MaxLine Solutions Ltd

Novar Driver User Guide (Beta)

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1

Installation

From your PC, use the Niagara Workbench 3.*n.nn* installed with the "installation tool" option (checkbox "This instance of Workbench will be used as an installation tool"). This option installs the needed distribution files (.*dist* files) for commissioning various models of remote JACE platforms. The dist files are located under your Niagara install folder in various revision-named subfolders under the "sw" folder.
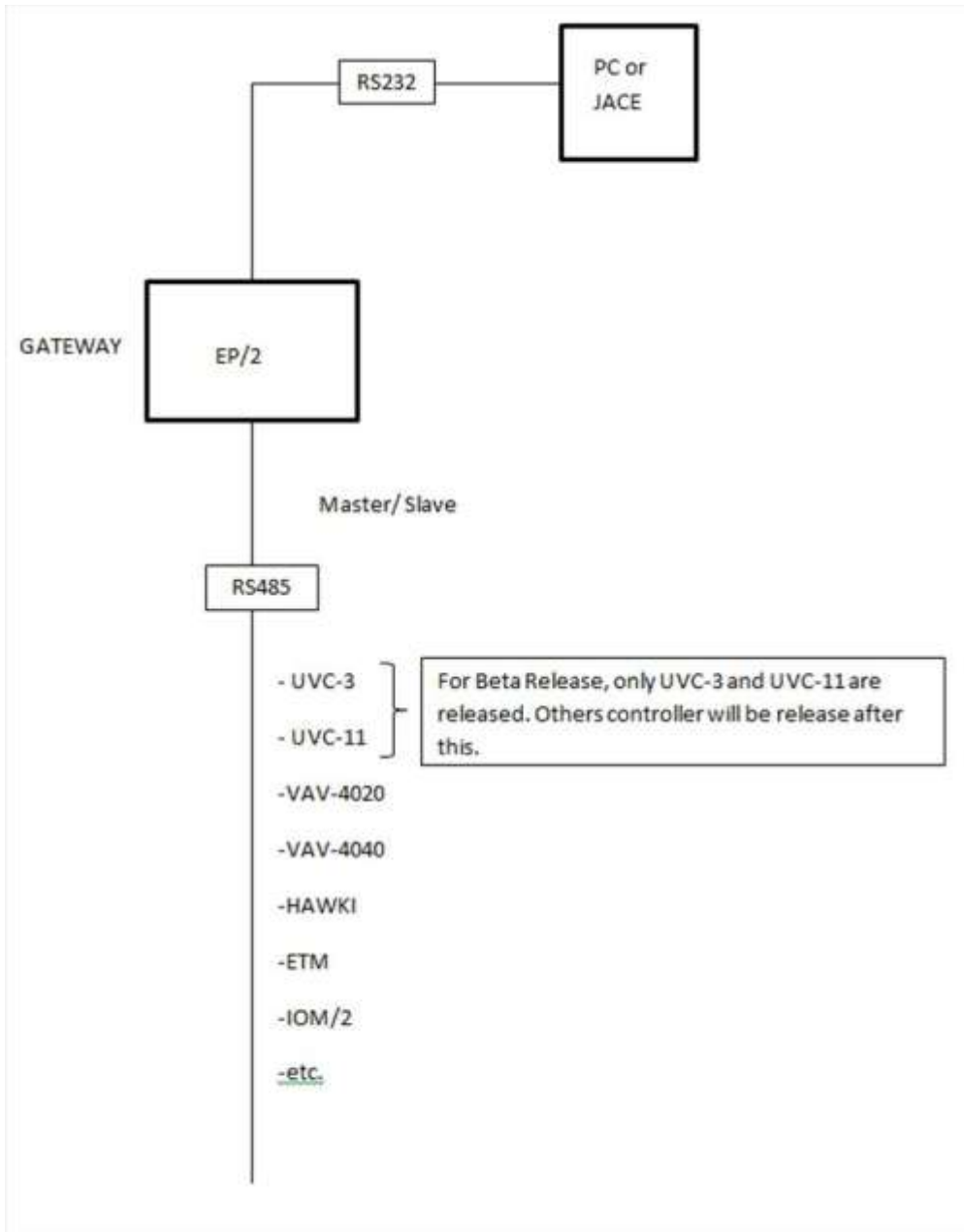
When installing Workbench on your PC, you should also select the **ifcNovar** module.

Apart from installing the 3.*n.nn* version of the Niagara distribution files in the JACE, make sure to install the **ifcNovar** module too (if not already present, or upgrade if an older revision). For more details, see "About the Commissioning Wizard" in the JACE Niagara AX Install and Startup Guide.

Following this, the station is now ready for Trane Novar software integration, as described in the rest of this document.

Requirement

- Niagara Ax workbench 3.4.xx or higher.

- Niagara Ax platform JACE support:

  1. JACE 2xx.
  2. JACE 4xx.
  3. JACE 5xx.
  4. JACE 6xx.
  5. JACE 7xx.

- Novar Devices support:

  1) UVC-03
  2) UVC-11
  3) VAV-4020 (Coming soon)
  4) VAV-4040 (Coming soon)
  5) Hawki (Coming soon)
  6) ETM (Coming soon)
  7) IOM (Coming soon)

- Serial communication RS232 Port. (Required "serial" feature in the license).

RS232 — PC or JACE

GATEWAY — EP/2

Master/ Slave

RS485

- UVC-3
- UVC-11

For Beta Release, only UVC-3 and UVC-11 are released. Others controller will be release after this.

-VAV-4020

-VAV-4040

-HAWKI

-ETM

-IOM/2

-etc.

Chapter

2

Quick Start

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

- For any of the Novar networks:

    - "Configure the Novar network"
    - "Add devices"
    - "Create Novar proxy points"

Configure Novar Network

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

- Add the Novar network, as needed:

    - Add a NovarNetwork

Add a NovarNetwork

To add a NovarNetwork in the station

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

Note : If the host JACE has multiple RS-232 ports to be used for client (master) access of Novar networks, add one Novar Network for each physical port. Note that for each NovarNetwork, you must Configure the serial port parameters.

To add a NovarNetwork 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 "Novar 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 NovarNetwork(s) to the station. You should have a NovarNetwork named "Novar 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 Novar Network property sheet for each network, you must set the serial port configuration to match the serial communications parameters used by other Novar devices on the network.

  To set the serial port parameters

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

- Right-click the NovarNetwork 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: Baud9600 — 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 Devices

After adding a Novar network, you can use the network's default "device manager" view to add the appropriate Novar devices.

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

To add a Novar device in the network

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

▪ In the Nav tree or in the Driver Manager view, double-click the client network, to bring up the device manager (Novar 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 Novar device address.

- Any *Novar Device* needs the unique address in use.

▪ Click **OK** to add the Novar device(s) to the network.
You should see the device(s) listed in the Novar 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 Novar 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 Novar Proxy Point

As with device objects in other drivers, each Novar 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 "**Novar Point Manager**"). You use it to add Novar proxy points under any Novar device.

*Note: Unlike the point managers in many other drivers, the **Novar 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 Novar device.*

To add Novar proxy points

Once a Novar 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 Novar 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 **Novar 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 **Novar 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	Ord	Enabled	Facets	Tuning Policy Name	Conversion	
⦿ setpoint_coolScheduledOnSetPoint	Numeric Writable	setpoint:coolScheduledOnSetPoint	true	units=℉,precision=0,min=56.00,max=127.00	defaultPolicy	Default	

○ Name	setpoint_coolScheduledOnSetPoi
○ Type	Cannot edit
○ Ord	○ Novar Link
	☐ ○ Source setpoint
	☐ ○ Slot coolScheduledOnSetPoint
○ Enabled	○ true ▾
○ Facets	units=℉,precision=0 ℉,min=56 ℉,max=127 ℉ ≫ 🜊 ▾
○ Tuning Policy Name	Default Policy ▾
○ Conversion	☐ Default ▾

<div align="center">OK   Cancel</div>

For more details, see "About Novar 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 Novar "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 Novar 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.
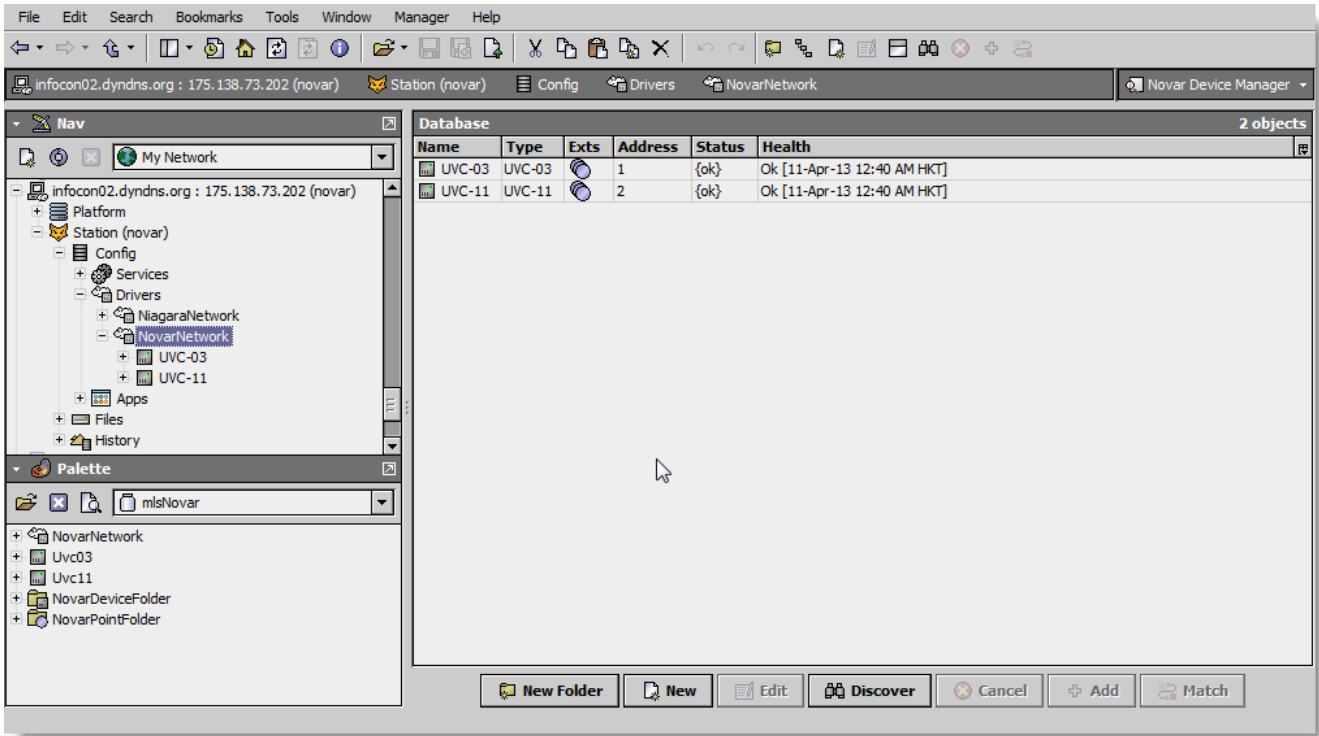
Chapter

3

Novar View

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

Novar Device Manager

The Novar Device Manager is the default view when you double-click on a Novar Network in the Nav tree. This manager view provides a quick and easy way to display.
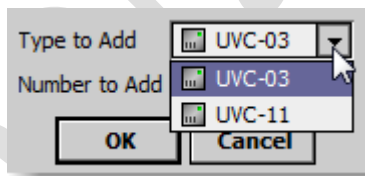
The Novar Device Manager is the default view for any Novar Network container. The Novar Device Manager is a table-based view, where each row represents a unique device. When building a network in the station, you use this view to create, edit, and delete device-level components. Below is an example Novar Device Manager view.

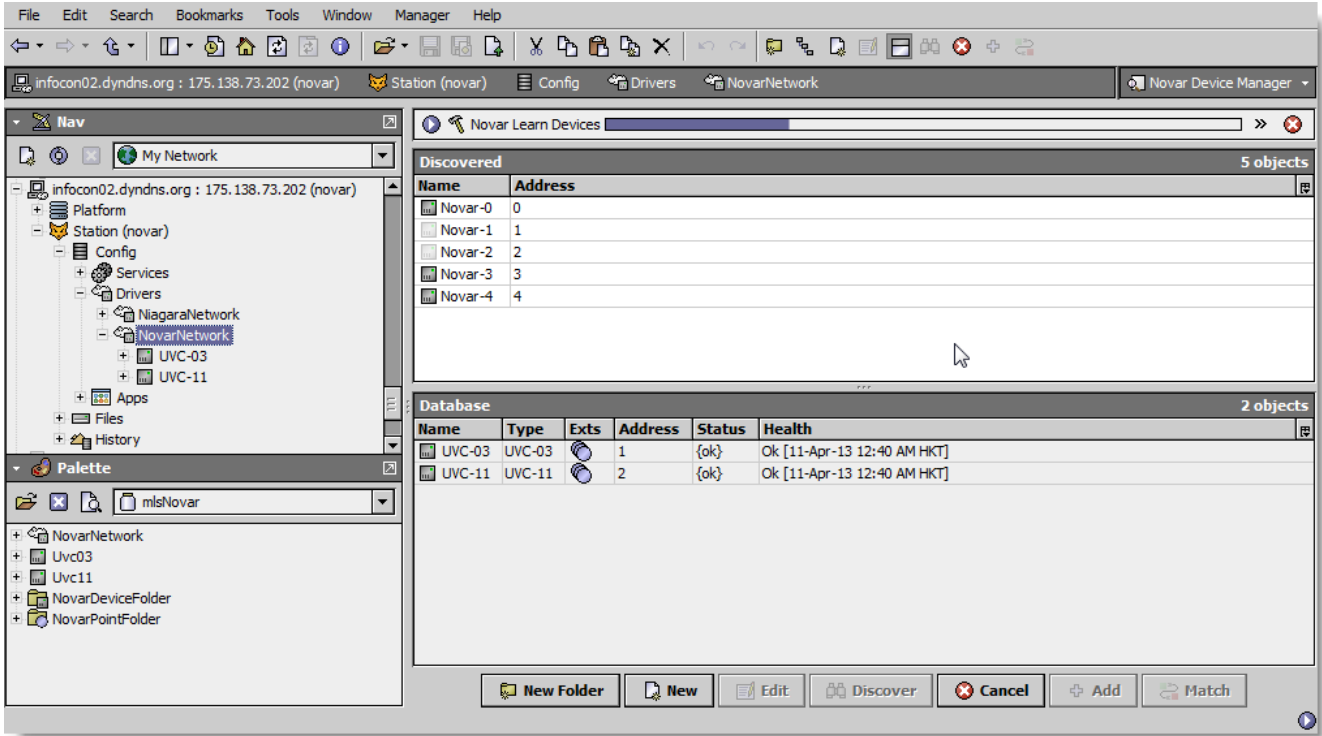The view above shows a typical Novar Device Manager view.

The "New Folder", "New", and "Edit" buttons are not unique to the Novar Device Manager, and are explained in the "Niagara AX User's Guide" in the "Driver Architecture" section. The "Match" button is not used for the Novar 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 Novar 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) .
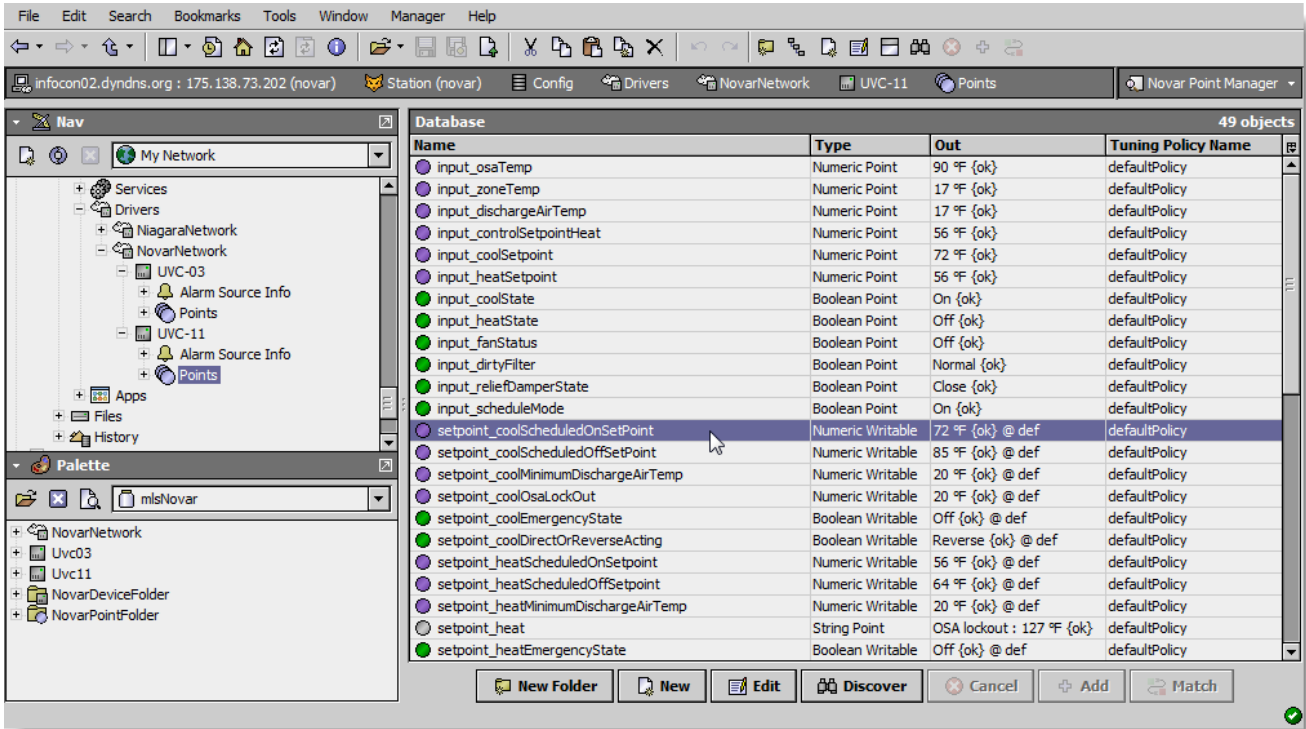

Single or multiple Novar devices can be added as device by selecting the discovered row(s) in the top pane, and clicking add. Doing so will cause the "Add" dialog box to appear:
Once the device(s) are satisfactorily edited, click "OK" to create the device corresponding to the device property.

Novar Point Manager

The Novar Point Manager is the default view when you double-click on a "points" folder (a NovarPointDeviceExt type folder) under a Novar Device in the Nav tree. This manager view provides a quick and easy way to display and learn Novar points in a Novar device.
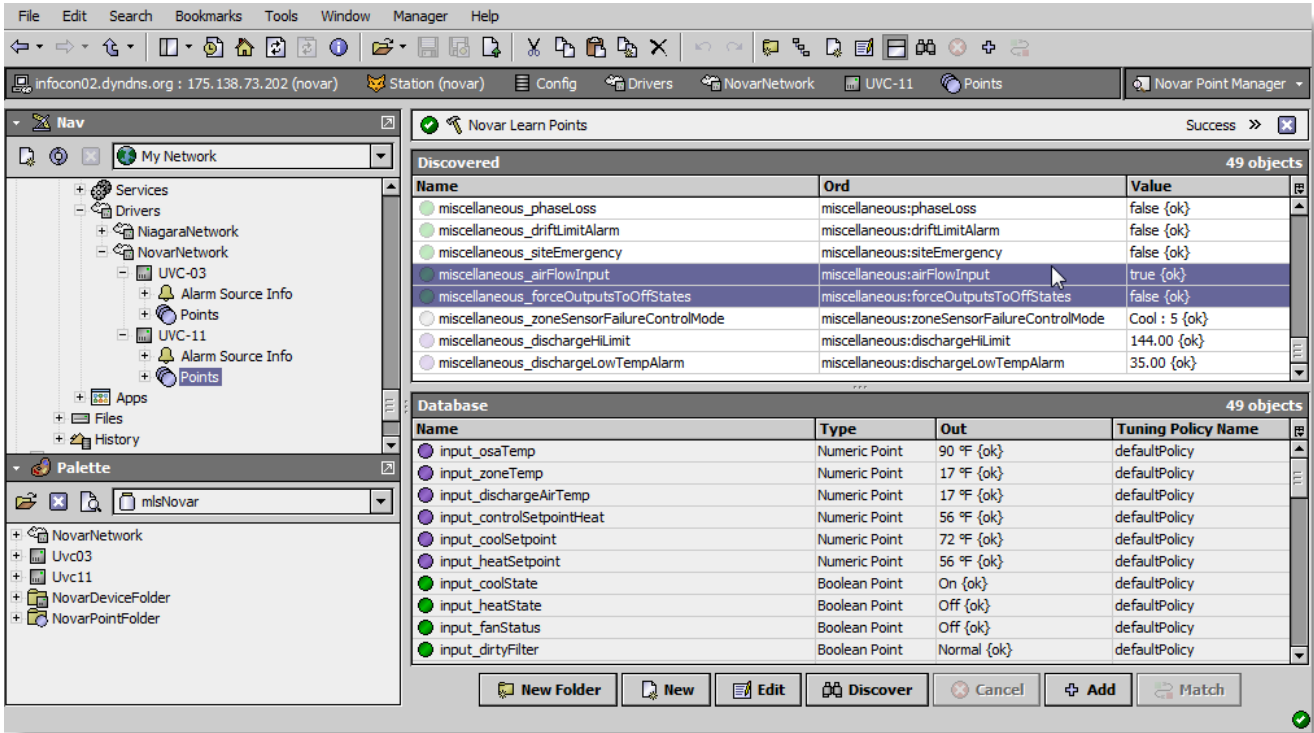
The Novar Point Manager is the default view for any NovarPointDeviceExt container. The Novar Point Manager is a table-based view, where each row represents a unique Novar Group address within a device.

Below is an example Novar Point Manager view.

The "New Folder", "New", and "Edit" buttons are not unique to the Novar Device Manager, and are explained in the "Niagara AX User's Guide" in the "Driver Architecture" section. The "Match" button is not used for the Novar driver.

The "Discover" button implements functionality that is unique and tailored to discovering Novar 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 NovarProxyExt 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.

Chapter

4

Licensing

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

The Novar license provide 2 hour demo license without the unlock code. After the demo license expired the Novar Driver communication will stop automatically and will show fault in the Novar Network level. "ifcNovar" license expired". To extend the demo period user required to restart the station or reboot the JACE station. The licensing count is per-JACE and will allow having multiple networks in single JACE's license.

To request the license please submit the JACE host ID, and to unlock the driver simply place the unlock code that provide by authorize vendor at the NovarNetwork license property "Unlock Code". If the unlock code is successful enter, the license will automatically change to "registered" and user is required to reboot the station.