



**SmartCare**

Remote Management

Instructions for use

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For information about any Baxter product, contact Baxter Technical Support at [baxter.com/contact-us](https://www.baxter.com/contact-us).



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## Contents

# Introduction

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## Product overview and functions and features

### Product overview

**SmartCare** Remote Management lets you optimize your healthcare operations by remotely connecting Baxter products for servicing and actionable insights. The system is designed to integrate Baxter vital signs monitors, wireless **RetinaVue700** Imager, and hospital beds with real-time tracking and control.

See [Actionable Insights](#) on page 17 for more information.

### Functions



**NOTE** Some functions and features may not apply to your connected Baxter product. Contact your Baxter representative for more information about the specific items related to your product.

- *Error Tracking and Health Alerts:* Detect potential issues early with automatic error tracking and health alerts for each connected component, ensuring uninterrupted patient care.
- *Centralized Control and Configuration:* Remotely deploy configurations and custom data files to keep devices updated and consistent across the facility.
- *Firmware Upgrades:* Remotely upgrade firmware to enhance performance and security without disrupting patient care.
- *Bed Occupancy Monitoring:* Gain visibility into bed usage in real-time, allowing for efficient resource allocation and management.
- *Comprehensive Reporting:* Generate and print detailed reports to maintain regulatory compliance and gain insights into equipment utilization.

### Features

- *Remotely retrieve logs:* Allows quick access to analyze logs to identify and resolve errors and issues before they escalate and to identify performance bottlenecks and optimize system performance. It also enables the review of logs to investigate security breaches and implement preventative measures.
- *Track preventive maintenance:* This feature enables you to plan and schedule maintenance tasks based on equipment usage and historical data. It also allows you to allocate resources efficiently by prioritizing maintenance tasks based on their impact. This will reduce downtime and enable you to address potential issues before they lead to system failures.
- *View error code notifications:* The error code notifications feature allows you to immediately address critical errors and minimize downtime. You can analyze error codes to identify the underlying root causes of issues and implement corrective measures to prevent recurring errors.
- *View component health alerts:* This feature allows you to continuously track the health of critical components and identify potential problems before they lead to failures. You can also schedule maintenance based on component health data.
- *Access and print reports:* The reporting feature lets you analyze trends to make informed decisions and to track key performance indicators (KPIs) and to comply with audits.
- *Access and deploy configuration and custom data files:* This feature enables remote system configurations and to customize data files to enforce consistent configurations across multiple systems.
- *Upgrade firmware:* Remotely improve system performance by adding new features, applying security patches to protect against vulnerabilities, and resolving known issues.
- *Remotely locate devices:* Locate connected Baxter products via access point (AP) mapping information.

## Purpose

**SmartCare** Remote Management allows you to remotely service your connected Baxter products. The list below contains all the service-related and monitoring tasks available.



**NOTE** Some features in the comprehensive list below may not apply to your connected Baxter products. Contact your Baxter representative for information about the specific features that are available for your connected Baxter products.

- Remotely retrieve logs
- Track preventive maintenance
- View error code notifications
- View component health alerts
- Access and print report
- Access and deploy configuration and custom data files
- Upgrade firmware
- Locate connected Baxter products via access point (AP) mapping information

## Deployment options: cloud and on-premises

**SmartCare** Remote Management can be hosted either in the cloud or on premises.

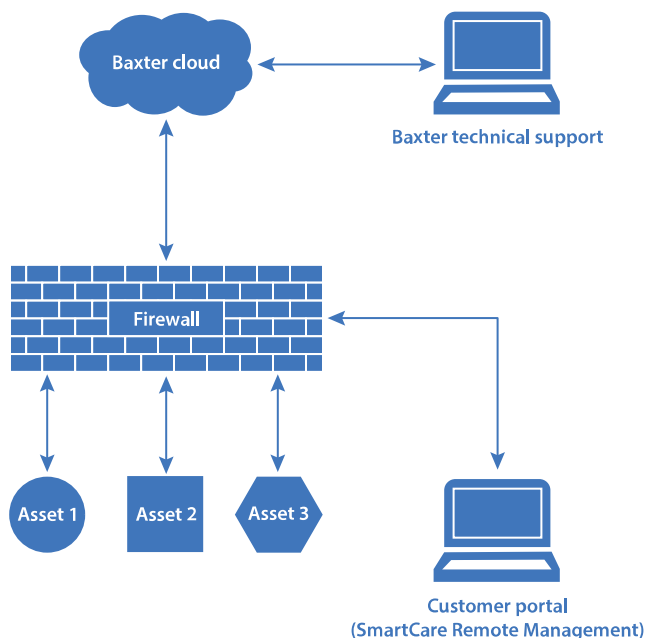
### Cloud-Hosted **SmartCare** Remote Management

If your **SmartCare** Remote Management software is cloud hosted, access it at this link:

<https://smartcareremotemanagement.hillrom.com>

The diagram below is a high-level overview of how the cloud-hosted **SmartCare** Remote Management works.

For more details, see the **SmartCare** Remote Management – On-premises version setup guide or contact your local Baxter representative.

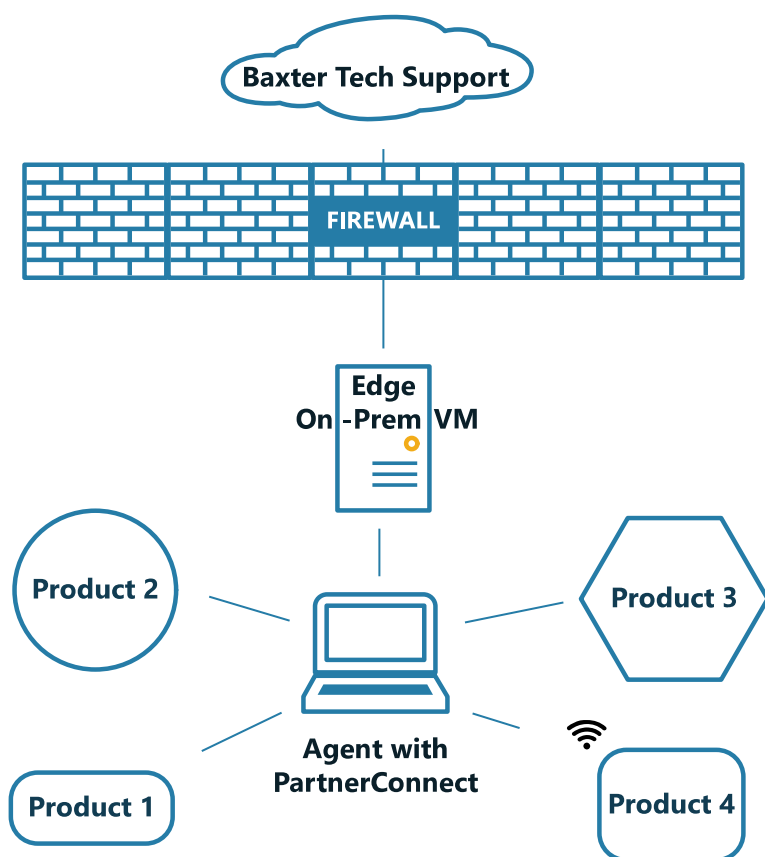


## On-Premises **SmartCare** Remote Management

An on-premises version of **SmartCare** Remote Management is hosted on your IT infrastructure behind your firewall. Its workflows are slightly different from those in a cloud deployment. Also, only certain assets are compatible with on-premises **SmartCare** Remote Management, such as **Connex** Spot Monitor, **Connex** Vital Signs Monitor, and **Connex** Integrated Wall System.

The diagram below is a high-level overview of how on-premises **SmartCare** Remote Management works.

For more details, see the **SmartCare** Remote Management — on-premises version setup guide or contact your local Baxter representative.



## Compatibility

**SmartCare** Remote Management is compatible with the following web browsers:

- ◦ **Microsoft Edge**
- ◦ **Google Chrome**
- ◦ **Safari**, iOS 14

For product compatibility, refer to the compatibility matrix at the following link:


<https://www.hillrom.com/content/dam/hillrom-aem/us/en/sap-documents/LIT/80030/80030603LITPDF.pdf>


For more compatibility information, please contact your Baxter representative.

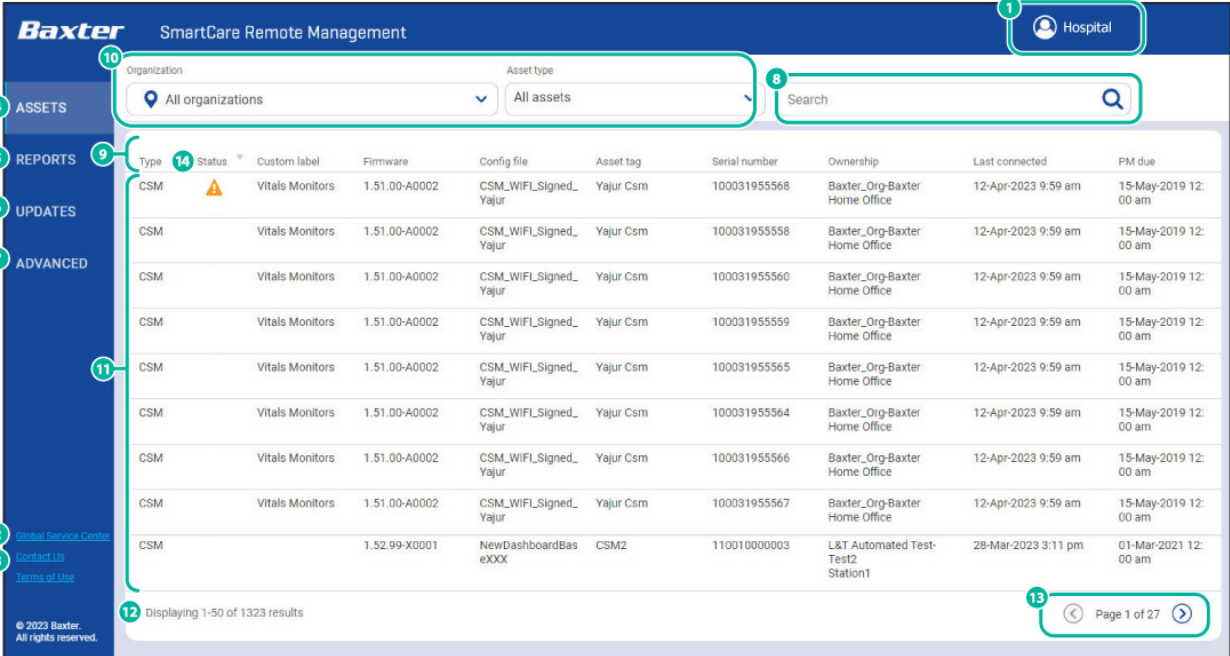



# Navigate SmartCare Remote Management

The **SmartCare** Remote Management user interface provides filters, a search box, and hyperlinks as navigational tools. An example of a **SmartCare** Remote Management screen with callouts identifying key features appears below.

 **NOTE** The screen below is only an example. The actual interface may vary.

 **NOTE** Only administrators can see the ADVANCED menu option shown below.



 **NOTE** A banner across the top of the page may appear, providing helpful information. For example, this banner may indicate the date of upcoming site maintenance. To learn more about a specific banner, click **More** on the banner's right side.

No.	Feature	Description
1	Account/User link	The Account/User link displays your user name after you log in, and it provides a Log out link for to exit <b>SmartCare</b> Remote Management.  If the user is an administrator, the ADVANCED menu appears on the left side of the screen.
2	Global Service Center link	The Global Service Center link opens a new window and navigates to the Service Center website.  This link only appears in the cloud-hosted version of <b>SmartCare</b> Remote Management. It will not be available in the on-premises versions of <b>SmartCare</b> Remote Management.
3	Contact Us link	The Contact Us link opens a new window and navigates to the Contact Us website.

No.	Feature	Description
		This link only appears in the cloud-hosted version of <b>SmartCare</b> Remote Management. It will not be available in the on-premises version of <b>SmartCare</b> Remote Management.
4	ASSETS	The ASSETS page displays a list of assets that you may filter by organization, including by ownership and facility. You may also sort the assets by firmware, config file, asset tag, serial number, time last connected, status, or the date preventive maintenance (PM) is due.
5	REPORTS	The REPORTS page provides service-related reports by asset type.
6	UPDATES	The UPDATES page allows you to select the asset type and the asset update type in order to push updates to assets.
7	ADVANCED	The ADVANCED menu contains settings that are available only to administrators. See "Advanced settings (administrators only)" for more information.
8	Search box	<p>Use the search box to search the Firmware, Config, Asset tag, and Serial number columns.</p> <p>Searching for an access point MAC address results in a list of devices that report using the access point. An example access point MAC address search query is below.</p> <p>AP=28:c6:8e:78:18:2b</p>
9	Asset list column headers	<p>Click the asset list column headers to sort asset data in either ascending or descending order. When you first access the page, assets with alerts or errors will appear at the top of the page. Sorting within columns occurs as follows:</p> <ul style="list-style-type: none"> <li>• Firmware sorts by the asset's firmware version.</li> <li>• Config file sorts by the asset's current, active configuration name.</li> <li>• Asset tag sorts alphanumerically by the asset's tag.</li> <li>• Serial number sorts alphanumerically by serial number.</li> <li>• Last connected sorts by the date/time an asset was last seen on the server.</li> <li>• PM due sorts by the date recorded in the system as the preventive maintenance due date.</li> <li>• Status sorts by prioritizing assets with alerts or errors. These assets are automatically prioritized when you first access the page.</li> </ul>
10	Organization and Asset type drop-down menus	These menus let you narrow the asset list according to facility/organization, location/unit, and model. By default, no filters are applied at the start of a new session.
11	Asset list data	The asset list data provides at-a-glance information for each asset based on filters or searches. Clicking anywhere in a specific asset's row navigates to the asset details screen.
12	Search/filter results	The search/filter results indicate the number of results displayed on the page, out of the total number of results. A maximum of 50 results can appear on a page.
13	Pagination controls	The pagination controls let you navigate from one page of results to another.
14	Status column	The status column tells you that the connected Baxter product has an error code or alert.

# Use **SmartCare** Remote Management

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This chapter addresses the following topics and tasks:

- Best practices for deploying configuration and software updates
- Log in and log out
- Access the asset list
- Filter the asset list
- Use the search box
- Access asset details
- View error code notifications
- Component health alerts
- Access and print reports
- Change call-home frequency (Service Monitors only)
- Access and deploy configuration and custom data files
- View the status of a configuration deployment
- View the status of a firmware deployment
- Upgrade firmware
- Locate connected Baxter products via access point (AP) mapping information
- Use the support links

## Best practices for deploying updates and upgrades

This section describes recommended best practices for deploying new configurations and software upgrades to your connected Baxter products using **SmartCare** Remote Management.

### *Before deployment*

- Make sure the scheduled deployment time is during normal business hours. This is when resources are most likely to be available for you, including Baxter. As the customer, you own the communications and training plan.
- Make sure to perform basic regression test cases first. This is to ensure the updates or upgrades work correctly in your environment before a large deployment. In addition to verifying asset network connectivity, make sure the asset tag and location fields appear properly on the asset.
- Before the planned deployment, coordinate with clinical staff to turn on assets during the planned update time. This ensures maximum update coverage.

### *During and after deployment*

- Use the **SmartCare** Remote Management report feature to check on the CFG Update Status or the Firmware Status.

## Log in and log out

This section describes two different methods of logging into Remote Management. Depending on how your facility is set up, you will either log in without single sign-on or sign in with single sign-on.

These instructions assume you have established login credentials to access **PartnerConnect** and have credentials to access **SmartCare** Remote Management. If this is not the case, contact your organization's administrator.



**NOTE** See "Sign in (with single sign-on)" for more information about the single sign-on process.

## Log in [without single sign-on]

Follow the steps below to log in to **SmartCare** Remote Management if your facility is not set up with single sign-on.

1. Open an internet browser and enter the **SmartCare** Remote Management URL:  
<https://smartcareremotemanagement.hillrom.com>
2. Enter your email address and password for this site.
3. Click **LOG IN**.
4. After you log in, there might be two options to choose from, based on the types of assets at your facility. If your facility has only CSM or CVSM assets, one option is available. If your facility has assets compatible with Actionable Insights, such as beds or **Connex 360** assets, the Actionable Insights option is also available. See the "Actionable Insights" section of this document for more information.
5. Choose **SmartCare** Remote Management. **SmartCare** Remote Management opens and displays either the ASSETS window or a roll-up page from which you may select your facility.



**NOTE** By default, **SmartCare** Remote Management presents an unfiltered asset list at the start of a new session.

6. If you have forgotten your password, click **Forgot password?** to receive an email with instructions for updating your password.

## Sign in [with single sign-on]

Follow the steps below to sign in to **SmartCare** Remote Management if your facility is set up with single sign-on.

The single sign-on method allows you to authenticate your credentials through your company's existing **Active Directory (Windows** login). This method eliminates the need to provide a user name and password at every login.



**NOTE** Single sign-on is available to customers with corporate accounts that are compatible with **SmartCare** Remote Management. Establish the initial account setup in advance with help from Baxter Technical Support: [baxter.com/contact-us](http://baxter.com/contact-us).

1. Open an internet browser and enter the **SmartCare** Remote Management URL:  
<https://smartcareremotemanagement.hillrom.com>
2. Click **SINGLE SIGN-ON**.
3. Click the name of your company's single sign-on provider.



**NOTE** The look and feel of the prompts after this step may vary.

4. Enter your corporate email and click **Next**.
5. Enter your corporate password and click **Sign in**.  
A message may appear asking whether you would like to stay signed in.
6. If a message appears, asking whether you would like to stay signed in, click the appropriate option. For example, you may click **Yes** to reduce the number of times you are asked to sign in, or you may click **No** to opt out of this feature.

If it is your first time signing in, an ACCESS PENDING message will appear. Contact your corporate **SmartCare** Remote Management administrator to request an assignment to the proper asset groups. Once the administrator assigns you to the asset groups, you will be able to sign in to **SmartCare** Remote Management.



**NOTE** Please see "Provide a new user with single sign-on access" in the "Manage users" section for more information about single sign-on.

## Log out

To exit **SmartCare** Remote Management, follow the steps below.

1. Click the Account/User link at the top of the screen. (Look for your user name.)
2. Click **Log out** in the pop-up window.

## Access the asset list

The asset list provides a complete list of equipment associated with your Account/User ID. This list opens automatically when you log in to **SmartCare** Remote Management. For users with the Rollup option active, list opens after you click the name of your clinic. To access the asset list from any other screen in **SmartCare** Remote Management, click the **ASSETS** option on the left side of the screen.

## Filter the asset list

Filtering lets you refine the asset list by asset type and by organization, including by a specific location within an organization.

By default, no filters are applied at the start of a **SmartCare** Remote Management session. You can apply filters any time during your session. Once you apply a filter, it is applied throughout a session until you modify it.

The steps below move from the most general to the most specific filter options. However, you can filter by model alone, and in some cases you can filter on just a subset of the other available filters.

Once you apply a filter, the screen will refresh with the filter applied.

1. To filter the asset list by organization, select the Organization drop-down. The organization drop-down appears above the asset list.
2. To filter the asset list by location or facility, select the location from the Organization drop-down.
3. To filter the asset list by model, select a model name from the Asset type list.

The asset list data changes based on the filters that you apply and can include the following details:

- Asset type
- Status
- Custom label
- Firmware
- Config file
- Asset tag
- Serial number
- Ownership
- Last connected
- PM due

For **Connex 360** monitors, the preventative maintenance information is found in Actionable Insights.

## Use the search box

You can also refine the asset list by using the search box. Enter a query based on a device's model name, custom label, firmware version, config file, asset tag, serial number, ownership, or connection information. To use the search box, follow the steps below.

1. Place your cursor in the search box.

2. Enter the alphanumeric characters for your query and press Enter.



**NOTE** Search terms are case sensitive.

3. Modify the search, if needed, by editing your query.

4. To clear the query, click the **X** in the search box.

If no devices match the search query, the screen displays the message, *Displaying 0-0 of 0 results.*

## Access asset details

Access detailed information about a specific asset on the ASSET screen by clicking on the line of the asset.

## View error code notifications

Some connected Baxter products offer an option to view information about error codes from the asset details screen. If your connected Baxter product offers this option, follow the steps below to view the information.



**NOTE** The following icon  indicates error codes or alerts.

1. From the ASSETS screen, use filters or a search query to refine the details.
2. Click anywhere in a specific row to view additional details.
3. Click the **Error codes** tab.
4. Click the row that displays the error name.

A window showing information about the error, including possible solutions, appears.




**NOTE** Click **Reference** either in the asset details screen or in the error code window to open the service manual.

Depending on the type of asset, you may see status information about service alerts in the error codes window:

- “Active” status means that the asset reported an error.
- “Acknowledged – no work order” means that Baxter support has acknowledged the error but has not yet assigned a work order.
- “Acknowledged – work order” means that Baxter support has assigned a work order. The work order number will appear next to the “acknowledged” status.

## Component health alerts




**NOTE** The following icon  indicates an error code or a component health alert such as a battery end-of-life alert.



**NOTE** Not all connected Baxter products will have this feature.

Component health alerts help you to know when the health of a component may be in question.

For example, the end-of-life battery alert helps you proactively replace batteries. When a battery in a connected Baxter product is nearing its end of life, a battery end-of-life icon () appears on the ASSETS page in the Status column. This icon means that the battery maximum capacity is at less than 35% and that only a portion of the battery is usable. Low battery maximum capacity shortens the amount of time before battery charging is required. If the battery end-of-life icon appears, we recommend that you replace the batteries in the asset.

## View end-of-life battery alert details

To view an end-of-life battery alert and the percentage of battery life remaining, follow the steps below.

1. From the ASSET screen, use filters or a search query to refine the asset list data.  
The end-of-life battery alert (⚠️) appears in the Status column.
2. Click anywhere on a specific asset's row to open its asset details screen.
3. Click the **Component information** tab where the end-of-life battery alert also appears.
4. Click > next to the battery name to expand the details about the battery status.  
The end-of-life battery alert appears next to the percentage of remaining battery life.

## View a list of assets with end-of-life battery alerts

Using the Reports option, you may view a list of the assets with end-of-life battery alerts. Follow the steps below to generate an Activity report with the end-of-life battery alerts prioritized.

1. Click the **REPORTS** option on the left side of the screen.
2. At the top of the REPORTS screen, select the desired facility and asset type. For the report type, select Activity.
3. Click the column heading **Replace?** to sort by assets that need their batteries to be replaced. The letter Y indicates that, yes, the batteries are close to their end of life (less than 35% battery maximum capacity remaining), and the letter N indicates that, no, the batteries are not close to their end of life.
4. Click **GET REPORT**.  
The screen refreshes and the Activity report appears.
5. Scroll through the tables and expand fields to find the specific information you need.
6. To print a report, click the Print button in the upper right corner of the screen, and then click **Print** in the **Windows** Print window.



**NOTE** The printed report shows only the details that appear on the screen. Expand fields to reveal hidden data you want to include in printed reports.

## Access and print reports

Access and print detailed usage and firmware information through the REPORTS screen by following the steps below.

1. Click the **REPORTS** option on the left side of the screen.
2. At the top of the REPORTS screen, select the desired facility, asset type, and report type to filter your results.  
Options:
  - Asset type: Asset types linked to Remote Asset Management
  - Report type: Usage, Activity, CMMS Report, Firmware Status, Firmware Version, CFG Update Status, and Access Point Locations
3. Click **GET REPORT** to refresh the screen and see the selected report.
4. Scroll through the tables and expand fields to find the specific information you need.
5. Some reports can be printed or downloaded. To print a report, click the Print button in the upper right corner of the screen, and then click **Print** in the Print window.



**NOTE** The printed report shows only the details that appear on the screen. Expand fields to reveal hidden data you want to include in printed reports.

CMMS stands for Computerized Maintenance Management System.

## Change call-home frequency (patient monitors and vision products only)

A connected Baxter product regularly makes a connection to **SmartCare** Remote Management to receive updates and report its status. This connection is called the call-home period. From **SmartCare** Remote Management, you can control the asset call-home period for Baxter Service Monitors. The minimum call-home period is 15 minutes. The typical call-home period is 4 hours when not deploying to a large number of devices.

When you plan to deploy updates to a large number of assets, you might change the asset call-home period to 15 minutes and the deployment mode to "true." Certain products are an exception.

Follow the steps below to update the call-home period.

1. Click **UPDATES** on the left side of the screen.
2. Click **Service Monitor** from the drop-down list under the Asset type menu.
3. Select a value from the Call home period drop-down menu.

Available options are as follows:

- P1D (24 hours)
- PT8H (8 hours)
- PT4H (4 hours)
- PT15M (15 minutes)

Available options for Deployment Mode are as follows:

- False (off)
- True (On)

4. Select the service monitor servers that you want to update from the list of available Service Monitors.
5. Click **Deploy**.

## Access and deploy configuration and custom data files

**SmartCare** Remote Management lets you deploy (or push) saved configuration files to one or more connected Baxter products in your facility. To complete a deployment, a biomed or other authorized user must first save or push the desired configuration file from a specific device.

For the on-premises version of **SmartCare** Remote Management, you need to manually upload the configuration file into **SmartCare** Remote Management. To do so, navigate to the **ADVANCED** menu, select Configuration files, and select the Facility and Asset type from the menus. A button to upload a file will appear. Select the configuration file and upload.



**NOTE** If the configuration includes custom data, a separate custom data file is transmitted when you push the configuration file to **PartnerConnect**.

Follow the steps below to push a configuration file to an asset.

1. Click the **UPDATES** option on the left side of the screen.
2. In the Asset type drop-down list, select the name of your Baxter product.
3. In the Update type drop-down list, select Configuration. A list of saved configuration and custom data files populate the table. Tags on these files reveal their types.
4. Select the desired filename.
5. Click **Next**.

The **DESTINATION** screen appears. This screen shows the selected file at the top of the screen and a list of connected Baxter products in your facility that are eligible to receive the configuration file.

6. Select one or more devices from the list.
7. Click **Next**.  
The configuration file (item to push) and the destinations appear on the next screen.
8. Click **Confirm** to deploy the file to the indicated destinations.
9. To confirm that the configuration file has been pushed to the asset(s), click the **ASSETS** option on the left side of the screen, and click each connected Baxter product to which you pushed the configuration. This allows you to check the asset details.  
In the asset details summary at the top of the page, "Last configuration deployed" or "Last customization deployed" shows the most recently deployed filename and should match the configuration or custom data file you selected.



**NOTE** Deployed configuration or custom data files may not be active immediately. These files remain in a queue to be loaded once the call-home interval has completed.

## View the status of a configuration deployment

After a configuration has deployed, the progress will display on the REPORTS screen. Follow the steps below to view the status of a configuration deployment.

1. Click the **REPORTS** option on the left side of the screen.
2. From the drop-down menu at the top, select your facility.
3. Select the name of your connected Baxter product.
4. Select **CFG Update Status**.
5. Click **GET REPORT**.

Clicking GET REPORT also refreshes the list. See the example below.

The screenshot shows the 'CONFIGURATION UPDATE STATUS (CSM)' report. At the top, there are filters for Facility (Hillrom Demo Hospital Internal Medicine), Asset type (Connex Spot Monitor (CSM)), and Report type (CFG Update Status). A 'GET REPORT' button is present. Below the filters is a search bar with the placeholder text 'Search by serial no. etc'. To the right of the search bar are buttons for 'Information', 'Download', and 'Print'. The main area contains a table with the following data:

Serial number	Configuration	Ownership	Status	Last deployed	Last connected
16452315479CSM	Demo_3North_v5_0	Hillrom Demo Hospital Internal Medicine Euclid	Available	CO_Lucy_32_0A-signed.waconfig	16 Jul 2020, 11:05 PM
12452315479CSM	Demo_3North_v5_0	Hillrom Demo Hospital Internal Medicine Beachwood	Available	CO_Lucy_32_0A-signed.waconfig	16 Jul 2020, 11:05 PM
16452315489CSM	Demo_3North_v5_0	Hillrom Demo Hospital Internal Medicine Euclid	Available	CO_Lucy_32_0A-signed.waconfig	16 Jul 2020, 11:05 PM
13452315479CSM	Demo_3North_v5_0	Hillrom Demo Hospital Internal Medicine Beachwood	Available	CO_Lucy_32_0A-signed.waconfig	16 Jul 2020, 11:05 PM

At the bottom of the table, it says 'Displaying 1-4 of 4 results' and 'Page 1 of 1' with navigation arrows.

- 1 Select an asset type and associated report types
- 2 The Serial number, Configuration, Ownership, Status, and Last deployed columns are searchable
- 3 The reports table and all columns are sortable (see the "Column explanations" table below)
- 4 Each page displays up to 50 connected Baxter products. Click the arrows to page through devices
- 5 The context-sensitive pop-up page contains explanations of each Status string
- 6 Click the **Download** button to download a report in .csv format

Additional tips:

- Search for assets using the search bar.
- Click the **Information** button to open a pop-up window explaining the meaning of each status.

The table below explains the columns.

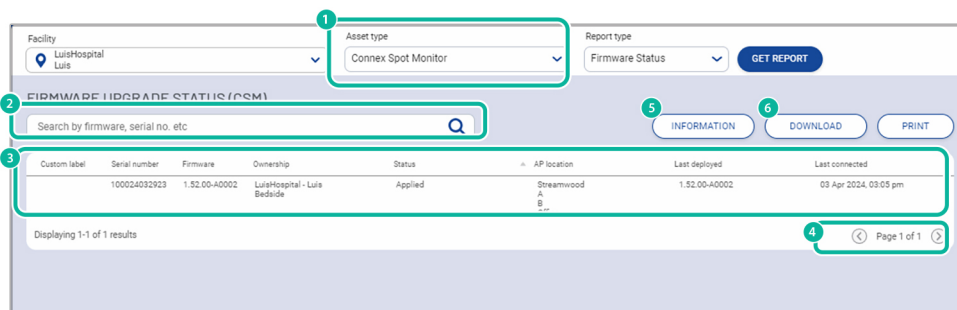
Column name	Information
SERIAL NUMBER	Shows products by serial number
CONFIGURATION	Shows the active configuration names
OWNERSHIP	Shows ownership
STATUS	Shows each stage of deployment progress. A question mark (?) indicates that the field is currently empty
LAST DEPLOYED	Shows the name of the configuration deployed
LAST CONNECTED	Shows the date and time when the asset last contacted the server

## View the status of a firmware deployment

After a firmware deployment, the progress will display on the REPORTS screen. Follow the steps below to view the status of a firmware deployment.

1. Click the **REPORTS** option on the left side of the screen.
2. From the drop-down menu at the top, select your facility.
3. Select the name of your connected Baxter product.
4. Select **Firmware Status**.
5. Click **GET REPORT**.

Clicking GET REPORT also refreshes the list. See the example below.



- 1 Select an asset type and associated report types
- 2 The Serial number, Configuration, Ownership, Status, and Last deployed columns are searchable
- 3 The reports table and all columns are sortable (see the "Column explanations" table below)
- 4 Each page displays up to 50 connected Baxter products. Click the arrows to page through devices
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Additional tips:

- Search for assets using the search bar.
- Click the Information button to open a pop-up window explaining the meaning of each status.

The table below explains the columns.

Column name	Information
SERIAL NUMBER	Shows products by serial number
FIRMWARE	Firmware version currently on the device
OWNERSHIP	Shows ownership
STATUS	Shows each stage of deployment progress. A question mark (?) indicates that the field is currently empty
LAST DEPLOYED	Shows the name of the configuration deployed
LAST CONNECTED	Shows the date and time when the asset last contacted the server

## Upgrade firmware

**SmartCare** Remote Asset Management lets you upgrade firmware on one or more connected Baxter products when new firmware is released. Follow the steps below to upgrade firmware when possible for the product type.

For instructions about uploading firmware for the on-premises version, please see the *SmartCare Remote Management – On-premises version Setup guide*. Once the firmware is uploaded, then it will be available in **SmartCare** Remote Management

1. Click **UPDATES** on the left side of the screen.
2. In the Asset type drop-down menu, select the connected Baxter product type from the list.
3. In the Update type drop-down list, select **Upgrade**. If any firmware upgrades are available, they will appear in the results table.
4. Select the desired firmware version.
5. Click **Next**.  
The Select assets screen appears. The Update to push section displays the firmware version to apply. The Destinations section contains a list of assets in your facility that are eligible to receive the upgrade. If there is more than one organization, you can filter the organization and facility from the All organizations list.
6. Select one or more assets in the list.
7. Click **Next**.  
The Review action screen appears, listing the following items:
  - Update to push
  - Destinations
  - Date or time of the push
8. Click the **Immediately** radio button to push the item to the asset immediately, or, if available for the asset type, click the **Schedule** radio button to set the date and time when you would like to push the item to the asset.  
For Scheduled upgrade, the time is in military time format. Also, the date and time to schedule the upgrade must be at least twice the call-home interval from the current time.
  - When using the Immediately feature on **Connex Spot** Monitors, the firmware will load the next time the device calls home. After the call home, you will need to press the power button and then touch **Power down**. A window to load the firmware will appear. Touch **OK** to install the firmware. The device will reboot after the installation.
  - When using the Scheduled feature on **Connex Spot** Monitors, the deployed firmware will be installed automatically on the device, and the device will power cycle automatically
9. Click **Confirm**.



**NOTE** Deployed firmware upgrades may not be active immediately. Each deployment may remain in a queue until the call-home interval occurs.



**NOTE** To cancel a Scheduled firmware update, go to UPDATES and select the **Asset type** then select **Update type** (Upgrade), and click **MANAGE SCHEDULED UPDATES**. If needed, select the device(s) and click **CANCEL UPGRADE**.

## Locate connected Baxter products via access point (AP) mapping information

**SmartCare** Remote Management reports the MAC address of the last access point with which the asset communicated. When an administrator adds location data to an access point, this information allows you to find an asset's approximate location. If you are an administrator, see the section "Add access point (AP) mapping information" for more information.

You may search AP mapping information, and this information is available in the Access Point (AP) tab in the ADVANCED menu, the firmware update page, the configuration update page, the Firmware Status report, and the Configuration Update Status report.



**NOTE** The search for AP mapping information is not case sensitive.

## Use the support links (cloud-hosted version only)

**SmartCare** Remote Management includes two support links. Follow the steps below to access these links.

1. From Remote Management, click the **Global Service Center** link on the lower left side of the screen to access the Service & Support page on the Baxter website.



**NOTE** This link is available on every **SmartCare** Remote Management screen, including the splash screen where you sign in. This link provides quick access to service information, documentation for your device, and other self-help tools. This page opens in a separate window.

2. To contact Baxter with questions or concerns, click **Contact Us**.



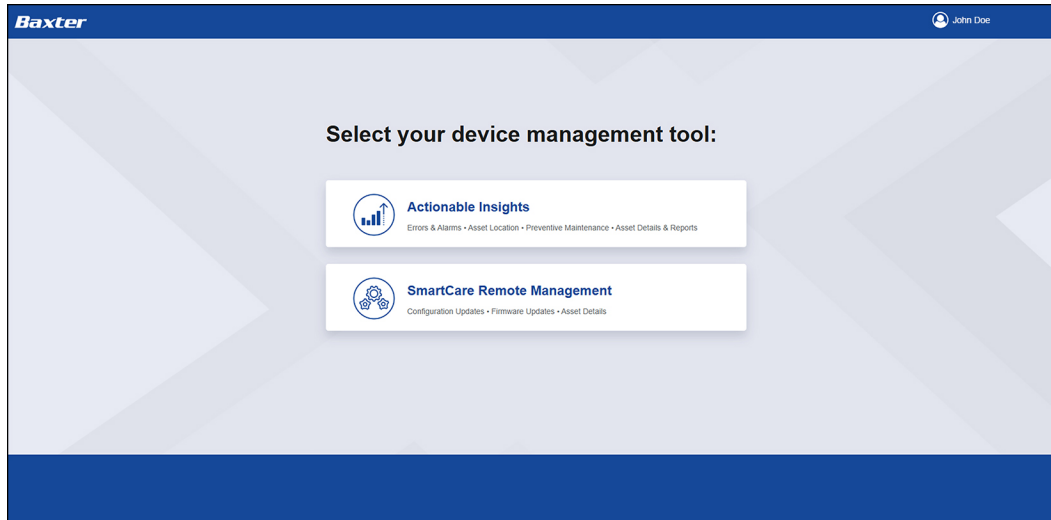
**NOTE** This link opens in a separate window and is available after sign-in on every **SmartCare** Remote Management screen. It provides quick access to customer service and technical support for your region.

## Contact support (on-premises version)

If you have the on-premises version of **SmartCare** Remote Management and need additional support, contact Baxter customer support: [baxter.com/contact-us](https://baxter.com/contact-us).

# Actionable Insights

You can access Actionable Insights from the landing page.



## Actionable Insights reports



**NOTE** Actionable Insights reports are only available for Smart Beds and **Connex 360** Monitors.

Actionable Insights reports and visualizations allow you and the Baxter service team to view device diagnostic data for supported assets.

Security controls on Actionable Insights reports ensure that the reports are only available to the applicable customers. Actionable Insights uses authorization and authentication to ensure that users can view the data that is relevant to them. All HTTP connections utilize TLS 1.2 or greater.

The following sections explain the various Actionable Insights reports and visualizations.



**NOTE** The maximum number of facilities that you can associate to a user is 30.

## Access and print reports

To access and print reports, select the ... (More options) menu in the upper right corner of a table and choose Export Data. The Export Data menu has three options:

- Data with current layout
- Summarized data
- Underlying dataset

Select **Summarized data** to export only the aggregated data in a flat table.

Select **Data with current layout** to preserve the formatting and structure of the table.

## Historical data and refresh rate

Actionable Insights receives data from **SmartCare** Remote Management every hour. Due to this and processing times, the last Updated date and time on each screen indicates the time at which the data was processed. This value might not match the import time because it takes time to process the data.



**NOTE** Actionable Insights refreshes the data hourly except for the following reports: Asset Utilization, Preventive Maintenance, and Error History, which are all refreshed daily.

Date values are displayed in MM/DD/YY format, while the format of hover-over dates can vary by locale. By default, the date and time values are displayed according to your time zone. Therefore, dates and times displayed without a time zone designation are always in your local time zone. When the time zone is unavailable, values are displayed in UTC format with the "UTC" designation.

## Graph drill-up and drill-down

Drill-down in Actionable Insights allows you to move from a higher level of data to a more detailed level, while drill-up allows you to move from a lower level of data to a higher level of data.

To drill-down, click a specific bar, point, row, or other element that corresponds to the data you want to drill-down into. This action filters the other tables and charts on the page to display only the data that matches your selection.

To select more than one element in a chart or table, hold the Ctrl key while selecting the elements.

To reset the view, click anywhere in the visualization that you used to create the filter.

## Drop-down list behavior

If you deselect all facilities from an organization, the drop-down menu might still report that the organization is partially selected. Additionally, the Select all menu item might report multiple selections, even if a single organization and facility are selected.

## Duplicate tabs

When you duplicate a tab on any Actionable Insights report, the duplicate tab will display the Overview & Errors report.

## Context menu

Right-click a data element in an Actionable Insights visualization for a context menu with a list of available menu options for that specific visualization or data element.

## Focus mode

You can view certain visualizations in Focus mode. Focus mode is an expanded, full-screen view of the visualization that improves readability.

To enter Focus mode, hover over the visualization and click the Focus mode icon in the upper right corner of the visualization.

To exit Focus mode, click Back to report in the upper left corner of the screen.

Currently supported visualizations are Bed Availability, Beds Availability by AP Location, and Total Cycle Counts Per Day.

## Overview & Errors

The *Overview & Errors* page displays error information, battery alerts, and overdue preventive maintenance notes for supported assets. The report has a single table that displays all recent errors, battery alerts, and all assets due for preventive maintenance.

The *Assets with Recent Errors* table displays the beds that have recently reported an error. The information in this table includes recent errors, error start time, asset type, patient presence, serial number, campus, building, floor, and the access point location of the asset (if available).



**NOTE** Different errors from the same device are listed separately in **SmartCare** Remote Management, while Actionable Insights combines all error instances for the same device and will display those in a single row.

The *Battery Alerts* table displays the monitors that are reporting a battery alert. The information in this table includes max battery capacity, current charge level, asset type, asset tag, serial number, campus, building, floor, and the access point location of the asset (if available).

The *Assets Due for PM* table displays the assets that are due for preventative maintenance. The information in this table includes preventative maintenance due date, most recent preventative maintenance date, asset type, serial number, campus, building, floor, and access point location of the asset (if available).

## Asset overview

The *Asset Overview* page is a snapshot of your assets. It contains the *Asset Breakdown* chart and the *All Asset List* table. The *Asset Breakdown* chart is a bar chart that displays you connected assets by type.

The *All Asset List* contains the following information about the assets (if available):

- Asset Type
- Serial Number
- Asset Tags / Labels
- Campus
- Building
- Floor
- Access point location of the asset

## Asset details

The *Asset Details* page provides a snapshot of bed availability or monitor activity. The beds snapshot contains two graphs and a table. The monitors snapshot provides a summary, graph, and table.

You can choose whether to view information about beds or monitors by selecting either BEDS or MONITORS in the search and filter pane.

To view detailed information about a particular asset, select it in the table and click VIEW ASSET DETAILS. For more information, see Individual asset details.

The beds snapshot contains the following information:

- *Bed availability* - displays how many beds are unavailable, have been available for less than two hours, have been available for more than two hours, or have an unknown status.
- *Beds availability by AP location* - displays bed status grouped by access point location.
- *All Asset List* - contains the following information about the assets (if available):
  - Asset Type
  - Serial Number
  - Patient Presence
  - Custom label

## Actionable Insights

- Campus
- Building
- Floor
- Access Point Location of the asset

The monitors snapshot contains the following information:

- *Daily Averages* – displays the average number of temperature cycles and NIBP cycles experienced by the monitors.
- *Total Cycle Counts Per Day* – displays the total number of temperature and NIBP cycles experienced by the monitors every day for the last 90 days.
- *All Asset List* - contains the following information about the monitors (if available):
  - Asset Type
  - Serial Number
  - Asset Tag
  - Total Temp. Cycles
  - Total NIBP Cycles
  - Total Runtime (min)
  - Battery Charge Level
  - Battery Max Capacity
  - Campus
  - Building
  - Floor
  - Access Point Location of the asset

## Individual asset details

The *Individual Asset Details report* provides detailed information about one specific asset. The information in this report varies based on whether a bed or monitor is selected.

You can reach this screen from the *Overview and Errors* page, *Asset Details* page, or *Error History* report. On one of these pages, select an individual asset and click VIEW ASSET DETAILS.

For beds, this report displays the following information:

- Asset details - The device type, serial number, custom label, and patient presence for the asset.
- Location information - The building, floor, and access point location for the asset.
- Recent Errors - The error code and error name of any errors experienced in the last 90 days.
- Error History - A time line of when the recent errors were reported.
- Preventative Maintenance - The date of the last preventative maintenance and due date for the next preventative maintenance.

For monitors, this report displays the following information:

- Asset details - The device type, serial number, asset tag, and last connected date and time for the asset.
- Location information - The building, floor, and access point location for the asset.
- Battery Alerts - Any reported battery alerts for the asset..
- Battery Details - The current charge level, maximum capacity, and manufacture date of the battery.
- Asset Metrics - The total number of temperature cycles, NIBP cycles, and run time of the asset.
- Total Cycle Counts Per Day - A time line of the number of temperature and NIBP cycles experienced each day.
- Temp. Probe - The serial number and cycle count for the temperature probe.
- Preventative Maintenance - The date of the last preventative maintenance and due date for the next preventative maintenance.

The *Recent Errors table* displays recent errors and the associated error codes.

The *Error History graph* displays the individual errors for the last 90 days.

The *Preventive Maintenance table* displays the last time preventive maintenance was completed and the next time preventive maintenance is expected.

## Asset utilization

The *Asset Utilization* report displays two visualizations for either the beds or the monitors. The *Utilization History* graph shows the utilization percentage for each device type individually.

You can choose whether to view information about beds or monitors by selecting either BEDS or MONITORS in the search and filter pane.

The *Average Utilization Rate* table displays the overall utilization percentage over the last 90 days for all assets.



**NOTE** Assets require a network connection to report service data.

### Asset utilization metrics

Metric	Description
Utilization Rate Average	<p>For beds, if patient presence status received for a bed during a day is present, bed is marked as utilized for that day. For monitors, if the cumulative NIBP cycle count increases during the day, the monitor is marked as utilized.</p> <p>Utilization % is calculated at the end of each day for each facility.</p> <p>Utilization % = (Total number of assets marked as utilized)/(Total number of assets at the Facility) *100.</p> <p>Average Utilization rate = Average Utilization % for a facility over a period of 90 days</p> <p>If more than one facility is selected, the average utilization is calculated based on total devices across the facilities.</p>
Utilization History	<p>The line graph displays the utilization percentage of all assets over the last 90 days for the selected facilities.</p> <p>For beds, if patient presence status received for a bed during a day is present, bed is marked as utilized for that day. For monitors, if the cumulative NIBP cycle count increases during the day, the monitor is marked as utilized.</p> <p>Utilization % is calculated at the end of each day for each facility.</p> <p>Utilization % = (Total number of assets marked as utilized)/(Total number of assets at the Facility) *100.</p> <p>If more than one facility is selected, the utilization is displayed based on total devices across the facilities.</p> <p>Utilization is displayed for each device type (Centrella, Progressa, Progressa+, and so on).</p>

## Preventive maintenance

The *Preventive Maintenance* report contains an overview of how many assets have received preventative maintenance and how many require preventative maintenance. The *Preventative Maintenance* graph displays the completed and overdue maintenance status of the assets over the last 90 days.

You can choose whether to view information about beds or monitors by selecting either BEDS or MONITORS in the search and filter pane.

Each point on the graph is a daily total, not a cumulative count. That is, each point is either the number of assets that received preventative maintenance on that day or the number of assets that came due for preventative maintenance on that day.

The report also displays the percentage of assets that are overdue for preventative maintenance and the percentage of assets that are up-to-date on preventative maintenance.



**NOTE** Hovering over the graph brings up a tool tip. There may be a slight tool tip latency for the drill-up and drill-down functionality part of the tool tip to load.



**NOTE** Due date criticality is determined by length of overdue preventative maintenance.

### Preventive maintenance metrics

Metric	Description
Preventive Maintenance History	<p>The graph displays the date of maintenance on the x-axis. The count of assets that completed their maintenance and count of devices that did not complete their maintenance are shown on the y-axis. The sum of overdue and completed give the total number of assets scheduled for preventative maintenance on a given date.</p> <p>Asset Preventive Maintenance dates are retrieved from the JD Edwards (JDE) database and <b>Cumulocity</b>. The last maintenance date on JDE is compared with the last calibration date from <b>Cumulocity</b>. The most recent date is considered the last maintenance for that device.</p> <p>For monitors, only data from <b>Cumulocity</b> is used.</p>

## Asset Version

The *Asset Version* report contains firmware information for supported beds and monitors. The *Assets per Firmware Version* graph reports the number of beds or monitors running each version of firmware, grouped by asset type.

You can choose whether to view information about beds or monitors by selecting either BEDS or MONITORS in the search and filter pane.

For monitors, the *Assets Per Configuration* chart reports the number of assets running each specific configuration.

For both beds and monitors, the *All Asset List* provides a summary of each asset. To view detailed information about a particular asset, select it in the table and click VIEW ASSET DETAILS. For more information, see *Individual asset details*.

For beds, the *All Asset List* contains the following information (if available):

- Asset Type
- Patient Presence
- Serial Number
- Custom Label
- Firmware Version
- Campus
- Building
- Floor
- Access Point Location of the asset

For monitors, the *All Asset List* contains the following information (if available):

- Asset Type
- Serial Number
- Asset Tag

- Firmware Version
- Configuration
- Battery Charge Level
- Battery Max. Capacity
- Campus
- Building
- Floor
- Access Point Location of the asset

## Error history

The *Error History* report identifies common errors and devices with an abnormal number of errors. The *Error History* report supports only beds and is available only to beds customers.

The Error History report contains the following information:

- *Error History* graph - displays the number of unique devices that reported an error on any date within the last 90 days. This value identifies the number of devices that reported an error on a given date, not the number of errors that were reported on that date.
- *Assets with Recurring Errors* - displays the Device Type, Custom Label, Serial Number, and total number of distinct errors reported by the asset in the last 90 days. To view detailed information about a particular asset, select it in the table and click VIEW ASSET DETAILS. For more information, see *Individual asset details*.
- *Asset Metrics* - displays metrics for the device selected in the *Assets with Recurring Errors* table. The *Asset Metrics* table displays the total number of errors received, the number of on-sites visits, and asset downtime for the select device within the last 90 days.



**NOTE** When you select a device to view its error history, the error history chart updates with the error occurrences, and the Asset Metrics chart will display that updated information for only that selected device. For information on the errors, select **VIEW ASSET DETAILS**.

## Deleted and migrated assets

When you remove an asset or migrate it to a new location, information about that asset is updated. Consider the following situations:

- Assets that have been deleted from a facility or assigned to a new facility might not display properly within associated Actionable Insights reports.
- In the *Asset Utilization* report, moved beds are removed from the total device count of the original facility. This asset is added to the total device count of the newly migrated facility.
- In the *Preventive Maintenance* report, the entire asset's history is displayed only in the newly migrated facility.
- In the *Updates* report, the moved bed is listed only in the newly migrated facility.



# Advanced settings [administrators only]

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**SmartCare** Remote Management has two different types of users, a regular user and an administrator. An administrator has access to additional settings.

If you are an administrator, you will see the menu option, **ADVANCED**, on the left side of the screen when you are logged into **SmartCare** Remote Management.

## Create custom labels

By default, asset type names will appear as the factory default, which is the product name or an abbreviated product name. For example, the **RetinaVue** 700 Imager will appear as "RV700."

If you are an administrator, you may add custom labels to most supported asset types to help distinguish them. For example, you may want to distinguish assets by a location, such as "ICU Bed" or "Emergency Dept 1," or by their functionality, such as "Step Down Bed." These custom labels will then appear throughout **SmartCare** Remote Management in a variety of places. These places may include the main asset list page, the asset details page, the Activity report, the Configuration Update report, the Firmware Status report, the firmware update page, and the configuration update page.

To create a custom label for a single asset, click **Edit** from the Asset Details screen. As an administrator, you can then enter the custom label for the selected asset.

To create custom labels for multiple assets, follow the steps below.

1. Click **ADVANCED** on the left side of the screen.
2. Click **Custom labels**.
3. Select your organization and asset type from the drop-down lists.
4. Click **Export**.  
Your browser will attempt to download a CSV file called `Exported_Devices.csv`.
5. Open the CSV file and edit the Custom Label column as needed.
6. Save and close the CSV file.
7. Click **Import**.



**NOTE** Not all asset types support custom labels.

## Delete an asset



**NOTE** Not all asset types can be deleted.

Administrators can delete some types of assets from **SmartCare** Remote Management. If you are an administrator, follow the steps below to delete one or more assets.

1. Click **ADVANCED** on the left side of the screen.
2. Click **Delete assets**.
3. Select your organization and asset type from the drop-down menus.
4. Use the check boxes to select one or more assets.
5. Click **DELETE SELECTED**.
6. Carefully read the pop-up information.
7. Click **Yes** to confirm.

## Reconnect assets



**NOTE** This section only applies to certain assets, such as CSM and CVSM.

Assets will reconnect automatically after booting up and completing a call-home period.

## Manage SmartCare Remote Management users

In **SmartCare** Remote Management, an administrator can add, edit, and remove users through the **ADVANCED** menu option.

### Create a new user

If you are an administrator, follow the steps below to create a new user.

1. Click **ADVANCED** on the left side of the screen.
2. Click **User Management** if the tab is not already open.
3. Click **Create**.
4. Type the new user's information into the available fields.



**NOTE** If you want the new user to also be an administrator, check the box next to the word "Administrator." This will give the new user the same **SmartCare** Remote Management access level that you have.

5. Click **Save** to add the new user. The Save button is in the bottom right corner of the window. You may need to scroll down to see it.

Once a new user is created, a password reset email goes to the user's email address to establish the user's own password.

### Edit or delete a user

If you are an administrator, follow the steps below to edit or delete a user.

1. Click **ADVANCED** on the left side of the screen.
2. Click **User Management** if the tab is not already open.
3. To edit a user's details, click **EDIT** and then make your changes.
4. To delete a user, click **Delete**.
5. Click **SAVE** to complete the process or **CANCEL** to abandon your edits.

## Give a new user single sign-on access—cloud-hosted version only

As an administrator, you may receive requests for access from users who are trying to access **SmartCare** Remote Management through single sign-on for the first time. Follow the steps in this section to provide new users access to **SmartCare** Remote Management and to assign new users to the appropriate asset group(s).



**NOTE** The system will *not* automatically notify you when a user tries to access **SmartCare** Remote Management through single sign-on.

1. View the **ADVANCED** menu option in the left column of Remote Management.  
An exclamation point icon next to the word "ADVANCED" means that a new user tried to sign in using single sign-on.
2. Click **ADVANCED** to view any pending requests. The "Role" column will state "unassigned" for users requesting access.
3. Click the unassigned user's name to edit the user.

4. Assign the user access to asset groups as needed. From this screen you may also choose to make the user an administrator. Please use this option carefully, as it gives the user the same administrative rights that you have.



**NOTE** When you save, the changes will take effect immediately.

5. Notify the new user that access is now granted.

## Add access point (AP) mapping information

**SmartCare** Remote Management reports the MAC address of the last access point with which the asset communicated. Adding location data to access points allows you to find an asset's approximate location.

All users may search AP mapping information, and this information is available in the Access Point (AP) mappings tab in the ADVANCED menu, the firmware update page, the configuration update page, the Firmware Status report, and the Configuration Update Status report.

If you are an administrator, follow the steps below to add access point mapping information from the Access Point (AP) mappings tab.

1. Click the **ADVANCED** option on the left side of the screen.
2. Click the **Access Point (AP)** mappings tab at the top of the screen.  
The Facility drop-down list appears on a refreshed screen.
3. Click the name of your facility from the drop-down list.  
The page refreshes and displays the EXPORT, IMPORT, and CREATE buttons as well as any previously added AP mapping entries.
4. Click the **CREATE** button on the right side of the screen.  
The NEW AP MAPPING screen appears.



**NOTE** Use all lower case for MAC addresses.

5. Type the MAC address along with the following information, as available, into the appropriate fields.
  - Campus
  - Building
  - Floor
  - AP location

The data entered in these fields is used to locate assets.

6. Click **SAVE**.  
The entered data will appear as a line item on the asset details screen under Locate asset. It will also appear on the REPORTS page when you select Access Point Locations from the Report type menu.

From the Access Point (AP) mappings page, you may also do the following actions if you are an administrator:

- Click the **Edit** button to change an AP mapping entry.
- Click the **Delete** button to delete an AP mapping entry.
- Click the **Export** button to export AP mapping information to a .csv file.
- Click the **Import** button, click **Select file...**, and upload a .csv file to simultaneously import multiple pieces of AP mapping information.



**NOTE** As an administrator, you may also edit AP mapping information from the ASSETS screen. To do so, click a specific asset, click the **Locate asset** button, click **Edit AP mapping**, and enter the information as described in Step 5 above. Then, click **Save**.

Advanced settings (administrators only)



***Baxter***