



Station Health™

STATION HEALTH SERVICE

Built on Niagara 4

Installation & User Guide

Hawkeye Energy Solutions

Ver 4.10.2.1

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Overview

Building Automation on the enterprise level requires the coordination of many different networks and devices. Before an AHU controller "fails", it often can be diagnosed before the issue occurs. Typically, you can find issues at the hardware and software level before the actual equipment is affected. That said, **how do you know what controllers are down and or having intermittent issues?**

Built on the Niagara 4 framework, Station Health Reporting automatically "latches" on to any JACE in your Niagara Network. This produces a pdf report for each station that can be emailed to specific stakeholders. Now of course, if you have many stations in a building you can easily pull the data into a supervisor station to see all of your devices in a single pane of glass! Station Health Reporting is the solution to monitor all of your Niagara JACEs and child devices.

Requirements

- Niagara 4.10+ (Contact Hawkeye Energy Solutions for lower versions)

Installation

Prerequisites

- ✓ Purchase license for each Host ID
- ✓ Download the latest module files (hesStationHealth.jar)
- ✓ Receive the Product Key from Hawkeye Team

JACE Installation

1. Connect to the station using Workbench
2. Using the License Manager, update licenses from the License Server
3. Ensure the Hawkeye Certificate was also added from the License Server
4. Install the modules using the Software Manager
5. Restart the Station
6. Open the "hesStationHealth" palette and drag the "StationHealth" component to under the Station's "Config"
7. Installation is completed.

Supervisor Installation

8. Connect to the station using Workbench
9. Using the License Manager, update licenses from the License Server
10. Ensure the Hawkeye Certificate was also added from the License Server
11. Install the modules
12. Restart the Station
13. Open the "hesStationHealth" palette and drag the "StationHealthService" component to under the Station's "Service" bucket.
14. For each subordinate Niagara Station that utilizes the Station Health Service, drag the "StationHealthProxy" from the palette to the Station's "Points" bucket under the Niagara Network.
15. After the next poll, the station will automatically register in the Supervisor Service.
16. Installation Complete

License Manager Configuration (Product Key)

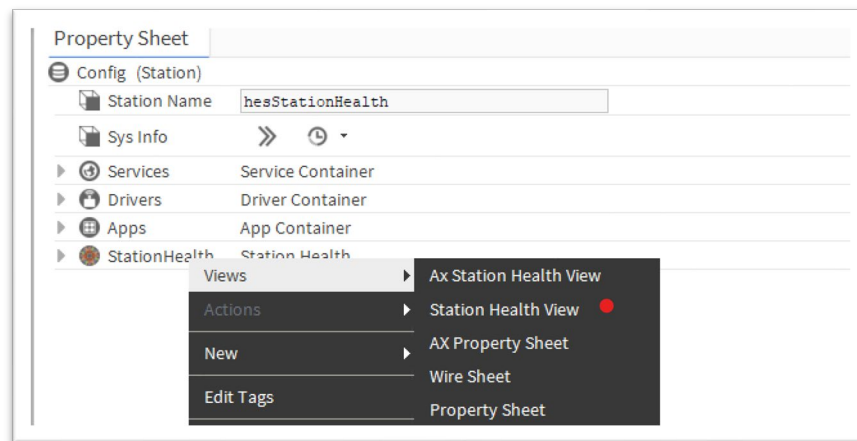
1. Open the “StationHealthService” component in the AX Property Sheet view
2. Expand the “License Manager”
3. Copy/Paste the Product Key
4. Right-Click on the License Manager and invoke “Load License”
5. Ensure the slots, “Licensed” and “Product Key Valid” are “true”
6. License Manager is Configured

User Guide

JACE Processes

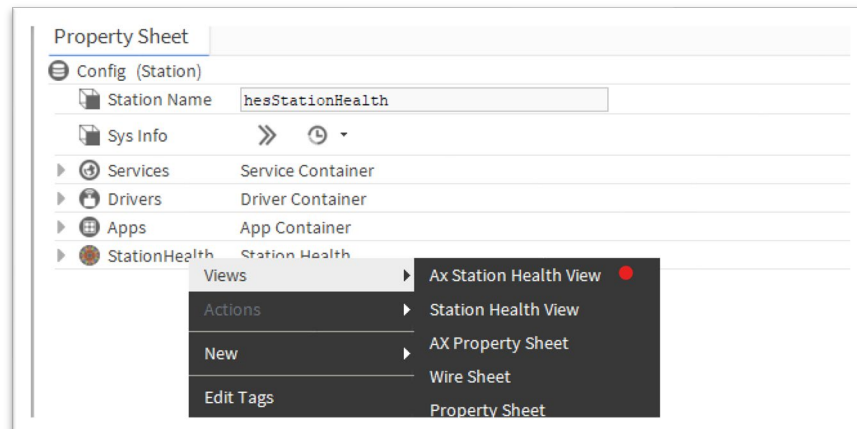
View the HTML Report

1. Right-click on the “StationHealth” Component
2. Select “Station Health View”



View the PX Report

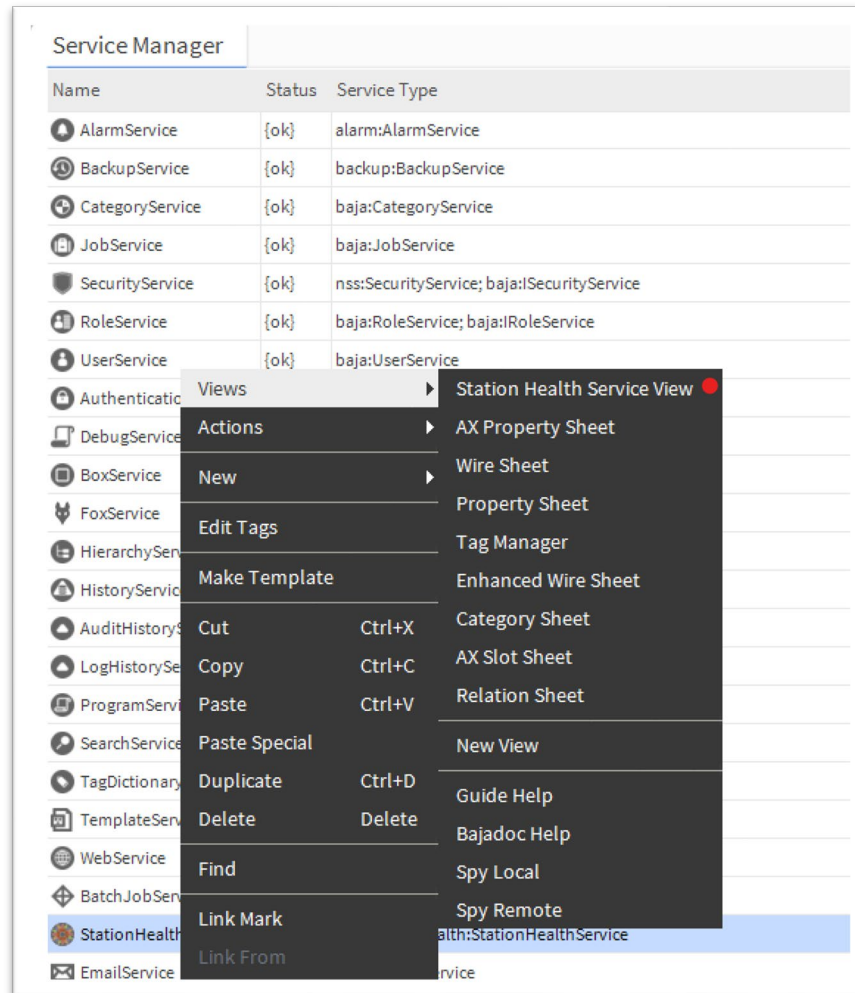
1. Right-click on the “StationHealth” Component
2. Select “AX Station Health View”



Supervisor Processes

View the HTML Dashboard

1. Right-click on the “StationHealthService” Component
2. Select “Station Health Service View”



Advanced Configuration

Customizing the Report Logo

1. Open the Station Health or Station Health Service slot sheet.
2. Unhide the “useCustomLogo” and “logoOrd” slots.
3. Open the Property Sheet
4. Select true on “useCustomOrd”
5. Select the image from the file directory on the “logoOrd”
6. Refresh the Report or Dashboard pages

Note: Changing the logo at the service level will automatically change all headers of Proxy reports on the Supervisor.

Adjusting the Health KPI Calculation

The Health KPI calculation takes into account many of the metrics calculated throughout the report. The following is a list of these categories and how to adjust how much each category affects the overall score:

1. **CPU Usage** – This accounts for two parts: hours above threshold and average usage over the last seven days. The default threshold for acceptance is **80.0%**. In the property sheet under Hardware Performance, the “Cpu Threshold” property can be adjusted to loosen or tighten how this is monitored. Example: decreasing the value to 50.0% would tighten the metric and make the CPU have a larger effect on the Health KPI.
2. **Heap Usage** – This accounts for two parts: hours above threshold and average usage over the last seven days. The default threshold for acceptance is **75.0%**. In the property sheet under Hardware Performance, the “Heap Threshold” property can be adjusted to loosen or tighten how this is monitored. Example: decreasing the value to 50.0% would tighten the metric and make the Heap have a larger effect on the Health KPI.
3. **File Space** – This accounts for the used file space percentage on the JACE or supervisor machine. As the free space shrinks, this decreases the Health KPI.
4. **Alarms** – This accounts for two parts: current alarm count and average alarm count over the last seven days. The default threshold for acceptance is **40**. In the property sheet under User Interface Performance, the “Open Alarm Count Threshold” property can be adjusted to loosen or tighten how this is monitored. Example: increasing the value to 100 would loosen the metric and make the alarm counts have a lesser effect on the Health KPI. Also, the “Excluded Alarm Classes” property will filter out Alarm Classes. By default, the “Default Alarm Class” is filtered. Adjust the alarms classes by clearing out the value or adding comma separated classes (“defaultAlarmClass, AHU_Safety_Class”).
5. **User Interactions** – This accounts for two parts: number of actions invoked and number of login failures over the last seven days. The default threshold for acceptance is **10** for actions invoked and **2** for login failures. In the property sheet under User Interface Performance, the “Actions Invoked Count Threshold” and “Login Failure Threshold” properties can be adjusted to loosen or tighten how each is monitored.
6. **Device Uptime Index** – This accounts for the number of devices down and the durations of each event over the last seven days. Sometimes, “old” devices can negatively impact this number if not managed by disabling or removing them.
7. **Error Counts** – This This accounts for two parts: hours above threshold and average usage over the last seven days. The default threshold for acceptance is **80.0%**. In the property sheet under Hardware Performance, the “Cpu Threshold” property can be adjusted to loosen or tighten how this is monitored. Example: decreasing the value to 50.0% would tighten the metric and make the CPU have a larger effect on the Health KPI.

Troubleshooting

Contact Hawkeye Energy Solutions at (815) 744-0505.

Release Notes

Ver 4.10.2.1

Bug Fixes:

- **Custom Logo was not working for Station Health Report views.** Corrected.

Ver 4.10.2.0

Features Added:

- **Supervisor License Capabilities.** Supervisor Licenses now allow the user to add the report for the supervisor station.
- **Automatic Emails on KPI changes.** Both the dashboard and the single report can monitor for threshold discrepancies and automatically send an HTML email with the Station Summary information. (This depreciated the AX View for the Report)
- **Email Configuration View.** Added new view on Email Ext to easily configure the email thresholds.
- **Updated Logo and Icon to new Station Health Logo**

Bug Fixes:

- **Supervisor Dashboard doesn't display all stations if there is an error on one station.** Added additional error checking.
- **Minor Responsiveness Fixes** – improved card overflow glitches on small screens
- **Honeywell Ciper 30 Fixes** – improved functionality for Ciper 30 controllers

Ver 4.10.1.8

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Ver 4.10.1.7

Features Added:

- **IP Address Information** – Report now shows Primary/Secondary IP Addresses. Dashboard has a new column for the IP Address.
- **Station Health Version** – Added module version to bottom of report for easier version troubleshooting.
- **Engine Watchdog Setting** – Explicitly calls out timeout setting.



- **Added additional point count cards** – New cards to track down, nan, +/-inf, and null points
- **Driver Metrics** – Added high-level driver network statistics.

Bug Fixes:

- **Report footer shows browser time in universal time zone, not the station local time** – Corrected.
- **Minor Responsiveness Fixes** – improved card overflow glitches on small screens

Ver 4.10.1.5 (Niagara Marketplace Release)

Features Added:

- First release.

Bug Fixes:

- First release.