

# Trane ComThree Driver User Guid

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## Installation

Install ifcComThree-rt.jar and ifcComThree-wb.jar on the computer where Niagara N4 Workbench will run. To install, place a copy of the file in the modules directory of your Niagara N4 installation. This is typically C:\Niagara\Niagara-4.n.nnn\modules.

Install ifcComThree module on the target station. Using a Niagara N4 workbench where the module has already been installed, connect to the stations platform service. Go to the software manager and install ifcComThree.

## Requirement

- Niagara N4 workbench 4.0.22 or higher.
- Niagara N4 platform JACE support:
  1. JACE-3E.
  2. JACE 6xx.
  3. JACE 7xx.
  4. JACE 8000 (Titan JACE).
- Trane ComThree Devices support:
  - 1) VariTrane VAV Type I
- Serial communication RS485 Port. (Required “serial” feature in the license). Non isolated RS485 communication.

## Quick Start

This section provides a collection of procedures to use the Niagara N4 Trane ComThree drivers to build networks of devices with proxy points and other components. Like other Niagara N4 drivers, you can do most configurations from special “manager” views and property sheets using Workbench.

- For any of the NonIsoComThree networks:
  - [“Configure the NonIsoComThree network”](#)
  - [“Add VariTrane I devices”](#)
  - [“Create ComThree proxy points”](#)

### Configure NonIsoComThree Network

To add and configure a NonIsoComThree network, perform the following main tasks:

- Add the NonIsoComThree network, as needed:
  - [Add a NonIsoComThreeNetwork](#)

## Add a NonIsoComThreeNetwork

### To add a NonIsoComThreeNetwork in the station

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Use the following procedure to add a NonIsoComThree Network component under the station's Drivers container.

Note : If the host JACE has multiple RS-485 ports to be used for client (master) access of NonIsoComThree networks, add one NonIsoComThree Network for each physical port. Note that for each NonIsoComThreeNetwork, you must [Configure the serial port parameters](#).

To add a NonIsoComThreeNetwork in the station:

- Double-click the station's **Drivers** container, to bring up the **Driver Manager**.
- Click the **New** button to bring up the New network dialog. For more details, see "[Driver Manager New and Edit](#)" in the *Drivers Guide*.
- Select "NonIsoComThree Network," number to add: 1 (or more if multiple networks) and click **OK**. This brings up a dialog to name the network(s).
- Click **OK** to add the NonIsoComThreeNetwork(s) to the station. You should have a NonIsoComThreeNetwork named "NonIsoComThree Network" (or whatever you named it), under your Drivers folder, initially showing a status of "{fault}" and enabled as "true."

After you [Configure the serial port parameters](#), status should change to "{ok}".

### Configure the serial port parameters and transmission mode

In the NonIsoComThree Network property sheet for each network, you must set the serial port configuration to match the serial communications parameters used by other NonIsoComThree devices on the network.

### To set the serial port parameters

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To set the serial port parameters and mode for a NonIsoComThreeNetwork:

- Right-click the ComThreeNetwork and select **Views > Property Sheet**.

The **Property Sheet** appears.

- Scroll down and expand the **Serial Port Config** slot.

Set the properties for the JACE serial port used, where defaults are:

- Port Name: none — Enter the JACE port being used, like COM1 or COM3. (Case sensitive character. "COMx")
- Baud Rate: Baud1200 — leave it default.

- Data Bits: Data Bits8 — leave it default.
  - Stop Bits: Stop Bit1 — leave it default.
  - Parity: none — leave it default.
  - Flow Control Mode: none — leave it default.
- Click the **Save** button.

## Add a VariTrane Devices

After adding a NonIsoComThree network, you can use the network’s default “device manager” view to add the appropriate VariTrane I devices.

**Note:** *You need the address information for each ComThree device you are adding, as well as for later procedures to add proxy points under devices.*

### To add a VariTrane device in the network

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Use the following procedure to add the correct type of VariTrane device in the network. To add a VariTrane device:

- In the Nav tree or in the Driver Manager view, double-click the client network, to bring up the device manager (NonIsoComThree Device Manager). All of these device manager views operate in a similar fashion.

**Note:** *For general device manager information, see the “[About the Device Manager](#)” section in the Drivers Guide.*

- Click the **New** button to bring up the **New** device dialog.
- Select for number to add: 1 (or more, if multiple) and click **OK**.  
This brings up a dialog to name the device(s), enter VariTrane device address.
  - Any *VariTrane Device* needs the unique address in use.
- Click **OK** to add the VariTrane device(s) to the network.  
You should see the device(s) listed in the VariTrane Device Manager view, showing a status of “{ok}” and enabled as “true.”

If a device shows “down” check the configuration of the network and/or VariTrane device addresses. You can simply double-click a device in the device manager to review settings in an **Edit** dialog, identical to the **New** dialog when you added it.

After making any address changes, click **Save**, then right-click the device and select **Actions > Ping**.

## Create ComThree Proxy Point

As with device objects in other drivers, each VariTrane device has a **Points** extension that serves as the container for proxy points. The default view for any Points extension is the Point Manager (and in this case, the “**ComThree Point Manager**”). You use it to add ComThree proxy points under any VariTrane device.


***Note:** Unlike the point managers in many other drivers, the **ComThree Point Manager** does offer a “Learn mode” with a **Discover** button and pane. Otherwise you can simply use the **New** button to create proxy points, referring to the vendor’s documentation for the addresses of data items in each VariTrane device.*

### To add ComThree proxy points

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Once a VariTrane device is added, you can add proxy points to read and write data. If programming online (and the device shows a status of “{ok}”), you can get statuses and values back immediately, to help determine if point configuration is correct. Use the following procedure:

To create ComThree proxy points in a device:

- In the **Device Manager**, in the **Exts** column, double-click the Points icon  in the row representing the device you wish to create proxy points.

This brings up the **ComThree Point Manager**.

- (Optional) Click the **New Folder** button to create a new points folder to help organize points, and give it a short name, such as “TempNo1”, or whatever name works for your application. You can repeat this to make multiple points folders, or simply skip this step to make all proxy points in the root of **Points**. Note that all points’ folders have their own **ComThree Point Manager** view, just like **Points**. If making points folders, double-click one to move to its location (and see the point manager).

Name	Type	Read Address	Write Address	Bit	Enabled	Facets	Tuning Policy Name	Conversion
SpaceTemperature	Numeric Point	8	0	0	true	units=°F,precision=2,min=-inf,max=+inf	defaultPolicy	Default

☐ Name: SpaceTemperature
 ☐ Type: Numeric Point
 ☐ Read Address: 8
 ☐ Write Address: 0
 ☐ Bit: 0 [0 - 7]
 ☐ Enabled: true
 ☐ Facets: units=°F,precision=2,min=-inf,max=+inf
 ☐ Tuning Policy Name: Default Policy
 ☐ Conversion: Default

For more details, see [“About ComThree proxy points”](#)

- Click **OK** to add the proxy point(s) to the Points extension (or to the current points folder), where each shows as a row in the point manager.

If parameter correctly, each point should have a status of “{ok}” with a polled value displayed.

- If a point shows a “{fault}” status, check its ProxyExt “Fault Cause” property value, which typically includes a ComThree “exception code” string, such as “Read fault: illegal data address”. In such a case, re-check the address in the point against the documented address for the data item.
- Continue to add proxy points as needed under the **Points** extension of each ComThree device. As needed, double-click one or more existing points for the **Edit** dialog, similar to the **New** dialog used to create the points. This is commonly done for re-editing items like data addresses, names, or facets.



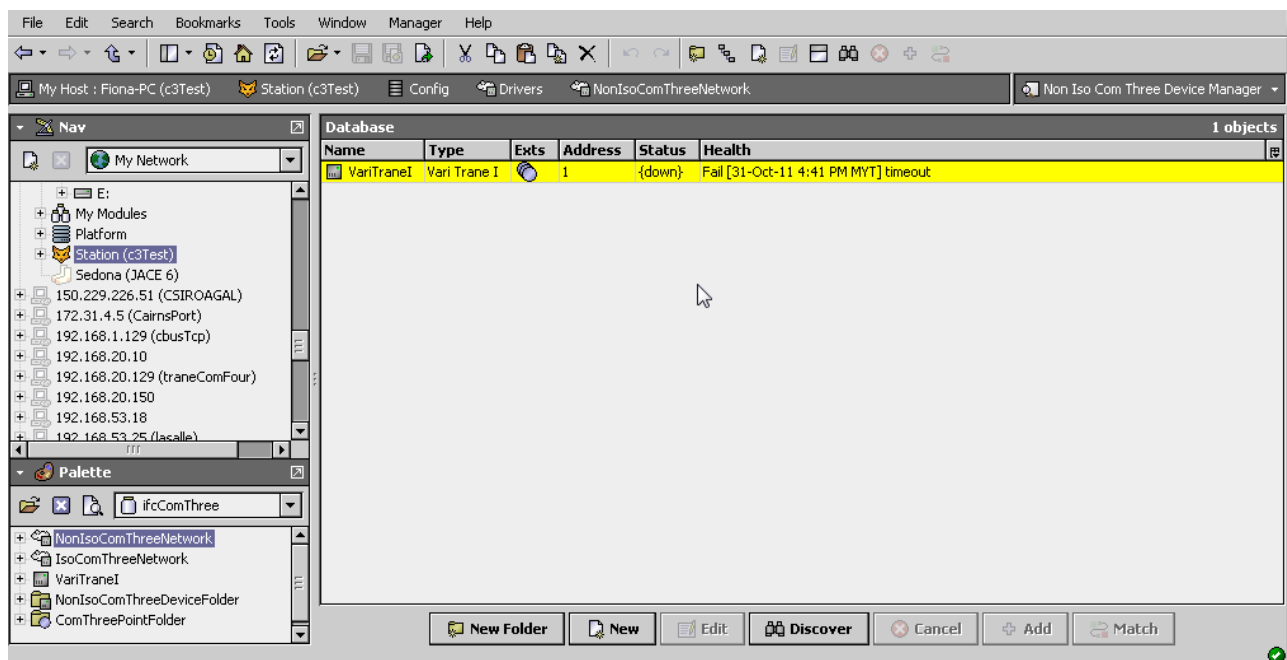
## ComThree View

- [ComThree Device Manager](#)
- [ComThree Point Manager](#)

### ComThree Device Manager

The ComThree Device Manager is the default view when you double-click on a NonIsoComThree Network in the Nav tree. This manager view provides a quick and easy way to display.

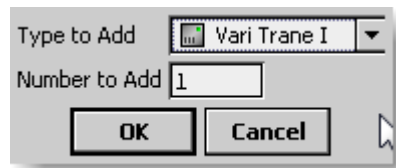
The VariTrane Device Manager is the default view for any NonIsoComThree Network container. The VariTrane Device Manager is a table-based view, where each row represents a unique device. When building a network in the station, you use this view to create, edit, and delete device-level components. Below is an example NonIsoComThree Device Manager view.



The view above shows a typical NonIsoComThree Device Manager view.

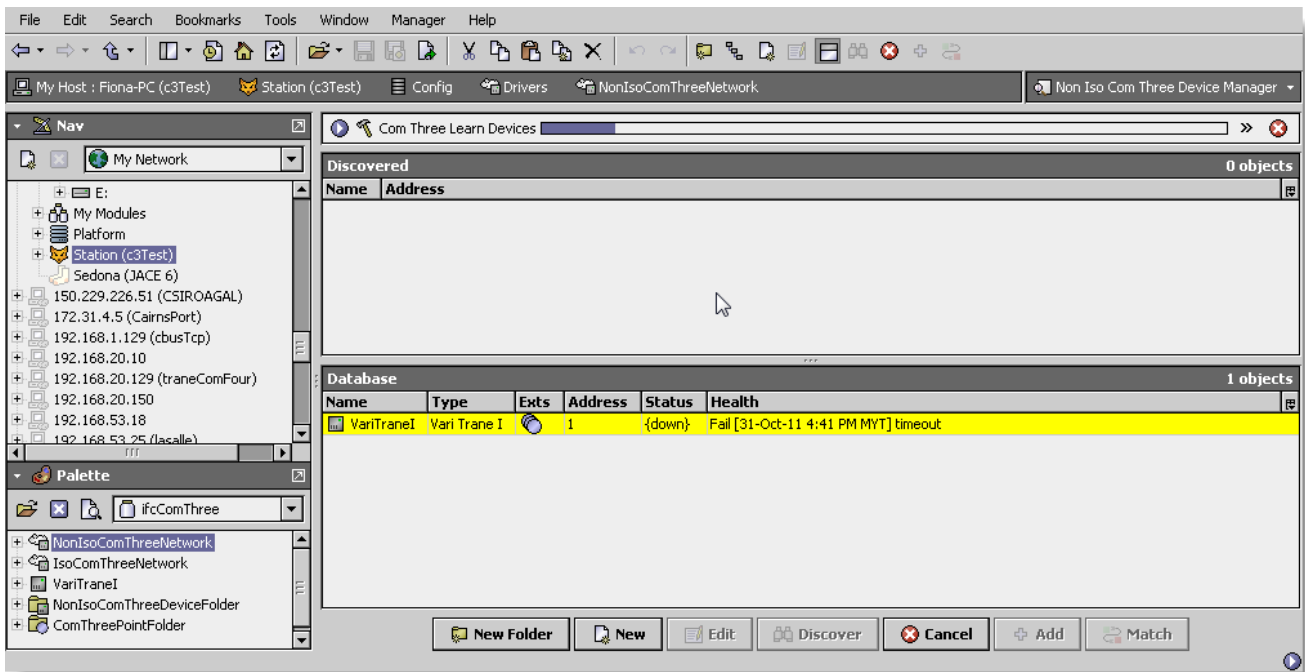
The “New Folder”, “New”, and “Edit” buttons are not unique to the ComThree Device Manager, and are explained in the “Niagara N4 User’s Guide” in the “Driver Architecture” section. The “Match” button is not used for the ComThree driver.

You can now add the devices to the station database by clicking the “Add” button. This will pop up the “Add” dialog box:



The “Add” dialog box affords you the opportunity to tweak the display name, enabled state, and/or address of each of the selected devices. Click the “OK” button to add the devices to the database, or click “Cancel” to bail out.

The “Discover” button implements functionality that is unique and tailored to discovering VariTrane devices. By clicking the “Discover” button, the “learn” mode of the manager is invoked (the panes will be split, and a “discovery” table will be displayed in the top pane) .



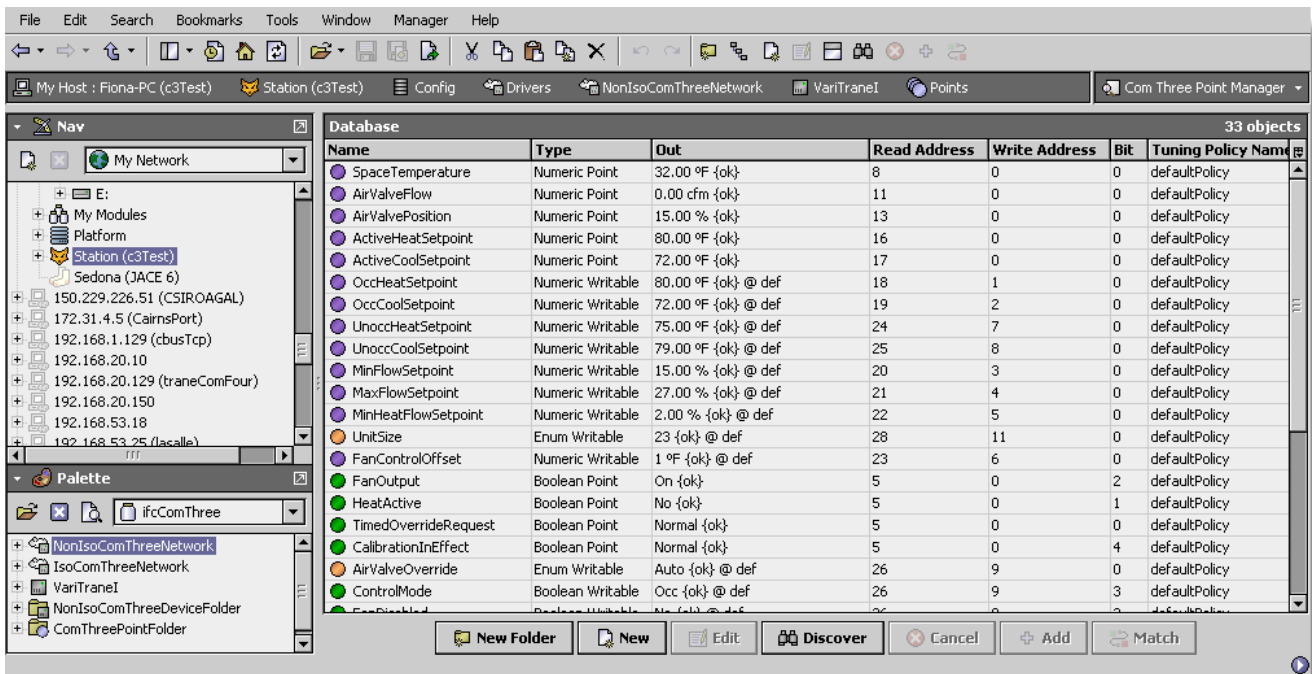
Single or multiple VariTrane devices can be added as device by selecting the discovered row(s) in the top pane, and clicking add. Doing so will cause the “Add” dialog box to appear. Once the device(s) are satisfactorily edited, click “OK” to create the device corresponding to the device property.

## ComThree Point Manager

The ComThree Point Manager is the default view when you double-click on a “points” folder (a ComThreePointDeviceExt type folder) under a VariTrane Device in the Nav tree. This manager view provides a quick and easy way to display and learn ComThree points in a VariTrane device.

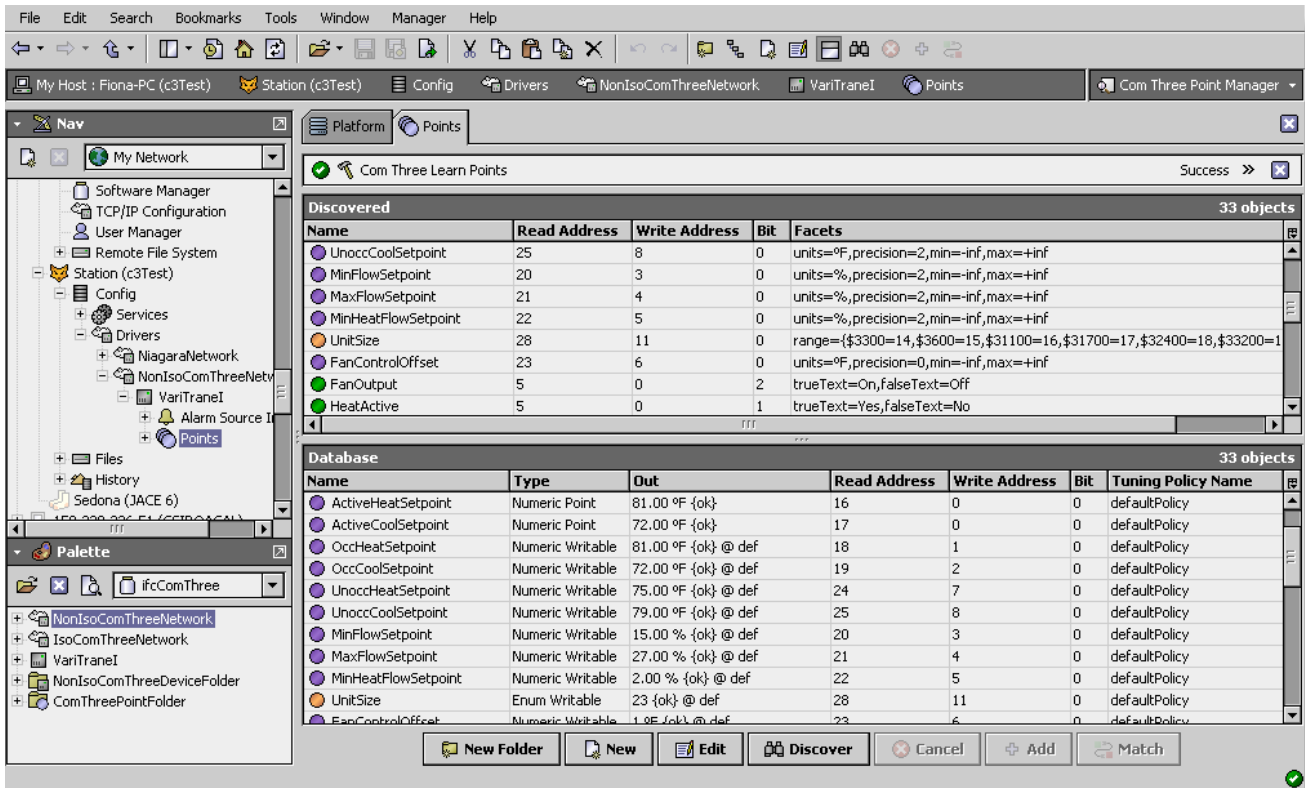
The ComThree Point Manager is the default view for any ComThreePointDeviceExt container. The ComThree Point Manager is a table-based view, where each row represents a unique ComThree Group address within a device.

Below is an example ComThree Point Manager view.



The “New Folder”, “New”, and “Edit” buttons are not unique to the ComThree Device Manager, and are explained in the “Niagara N4 User’s Guide” in the “Driver Architecture” section. The “Match” button is not used for the ComThree driver.

The “Discover” button implements functionality that is unique and tailored to discovering ComThree devices points. By clicking the “Discover” button, the “learn” mode of the manager is invoked (the panes will be split, and a “discovery” table will be displayed in the top pane) .



Single or multiple points can be added as control points with ComThreeProxyExt extensions by selecting the discovered row(s) in the top pane, and clicking add. Doing so will cause the “Add” dialog box to appear:

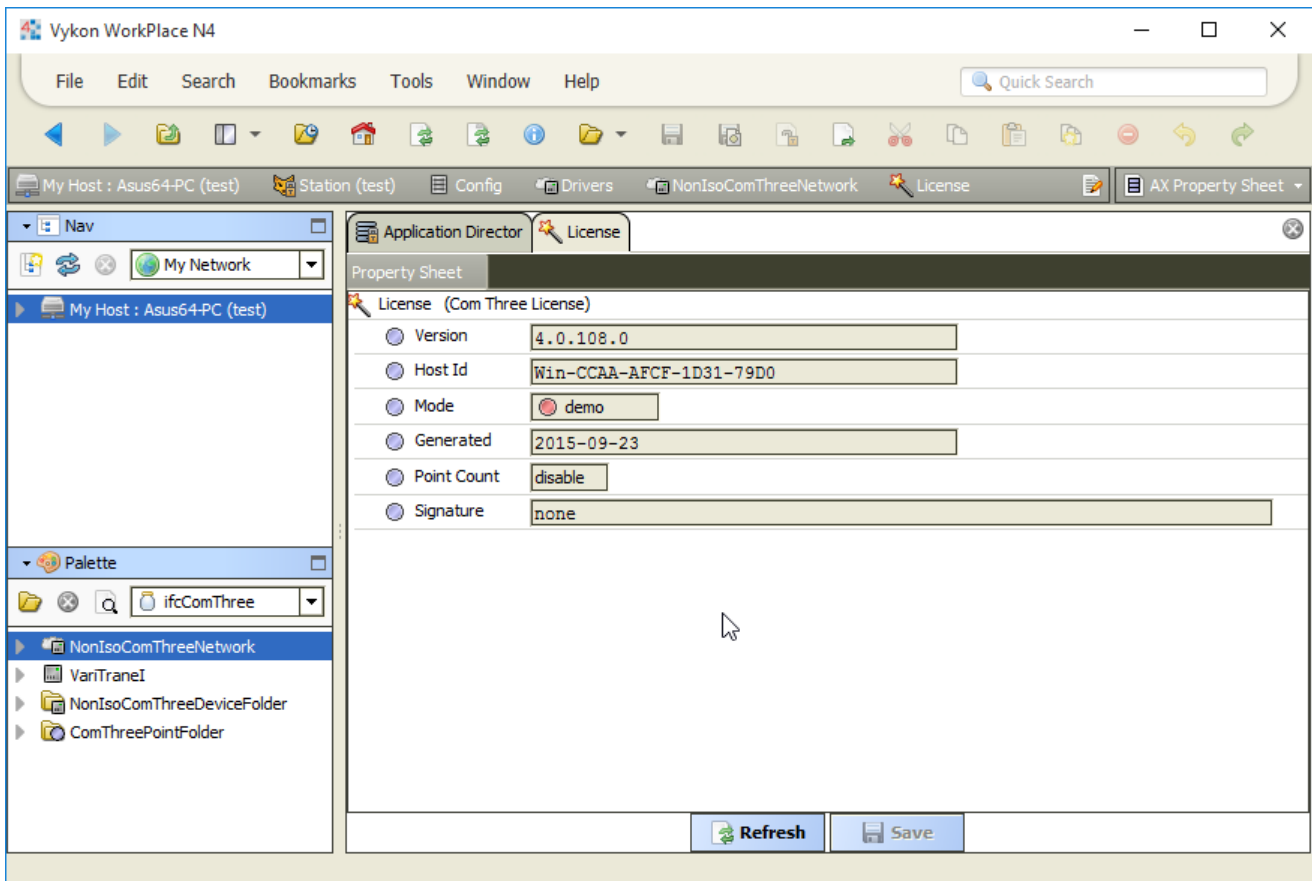
Once the point(s) are satisfactorily edited, click “OK” to create the proxy points corresponding to the point property.

## Licensing

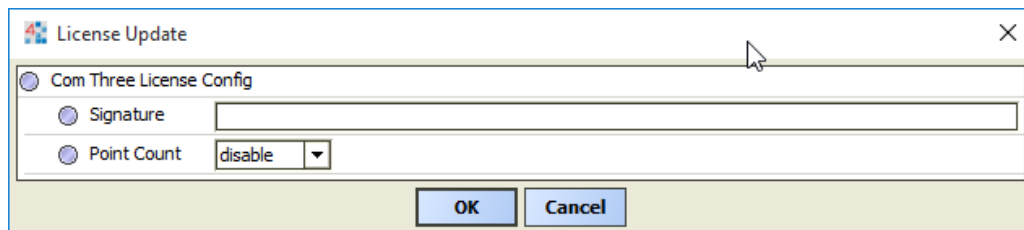
Trane Com Three driver License is running independently from the Tridium license, it has no restriction to run to any of the existing license vendor.

The Com Three license provide 2 hour demo license without the unlock code. After the demo license expired the Com Three Driver communication will stop automatically and will show fatal fault at the CommFour Network level. “ifcComThree license expired”. To extend the demo period user required to restart the station or reboot the JACE.

To request the license please submit the JACE/Web Supervisor host ID, to unlock the driver simply go to the license property action and invoke command “License Update”, the dialog “License Update” will appear. Place the unlock code at the “Unlock Code” property. Please take note the license only provide by authorize vendor. If the unlock code is successful enter the property “Mode” will automatically change to “registered” and user is required to reboot the JACE to applied the change.



To place the unlock code select at the word “License (Com Three License)” and click the right mouse button the action invoke will appear. Select the license update the dialog as below will appear.



\*\*\*end\*\*\*