Albér™ Battery Xplorer Enterprise Software

User Guide

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Technical Support Site

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures.

Visit https://www.vertiv.com/en-us/support/ for additional assistance.

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1 Product Overview

The Vertiv™ Albér™ Battery Xplorer Enterprise Software (BXE) battery management software is a web-based monitoring platform for managing collective data from Albér stationary and portable monitoring devices as well as Lithium-ion batteries (such as Samsung Lithium-ion battery, HPL Lithium-ion battery). The Albér BXE has an intuitive user interface permitting easy review of battery condition and analysis, along with the probable cause and corrective actions of alarm conditions. The highly intuitive tool will aggregate all your battery data in one database from multiple monitoring product architectures and battery chemistries to streamline the user experience and learning curves.

NOTE: For software upgrade information, refer to the software release notes located on the Albér Battery Xplorer Enterprise product page on www.vertiv.com.

1.1 Features and Benefits

The Albér BXE battery management software provides the following features:

- System view provides summary, status, and navigation
- Battery view with voltage, currents, and temperature parameters
- Battery multi-string graphical viewing and trending
- Graphical alarm management with point and click filtering
- Probability cause and corrective action analysis
- Historical data collection and trending
- System email notifications
- Recharge playback for lithium ion batteries
- Discharge playback
- Automated reports delivered to the user through emails periodically on a scheduled basis

The Albér BXE battery management software provides the following benefits:

- Scalable solution to battery monitoring as the software is licensed per string count and strings from servers can be aggregated with the server view feature
- Web browser functionality with no platform or OS dependencies
- Tablet compatibility (iOS, Android)
- Supports new and legacy Albér stationary battery monitoring platforms
- Separate modules support Lithium-ion batteries, Cellcorder, CVR+, and Hydrometer portable products
- Quick and easy installation using wizards and existing database import functions
- Software service program to maintain optimal performance

1.2 Albér BXE Battery Management Software Components

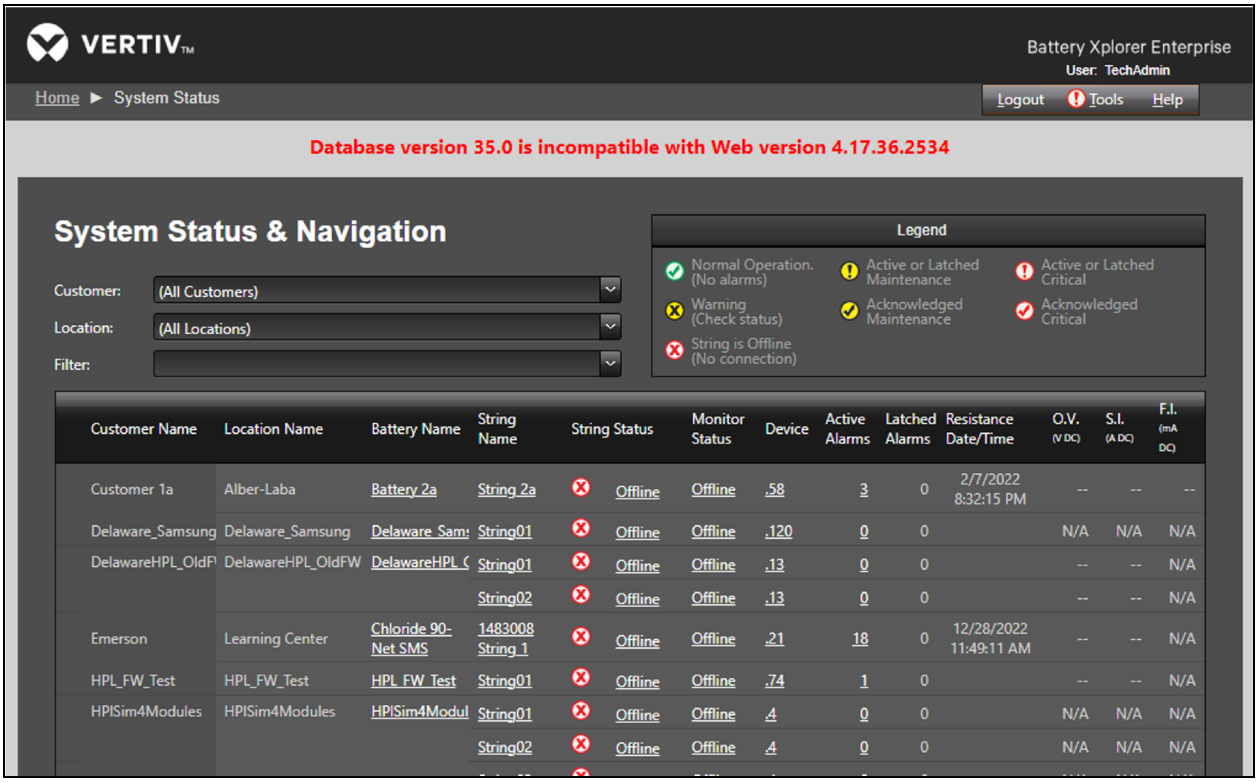
The Albér BXE battery management software is developed on the following three tier architecture to monitor stationary devices:

1. Web User Interface (UI): The web UI displays the monitoring data stored in the SQL database.
2. Application Layer: Drivers run in the background and connect to the individual stationary monitors to get the required monitoring data.
3. Database: The BXE uses the SQL database to store and retrieve data.

NOTE: These three components can be installed independently or on the same server or computer.

In case the DB version of Web UI and the SQL DB is not in sync, then it will show an incompatible error message. For more information, see Figure 1.1 below. For example: Any database modifications, such as adding new columns for the new features or making other database adjustments, must be reflected in all the components of the software. If it is not updated, an incompatible error message will be displayed. In this case, the Albér BXE battery management software needs to be run once again to install the latest web UI component.

Figure 1.1 Incompatible Error Message



NOTE: It is just a warning message. All software features are still accessible.

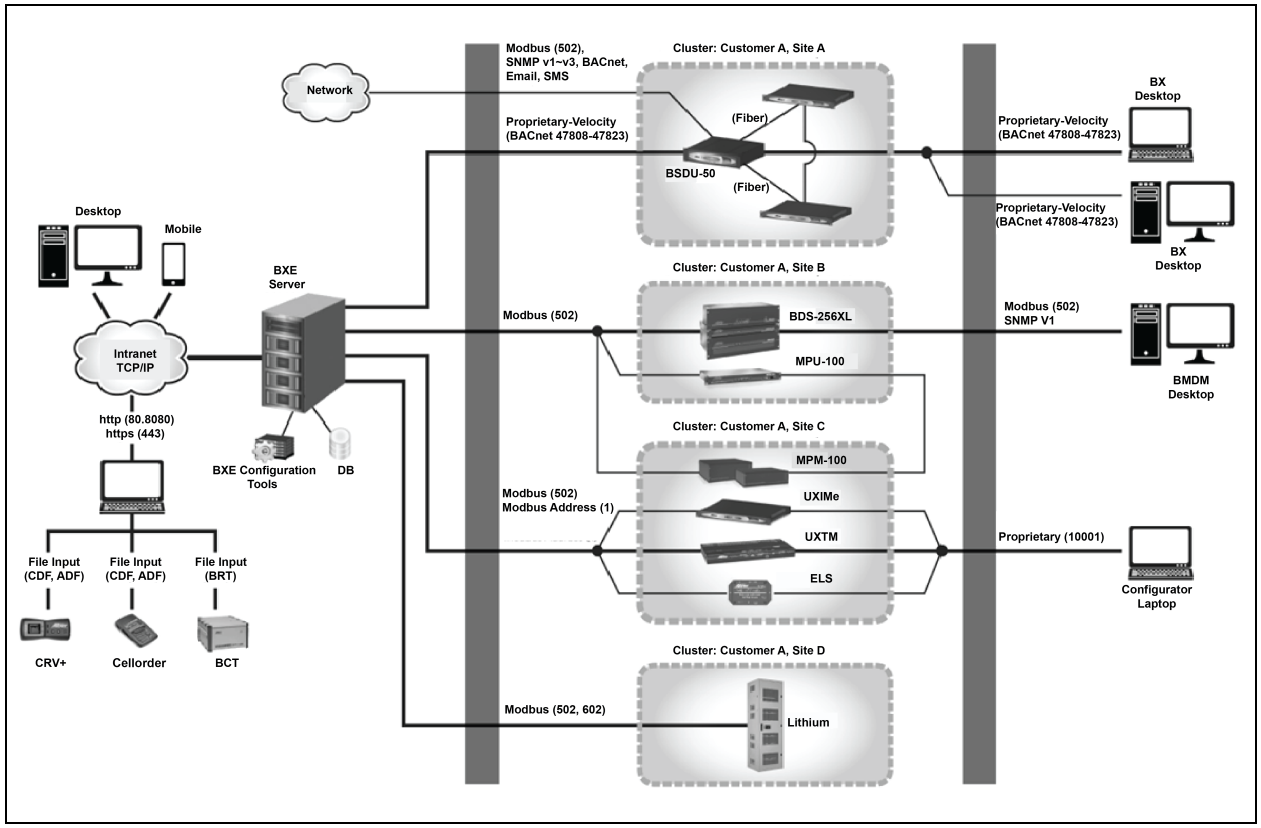
1.3 Installation and Initial Setup

For installation and initial network configuration instructions, see the following documents provided with your Albér BXE battery management software or visit the Vertiv™ Albér™ Battery Xplorer Enterprise Software Downloads product page.

- Vertiv™ Albér™ Battery Xplorer Enterprise System Installation Guide
- Vertiv™ Albér™ Battery Xplorer Enterprise Quick Installation Guide
- Vertiv™ Albér™ Battery Xplorer Enterprise Data Import Manager Manual

If the user needs additional assistance, contact Vertiv technical support representative.

Figure 1.2 Overview of Albér BXE System Network Configuration



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2 Web User Interface (UI)

This section provides detailed information about using the Albér BXE software web UI. The BXE web UI provides access to the battery monitoring data upon successful user log-in. User needs to complete the one-time setup procedures, like establishing a web connection with the SQL database (running WAM), importing the strings into the BXE database (referring to the DIM document), and assigning drivers (using MSM). Refer to Vertiv™ Albér™ Battery Xplorer Enterprise System Installation Guide for information about installation and first-time setup procedure.

The web UI is compatible with the latest 32-bit and 64-bit versions of the following web browsers:

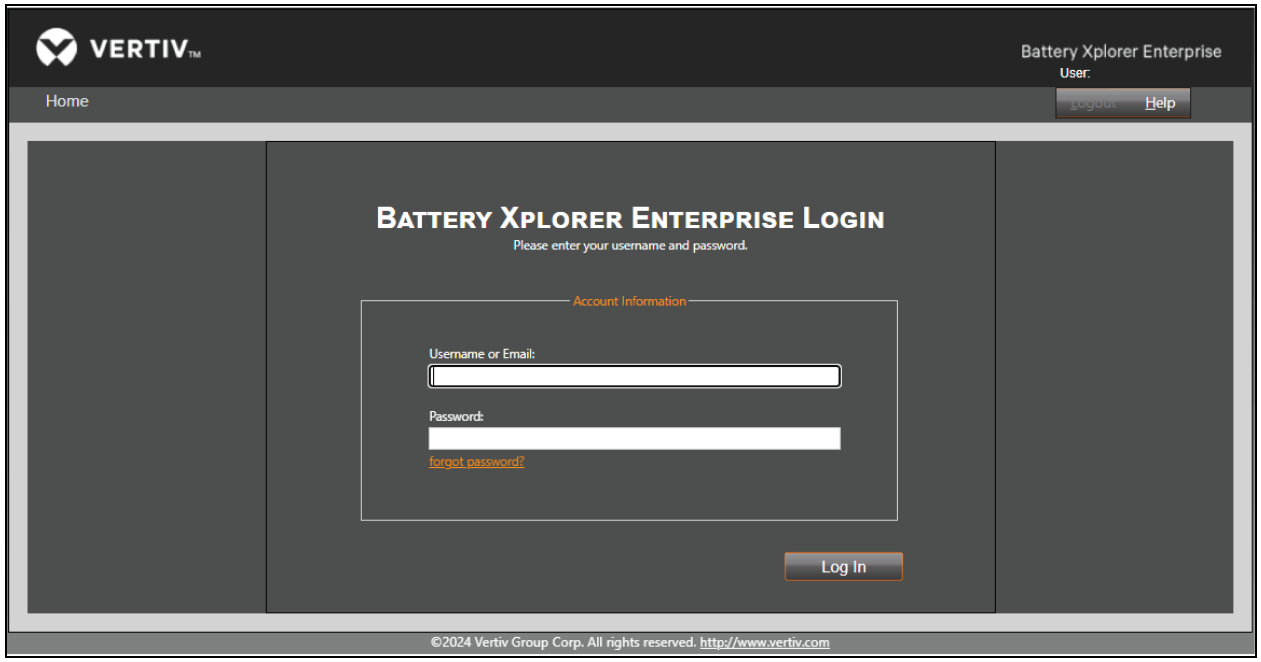
- Google Chrome Version 20 or above (preferred)
- Microsoft Internet Explorer version 11.0 or above
- Apple Safari Version 5.1 or above
- Mozilla Firefox 13 or above
- Microsoft edge 125 or above

To log-in to the web UI:

1. Launch the Albér BXE software or log-in to the web UI with the following steps:
    a. Double-click on the Albér BXE web icon which is the desktop shortcut created by the Albér BXE installer on the Albér BXE server.
    b. Launch any web browser from the BXE server and then type *http://localhost/BEEnterpriseweb/* in the address bar and then press enter.
    c. To launch BXE in secure browsing, users need to update their security certificate in IIS. Launch the browser from the BXE server, then type *https://localhost/BEEnterpriseweb/*, and then hit enter. To browse the BXE server from any external browing device, launch the web browser and then replace the localhost with the BXE server name or IP address from the browsing link above. (Example: *https://BXEserverIP* or server name */BEEnterpriseweb/*, and then press enter.

NOTE: When there is no SSL certificate added to IIS, do not enable the HTTPS redirect setting on the browser or on the System Manager from Administration Access.

Figure 2.1 Overview of Albér BXE web UI Login Page



2. At the login page, enter your username and password then click the *Log In* button.
3. Once the user logins, the Albér BXE Home page will appear.

Figure 2.2 Overview of Albér BXE Software Home Page

Table 2.1 Web UI Dashboard Description

Item	Description
1	Battery Systems
2	Battery Alarms
3	Portable Devices
4	Advanced Users
5	Administration

NOTE: The web UI features are visible as per the user role (Administration, Advanced, and Regular user). For detailed information, see User Roles on page 10.

2.1 Albér BXE Home Page

Figure 2.3 Albér BXE Home Page

Logout:

To log out of the web UI, click on the *Logout* button.

Tools:

From the Tools feature, user can configure the below options:

Resistance Test: From the Resistance Test manger tab, user can run the resistance test.

Reports: From the Reports tab, user can generate a report.

Changed Values: From the Changed value page, user can view the stationary monitor thresholds versus Albér BXE stored thresholds, in case a mismatch occurs. For more information, see Changed Values on page 55.

Switch to Fahrenheit/Celsius: Click the *Tools* button and select *Switch* to *Fahrenheit/Celsius*, to change the unit Fahrenheit to Celsius or vice versa. For more information, see System Manager on page 68.

Change Password: From the change password page, user can change or create a new password. For more information, see User Manager on page 58.

To run the resistance test:

1. From the top right corner of the Home Page, select *Tools- Resistance Test*.
2. From the Resistance Test Manager page, user can see the Location Name, Battery Name, String Name, Status details.
3. Click the *Start* button.

NOTE: Resistance test can only be triggered on the Albér stationary battery monitors.

To generate a report:

1. Log in to the Albér BXE software and select the *Battery Systems* tab.
2. In the top right corner, select *Tools- Reports*.
3. On the Reports page, select the *Report Type* to see the available options (Executive Overview, String Analysis, Discharge Analysis and Alarm Analysis), then select the appropriate report type.
4. Select the strings you wish to include in the report.
5. Expand the Report Elements to see the available options, then select any applicable elements. Selected elements appear below the Book Content section.
6. In the Book Content section, select the gear icon (next to Title Page) to select dates for which to report those parameters.
7. Reports are only generated if historical data exists in the Albér BXE software database. If you do not see any dates, remove that element by selecting the red Delete icon.
8. Click *Generate Report*.

   -or-

   User can save the book to generate the same report again later or schedule it to run at a specified interval.

NOTE: Analysis and discharge reports can only be generated if there is historical data on the BXE server.

Help:

Under the Help tab, user can configure the following options:

- Help Topics: Help provides web UI guidance and information on how to use the features of the application or website.
- About Battery Xplorer Enterprise: The About page provides the Albér BXE software version, database schema, Microsoft SQL Server, and modules covered under the Albér BXE software.

Figure 2.4 Albér BXE Help Tab

2.2 User Roles

The Albér BXE battery management software has the following three user role types: administrators, advanced users, and regular users. Each role has varying levels of feature accessibility. Refer to the following sections for descriptions of each role.

2.2.1 Administrators

Administrators can view, access and utilize the functionality of all five feature tabs of the software: Battery System, Battery Alarms, Portable Devices, Advanced Users, and Administration. For more information, see Figure 2.5 below.

Figure 2.5 Overview of Administration Users Albér BXE Software Dashboard

2.2.2 Advanced Users

Advanced users can view, access and utilize the functionality of only four feature tabs of the software: Battery System, Battery Alarms, Portable Devices, and Advanced Users. Advanced users do not have access to the Administration tab. For more information, see Figure 2.6 below.

Figure 2.6 Overview of Advanced Users Albér BXE Software Dashboard

2.2.3 Regular Users

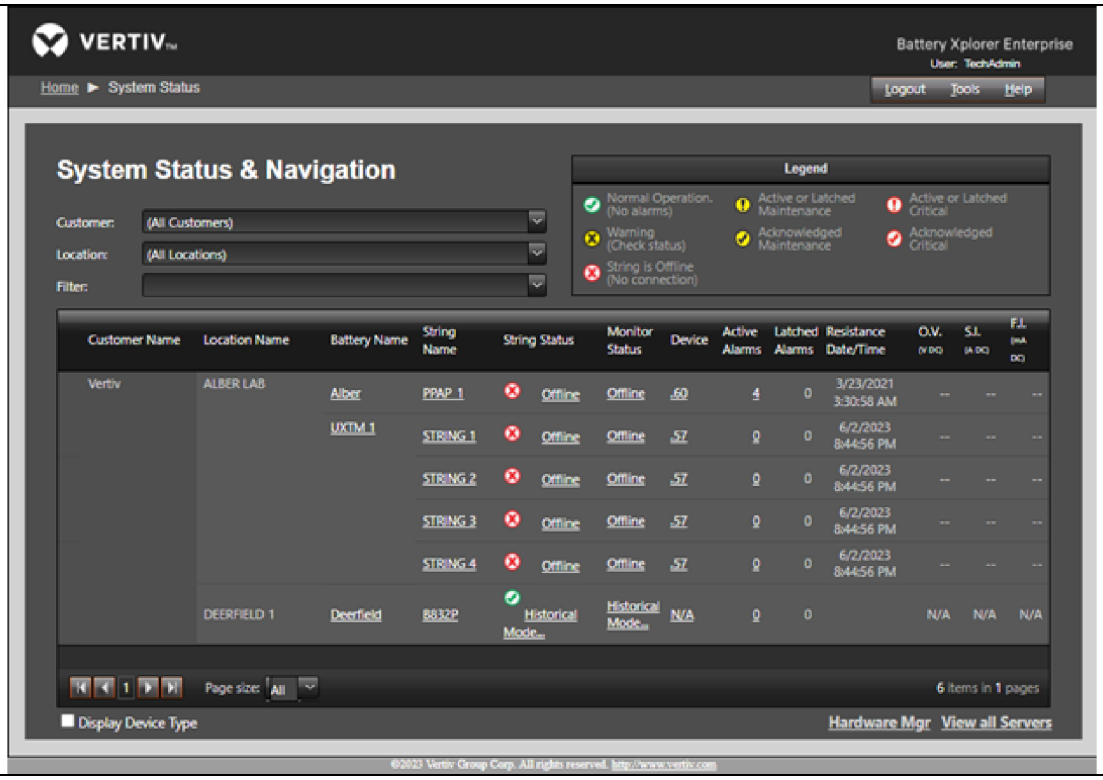
Regular users have read-only access to the software. They can see and access only three tabs of the software: Battery System, Battery Alarms, and Portable Devices. They can only see all the functions from these three tabs. Regular users will not have access to the Advanced Users and Administration tab. For more information, see Figure 2.7 below.

Figure 2.7 Overview of Regular Users Albér BXE Software Dashboard

2.3 Battery Systems

The Battery System Status page provides the overall monitoring status for all the strings monitored by the BXE server with the following information: Customer Name, Location Name, Battery Name, String Status, Monitor Status, Active Alarms and Latched Alarms, Discharge Time, Overall Voltage, String Current and Float Current in one window. It also highlights the issue when alarms occur and shows where the problem is happening.

Figure 2.8 Overview of Battery System Status Page



To navigate through the System Status & Navigation page:

From the Home page, select the *Battery Systems* tab. The System Status page appears and shows the overall performance and status of the monitoring stationary battery system. Information such as the customer name, battery name, and string name are imported automatically from the stationary monitor via the Database Import Manager (DIM) during the initial import. The following functions and features are available on the System Status & Navigation page:

- For descriptions of each column, see Table 2.3 on the facing page.
- Use the Customer drop-down menu to select a specific customer or All Customers to sort, find, and view customers associated with the monitoring battery system. As per the selection, the page updates and filters the entries based on the customer.
- Use the Location drop-down menu to select a specific location or All Locations to sort, find, and view locations associated with the monitoring battery system. As per the selection, the page updates and filters the entries based on the location.
- Use the Filter drop-down menu to sort, add or delete the features in the columns.
- A Legend is provided on the right-hand corner of the window as shown in Figure 2.8 above, which displays the status of the system (string status) and the alarm types. For descriptions of the legends and their corresponding icons, see Table 2.2 on the facing page.
- Right-click the column menu bar to sort, group, ungroup, add or delete the column list.
- Use the arrows on the bottom of the window to flip between web pages.
- Configure the page size by clicking the down arrow next to the Page size feature on the bottom left-hand corner of the page.
- Click on the Display Device Type checkbox in the bottom left-hand corner to see the specific device type under the Battery Name column.

- Click on *Hardware Manager* to get information about the hardware. For more information, see Hardware Manager on page 52.
- Click on View all Server to get information about servers that are connected along with their location to Albér BXE and their status. For more information, see Servers on page 77.

NOTE: Any changes or filters that user applied for sorting the customer, location and filter will be saved. Even if the user logs out and logs back in, those filters will be retained unless the filters are cleared.

Table 2.2 Legends and its Description

Sr No.	Legend Icon	Status Message	Description
1		Normal Operation (No alarms)	The string is being monitored properly without alarm or fault. No action is required.
2		Warning (Check Status)	An issue has occured. Check the status for rectification.
3		String if Offline (No connection)	The string is no longer receiving real-time data updates. The monitor or the device is offline. Check the system monitor status and resolve any connection issues. Contact Vertiv Technical Support for assistance.
4		Active or Latched Maintenance	The Albér BXE detected some error in the string parameter and provided an alarm message to check the status.
5		Acknowledged Maintenance	The user has acknowledged the error.
6		Active or Latched Critical	A monitored string parameter has violated a critical threshold. It requires immediate action.
7		Acknowledged Critical	The user has acknowledged the critical error.

Table 2.3 System Status and Navigation Page Description

Column Name	Description
Customer Name	Name of the customer who owns and manages the stationary battery system.
Location Name	Location where the stationary batteries are located.
Battery Name	Name of the battery as assigned by the customer. Click the battery name to access the Battery View feature. For more information, see Battery View feature on page 18.
String Name	Specific name of battery string as assigned by the customer that connects to the UPS. Click the string name to access the String View feature. For more information, see String View feature on page 22
String Status	Current status of the stationary battery string with respective legend icons. If the status is offline, then the unit is not responding. For details about Legends and its description, see **Table 2.3** above.
Monitor Status	Status of the driver. If the monitor status displays as Online, then the Albér BXE drivers are active and running. If it displays as Offline, check the status of Albér BXE drivers and BX Enterprise Watchdog service.
Device	The IP address assigned to the particular device. **NOTE: The IP address is assigned at device level and not at each string.**
Active Alarms	Number of alarms currently being alerted on the particular string or system. Click the alarm number to view the String Alarm Details page. For more information, see String Alarm Details feature on page 30.
Latched Alarms	Number of latched alarms triggered from the system. Click the alarm number to view the String Alarm Details page. For more information, see String Alarm Details feature on page 30.

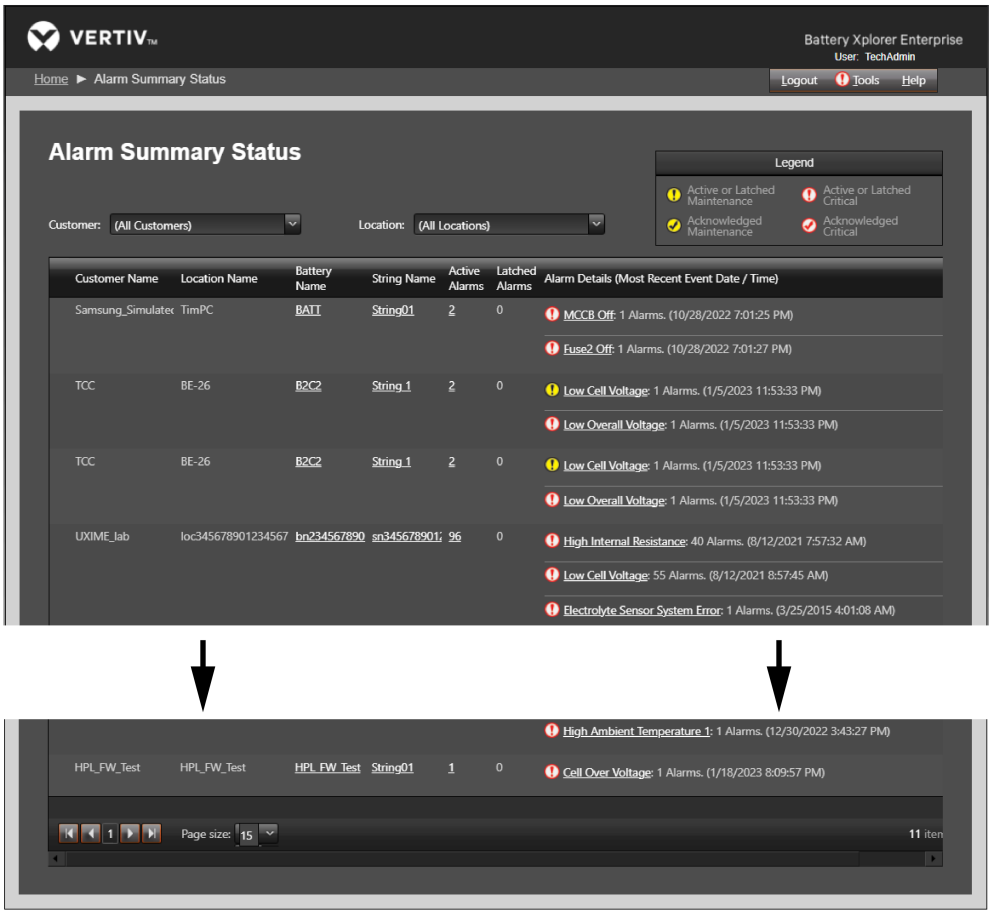
Table 2.3 System Status and Navigation Page Description (continued)

Column Name	Description
Resistance Date/Time	Date and time of the latest resistance test run on the particular battery in the format of hours, minutes, and seconds (00:00:00). To sort the Resistance Date/Time column by either latest or oldest date/time of resistance test, click the column title.
O.V. (V DC)	Overall voltage on the battery string in Volts DC (V DC). For more information, see String View feature on page 22.
S.I. (A DC)	The current of the string on the battery string in Ampere DC (A DC). For more information, see String View feature on page 22.
F.I. (mA DC)	The current of the float on the battery string in Milliampere DC (mA DC).

2.4 Battery Alarms

The Battery Alarms page displays the following information: Customer Name, Location Name, Battery Name, String Name and its status, Active Alarm and Latched Alarms, and Alarm Details in one window. It also highlights the issue when alarms occur and shows where the problem is happening.

Figure 2.9 Overview of Battery Alarm Summary Status Page



To navigate through the Alarm Summary Status page:

From the Home page, click on the *Battery Alarms* tab. The following functions and features are available on the Alarm Summary Status page:

- Use the Customer drop-down menu to select a specific customer or All Customers to sort, find, and view customers associated with the monitoring battery system. As per the selection, the page updates and filters the entries based on the customer.
- Use the Location drop-down menu to select a specific location or All Locations to sort, find, and view locations associated with the monitoring battery system. As per the selection, the page updates and filters the entries based on the location.

NOTE: If the user applies any filter to customer and location, the filter will only be valid for the current session and will be reset to default after logging off.

- A Legend is provided on the right-hand corner of the window as shown in Figure 2.9 above, which displays the status of the system and the alarm types. For descriptions of the legends and their corresponding icons, see Table 2.4 on the next page.
- Use the arrows on the bottom of the window to flip between web pages.
- Configure the page size by clicking the down arrow next to the Page size feature on the bottom left-hand corner of the page.

Table 2.4 Legends and their Description

Sr No.	Legend Icon	Status Message	Description
1		Active or Latched Maintenance	The Albér BXE detected some error in the string parameter and provided an alarm message to check the status.
2		Acknowledged Maintenance	The user has acknowledged the error.
3		Active or Latched Critical	A monitored string parameter has violated a critical threshold. Immediate action is required.
4		Acknowledged Critical	The user has acknowledged the critical error.

Table 2.5 Alarm Summary Status Page Description

Column Name	Description
Customer Name	Name of the customer who owns and manages the stationary battery system.
Location Name	Location where the stationary batteries are located.
Battery Name	Name of the battery as assigned by the customer. Click the battery name to access the Battery View feature. For more information, see Battery View feature below.
String Name	Specific name of battery string as assigned by the customer that connects to the UPS. Click the string name to access the String View feature. For more information, see String View feature on page 22.
Active Alarms	Number of alarms currently being alerted on the particular string or system. Click the alarm number to view the String Alarm Details page. For more information, see String Alarm Details feature on page 30.
Latched Alarms	Number of latched alarms triggered from the system. Click the alarm number to view the String Alarm Details page. For more information, see String Alarm Details feature on page 30.
Alarm Details (Most Recent Event Date/Time)	Type of alarm, respective legend icon, number of alarms, and the most recent event date and time.

2.4.1 Battery View feature

The Battery View feature displays the overall battery statistics for all the strings attached to that particular battery or UPS including Site Summary, System Status, Battery Summary, Alarm Status, Battery Alarm Summary, Voltage, Resistance, Intercell Resistance, and Intertier Resistance. Additionally, this page allows user to reset or remove latched alarms.

Figure 2.10 Overview of Battery View Page

To navigate through the Battery View feature:

1. From the System Status and Navigation page, click on the battery name and the Battery & String Status page appears.

   - or-

   From the Alarm Summary Status page, click the battery name and the Battery & String Status page appears.

2. From the Battery View tab, user can access the following battery information:
   a. **Battery Summary:** It shows the overall voltage (V DC), string current (A DC), float current (mA DC), ripple current (A AC), ambient temperature 1 and 2 (°C or °F) and so on tabs for detailed battery information.

NOTE: The Battery Summary parameter tabs may vary depending on the selection of battery.

- **Overall Voltage (V DC):** It displays the overall voltage of associated cell and a graphical representation of the voltage in V DC. The graph shows the high, low, average, string, and value of each cell.
- **String Current (A DC):** It displays the string current of associated cell and a graphical representation of the current in A DC. The graph shows the high, low, average, string, and value of each cell.

- **Float Current (mA DC):** It displays the float current of associated cell/jar showing a graphical status of the current in mA DC. The graph shows the high, low, average, string, and value of each cell.
- **Ripple Current (A AC):** It displays the ripple current of associated cell and a graphical representation of the current in A AC. The graph shows the high, low, average, string, and value of each cell.
- **Ambient Temp. 1 (°C) and Ambient Temp. 2 (°C):** It displays the overall average ambient temperature reading in Fahrenheit or Celsius in each cell and graphical representation of ambient temperature in Celsius or Fahrenheit.

NOTE: If you do not see the Voltage, Temperature, Resistance, Intercell Resistance, or the Intertier Resistance tabs, check the Optional Parameters settings. If the optional parameter is not enabled, these tabs will not be shown.

NOTE: The selected tab will be highlighted in orange.

b. **Voltage tab:** The voltage tab displays the individual cell or module voltages. Each graph represents one string in that UPS battery. The minimum and maximum thresholds are defined by the battery manufacturer and will be entered by the user as recommended by the battery manufacturer. Click on the string name in the graph to view the battery string information. To view the summary of each cell, hover the mouse over the individual cell to view the cell number, voltage, threshold, and delta. Click on the individual cell to view the cell information in the summary pane on the left-hand side.

c. **Temperature tab:** The temperature tab displays the individual cell or module temperatures. Each graph represents one string in that UPS or battery. The minimum and maximum cell temperature thresholds are defined by the battery manufacturer and will be entered by the user as recommended by the battery manufacturer. Click on the string name in the graph to view the battery string information. To view the summary of each cell, hover the mouse over the individual cell to view the cell number, temperature, threshold, and delta. Click on the individual cell to view the cell information in the summary pane on the left-hand side.

NOTE: If the cell temperature tab is missing or cell temperature values are not reported then user needs to check if the stationary monitor can support cell temperatures.

NOTE: If the user is not aware of the battery manufacturer recommendations, contact Vertiv technical support for details.

d. **Resistance tab:** It displays the resistance values of individual cell from its last resistance test. The minimum and maximum cell resistance thresholds are defined by the battery manufacturer and will be entered by the user as recommended by the battery manufacturer. Click on the string name in the graph to view the battery string information. To view the summary of each cell, hover the mouse over the individual cell to view the cell number, resistance, threshold, and delta. Click on the individual cell to view the cell information in the summary pane on the left-hand side.

NOTE: The Lithium-ion battery does not support resistance values.

e. **Intercell Resistance tab:** This tab shows the resistance developed in the interconnect wire between two cells in a bar graph. Summary on the left hand side shows high and low cell individual intercell resistance thresholds, string summary, cell / jar summary, thresholds information. The resistance tab also shows a string Intercell Resistance readings (micro ohms) in a graph format of each battery string.

NOTE: Intercell Resistance tab is displayed only if the Albér stationary monitor supports it.

f. **Intertier Resistance tab:** This tab shows the resistance developed in the interconnect wire between two tiers (or any longer wire between two cell than other connections) in a bar graph. Summary on the left hand side shows high and low cell individual intertier resistance thresholds, string summary, cell/jar summary, thresholds information. The resistance tab also shows a string Intertier Resistance readings (micro ohms) in a graph format of each battery string.

g. **Battery Alarm Summary:** It represents the battery alarm summary of the selected battery in a graph and grid format. To view information of any active alarms that are currently on the battery, click the *View Alarm Details* button and Battery Alarm Details window appears.

h. **View Alarm Details:** From the Battery View tab or String View tab, click the *View Alarm Details* button and the String Alarm Details page appears. It displays any active and latched alarms that are currently in the system for the selected battery string. For more information, see String Alarm Details feature on page 30.

i. **Site Summary:** It displays the customer name and location of the selected stationary battery system.

- **Customer:** It represents the name of the customer for the selected stationary battery system.
- **Location:** It represents the physical location of where the stationary battery systems are located.

j. **System Status:** It displays the status of the selected battery and its monitoring status.

- **Battery:** It represents the current system status of the selected battery. Battery status includes normal, charging, discharging, resistance test, and other status.
- **Monitor:** It represents additional monitoring status information about the battery. Battery monitoring status includes online, offline, and other status.

k. **Battery Summary:** In the upper Battery Summary tab, it represents the information about the selected battery.

- **Battery:** It displays the name of the currently selected battery.
- **No. of Strings:** It displays the number of strings associated with the battery.
- **Capacity:** It displays the capacity rating of the battery. The capacity rating of the battery is in Amp-Hrs at the 8-hour rate for selected battery.

l. **Alarm Status:** It represents the number of alarms (active, latched, and acknowledged) in the selected battery. It also provides option to reset latched alarms.

- **Active:** It displays any active alarms in the selected battery.
- **Latched:** It displays any latched alarms in the selected battery.
- **Acknowledged:** It displays whether any of the alarms have been acknowledged in the selected battery.
- **Reset Alarms:** To remove and reset any alarms that are currently latched in the system, click the *Reset Alarms* button. By resetting the alarms, this clears the Battery Alarm Summary queue for additional new active alarms to be added in the future.

NOTE: The hardware status is available only when the user is monitoring the Lithium-ion batteries.

NOTE: The ELS status is available only when the user is monitoring a Vertiv™ Albér™ Universal Xplorer Industrial Battery Monitor (UXIME) device integrated with an ELS module.

2.4.2 String View feature

The string view page displays the default view of the cell voltage tab. The voltage tab displays a bar graph, with each bar representing an individual cell voltage. To see the trend, click on particular cell voltage bar. Select the cell/jar from the bar graph above and then the trend will be displayed below the graph. To configure the displayed trend, click on the displaying information drop-down menu and select the trend interval of 7 days, 30 days, 6 month, 1 year or 5 years to see the trend information.

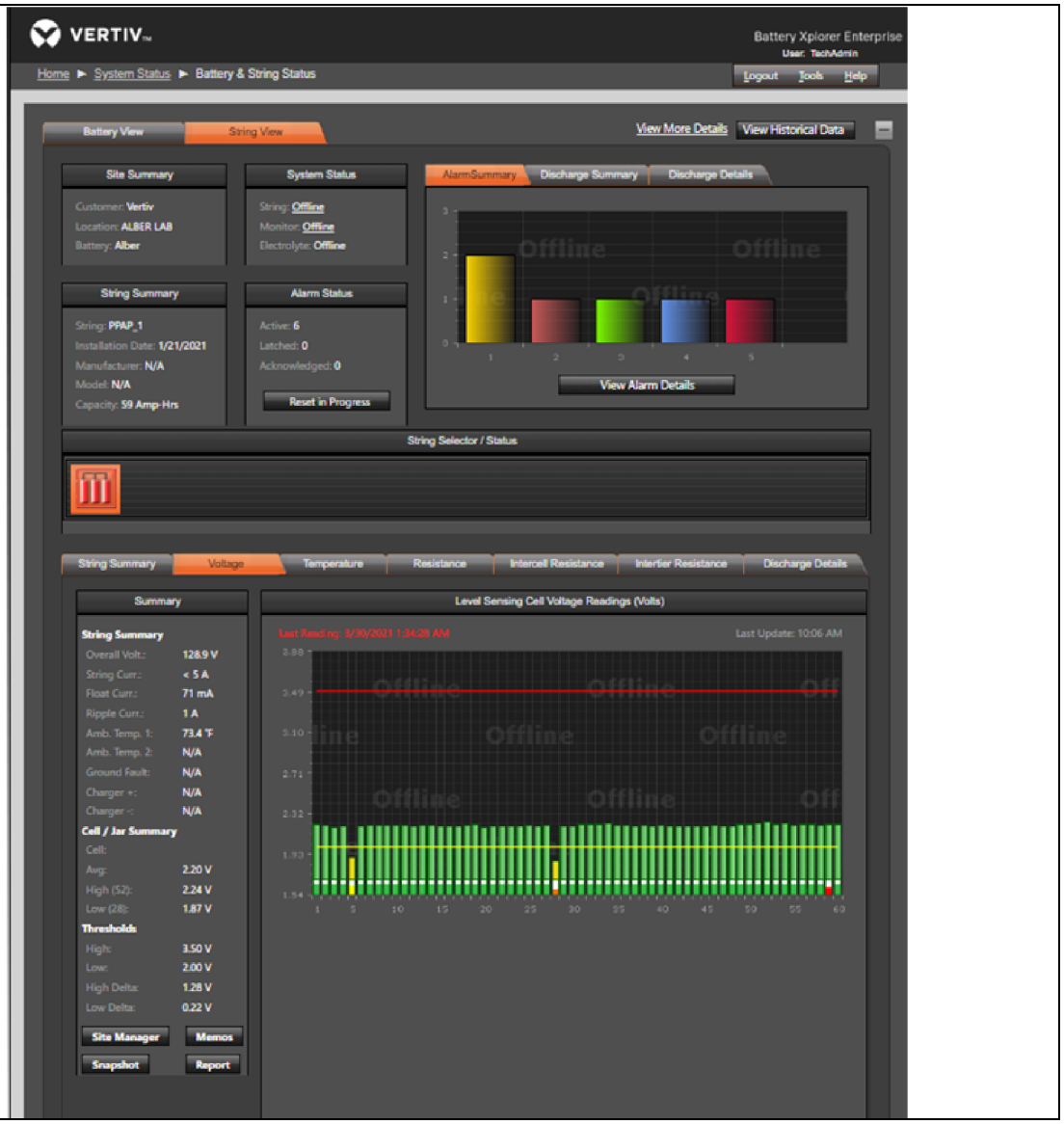
The last reading indicates when the cell voltage was last time recorded, and the latest update indicates when the BXE has last checked. By selecting the End date, user may view the history from that date.

When user clicks on a particular cell/jar, the left-hand summary tab displays which cell is selected as well as the cell voltage, average voltage, highest value, and lowest cell voltage in that specific string. From the thresholds, user can get the individual threshold information at string level.

NOTE: On String View page, the default tab opened will always be voltage tab and the default view will always be pointing to cell number 1.

NOTE: If there are two cell with highest voltage, BXE does not display both cell numbers; instead, the device shows the first cell number with the highest voltage.

Figure 2.11 Overview of String View Page



To navigate through the String View feature:

1. From the System Status and Navigation page, click on the string name and the Battery & String Status page appears.

   -or-

   From the Alarm Summary Status page, click the string name and the Battery & String Status page appears.

2. From the String View tab, user can access the following battery string information:

a. **Voltage Tab:** The voltage tab displays the individual cell voltages in the selected string. For lithium ion strings, a light and dark green color pattern is followed to differentiate the modules. The summary on the left-hand side shows overall voltage, string current, float current, ripple current, ambient temperature, cell summary, and thresholds. By clicking on any cell and selecting the historical tenure from the drop-down selection, the user can see the historical trend for the selected cells. Selecting the same cell from the bargraph above will make the trend disappear. Hovering over an individual cell on the bar graph shows the cell ID, voltage, and high and low thresholds, memos, baseline, and cell balancing information.

b. **String Summary tab:** It displays the battery string summary, trend data summary, thresholds value, overall voltage trend (volts) information.

   - **String Summary:** It displays the overall voltage of the system, string current, average string current, float current, ripple current, ambient temperature and so on information of the system.

NOTE: The string current or discharge current is the current through the string during a discharge or when the string is being called into service to perform its back up function.

NOTE: Ripple current is a type of electrical noise characterized by a uniform waveform riding in the DC circuit, normally expressed as peak, peak to peak, or RMS (Root Mean Square). Turn off the ripple current parameter if the Vertiv™ Albér™ UXIM battery monitoring system is not communicating with the Vertiv™ Albér™ UXBM battery modules.

   - **Trend Data Summary:** It displays the average, high, and low threshold reading in voltage.
   - **Overall Voltage Trend (Volts):** It displays the real time and historical views in the time frame of Last 24 hours, Last 7 days, Last 30 days, Last 6 months, Last year, Last 5 years, and All history. Use the drop-down menu to sort and view the real time and historical data for overall voltage.
   - **Thresholds:** It displays the high and low voltage threshold information.
   - To modify site information, such as string and battery configuration, customer and location information, UPS navigation, and so on, click the *Site Manager* button under the Lithium Summary menu. For more information, see Site Manager on page 36.
   - To modify Memos, click the *Memo* button under the Lithium Summary menu and Memos window appears. For more information, see Site Manager on page 36.
   - To modify, generate, and view reports, click the *Report* button under the Lithium Summary menu and Reports page will appear in the new tab. For more information, see Site Manager on page 36.
   - To capture and save the overall voltage trend result, click the *Snapshot* button under the Lithium Summary menu.

c. **Temperature Tab:** The temperature tab displays the individual cell temperature in the selected string. For Lithium ion strings, a light and dark green color pattern is followed to differentiate the modules. The summary on the left-hand side shows overall voltage, string current, float current, ripple current, ambient temperature, cell summary, and thresholds. Clicking on any cell and by selecting the historical tenure from the dropdown selection, the user can see the historical trend for the selected cells. Selecting the same cell from the bargraph above will make the trend disapper. Hovering over an individual cell on the bar graph shows the cell ID, voltage, high and low thresholds, memos, baseline, and cell balancing information.

d. **Resistance Tab:** The resistance tab displays the individual cell internal resistance for the string selected. Resistance measurements on Lithium Ion strings are not supported. The summary on the lefthandside shows overall voltage, string current, float current, ripple current, ambient temperature, cell summary and thresholds. Clicking on any cell and by selecting the historical tenure from the dropdown selection, user can see the historical trend for the selected cells. Selecting the same cell from the bargraph above will make the trend disapper. Hovering over an individual cell on the bar graph shows the cell ID, voltage, high and low thresholds, memos, baseline, and cell balancing information.

e. **Intercell Resistance Tab:** This tab displays the resistance in the interconnecting wire between any two cells in the string selected. The summary on the left-hand side shows overall voltage, string current, float current, ripple current, ambient temperature, cell summary, and thresholds. Clicking on any cell and selecting the historical tenure from the dropdown selection, the user can see the historical trend for the selected cells. Selecting the same cell from the bargraph above will make the trend disapper. Hovering over an individual cell on the bar graph shows the cell ID, voltage, high and low thresholds, memos, baseline, and cell balancing information.

f. **Intertier Resistance Tab:** This tab displays the resistance in the interconnecting wire between any two tiers in the string selected. Not all the monitoring devices can measure intertier resistance. Please contact Vertiv Support for more information. The summary on the left-hand side shows overall voltage, string current, float current, ripple current, ambient temperature, cell summary, and thresholds. By clicking on any cell and selecting the historical tenure from the drop-down selection, the user can see the historical trend for the selected cells. Selecting the same cell from the bargraph above will make the trend disapper. Hovering over an individual cell on the bar graph shows the cell ID, voltage, high and low thresholds, memos, baseline, and cell balancing information.

g. **String Selector/Status:** It shows the graphical representation of the individual string and the state of the string. The user can select this individual graphics which represents each string. Once the user selects the string that graphics will be highlighted. The user can switch between different strings in that selected UPS or attached to that battery.

h. **String Alarm Summary:** It represents the string alarm summary of the selected string in a graph and grid format.

   - **Alarm Summary:** It represents the alarm summary of the selected string in a graph and grid format. To view information of any active alarms that are currently on the string, click the *View Alarm Details* button and String Alarm Details page appears. For more information, see String Alarm Details feature on page 30.

i. **View Alarm Details:** From the Battery View tab or String View tab, click the *View Alarm Details* button and the String Alarm Details page appears. It displays any active and latched alarms that are currently in the system for the selected battery string. For more information, see String Alarm Details feature on page 30.

j. **Discharge:** It displays the number of discharges on the string that occurred in the past.

k. **Discharge Details:** This tab displays the discharges occurred on the string. The user can playback the discharge event with discharge playback tool and see the individual cell behavior during the discharge event. The user can view this discharge details by selecting an individual discharge and the details will be shown at the bottom window pane.

Figure 2.12 Discharge Details

- From the upper DischargeDetails tab, user can access the following discharge details information:
  - **Start Date:** It represents the starting date and time of the discharge.
  - **Duration:** It represents the total time occurred during the discharge event.
  - **State of Charge (SOC) Lowest:** It represents the lowest state of charge during the discharge period.
  - **Overall Voltage (OV) Lowest:** It represents the lowest overall voltage during the discharge period.
  - **String Current (SI) Highest:** It represents the highest string current during the discharge period.
  - **Cell Voltage (CV) Lowest:** It represents the lowest cell voltage during the discharge period.
  - **Cell Temperature (CT) Highest:** It represents the highest cell temperature during the discharge period.
- On the upper DischargeDetails tab, click the Discharge Event row and the graph of the cell voltage will show in the lower Discharge Details pane. Hover the mouse over the value points to view the measured information such as Cell number, Value, and Time of the selected string at the specified occurrence.

- The lower Discharge Details tab allows the user to playback the discharge event and see the cells behavior during discharge event. There are two radio buttons in the discharge playback – Cell Voltage and Cell Temperature. The user can configure the discharge playback option. The user can select either the cell voltage or cell temperature during the discharge by clicking the respective radio button. The user can also specify the discharge playback speed, progress, and interval time (mm:ss).

l. **Recharges:** This tab displays the number of recharge events occurred on the string in the past.

m. **Recharge Details:** This tab provides the details of the recharge events. By selecting any individual event, user can playback the recharge event with recharge playback tool and see the individual cell behavior during the recharge event. The user can view this recharge details by selecting an individual recharge and the details will be shown at the bottom window pane.

NOTE: Recharge event monitoring is supported by few battery types only. See Vertiv™Albér™ BXE release notes for more details.

Figure 2.13 Recharge Details

- From the upper RechargeDetails tab, user can access the following recharge details information:
  - **Start Date:** It represents the starting date and time of the recharge.
  - **Duration:** It represents the total time required during the recharge event.
  - **State of Charge (SOC) Lowest:** It represents the lowest state of charge during the recharge period.
  - **Overall Voltage (OV) Lowest:** It represents the lowest overall voltage during the recharge period.
  - **String Current (SI) Highest:** It represents the highest string current during the recharge period.
  - **Cell Voltage (CV) Lowest:** It represents the lowest cell voltage during the recharge period.

- **Cell Temperature (CT) Highest:** It represents the highest cell temperature during the recharge period.

n. **Site Summary:** It displays the customer name, location, and battery name for the selected stationary battery system.

- **Customer:** It displays the name of the customer for the selected stationary battery system.
- **Location:** It displays the physical location name of where the stationary battery systems are located.
- **Battery:** It displays the battery name for the selected string.

o. **System Status:** It displays the status of the selected string and its monitoring status.

- **String:** It represents the current system status of the selected string. String status includes Normal, Charging, Discharging, Resistance Test, Offline, and other statuses.
- **Monitor:** It represents additional monitoring status information about the battery strings. Battery monitoring status includes Online, Offline, and other statuses.
- **Electrolyte:** It represents additional status information about the battery strings. Battery electrolyte status includes Online, Offline, and other statuses.

p. **String Summary:** In the upper String Summary, it represents the information about the selected string.

- **String:** It displays the name of the currently selected battery string.
- **Installation Date:** It displays the date the string was installed.

NOTE: The installation date cannot be changed.

- **Manufacturer:** It displays the battery manufacturer name for the associated battery.
- **Model:** It displays the battery model number for the associated battery.
- **Capacity:** It displays the capacity rating number of the battery in Amp-Hrs.

q. **Alarm Status:** It represents the number of alarms (active, latched, and acknowledged) in the selected battery string. It also provides option to reset latched alarms.

- **Active:** It displays any active alarms in the selected battery string.
- **Latched:** It displays any latched alarms in the selected battery string.
- **Acknowledged:** It displays if any of the alarms have been acknowledged in the selected battery string.
- **Reset Alarms:** To remove and reset any alarms that are currently latched in the system, click the *Reset Alarms* button. By resetting the alarms, this clears the Battery Alarm Summary queue for additional new active alarms to be added in the future.

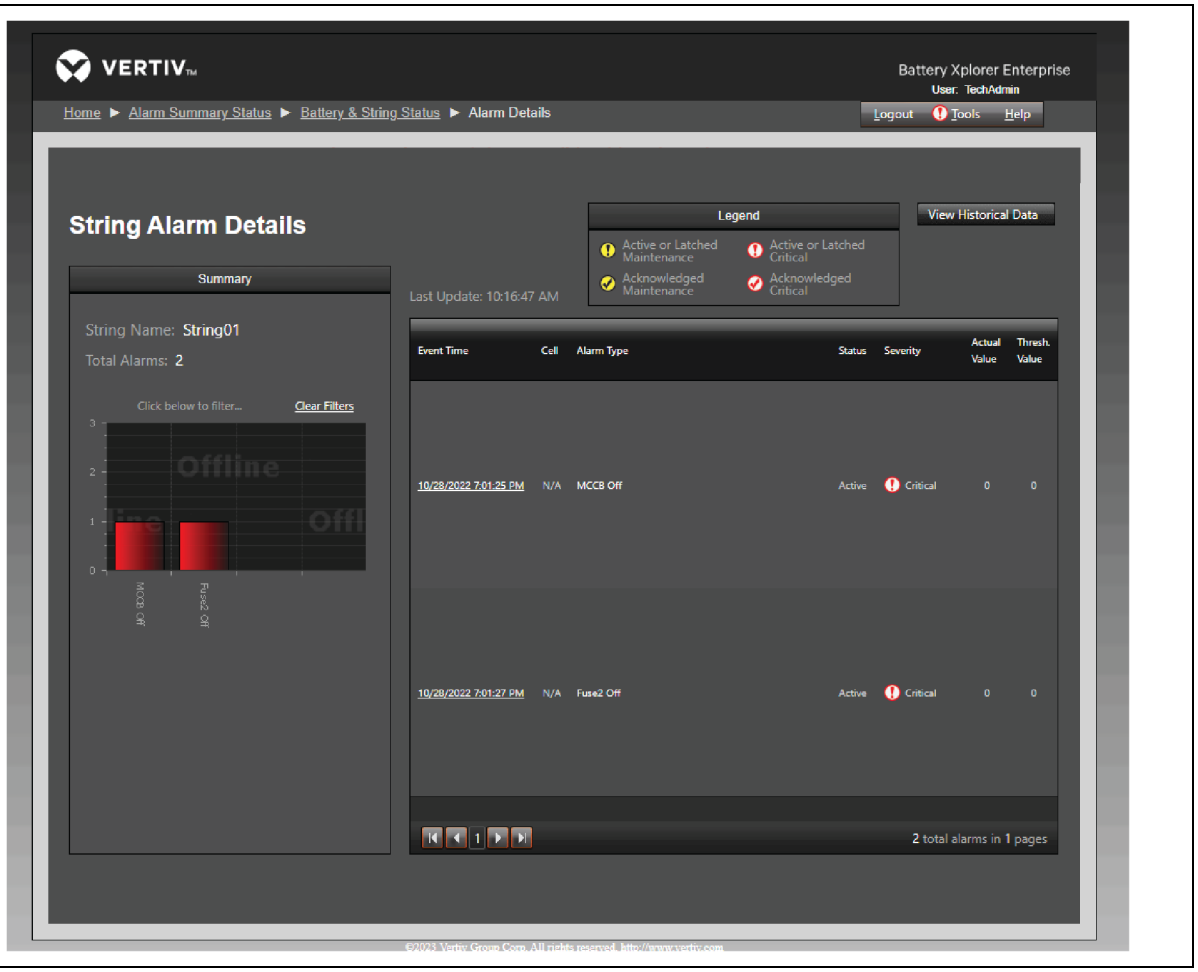
NOTE: The hardware status is available only when the user is monitoring the Lithium-ion batteries.

NOTE: The Vertiv™ Albér™ ELS status is available only when the user is monitoring a Vertiv™ Albér™ UXIME device integrated with an Vertiv™ Albér™ ELS module.

2.4.3 String Alarm Details feature

The String Alarm Details page is view-only and displays detailed information about the alarms currently in the system for the selected string.

Figure 2.14 Overview of String Alarm Details



On the String View page, click the *View Alarm Details* button. From here, user can access the following details from when the alarm was generated:

a. A summary that includes the string name, total number of alarms, and an alarm graph. The graph represents the total number of alarms with respect to the alarm type.
   - To view the alarm type and information, hover over the individual cell.
   - To filter the alarms by type, click on the individual cell.
   - To clear the applied filters, click *Clear Filters* above the graph.

b. A general information box that contains the event time, cell number, alarm type, status (Active, Acknowledged, or Latched), severity of the alarm (Critical, Maintenance, or Latched), actual value and threshold value.

NOTE: Alarm reset works only for the latched alarms. Current alarms will remain unaffected.

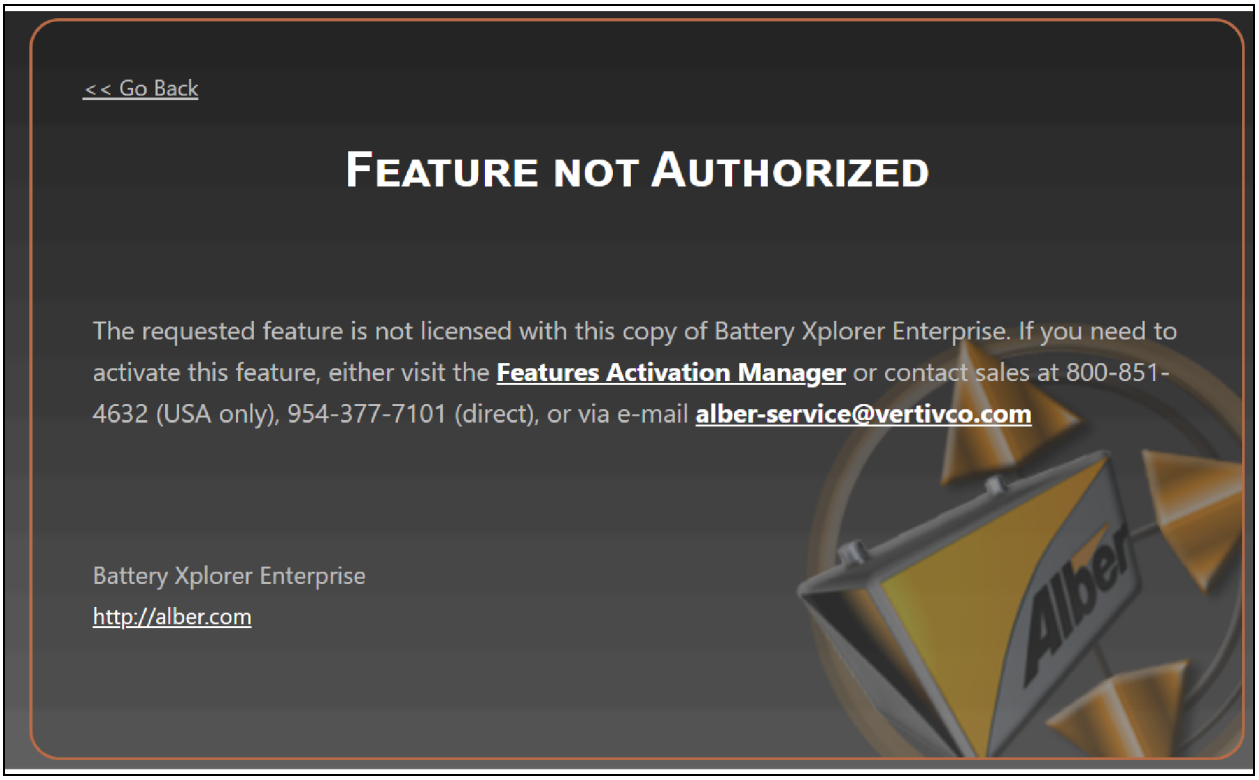
NOTE: Event times use the date, month, year format, and are displayed in your local time zone.

2.5 Portable Devices

Importing Portable Devices data like CRT-400 is an optional feature can be unlocked by obtaining adequate licenses. BXE supports reporting functionality on such imported data.

NOTE: This feature is only available for users that have authorized it in the Albér BXE software and have acquired the appropriate licenses. If the user has not completed the required authorization steps, they will receive the following error message as shown in Figure 2.15 below.

Figure 2.15 FEATURE NOT AUTHORIZED Message



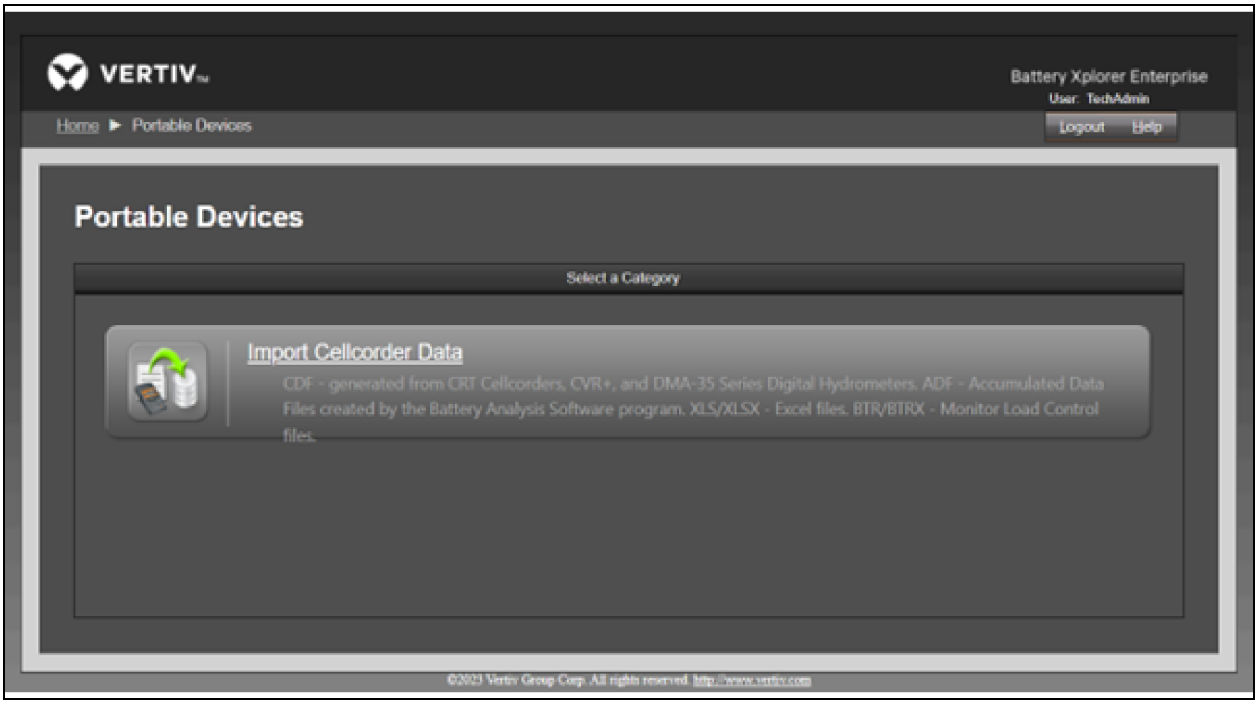
To resolve the authorization error:

1. The users need to activate the Portable Device feature. For more information, see Features Activation Manager on page 57.

   -or-

   Contact your Vertiv sales representative at 1-800-543-2378 or via e-mail customerservicerequest@vertiv.com.

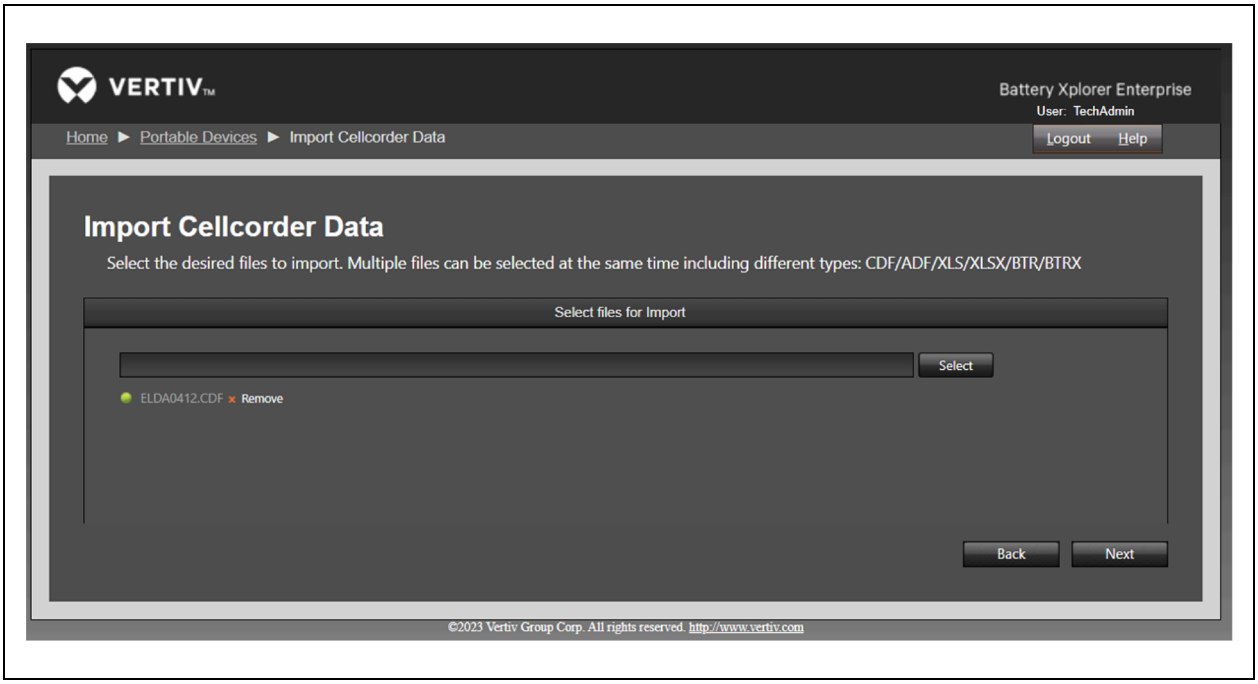
Figure 2.16 Portable Devices



To import the Cellcorder Data:

1. From Home page, select *Portable Devices*.
2. Click on *Import Cellcorder Data*. The Import Cellcorder Data Page appears.

Figure 2.17 Import Cellcorder Data

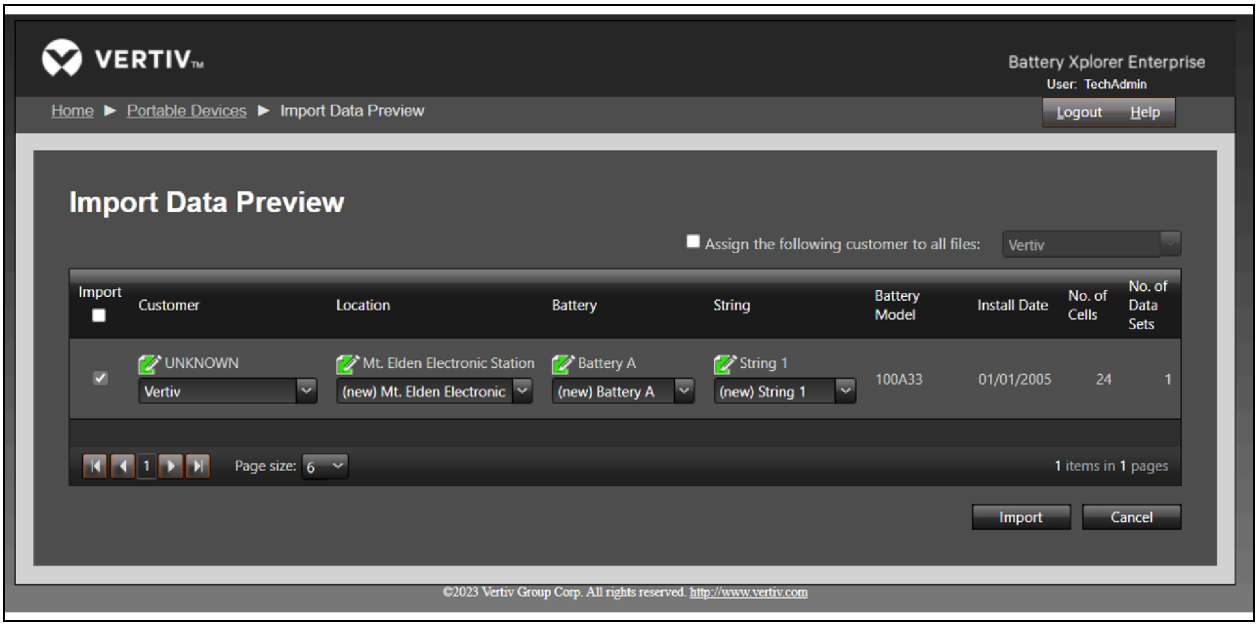


3. Click the *Select* button to browse for and choose a file from the open dialog box, then click *Open*. The file should be .CDF, .ADF, .XLS, .XLSX, .BTR, or .BTRX.

NOTE: A dot appears in front of the file type to indicate if it is supported (green) or unsupported (red).

4. After the file is successfully imported, click the *Next* button. The Import Data Preview page appears.

Figure 2.18 Overview of Import Data Preview Page



5. From the Import Data Preview page, click the checkbox in front of the desired file to import.

   -or-

   Click on the Import checkbox to import the multiple files.

6. Use the drop-down menu and select the appropriate data for Customer, Location, Battery, and String. For more information, see Figure 2.18 on the previous page.
7. Click the *Import* button.

Figure 2.19 Import Data Status Report

8. After receiving the Strings were successfully imported message, click the *Finished* button.

2.6 Advanced Users

2.6.1 Report Scheduler

From the Report Scheduler page, users can define a particular functionality and configure a schedule for the report mail to send automatically.

To create new report:

1. From the Advanced Access page, select *Report Scheduler*.
2. Select the string of which you want to generate report under Current System menu.

NOTE: The user can apply one setting at a time.

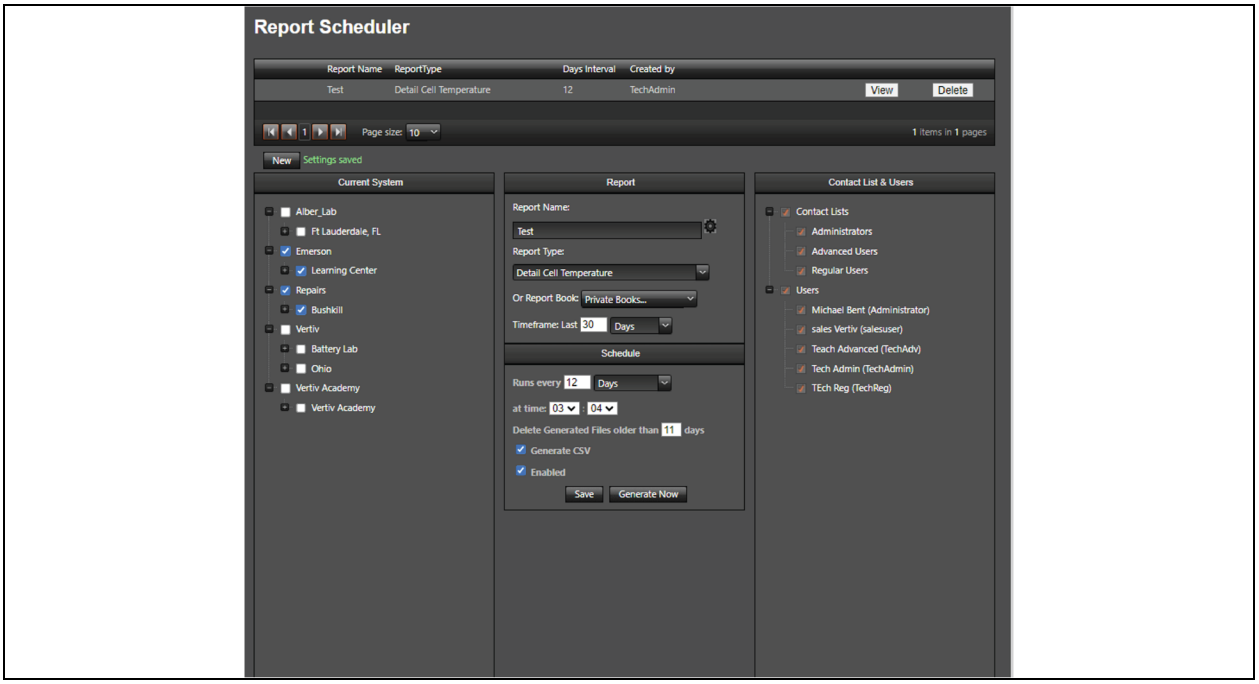
3. Select the users/user groups to send emails on the generated reports under the Contact List and Users menu.
4. Select the *New* button and fields will be editable under the Report menu.
5. Enter the name for the report in the Report Name field under the Report menu.
6. Use the drop-down menu to select the report type.

   -or-

   Use the Report Book drop-down menu to select a saved report.

7. Enter the time in days or month in the Timeframe field for the history data to be included in the report.
8. Enter the time in days or month in the Runs every field under the Schedule menu to define the report interval and when the report needs to run.

Figure 2.20 Report Scheduler



9. Use the drop-down menu to define the time when the report needs to run.
10. Define the duration to delete the older generated file and select the Enabled checkbox.
11. Select the checkbox if you want to generate CSV file.
12. Click the *Save* button to save the report settings.

NOTE: If the scheduled report fails to run at the scheduled time, go to *Control panel - Administrative Tools - Task Scheduler - Task Scheduler Library - BXE Report #* and change the user/password.

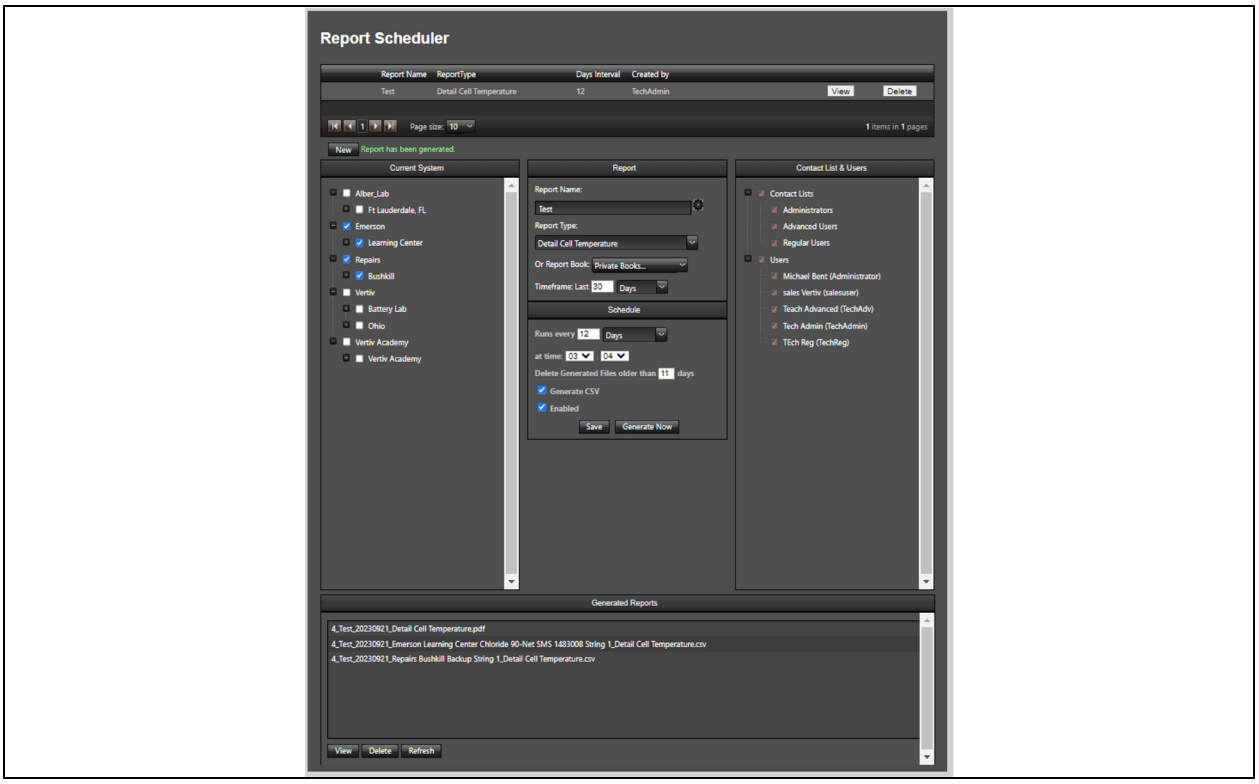
To generate report:

1. From the Advanced Access page, select *Report Scheduler*.
2. From the Report Scheduler page, from the left-hand side, select the string which you want to configure through the Albér BXE software.

NOTE: The user can apply one setting at a time.

3. Under the Report Scheduler page, click on *View* for which you want to generate a report.
4. Now you can see the fields are related to report appear under the report section.
5. Click *Generate Now* button. A Settings saved message will be displayed next to the New button. For more information, see Figure 2.21 on the next page.

Figure 2.21 Report Scheduler Page



6. Under the Generated Reports section, you can see the generated report.
7. To view the generated report, click *View*.

To delete reports:

1. From the Generated Reports page, select the report which you want to delete.
2. Click *Delete*.

2.6.2 Site Manager

Optional Parameters

The Optional Parameters page allows the user to enable or disable certain features purchased with the product.

To navigate the Optional Parameters page:

1. From the Advanced Access page, select *Site Manager*.
2. Under the Site Manager page, use the drop-down menu to select the *Optional Parameters*.
3. From the left-hand side, select the applicable string which the user wants to configure through the Albér BXE software.

NOTE: One setting can be applied at a time.

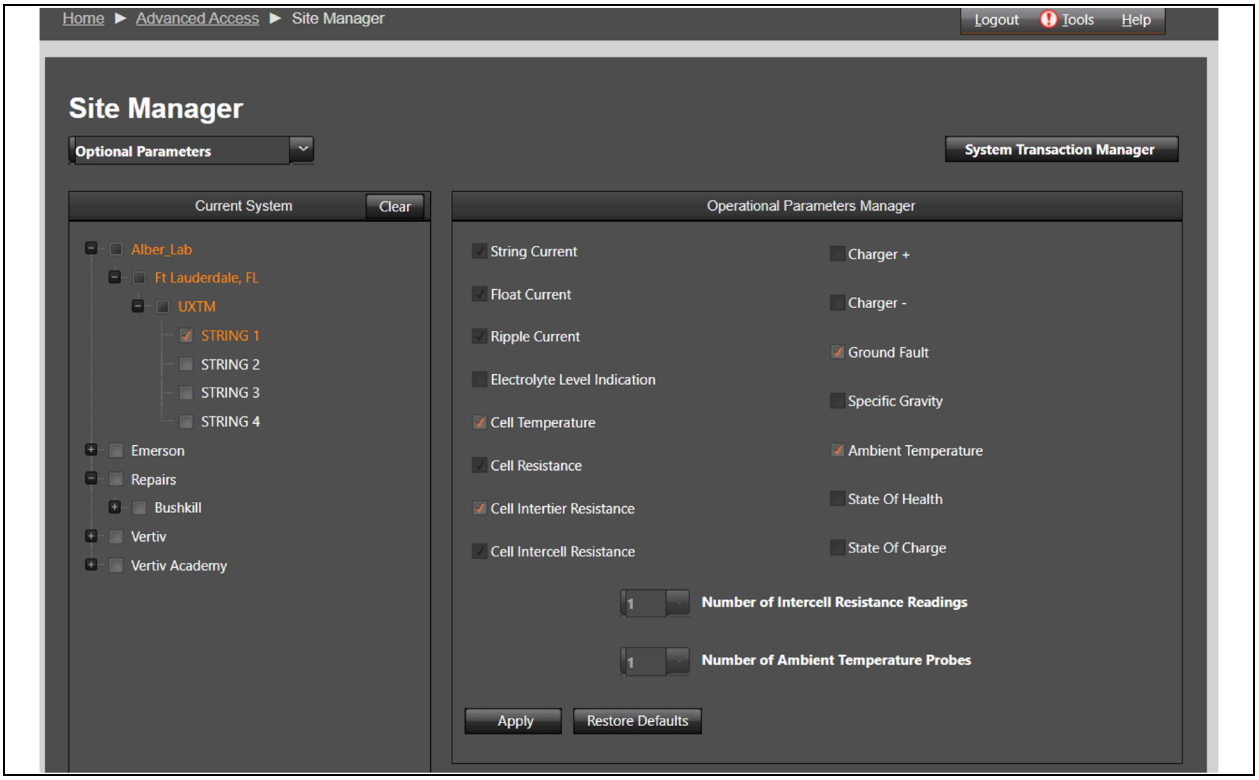
4. Once the user clicks the string, the list of features will appear.

NOTE: Properties and permissions for the default parameter roles cannot be edited.

5. Some additional features are editable, and the user can edit them by clicking the checkboxes.
6. Enter the number if you want to define the intercell resistance reading and ambient temperature probe.
7. Click *Apply*.

NOTE: If the parameters were modified incorrectly or accidentally, the factory settings can be restored by clicking the *Restore Default* button. For more information, see Figure 2.22 below.

Figure 2.22 Optional Parameter Page



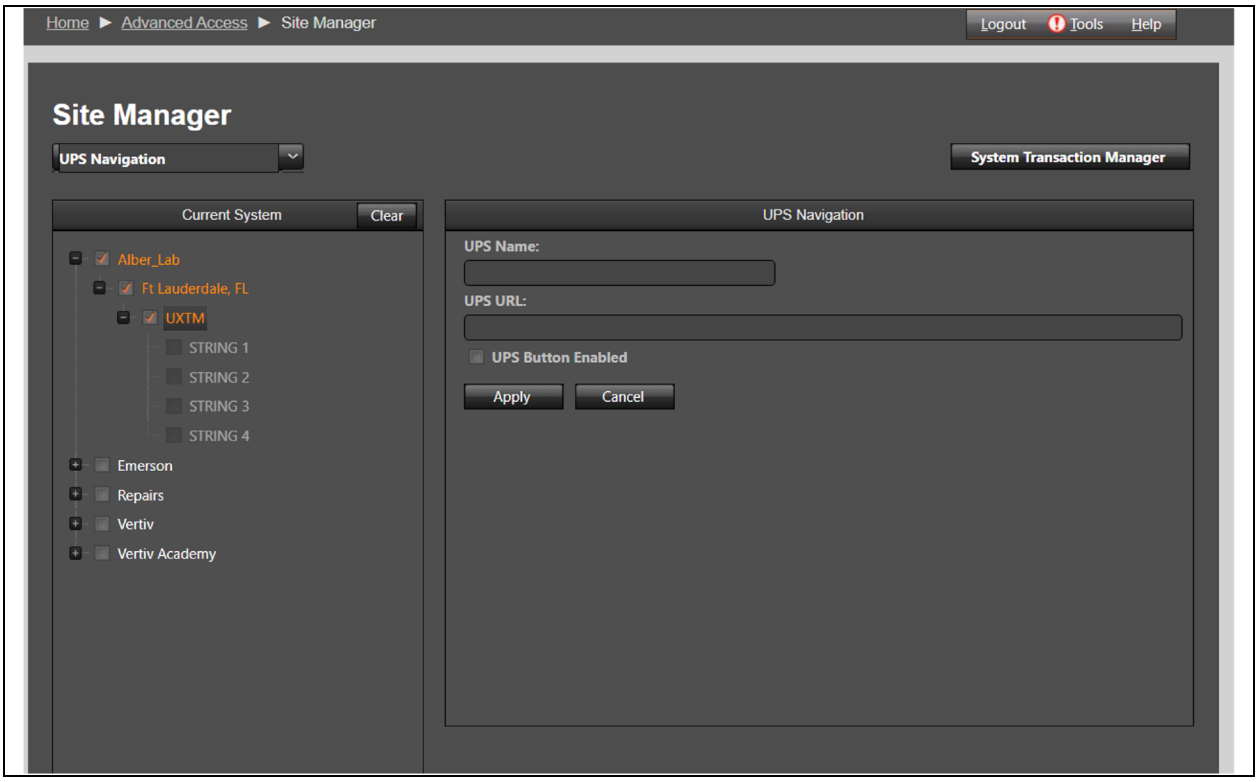
UPS Navigation

To get the UPS Navigation page:

1. From the Home page, select *Advanced Access – Site Manager*, then use the drop-down menu to select *UPS Navigation*.
2. From the left-hand side, select the applicable string to configure through the Albér BXE software.

NOTE: One setting can be applied at a time.

Figure 2.23 UPS Navigation Page



3. Enter the UPS name and URL in the appropriate fields.
4. Check the UPS Button Enabled box, then click *Apply*.

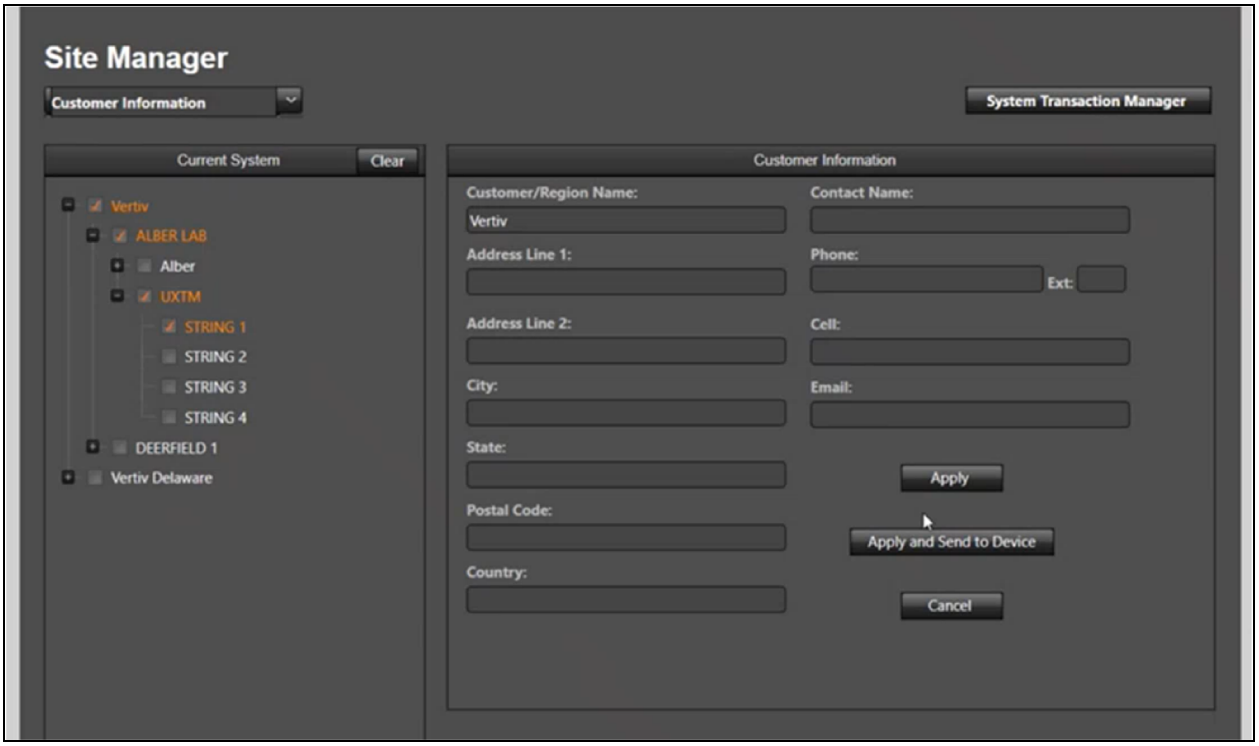
Customer Information

To modify the customer information:

1. From the Home page, select *Advanced Access – Site Manager*, then use the drop-down menu to select *Customer Information*.
2. From the left-hand side, select the applicable string to modify the customer information for the Albér BXE software.

NOTE: One setting can be applied at a time.

Figure 2.24 Customer Information



3. Enter the customer information in the given fields.
4. If you want to save the customer information in the Albér BXE software, click *Apply*.

   -or-

   If you want to save the customer information in both the Albér BXE software and device, click *Apply and Send to Device*.

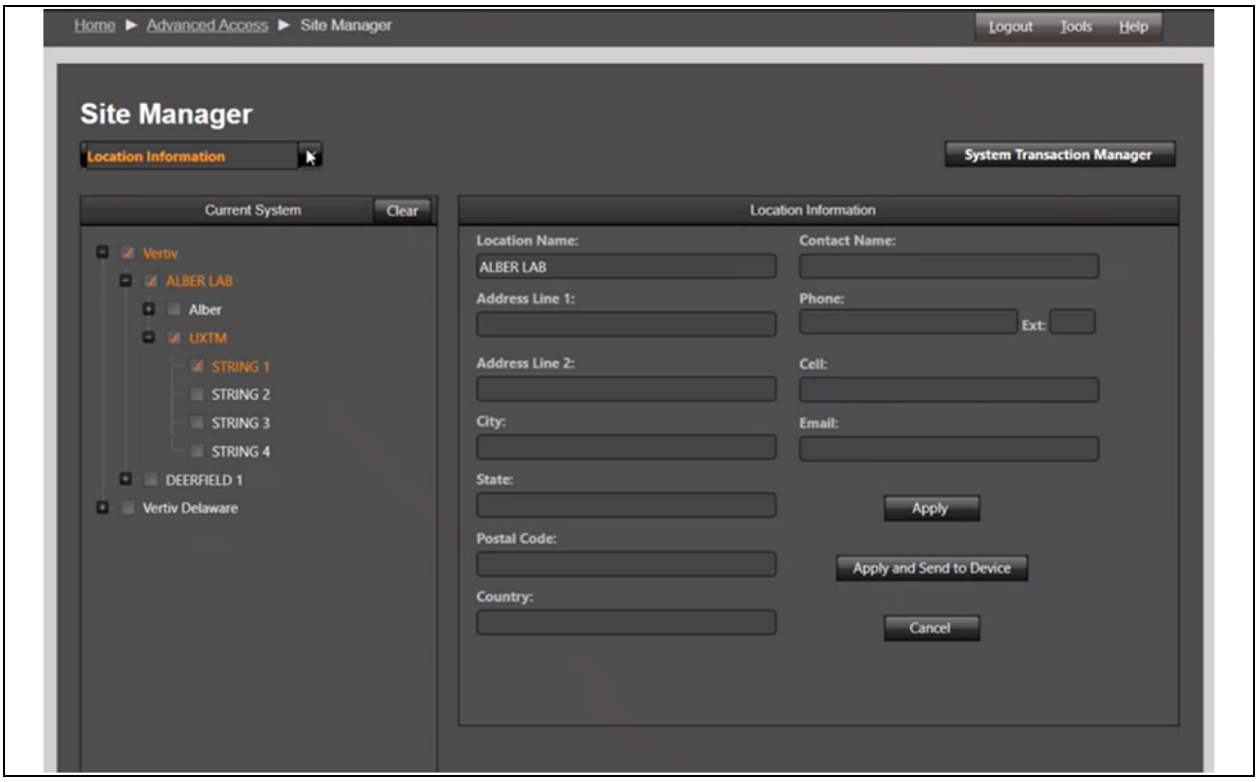
Location Information

To modify the location information:

1. From the Home page, select *Advanced Access – Site Manager*, then use the drop-down menu to select *Location Information*.
2. From the left-hand side, select the applicable string to modify the location information for the Albér BXE software.

NOTE: One setting can be applied at a time.

Figure 2.25 Location Information



3. Enter the location information in the appropriate fields.
4. If you want to save the customer information in the Albér BXE software, click *Apply*.

   -or-

   If you want to save the customer information in both the Albér BXE software and device, click *Apply and Send to Device*.

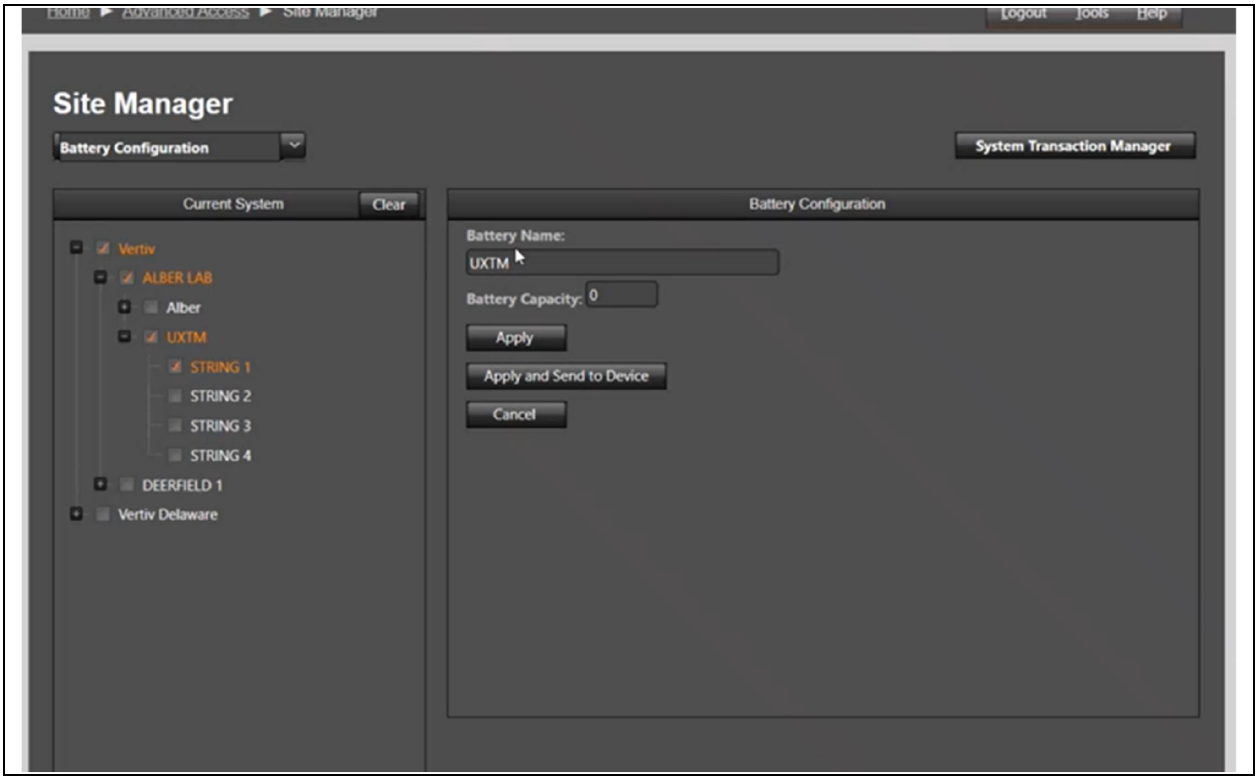
Battery Configuration

To modify the battery configuration:

1. From the Home page, select *Advanced Access – Site Manager*, then use the drop-down menu to select *Battery Configuration*.
2. From the left-hand side, select the applicable string to modify the battery configuration for the Albér BXE software.

NOTE: One setting can be applied at a time.

Figure 2.26 Battery Configuration



3. Enter the battery information in the appropriate fields.
4. If you want to save the customer information in the Albér BXE software, click *Apply*.

   -or-

   If you want to save the customer information in both the Albér BXE software and device, click *Apply and Send to Device*.

String Configuration

From the Site Manager – String Configuration page, users can perform the following functions:

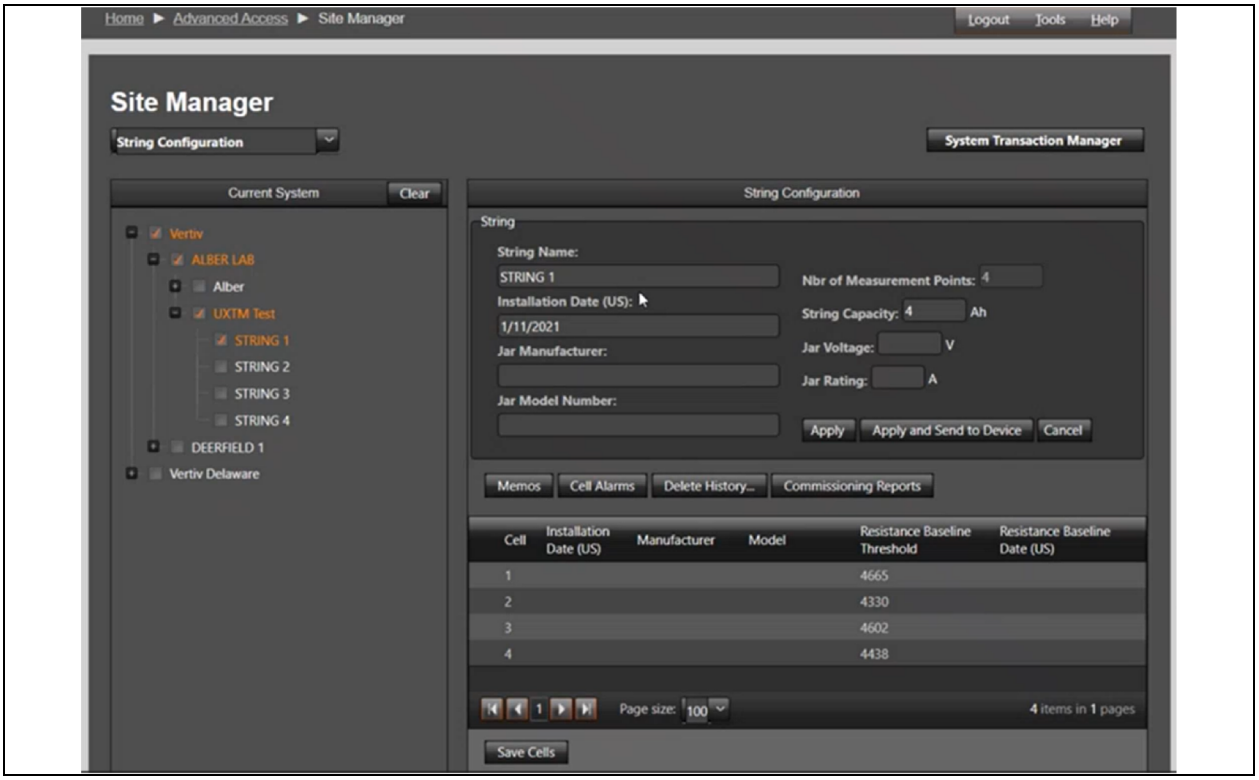
- Modify string configurations
- Create/delete memos for any string or category
- Configure cell alarms
- Delete string history
- Upload commissioning reports after setting up the device

To modify the string configuration:

1. From the Home page, select *Advanced Access – Site Manager*, then use the drop-down menu to select *String Configuration*.
2. From the left-hand side, select the applicable string to modify the string configuration for the Albér BXE software. The String Configuration table for the selected string appears on the right-hand side. The table contains information related to the cell, installation date, manufacturer, model, resistance baseline threshold, and resistance baseline date.

NOTE: One setting can be applied at a time.

Figure 2.27 String Configuration



3. Enter the string information in the applicable fields.
4. If you want to save the customer information in the Albér BXE software, click *Apply*.

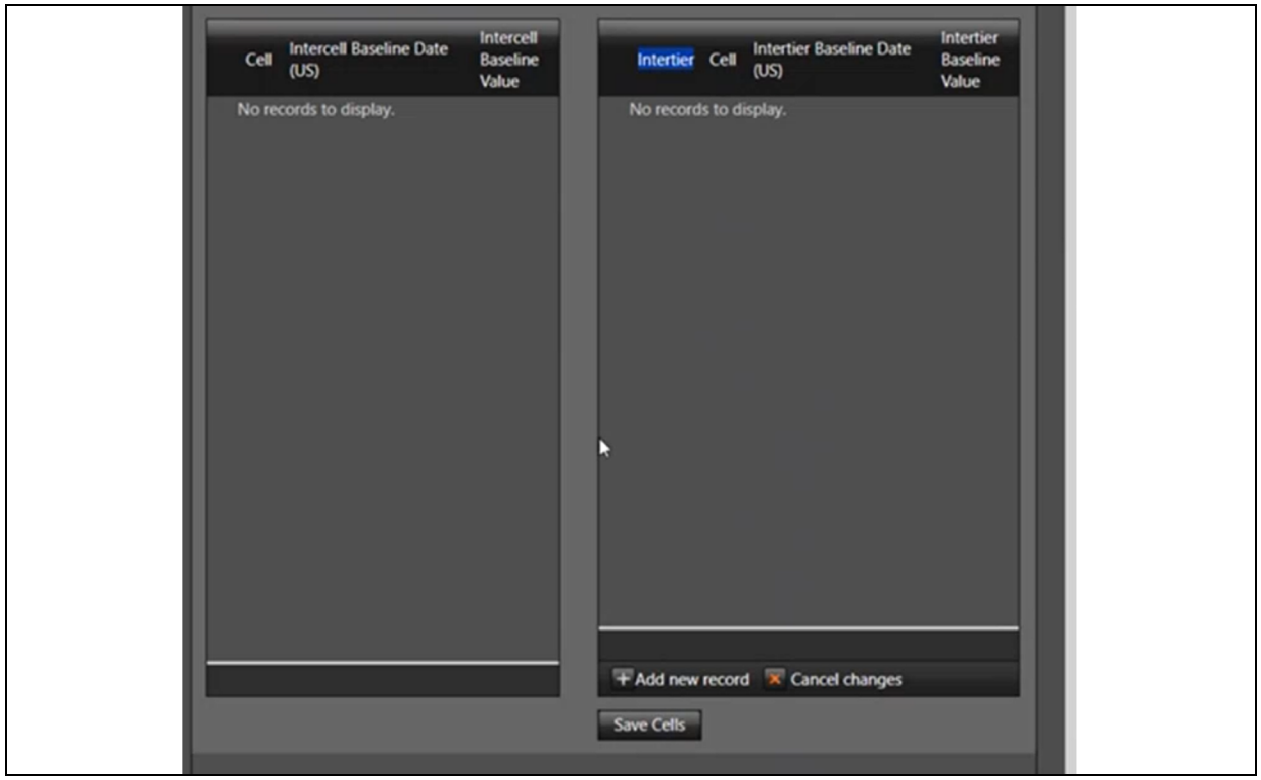
   -or-

   If you want to save the customer information in both the Albér BXE software and device, click *Apply and Send to Device*.

NOTE: A red tag appears while the fields are being edited and disappears once all changes have been saved. Click *Save Cells* to save all changes.

NOTE: Once the device is connected to the Albér BXE software, you can automatically access the intercell base line data.

Figure 2.28 Cell and Intertier



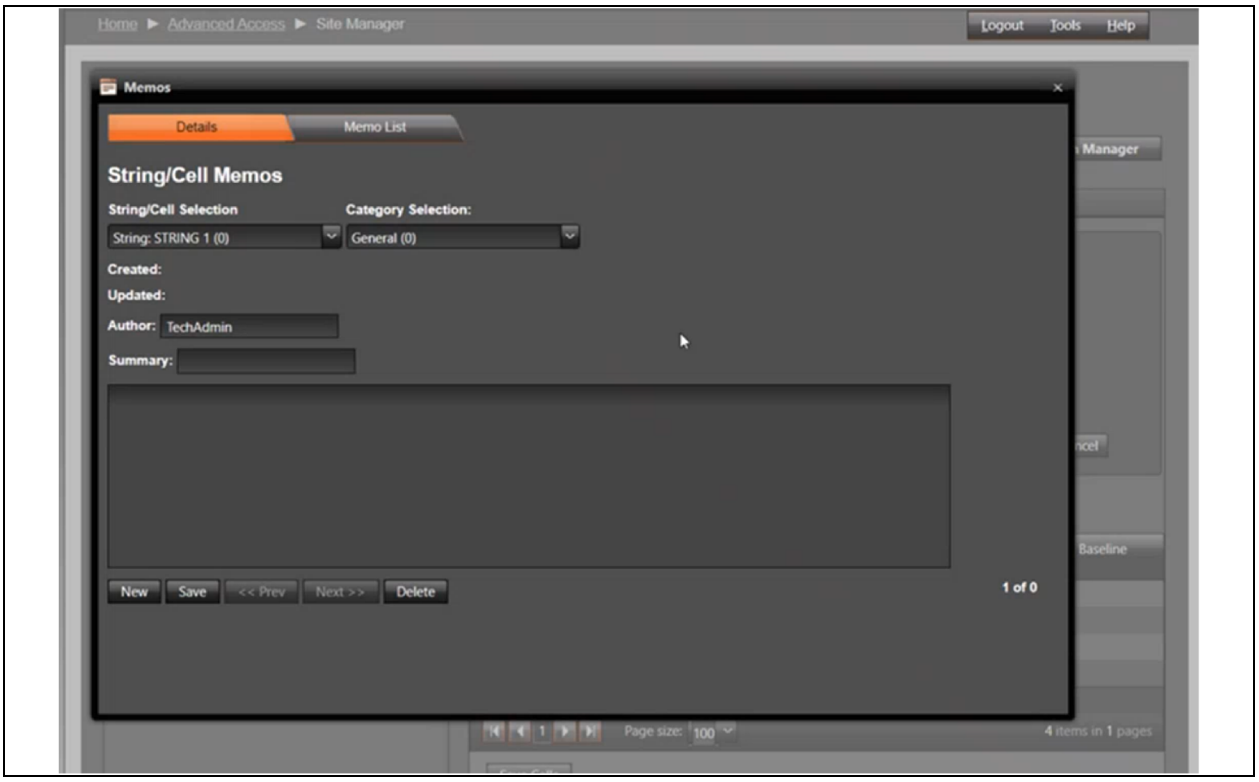
From the left-hand side Cell page, it shows a resistance value that accumulated between cells. From the right-hand side Intertier Cell page, it shows a resistance value that accumulated between intertier cell. For more information, see Figure 2.28 above.

NOTE: Albér BXE will automatically draw the value onto the Intertier Cell page; if the value does not appear, click the *Add new record* button.

To create a memo:

1. From the *Advanced Access – Site Manager – String Configuration* page, click the *Memos* button in the middle of the String Configuration section.
2. Click the *Details tab*.

Figure 2.29 Memos



3. Use the String/Cell Selection and Category Selection drop-down menus to select the appropriate string/cell and category to create a new memo.
4. (Optional) Add a note in the text box.
5. Click *Save*.

To delete a memo:

1. From the *Advanced Access – Site Manager – String Configuration* page, click the *Memos* button in the middle of the String Configuration section.
2. Click the *Memo List* tab.
3. Select the memo to delete. The associated values of the selected memo appear in the Details tab.
4. Click *Delete*.

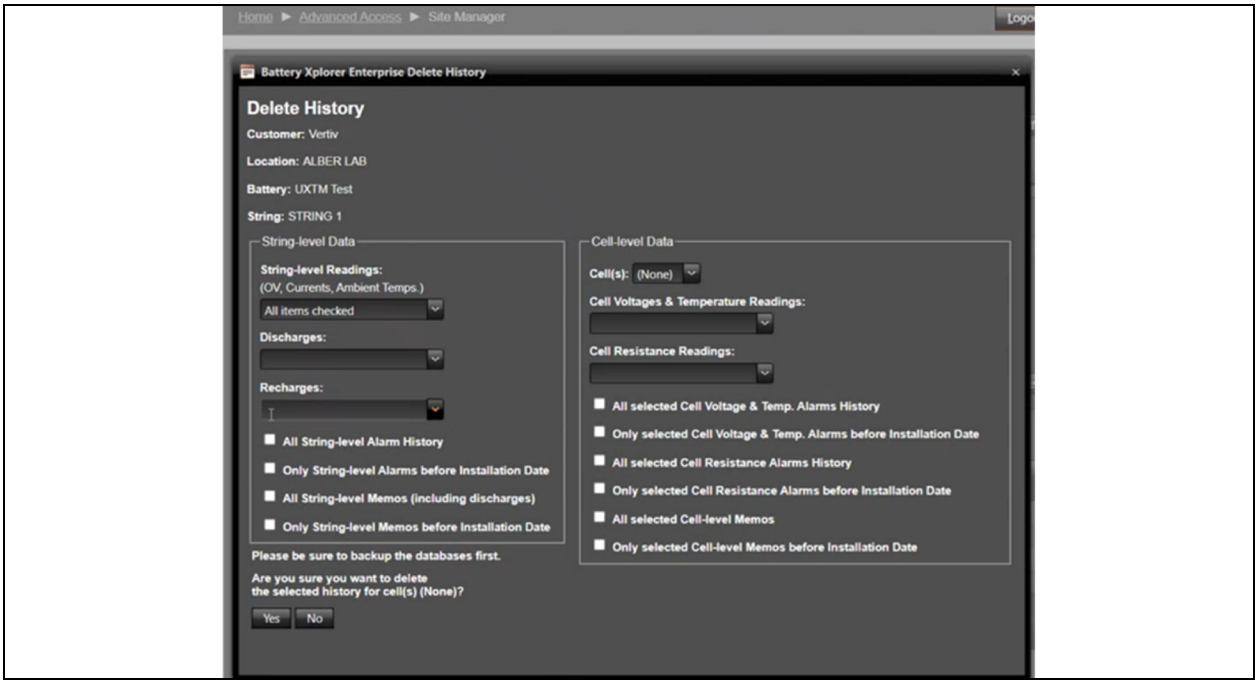
To configure the cell alarms:

Refer to Cell Alarms on page 47 to define the threshold values for the cell alarms.

To delete string history:

1. From the *Advanced Access – Site Manager – String Configuration* page, click the *Delete History* button, and a new window appears.

Figure 2.30 Delete History

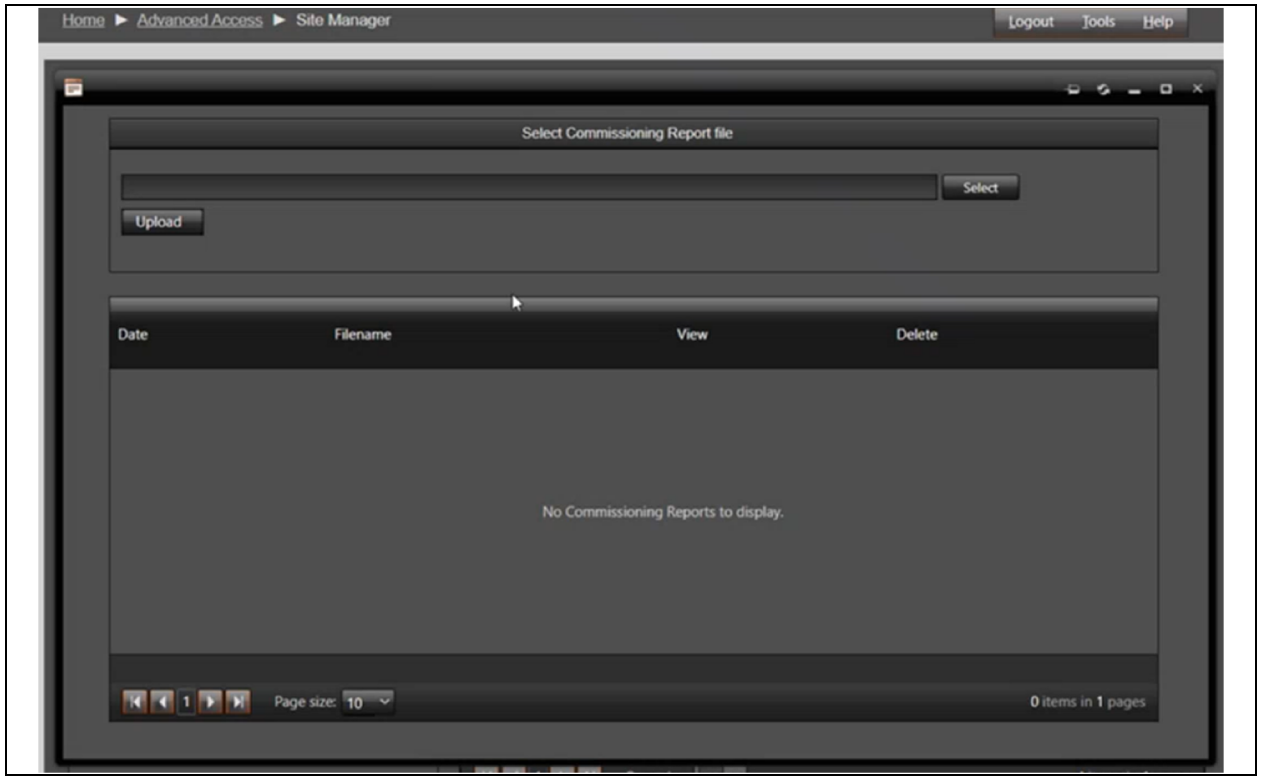


2. In the String-level Data and Cell-level Data sections, use the drop-down menus to select the appropriate values for the provided fields.
3. Check the boxes for the items you wish to remove from the string history.
4. Click the *Yes* button at the bottom of the page.

To upload the commissioning report:

1. From the *Advanced Access – Site Manager – String Configuration* page, click the *Commissioning Report* button, and a new window appears.

Figure 2.31 Commissioning Report



2. Click *Select*.
3. Browse to and select the appropriate file, then click *Open*.
4. Click *Upload*.

String Alarms

Once the device is configured with Albér BXE software, the software automatically retrieves the alarm value, alarm type, and default threshold values from the configured device. These values are reflected in the web UI.

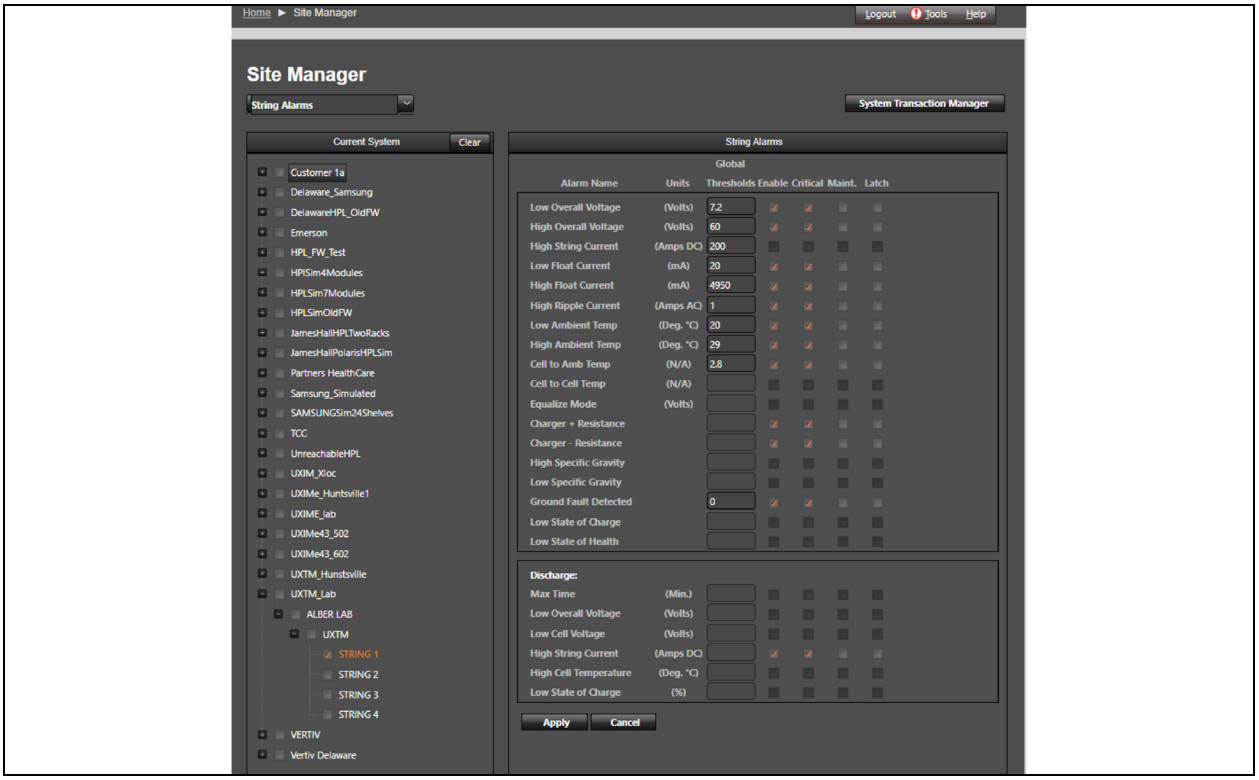
NOTE: It is mandatory to send alarm value and alarm setting or mandatory fields information to device.

To modify the string alarms:

1. From the Home page, select *Advanced Access – Site Manager*, then use the drop-down menu to select *String Alarms*.
2. From the left-hand side, select the applicable string to change the string alarms for the Albér BXE software.

NOTE: One setting can be applied at a time.

Figure 2.32 String Alarms



3. The String Alarms section on the right-hand side contains two sub-sections: Global and Discharge. For both sub-sections, select the appropriate checkbox below the Enable, Critical, Maintenance and Latch columns for the associated string parameter listed in the Alarm Name column.
4. Click *Apply*. A Settings applied message appears.

Cell Alarms

Once the device is configured with Albér BXE software, the software automatically retrieves the alarm value, alarm type, and default global threshold values from the configured device. These values are reflected in the web UI.

NOTE: It is mandatory to send alarm value and alarm setting or mandatory fields information to device.

To modify the cell alarm:

1. From the Home page, select *Advanced Access – Site Manager*, then use the drop-down menu to select *Cell Alarms*.
2. From the left-hand side, select the applicable string to modify the cell alarms for the Albér BXE software.

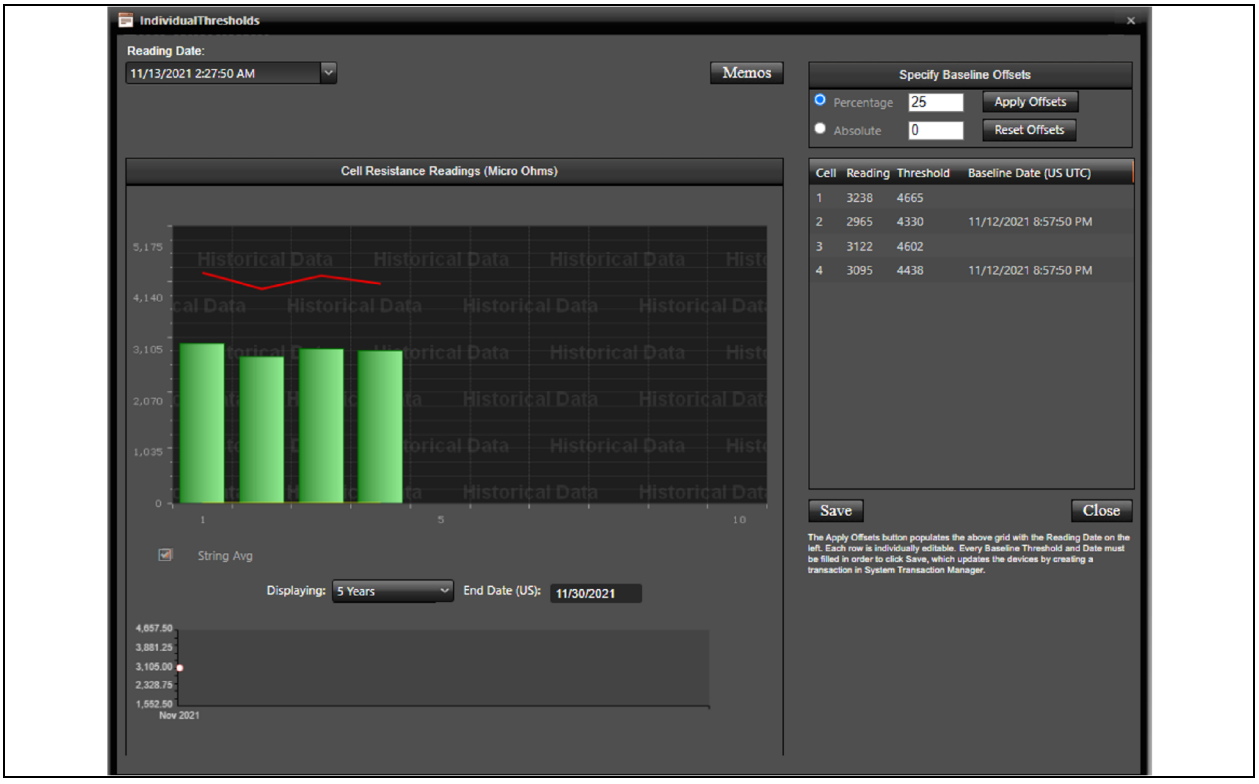
Figure 2.33 Cells Alarms

3. In the Cell Alarms section, select the appropriate checkbox below the Enable, Critical, Maintenance and Latch columns for the associated string parameter listed in the Alarm Name column.
4. Click *Apply*.

To navigate the Individual Threshold column:

1. From the Individual Thresholds column, select the checkbox and then click the *Edit* button. The Individual Thresholds page will appear. For more information, see Figure 2.34 on the facing page.

Figure 2.34 Individual Thresholds



2. From the Individual Threshold page, you can get such as cell number, cell reading, and threshold value.
3. Hover the mouse over the cell on the graph. It will show the details of Cell ID, Resistance, High threshold, Low threshold, High Delta and Low Delta.
4. From the Memos tab, you can create a new memo and see the list of memos. For more information, see Site Manager on page 36.
5. From the Displaying field, select the frequency from the drop-down menu and enter the end date to know the cell reading. The Cell Reading graph will appear.
6. Click the checkbox to know the string average of cell reading.

To change the Individual Threshold column:

1. To change the Individual Threshold value, enter the percentage, and select the reading date from the left side.
2. After selecting the reading date, Albér BXE considers it as a baseline and shows in the Baseline date (US UTC) column.

NOTE: The Apply Offsets button populates the above grid with the Reading Date on the left. Each row is individually editable. Every Baseline Threshold and Date must be filled in order to click *Save*, which updates the devices by creating a transaction in System Transaction Manager. For more detail, see System Transaction Manager on page 51.

NOTE: The red tag appears when you edit the fields in the table; when you click *Save Cells*, the flag disappears from the fields.

3. Click *Apply Offset*.
4. Click *Save*.

Log & Test Schedules

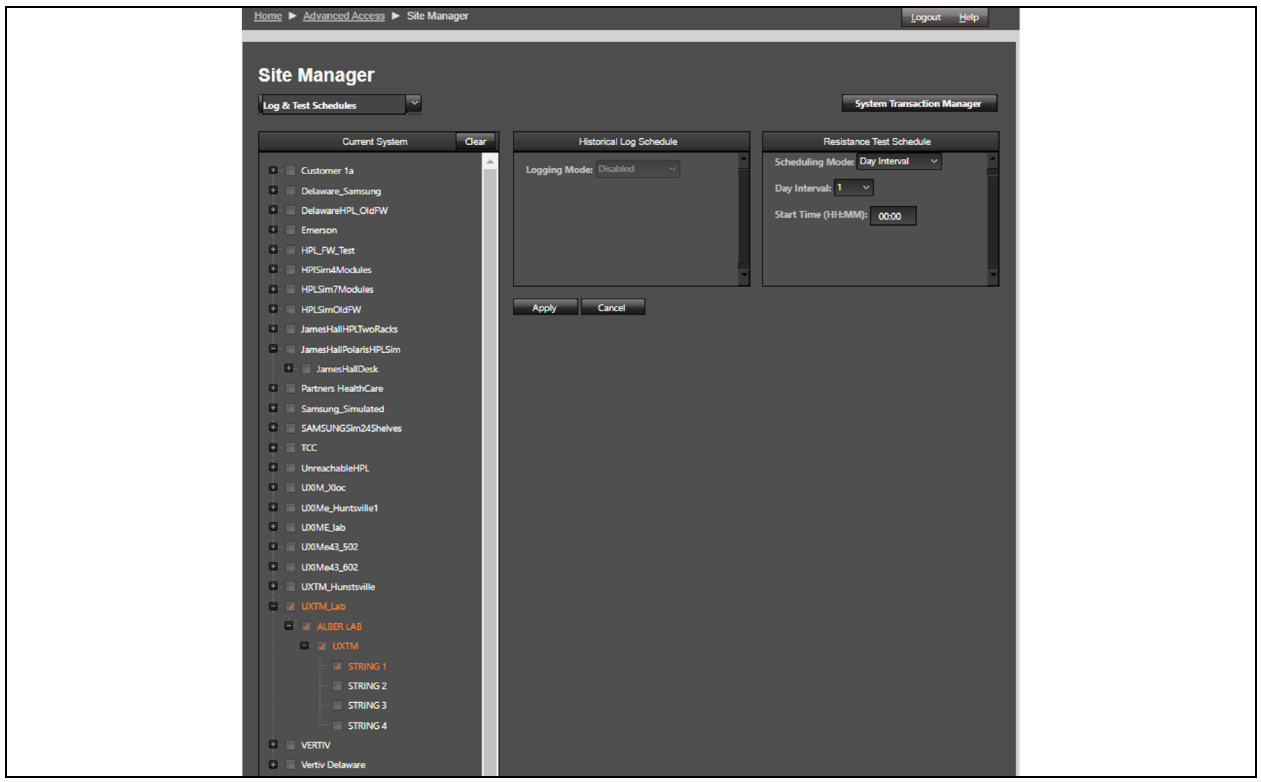
To navigate through the Log & Test Schedules page:

From the *Home - Advanced Access – Site Manager* page, use the drop-down menu to select *Log & Test Schedules*. Use the Current System section to select the applicable string you wish to modify.

NOTE: One setting can be applied at a time.

NOTE: The Historical Log Schedule section is only for the device.

Figure 2.35 Log & Test Schedules



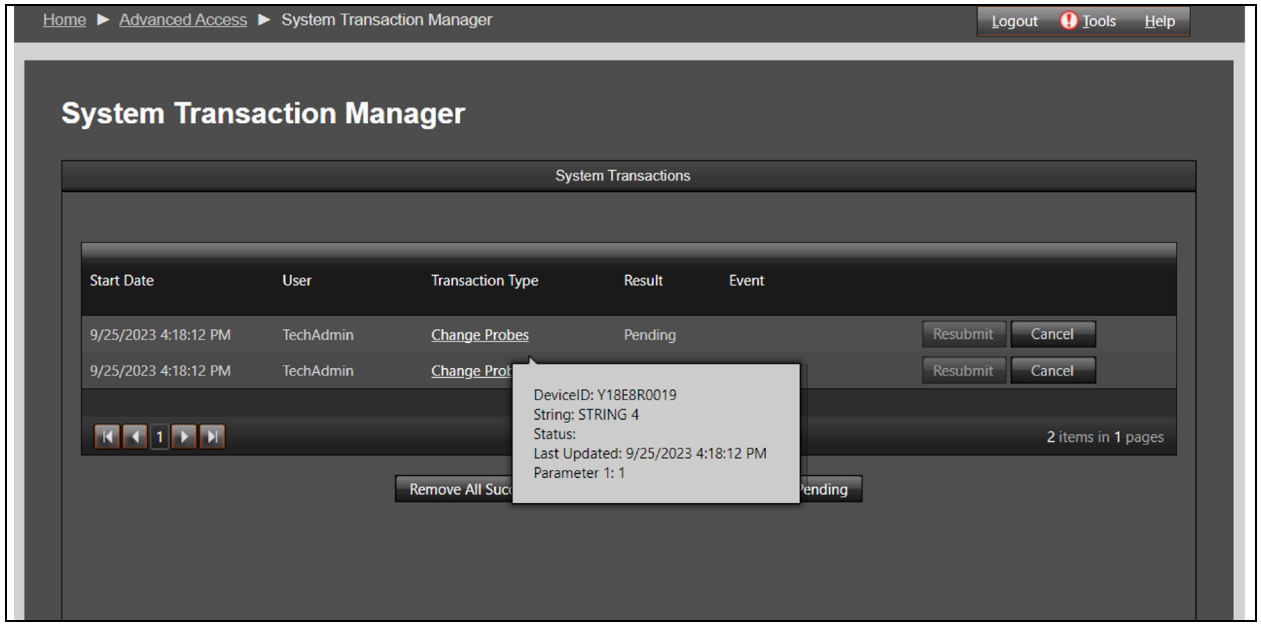
To configure the resistance test scheduling:

1. From the *Home - Advanced Access – Site Manager - Log & Test Schedules*, locate the Resistance Test Schedule section.
2. Use the drop-down menu to select the scheduling mode and the interval frequency which the test will run.
3. Enter the start time for the test to run for a specific period of time.
4. Click *Apply*.

2.6.3 System Transaction Manager

From the System Transaction Manager page, user can view the list of all commands initiated in the Albér BXE software. The page details the start date, transaction type, and result of the commands, as well provides user and other parameter information. Possible command results are Pending, Failure, or Success.

Figure 2.36 System Transaction Manager



To navigate through the System Transaction Manager page:

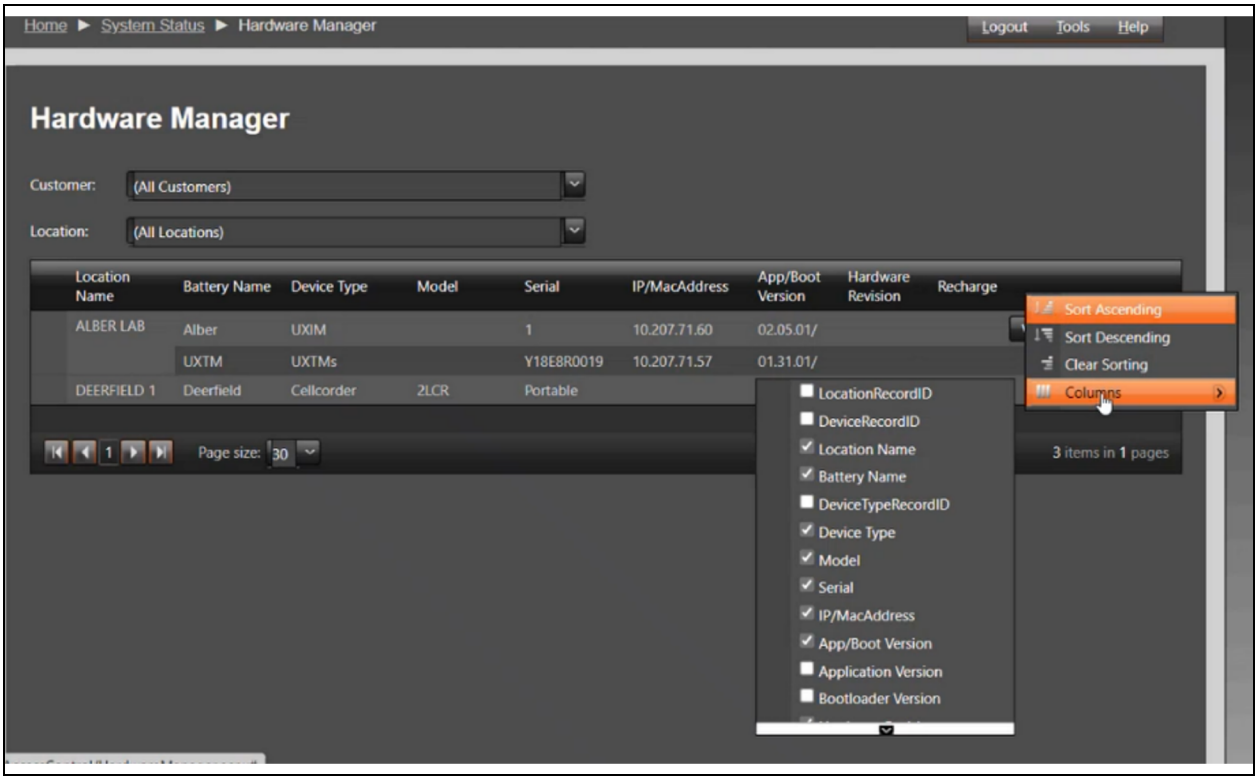
From the Home page, select *Advanced Access - System Transaction Manager*. Users can perform the following functions:

- View the additional parameter information by hovering the mouse over the Transaction Type entry of the specific command in the table. A pop-up window appears that highlights additional command parameters. For more information, see Figure 2.36 above.
- Cancel and resubmit the command by clicking the Resubmit button next to the appropriate command.
- Remove the System Transaction Manager Log with one of the three available options:
  - Remove All Success: This option allows the user to remove all the Successful Transactions by clicking on this option.
  - Remove All Failure: This option allows the user to remove all the Failed Transactions by clicking on this option.
  - Remove All Pending: This option allows the user to remove all the Pending Transactions by clicking on this option.

2.6.4 Hardware Manager

The Hardware Manager page provides general hardware information.

Figure 2.37 Hardware Manager



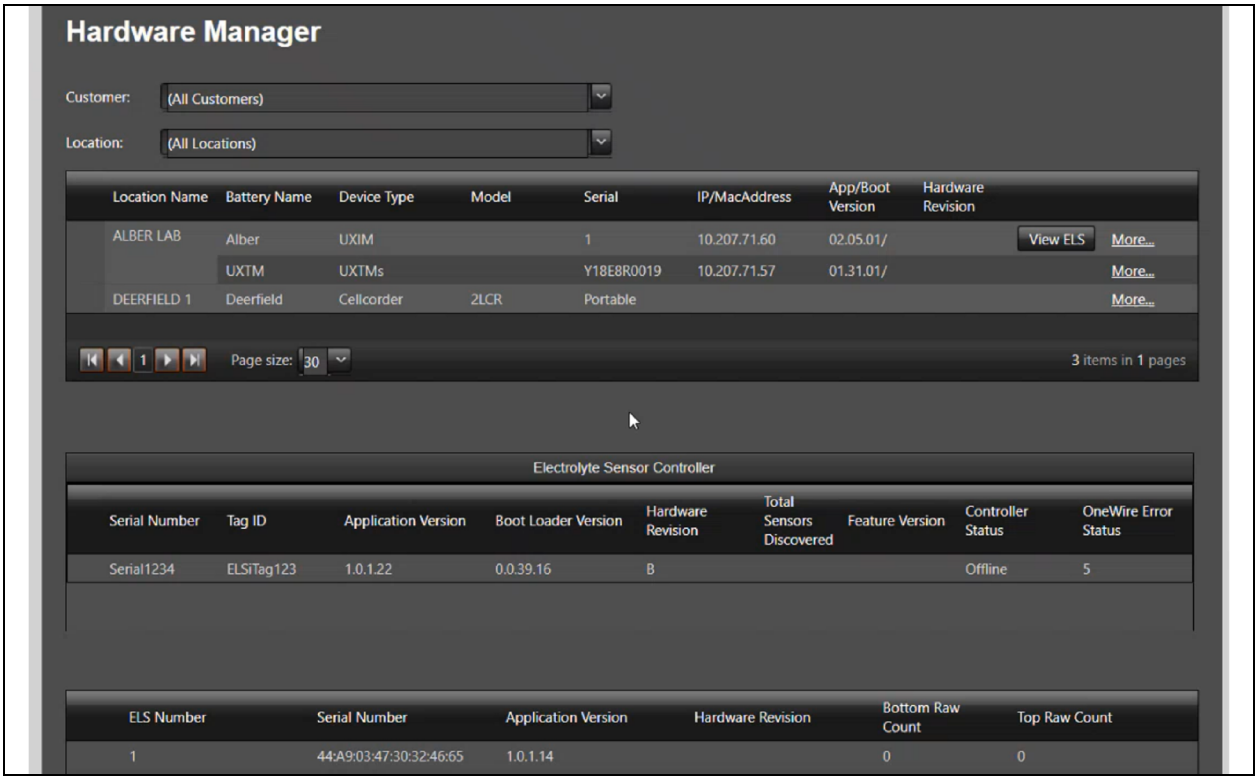
To navigate through the Hardware Manager page:

From the Home page, select *Advanced Access – Hardware Manager*. Users can perform the following functions:

- Filter the string information by customer name and location by using the drop-down menu. After the filter is applied, the details appear in the table.
- View the battery location, name, device type, model, serial number, IP or mac address, app or boot version, hardware revision and recharge.
- Monitor the charging matrix by clicking the checking the box to enable the recharge mode.
- Add or delete columns by right-clicking the Column heading and hovering the mouse over the Columns option.
- View the monitor status, port number, general description, and detailed description by selecting the More... option.
- View the Vertiv™ Albér™ Electrolyte Level Sensor (ELS) controller and individual sensor information if the Vertiv™ Albér™ Universal Xplorer Industrial Monitor (UXIME) Battery Monitoring System is integrated with the module. For more information, see Figure 2.38 on the facing page on the next page.

NOTE: The Vertiv™ ELS monitors the electrolyte level from the cell or battery cabinet.

Figure 2.38 Vertiv™ Albér™ ELS Controller and Individual Cell



2.6.5 Notification Manager

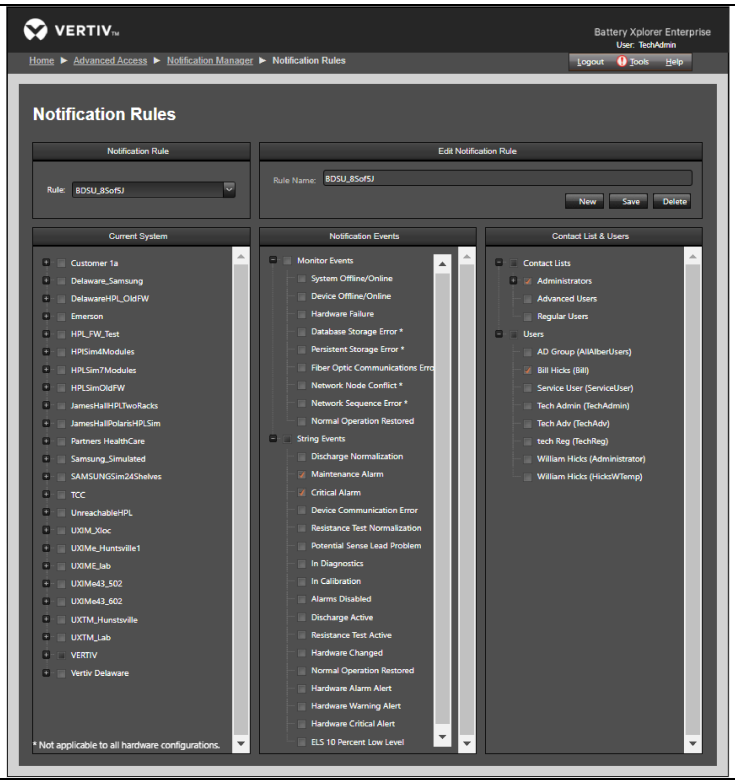
The Notification Manager page allows the user to configure notifications to be sent for status change alerts.

NOTE: This setting is not applicable to all hardware configurations.

To set a new notification rule:

1. From the Home page, select *Advanced Access – Notification Manager*.
2. Select *Notification Rules* to define a new rule.
3. Use the drop-down menu to select the *New Item*, then enter the rule name.
4. Under the Current Systems heading, select the appropriate string or all systems list for the desired email notifications.
5. Under the Notification Events heading, select the appropriate events for which you want to create a notification rule.
6. Select the appropriate user and contact by selecting the checkbox, then click *Save*. For more information, see Figure 2.39 on the next page.

Figure 2.39 Notification Rules



7. From the Rule drop-down menu, select the rule you just saved and verify your selections are correctly saved.

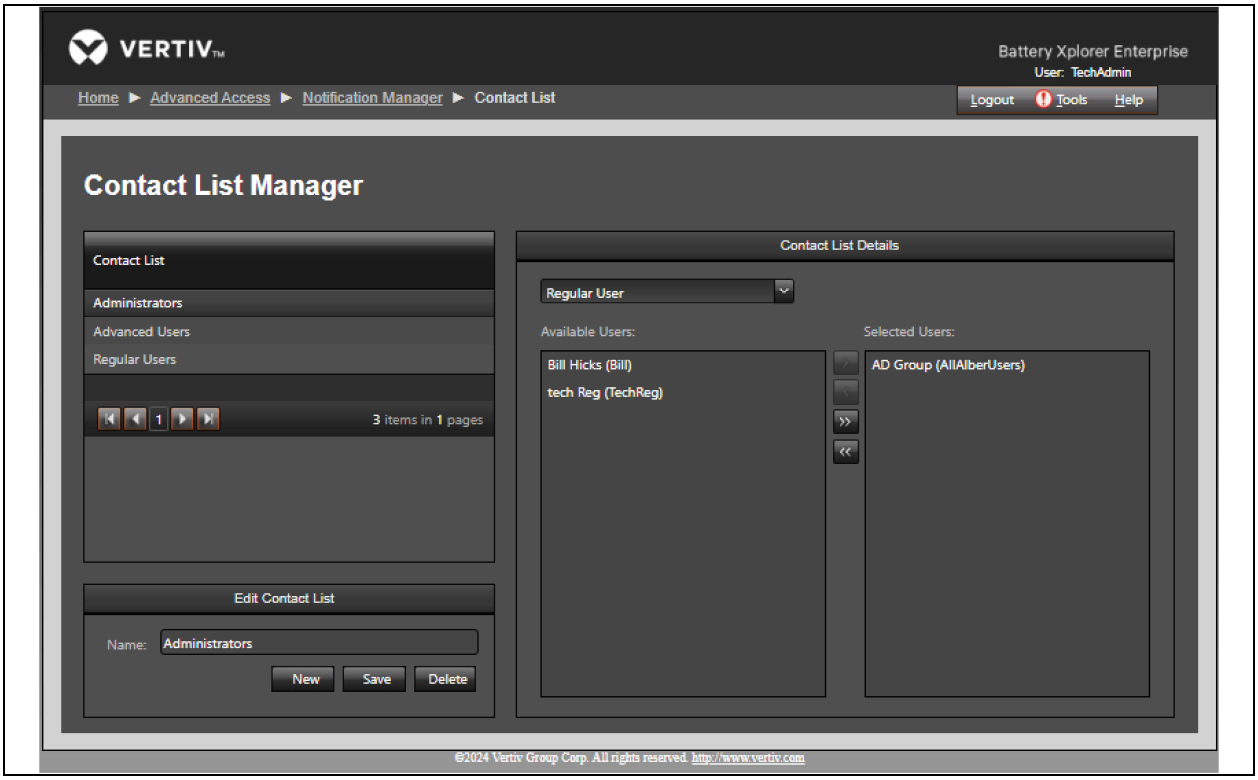
NOTE: Under the String Events option under Notification Events, if the ELS 10 Percent Low Level checkbox is selected, the alarm alert will only be sent after a minimum of 10% of the total number of active alarms.

NOTE: Before sending the alarm notification, you must first configure the SMTP server using the Albér BXE software to send the notification. For more information, see Email Server Manager on page 67.

To modify the contact list:

1. From the Home page, select *Advanced Access – Notification Manager*.

Figure 2.40 Contact List Manager



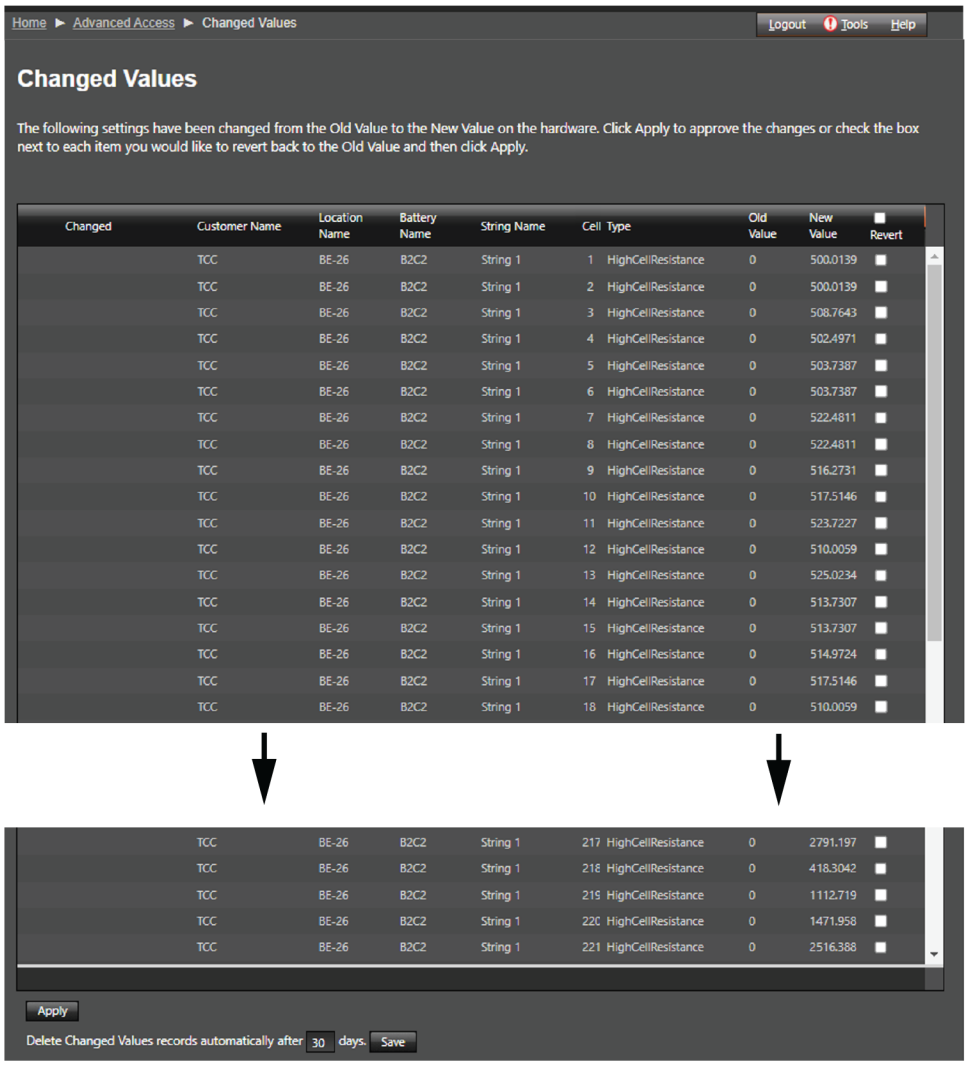
2. Under the Contact List Details section, use the drop-down menu to select the user type you want to modify.
3. As per selection, the list of available users will be displayed under the Available Users portion.
4. Select the username you want to move from the Available Users portion and click the *Move* button to shift to the Selected Users area.
5. Use the drop-down menu to select the user type where you want to move the user.
6. Click the *Move* button to shift the users to the Available Users portion.
7. From the Edit Contact List section, you can create a new user. For more information, see User Manager on page 58.

2.6.6 Changed Values

To navigate through the Changed Values page:

1. From the Advanced Access page, select *Changed Value*.
2. From the Changed Values page, the user can see any alarm threshold changes made using the configurator tool rather than the Albér BXE software. In such case, the user monitoring from the Albér BXE software will have a choice to accept or reject such changes.

Figure 2.41 Changed Values



3. Click *Apply* to accept the changes.
4. Click on the checkbox next to each item you would like to revert to the Old Value.
5. Click *Apply*.

To delete the Changed Values records:

1. From the Home page, select *Advanced Access – Changed Values*.
2. At the bottom of the screen, define the number of days to delete the older changed value data.
3. Click *Save*.

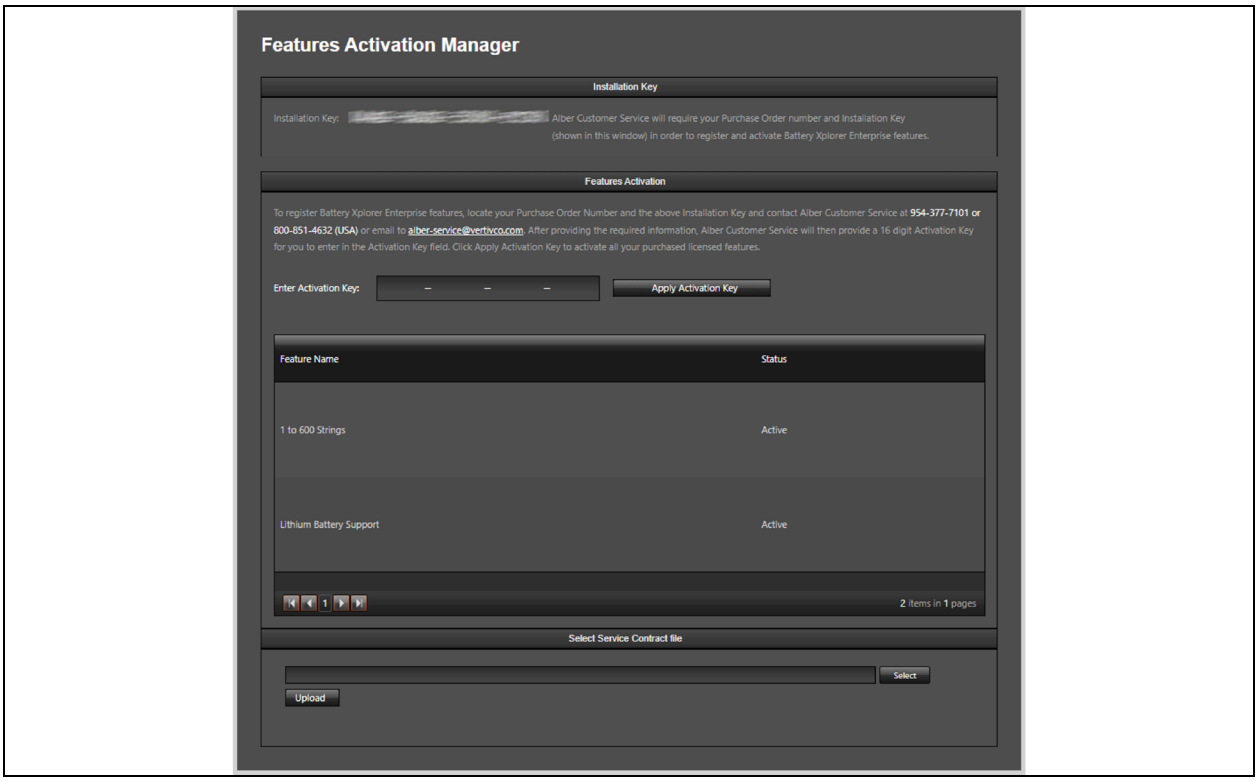
2.6.7 Features Activation Manager

From the Features Activation Manager page, users can contact Vertiv Customer Service or tech support to know the activation key and feature which they have purchased.

To activate Albér BXE Software and their features:

1. From the Advanced Access page, select *Features Activation Manager*.
2. From the Features Activation Manager page, users can view the Installation Key and Feature Activation instructions. Users must then locate their Purchase Order to register the Albér BXE features. For assistance contact Albér Customer Service at 954-377-7101 or 800-851-4632 (USA) or email to monitoring.support@vertivco.com.
3. Albér Customer Service will issue a 16-digit Activation Key. Enter the Activation Key in the field.
4. Click *Apply Activation Key*. The key will be activated, and the user can see the list of corresponding activated licenses in the following table. For more information, see Figure 2.42 below.

Figure 2.42 Features Activation Manager



To upload the Service Contract File:

1. From the Home page, select *Advanced Users – Features Activation Manager*.
2. On the Features Activation Manager page, click *Select*.
3. Browse the file from your local drive and click *Open*.
4. Click *Upload*.

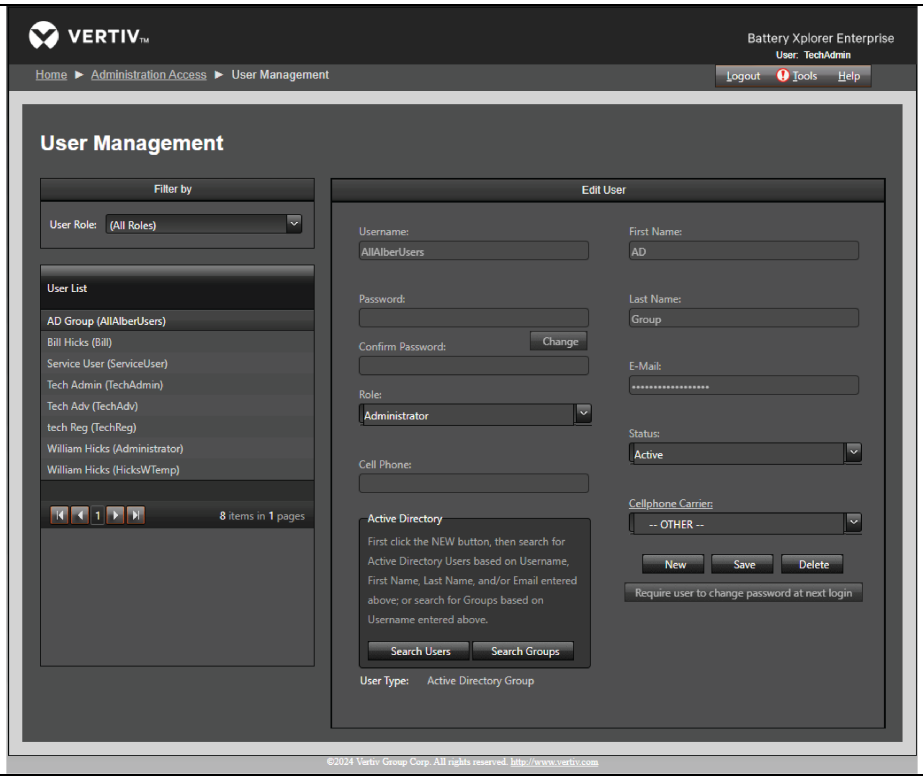
2.7 Administration Access

The Administration Access page allows the user to configure the Albér BXE software with the highest level of all access.

2.7.1 User Manager

From the User Management page, an administrator can add and remove users, as well as activate, deactivate, or limit the access of existing users to the Albér BXE software.

Figure 2.43 Overview of User Management Page



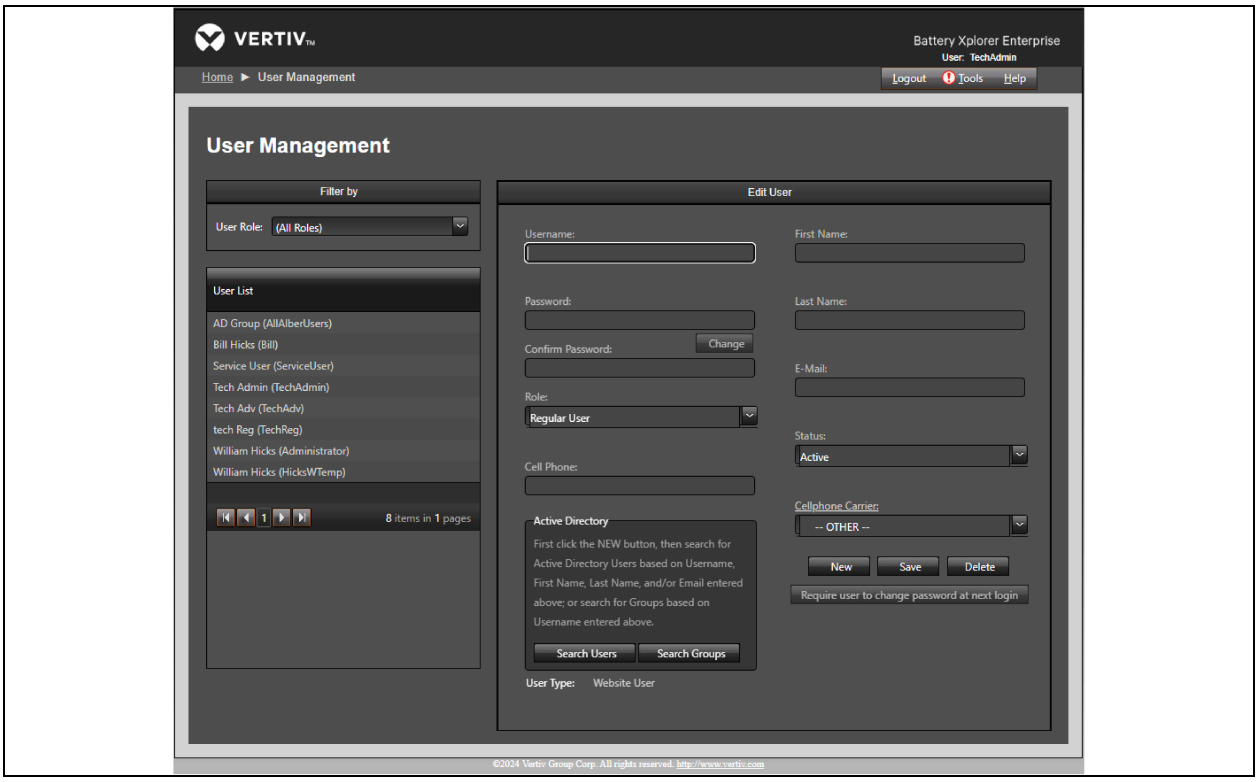
From the Home page, click *Administration Access – User Management*. User can perform the following functions:

- View a list of existing users under the User List on the left-hand panel.
- Filter user roles by using the User Role drop-down menu in the Filter by section. The results display under the User List.
- Add, delete, or edit the existing user under the Edit User section.

To add a new user:

1. From the Home page, click *Administration Access – User Management*.
2. On the User Management page, click *New*. A blank page is provided with editable fields for creating a new user under the Edit User heading.

Figure 2.44 Overview of User Management Page for Adding New User



3. Enter the username, first name, last name, e-mail, password, and confirm the password.
4. Use the Role drop-down menu to select the appropriate role: *Administrator, Advance User, Regular User, or Service User*.

NOTE: If the user has agreed to a service account, then the Vertiv Services team can create an individual account on the server to allow the user to immediately log into the software.

5. Use the Status drop-down menu to select the status: *Active* or *Inactive*.

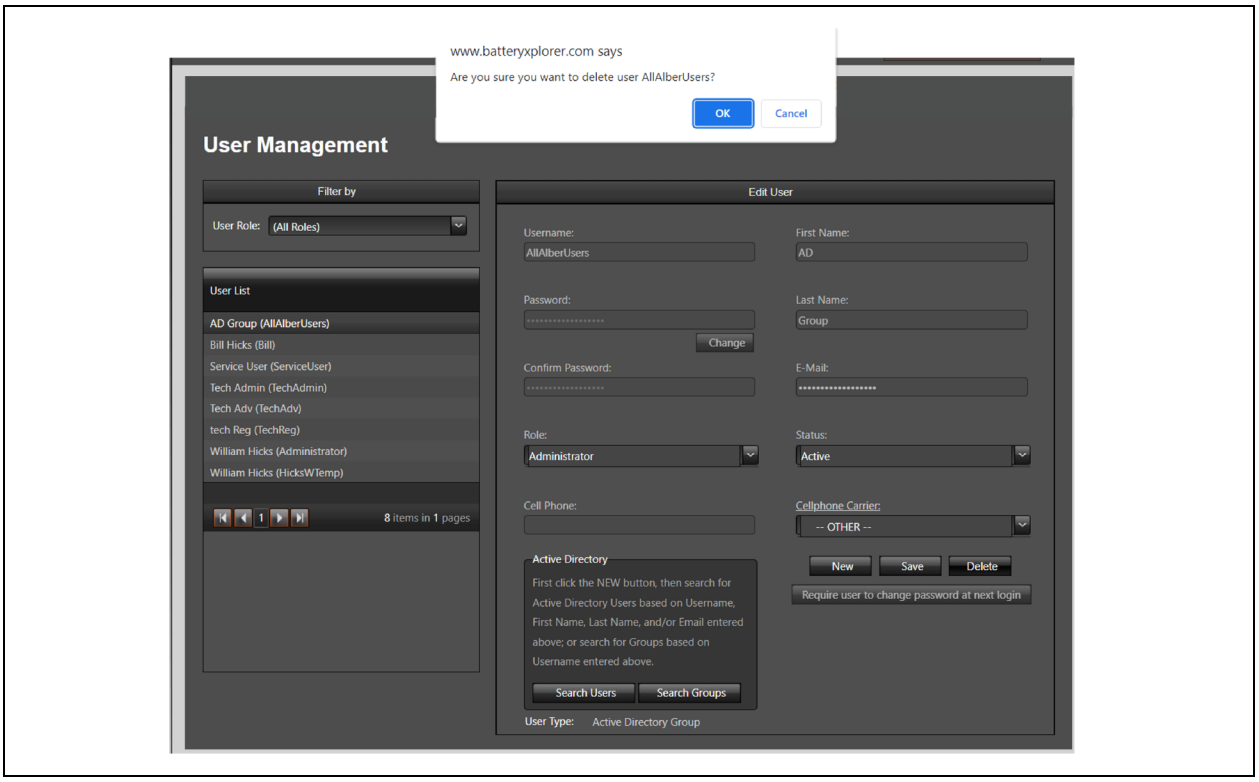
NOTE: To temporarily suspend any user account, select *Inactive*.

6. Enter the cell phone number in the Cell Phone field and select the applicable Cellphone Carrier by using the drop-down menu.
7. Click *Save*.

To delete a user:

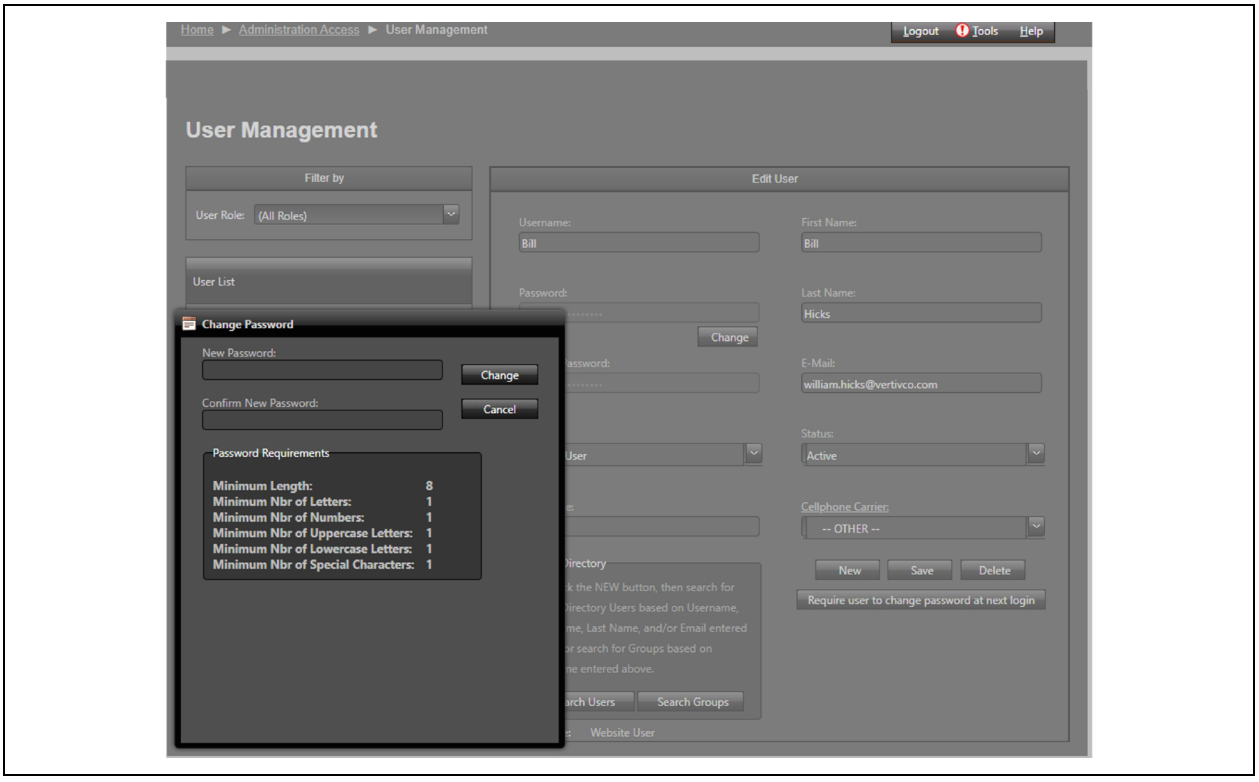
1. From the Home page, click *Administration Access – User Management*.
2. Select the appropriate user you want to delete from the User List.
3. Click *Delete* under the Edit User.
4. On the confirmation window, select *OK*.

Figure 2.45 Overview of User Management Page for Deleting a User



To change a user password:

Figure 2.46 Overview of User Management Page for Changing Password



1. From the Home page, click *Administration Access – User Management*.
2. Click the *Change* button below the Password field. The Change Password window will appear.
3. Enter the password in the New Password and Confirm New Password fields as per password requirements.

NOTE: BXE administrator can define the password complexity requirents. For more details, refer to the Two Factor Authentication on page 70.

4. Click the *Change* button.

NOTE: If user have their own strong password or if the user want to change their password at the next login, then click the *Require user to change password at next login* button.

Active Directory (AD)

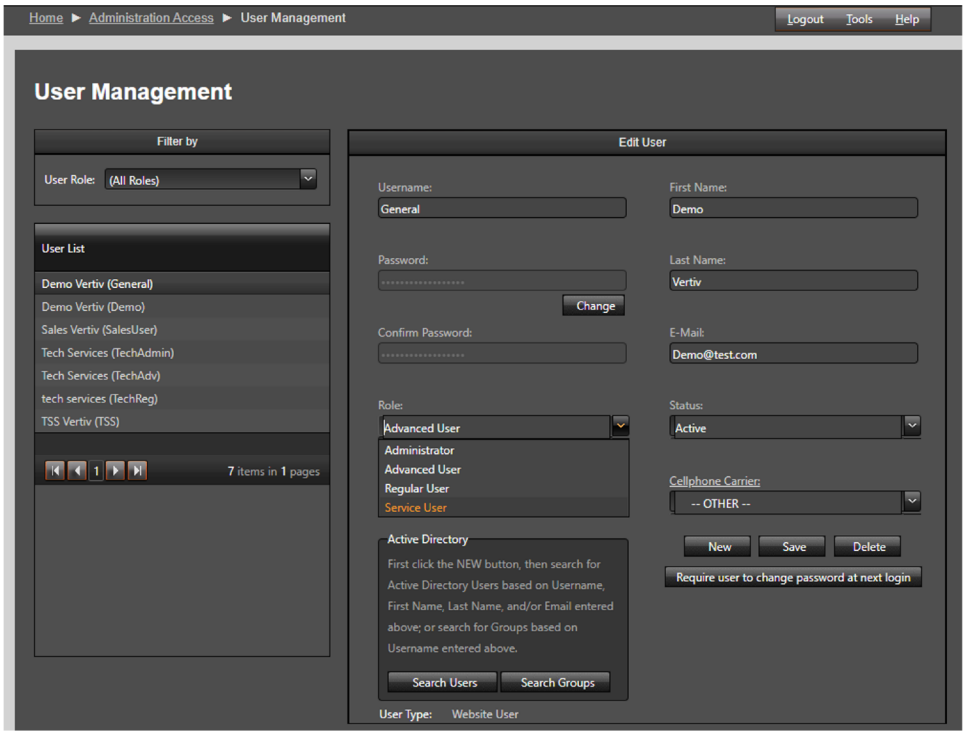
User needs to configure the AD server from Administration - Active directory manager, prior to adding AD users in BXE. Refer to Active Directory on page 69 for more details.

NOTE: Users can perform user-based or group-based searches within the Active Directory.

To provide access to users through the Active Directory:

1. From the Home page, click *Administration Access – User Management*.
2. On the User Management page, click *New*, then fill in the applicable fields in the Edit User section.

Figure 2.47 Active Directory



3. To search by the users, enter the Username, First Name, Last Name, and/or E-mail. Click *Search Users* under the Active Directory.

   -or-

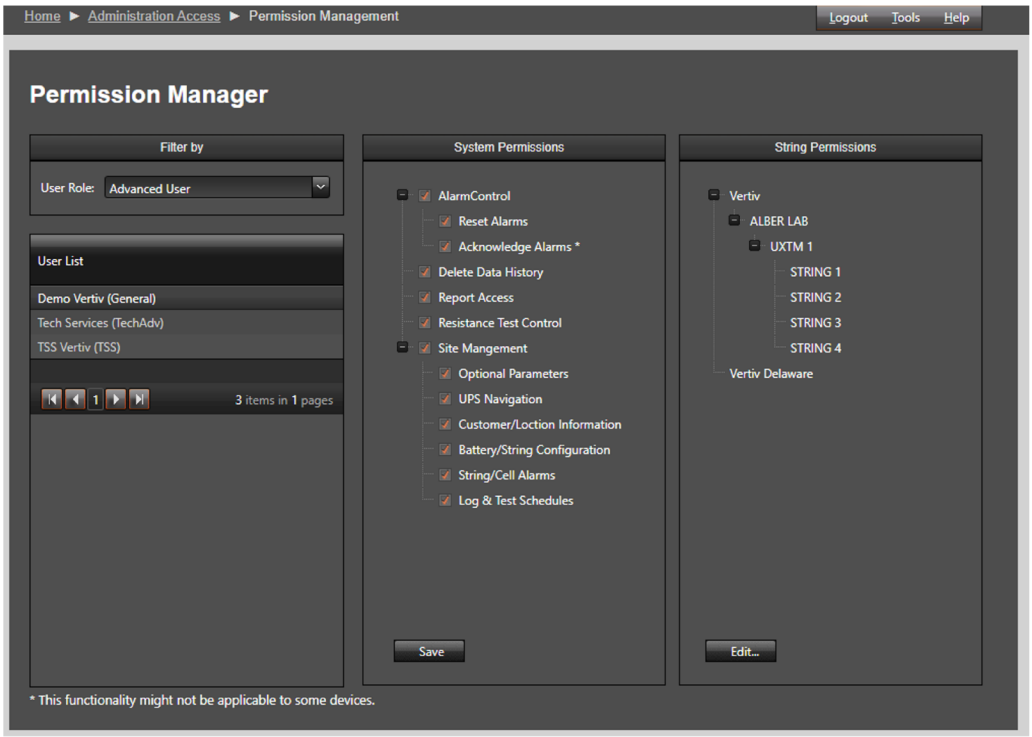
   To search by the groups, enter the Username and click *Search Groups* under the Active Directory. For more information, see Figure 2.47 above.

2.7.2 Permission Management

The Permission Manager page allows an administrator to delegate permissions to users. Permissions are created on the User Management page. For more information, refer to User Manager on page 58.

To navigate through the Permission Manager:

Figure 2.48 Permission Manager



From the Home page, click *Administration Access – Permission Management*. The user can perform the following functions:

1. View a list of existing users under the User List on the left-hand panel.
2. Filter user roles by using the User Role drop-down menu in the Filter by section. The results display under the User List.
3. Assign system access to users by checking the box next to the desired permission under the System Permissions heading.

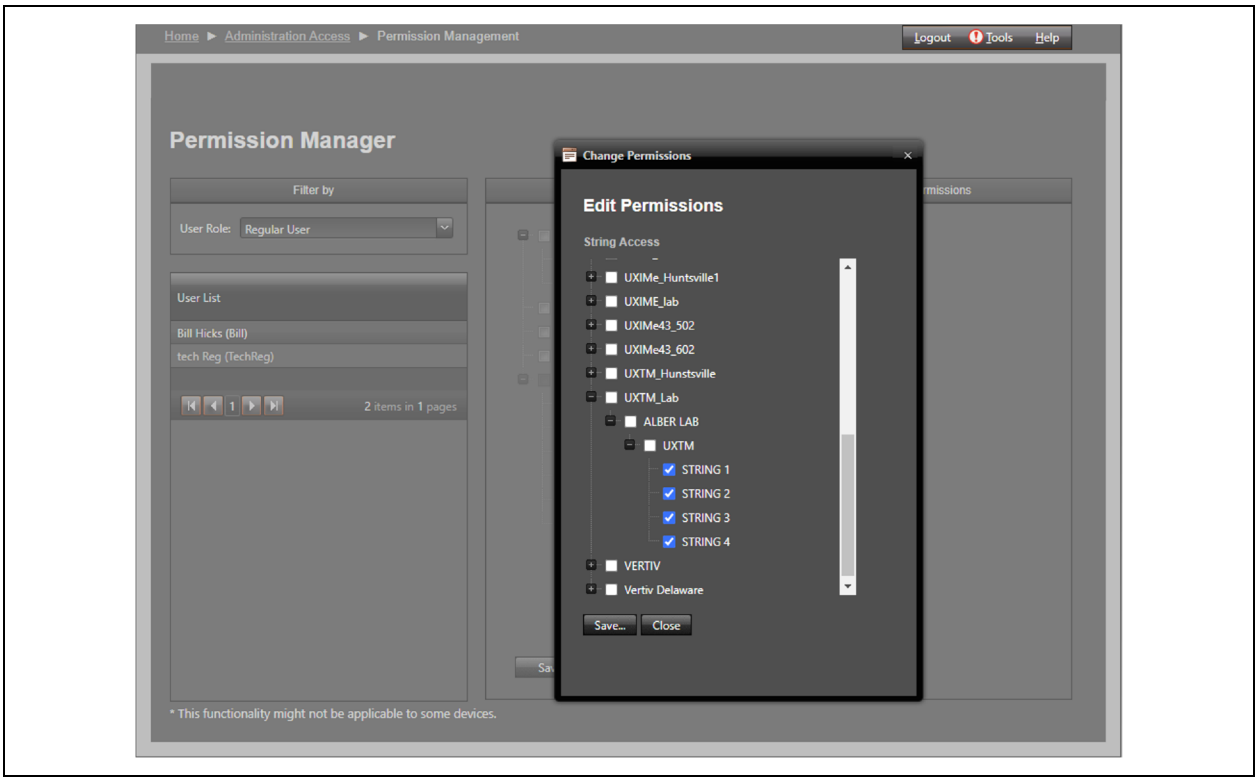
NOTE: Only advanced and administrator users have access to the Site Management permissions under the System Permissions heading.

4. Assign access to the desired string permissions for users by clicking the *Edit* button under the String Permissions heading.

To assign permissions to the user:

1. From the Home page, click *Administration Access – Permission Management*.
2. Select the user from the User List on the left-hand side panel.
3. Click the *Edit* button under the String Permission section. The Change Permissions window appears. For more information, see Figure 2.49 on the next page.

Figure 2.49 Change Permissions



4. Click the plus *(+)* sign next to the customer name to expand the menu, then select the desired string.

   -or-

   Select the checkbox next to the customer name, location name or battery name, and string which you want to give permission to the user.

5. Click *Save*.

NOTE: Once saved, a message will appear to indicate the user permissions were successfully saved.

6. Click the *Close* button to close the Change Permissions window.

NOTE: The selected string will now be displayed under the String Permissions section. For more information, see Figure 2.48 on the previous page.

7. Under the System Permissions section, click the checkboxes next to the desired permissions to provide access to the selected user. For more information, see Figure 2.48 on the previous page.
8. Click *Save*.

NOTE: Some devices may not support the Permission Manager functionality.

2.7.3 Albér BXE and Microsoft SQL Server Database Backup Manager

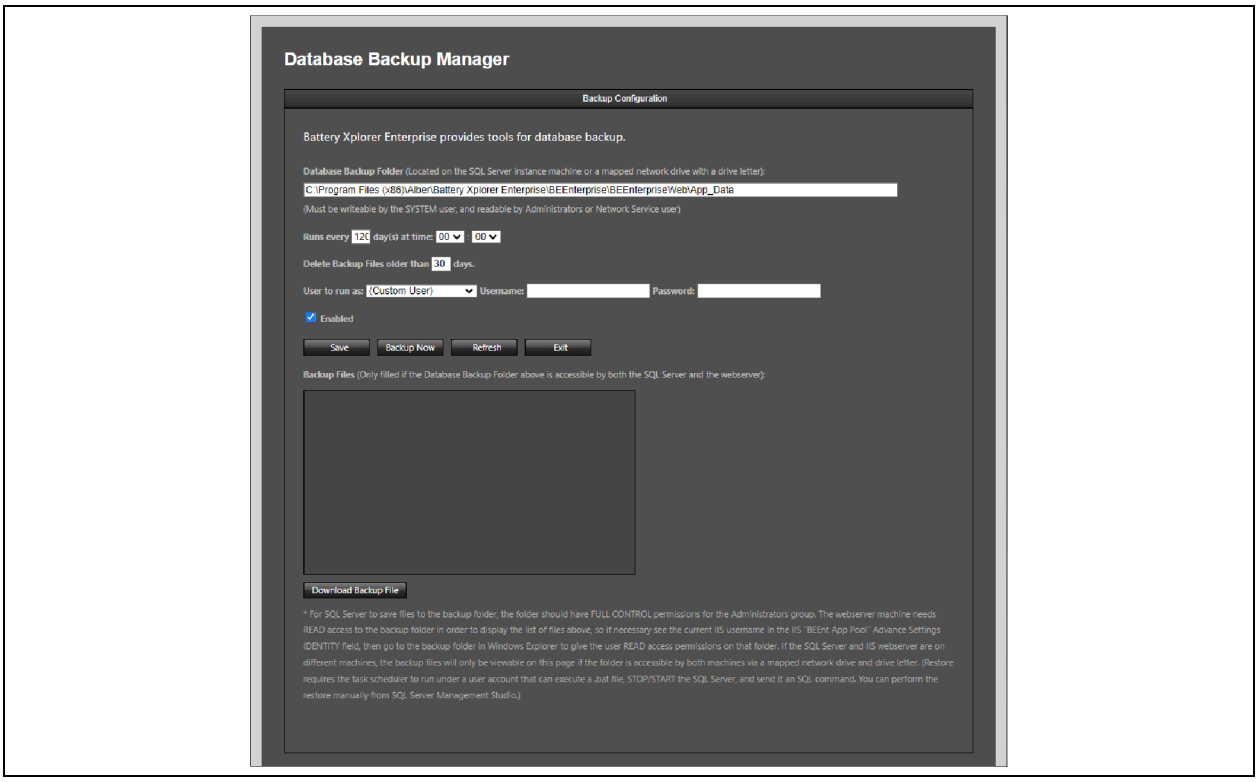
The Database Backup Manager page allows the user to perform occasional backups and restorations of the databases via the Albér BXE Database Backup Manager or the SQL Server Management Studio. It is recommended to perform backups of the Albér BXE data periodically to secure the databases in case data restoration is required.

NOTE: For the Albér BXE software web UI to perform the backup, both the web component and the database must be installed on the same server.

To back up the database using the Albér BXE Database Backup Manager:

1. From the Home page, click *Administration Access – Database Backup Manager*. This page displays a predefined path where the database backup is saved.
2. Enter the number of days and time to run the backup on a specific frequency.
3. Enter the number of days to delete older backup files on a specific frequency.
4. From the drop-down list, select the User to run as System, Local Service, Network Service, or Custom User. It is set to System by default.
5. When a Custom User is selected, the screen reloads with the Username and Password input test box.
6. Enter the Username and Password.
7. Check the Enabled checkbox.
8. Click *Save* to apply the changes. A message appears in green stating the Database backup configuration successfully saved. For more information, see Figure 2.50 on the next page.
9. Click *Backup Now*, then wait a few seconds and click *Refresh*.
10. The backup files are now listed in the Backup Files section. The files are located in the indicated path. For more information, see Figure 2.50 on the next page.

Figure 2.50 Database Backup Manager



To back up the database using the Microsoft SQL Server Management Studio:

1. Connect to the Albér BXE SQL server instance.
2. In the navigation tree, expand the Databases section.
3. Right-click *BEEnterprise* and select *Tasks - Backup*.
4. When the next window appears, define the full path of the destination file, then click *OK*.
5. Once the backup is complete, click *OK* again.
6. Retrieve the file from the path defined in Step 4 and repeat the process for the BEEnterprise History database.

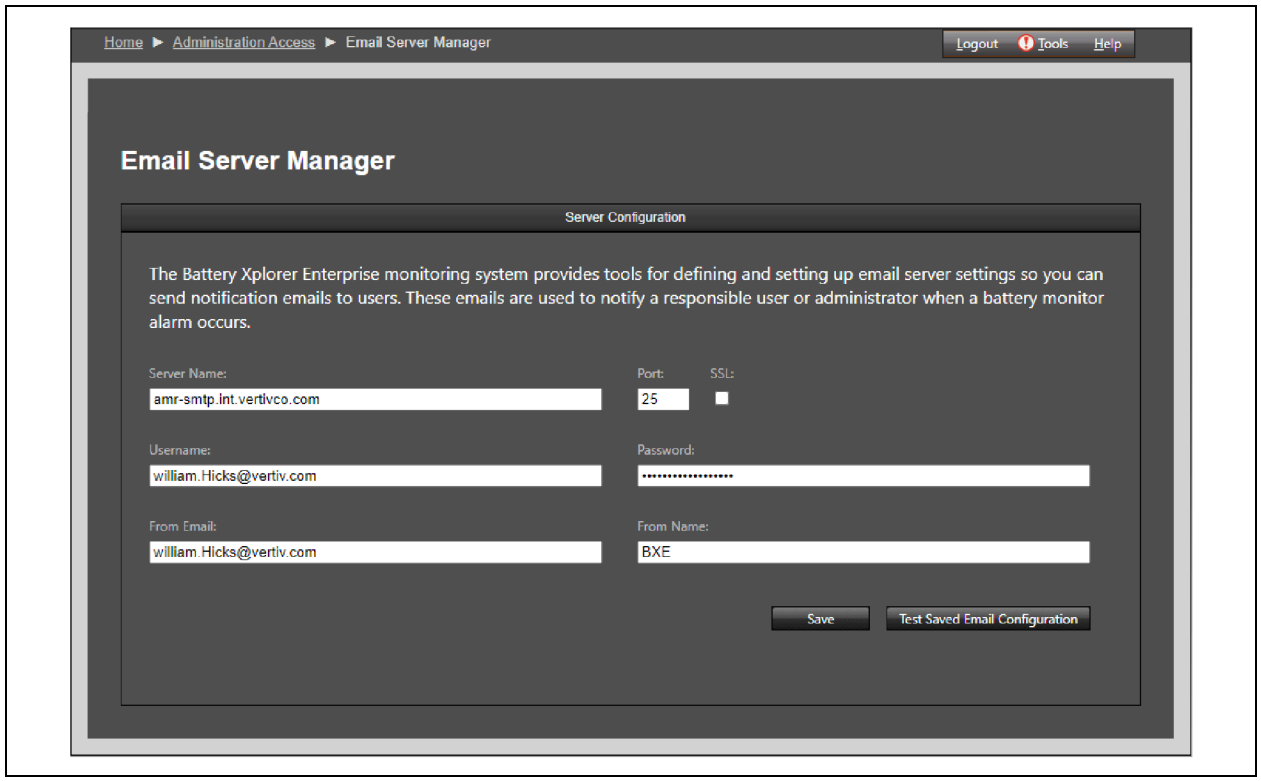
2.7.4 Email Server Manager

The Albér BXE monitoring system provides tools for defining and setting up email server settings so Admin user can send notification emails to users. These emails are used to notify a responsible user or administrator when a battery monitor alarm occurs.

To configure the email server if a Windows server is used as an SMTP server:

1. From the Home page, click *Administration Access – Email Server Manager*.

Figure 2.51 Email Server Manager



2. Enter the following information to authenticate the email server:
   - **Server Name:** Enter the localhost name.
   - **Port:** Define the applicable port number.
   - **SSL:** Click the checkbox to enable or disable to SSL.
   - **Username:** Enter the name of the user.
   - **Password:** Enter the password.
   - **From Email:** info@BXE.com (enter information so that the user will know emails are from Albér BXE).
   - **From Name:** Enter name so that the user will know emails are from Albér BXE server.
3. Click *Save*.

NOTE: If the user is using an Albér BXE software-specific SMTP email server instead of corporate email servers, check the Junk or Spam folders in case these emails are filtered as spam.

NOTE: To possibly avoid the emails being categorized as spam, try having a domain name pointing to the web server IP address, then configuring it as Reverse DNS. This would allow the IP address to point back to the domain. Free downloads of Reverse DNS-type software to run on your web server should be available online.

NOTE: Contact your IT representative if you have questions regarding your email server.

To send a test email using an existing SMTP server:

1. From the Home page, click *Administration Access – Email Server Manager*.
2. Click the *Test Saved Email Configuration* and provide your email ID.

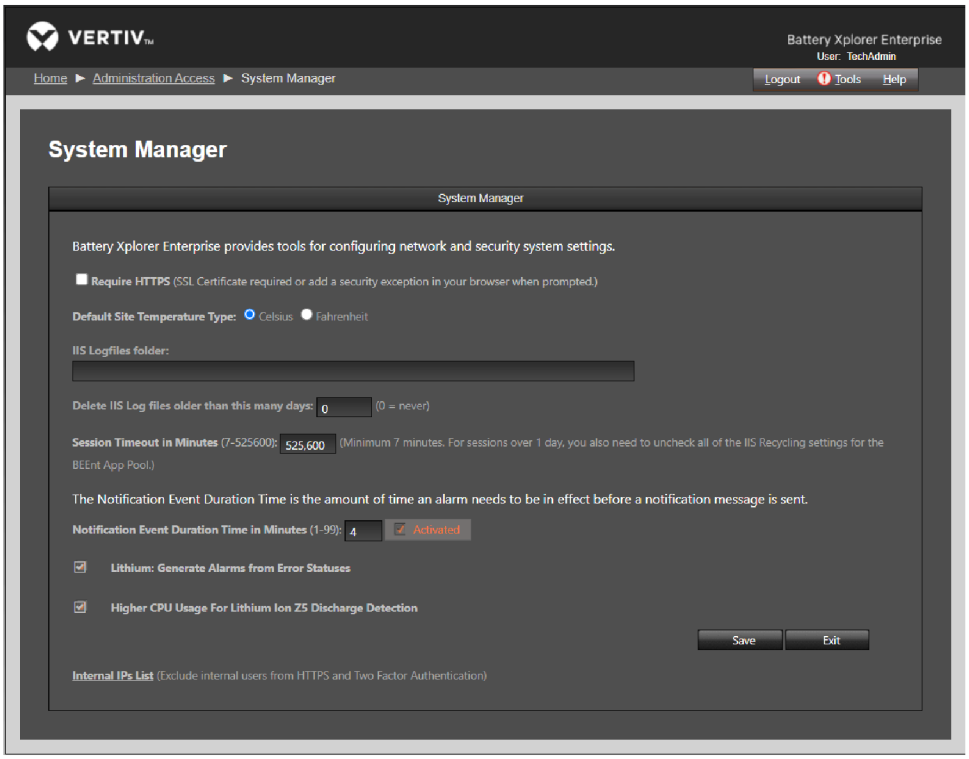
2.7.5 System Manager

The System Manager page allows administrators to customize the Albér BXE system configuration. Administrators can also configure network and security system settings, such as Active Directory (AD), HTTPS, alarm notification emails and so on.

To navigate through the System Manager page:

1. From the Administration Access page, select System Manager.

Figure 2.52 System Manager

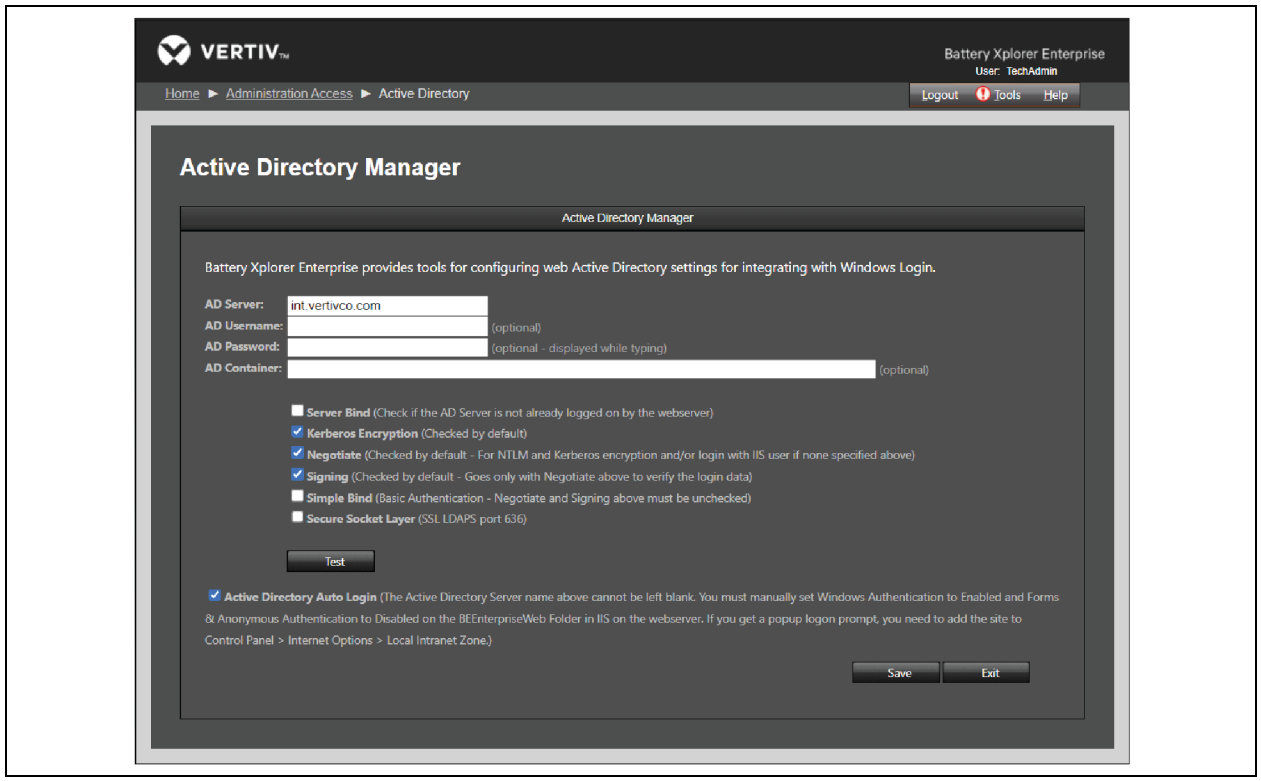


2. Can set up the HTTPS to be required to force on or off HTTPs on all Albér BXE users.
3. Click on the checkbox either Celsius or Fahrenheit next to Default Site Temperature Type option to define the default type of site temperature.
4. Enter the path for IIS Log files folder in the text box.
5. You can set up the duration (in days) to delete the older IIS Log files (0 = Never).
6. You can set up the system session timeout duration (in minutes) on all Albér BXE users.

7. You can set up the notification event duration in values from 1 to 99 minutes to send to a specified user. After that click the button to activate or deactivate.
8. To generate the error statuses of the Lithium ion as alarms and historical information, click on the Lithium: Generate Alarms from Error Statuses checkbox.
9. If there is excessive CPU usage for Ion Z5 system and cannot allocate more CPU to the BXE system then uncheck the parameter for Higher CPU Usage For Ion Z5 Discharge Detection then it pop up the information, Please restart the monitor engine via the DIM or MSM in order for this change to take effect after clicking the Save button.
10. Click on *OK* then click on *Save* button.

Active Directory

Figure 2.53 Active Directory



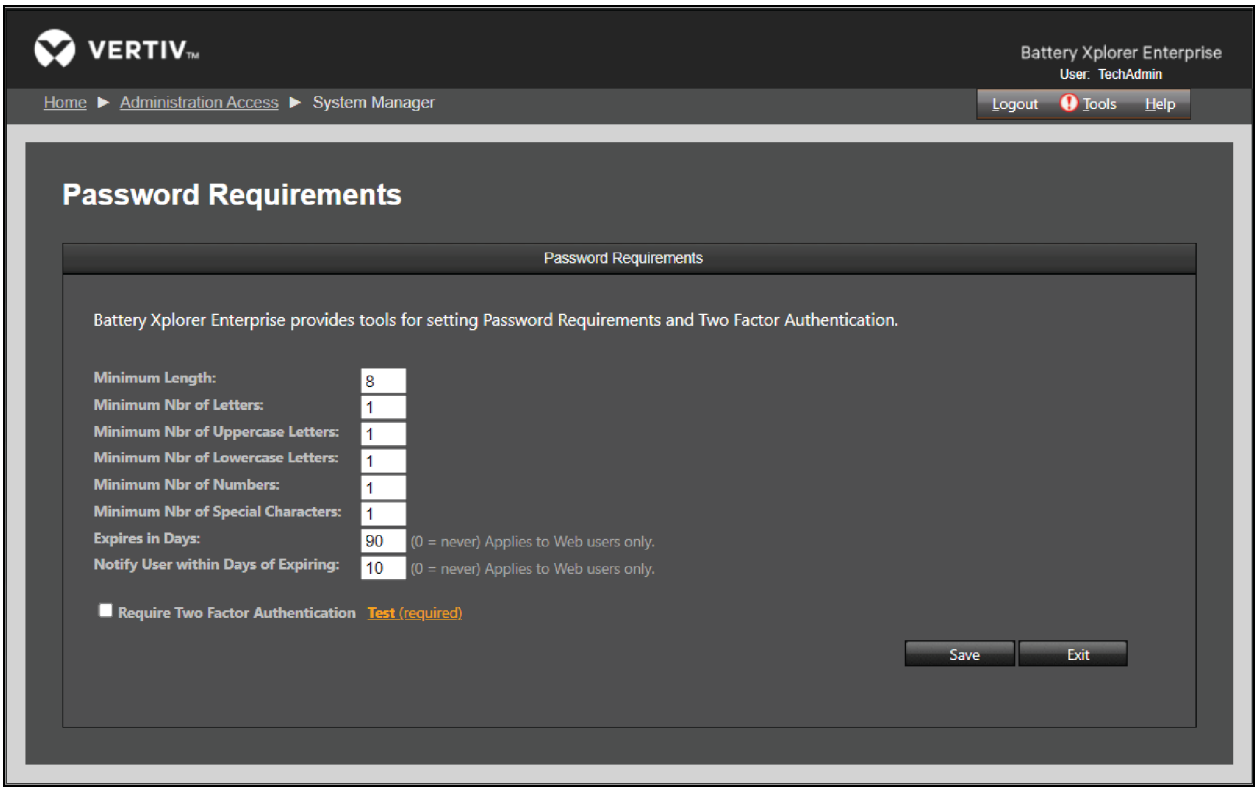
To configure Active Directory and set up Active Directory auto-login feature within Albér BXE:

1. From the Home page, select *Administration Access – Active Directory Manager*.
2. Enter the AD server, AD Username, AD Password, and AD Container information in the appropriate fields under the Active Directory menu in the System Configuration area.
3. Check the parameters Server Blind, Kerberos Encryption (checked by default), Negotiate (checked by default), Signing (checked by default), Simply Blind, Secure Socket Layer.
4. Click the *Test* button to verify the settings are correct.
5. Click the Active Directory Auto Login checkbox to enable the auto-login feature.
6. Click *Save – Exit*.

Two Factor Authentication

NOTE: Before setting a two-factor authentication method, make sure you are using the latest version of Albér BXE software (4.15 or higher).

Figure 2.54 Two Factor Authentication



To set up a two-factor authentication:

1. From the Home page, select *Administration Access – Password Requirements*.
2. Set the value to all the parameters for password requirements such as minimum length, mimimum number of letters, uppercase, lowercase, numbers, special characters.
3. Set the value for password expires in days and notify user within days of expiring. (0 = Never) Applies to web users only.
4. Click the Require Two factor Authentication checkbox to enable the two-factor authentication.
5. Click the *Test* button to verify the settings are correct. The Two Factor Authentication window appears.
6. Click *Save – Exit*.

Require HTTPS

To set up the required HTTPS on all Albér BXE software devices:

NOTE: If you wish to enable the HTTPS requirement, you must obtain and upload an SSL certificate or add a security exception on your browser when prompted.

1. Upload an SSL certificate. For more information, For more information, see To upload the Albér BXE server certificate: on page 75.

-or-

Add a security exception on your browser when prompted.

2. From the Home page, select *Administration Access – System Manager*.
3. Click on the Require HTTPs checkbox to enable the HTTPs requirement on all Albér BXE software devices.
4. Click *Save - Exit*. Users will now always connect to the HTTPS server.

Session Timeout in Minutes

From this option, users can set up the system session to timeout after a predefined time (7 minutes to 525,600 minutes).

NOTE: When the specified time expires, the user must re-login to the system.

To set up the session timeout in minutes on all Albér BXE users:

1. From the Home page, select *Administration Access – System Manager*.
2. Enter the value (7 minutes to 525,600 minutes) in the field next to the Session Timeout in Minutes option.

NOTE: Changing this value will logout all users from the Albér BXE system.

NOTE: For sessions over 1 day or more, it is required to uncheck all the IIS Recycling settings for the BEEnt App pool.

3. Click *Save - Exit*.

Setting Notification Event Duration

From this option, users can set up the notification event duration time in values (from 1 to 99 minutes) to send to a specified user.

To set up the notification event duration time:

1. From the Home page, select *Administration Access – System Manager*.
2. Click the checkbox to select either Activated or Deactivated next to the Notification Event Duration Time in Minutes option.
3. Enter the value (1 minute to 99 minutes) in the field next to the Notification Event Duration Time in Minutes option.

NOTE: If the Notification Event Duration Time in Minutes option is deactivated, notification will not be sent out to a user.

4. Click *Save – Exit*.

Lithium-ion Battery Error Status

To generate the error statuses of the Lithium-ion as alarms and historical information:

1. From the Home page, select *Administration Access – System Manager*.
2. Select the checkbox for Lithium: Generate Alarms from Error Statuses.
3. At the confirmation window, click *OK*.
4. Click *Save*.

NOTE: It is required to restart the monitor engine via the DIM or MSM for this change to take the effect.

2.8 Single Sign On (SSO) in Albér BXE

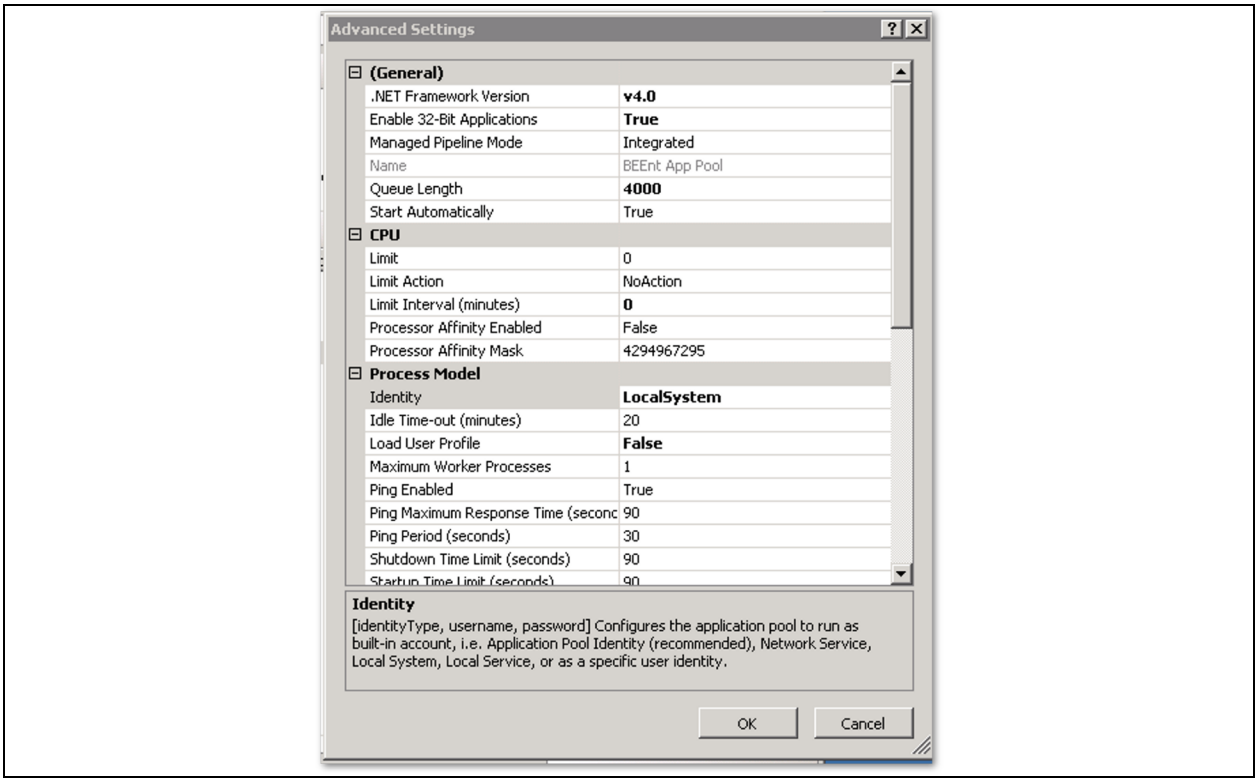
If the user has logged into the computer as an Active Directory user and the same Active Directory user (or group) account has been added to the Battery Xplorer Enterprise User Management page, the user may be automatically logged into the Battery Xplorer Enterprise website.

Active Directory auto-login feature

To setup the Active Directory auto-login feature within IIS:

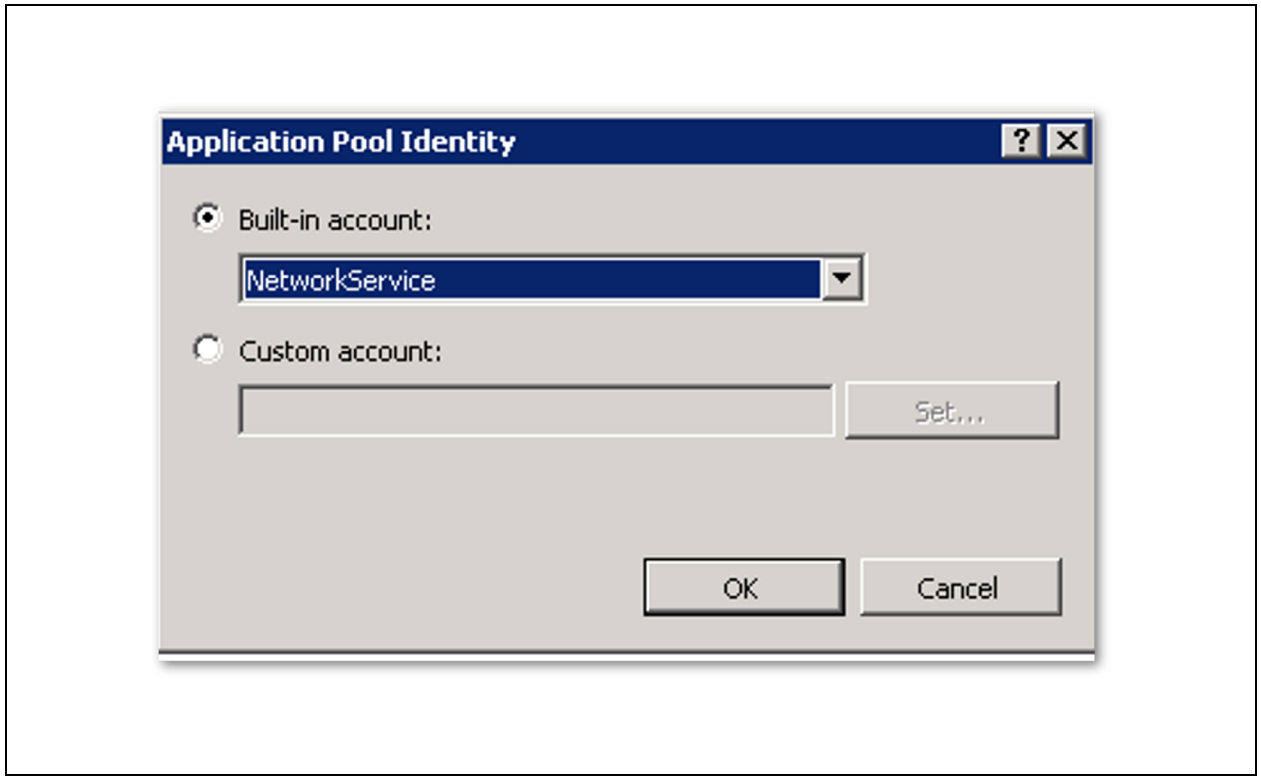
1. Open the IIS Manager and click on *Application Pools* in the Connections on left-hand sidebar.
2. In the Application Pools section, right-click on *BEEnt App Pool* and select the *Advanced Settings* menu and Advanced Settings window appears.

Figure 2.55 Overview of Advanced Settings Menu



3. From the Advanced Settings menu, under Process Model, select *Identity* and click the ellipsis button. The Application Pool Identity window appears.

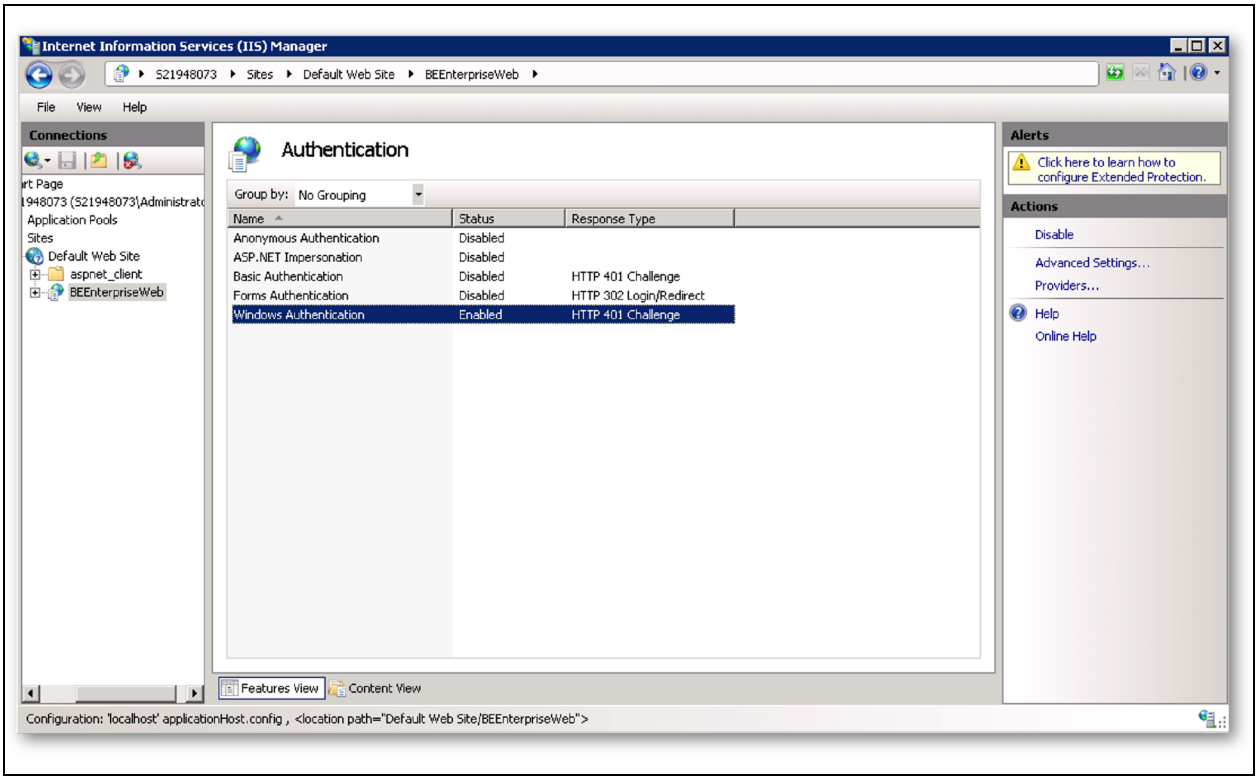
Figure 2.56 Overview of Application Pool Identity



4. In the Application Pool Identity window, click the Built-in account radio button and select *NetworkService* from the drop-down menu.
5. Click *OK*.
6. Click the plus *(+)* icon or arrow next to the Default Web Site option in the Connections sidebar and select *BEEnterpriseWeb*.
7. In the /BEEnterpriseWeb Home section, double-click *Authentication* under the IIS portion and Authentication page appears.

NOTE: Manual AD AND AD Autologin both require Network service or an Administrator on the Application Pool Identity.

Figure 2.57 Overview of Authentication Page



8. In the Authentication page, right-click *Windows Authentication* and select *Enabled*.

NOTE: Ensure that Windows Authentication is enabled and Forms Authentication is disabled on the BEEnterpriseWeb in IIS on the webserver. For more information, refer to Active Directory on page 69.

To set up the Active Directory auto-login feature within Albér BXE:

1. For steps to set up Active Directory auto-login feature, refer Active Directory on page 69.
2. From the Administration Access page, select the *User Manager* to login to Albér BXE software or import the desired user/user group to Albér BXE software, do the following steps:
   a. On the User Management page, click the *New* button and it provides a blank page with editable fields.
   b. To search the users, enter the Username, First Name, Last Name, and/or E-mail and click *Search Users* in Active Directory menu.

      - or -

      To search for the groups of users, enter the Username and click *Search Groups* in the Active Directory menu.

   c. Select a user or group from search result list and click *Save*.
3. Now the user can auto-login to the Albér BXE software at the next login.

2.8.1 Albér BXE Server Certificates

To upload the Albér BXE server certificate:

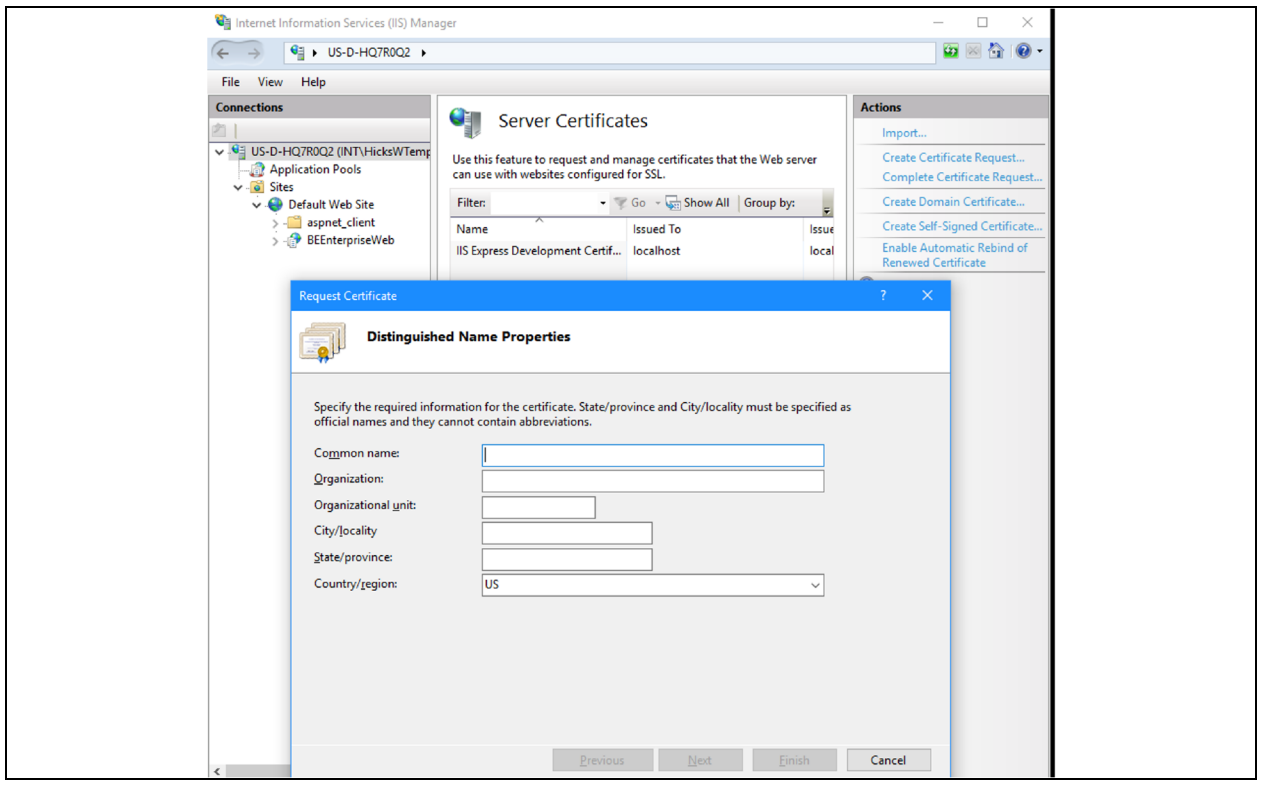
1. In Internet Information Services Manager (IIS), click on the top root node for the server's name and select the Server Certificates icon.
2. In the right window menu, select *Create Certificate Request* to create a small text file which the user had uploaded when buying the certificate. Another text file is emailed back to the user.
3. Upon receipt of the text file, select *Complete Certificate Request* in the right window menu to import the received text file back into IIS.

NOTE: With the text file, the user will receive specific instructions for your version of IIS.

4. Reboot the server to activate.

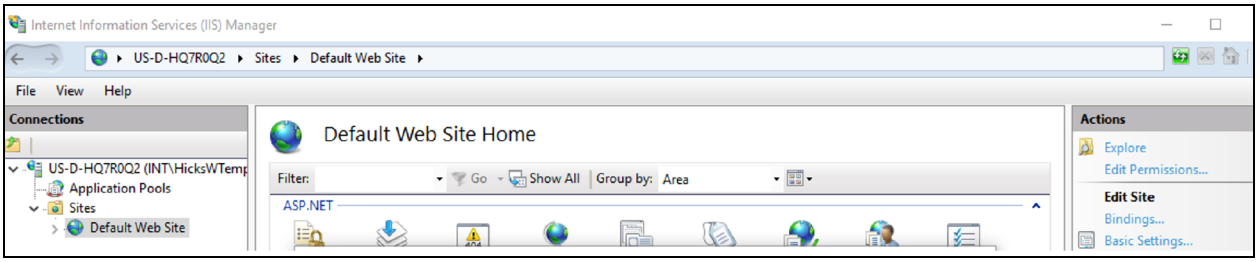
NOTE: Rather than checking the box to require https in the web page, the user can manually type https://.

Figure 2.58 Server Certificates



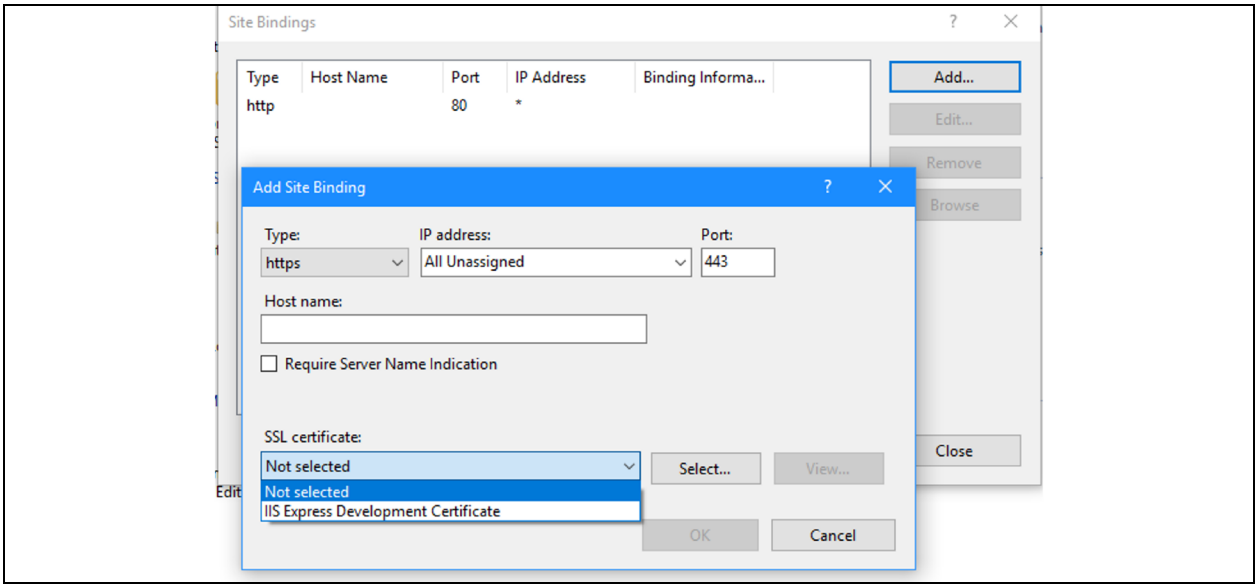
5. After importing the certificate into the IIS, select the *Default Web Site* then select *Bindings* in the right window menu.

Figure 2.59 Default Web Site Home



6. In the Site Bindings window, select *Add*.
7. In the Add Site Binding window, select *https* in the Type pull-down list, select the *ISS Express Development Certificate* in the SSL certificate pull-down menu and click *OK*. For more information, see Add Site Binding below.

Figure 2.60 Add Site Binding

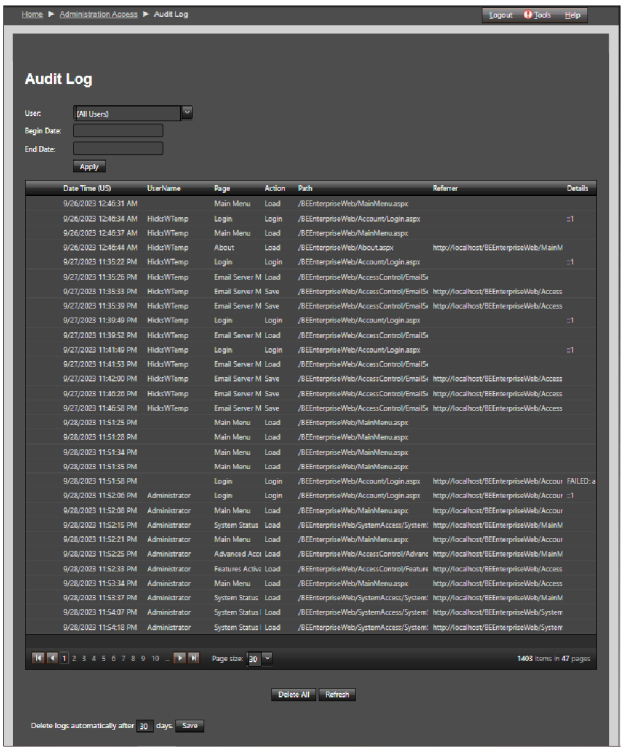


2.8.2 Audit Log

The Audit Log records the information about each action or event occurs on the site and can be viewed from this page.

To navigate the Audit Log:

Figure 2.61 Overview of Audit Log Page



From the Home page, select *Administration Access – Audit Log*. The user can perform the following functions:

1. Filter the audit log by username by using the drop-down menu.
2. Define a time frame for the log by entering the date in the Begin Date and End Date fields and clicking *Apply*.
3. Adjust the number of log entries displayed by using the Page size drop-down menu.
4. Schedule the removal of log entries from the audit log by entering the number of days in the Delete logs automatically after field, then click *Save*.
5. Delete all logs for a specific by using the User drop-down menu, entering the date in the Begin and End Date fields, and clicking the *Delete All* button at the bottom of the screen.

2.8.3 Servers

From the Servers page, The user can see the list of all servers located in the same or different location. Before the user can view the list of servers, you must configure the master server. Refer to the following procedure.

To configure the master Albér BXE server to view this type of data:

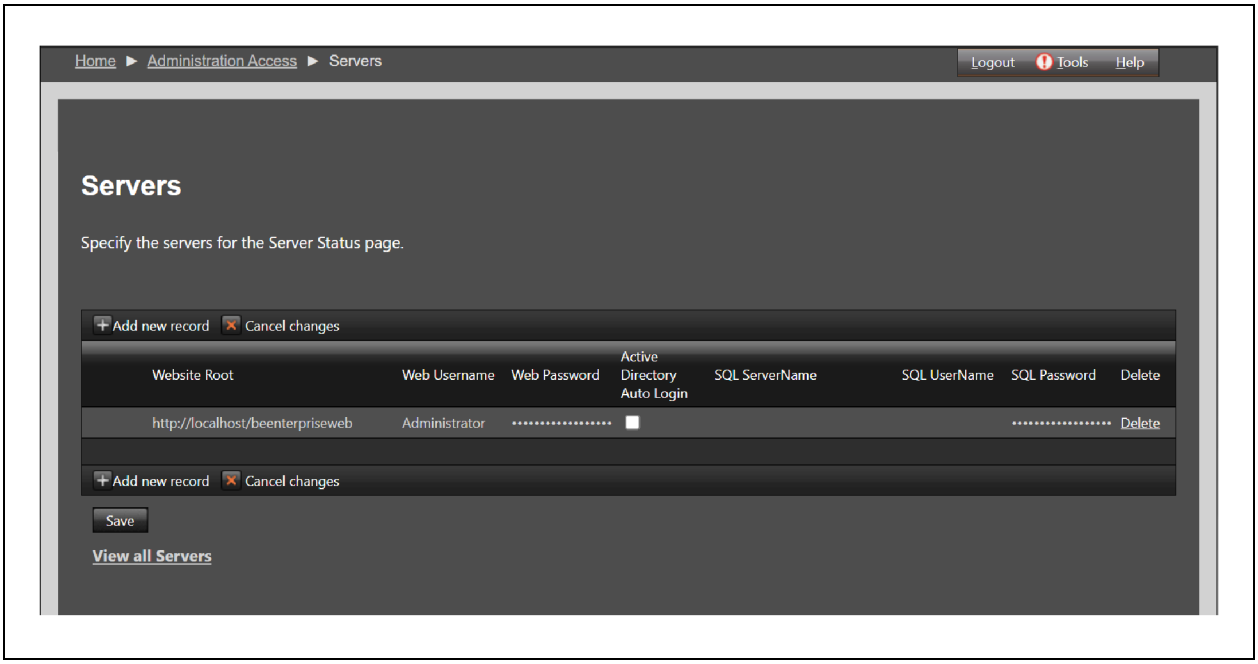
1. From the Home page, select *Administration Access – Servers*.
2. Select the Add new record icon and enter the following information:
   a. Website Root (Example: https://BXEserver 1 IP address/beenterpriseweb).
   b. Web Username and Web Password.
   c. SQL ServerName (Example: SQL or Albér BXE server name\SQL instance name).
   d. SQL UserName and SQL Password. See Figure 2.62 on the next page

3. Click on the checkbox for Active Directory Auto Login.
4. Click *Save*.
5. Click on *View all Servers* after each server entry to see if there are any errors connecting to the specified server.

NOTE: BEENT_SQL is the default.

To navigate the Servers page:

Figure 2.62 Servers



From the Home page, select *Administration Access – Servers*. The user can perform the following functions:

- Create and save a new server.
- View the list of existing servers by clicking the *View All Servers* link at the bottom of the page.
- Filter information by customer name and location using the drop-down menu.

To add a new record:

1. From the Home page, click on *Administration – Servers*.
2. From the Servers page, click the Add new record icon.
3. Enter the required information.
4. Check the box to enable/disable the Active Directory Auto Login feature.
5. Click *Save*.

To delete a new record:

1. From the Home page, click on *Administration – Servers*.
2. From the Servers page, identify the server which the user want to delete.
3. Click the *Delete* button under the Delete column.

NOTE: If you encounter any errors while connecting to the server, see Troubleshooting Server Error on page 81.

Appendices

Appendix A: Technical Support and Contacts

A.1 Technical Support/Service in the United States

Vertiv Group Corporation

24x7 dispatch of technicians for all products.

1-800-543-2378

Liebert® Thermal Management Products

1-800-543-2378

Liebert® Channel Products

1-800-222-5877

Liebert® AC and DC Power Products

1-800-543-2378

A.2 Locations

United States

Vertiv Headquarters

505 N Cleveland Ave

Westerville, OH 43082

Europe

Via Leonardo Da Vinci 8 Zona Industriale Tognana

35028 Piove Di Sacco (PD) Italy

Asia

7/F, Dah Sing Financial Centre

3108 Gloucester Road, Wanchai

Hong Kong

Appendix B: Troubleshooting

B.1 Albér BXE Event Log

To generate an Albér BXE software log:

1. Open the Windows Event Viewer. If you are using Windows 7, select *Program Files - Control Panel - Administrative Tools - Event View*.
2. Expand the Application and Services Logs section.
3. Select *BatteryExplorerEnterprise*.
4. Right-click *BatteryExplorerEnterprise* and select *Save All Events As*.
5. Select a filename (such as *BXEEventLog*) and save as an Event Files type.
6. When the Display Information window opens, select *Display* Information for these languages, then select *English*.
7. Go to the directory where the event log was saved (in Step 5).
8. Zip the file by right-clicking and selecting either *Send to compressed (zipped) folder* or *7 zip*.

B.2 Modbus Port/IP Address in the Albér BXE Software

To reset the Modbus port/IP address in the Albér BXE software:

NOTE: These changes are internal to the Albér BXE software only. After the following changes are made, the Albér BXE software will monitor the hardware over the new IP address or port. The hardware IP address cannot be changed in the Albér BXE software.

1. From the Windows Start menu, search for MSM and select *Yes* on the prompt.
2. In the upper-right corner of the page, open the Monitor Engine drop-down list and stop the monitoring engine.
3. Double-click on the IP address and change the port or the IP address (you can also change both).
4. Select *Apply*, then start the monitoring again.

B.3 Deletion of Strings Using DIM

To delete strings using DIM:

NOTE: The size of your accumulated data determines the length of time it may take for this process to complete (for example, large amounts of data may take a longer amount of time).

1. Click *DIM* and in the upper right Misc menu item click *Connect to BXE for Item Deletion*. Use the default options and click *OK*.
2. In order to see the cells information, expand the right-hand side strings.
3. Right-click on the string you wish to delete and select *Remove from BX database*.

B.4 Albér BXE Admin Password Management

To reset the BXE Admin password:

1. Run the WAM and click *OK* (with all of the default values).
2. After a message appears indicating the initialization is complete, select the *file* and reset the Admin password.

B.5 Albér BXE Web Configuration Error

When a user runs into the runtime error when attempting to access the Albér BXE software or in any other circumstance, follow the steps below.

1. Run the WAM and click *OK* (with all the default values).
2. After a message appears indicating the initialization is complete. For more information, refer to Vertiv™Albér™ Battery Xplorer Enterprise Software System Installation Guide.
3. Click the *Change web. Config to show errors* button. Then reload the web page to view the error. This error can help you while troubleshooting the error.

B.6 Troubleshooting Server Error

1. Click *View all Servers* after each server entry to see if there are any errors connecting to the specified server.
2. Complete the following verification steps if this error appears:
   a. Connection Failed: A network-related or instance-specific error occurred while establishing a connection to the Microsoft SQL server.
   b. The server was not found or was not accessible: Verify that the instance name is correct and that the Microsoft SQL server is configured to allow remote connections. (Provider: SQL Network Interfaces, error: 26 – Error Locating Server/Instance Specified):
      - Verify that you can ping the newly added Albér BXE server from the command prompt.
      - Verify that you can ping the Microsoft SQL server.
      - Verify that the SQL port (1433) is not blocked by firewall settings over the network.

NOTE: If these troubleshooting steps do not resolve the issue, contact Vertiv Technical Support.

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