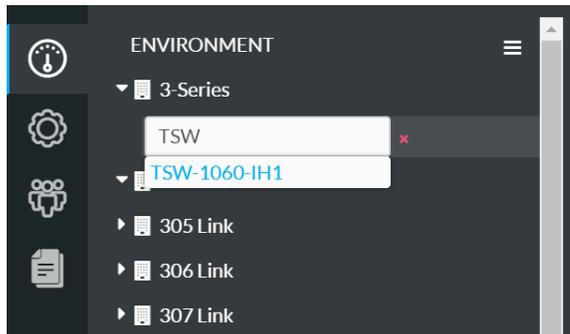
3. Click **Add Device**. A text box is added under the selected group or room.

Group - Add Device Text Box



4. Start typing the name of the desired device. A list of claimed devices that match the entered text is displayed below the text box.

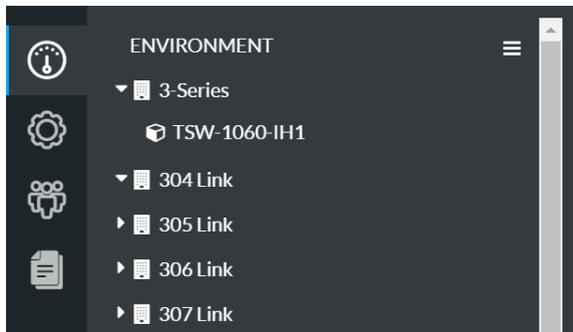
Group - Add Device Text Box (with Text)



5. Select the desired device by clicking on it or by navigating to the device using the arrow keys and pressing **Enter**.

The device is reordered alphabetically within its parent group or room after it is added. It is no longer shown in the **Unassociated Devices** group.

Group - Device Added



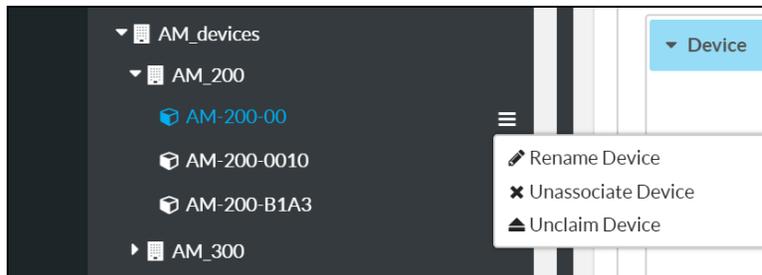
To drag a device from the **Unassociated Devices** group into another group or room:

1. Click and hold the pointer over the device.
2. Drag the device from the **Unassociated Devices** group and drop it into the desired group or room. The device is added to the group or room and is no longer shown in the **Unassociated Devices** group.

To return a device to the **Unassociated Devices** group:

1. Position the cursor over the device in the **ENVIRONMENT** menu to reveal its context menu.
2. Click the context menu button  for the device to display a drop-down menu.

Device - Drop-Down Menu



3. Click **Unassociate Device**. The device is added back to the **Unassociated Devices** group and is no longer shown in its previous group or room.

Devices may also be dragged to the **Unassociated Devices** group or to any other group or room that supports added devices.

Select the device from the group tree to view and configure device settings. For more information, refer to [Configure Device Settings \(on page 29\)](#).

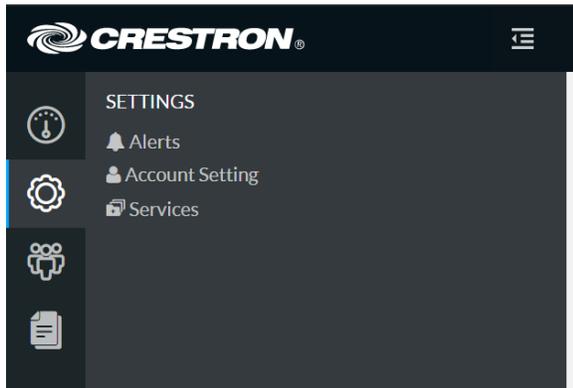
Licensed Features

For room-based accounts, licenses can be purchased to enable specific functionality within the XiO Cloud service. Licensed features may be added to rooms, removed from rooms, or transferred to different rooms.

NOTE: Licensed features can be configured only by users with Global Administrator permissions.

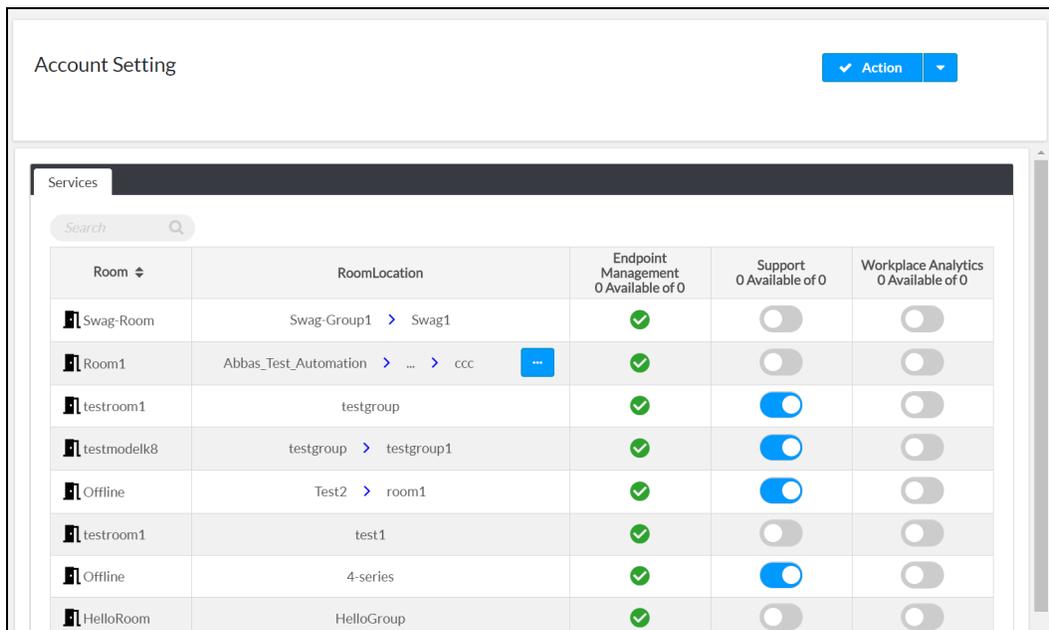
The **SETTINGS** menu for licensed features is located in the user management panel, which may be accessed by clicking the gear icon  on the left side of the screen.

Settings – Services Option



Click **Services** in the **SETTINGS** menu. A **Services** page is displayed to the right of the **SETTINGS** menu.

Services Page



Account Setting Action

Services

Search

Room	RoomLocation	Endpoint Management 0 Available of 0	Support 0 Available of 0	Workplace Analytics 0 Available of 0
Swag-Room	Swag-Group1 > Swag1	✓	<input type="checkbox"/>	<input type="checkbox"/>
Room1	Abbas_Test_Automation > ... > ccc	✓	<input type="checkbox"/>	<input type="checkbox"/>
testroom1	testgroup	✓	<input checked="" type="checkbox"/>	<input type="checkbox"/>
testmodelk8	testgroup > testgroup1	✓	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Offline	Test2 > room1	✓	<input checked="" type="checkbox"/>	<input type="checkbox"/>
testroom1	test1	✓	<input type="checkbox"/>	<input type="checkbox"/>
Offline	4-series	✓	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HelloRoom	HelloGroup	✓	<input type="checkbox"/>	<input type="checkbox"/>

Licensed features are organized by room name. The total number of available licenses versus purchased licenses for each feature is displayed next to the license type in the table headings.

Enter text in to the **Global Filter** text box to search for and display rooms that match the search term(s).

If the room list spans multiple pages, use the navigation arrows on the bottom of the page to move forward or backward through the pages, or select a page number to navigate to that page.

The following information and controls are provided for each listed room:

- **Room:** The room name
- **Room Location:** The location of the room within the group tree hierarchy
- **Endpoint Management:** Displays whether an Endpoint Management license has been enabled for the room (A green check mark icon indicates that the license is enabled for the room, while a red x icon indicates that the license has not been enabled for the room.)

NOTE: An Endpoint Management license is required for the room before any other licensed functionality can be added.

- **Support:** Toggle the switch to add or remove a Support license from the room. A Support license can be added only if one or more unused Support licenses are available in a customer's license pool. Removing a Support license adds it back to the customer's license pool.
- **Workplace Analytics:** Toggle the switch to add or remove a Workplace Analytics license from the room. A Workplace Analytics license can be added only if one or more unused Workplace Analytics licenses are available in a customer's license pool. Removing a Workplace Analytics license adds it back to the customer's license pool.

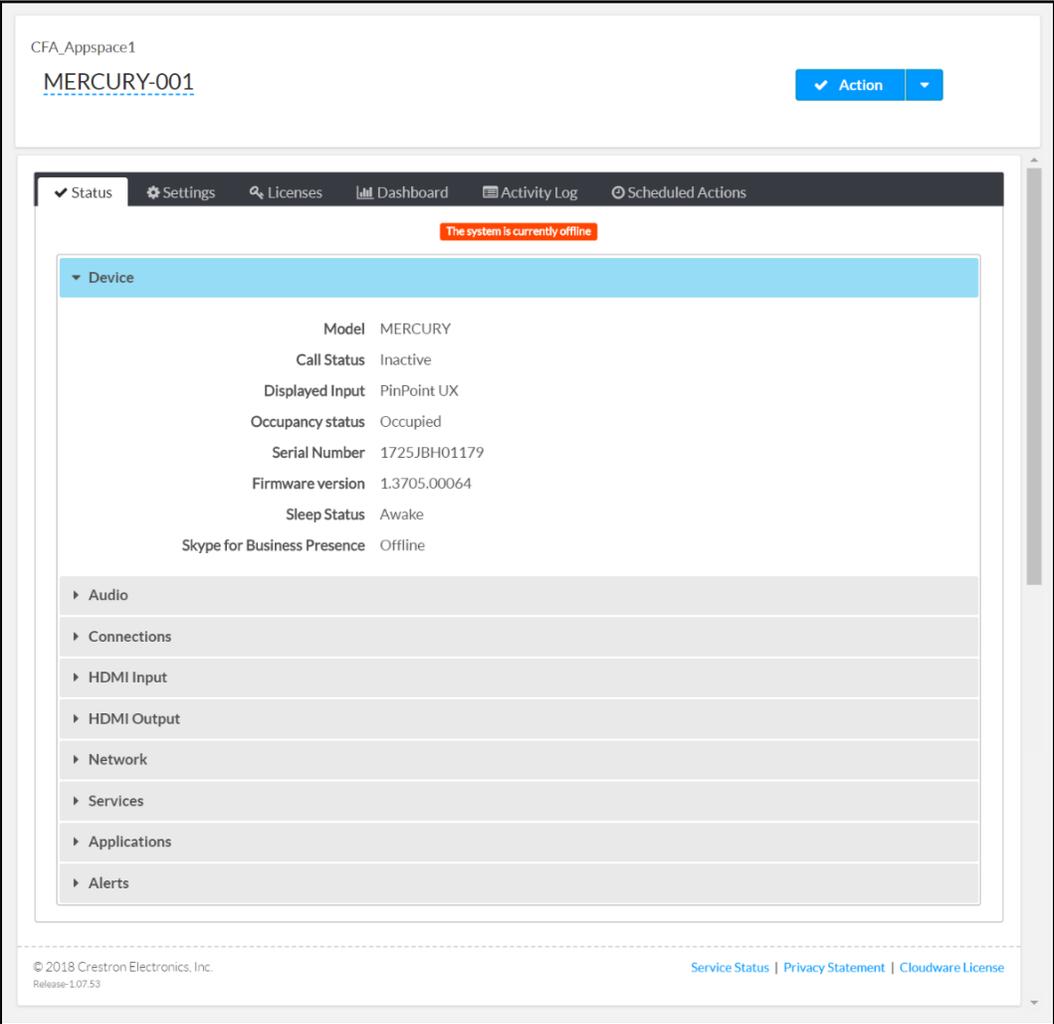
Manage Devices

Devices may be managed via the XiO Cloud service after they have been claimed by the service. Devices may be managed individually or as a group.

Select a device from the group tree to view and configure the device status, settings and licenses. The configuration pages for the device also provide options for viewing status dashboards and activity logs, and automated actions may be scheduled for the device.

NOTE: Not all device management options are available for some devices.

Device Configuration Page



Use the following procedures to manage devices via the XiO Cloud service.

Rename a Device

Each device in the XiO Cloud service has a unique device name, which allows the device to be identified and organized within the service. The device name is used only by the XiO Cloud service.

By default, the device name is set as the hostname of the device. However, the device may be renamed as needed.

NOTE: Changing the device name has no impact on the hostname or other identifying features on the hardware.

Two methods may be used to rename a device: The device name may be changed in the group tree or from its configuration pages.

To change the device name in the group tree:

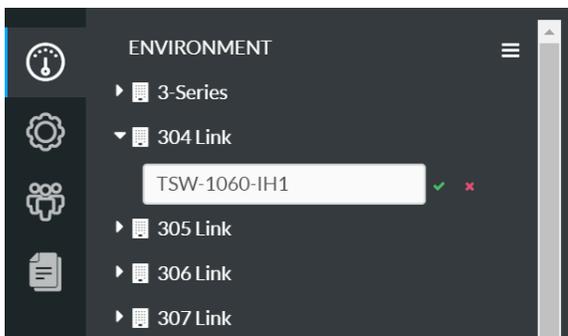
1. Position the cursor over the device in the **ENVIRONMENT** menu to reveal its context menu.
2. Click the context menu button  of the device to display a drop-down menu.

Device - Drop-Down Menu



3. Click **Rename Device**. The device name becomes an editable text box.

Device - Edit Device Name

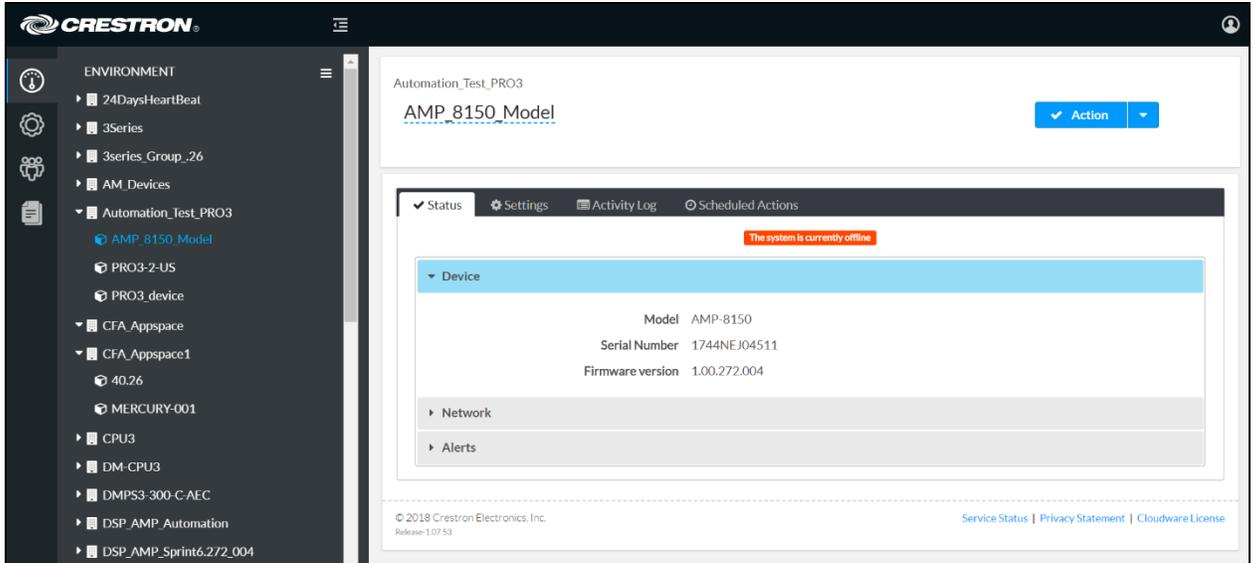


4. Enter a new device name in the text box. A device name must be at least three characters long.
5. Click the green check icon  or click **Enter** to save the device name. Click the red **x** icon  to discard the changes.

To change the device name from the configuration pages:

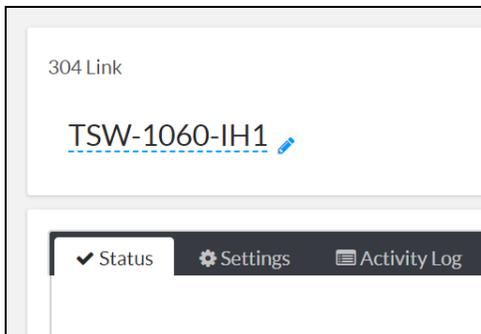
1. Select the device from the group tree to display its configuration page.

Device Configuration Page



2. Click on the device name on the top left of the configuration page. The device name becomes an editable text box.

Device Configuration Page - Edit Device Name



3. Enter a new device name in the text box. A device name must be at least three characters long.
4. Click the green check icon  or click **Enter** to save the device name. Click the red x icon  to discard the changes.

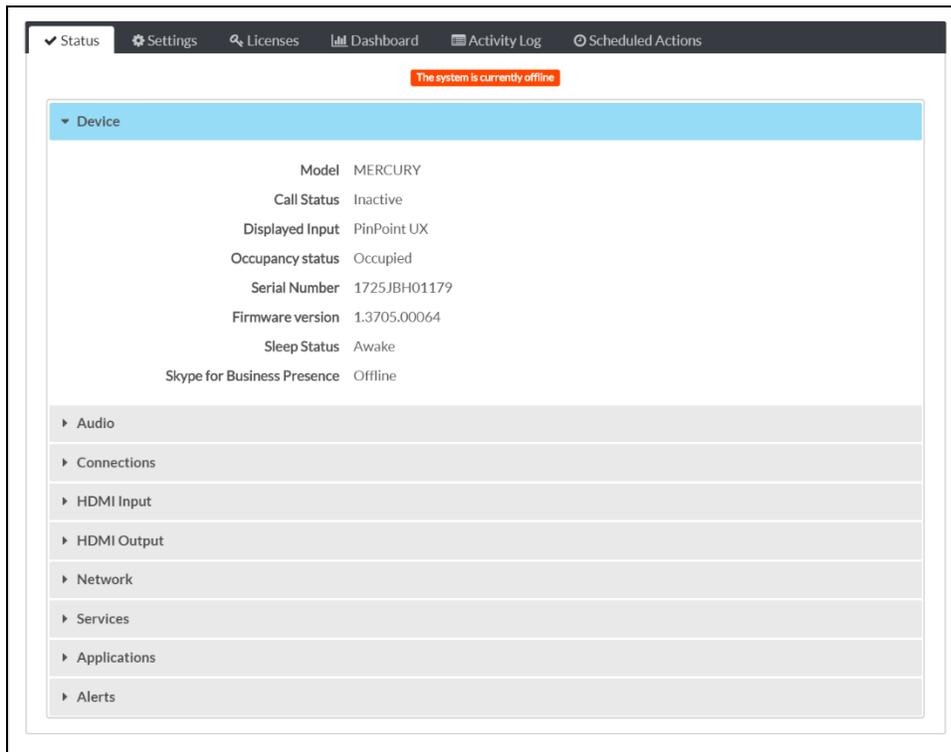
View Device Status

The device status may be viewed for individual devices or for multiple devices within the same group or room (license-dependent).

View Status for a Single Device

To view the status for a single device, select a device from the group tree to display its configuration pages. The **Status** tab is open by default.

Device Configuration Page - Status Tab (Devices)



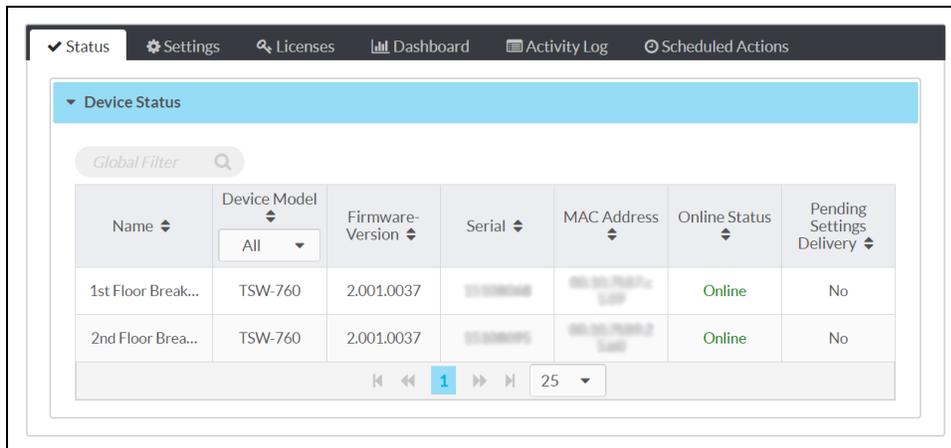
The **Status** tab provides expandable "accordions" that display static and changing device attributes. Dynamic attributes, such as volume, change in the appropriate status accordion within seconds of being changed on the device.

Click on an accordion name to expand it. If the accordion is expanded, click the accordion name again to collapse it. The accordions provided vary depending on the device.

View Status for a Group of Devices

To view the status for multiple devices within the same group or room, select a group or room from the group tree to display its configuration pages. The **Status** tab is selected by default.

Group Configuration Page - Status Tab (Device Status)



Name	Device Model	Firmware-Version	Serial	MAC Address	Online Status	Pending Settings Delivery
1st Floor Break...	TSW-760	2.001.0037	XXXXXXXXXX	XXXXXXXXXX	Online	No
2nd Floor Brea...	TSW-760	2.001.0037	XXXXXXXXXX	XXXXXXXXXX	Online	No

The **Status** section lists all of the devices within the group or room and its subgroups in table format. The **Device Status** table provides a subset of important status information for the devices within the group and its subgroups.

The following information is displayed for each device:

- The name and model
- The loaded firmware version, including whether any firmware updates are pending
- The serial number and MAC address
- The online status, which indicates whether the device is connected to the XiO Cloud service
- The pending settings delivery status, which indicates whether any device settings changes are pending

NOTE: If the **Pending Settings Delivery** status is **Yes**, device settings have been saved in the portal but have not yet been applied to the device (such as in instances where the device is unplugged).

Enter text into the **Global Filter** text box to search for and display devices that match the search term(s).

If the device lists spans multiple pages, use the navigation arrows on the bottom of the page to move forward or backward through the pages, or select a page number to navigate to that page. Additionally, the number of devices displayed on each page may be set to 5, 10, 20, or 25 devices.

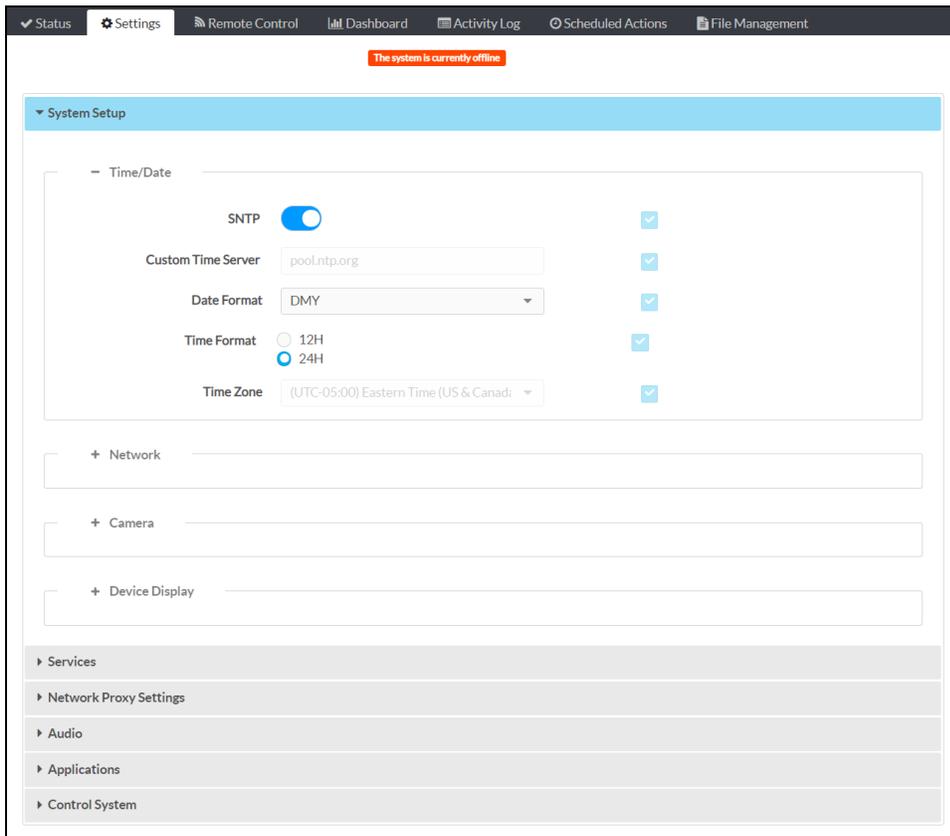
Configure Device Settings

Device settings may be configured for individual devices or for multiple devices within the same group or room.

Configure Settings for a Single Device

To configure the settings for a single device, select a device from the group tree to display its configuration pages, and then click the **Settings** tab.

Device Configuration Page - Settings Tab (System Setup)



The **Settings** tab provides selections for configuring various device settings. When a device is first claimed and added to a group, the current device settings are prepopulated in the XiO Cloud service.

To change a device setting:

1. Locate the device setting in the appropriate **Settings** accordion.

The accordions provided vary depending on the device. Some accordions include subsections that may be expanded by clicking the plus (+) button next to the subsection name. If the subsection is expanded, click the minus (-) button to collapse the subsection.

2. Fill the check box next to a setting to enable it in XiO Cloud.

If a setting is not enabled in XiO Cloud, it will not be sent to the device and can be managed by processes outside of XiO Cloud (such as joins).

NOTE: If a setting is enabled in XiO Cloud, it will show what is currently saved in the portal. If a setting is not enabled in XiO Cloud, it will show what is currently set on the device.

For more information on configuring specific settings for a device, refer to its documentation at www.crestron.com/manuals.

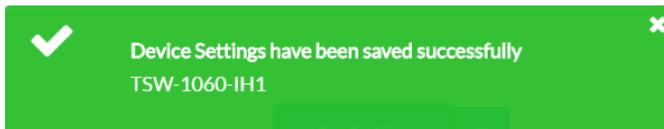
Once a device setting has been changed, the **Actions** button on the top right of the configuration pages changes to a **Save Changes** button. Click **Save Changes** to push the updated setting(s) to the device.

Save Changes Button



After the settings have been pushed from the cloud to the device successfully, a notification is displayed confirming the success.

Device Settings Saved Successfully Message



If the device has not yet received the settings, orange "Delivery to Device Pending" text is shown next to the changed settings until the device receives the settings.

NOTES:

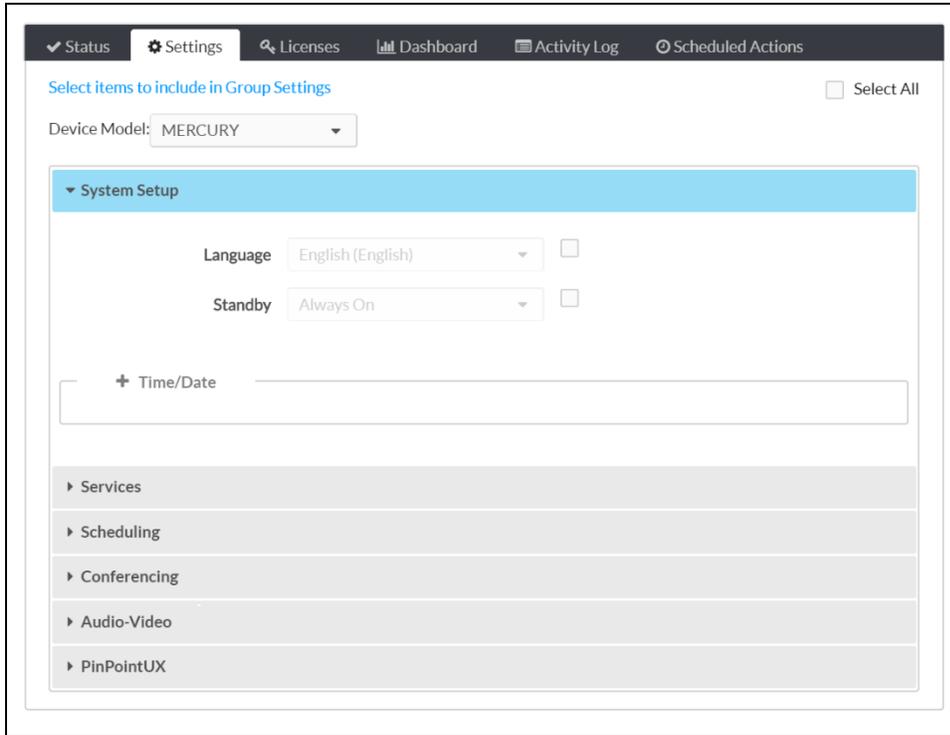
- Depending on the settings that are changed, the device may reboot a few minutes after **Save Changes** is clicked.
- Each setting checks for valid input. If an invalid input is entered, red text explaining the error is displayed next to the setting, and a red underline is shown under the setting. Changes cannot be saved until the error is resolved.
- A setting entered at the group level cannot be edited on the individual device page. Each device in a group inherits any group-level settings.

To undo changes before saving the settings to the device, click the drop-down arrow next to the **Action** (or **Save Changes**) button, and then click **Revert**. The device settings are returned to their last saved state.

Configure Settings for a Group of Devices

To configure the settings for multiple devices within the same group or room, select a group or room from the group tree to display its configuration pages, and then click the **Settings** tab.

Group Configuration Page - Settings Tab (System Setup)



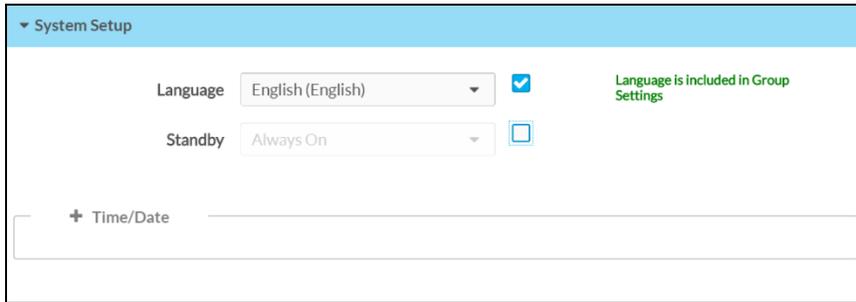
Configuring device settings (such as language or date and time) at the group level pushes the settings to every device in that group or room or its subgroups. Device settings configured at the group level overwrite the same settings on the individual device pages.

Each group-level setting in the **Settings** section provides a check box next to the setting:

- Click an empty check box to activate the associated setting at the group level. Green text is displayed next to the setting to indicate that the setting is now included in the group settings.
- Click a filled check box to disable the associated setting at the group level.

By default, all group-level settings are disabled.

System Setup Accordion (Language Setting Enabled)



The screenshot shows a 'System Setup' accordion with a blue header. Below the header, there are two settings: 'Language' and 'Standby'. The 'Language' setting has a dropdown menu set to 'English (English)' and a checked checkbox. To the right of the 'Language' setting, there is a green text label that reads 'Language is included in Group Settings'. The 'Standby' setting has a dropdown menu set to 'Always On' and an unchecked checkbox. Below these settings, there is a section for 'Time/Date' with a plus sign icon and a text input field.

Group-level settings in the **Settings** section are organized by device type. To configure the group-level settings for a device type:

1. Select the desired device type from the **Device Model** drop-down menu on the top left of the **Settings** section.
2. Navigate through the accordions provided for each device to locate the desired group-level settings.
3. Click the applicable check box(es) next to the group-level settings to activate the associated setting at the group level.

Once a group setting has been changed, the **Actions** button on the top right of the configuration pages changes to a **Save Changes** button. Click **Save Changes** to save the group-level settings.

Save Changes Button



The screenshot shows a blue button with a white checkmark icon and the text 'Save Changes'. To the left of the button, there is a blue link labeled '304 Link'.

Additional settings may be configured for subgroups after changes are made at the parent group level.

Only settings that have not been configured for the parent group may be activated. Parent group settings are disabled because they are inherited by the subgroup. An "Inherited from Group Settings" text is displayed next to any subgroup settings that may not be activated.

System Setup Accordion (Subgroup)

The screenshot shows a 'System Setup' accordion with the following settings:

- Language:** English (English) (dropdown), Inherited from Group Settings
- Standby:** Always On (dropdown), Inherited from Group Settings
- Power Scheduling:** (collapsed)
- Time/Date:** (expanded)
 - SNTP:** Disable (toggle), (checkbox), SNTP is included in Group Settings
 - Custom Time Server:** IP Address (text input), (checkbox)
 - Date Format:** MDY (dropdown), (checkbox)
 - Time Format:** 12H (radio), 24H (radio), (checkbox)
 - Time Zone:** (UTC-12:00) International E (dropdown), (checkbox)

Subgroup-level settings in the **Settings** section are organized by device type. To configure the subgroup-level settings for a device type:

1. Select the desired device type from the **Device Model** drop-down menu on the top left of the Settings section.
2. Navigate through the accordions provided for each device to locate the desired subgroup-level settings.
3. Click the applicable check box(es) next to the subgroup-level settings to activate the associated setting at the subgroup level.

Once a subgroup setting has been changed, the **Actions** button on the top right of the configuration pages changes to a **Save Changes** button. Click **Save Changes** to save the subgroup-level settings.

Save Changes Button

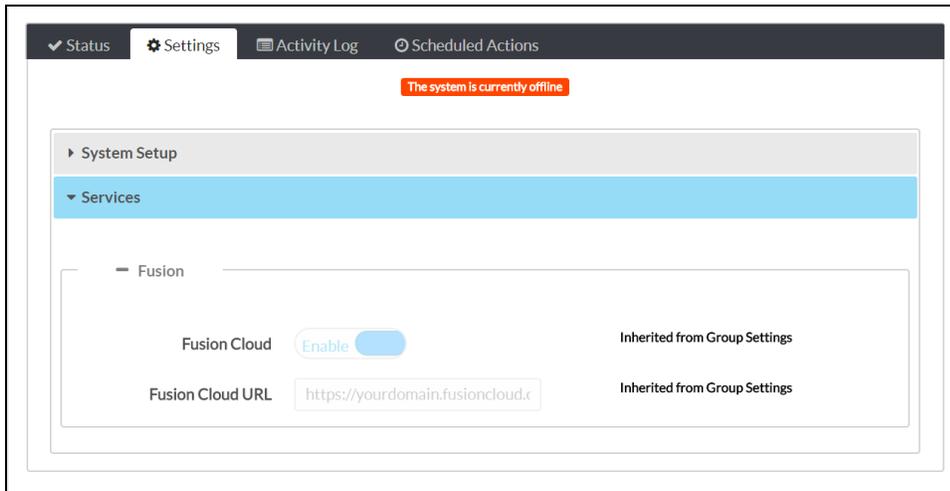
The screenshot shows a configuration page with a '304 Link' (text input) and a blue 'Save Changes' button with a checkmark icon on the left and a dropdown arrow on the right.

Any remaining settings may be configured for individual devices after changes are made at the parent group and subgroup level.

Only settings that have not been configured for the parent group or subgroup may be configured. Parent group and subgroup settings are disabled because they are inherited by the device. An "Inherited from Group Settings" text is displayed next to any device settings that may not be activated.

NOTE: Unchecking the check box for a group setting does not change the setting for an individual device, but makes it possible to change the setting on the individual device configuration page.

Device Status Page Showing "Inherited from Group Settings" Text



NOTE: Adding a device to a group or room automatically pushes down any of the settings from the group to the device.

Prevent Unnecessary Reboots

Under rare circumstances, applying certain settings to a device may cause unexpected device behavior, such as repeated rebooting, to occur.

If the XiO Cloud service detects a device in this state:

- The XiO Cloud service stops sending the setting that is causing the issue to the device, which prevents reboots from occurring.
- A message is displayed on the device settings page stating that undesired behavior was detected and that settings are no longer being sent to the device.
- An alert message is placed next to the setting that is causing the issue.

To resume sending settings to the device, update the setting that is causing the issue, and then select **Save Changes** from the **Action** menu.

The XiO Cloud service resumes sending settings to the device once it verifies that the problem setting is fixed.

Manage Licenses

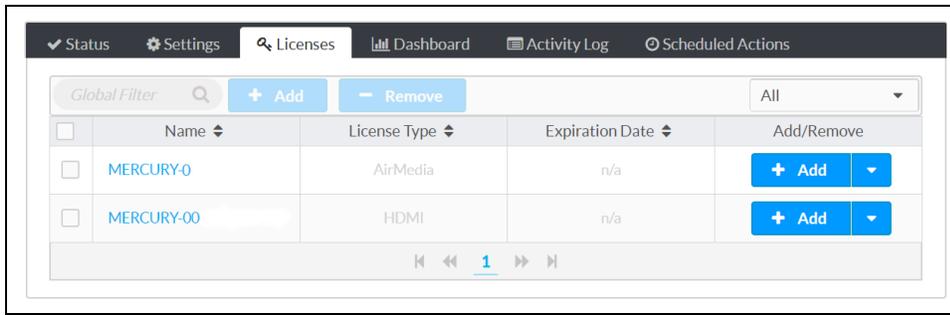
Certain Crestron devices use licenses to enable extra functionality. These licenses may be managed through the XiO Cloud service. Licenses may be added to devices, removed from devices, or transferred to different devices.

The XiO Cloud service maintains a record of all of the licenses that have been purchased for a customer's account, including licenses that were included with purchased devices.

Manage Licenses for a Single Device

To manage the licenses for a single device, select a device from the group tree to display its configuration pages, and then click the **Licenses** tab.

Device Configuration Page - Licenses Tab



The **Licenses** section lists all of the licenses that are available for the device in table format. The **Licenses** table provides the following information for each license:

- The device name
- The license type
- The expiration date
- Controls to add or remove the license

Enter text in to the **Global Filter** text box to search for and display licenses that match the search term(s).

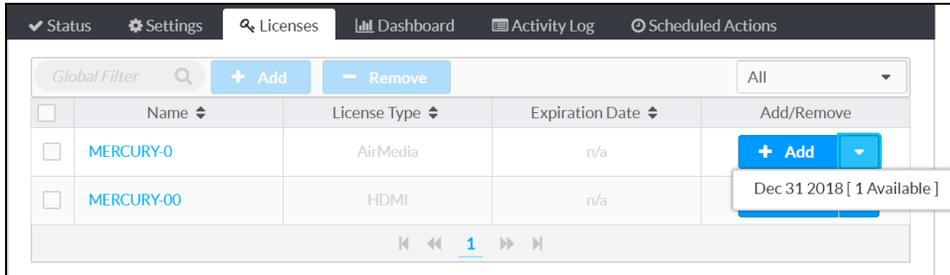
If the license list spans multiple pages, use the navigation arrows on the bottom of the page to move forward or backward through the pages, or select a page number to navigate to that page.

To add a license for a feature that has not yet been licensed for a device, click the **Add** button in the **Add/Remove** column for the device.

NOTE: If multiple licenses are available for the same feature, the license that expires first is added first automatically. For example, if a 1-year AirMedia® presentation system license and a 2-year AirMedia license are available, the 1-year license is added first.

If a license other than the license with the earliest expiration date is desired, click the arrow next to the **Add** button to choose from the available expiration dates in the account.

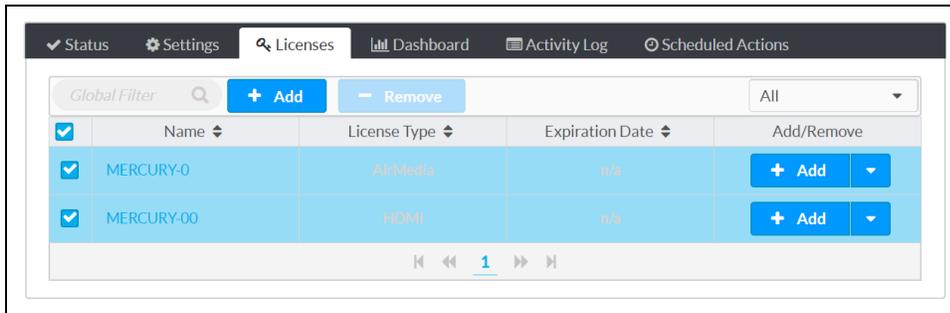
Device Configuration Page - Licenses Tab (Expiration Date Selection)



To add licenses for multiple features at the same time, check the boxes next to the license features, and then click the **Add** button at the top of the screen. As with adding licenses individually, if multiple licenses are available for the same feature, the license that expires first is added first automatically.

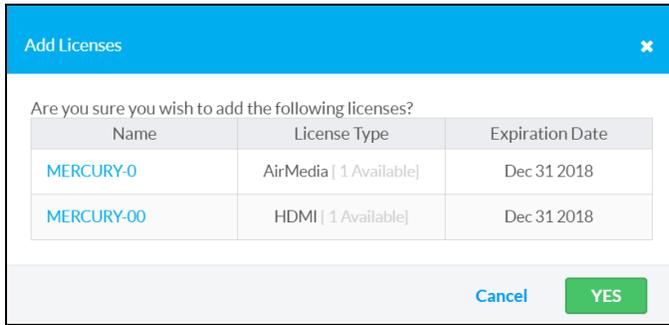
Click the check box in the table heading row to select or deselect all available licenses.

Device Configuration Page - Licenses Tab (Add Multiple Licenses)



After adding a license using either of these methods, a confirmation dialog box is displayed. Click **YES** to apply the license.

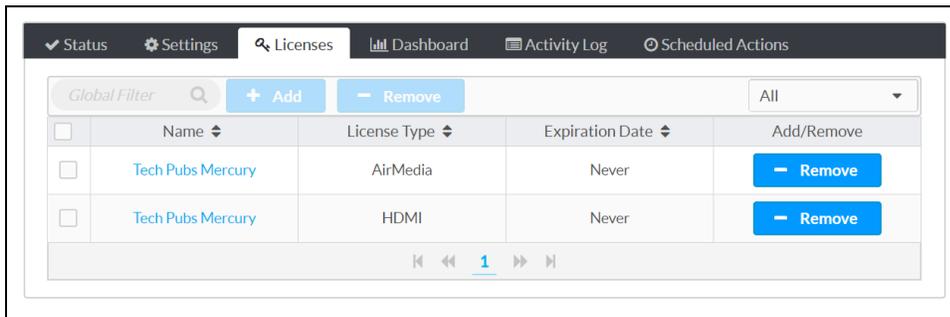
Add Licenses Confirmation Dialog Box



To remove a license for a feature that has not yet been licensed for a device, click the **Remove** button in the **Add/Remove** column for the device.

Removing a license returns it to the customer's license pool, allowing the same license to be applied to a different device.

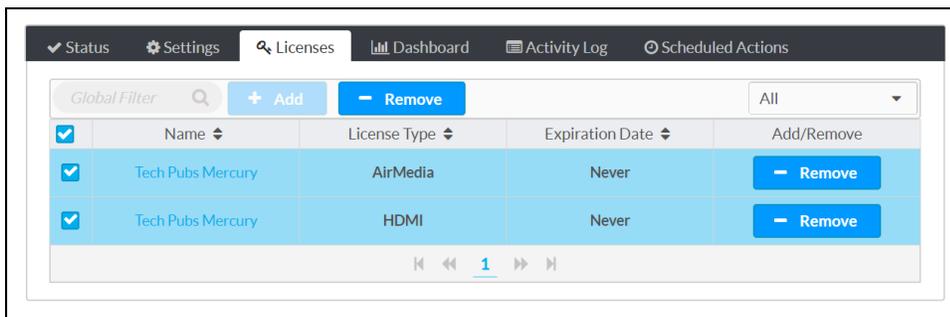
Device Configuration Page - Licenses Tab (Remove Button)



To remove licenses for multiple features at the same time, check the boxes next to the license features, and then click the **Remove** button at the top of the screen.

Click the check box in the table heading row to select or deselect all available licenses.

Device Configuration Page - Licenses Tab (Remove Multiple Licenses)

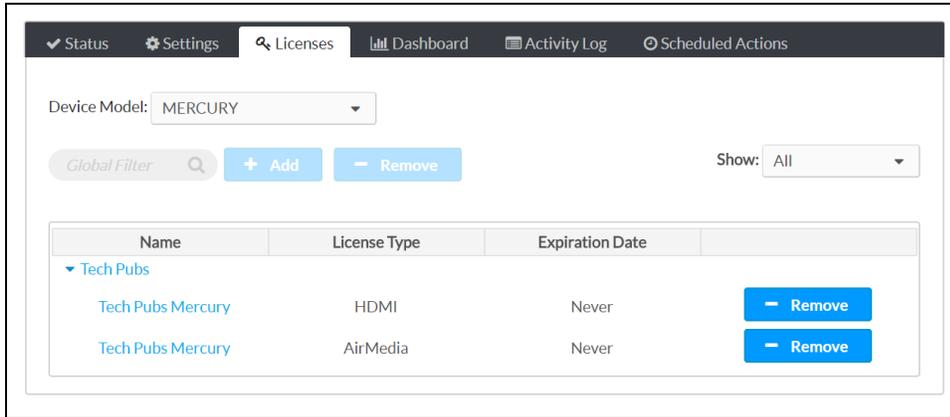


NOTE: Adding or removing licenses may cause a device to reboot. Behavior may differ between device models due to firmware differences.

Manage Licenses for a Group or Room

To manage the licenses for multiple devices within the same group or room, select a group or room from the group tree to display its configuration pages, and then click the **Licenses** tab.

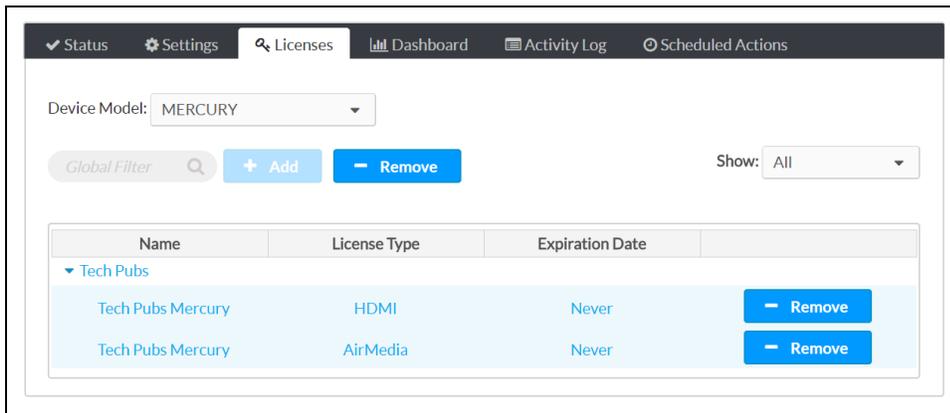
Group Configuration Page - Licenses Tab



The **Licenses** section of the group or room configuration page provides the same information and controls as the **Licenses** section of the device configuration pages; however, the licenses for all the devices in the group or room and its subgroups are displayed.

To add or remove the licenses for multiple features or devices at once, press **Ctrl** and click on the appropriate features, and then use the bulk **Add** and **Remove** buttons at the top of the page to add or remove the licenses, respectively.

Group Configuration Page - Licenses Tab (Select Multiple Licenses)



Scheduled Actions

Scheduled actions allow device functions to be automated from the cloud.

The available actions for each device vary, although all devices support a scheduled reboot. Actions may be scheduled to occur once or in a recurring pattern.

Scheduled actions are accessible from the **Scheduled Actions** tab for an individual device or for a group.

Device Configuration Page - Scheduled Actions

Action	Group/Dev...	Schedule	Last Ran	Next Run	Add/Remove
Reboot					+

Group Configuration Page - Scheduled Actions

Device Model: MERCURY

Action	Group/Dev...	Schedule	Last Ran	Next Run	Add/Remove
Reboot					+

The **Scheduled Actions** table lists the actions that may be scheduled for the selected device or device model.

When scheduling actions for a group or room, select the desired device type from the **Device Model** drop-down menu on the top left of the Settings section. An action created in the group or room configuration pages will be applied to all devices that share the selected model.

Click the arrow button next to an action to view more details about the action.

Schedule Actions Table

Action	Group/Dev...	Schedule	Last Ran	Next Run	Add/Remove
Reboot	TSW-1060...	Monthly on the 1st of the month 15:48 EDT Effective from Aug 01, 2018 15:48 EDT		Aug 01, 2018 15:48 EDT	-

The following information is displayed for each device:

- The name of the action
- The device model or device model group
- The schedule that has been set for the action
- The date and time when the action was last ran

NOTE: If the action was triggered but the device was unable to complete it for any reason, such as being offline at the scheduled date and time, an error icon  is shown next to the **Last Ran** date and time to indicate this error.

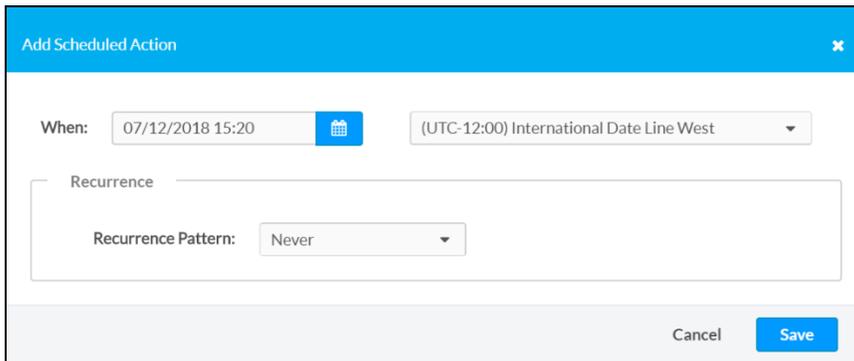
- The date and time when the action is scheduled to run again
- Controls for adding and removing an action

Create a Scheduled Action

To schedule an action:

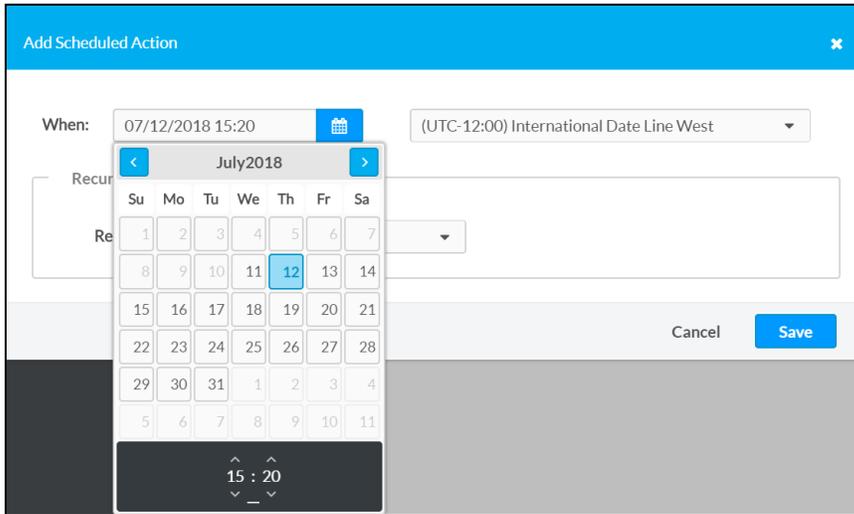
1. Click the plus (+) button under **Add/Remove**. An **Add Scheduled Action** dialog box is displayed.

Add Scheduled Action Dialog Box



2. Click inside the **When** field to open the calendar and time settings.
3. Select the date and time for the action to occur. If the **Recurrence Pattern** is set to **Never**, the action will occur only once at the selected date and time.

Add Scheduled Action Dialog Box (Calendar and Time Settings)

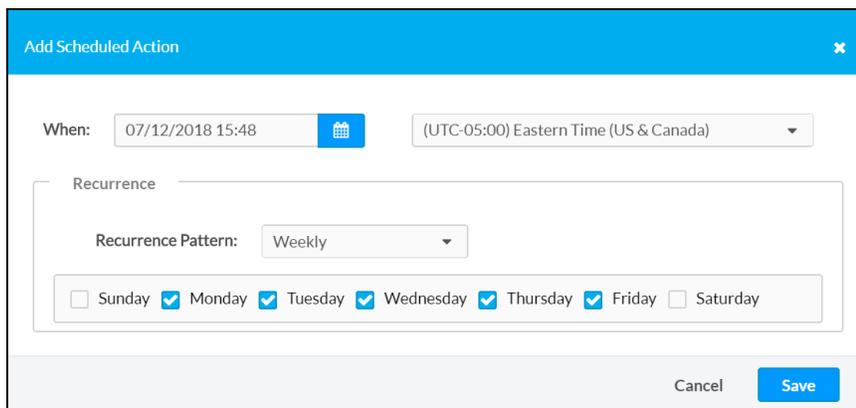


4. Select a time zone from the drop-down menu to the right of the **When** field.

NOTE: All devices in the same time zone that share a scheduled action perform that action at the same time if the action is set at a group level. If there are devices in different time zones, their actions may be scheduled individually.

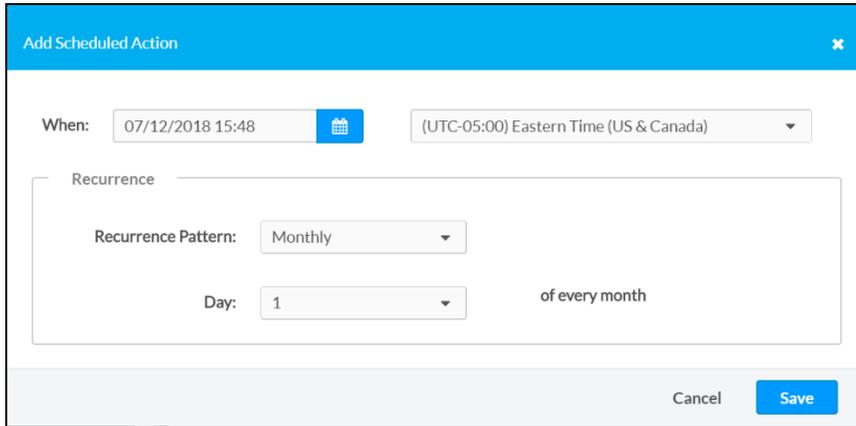
5. Use the **Recurrence Pattern** drop-down menu to select if and when the action should repeat. The following options are provided:
 - a. **Never:** The action will occur only once on the date and time that is set for the **When** field.
 - b. **Daily:** The action will occur every day starting on the date and time that is set for the **When** field.
 - c. **Weekly:** The action will occur every week on the days selected, starting on the date and time that is set for the **When** field. Click the empty check box next to a day to select it.

Add Scheduled Action Dialog Box (Weekly Recurrence Pattern)



- d. **Monthly:** The action will occur on the selected date of every month. Options are 1 through 31 and last.

Add Scheduled Action Dialog Box (Monthly Recurrence Pattern)



The screenshot shows a dialog box titled "Add Scheduled Action" with a close button (X) in the top right corner. The "When:" field contains the date and time "07/12/2018 15:48" and a calendar icon. To its right is a time zone dropdown menu set to "(UTC-05:00) Eastern Time (US & Canada)". Below this is a "Recurrence" section with a "Recurrence Pattern:" dropdown menu set to "Monthly" and a "Day:" dropdown menu set to "1", followed by the text "of every month". At the bottom right of the dialog are "Cancel" and "Save" buttons.

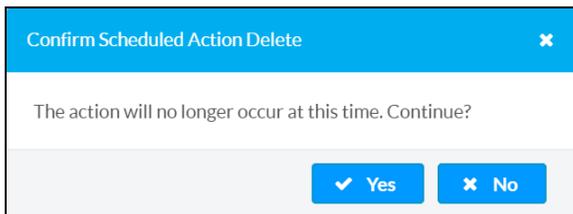
NOTE: The selection in the **When** box determines the first time the scheduled action occurs and does not need to be set for the recurrence pattern. In the example above, the first time the action occurs will be on July 12. Thereafter, it will occur on the first day of each month, so the next occurrence will be on August 1.

Delete a Scheduled Action

To delete a scheduled action:

1. Use the arrow button next to the action name to expand the selection.
2. Click the plus (-) button under **Add/Remove** for the desired action. A **Confirmed Scheduled Action Delete** dialog box is displayed.

Confirm Scheduled Action Delete Dialog Box



The screenshot shows a dialog box titled "Confirm Scheduled Action Delete" with a close button (X) in the top right corner. The main text reads "The action will no longer occur at this time. Continue?". At the bottom are two buttons: "Yes" with a checkmark icon and "No" with an X icon.

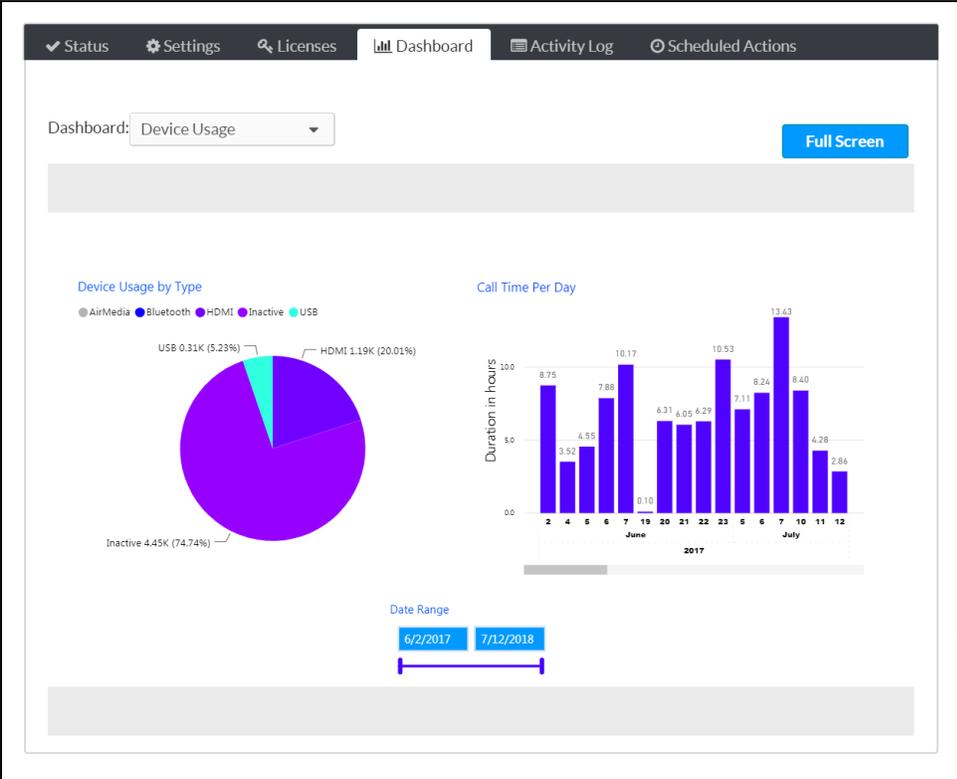
3. Click **Yes** to delete the action, or click **No** to cancel the deletion.

Dashboard

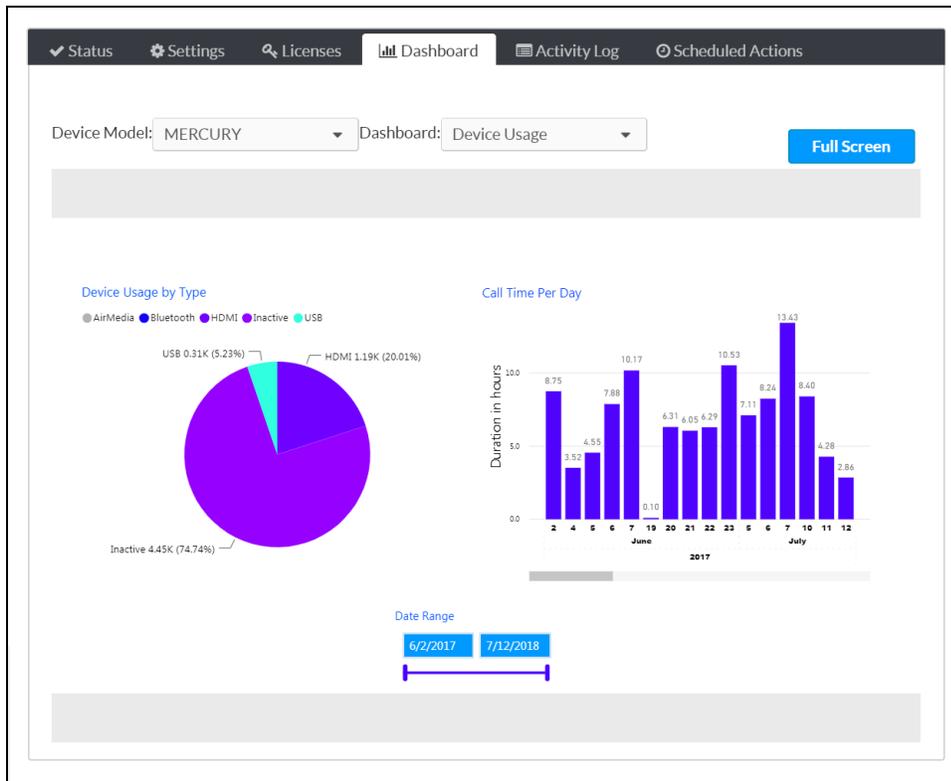
The Dashboard section provides interactive data that shows when and how a device is used within the organization.

The **Dashboard** section is accessible from the **Dashboard** tab for an individual device or for a group or room (license-dependent).

Device Configuration Page - Dashboard



Group Configuration Page - Dashboard



Use the **Dashboard** drop-down menu to select the type of data shown for the device (such as device usage). The available data varies by device.

When viewing the **Dashboard** section for a group or room, select the desired device type from the **Device Model** drop-down menu on the top left of the **Settings** section. The dashboard presents data for all devices within the group or room that share the same model.

Dashboards are interactive and contain different charts that may be cross-filtered by clicking on the chart and filters:

- Hover the mouse cursor over a chart to expose additional selections for viewing and sorting the chart, changing the level of data shown, and exporting data as a CSV file or a Microsoft Excel® software file.
- Use the **Date Range** filter to show data from a specific date range. Enter a start and end date in the appropriate fields, or drag the two points on the slider bar up and down to adjust the start and end dates.

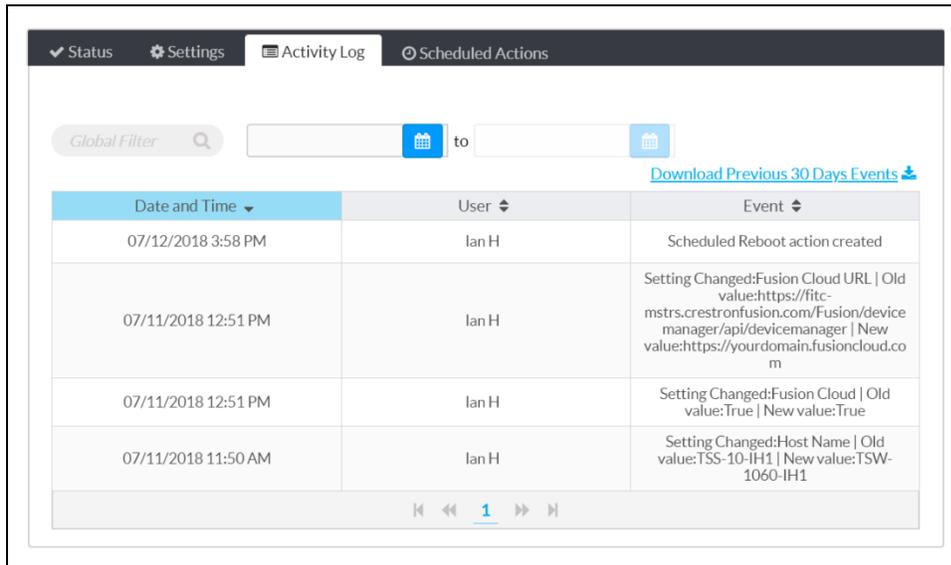
Click **Full Screen** to display the **Dashboard** section in full screen mode. To return to the normal size, press the **Esc** key on the keyboard.

Activity Log

The **Activity Log** section provides a list of events that have occurred for each device.

The **Activity Log** section is accessible from the **Activity Log** tab for an individual device or for a group or room (license-dependent).

Device Configuration Page - Activity Log



The screenshot shows the Activity Log interface with a navigation bar at the top containing 'Status', 'Settings', 'Activity Log', and 'Scheduled Actions'. Below the navigation bar is a 'Global Filter' search box and a date range selector. A table of events is displayed with the following data:

Date and Time	User	Event
07/12/2018 3:58 PM	Ian H	Scheduled Reboot action created
07/11/2018 12:51 PM	Ian H	Setting Changed:Fusion Cloud URL Old value:https://fitc-mstrs.crestronfusion.com/Fusion/devicemanager/api/devicemanager New value:https://yourdomain.fusioncloud.com
07/11/2018 12:51 PM	Ian H	Setting Changed:Fusion Cloud Old value:True New value:True
07/11/2018 11:50 AM	Ian H	Setting Changed:Host Name Old value:TSS-10-IH1 New value:TSW-1060-IH1

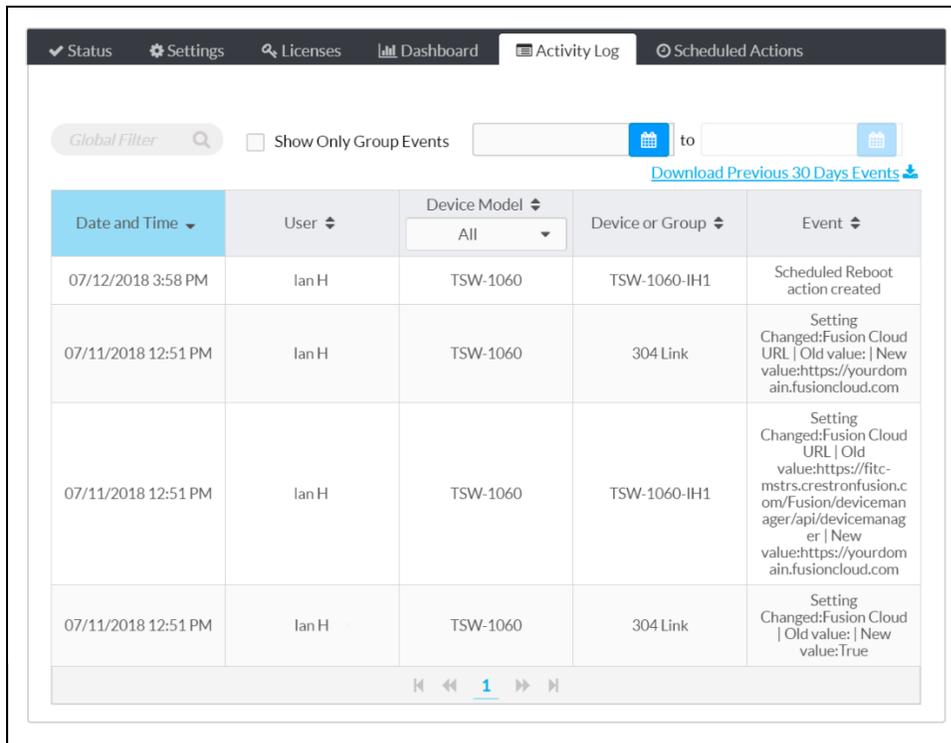
The Activity Log presents the following information for each device in table format:

- Scheduled actions
- Changed device settings, including the original and new values
- Licenses that were added to or removed from the device
- Movement from one group to another
- Movement between online and offline states

Each entry in the **Activity Log** table includes the date and time of the event, the logged-in user who performed the event (if applicable), and a summary of the event.

The **Activity Log** table at the group level presents additional data, including the device model and the device, group, or subgroup that was affected. Use the drop-down menu at the top of the **Device Model** column to filter the table by device type.

Group Configuration Page - Activity Log



The screenshot shows the Activity Log page with a navigation bar at the top containing Status, Settings, Licenses, Dashboard, Activity Log, and Scheduled Actions. Below the navigation bar is a Global Filter search box, a checkbox for 'Show Only Group Events', and a date range selector. A link for 'Download Previous 30 Days Events' is also present. The main table has the following data:

Date and Time	User	Device Model	Device or Group	Event
07/12/2018 3:58 PM	Ian H	TSW-1060	TSW-1060-IH1	Scheduled Reboot action created
07/11/2018 12:51 PM	Ian H	TSW-1060	304 Link	Setting Changed:Fusion Cloud URL Old value: New value:https://yourdomain.fusioncloud.com
07/11/2018 12:51 PM	Ian H	TSW-1060	TSW-1060-IH1	Setting Changed:Fusion Cloud URL Old value:https://fitcmstrs.crestronfusion.com/Fusion/devicemanager/api/devicemanager New value:https://yourdomain.fusioncloud.com
07/11/2018 12:51 PM	Ian H	TSW-1060	304 Link	Setting Changed:Fusion Cloud Old value: New value:True

The table may be filtered using a global filter or date filter:

- Enter text in to the **Global Filter** text box to search for and display activity log entries that match the search term(s). (For example, typing "Mercury" in the global filter box will show all rows containing the word "Mercury" in any column.)
- Click inside the first date filter text box to select a start date for the activity log, and then click inside the second date box to select an end date for the activity log. The activity log updates to show entries within the specified date range.

If the activity log list spans multiple pages, use the navigation arrows on the bottom of the page to move forward or backward through the pages, or select a page number to navigate to that page.

Click **Download Previous 30 Days Events** to download the previous 30 days of the activity log as a CSV file. Any filter applied to the table are not applied to the CSV file.

When viewing the Activity Log at the group level, click the empty check box next to **Show Only Group Events** to update the table to show events that were performed at the group level only.

Update or Downgrade Firmware

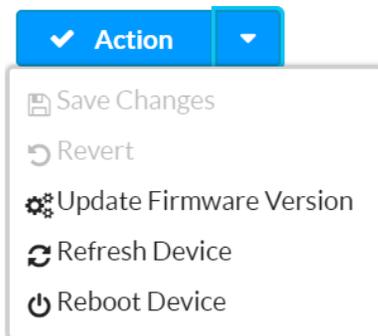
Firmware for one or all devices may be updated or downgraded from the XiO Cloud service. When new firmware is released for a device, it is posted to the cloud and made available for update.

NOTE: Firmware updates are scheduled actions and may be managed like any other scheduled action. For more information, refer to [Scheduled Actions \(on page 39\)](#).

To update or downgrade device firmware:

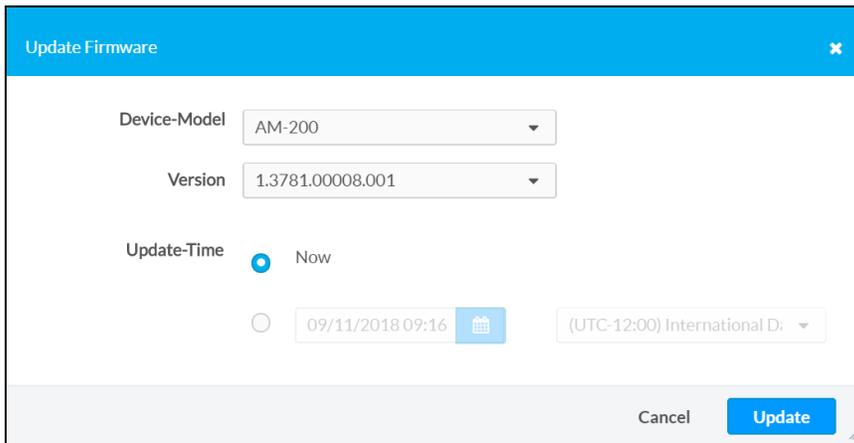
1. Select the individual device or the group where the firmware update is desired.
2. Select **Update Firmware Version** from the **Action** drop-down menu.

Action Drop-Down Menu



The **Update Firmware** dialog box is displayed.

Update Firmware Dialog Box



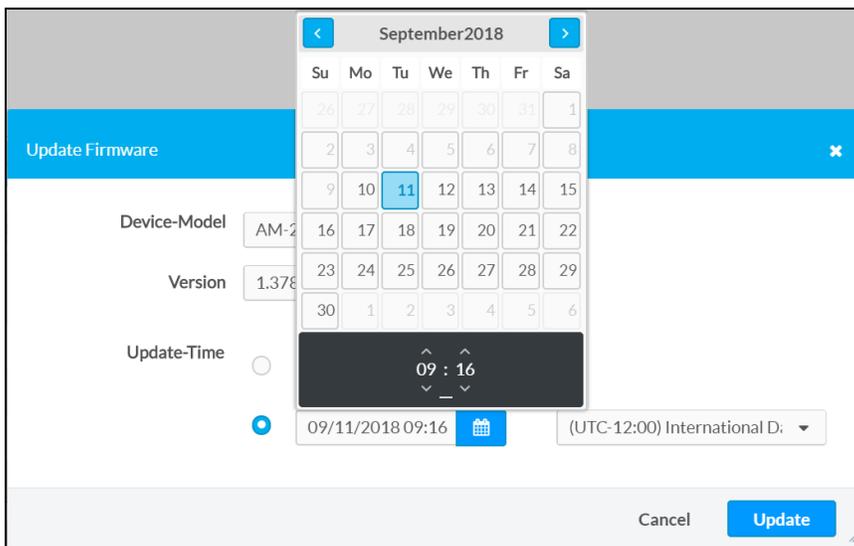
NOTE: When upgrading firmware from the group or room level, select the device model from the **Device-Model** drop-down menu to upgrade the firmware of all devices that share the model type.

- Use the **Version** drop-down menu to select the firmware version that will be installed on the device or devices.

NOTE: Release notes may be downloaded from the link below the **Version** menu if available.

- Select when the firmware update will be performed:
 - Select the **Now** radio button to perform the firmware update immediately, or select the radio button next to the **date/time** and **time zone** fields to perform the firmware update at a set date and time. The firmware update will occur on the selected date and time.
 - Click inside the **date/time** field to display a pop-up dialog box for selecting a date and time.
 - Use the drop-down menu to the right of the **date/time** field to select a time zone for the firmware update.

Update Firmware Dialog Box (Day and Time Selection)



- Click **Update** to perform the firmware update at the selected date and time, or click **Cancel** to cancel the firmware update.

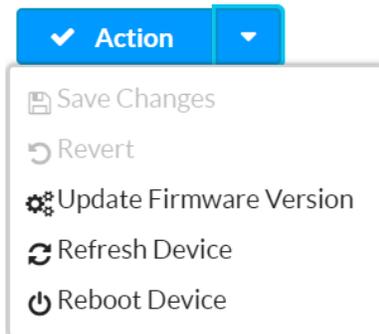
At the specified update time, the device connects to a secure Crestron file server to download and install the firmware. If the device cannot complete the download and installation on the first attempt, it tries up to three more times. If these attempts fail, the device tries one more time at 2:00 AM local time. If this final attempt fails, a failure message is displayed in the **Firmware-Version** column on the group **Status** page.

Reboot Devices

An individual device or groups of devices may be rebooted remotely from the XiO Cloud service.

To reboot one or more devices, select **Reboot Device** from the **Action** drop-down menu on the desired device or group page. The device or devices reboot immediately.

Action Drop-Down Menu



Refresh Devices

Occasionally, the settings or status of a device shown in the XiO Cloud service may become out of sync with the settings or status on the actual device.

To obtain the latest settings and status from the device, select **Refresh Device** from the **Action** drop-down menu. The latest device settings and status are synced with the XiO Cloud service.

Manage Users

Individuals in an organization may have their own login credentials to access the XiO Cloud service. The system administrator can limit a user's access to only the devices that he or she needs to manage. For example, an administrator in Hong Kong may be granted read/write access to devices in their local office but granted read-only access to devices in the London office.

This section explains how to manage users locally.

Add a New User

The **USERS** menu is located in the user management panel, which may be accessed by clicking the users icon  on the left side of the screen.

Users Menu



The **USERS** menu provides a list of the users with access to the XiO Cloud service for the organization.

To add a new user:

1. Click the **ENVIRONMENT** menu button  to display a drop-down menu.

Users Menu - Add New User



2. Click **Add new user**. A **Users** page is displayed to the right of the **USERS** menu.

Users Page

Users

Profile Access and Alerts

Details Revert Save Changes

First Name

Middle Name

Last Name

Email

Identity Provider crestron.io

User Name

Role Standard User

What's New Message Enable

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3. Use the provided fields to enter information about the new user, including name, email address, username, and role. Two roles are available in the XiO Cloud service:
 - Select **Global Administrator** from the **Role** drop-down menu to grant the user complete access to every part of the system. The user may add other global administrators. There must always be at least one global administrator in the system.
 - Select **Standard User** from the **Role** drop-down menu to grant the user limited levels of access based on assigned groups. This user may not add other global administrators.
4. Once all information is entered, click **Save Changes** at the top right of the screen. Click **Revert** to clear any information that was entered.

The user receives an email asking for account confirmation, along with a temporary password. A change of password is requested on the first login.

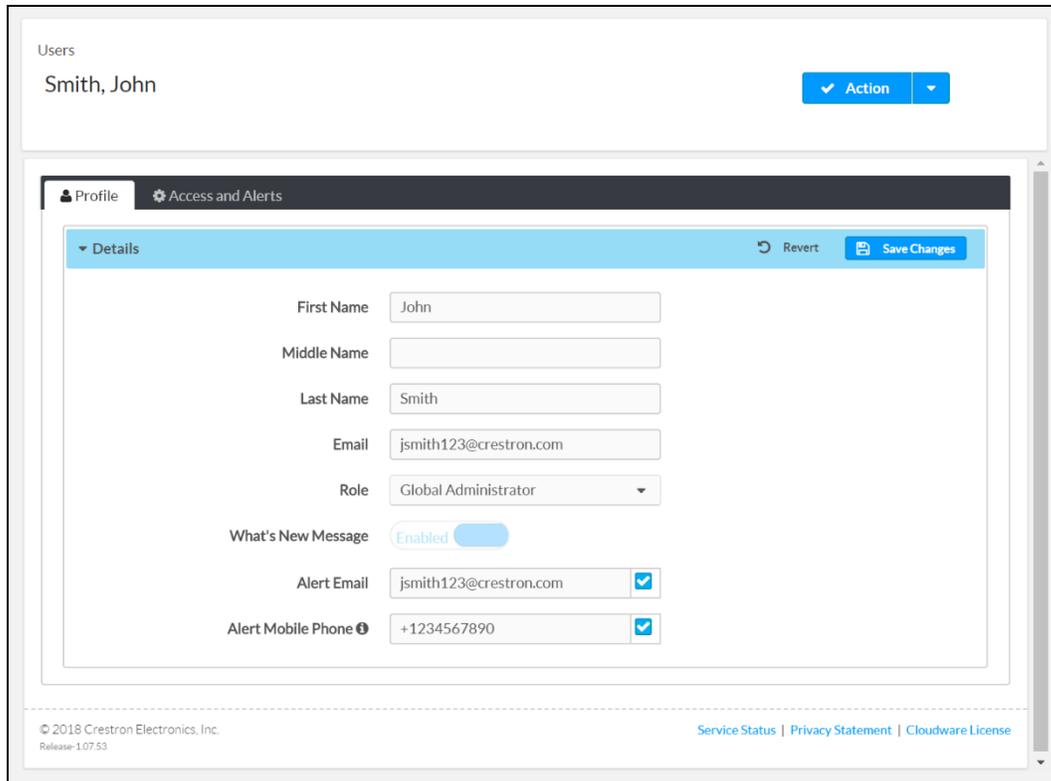
Edit User Information

Any of the information entered for a user during the account creation process may be edited at any time.

To edit the information for an existing user:

1. Click the user's name in the **USERS** menu. A **Users** page with the **Profile** tab open by default is displayed to the right of the **USERS** menu.

Uses Page - Profile



The screenshot shows a web interface for editing a user's profile. At the top, the user's name "Smith, John" is displayed next to an "Action" dropdown menu. Below this, there are two tabs: "Profile" (selected) and "Access and Alerts". The "Profile" tab contains a "Details" section with a "Revert" button and a "Save Changes" button. The form fields are as follows:

First Name	John
Middle Name	
Last Name	Smith
Email	jsmith123@crestron.com
Role	Global Administrator
What's New Message	Enabled
Alert Email	jsmith123@crestron.com <input checked="" type="checkbox"/>
Alert Mobile Phone	+1234567890 <input checked="" type="checkbox"/>

At the bottom of the page, there is a footer with the text: "© 2018 Crestron Electronics, Inc. Release-1.07.53" and links for "Service Status", "Privacy Statement", and "Cloudware License".

2. Use the provided fields to edit information about the user, including name, email address, role, and alert notifications.

NOTE: For more information on managing alerts, refer to [Alerts \(on page 57\)](#). For more information on the What's New Message, refer to [What's New Message \(on page 56\)](#).

3. Click **Save Changes** at the top right of the screen to save any changes made. Click **Revert** to clear any information that was entered.

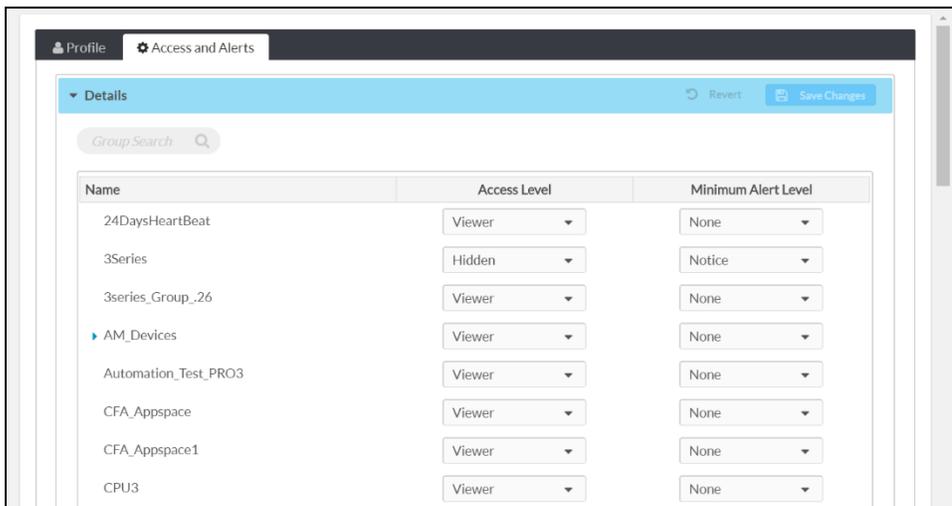
Manage User Access

Users may be granted different access levels to groups or rooms within the XiO Cloud service environment.

To manage access levels for a user:

1. Click the user's name in the **USERS** menu. A **Users** page with the **Profile** tab open by default is displayed to the right of the **USERS** menu.
2. Click the **Access and Alerts** tab.

Users Page - Access and Alerts



3. Use the **Access Level** drop-down menu to select the user's access level for each group and subgroup or room.

NOTE: Enter text in to the **Group Search** text box to search for and display groups or rooms that match the search term(s).

- Select **Viewer** to grant the user read-only access to the group. The user may view the status and settings for devices within the group but cannot change them.
- Select **Tech** to grant the user read and write access to the group. The user may view the status of devices and change device settings within the group.
- Select **Administrator** to grant the user read and write access to the group and to allow the user to change the access level other users have to the group.
- (Subgroups only) Select **Inherit** to have the subgroup inherit the access level settings of its parent group. **Inherit** is the default setting for subgroups.

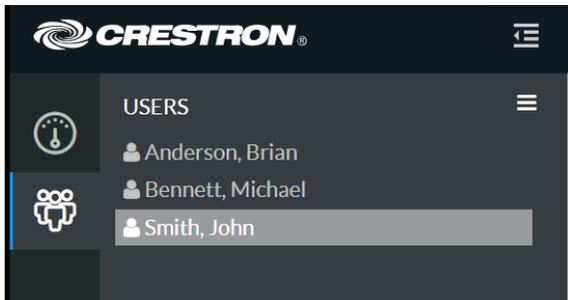
Delete a User

Users may be deleted from the XiO Cloud service to remove their access and to prevent them from viewing or changing any settings in the service.

To delete a user:

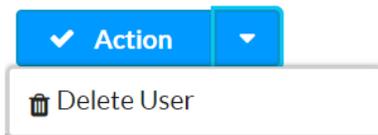
1. Click the user's name in the **USERS** menu.

Users Menu



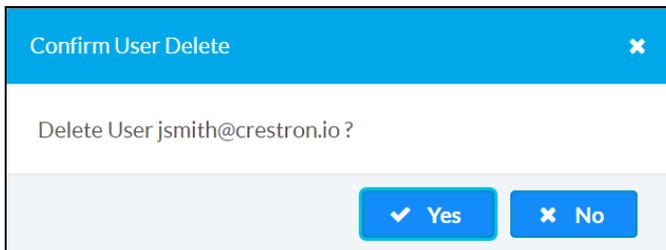
2. Select **Delete User** from the **Action** menu.

Action Drop-Down Menu - Delete User



The **Confirm User Delete** dialog box is displayed.

Confirm User Delete Dialog Box



3. Click **Yes** to delete the user or click **No** to cancel the deletion.

Single Sign-On

XiO Cloud accounts can be configured for enterprise single sign-on with the Okta® management platform, the Active Directory® service, and others. Account administrators may contact Crestron support to configure their accounts for single sign-on.

When using Okta single sign-on:

- Users must log in to the account from their corporate Okta portal instead of the XiO Cloud portal.
- When adding a new user to XiO Cloud, the email address entered for the user must match his or her email address used to access Okta.

What's New Message

The XiO Cloud service shows messages occasionally that announce new features or news about the service.

To disable these messages, set the **What's New Message** toggle on the user profile page to **Disable**. For more information on editing user information, refer to [Edit User Information \(on page 52\)](#).

User Profile Page

The screenshot displays the user profile page for John Smith. At the top, the name 'Smith, John' is shown next to an 'Action' dropdown menu. Below this, there are two tabs: 'Profile' (selected) and 'Access and Alerts'. The 'Profile' tab contains a 'Details' section with a 'Revert' button and a 'Save Changes' button. The form fields are as follows:

First Name	John
Middle Name	
Last Name	Smith
Email	jsmith123@crestron.com
Role	Global Administrator
What's New Message	Enabled
Alert Email	jsmith123@crestron.com <input checked="" type="checkbox"/>
Alert Mobile Phone	+1234567890 <input checked="" type="checkbox"/>

At the bottom of the page, there is a footer with the text: © 2018 Crestron Electronics, Inc. Release-1.07.53. On the right side of the footer, there are links for Service Status, Privacy Statement, and Cloudware License.

Alerts

The XiO Cloud service sends alerts when it detects an issue with a device. Alerts are sent via email or text messages to any user that is configured to receive alerts. For room-based accounts, enabling alerts requires purchase of an SW-XIOC-S license per room.

Configure Contact Information

To receive alerts, a user must enable alerts for email and/or text messages in his or her profile page.

To configure alerts for a user:

1. Click the user's name in the **USERS** menu. A **Users** page with the **Profile** tab open by default is displayed to the right of the **USERS** menu.
2. Choose one or both of the following alert methods:
 - Click the check box next to the **Alert Email** text field to enable email alerts. Enter a valid email address in the **Alert Email** text field to receive messages at that address.
 - Click the check box next to the **Alert Mobile Phone** text field to enable text message alerts. Enter a valid mobile phone number (including country code and area code) in the **Alert Mobile Phone** text field to receive text messages at that phone number.

User Profile Page

The screenshot displays the 'Users' management interface. At the top, the user 'Smith, John' is listed with an 'Action' dropdown menu. Below this, the 'Profile' tab is selected, showing a 'Details' section with the following fields:

- First Name: John
- Middle Name: (empty)
- Last Name: Smith
- Email: jsmith123@crestron.com
- Role: Global Administrator
- What's New Message: Enabled (toggle)
- Alert Email: jsmith123@crestron.com (checked)
- Alert Mobile Phone: +1234567890 (checked)

At the bottom of the page, there is a footer with the text: © 2018 Crestron Electronics, Inc. Release: 1.07.53. On the right side of the footer, there are links for Service Status, Privacy Statement, and Cloudware License.

3. Click **Save Changes** at the top right of the screen to save any changes made. Click **Revert** to clear any information that was entered.

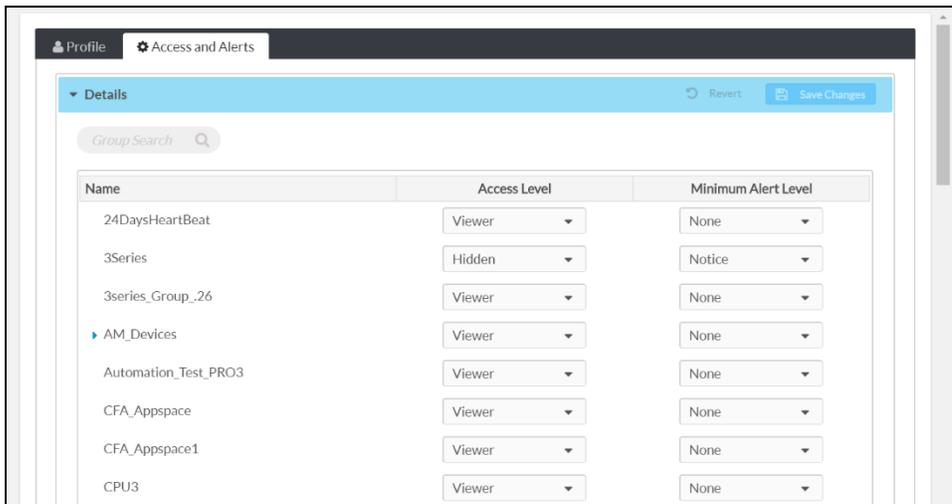
Configure Alert Levels

Alerts may be configured so that they are issued at different severity levels for different groups. This configuration is set at the user level, so each user may customize the alerts that he or she receives.

To configure access levels for alerts:

1. Click the user's name in the **USERS** menu. A **Users** page with the **Profile** tab open by default is displayed to the right of the **USERS** menu.
2. Click the **Access and Alerts** tab.

Users Page – Access and Alerts



3. Use the **Minimum Alert Level** drop-down menu to select the alert severity level (**None**, **Notice**, **Warning**, **Error**, or **Critical**) for each group and subgroup or room. Only alerts of the chosen severity level or higher will be sent.
4. (Subgroups only) Select **Inherit** to have the subgroup inherit the alert severity level settings of its parent group. **Inherit** is the default setting for subgroups.

NOTE: Enter text in to the **Group Search** text box to search for and display groups or rooms that match the search term(s).

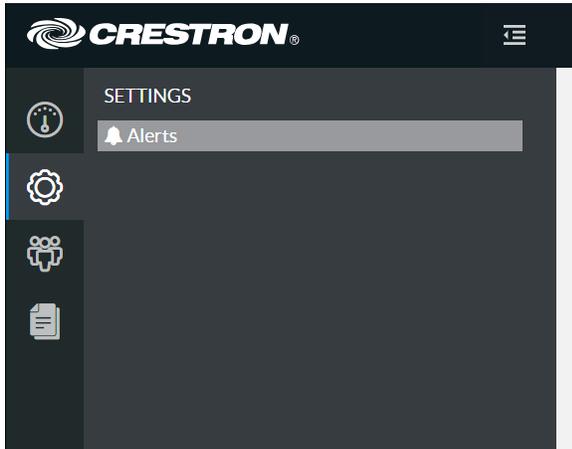
5. Click **Save Changes** at the top right of the screen to save any changes made. Click **Revert** to clear any information that was entered.

Manage Alerts

The changes made to a device that trigger an alert may be customized. The XiO Cloud service adds common alerts automatically. However, these alerts may be deleted and new alerts may be added.

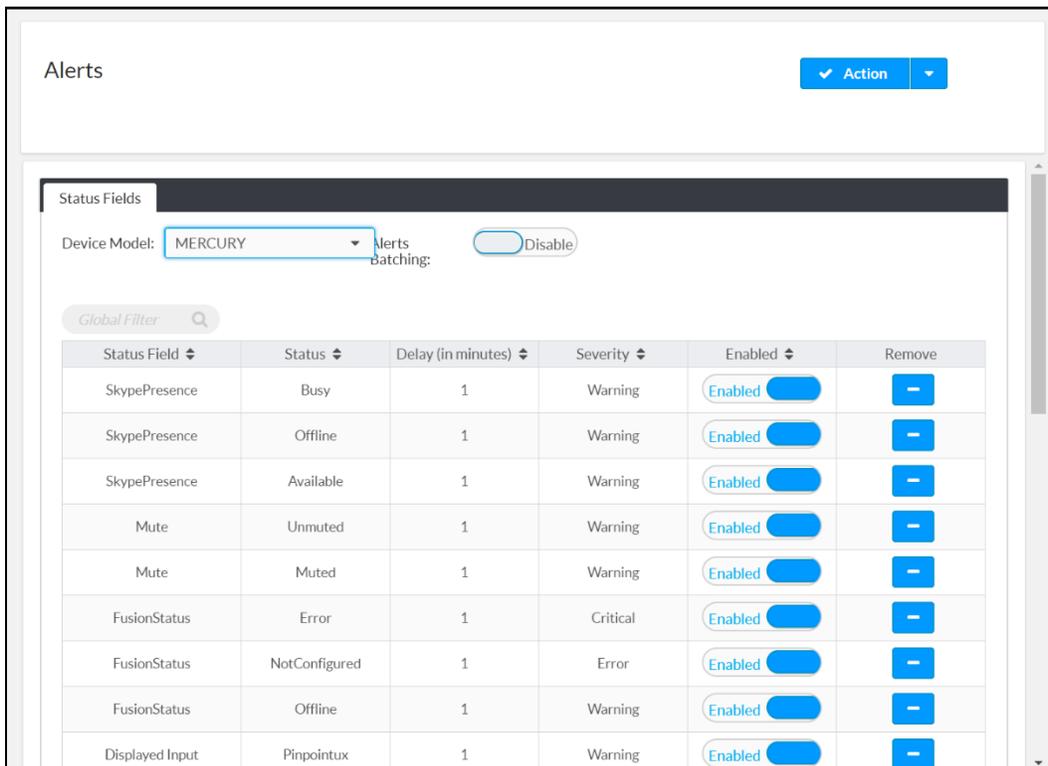
The **SETTINGS** menu for alerts is located in the user management panel, which may be accessed by clicking the gear icon  on the left side of the screen.

Settings – Alerts Option



Click **Alerts** in the **SETTINGS** menu. An **Alerts** page with the **Status Fields** tab open by default is displayed to the right of the **SETTINGS** menu.

Alerts – Status Fields Tab



Alerts in the **Status Fields** section are organized by device type. To configure alerts for a device type, select the desired device type from the **Device Model** drop-down menu on the top left of the **Status Fields** section.

Alerts may be also be batched by setting the **Alerts Batching** toggle to **Enabled**. When **Alerts Batching** is enabled, all alerts for a device are batched together and may be enabled/disabled or removed at once.

The **Status Fields** table presents all of the alerts configured for the selected device type. The following information is provided:

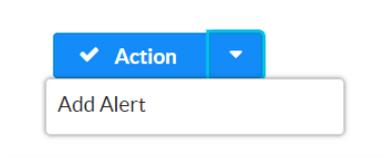
- **Status Field:** The device status type (An alert is triggered if changes to this status are detected.)
- **Status:** The state that the device status must reach in order to trigger an alert
- **Delay:** The duration in minutes that the device must remain in the selected status before an alert is triggered
- **Severity:** The severity level of the alert, which determines the users who are notified based on their configured alert levels
- **Enabled/Disabled:** Provides controls for enabling or disabling the alert
- **Remove:** Provides controls for removing the alert

Add a New Alert

To add a new alert:

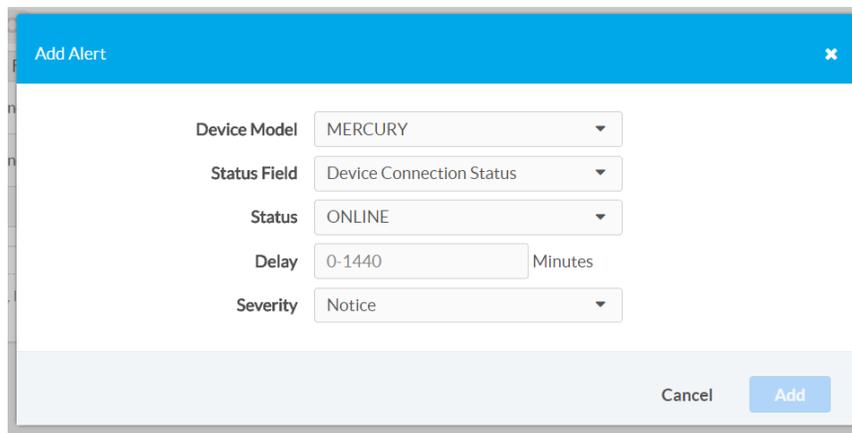
1. Select **Add Alert** from the **Action** drop-down menu.

Drop-Down Menu with Add Alert Option



An **Add Alert** dialog box is displayed.

Add Alert Dialog Box



2. Use the provided text fields and drop-down menus to enter the required information for the alert.
3. Once all information has been entered, click **Add** to add the alert or **Cancel** to cancel adding the alert.

The new alert is displayed in the **Status Fields** section of the **Alerts** page for the selected device type.

Delete an Alert

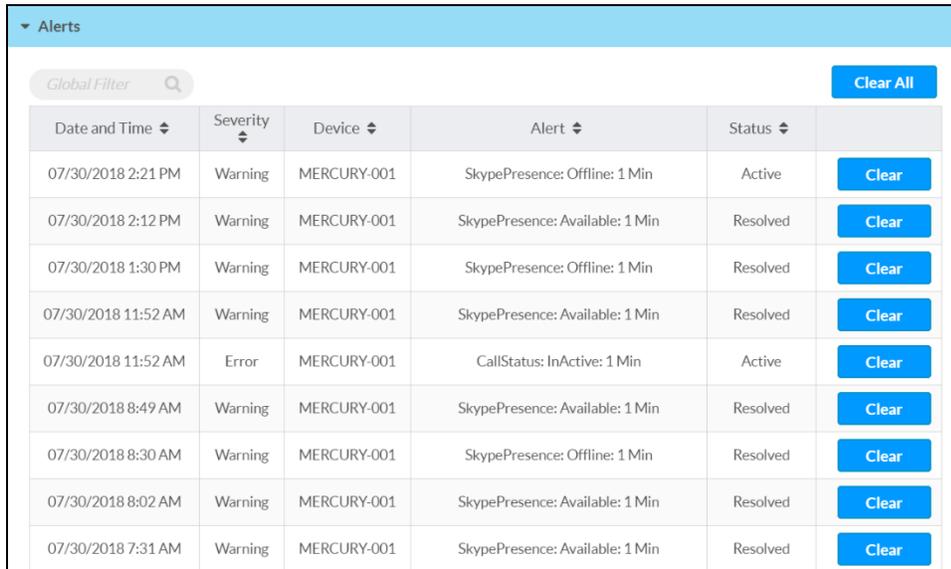
To delete an alert, click the minus button (-) in the **Remove** column for that alert.

View Alerts

In addition to receiving alerts via email or text messages, alerts may also be viewed for individual devices and for groups of devices.

Alerts are accessible from the **Alerts** accordion of the **Status** tab for an individual device or for a group.

Settings Tab – Alerts Accordion



Date and Time	Severity	Device	Alert	Status	
07/30/2018 2:21 PM	Warning	MERCURY-001	SkypePresence: Offline: 1 Min	Active	Clear
07/30/2018 2:12 PM	Warning	MERCURY-001	SkypePresence: Available: 1 Min	Resolved	Clear
07/30/2018 1:30 PM	Warning	MERCURY-001	SkypePresence: Offline: 1 Min	Resolved	Clear
07/30/2018 11:52 AM	Warning	MERCURY-001	SkypePresence: Available: 1 Min	Resolved	Clear
07/30/2018 11:52 AM	Error	MERCURY-001	CallStatus: InActive: 1 Min	Active	Clear
07/30/2018 8:49 AM	Warning	MERCURY-001	SkypePresence: Available: 1 Min	Resolved	Clear
07/30/2018 8:30 AM	Warning	MERCURY-001	SkypePresence: Offline: 1 Min	Resolved	Clear
07/30/2018 8:02 AM	Warning	MERCURY-001	SkypePresence: Available: 1 Min	Resolved	Clear
07/30/2018 7:31 AM	Warning	MERCURY-001	SkypePresence: Available: 1 Min	Resolved	Clear

The Alerts section provides the following information in table format:

- The date and time the alert was issued
- The severity of the alert
- The device that caused the alert to be issued
- The status field, status, and duration values that triggered the alert
- The status of the alert (An alert changes from **Active** to **Resolved** automatically when the status field value changes to a status other than the one that triggered the alert.)
- A **Clear** button that removes the alert from the log

Click the **Clear All** button at the top right of the table to clear all listed alerts.

Load a Program to a Control System

The XiO Cloud service provides controls for uploading a program file to a 3-Series® or 4-Series™ control system. Once a program has been uploaded to the XiO Cloud environment, it may be pushed to any number of control systems that have been claimed by the service.

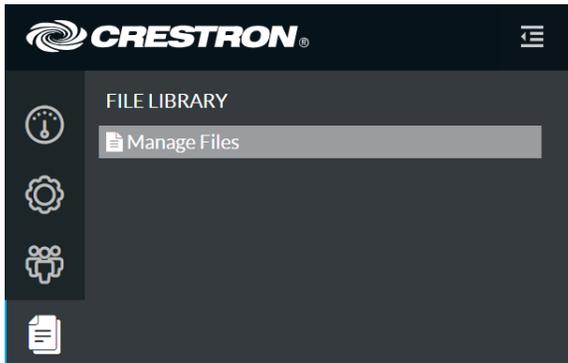
NOTE: Program details will not be maintained in XiO Cloud when downgrading to an earlier 3-Series firmware version (such as 1.503.0070).

Upload a New Program

To upload a new program to the XiO Cloud environment:

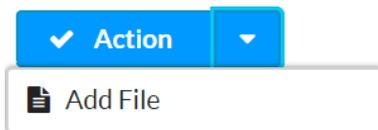
1. Click the file upload icon  on the left side of the screen to display the **FILE LIBRARY** menu.

FILE LIBRARY Menu



2. Select **Add File** from the **Action** drop-down menu.

Drop-Down Menu with **Add File** Option



The **Add Files** dialog box is displayed.

Add Files Dialog Box

The screenshot shows the 'Add Files' dialog box. It features a blue header bar with the text 'Add Files' and a close icon. Below the header, there are three input fields: 'File Type' (a dropdown menu currently showing '3-Series Programs'), 'Name' (an empty text box), and 'Notes' (an empty text box). Below these fields are three buttons: '+ Add File', 'Upload', and 'Cancel'. At the bottom right of the dialog is a 'Cancel' button.

3. Enter the following information about the program:
 - **File Type:** Select **3-Series Programs** from the drop-down menu
 - **Name:** Enter a name for the program.
 - **Notes:** Enter any notes about the program.

Once the information above is entered, the **+ Add File** button can be selected.

4. Click **+ Add File**, and then navigate to the program file on a connected computer.
5. Select the program file, and then click **Open**. The filename and file size of the program is shown after the program is selected.

NOTE: Click the **x** button to discard the program.

Add Files Dialog Box - Program Preview

The screenshot shows the 'Add Files' dialog box with a program preview. It features a blue header bar with the text 'Add Files' and a close icon. Below the header, there are three input fields: 'File Type' (a dropdown menu currently showing '3-Series Programs'), 'Name' (a text box containing 'VoiceControl'), and 'Notes' (a text box containing 'Voice Control for CS'). Below these fields are three buttons: '+ Add File', 'Upload', and 'Cancel'. Below the buttons is a horizontal line. Below the line, the filename 'VoiceReg.lpz' and file size '1.009 MB' are displayed, followed by a blue 'x' button. At the bottom right of the dialog is a 'Cancel' button.

NOTE: Only compiled programs may be uploaded. The program code must be compiled with a minimum version of the include4.dat file to ensure full compatibility with XiO Cloud. For more information, refer to the respective programming tool help file.

6. Click **Upload**. A window showing the status of the upload is displayed.

Upon successful upload, the program file is added to the **Manage Files** table on the right side of the screen.

Manage Files Table

Name ^	Version ⇅	Device Type ⇅	Notes ⇅	Edit	Delete
3-Series	1	Program	This is a file	Edit	Delete
707IndependentsoftStructuredStorage	3	Program	707IndependentsoftStructuredStorage	Edit	Delete
buzz.cpz	1	Program	Note1	Edit	Delete
File upload status	3	Program	2030SecureTcpServer_TestClient	Edit	Delete
VoiceControl	1	Program	Voice Control for CS	Edit	Delete

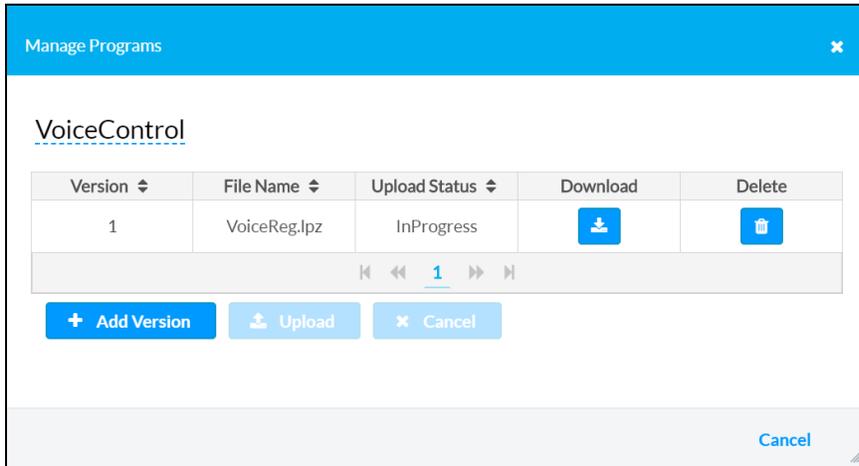
Manage Programs

Use the **Manage Files** table to manage program files after they have been uploaded to the XiO Cloud environment.

Edit a Program

Click **Edit** next to a program file to edit that program file. A **Manage Programs** dialog box is displayed.

Manage Programs Dialog Box



The **Manage Programs** dialog box provides the following information about the program in table format:

- The program version
- The program filename
- The status of the program upload
- Controls to download or delete the program file

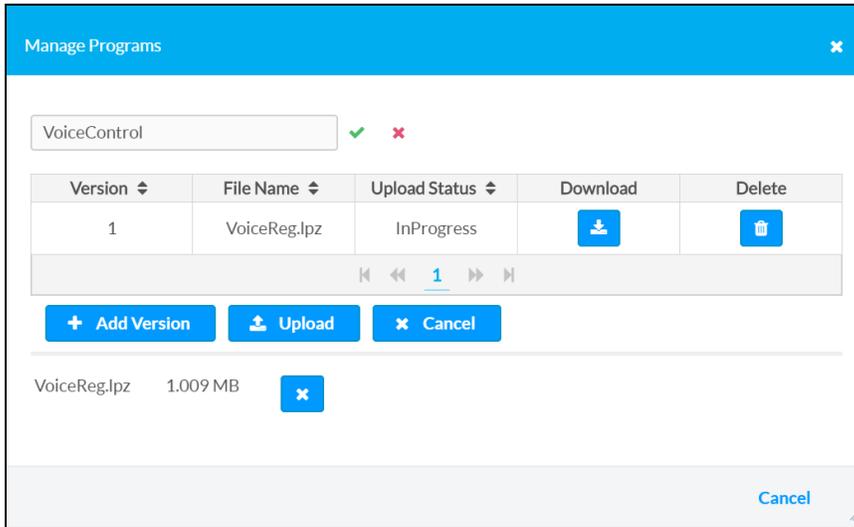
To edit the program name, click the program name in the top left corner of the dialog box. The program name becomes an editable text box. Click the green check icon or press **Enter** to save the new program name. Click the red x icon to discard the changes.

To add a new version of the program file:

1. Click **+ Add Version**, and then select an updated version of the program from the host computer.

The filename and file size of the program is shown after the program is selected. Click the x button to discard the program.

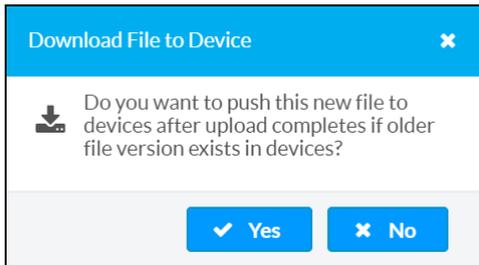
Manage Programs Dialog Box - Program Preview



2. Click **Upload**.

A message window is displayed asking whether the updated program file should be pushed to all devices running the older program file.

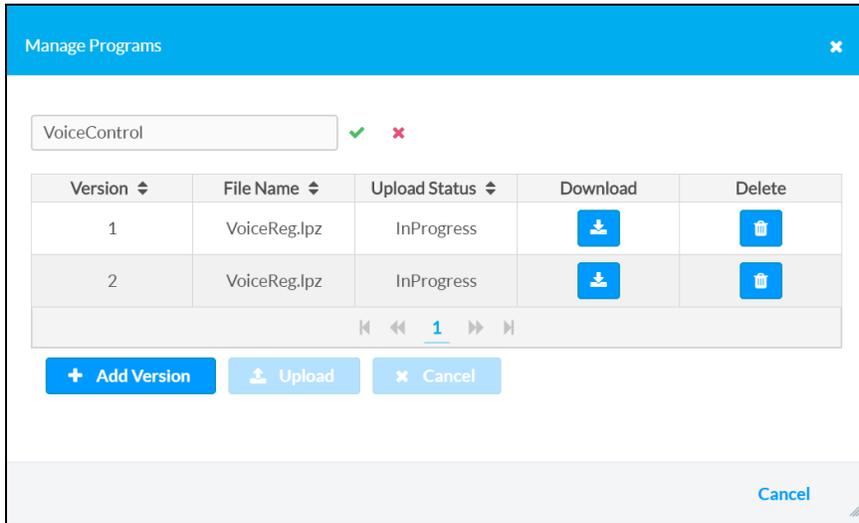
Download File to Device Window



3. Click **Yes** to push the program file to all applicable devices, or click **No** to upload the file without pushing the program to the devices.

Upon successful upload, the new program file is added to the **Manage Programs** table with the latest iteration of the version number. All previous versions of the program file are retained in this table unless they are deleted manually.

Manage Programs Dialog Box - New Program Version Uploaded



Click the **x** button or **Cancel** to exit the **Manage Programs** dialog box.

Delete a Program

Click **Delete** next to a program file to delete that program file. A message window is displayed asking whether the program file should be deleted.

Click **Yes** to delete the program file or **No** to cancel the deletion.

NOTE: If multiple versions of a program file have been uploaded, all program file versions will be deleted.

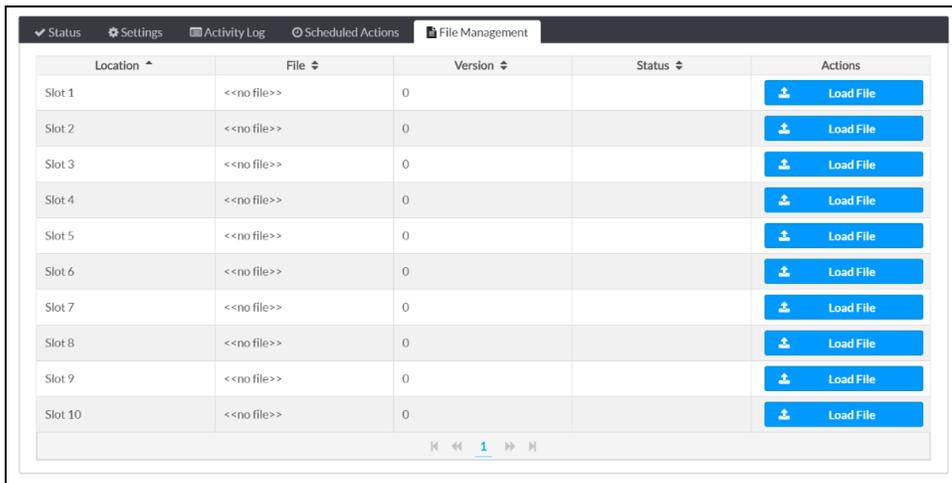
Load a Program to Device

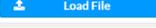
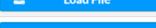
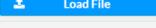
Once a program is uploaded to the XiO Cloud environment, it may be loaded to any number of claimed 3-Series or 4-Series control systems within the environment.

To load a program to a control system:

1. Click the dashboard icon  on the left side of the screen.
2. Select the desired control system from the group tree to display its configuration pages.
3. Click the **File Management** tab. A table showing all of the device's program slots is displayed.

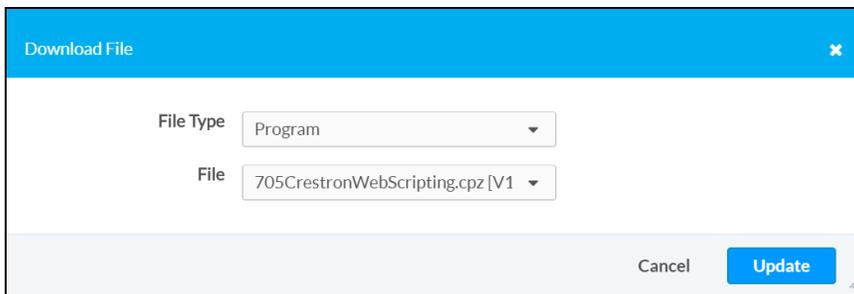
File Management Tab



Location ^	File ↕	Version ↕	Status ↕	Actions
Slot 1	<no file>	0		
Slot 2	<no file>	0		
Slot 3	<no file>	0		
Slot 4	<no file>	0		
Slot 5	<no file>	0		
Slot 6	<no file>	0		
Slot 7	<no file>	0		
Slot 8	<no file>	0		
Slot 9	<no file>	0		
Slot 10	<no file>	0		

4. Click **Load File** next to the desired program slot. The **Download File** dialog box is displayed.

Download File Dialog Box



Download File

File Type: Program

File: 705CrestronWebScripting.cpz [V1]

Cancel Update

5. Enter the following information about the program file:
 - **File Type:** Select **Program** from the drop-down menu.
 - **File:** Select the uploaded program file from the drop-down menu. The program version is displayed to the left of the program file name.
6. Click **Update**. The program file is pushed to the chosen program slot of the control system.

Manage a Loaded Program

Use the **File Management** table to manage program files after they have been loaded to a 3-Series or 4-Series control system.

File Management Tab

Location	File	Version	Status	Actions
Slot 1	708IndependentsoftMsg.cpz	1	Registered	[Edit] [Play] [Refresh]
Slot 2	2004SecureTcpClient.cpz	1	Registered	[Edit] [Play] [Refresh]
Slot 3	2000SQLiteDBTests.cpz	2	Registered	[Edit] [Play] [Refresh]
Slot 4	707IndependentsoftStructuredStorage.cpz	1	Registered	[Edit] [Play] [Refresh]
Slot 5	706CrestronSNMPTest.cpz	1	Registered	[Edit] [Play] [Refresh]
Slot 6	<<no file>>	0		[Load File]
Slot 7	<<no file>>	0		[Load File]
Slot 8	<<no file>>	0		[Load File]
Slot 9	<<no file>>	0		[Load File]
Slot 10	708IndependentsoftMsg.cpz	1	Registered	[Edit] [Play] [Refresh]

The **File Management** table displays the following information for each program slot:

- **Location:** The program slot of the control system
- **File:** The name of the program file loaded to the control system
- **Version:** The program file version

NOTE: The **Version** column for a loaded program will also note if a newer version of the program was loaded to XiO Cloud but has not yet been loaded to the device.

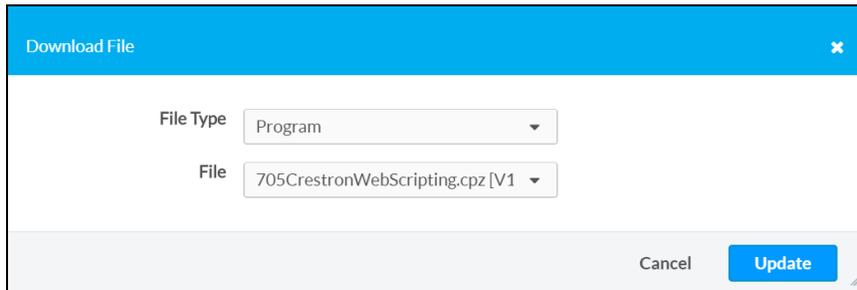
- **Status:** The registration status of the program file
- **Actions:** Controls to load a program file to the program slot or to manipulate a loaded program

Edit a Loaded Program

Tap the edit button  next to a loaded program file in the **Actions** column to edit the program file.

The **Download File** dialog box is displayed.

Download File Dialog Box



The following program file information may be edited:

- **File Type:** Use the drop-down menu to select the file type (**Program**)
- **File:** Use the drop-down menu to select a program file to load to the program slot.

Once all changes have been made, click **Update**. The updated program file is pushed to the chosen program slot of the control system. Click **Cancel** to cancel any changes.

Start/Stop a Loaded Program

Tap the play button  next to a loaded program file in the **Actions** column to start the program file. A growl notification is displayed stating that the program start command has been sent to the control system, and that there may be a small delay before the program starts.

If a program is running, tap the stop button  in the **Actions** column to stop the program. A growl notification is displayed stating that the program stop command has been sent to the control system, and that there may be a small delay before the program stops.

Unregister a Loaded Program

Tap the circular arrow button  next to a loaded program in the **Actions** column to unregister a program from the control system. A growl notification is displayed stating that the program unregister command has been sent to the control system, and that there may be a small delay before the program is unregistered.

Remote Control

Remote control functionality allows the display of a supported touch screen device (TSW-560, TSW-760, TSW-1060, TSS-7, and TSS-10) to be viewed and controlled within XiO Cloud. Users can control the touch screen directly by clicking on the virtual display, which mirrors the touch controls on the physical device.

Remote control functionality supports any programs that can run on the touch screen, including custom user projects, Crestron scheduling, and partner applications. Users also have full control of the capacitive hard buttons on the touch screen.

NOTE: Remote control is available only for Premium tier device-based accounts. Enabling this functionality for room-based accounts requires purchase of a SW-XIOC-S license per room.

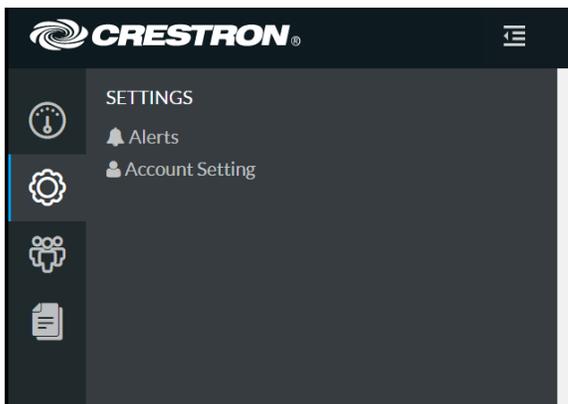
Enable Remote Control

A global administrator must enable remote control for the XiO Cloud account before users can access the functionality.

To enable remote control for an account:

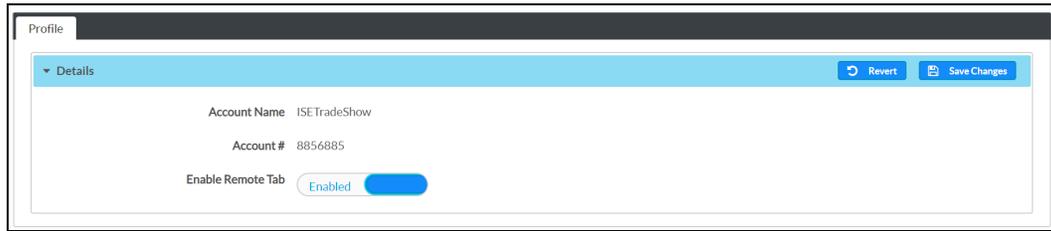
1. Click the gear icon  on the left side of the screen.
2. Click **Account Setting**.

SETTINGS Menu



3. Within the **Profile** tab on the right side of the screen, toggle **Enable Remote Tab** to **Enabled**.

Profile Tab



4. Tap **Save Changes** on the top right of the screen.

View a Touch Screen Display

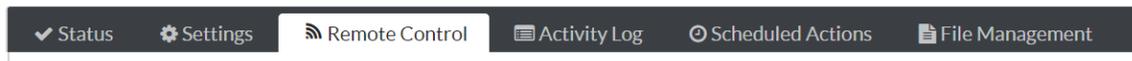
Users can view a connected touch screen display once remote control is enabled for the XiO Cloud account.

NOTE: To access touch screens within a group, users must have **Tech** access or above.

To view a touch screen display:

1. Navigate to the touch screen device that supports remote control functionality.
2. Select the **Remote Control** tab on the right side of the screen.

Remote Control Tab

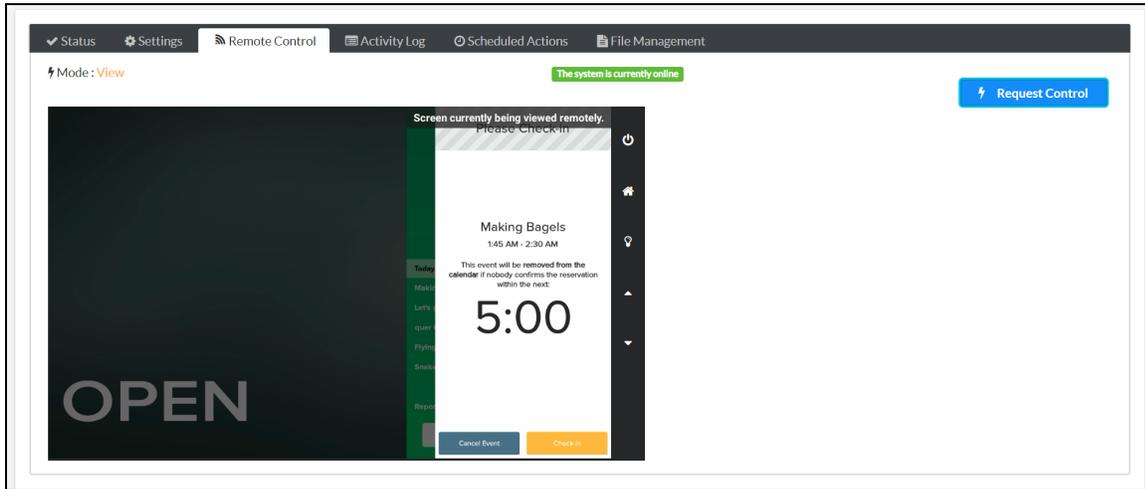


NOTES:

- Remote control is available only on the device level.
- The **Remote Control** tab is shown only if the touch screen has been upgraded to a firmware version that supports this functionality. The device firmware can be updated directly through XiO Cloud if necessary.

The content that is currently displayed on the touch screen is shown as an image in the **Remote Control** tab.

Remote Control Tab – Touch Screen Display (View Mode)



By default, the touch screen display is placed in **View** mode, which is indicated in the top left of the screen.

- The image of the remote touch screen is updated approximately every five seconds.
- If the remote touch screen is viewed for 15 minutes without any other activity occurring on the page, the image stops updating automatically. Refresh the page in the browser to resume viewing the touch screen in real time.

Control a Touch Screen Display

To take control of a touch screen display:

1. Navigate to the touch screen device that supports remote control functionality.
2. Select the **Remote Control** tab on the right side of the screen.
3. Click **Request Control** on the top right of the screen.

NOTE: Only one user can control a remote touch screen display at any time. If another user requests control, the current user controlling the display is placed back in **View** mode. Users controlling the physical touch screen are not affected by remote usage.

Within a few seconds, the mode switches from **View** to **Control**, and the **Request Control** button changes to a **Release Control** button.

While in **Control** mode, click anywhere on the virtual touch screen display, including the capacitive hard buttons, to send a virtual touch command to the device.

NOTE: If the touch screen is in standby mode, a black screen is displayed. Click the remote screen once to wake the touch screen. Normal control can resume once the image updates to show the remote user interface.

To stop controlling the touch screen, click **Release Control**. The touch screen returns to **View** mode.

Privacy Considerations

Remote control functionality was designed with privacy considerations in mind.

- The remote control functionality must be enabled by a Global Administrator before it can be used.
- To access touch screens within a group, users must have **Tech** access or above.
- Whenever a user is viewing or controlling the touch screen remotely, a "Screen currently being viewed remotely" message is displayed on the physical device.
- The activity log is updated to record whenever a user starts and stops viewing or controlling a touch screen.
- Remote control access can be disabled entirely on a touch screen by issuing the `REMOTECONTROL DISABLE` console command in Crestron Toolbox™ software.
- No images from the touch screen are stored on Crestron servers longer than is necessary to display them, and no images are accessible by Crestron staff.

Enable API Access

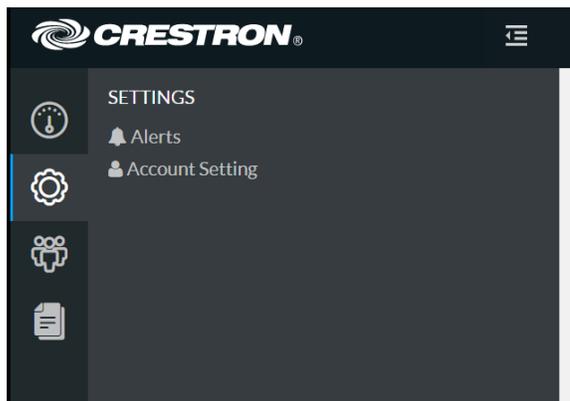
Users with Global Administrator can enable the XiO Cloud REST API functionality directly from the XiO Cloud portal. For room-based accounts, enabling API access requires purchase of a SW-XIOC-API license for the account.

The XiO Cloud REST API binds to the XiO Cloud server as a new transport interface (much like a direct transport interface or a serial join interface). The REST API layer provides a translation from the XiO Cloud server. Web server requests are stateless, and all stateful information is maintained between the XiO Cloud REST API layer and account, group, and device data. For more information, refer to the XiO Cloud Service API microsite at <https://developer.crestron.com>.

To enable API access from the portal:

1. Click the gear icon  on the left side of the screen.
2. Click **Account Setting**.

SETTINGS Menu



3. Within the **Profile** tab on the right side of the screen, toggle **Enable API Access** to **Enabled**.

Profile Tab

The screenshot shows a 'Profile' tab with a 'Details' section. The 'Details' section has a blue header bar with 'Revert' and 'Save Changes' buttons. Below the header, the following fields are visible:

Account Name	Account
Account #	5837236
Enable Remote Tab	<input checked="" type="checkbox"/>
Enable API Access	<input checked="" type="checkbox"/>
First Name	<input type="text" value="John"/>
Last Name	<input type="text" value="Smith"/>
Email Address	<input type="text" value="jsmith@crestron.com"/>
Api Key	--

4. Enter the administrator's first name, last name, and email address in the appropriate text fields.
5. Tap **Save Changes** on the top right of the screen. An API authentication key is displayed next to **Api Key**.

