



**ADDING AUDACITY HVAC
TEMPERATURE SENSORS TO
NIAGARA BAS**

2019

AUDACITY
WIRELESS LIGHTING CONTROL
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NOTE: THESE INSTRUCTIONS ARE FOR ADDING AN AUDACY® SYSTEM GATEWAY TO A NIAGARA EC-NET 4 (VERSION 4.6.96.28) BUILDING AUTOMATION SYSTEM TO CONTROL AUDACY HVAC TEMPERATURE SENSORS (58-N-1201-T, -THD, -TX2, -CO2, -CO2THD). IF YOU ARE USING ANY OTHER AUDACY SYSTEM PRODUCTS OR ANY OTHER VERSION OF NIAGARA, THESE INSTRUCTIONS WILL NOT BE VALID.

PRE-INSTALLATION SYSTEM REQUIREMENTS

Windows Operating System 7, 8, or 10

Linux Operating System CentOS, Ubuntu

***This installation is not supported on Mac Operating Systems.**

PRODUCT REQUIREMENTS

Audacy Gateway (GW1100) software release 1.4.8

HVAC Temperature Sensor (58-N-1201-T, -TX2), HVAC Temperature/Humidity Sensor (58-N-1201-THD) or CO2 Sensor (58-N-1201-CO2, -CO2THD)

Niagara Building Automation System software EC-Net 4 (Version 4.6.96.28)

*Niagara software must be purchased either directly from Niagara or through a channel partner prior to installation. Software is not available for purchase with the Audacy system or pre-packaged within the Audacy Gateway.

www.tridium.com/en/partner-channels/purchase-niagara



NOTE: AN AUDACY GATEWAY CAN BE MANAGED EITHER BY NIAGARA OR BY THE AUDACY SYSTEM CLOUD INTERFACE AT ANY GIVEN TIME. ATTEMPTS TO MANAGE THE AUDACY GATEWAY SIMULTANEOUSLY VIA BOTH PLATFORMS WILL RESULT IN PERFORMANCE ISSUES.

1. AUDACY GATEWAY COMPATIBILITY

The driver is compatible with Audacy Gateway software release 1.4.8.

2. NIAGARA VERSION 4 COMPATIBILITY

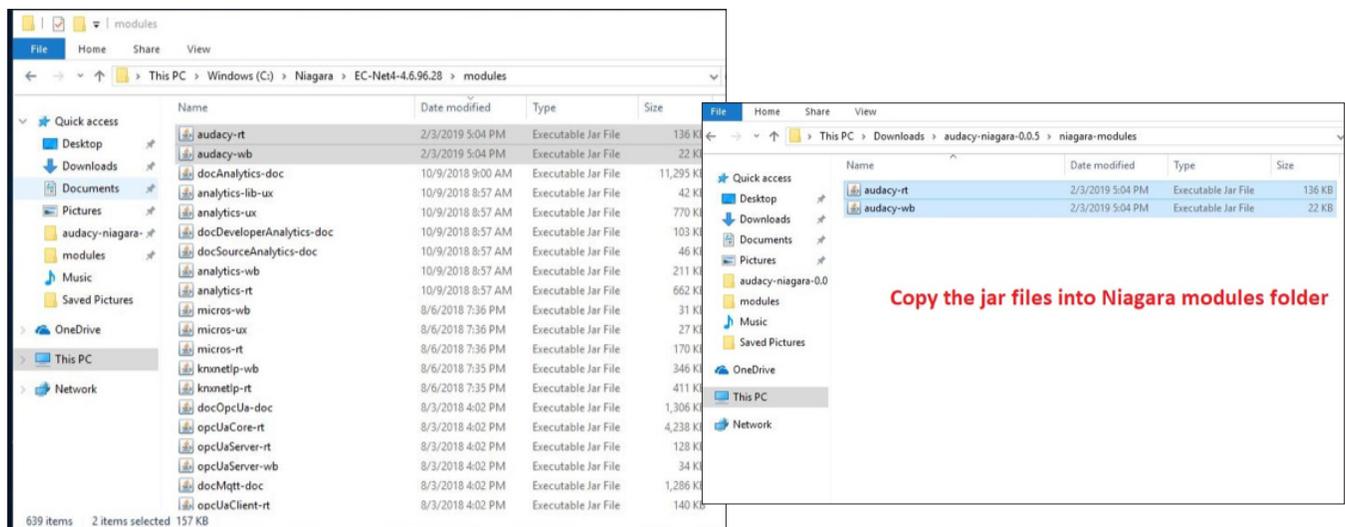
On Niagara 4, there are two modules. Both will execute on all 4.n.nnn versions of Niagara:

- **audacy-rt.jar** – This is required on both stations and engineering tools (Workbench).
- **audacy-wb.jar** – This is the user interface and is required on the engineering tool (Workbench). If any views (property sheets, managers) of the driver will be accessed through a browser, then this should be installed on the station as well.

3. MODULE INSTALLATION

Install **Audacy-rt.jar** and **Audacy-wb.jar** on the computer where Niagara 4 engineering tool (Workbench) will be run. To install, place a copy of the files in the modules directory of your Niagara 4 installation.

This is typically **C:\Niagara\Niagara-4.n.nnn\modules**.



Install the modules on the target station. Using a Niagara 4 Workbench where the modules have already been installed, connect to the station's platform service. Go to the Software Manager and install **Audacy-rt** and optionally **Audacy-wb** (if any views of the driver will be accessed with a browser).

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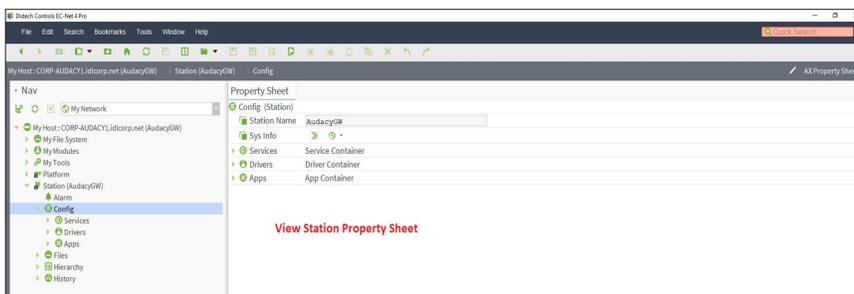
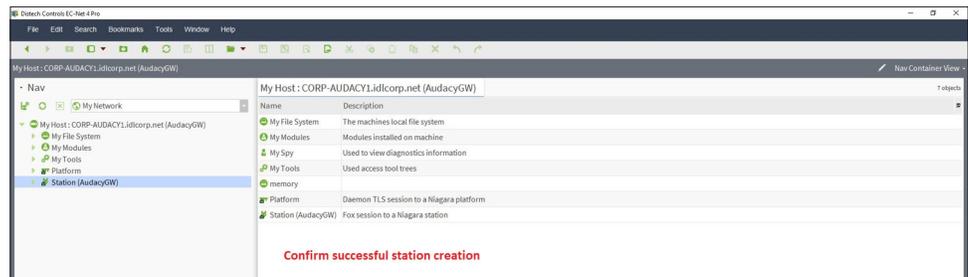
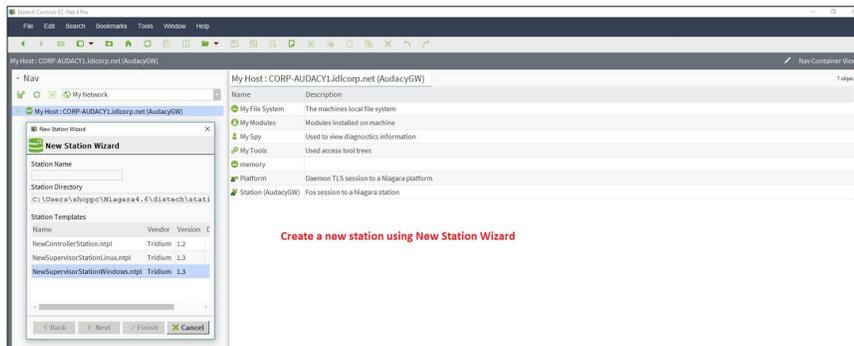


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4. STATION CREATION

Use the New Station Wizard to create a new station (if one doesn't exist).

Note: Every station needs a license from Niagara. So, with single license installation only, one station can be actively running at any given time.



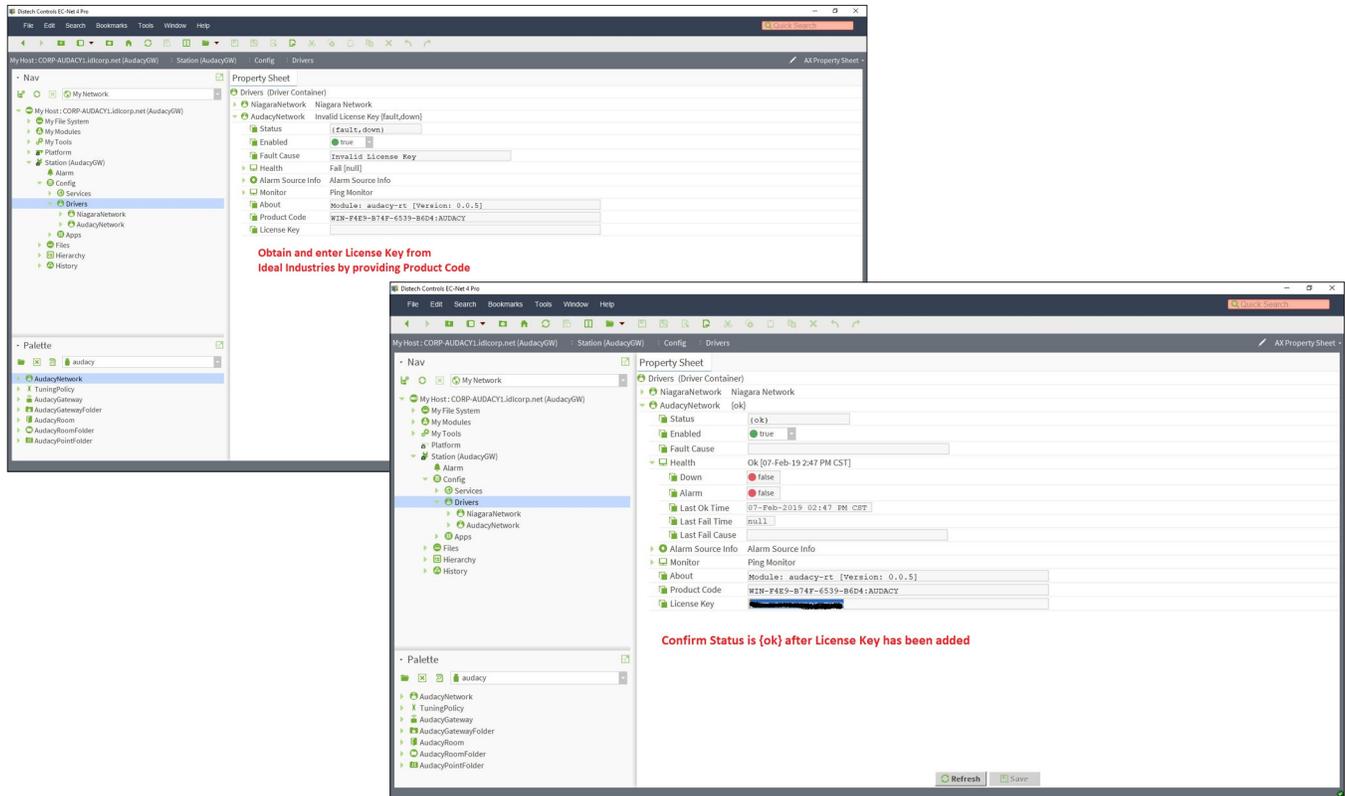
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5. LICENSING

The Audacy Network must be licensed. Licensing is managed on the property sheet of the network object. The following properties are related to licensing.



- **Product Code** – Automatically generated by the driver and is used to generate a license key.
- **License Key** – Where the key generated for the product code must be entered.

Use CTRL+C to copy the value of the “Product Code” property that is automatically generated. Send the product code to your Audacy System representative. They will respond with a text string for you to enter in the “License Key” property. If the license key is correct, the network status will change to {ok} and normal driver usage may proceed without restarting the station.

The exact text of the product code and license key are critical. Please try not to send screen shots as it increases the chances for errors. Highlight the text, copy it using CTRL-C and paste into an email.

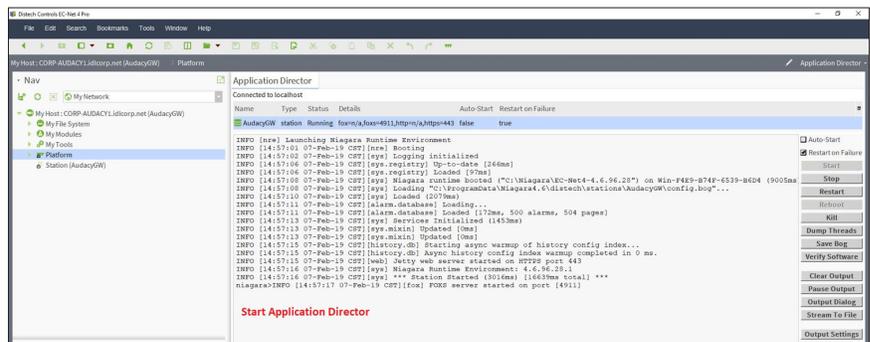
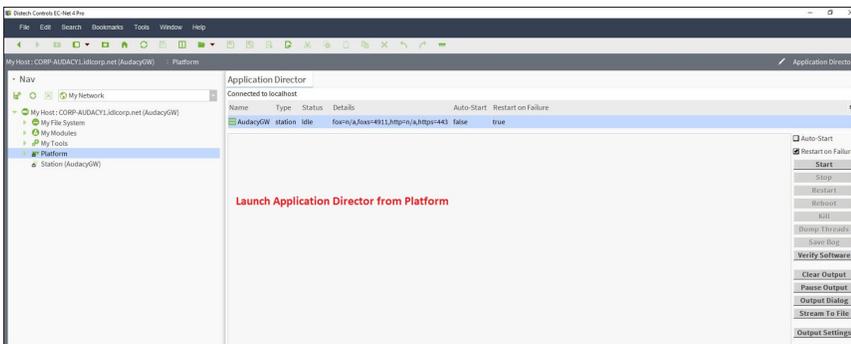
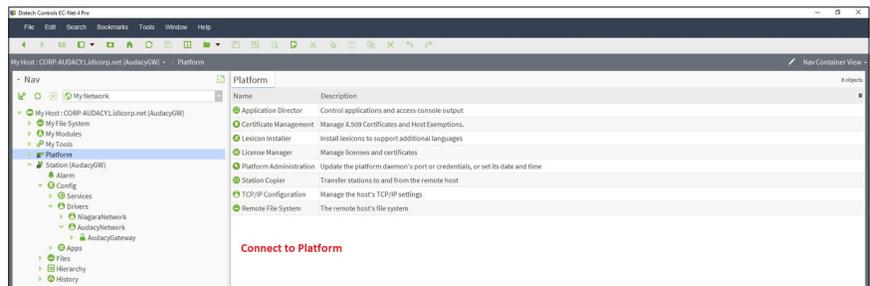
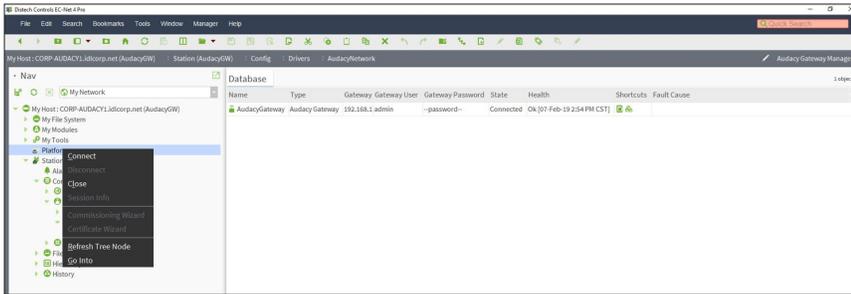
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6. APPLICATION DIRECTOR

The Application Director needs to be started if it is not already running.



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7. USAGE

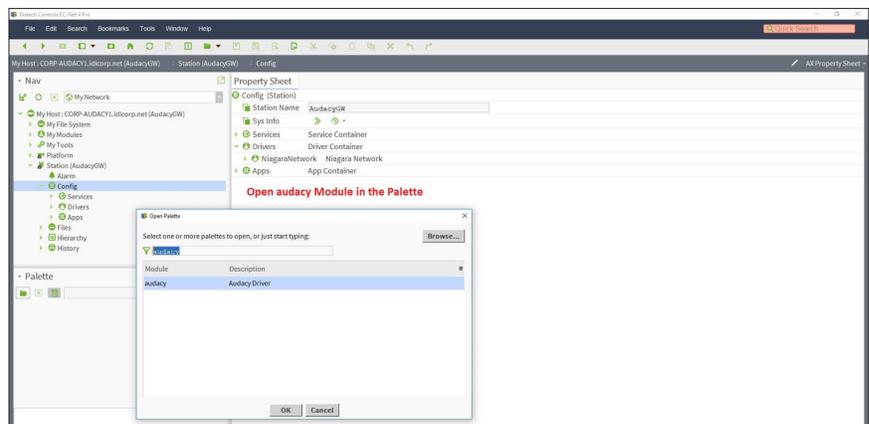
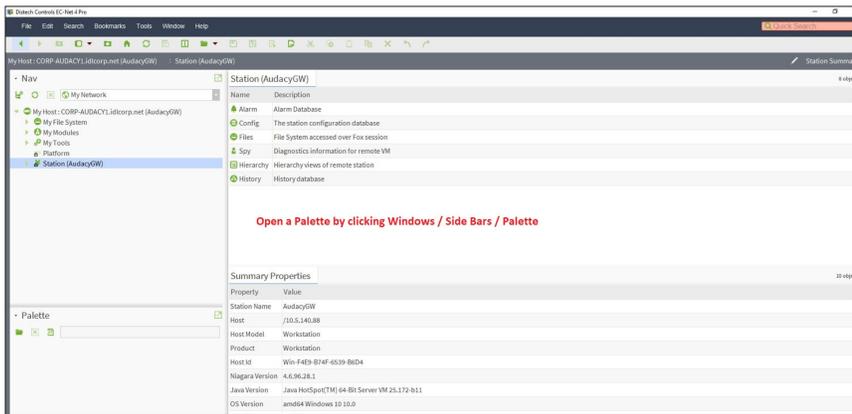
PRE-CONFIGURATION REQUIREMENTS

Before installing and configuring the driver, the following items will be needed.

- Audacy Gateway IP address
- Gateway user account and password for the driver to use

CONFIGURATION

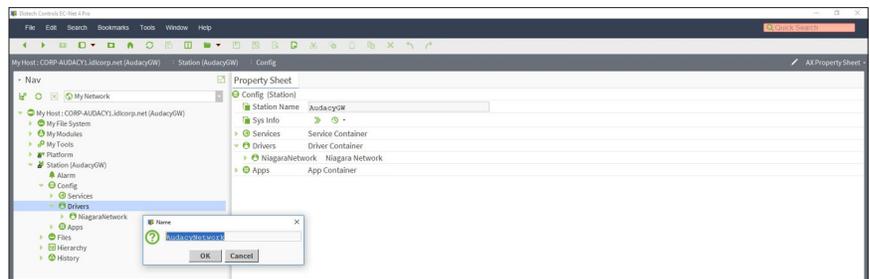
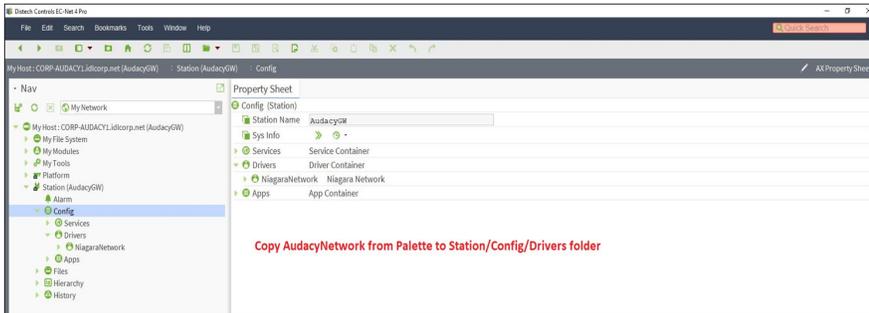
1. Install the module. See the installation section of this document.
2. Open the Audacy palette and add an Audacy Network under the /Drivers node of your station.



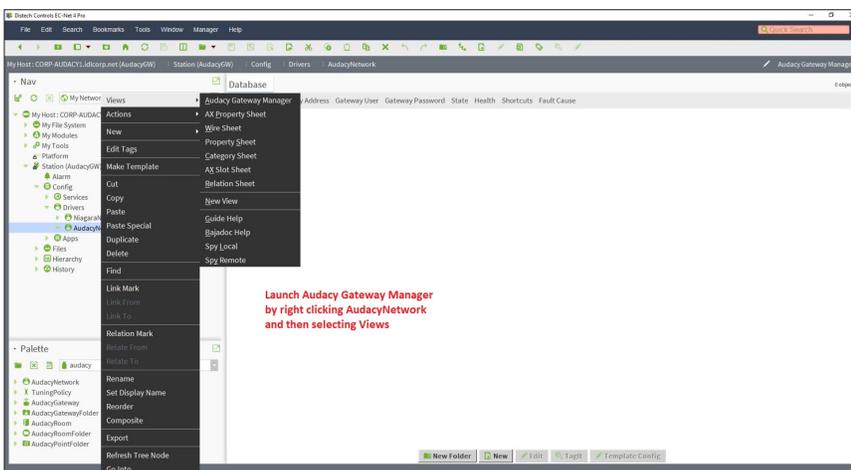
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3. Go to the property sheet of the network object and configure the license. See the licensing section of this document.
4. Double-click the network object to view the Gateway manager. Click the New button to add an Audacy Gateway object.

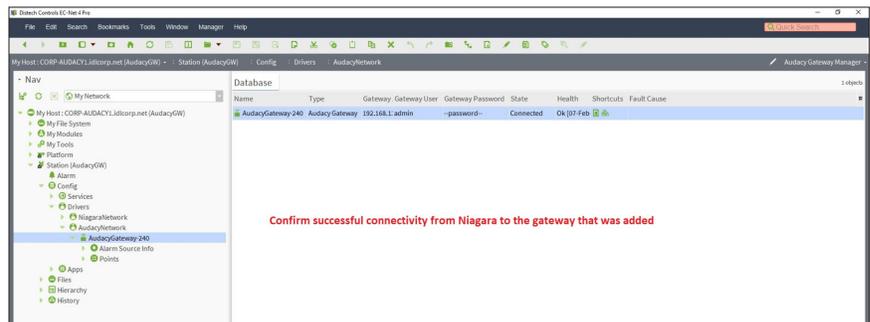
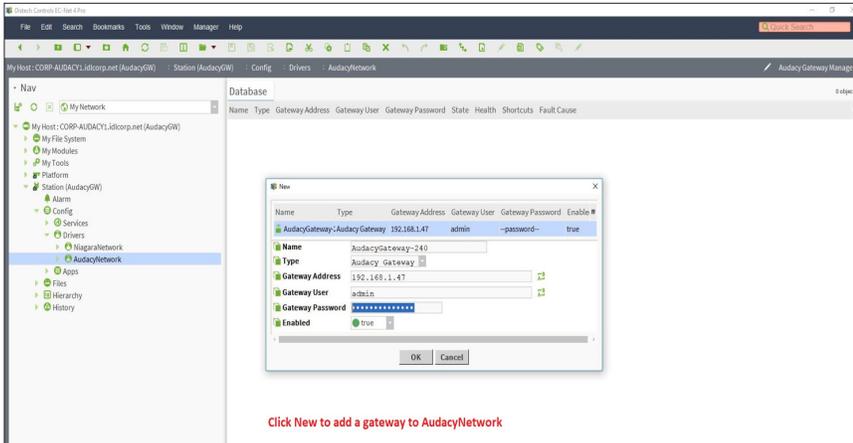


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5. Configure the Gateway Address, User and Password properties of the Gateway object.
6. Double click on “points” to discover and add rooms in the room manager view.
7. Double click on room objects to discover and add points in the point manager view.



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8. TROUBLESHOOTING

ALL ISSUES

- Verify the network is licensed. If unlicensed it will be in fault and the fault cause will say Unlicensed.
- Verify the module version is the latest.
- Check application director for errors.
 - Set the Audacy log to finest to see more details on application director.
- As a last resort, you can unhide and enable “Debug Requests” and “Debug Responses” on the slot sheet of a Gateway object to see actual messaging on application director.

CANNOT CONNECT TO AN AUDACY GATEWAY

- First go through “All Issues”
- Check the Fault Cause of the Gateway object.
- Under the Health property of the Gateway, check Last Fail Cause.
- Try pinging the Gateway from a PC on the same network. If that fails it probably means the address is wrong or the Gateway is down. If the Gateway is down, contact your Audacy System representative.

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9. COMPONENT GUIDE

This section documents the properties and actions of the major driver components involved in this installation.

AUDACY NETWORK (AUDACYNETWORK)

This is the root node of the driver. It represents a tree of Audacy Gateway objects. It manages licensing, threads of execution and the ping monitor.

Properties

- Enabled – Set to false to disable the entire driver.
- Monitor – The ping monitor is used to send a health check message to each Gateway. It is also used to establish connections to unconnected Gateways, consider this the retry rate.
- About – Driver information.
- Product Code – Required by licensing to generate the License Key. See the licensing section of this document.
- License Key – Required to unlock this driver. See the licensing section of this document.

Actions

- Enable – Enables the driver for all Gateway connections.
- Disable – Disables the driver for all Gateway connections.
- Reconnect – Disconnects all Gateways and then reconnects.

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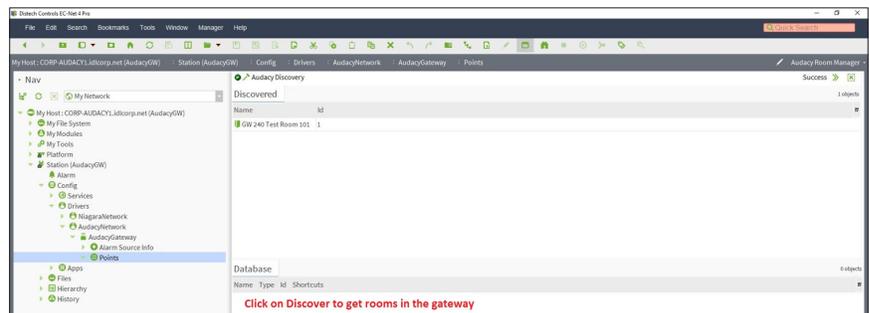
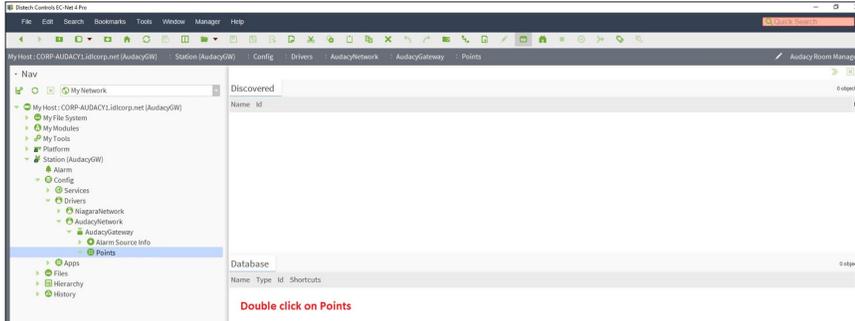


AUDACY GATEWAY (BAUDACYGATEWAY)

This is a Gateway object in the Niagara framework, it represents a connection to an AudacyGateway.

Properties

- Enabled – Set to false to disable communications.
- State – The connection state of the Gateway object.
- Gateway Address – URL or IP address of the Gateway.
- Gateway User/Password – User account and password for Gateway user authentication.
- Poll Changes Rate – Polling interval for changes of value. Set to 0 to disable.
- Poll All Rate – Polling interval to refresh all points. Set to 0 to disable.
- Error Flags – Any error codes sent by the Gateway.
- Mac – Mac address of the Gateway.
- Version – Gateway version.
- Serial – Serial number of the Gateway.
- Message Queue – Messages are sent serially to prevent overloading the Gateway, this provides information about the various queue sizes.
- Points – Standard Niagara point device extension.

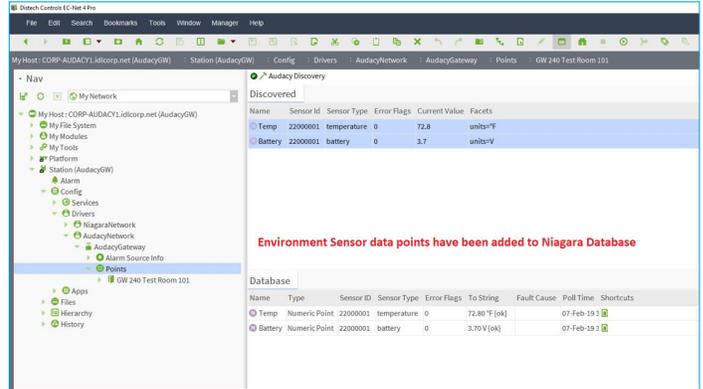
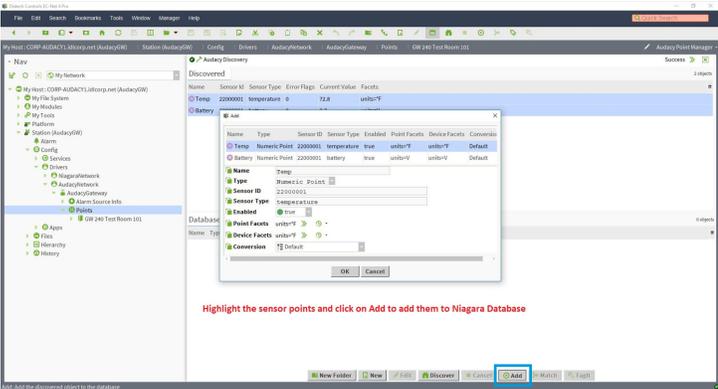
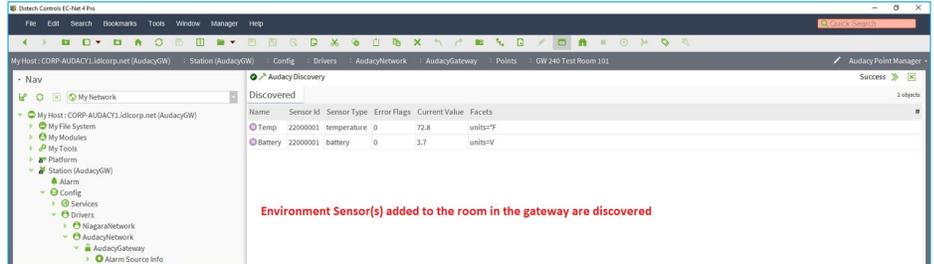
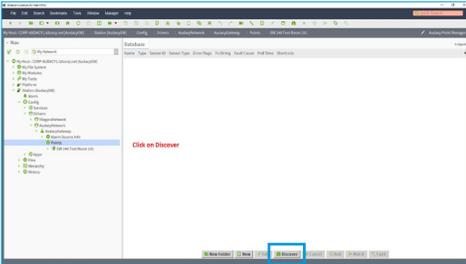


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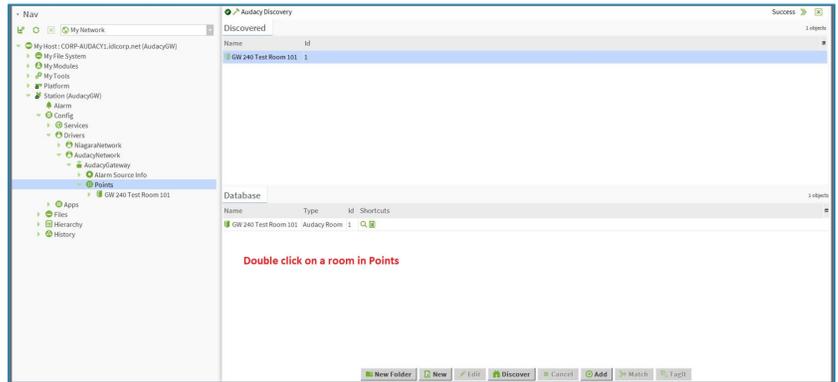
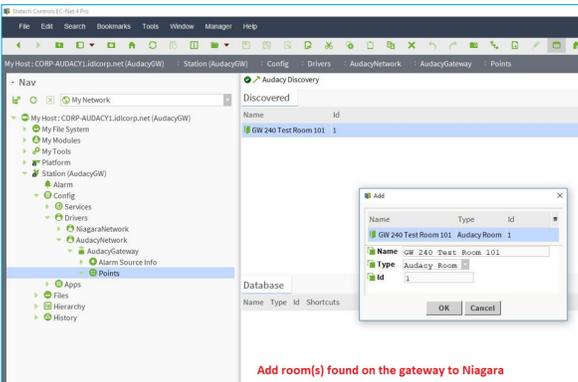


Actions

- Ping – Sends a health check message to the Audacy System.
- Enable/Disable – Enables when disabled, disables when enabled.
- Reconnect – Closes the existing connection and establishes a new one.
- Create Sensor On Gateway – Creates a sensor on the Gateway but does not add corresponding points in Niagara.



- Delete Sensor on Gateway – Deletes a sensor on the Gateway but does not remove its points from the station database.
- Create Room On Gateway – Creates a room on the Gateway but does not add a corresponding object in Niagara.



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- Delete Room on Gateway – Deletes a room on the Gateway but does not remove it from the station database.
- Poll All – Refresh every point.
- Poll Changes – Poll for changes of value.

AUDACY ROOM (BAUDACYROOM)

This object represents a room on the Gateway and will be the parent of all sensor points associated with the room.

Properties

- Id - Room ID

Actions

- Poll – Poll all points associated within the room.
- Create Sensor On Gateway – Creates a sensor on the Gateway but does not add corresponding points in Niagara.
- Delete Sensor on Gateway – Deletes a sensor on the Gateway but does not remove its points from the station database.
- Delete Room on Gateway – Deletes a room on the Gateway as well as the station database.

AUDACY POINT EXTENSIONS (BAUDACYPROXYEXT)

These are the “Proxy Ext” properties on points that represent sensor values on the Gateway.

Properties

- Sensor Id – Sensor address.
- Sensor Type – What this value represents.
- Error Flags – Any error codes sent by the Gateway.

Actions

- Poll – Poll all points associated within the room.
- Delete Sensor on Gateway – Deletes a sensor on the Gateway but does not remove its points from the station database.

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