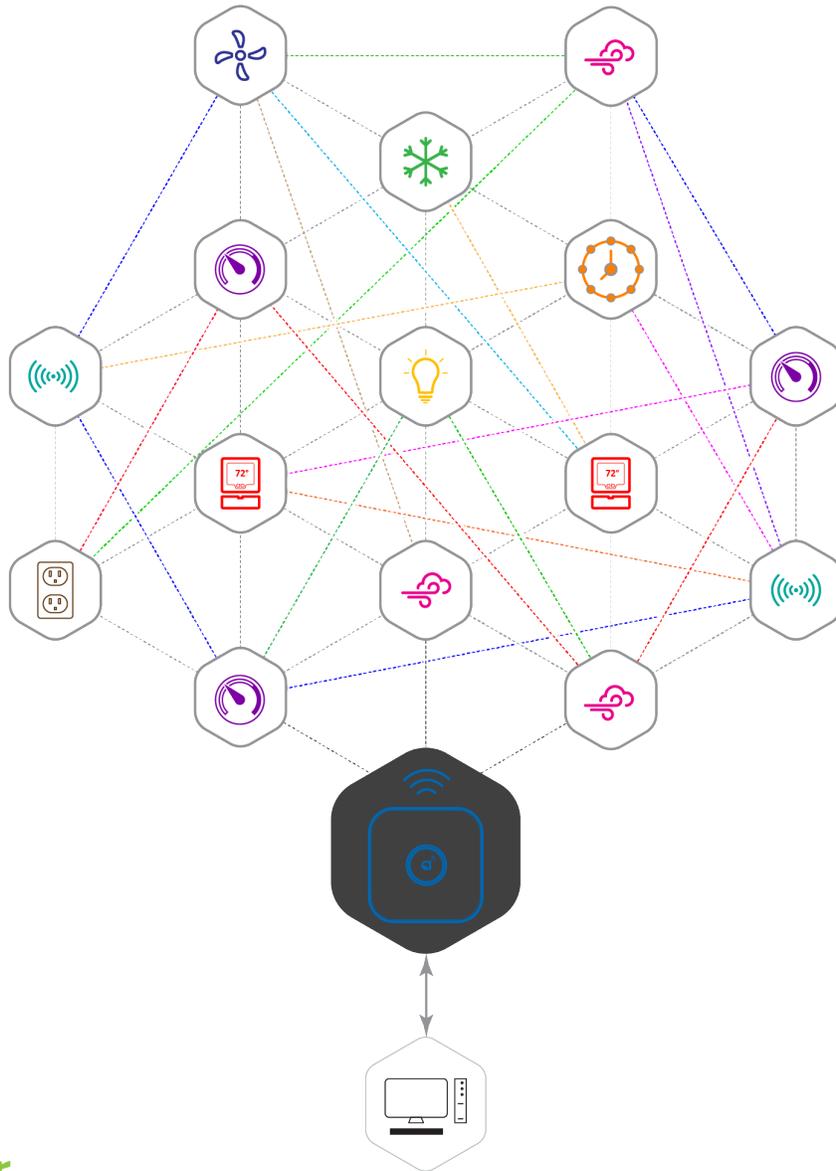


# EnergyCenter<sup>®</sup>

## Fan Management



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# 1. FanCenter Overview

The fan management software module is compatible with most commercial ventilation systems and is designed to quickly and easily configure, program, monitor, and control destratification fans from a remote location.

- To schedule changes to the speed and direction of the blades of an individual fan or a group of fans
- To wirelessly network multiple fans throughout a building or multiple buildings
- To monitor run time, settings, and schedule information
- In conjunction with the HVAC management software module, to control temperatures based on whether or not the space is occupied

For information on features and procedures that are the same in all EnergyCenter® software components, refer to the User Guide module entitled 'Tasks Common to All Applications (Zigbee)'.

**NOTE:** Energy consumed by destratification fans is not included in the system wide totals of energy-related data.

## 1.1. Navigating Through the Application (Site map)

The following two tables provide site maps of the fan-related portions of EnergyCenter®. The options on the left navigation bar appear in the tables as the column headings. The column lists are the fan-related tabs that appear when an option is selected.

Table 1: Site Map for Entering Fan Data or Selecting Options

Devices	Automation	Settings
<ul style="list-style-type: none"> <li>▪ Dashboard</li> <li>▪ Fans</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fans</li> <li>▪ 24/7 Schedules</li> <li>▪ Calendar</li> <li>▪ Advanced</li> </ul>	<ul style="list-style-type: none"> <li>▪ Site</li> <li>▪ Contractor</li> <li>▪ System</li> <li>▪ Data Maintenance</li> <li>▪ Energy</li> <li>▪ Security</li> <li>▪ Device Setup</li> </ul>

Table 2: Site Map for Viewing Fan Data

Groups	Energy	Alerts	Analysis > Reports	Help
Groups List Display and System Views	Not applicable for destratification fans <b>NOTE:</b> Data from fans associated with the heating/cooling system is included in system totals.	<ul style="list-style-type: none"> <li>▪ Recent Alerts</li> <li>▪ Alert Setup</li> </ul>	<ul style="list-style-type: none"> <li>▪ Devices: Device Inventory</li> <li>▪ Devices: Detailed Device Inventory</li> </ul>	<ul style="list-style-type: none"> <li>▪ User Guide modules:               <ul style="list-style-type: none"> <li>□ Tasks Common to All Applications (Zigbee)</li> <li>□ FanCenter</li> </ul> </li> <li>▪ About</li> </ul>

## 1.2. Configuring the Application

To utilize all the features available for fans, complete the steps summarized in the table below.

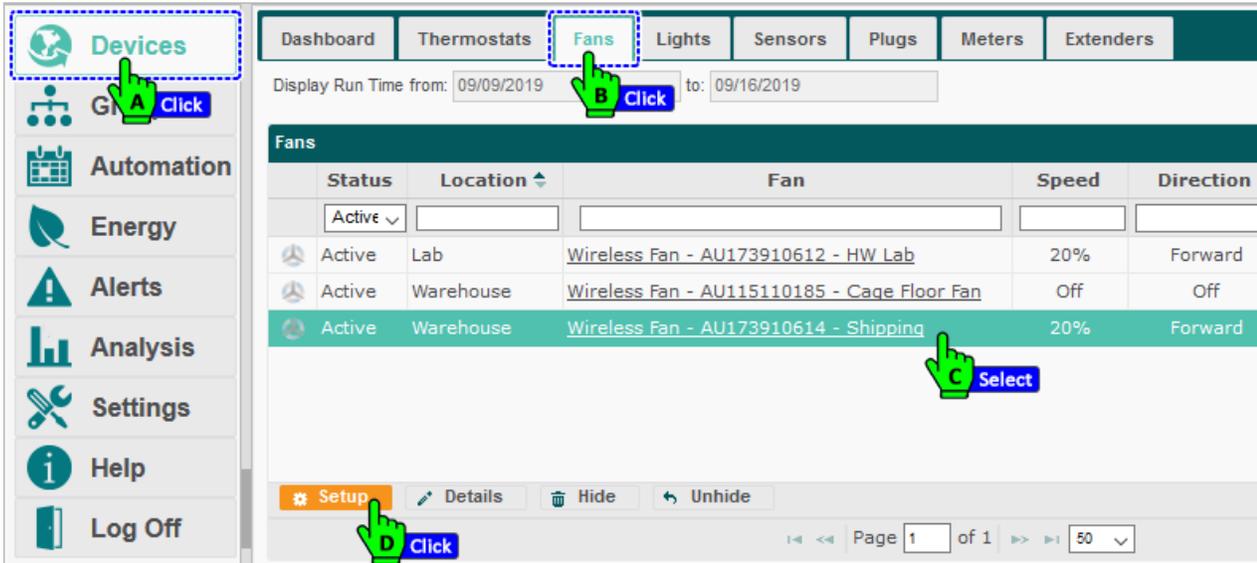
**NOTE:** Installation and configuration tasks are typically performed by the contractor that installs the system.

Table 3: System Setup Tasks

Task	Description	See
Complete hardware setup tasks	Install fans	Installation instructions that came with the fan
Access the Autani Manager appliance	<ul style="list-style-type: none"><li>▪ Initial steps for setting up the network using one of the following options:<ul style="list-style-type: none"><li>□ Remote access over the internet (preferred option)</li><li>□ Local network access</li></ul></li><li>▪ Establishing a static IP Address after first connection</li></ul>	See included documentation with Autani Manager.
Complete application commissioning tasks	<ul style="list-style-type: none"><li>▪ Tasks needed to setup and commission the system, regardless of device-type, including:<ul style="list-style-type: none"><li>▪ Entering customer and contractor information</li><li>▪ Creating user accounts</li><li>▪ Adding fans</li><li>▪ Creating custom schedules with events</li><li>▪ Creating e-mail alert notifications</li></ul></li></ul>	User Guide module entitled 'Tasks Common to All Applications (Zigbee)'
Commission fans	Select fan settings	Commissioning Fans

## 2. Commissioning Fans

1. On the left navigation bar, click **Devices**.
2. Click the **Fans** tab.
3. Click the row of the fan, and then the **Setup** button.



4. Update the settings as needed. Click **Save** or **Apply**.

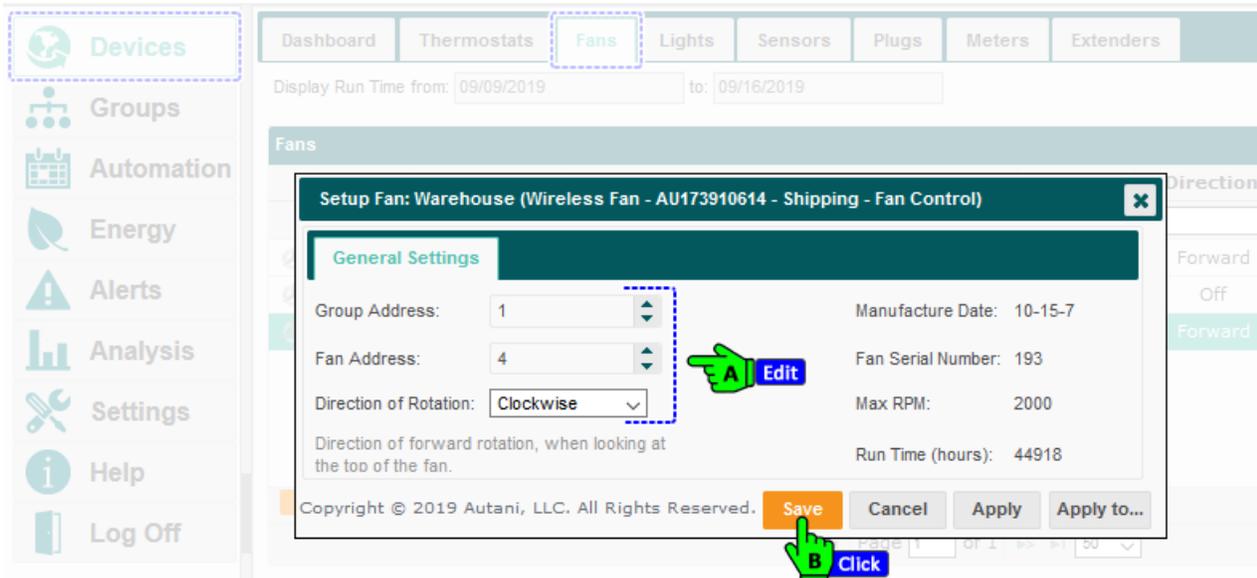


Table 4: Changing Fan Settings

Setting	Used To	Options
Group Address	Identify the group to which the fan belongs	<ul style="list-style-type: none"> <li>▪ User-defined number</li> <li>▪ Zero to 255</li> </ul>
Fan Address	Select a number to identify the fan	<ul style="list-style-type: none"> <li>▪ User-defined number</li> <li>▪ Zero to 255</li> </ul>
Direction of Rotation	Specify direction of fan blades	<ul style="list-style-type: none"> <li>▪ Counter-clockwise</li> <li>▪ Clockwise</li> </ul>

### 3. Changing Fan Settings

1. On the left navigation bar, click **Devices**.
2. Click the **Fans** tab.
3. Click the fan name link, **double-click** the row of the fan, or click the row of the fan and then the **Details** button.

Dashboard Thermostats **Fans** Lights Sensors Plugs Meters Extenders

Display Run Time from: 09/09/2019 to: 09/16/2019

**Fans**

Status	Location	Fan	Speed	Direction	
Active	Lab	<a href="#">Wireless Fan - AU173910612 - HW Lab</a>	20%	Forward	Defau
Active	Warehouse	<a href="#">Wireless Fan - AU115110185 - Cage Floor Fan</a>	Off	Off	Defau
Active	Warehouse	<a href="#">Wireless Fan - AU173910614 - Shipping</a>	20%	Forward	Doug

Setup **Details** Hide Unhide

Page 1 of 1 50

4. Update the settings as needed, click **Save** or **Apply**.

Fan: Warehouse (Wireless Fan - AU173910614 - Shipping - Fan Control)

**General** Charts Event Logs Schedule Notes

Name:

Description:

Location:

**Fan**

Speed:

Direction:

**Current Status**

Last Reported: 2019-09-16 02:55 AM Actual Speed (%): 30

Schedule: Doug's Warehouse Summer Schedule Actual Speed (rpm): 600

Event: Cleaning Direction: Reverse

Communication: Active

Fan: Normal

Recent Alert: None

Copyright © 2019 Autani, LLC. All Rights Reserved. **Save** Cancel Apply

Table 5: Changing Fan Settings

Setting	Used To	Options
Name	Specify the name of the fan <b>NOTE:</b> The serial number for a wired fan is an internal identification number and is not physically printed on the fan.	<ul style="list-style-type: none"> <li>▪ Fans are initially displayed as:                             <ul style="list-style-type: none"> <li>□ <b>Fan</b> for wireless fans</li> <li>□ Fan - serial number for wired fans</li> </ul> </li> <li>▪ Users can change</li> <li>▪ Alphanumeric characters</li> </ul>
Description	Identify the fan	<ul style="list-style-type: none"> <li>▪ User-defined description</li> <li>▪ Alphanumeric characters</li> </ul>
Location	Name of the location group to which the fan belongs	<ul style="list-style-type: none"> <li>▪ Assigned to the Default location group when a fan is first added to the network</li> <li>▪ User can change for each fan independently</li> <li>▪ Alphanumeric characters</li> </ul>
Speed	Change fan speed	<ul style="list-style-type: none"> <li>▪ Zero to 100%</li> <li>▪ In increments of 10%</li> </ul>
Direction	Specify direction of fan blades	<ul style="list-style-type: none"> <li>▪ Forward</li> <li>▪ Reverse</li> </ul>

## 4. Checking Status of Fans

### 4.1. Viewing Dashboard Data

Click **Devices** on the left navigation bar to view system summary information for the last 24 hours. If the Dashboard tab does not appear, see *Dashboard Does Not Appear* in the Troubleshooting section.

The Dashboard displays the number of active fans in the system. To view additional detail on all fans, click the active status link next to the number of fans or click the **Fans** tab.

The screenshot shows the dashboard interface with the following data:

System Component	Count	Status/Errors
Wireless Network	374	Locations: 41
Thermostats	17	6 Error(s)
Lights	112	7 Error(s)
Sensors	258	32 Error(s)
Plugs	1	1 Active
Meters	2	1 Error(s)
Computers	0	
Loads	0	
VFDs	0	
Extenders	17	

**Lighting**

Occupancy Rate: 1% | Lights On: 28%

**HVAC**

Heating:	0	Idle:	100%	High Indoor Temperature:	78°
Cooling:	0	Fan On:	0%	Low Indoor Temperature:	59°
Fan Only:	0	Supplemental HVAC:	0%	Average Indoor Temperature:	73°
Idle:	11	Keypad Locked:	0%	Outdoor Temperature:	57°

### 4.2. Viewing Tabular Data on Fans Tab

1. On the left navigation bar, click Devices.
2. Click the **Fans** tab to view the information in the following table.

**NOTE:** The grid can be modified to quickly view needed information.

- Rows can be sorted by clicking a column heading.
  - Fans can be hidden or redisplayed using the Hide and Unhide buttons.
  - The width of a column can be changed by dragging the lines on either side of the column heading to the desired size.
  - Columns can be hidden or displayed using the picker in the right-hand corner of a heading row
3. Click the **Show/Hide Run Time** link in the upper right-hand corner of the screen to display aggregate run time for the fans selected in the grid. For more information, see
  4. *Viewing Run Time Chart on Fans Tab.*

The screenshot shows the Fans tab interface with the following data:

Display Run Time from: 09/09/2019 to: 09/16/2019

Status	Location	Fan	Speed	Direction	Schedule	Run Time	Display
Active	Lab	Wireless Fan - AU173910612 - HW...	20%	Forward	Default	173 hrs, 27 m	<input checked="" type="checkbox"/>
Active	Warehouse	Wireless Fan - AU115110185 - Cag...	30%	Reverse	Default	136 hrs, 37 m	<input checked="" type="checkbox"/>
Active	Warehouse	Wireless Fan - AU173910614 - Ship...	20%	Forward	Doug's Wareh...	173 hrs, 27 m	<input checked="" type="checkbox"/>

Table 6: Information on Fans Tab

Column	Used To	Options
Status (with icon)	Describe the communication status for each fan	<ul style="list-style-type: none"> <li>▪ Active: Fan is reporting data.</li> <li>▪ Error: The fan is not communicating with the Autani Manager over the autaniNet network.</li> </ul>
Location	Identify the location group to which the fan belongs  <b>NOTE:</b> A fan can belong to only one location group.	<ul style="list-style-type: none"> <li>▪ Assigned to the <b>Default</b> location group when a fan is first added to the network</li> <li>▪ User can change</li> <li>▪ Alphanumeric characters</li> </ul>
Fan	<ul style="list-style-type: none"> <li>▪ List the names of fans</li> <li>▪ Provide link to open other tabs for fans</li> <li>▪ Links to tabs:                             <ul style="list-style-type: none"> <li>□ General</li> <li>□ Charts</li> <li>□ Event Logs</li> <li>□ Schedule</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ User-defined name</li> <li>▪ Alphanumeric characters</li> </ul>
Speed	Change fan speed	<ul style="list-style-type: none"> <li>▪ Zero to 100%</li> <li>▪ In increments of 10%</li> </ul>
Direction	Specify direction of fan blade rotation	<ul style="list-style-type: none"> <li>▪ Forward</li> <li>▪ Reverse</li> </ul>
Schedule (Available if a fan schedule is enabled)	<ul style="list-style-type: none"> <li>▪ Display the name of the schedule associated with the fan</li> <li>▪ Link to the Schedule tab to:                             <ul style="list-style-type: none"> <li>□ Change the name or description of the schedule</li> <li>□ Enable or disable the schedule for the fan</li> <li>□ View or modify schedule events associated with the fan</li> </ul> </li> <li>▪ Indicate in red text if a curtailment or scheduled override is in effect</li> </ul>	<ul style="list-style-type: none"> <li>▪ Schedule:                             <ul style="list-style-type: none"> <li>□ Name</li> <li>□ Description</li> <li>□ Disable</li> </ul> </li> <li>▪ Events:                             <ul style="list-style-type: none"> <li>□ New</li> <li>□ Copy</li> <li>□ Edit</li> <li>□ Delete</li> </ul> </li> </ul>
Run Time (Appears if Daily Run Time Chart is displayed)	<ul style="list-style-type: none"> <li>▪ Display the run time for the fan by day</li> <li>▪ Display data from midnight on the first day in the date range until the most recent daily report</li> </ul>	Hours and minutes
Display	Select fans to display in the Daily Run Time of Selected Fans chart on the bottom of the screen  <b>NOTE:</b> If the chart does not appear, click the Show/Hide Run Time link in the upper right-hand corner of the screen.	Checkbox for each fan

### 4.3. Viewing Run Time Chart on Fans Tab

To view a run time chart for selected or all fans:

1. On the left navigation bar, click **Devices**.
2. Click the **Fans** tab.
3. If the chart is not displayed, click the **Show/Hide Run Time** link in the upper right-hand corner of the screen. The default display is for the week ending with the current day.
4. To select a different date range for the chart, click the **Display Run Time from** and **to** textboxes to access the calendar.
5. Select the Display column checkbox(es) for an individual fan, several fans, or all the fans in the system.
6. To view more exact information:
  - i. Mouse over the displayed data
  - ii. Zoom in on a defined area of the chart by clicking and dragging the mouse to create a rectangular box. To return the view to its original size, click **Reset Zoom** in the upper right-hand corner of the chart.

The screenshot shows the Autani software interface. On the left is a navigation sidebar with 'Devices' selected. The top menu has 'Fans' selected. The main area displays a table of fans with columns for Status, Location, Fan, Speed, Direction, Schedule, Run Time, and Display. Three fans are listed, each with a checked checkbox in the Display column. Below the table is a 'Daily Run Time of Selected Fans' bar chart showing run time in hours from Sep 8 to Sep 17. The chart shows a general downward trend in run time over the week. Red dashed boxes highlight the 'Devices' sidebar, the 'Fans' tab, the date range input, the 'Show/Hide Run Time' link, the 'Display' checkboxes, and the chart area. Green arrows point to the 'Click' buttons for the 'Fans' tab, the date range input, the 'Show/Hide Run Time' link, and the 'Display' checkboxes.

Status	Location	Fan	Speed	Direction	Schedule	Run Time	Display
Active	Lab	Wireless Fan - AU173910612 - HW ...	70%	Forward	Default	173 hrs, 27 m	<input checked="" type="checkbox"/>
Active	Warehouse	Wireless Fan - AU115110185 - Cag...	30%	Reverse	Default	136 hrs, 37 m	<input checked="" type="checkbox"/>
Active	Warehouse	Wireless Fan - AU173910614 - Ship...	20%	Forward	Doug's Wareh...	173 hrs, 27 m	<input checked="" type="checkbox"/>

Office Hours 2

Setup Details Hide Unhide

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View 1 - 3 of 4

Daily Run Time of Selected Fans

Hours

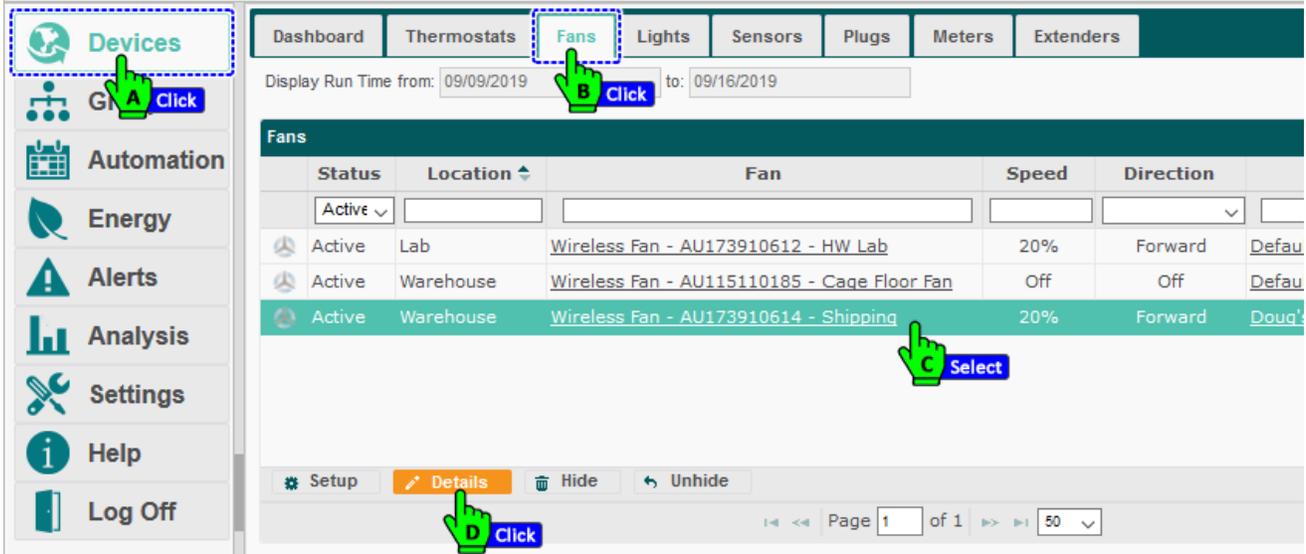
Sep 8 Sep 9 Sep 10 Sep 11 Sep 12 Sep 13 Sep 14 Sep 15 Sep 16 Sep 17

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#### 4.4. Using Detailed Fan Data

To access information related to individual fans:

1. On the left navigation bar, click **Devices**.
2. Click the **Fans** tab. For more information, see Viewing Tabular Data on Fans Tab.
3. Click the fan name link, **double-click** the row of the fan, or click the row of the fan and then the **Details** button.



4. The details about each are described in the following table.

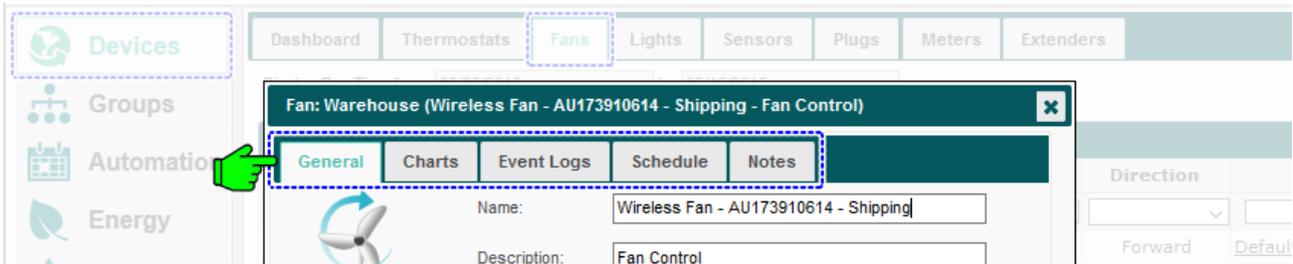


Table 7: Detailed Fan Data

Tab	Used To
General	<ul style="list-style-type: none"> <li>▪ Change general descriptive information</li> <li>▪ Change the location group</li> <li>▪ Change the fan speed</li> <li>▪ Change the direction of the fan blades</li> <li>▪ View current status information</li> </ul>
Charts	View graphical representations of fan status changes over a defined date range
Event Logs	View data on recent events
Schedule	<ul style="list-style-type: none"> <li>▪ View event schedule information</li> <li>▪ Change general descriptive information</li> <li>▪ Disable the schedule</li> <li>▪ Create or modify scheduled events</li> </ul>
Notes	<ul style="list-style-type: none"> <li>▪ The user can enter miscellaneous notes for other users.</li> </ul>

## 4.5. Checking Fan Status Data

1. On the left navigation bar, click **Devices**.
2. Click the **Fans** tab.
3. Click the fan name link, double-click the row of the fan, or click the row of the fan and then the **Details** button.

Dashboard | Thermostats | **Fans** | Lights | Sensors | Plugs | Meters | Extenders

Display Run Time from: 09/09/2019 to: 09/16/2019

Status	Location	Fan	Speed	Direction	
Active	Lab	Wireless Fan - AU173910612 - HW Lab	20%	Forward	Defau
Active	Warehouse	Wireless Fan - AU115110185 - Cage Floor Fan	Off	Off	Defau
Active	Warehouse	Wireless Fan - AU173910614 - Shipping	20%	Forward	Doug

Setup | **Details** | Hide | Unhide

Page 1 of 1 | 50

Dashboard | Thermostats | **Fans** | Lights | Sensors | Plugs | Meters | Extenders

Fan: Warehouse (Wireless Fan - AU173910614 - Shipping - Fan Control)

General | Charts | Event Logs | Schedule | Notes

Name: Wireless Fan - AU173910614 - Shipping  
Description: Fan Control  
Location: Warehouse

Fan  
Speed: 30%  
Direction: Reverse

**Current Status**  
Last Reported: 2019-09-16 02:55 AM  
Schedule: Doug's Warehouse Summer Schedule  
Event: Cleaning  
Communication: Active  
Fan: Normal  
Recent Alert: None  
Actual Speed (%): 30  
Actual Speed (rpm): 600  
Direction: Reverse

Save | Cancel | Apply

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Table 8: Current Status of Fans

Setting	Used To	Options
Last Reported	Display time/date stamp of the last communication between the fan and the Autani Manager	In the following format: yyyy-mm-dd hh:mm AM/PM
Schedule	Identify schedule currently applied to the fan, if applicable	<ul style="list-style-type: none"> <li>▪ Default</li> <li>▪ User-defined schedule names</li> <li>▪ Alphanumeric characters</li> </ul>
Event	Identify schedule event currently applied to the fan	<ul style="list-style-type: none"> <li>▪ Default</li> <li>▪ User-defined schedule events</li> <li>▪ Alphanumeric characters</li> <li>▪ Not Applicable: Schedule is disabled or no schedule has been applied to the fan.</li> </ul>
Communication	Indicate the communication status of the fan	<ul style="list-style-type: none"> <li>▪ Active: Fan is reporting data.</li> <li>▪ Error: Fan is not communicating with the Autani Manager over the autaniNet network.</li> <li>▪ Removed: The fan was removed from the autaniNet network.</li> </ul>
Fan	Identify the status of the fan	<ul style="list-style-type: none"> <li>▪ Normal</li> <li>▪ Warning: Specific error status message</li> <li>▪ Error: Device timeout</li> <li>▪ Unknown</li> </ul>
Recent Alert	Display the condition that triggered a warning or error <b>NOTE:</b> To clear an alert, click Alerts on the left navigation bar and then delete it.	<ul style="list-style-type: none"> <li>▪ None</li> <li>▪ Error: The fan is not communicating with the Autani Manager over the autaniNet network.</li> <li>▪ Warning: Specific error or warning status message</li> </ul>
Actual Speed (%)	Indicate current fan speed as a percentage of maximum speed	<ul style="list-style-type: none"> <li>▪ Zero to 100%</li> <li>▪ In increments of 10%</li> </ul>
Actual Speed (rpm)	Indicate speed at which fan blades are moving	<ul style="list-style-type: none"> <li>▪ Measured in revolutions per minute</li> <li>▪ Dependent on type of fan</li> </ul>
Direction	Specify direction of fan blade rotation	<ul style="list-style-type: none"> <li>▪ Forward</li> <li>▪ Reverse</li> </ul>

## 4.6. Viewing Fan Transition Data Charts

To view transition data for a specific fan:

1. On the left navigation bar, click **Devices**.
2. Click the **Fans** tab.
3. Click the fan name link, **double-click** the row of the fan, or click the row of the fan and then the **Details** button.

Dashboard | Thermostats | **Fans** | Lights | Sensors | Plugs | Meters | Extenders

Display Run Time from: 09/09/2019 to: 09/16/2019

Status	Location	Fan	Speed	Direction	
Active	Lab	Wireless Fan - AU173910612 - HW Lab	20%	Forward	Default
Active	Warehouse	Wireless Fan - AU115110185 - Cage Floor Fan	Off	Off	Default
Active	Warehouse	Wireless Fan - AU173910614 - Shipping	20%	Forward	Doug

Setup | **Details** | Hide | Unhide

Page 1 of 1 | 50

4. Click the **Charts** tab. The default display is for the current date.
5. To select a date range for the chart, click the **Start Date** and **End Date** textboxes to access the calendar.

Dashboard | Thermostats | **Fans** | Lights | Sensors | Plugs | Meters | Extenders

Display Run Time from: 09/09/2019 to: 09/16/2019

Fan: Warehouse (Wireless Fan - AU173910614 - Shipping - Fan Control)

General | **Charts** | Event Logs | Schedule | Notes

Start Date: 09/01/2019 End Date: 09/16/2019

Fan Speed

Forward

Thursday, Sep 5 at 11:12:39 AM  
Forward at 50%

Off

Reverse

Sep 1 Sep 3 Sep 5 Sep 7 Sep 9 Sep 11 Sep 13 Sep 15

Save Cancel Apply

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6. To view more exact information:
  - i. Mouse over the displayed data
  - ii. Zoom in on a defined area of the chart by clicking and dragging the mouse to create a rectangular box. To return the view to its original size, click **Reset Zoom** in the upper right-hand corner of the chart.

## 4.7. Viewing Fan Event Logs

Event logs are created to record all important events related to a fan. The tabular data view can be used to understand usage patterns, determine ways to fine tune the system, and why and when a problem occurred.

To view an event log:

1. On the left navigation bar, click **Devices**, and click the **Fans** tab.
2. Click the fan name link, **double-click** the row of the fan, or click the row of the fan and then the **Details** button.

The screenshot shows the 'Fans' section of the Autani interface. The left sidebar has 'Devices' selected. The top navigation bar has 'Fans' selected. Below the navigation, there is a date range selector showing '09/09/2019 to 09/16/2019'. The main content area displays a table of fans:

Status	Location	Fan	Speed	Direction	
Active	Lab	Wireless Fan - AU173910612 - HW Lab	20%	Forward	Default
Active	Warehouse	Wireless Fan - AU115110185 - Cage Floor Fan	Off	Off	Default
Active	Warehouse	Wireless Fan - AU173910614 - Shipping	20%	Forward	Doug's

At the bottom of the table, there are buttons for 'Setup', 'Details', 'Hide', and 'Unhide'. The 'Details' button is highlighted. A pagination control shows 'Page 1 of 1' and '50' items per page.

3. Click the Event Logs tab. The default display is for the current date.
4. To select a date range, click in the **Start Date** and **End Date** textboxes to access the calendar.

**NOTE:** Event logs include events that began before the date range if the event continued during the selected date range.

The screenshot shows the 'Event Logs' dialog box for the fan 'Warehouse (Wireless Fan - AU173910614 - Shipping - Fan Control)'. The 'Event Logs' tab is selected. The date range is set to '09/16/2019' for both start and end dates. The 'Recent Events' table is as follows:

Start Time	Duration	Description
2019-09-16 07:00:01 AM	00:31:28	Forward 50%
2019-09-16 05:07:17 AM	01:52:43	Forward 20%
2019-09-16 03:07:15 AM	02:00:02	Forward 20%
2019-09-16 03:05:23 AM	00:01:52	Forward 20%
2019-09-16 02:55:22 AM	00:10:01	Reverse 30%
2019-09-16 12:57:14 AM	01:58:07	Forward 20%
2019-09-16 12:47:15 AM	00:09:59	Forward 20%
2019-09-16 12:42:15 AM	00:04:59	Forward 20%
2019-09-16 12:22:45 AM	00:19:29	Forward 20%
2019-09-16 12:12:14 AM	00:10:31	Forward 20%

At the bottom of the dialog, there are 'Refresh', 'Save', 'Cancel', and 'Apply' buttons. A 'Columns' button is also visible to the right of the table.

5. To display hidden columns, click the picker, select the checkbox(es) for the column(s) to be displayed, and Click **OK**.
6. After viewing the event logs, either:
  - Click **Apply** to remain on the Event Logs screen.
  - Click **Save** or **Cancel** to close the dialog box.

## 5. Creating and Assigning a Schedule

The application can be used to change fan settings based on scheduled events.

The steps below are required to create a schedule template and use it to assign a schedule to one or more fans.

1. Create a schedule template by modifying a copy of the default template or another existing template.

The screenshot shows the application's main interface. On the left is a navigation menu with 'Automation' highlighted. The top navigation bar includes '24/7 Schedules', 'Calendar', and 'Advanced'. Below this, there are tabs for 'Thermostats', 'Lights', 'Fans', and 'Plugs'. The 'Fans' tab is active, showing a table of schedule templates. The 'Default' template is selected. Below the table, there are buttons for '+ New', 'Copy', 'Edit', and 'Delete'. A hand cursor points to the '+ New' button (D).

Template Name	Description	Last Changed
Default	This schedule template defines default fan events.	2017-06-19 10:57 PM
Empty	This schedule template may be used to disable fan events.	2017-06-19 10:57 PM

Events for Schedule Template: Default										
Name	Speed	Direction	M	T	W	T	F	S	S	Time
Cleaning	30%	Reverse	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	02:55 AM
Default	20%	Forward	<input checked="" type="checkbox"/>	03:00 AM						

2. Create or modify template events as described in the table below.

The screenshot shows the 'New Event' dialog box. The 'Name' field contains 'Event, Cleaning I'. The 'Fan Behavior' section has 'Speed' set to 50% and 'Direction' set to Forward. The 'Effective Days' section has checkboxes for Monday through Friday, with 'Weekday' selected. The 'Effective Time' section has 'Start' set to 'Scheduled Time' and 'End' set to 'Next Event'. The 'Save' button is highlighted. A hand cursor points to the 'Save' button (E).

3. Assign a schedule template to one or more fans or a group of fans.

For detailed step-by-step instructions on creating groups, schedules, overrides, or curtailments and curtailment stages, refer to the EnergyCenter® User Guide module entitled 'Tasks Common to All Applications (Zigbee)'.

Table 9: Event Configuration Settings

Setting	Used To	Options
Name	Enter a name for the event	<ul style="list-style-type: none"> <li>▪ User-defined</li> <li>▪ Alphanumeric characters</li> </ul>
Speed	Change fan speed	<ul style="list-style-type: none"> <li>▪ Zero to 100%</li> <li>▪ In increments of 10%</li> </ul>
Direction	Define direction of fan blade rotation	<ul style="list-style-type: none"> <li>▪ Forward</li> <li>▪ Reverse</li> </ul>
Effective Days	Select the days of the week the event is to apply	<ul style="list-style-type: none"> <li>▪ Days of the week</li> <li>▪ Weekday</li> <li>▪ Weekend</li> <li>▪ All</li> </ul>
Effective Time	Define when settings should take effect <b>NOTE:</b> Scheduled event settings remain in effect until another event begins.	<ul style="list-style-type: none"> <li>▪ The hour and minute</li> <li>▪ AM or PM</li> </ul>

## 6. BACNet Interfacing for Fan

The Speed & Rotation attributes of a Fan in a system, can be controlled by another building automation system through the BACnet interfacing. For License and interfacing instructions refer to the *Autani BACnet Interface Configuration* document available inside Autani portal (www.autani.net, Help>Licensing section).

To configure the BACnet interfacing follow the instructions below;

1. On the left navigation bar, click **Settings**.
2. Click the **Device Setup** tab.
3. Click the **Network Settings** button.

The screenshot shows the left navigation bar with the 'Settings' option highlighted by a red dashed box and a green hand icon labeled 'A'. The top navigation bar has the 'Device Setup' tab highlighted by a red dashed box and a green hand icon labeled 'B'. The main content area displays the 'Device Setup Assistant' page with a grid of buttons. The 'Network Settings' button is highlighted by a red dashed box and a green hand icon labeled 'C'.

4. Ensure the checkbox is enabled for **BACnet Interface Enabled**, and the automatic ID is generated for **BACnet Device Object Identified**.
5. Click on **Save**.

The screenshot shows the 'Network Settings' configuration page. The 'BACnet Interface Enabled' checkbox is checked and highlighted by a red dashed box and a green hand icon labeled 'A'. The 'BACnet Device Object Identifier' dropdown menu is set to '716204' and highlighted by a red dashed box and a green hand icon labeled 'B'. The 'Save' button is highlighted by a red dashed box and a green hand icon labeled 'C'. A warning message is displayed at the bottom: 'Warning: You may not be able to communicate with your appliance if any network settings are misconfigured. Click on Help and refer to the user guide for more information.'

6. There are two options for BACnet;
  - **BACnet Device Management:** allows you to bring in the BACnet devices from other systems to be used within EnergyCenter®, vice versa the same process will be done by other systems to control your devices.
  - **BACnet Browser:** here you can see what data is displayed in other building management system.
7. Click on BACnet Device Management.

The screenshot shows the EnergyCenter interface. On the left is a navigation menu with items: Devices, Groups, Automation, Energy, Alerts, Analysis, Settings (highlighted with a green hand icon labeled 'A Select'), Help (with a blue 'Select' button), and Log Off. The main content area has tabs: Site, Contractor, System, Data Maintenance, Energy, Security, and Device Setup (highlighted with a blue dashed box and a green hand icon labeled 'B'). Below the tabs, it says: Network: S4SEDHX | Channel: 25 | Status: Network Up | Security: Enabled | True Select | Allow Join: No | Devices. The main heading is 'Welcome to the Device Setup Assistant' with a sub-heading: 'This page allows you to configure your appliance and connect devices to its wireless network. Please choose an option below to get started:'. There are several buttons in a grid: Add Device(s), Wireless Routes, Network Status, Replace Device, Wireless Settings, Network Settings, Remove Device, Identify Device(s), Name Device(s), View Wireless Network, Wireless Bindings, System Restore, Advanced Commissioning, and Device Configuration. At the bottom, there are three buttons: EnOcean Device Management, BACnet Browser, and BACnet Device Management (highlighted with a blue dashed box and a green hand icon labeled 'C Click').

8. Select a BACnet from the list and click on import to import the devices from the selected BACnet. Click **edit** to make the changes.

The screenshot shows the 'BACnet Device Management' interface. On the left is the same navigation menu as in the previous screenshot. The main content area has a heading 'BACnet Device Management' and a table with columns: ID, Name, Description, Vendor, Address, Netwo, Discover, and Last Reported. The table contains several rows, with the row '717233 Electronic Wizards BACnet Autani, L... 172.21.1... 0 Complete 2019-10-04' highlighted in green and a green hand icon labeled 'A Select' pointing to it. Below the table are buttons: Discover objects, + Import (highlighted with a blue dashed box and a green hand icon labeled 'B Click'), Import Using..., and Import All... Below these buttons is a section 'BACnet-based devices imported from appliance:' with a table with columns: Status, ID, Location, Name, Description, and Last Reported. The row 'Active 170607 AU173910614 - Speed Warehouse - Wireless' is highlighted in green and a green hand icon labeled 'C Select' points to it. Below this table are buttons: Edit (highlighted with a blue dashed box and a green hand icon labeled 'D Click') and Delete. At the bottom, there is a pagination bar: Page 1 of 1, 50, and No records to view. A red arrow points from the 'Import' button to the 'AU173910614 - Speed Warehouse - Wireless' row.

9. **NOTE:** Both the Fan Speed & Rotation is controlled by altering the positive or negative values of the fan speed, through an **analog** input from the BACnet.

**Devices**

**Groups**

**Automation**

**Energy**

**Alerts**

**Analysis**

**Settings**

**Help**

**Log Off**

---

Customer

**Autani New Office - 00073253E637**  
 7090 Columbia Gateway Drive  
 Three Ponds Park, Suite 140  
 Columbia, MD 21046

[« Back to Device Management](#)    Edit Device: 1-1 (Can, LH-1 Leader) 0:D:6F:0:12:55:97:49

BACnet Device ID: 716204  
 Address: 172.21.18.178:47808  
 Network:

---

Device ID:

Name:

Description:

Location:

Device Type:

Speed

Select Type Select

**BACnet objects for device 716204**

Type	ID	Name	
<input type="text" value="Analog Value"/>	<input type="text" value="130507"/>	<input type="text" value="AU173910612 - Speed"/>	<input type="text" value="Lab - Wireless Fan - AU173910612 -"/>
Analog Value	170607	AU173910614 - Speed	Warehouse - Wireless Fan - AU173910614 -
Analog Value	183107	AU115110185 - Speed	Warehouse - Wireless Fan - AU115110185 -
Multi-state Value	69700	AU161910025 - Fan	Warehouse - Wireless Thermostat - AU161910025 -
Multi-state Value	72000	AU160210069 - Fan	Main Conference Room - Wireless Thermostat - AU160210069 -

Select Select

---

Use COV:  Use BACnet Change of Value (COV) service to automatically receive value changes from the remote device. The remote device does not support COV.  
**This device does not support COV.**

COV Rate:  Minutes  Seconds  
Resubscribe to COV at this rate.

Poll Rate:  Minutes  Seconds

Save Cancel Apply

Select

10. To see how the BACnet device data is displayed for the other building management system, click on **Settings**

11. Click the **Device Setup** tab

12. Click the **BACnet Browser**

Site Contractor System Data Maintenance Energy Security **Device Setup**

Network: S4SEDHX | Channel: 25 | Status: Network Up | Security: Enabled | True **Select** | Allow Join: No | Devices

Welcome to the Device Setup Assistant

This page allows you to configure your appliance and connect devices to its wireless network. Please choose an option below to get started:

Easy Setup

Add Device(s) Wireless Routes Network Status

Replace Device Wireless Settings Network Settings

Remove Device Identify Device(s) Name Device(s)

View Wireless Network Wireless Bindings System Restore

Advanced Commissioning Device Configuration

EnOcean Device Management **BACnet Browser** BACnet Device Management

13. Select your **BACnet ID** row to see its devices listed on the lower section of the screen.

BACnet Browser

ID	Name	Description	Vendor	Address	Netw	Discovery	Last Reported
28				127.0.0.1...	1833	Not disco...	2019-10-10
12345				172.21.1...	0	Not disco...	
716204			Autani, L...	172.21.1...	0	Complete	2019-10-10
717035			Autani, L...	172.21.1...	0	Not disco...	2019-10-10
717041			Autani, L...	172.21.1...	0	Not disco...	2019-10-10
717042				172.21.1...	0	Not disco...	

Discover objects + Import

BACnet objects for device 716204

Type	ID	Name	Description	Present Va	In Ala	Fa
Analog Val...	130507	AU173910612 - Speed	Lab - Wireless Fan - AU173910612 - ...		<input type="checkbox"/>	
Analog Val...	170607	AU173910614 - Speed	Warehouse - Wireless Fan - AU1739...		<input type="checkbox"/>	
Analog Val...	183107	AU115110185 - Speed	Warehouse - Wireless Fan - AU1151...		<input type="checkbox"/>	
Multi-state ...	69700	AU161910025 - Fan	Default - Wireless Thermostat - AU1...		<input type="checkbox"/>	
Multi-state ...	72000	AU160210069 - Fan	Main Conference Room - Wireless T...		<input type="checkbox"/>	

## 7. Troubleshooting

### 7.1. Devices are not Reporting Data

#### 7.1.1. Device is in Error or Warning State

During initial setup, devices are in an error state until the mesh network is established. If the status does not change momentarily to Active, click **Alerts** on the left navigation bar to check the alert log.

Table 10: Error and Warning Troubleshooting

Issue	Cause	Potential Solution
Device Timeout Error	Excessive distance between devices or thick walls	Move fans closer together. Install an extender.
Error	Fan is not communicating with the Autani Manager over the autaniNet network	Check power status of Autani Manager. Check wiring of the transceiver to the fan.
Warning	Specific condition listed	Dependent on warning condition listed

#### 7.1.2. Rediscover the Device

1. On the left navigation bar, click **Settings**.
2. Click the **Device Setup** tab.
3. Click the **View Wireless Network** button.

The screenshot displays the Autani Manager web interface. On the left is a vertical navigation bar with icons and labels for: Devices, Groups, Automation, Energy, Alerts, Analysis, Settings (highlighted with a dashed blue box and a green hand icon labeled 'A'), Help (with a 'Select' button), and Log Off. The top navigation bar contains tabs for: Site, Contractor, System, Data Maintenance, Energy, Security, and Device Setup (highlighted with a dashed blue box and a green hand icon labeled 'B'). Below the top bar, a status bar shows: Network: S4SEDHIX | Channel: 25 | Status: Network Up | Security: Enabled | True (with a 'Select' button) | Allow Join: No | Devices. The main content area is titled 'Welcome to the Device Setup Assistant' and contains a grid of buttons under the heading 'Easy Setup'. The buttons are: Add Device(s), Wireless Routes, Network Status, Replace Device, Wireless Settings, Network Settings, Remove Device, Identify Device(s), Name Device(s), View Wireless Network (highlighted with a dashed blue box and a green hand icon labeled 'C'), Wireless Bindings, System Restore, and Device Configuration.

- Click the row of the fan to be rediscovered. Click the **Rediscover** button.

The screenshot shows the 'Device Setup' tab in the network management interface. The 'Network Listing' table contains the following data:

Transceiver Tag	Type	Model	Serial Number	Last Discovered
Unknown	HA Light	LG WM	00:0D:6F:00:0D:DF:6F:A7	2019-10-10 11:48 AM
Unknown	HA Light	LG WM	00:0D:6F:00:0D:8B:5D:00	2019-10-10 04:16 PM
Unknown	HA Light	LG WM	00:0D:6F:00:0D:8B:59:77	2019-10-11 11:46 AM
Unknown	Wireless Fan	1000152-04	AU164610087	2019-10-17 12:40 AM
Unknown	HA Light	LG WM	00:0D:6F:00:12:58:25:CA	2019-10-10 02:00 PM
Unknown	HA Light	LG WM	00:0D:6F:00:0D:DF:51:14	2019-10-10 11:38 AM
Unknown	Thermostat	1000141-02	AU115110117	2019-09-28 12:34 AM
Unknown	HA Light	TWZT_V002D_F	00:0D:6F:00:0C:C2:52:1D	2019-10-10 11:53 AM
Unknown	LG Fixture, Occ, Lume	LG MultiSensor	00:0D:6F:00:0E:78:F0:92	2019-10-10 12:47 PM
Unknown	LG Fixture, Occ, Lume	LG MultiSensor	00:0D:6F:00:12:56:E8:BE	2019-10-10 12:47 PM

Below the table are buttons for 'Rediscover', 'Change Transceiver Tag', and 'Identify'. A green hand cursor points to the 'Rediscover' button. Another green hand cursor points to the 'Wireless Fan' row in the table.

- The description in the Type column changes to **Discovering**.
- The time/date stamp in the Last Discovered column changes to **Starting discovery** in red.

Unknown	Discovering ...	1000152-04	AU164610087	Starting discovery...
---------	-----------------	------------	-------------	-----------------------

- When the fan has been rediscovered, the fan reappears and a new date/time stamp is listed.

## 7.2. Dashboard Does Not Appear

To enable the dashboard:

- On the left navigation bar, click **Settings**.
- Click the **System** tab.
- From the **System Device** drop-down list, select **Enabled**. Click **Save**.

The screenshot shows the 'Settings' page with the 'System' tab selected. The 'Device Dashboard' dropdown menu is open, showing 'Enabled' selected. The 'Device Tabs' section has several checkboxes checked: Therm, Lights, Sensors, Plugs, Meters, Loads, and Extenders. The 'Save' button is highlighted with a green hand cursor.

### **7.3. Events Are Not Occurring As Scheduled**

There are a number of reasons why it may appear that scheduled events are not occurring as expected. They include:

- Two events cannot start at the same time on the same day.
- The fan is in an error state indicating that it is not communicating with the Autani Manager over the autaniNet network.
- The event was superseded by a scheduled override or by a curtailment. For more information, refer to the EnergyCenter® User Guide module entitled 'Tasks Common to All Applications (Zigbee)'.  
▪ The fan was added to a group after a Schedule Template was copied to each fan in a group.
- A Schedule Template may have been changed and not applied to the fan. Schedule template changes are not automatically copied to a device.

#### **7.3.1. Event Log Contains Data Outside the Selected Date Range**

EnergyCenter® is programmed to include all data collected during a specified date range. Consequently, Event logs include events that began before the selected date range when those events continued during the date range.

#### **7.3.2. Error Message When Selecting a Date Range**

If the desired start date is later than the default start date, set the end date before setting the start date to avoid receiving an error message.

### **7.4. Contacting Customer Support**

For assistance after following the steps in Troubleshooting, contact Customer Support at:

- **Autani Support**

Phone: 443.320.2233 x2

Address: 7001 Columbia Gateway Drive, Suite 210, Columbia, MD 21046 USA

Support/Commissioning Services: [support@autani.com](mailto:support@autani.com)

- **Autani Sales**

Phone: 443.320.2233 x1

Sales/Quotations: [sales@autani.com](mailto:sales@autani.com), [quotes@autani.com](mailto:quotes@autani.com)

General Inquiries: [information@autani.com](mailto:information@autani.com)

**Hours of Operation: Monday to Friday, 9am to 5pm, Eastern Standard Time**

## 8. Glossary

Table 11: Glossary

Term	Description
Curtailment	Used to immediately implement an Event Rule(s) to supersede a regularly scheduled Event or Override
Curtailment Stage	A trigger used to immediately implement a group of curtailments at the same time
Event	Setting or group of settings used to set the state on a single controllable point of a device at a certain time
Event Rule	Setting or group of settings used to set the state on a single controllable point of a device, or multiple points of the same type, triggered by an event defined in an override or curtailment
Override	Used to schedule one or more Event Rules to supersede a regularly scheduled Event
Schedule	Used to implement Events at a specific time, on a recurring basis, or based on conditions reported by sensors
Schedule Template	Schedule that is used as a pattern to quickly and easily apply the same setting(s) to multiple devices of the same type

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