Network 8000 Asd Driver User Guide

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Chapter 1

Installation

Install ibmsAsd.jar on the computer where Niagara AX Workbench will run. To install, place a copy of the file in the modules directory of your Niagara AX installation. This is typically C:\Niagara\Niagara-3.n.nnn\modules.

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

Apart from installing the 3*.n.nn* version of the Niagara distribution files in the JACE, make sure to install the ***ibmsAsd*** 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 N2 software integration, as described in the rest of this document.

Requirement

- Workbench 3.6.xx or higher.

    1. Serial communication RS485 Port. (Required “serial” feature in the license).

- Maximum Asd Network support:-

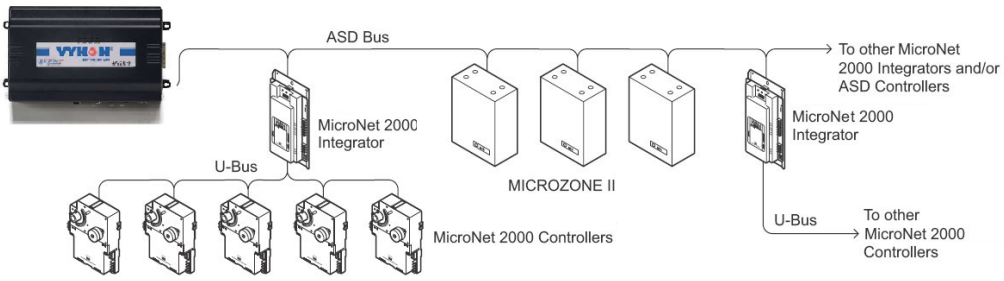
    Theoretical there is no limitation on maximum Asd Network in the single Niagara AX station, the limitation is always base on the JACE resource count, and system must have at least reserve for 30% CPU usage to perform the multiple process.

- AX platform JACE support:

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

- Network 8000 Asd Devices support:

    1. Microzone II (Zone2)
    2. VAV (Flow2)
    3. Lighting Interface Module (LIM)
    4. Micronet Integrator
    5. Micronet VAV (MnFlow)
    6. Micronet Heat Pump Fan Coil (MnHpfc)
    7. PEM


ASD Bus
To other MicroNet
2000 Integrators and/or
ASD Controllers
MicroNet 2000
Integrator
U-Bus
MICROZONE II
MicroNet 2000
Integrator
U-Bus
To other
MicroNet 2000
Controllers
MicroNet 2000 Controllers

Chapter 2

Quick Start

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

- For any of the Asd networks:
  - “Configure the Asd network”
  - “Add Asd devices”
  - “Create Asd proxy points”

Configure Asd Network

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

- Add the Asd network, as needed:
  - Add a AsdNetwork

Add a AsdNetwork

To add a AsdNetwork in the station

Use the following procedure to add a AsdNetwork 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 Asd networks, add one AsdNetwork for each physical port. Note that for each AsdNetwork, you must Configure the serial port parameters.

To add a AsdNetwork 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 "Asd 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 AsdNetwork(s) to the station. You should have a AsdNetwork named "AsdNetwork" (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

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

To set the serial port parameters

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

- Right-click the AsdNetwork 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 COM2 or COM3.

Note : The baud rate, data bit, stop bit and parity is disabled and the driver will automatically adjust the baud rate base on the Max Baud rate configuration.

- Click the **Save** button.

Add a Asd Devices

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

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

To add a Asd device in the network

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

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

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

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

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

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

To add Asd proxy points

Once a Asd 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:

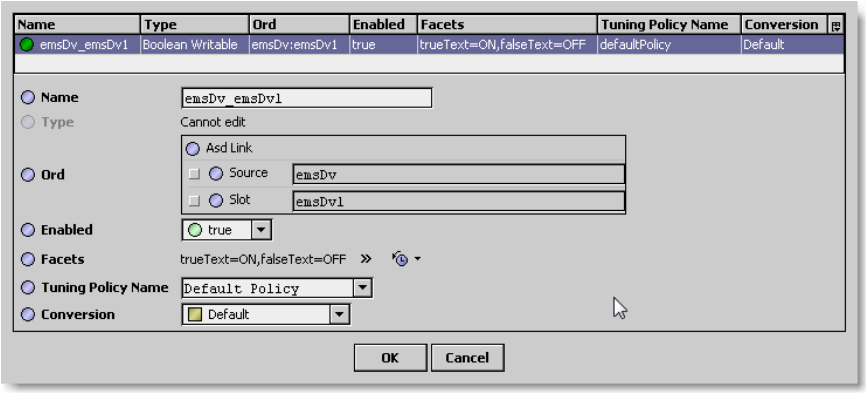
To create Asd proxy points in a device:

- 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 **Asd 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 **Asd Point Manager** view, just like **Points**. If making points folders, double-click one to move to its location (and see the point manager).

- At the location needed (**Points** root, or a points folder), click the **New** button. The **New** points dialog appears, in which you select a point "Type," "Number to Add," "Point Type" and "Index".



For more details, see “About Asd 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 Asd “fault cause” 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 Asd 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.

Create Asd Send Group

As with device objects in other drivers, each Asd device can be control by global by using the Send Group.

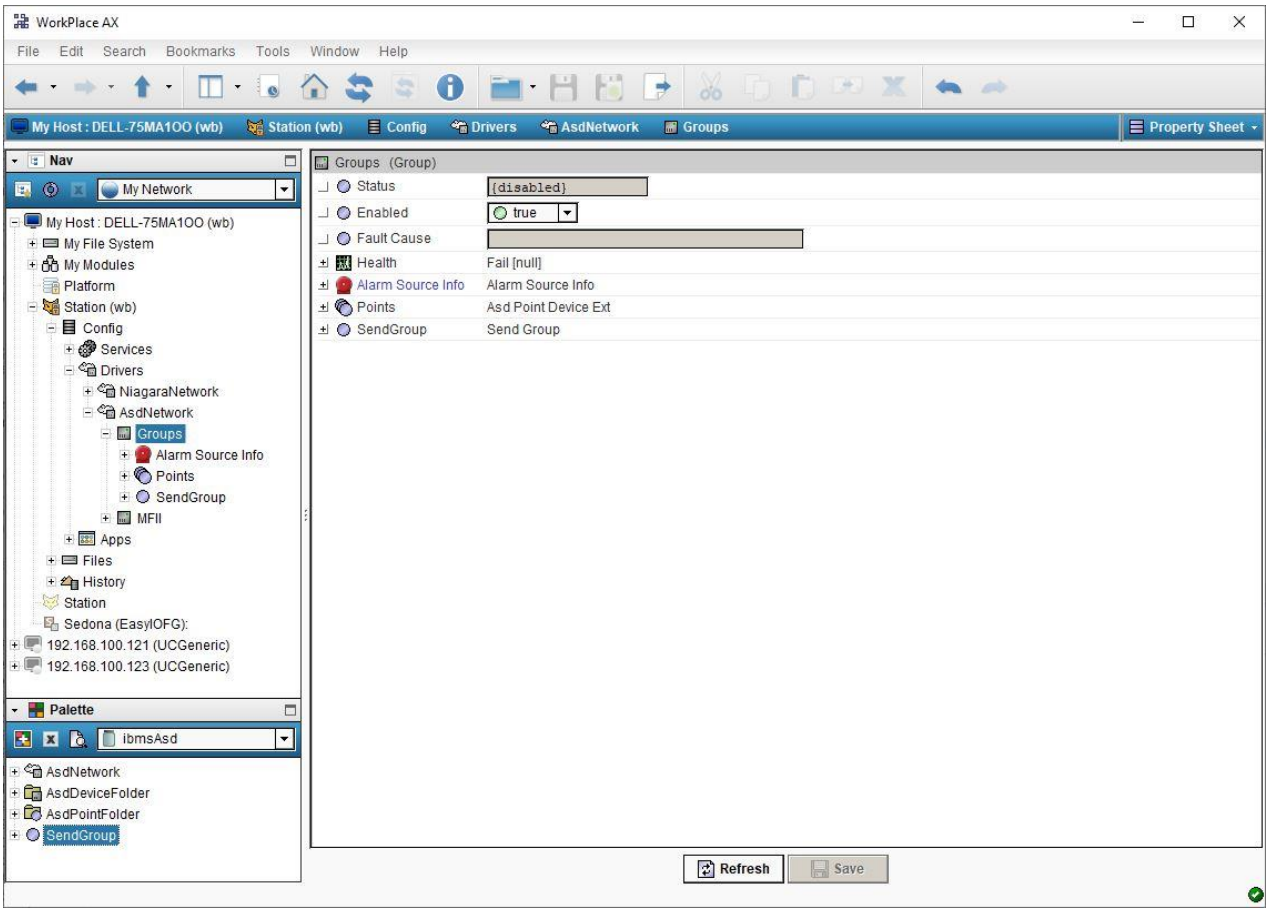
To add Asd Send Group

Once a Asd Network is added, you can add Send Group under the “Asd Group Device” to do the global control.

To create Asd Send Group in a Group Device:

- In the **Device Manager**, in the column name call “**Groups”,** click right mouse button View > Property sheet.

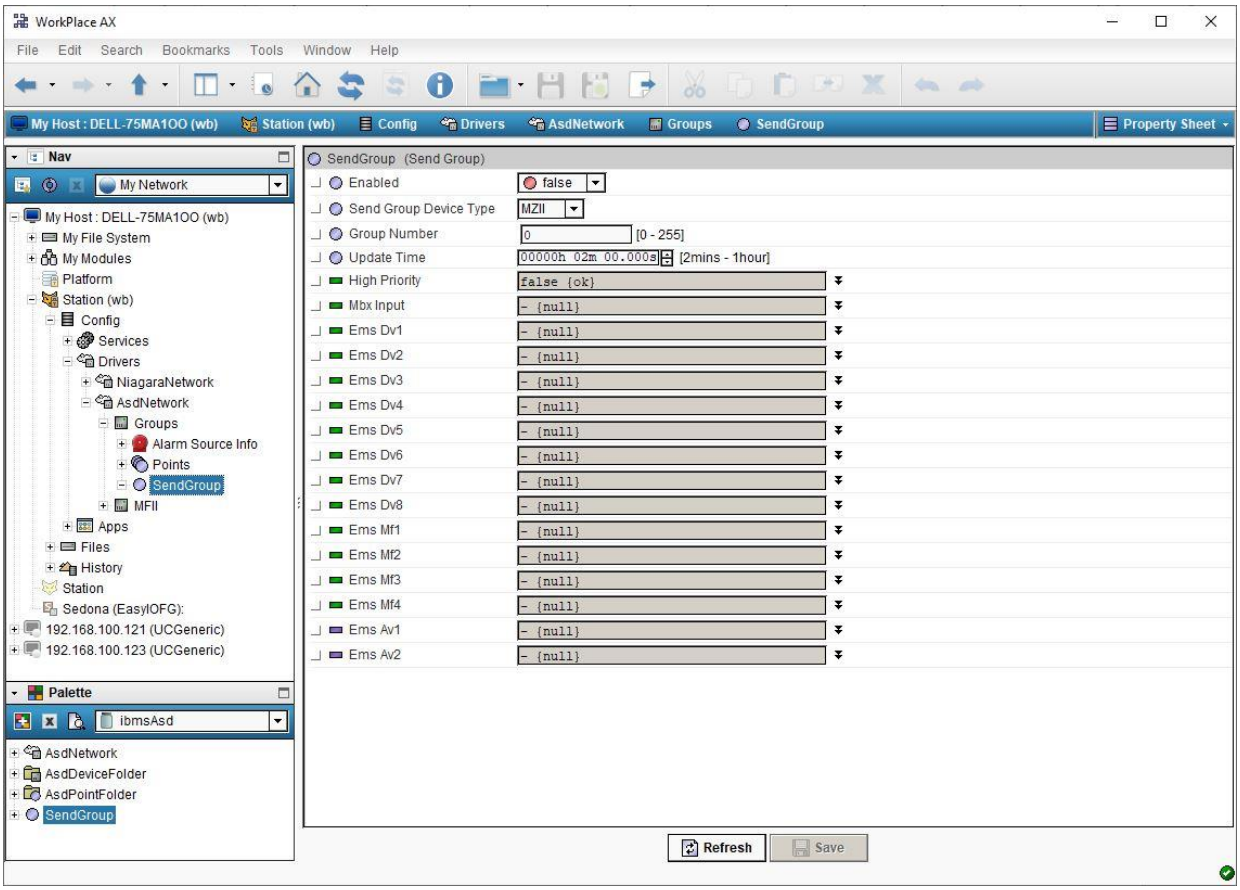
- Make sure the Asd palette already open and select the “AsdSendGroup” from the palette and drop under the “Groups” as a figure below.



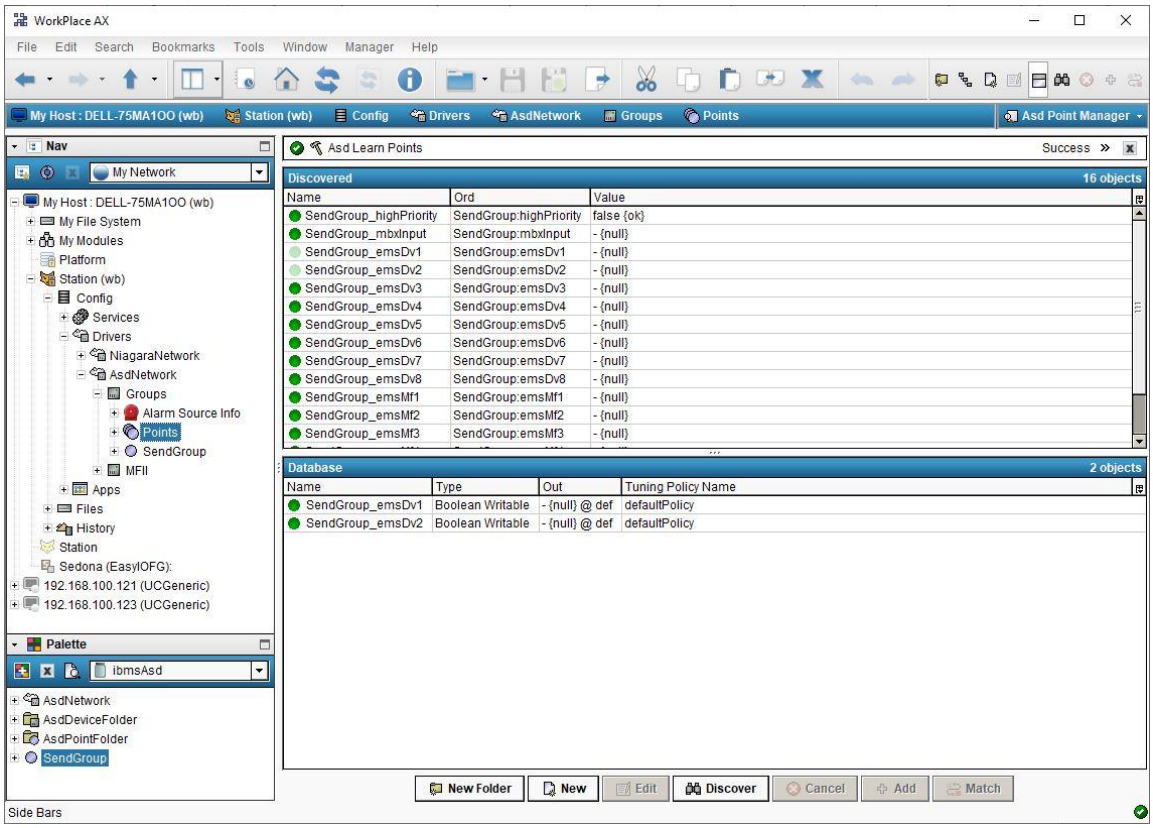
- Every “AsdSendGroup” object has property as below:

  a) Send Group Device Type – device type that will receive the broadcast message from the sent group input.

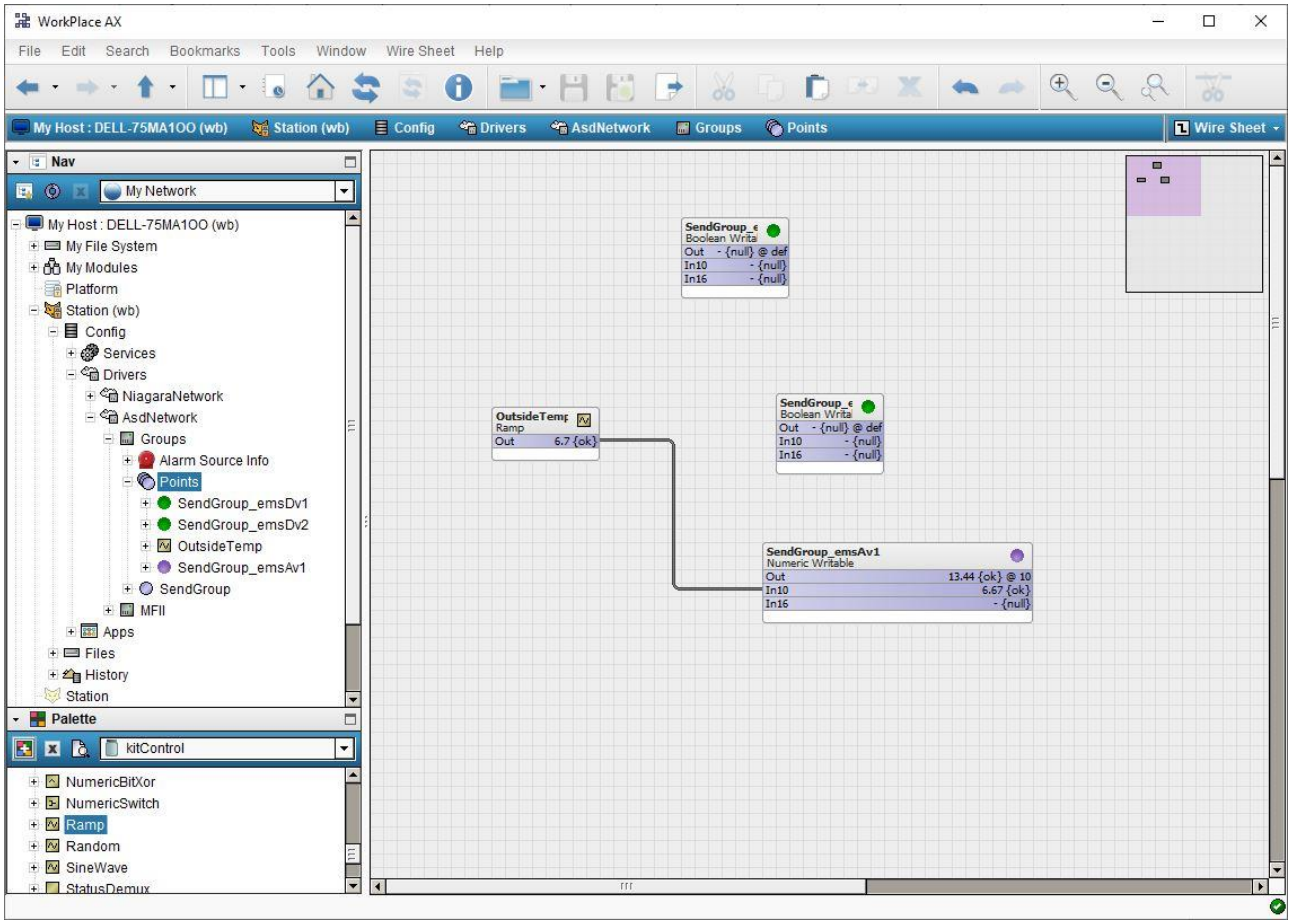
  b) Group number – the group number that will receive the command.



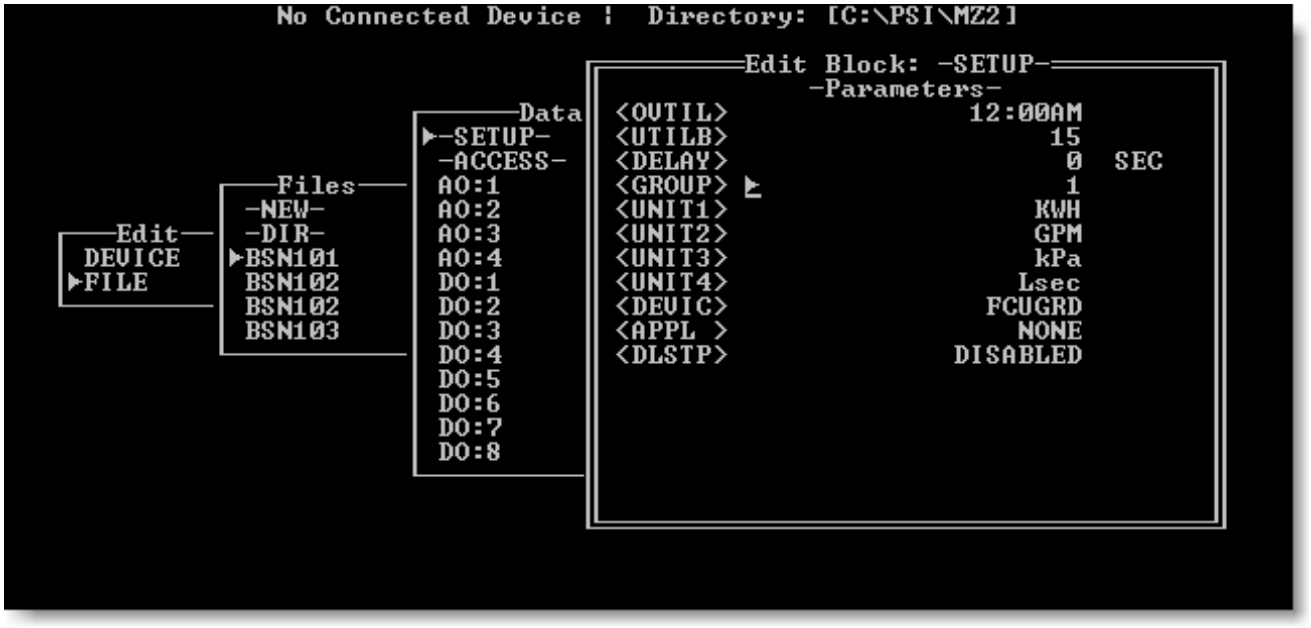
- Double click at the “Groups” point extension as figure below and this will show the point manager for the “Groups” “SendGroup” point database. Discover the “SendGroup” point and add into the database as figure below:-

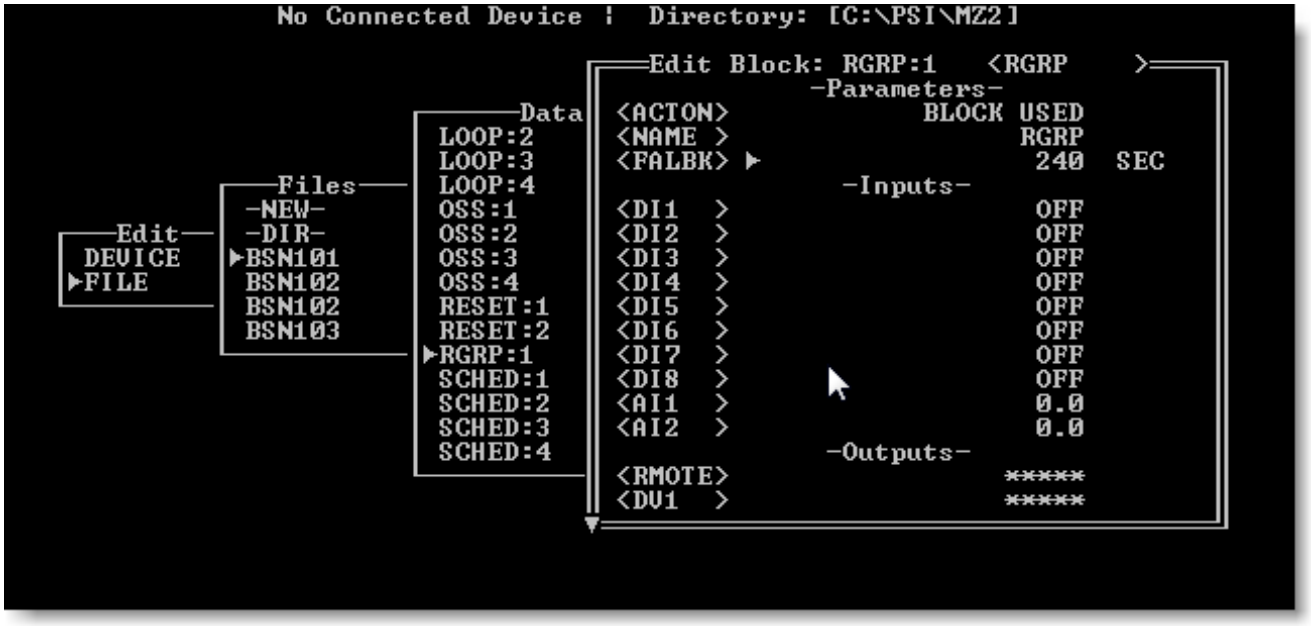


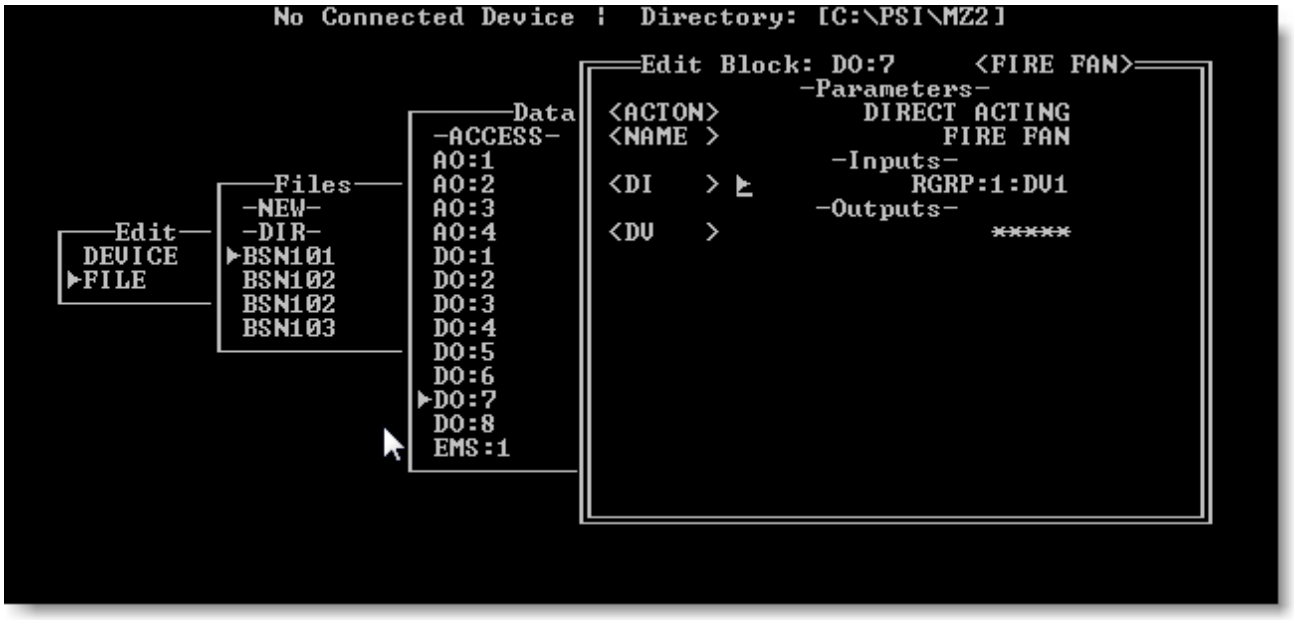
- Link the global point such a outside temperature to the input property such Ems Dv1, Ems Av1 at the added “SendGroup” point database.

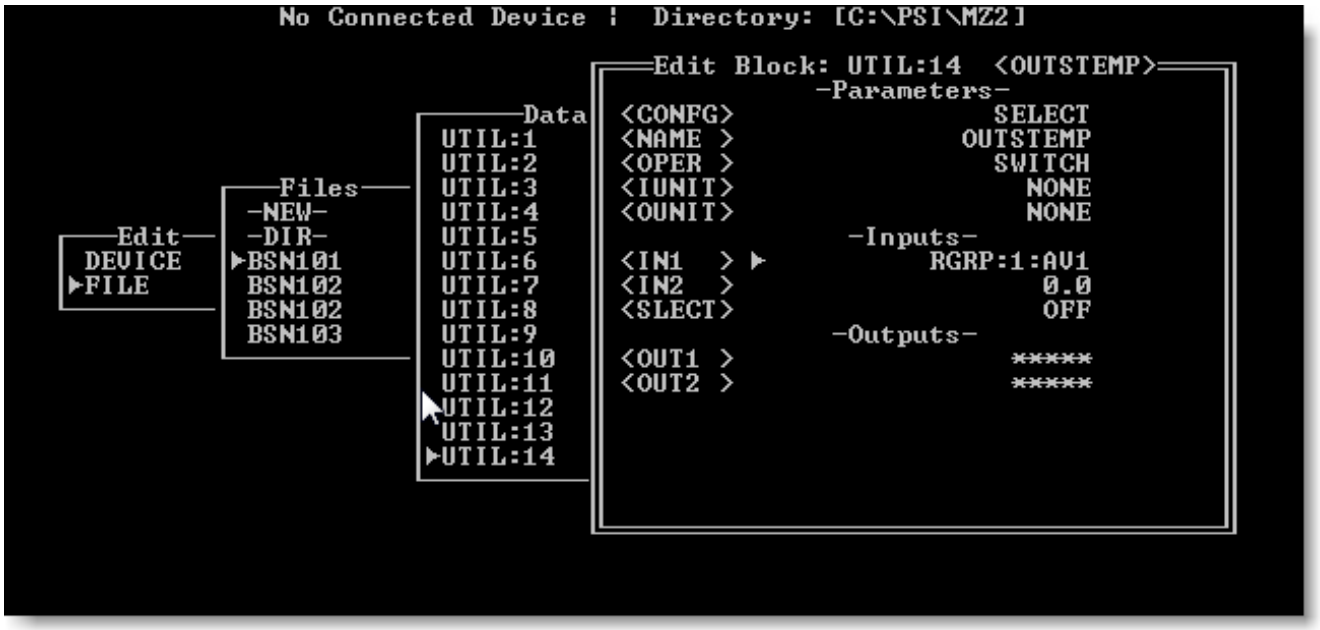

WorkPlace AX
File Edit Search Bookmarks Tools Window Wire Sheet Help
My Host : DELL-75MA1OO (wb)
Station (wb)
Config
Drivers
AsdNetwork
Groups
Points
Wire Sheet
Nav
My Network
My Host : DELL-75MA1OO (wb)
My File System
My Modules
Platform
Station (wb)
Config
Services
Drivers
NiagaraNetwork
AsdNetwork
Groups
Alarm Source Info
Points
SendGroup_emsDv1
SendGroup_emsDv2
OutsideTemp
SendGroup_emsAv1
SendGroup
MFII
Apps
Files
History
Station
Palette
kitControl
NumericBitXor
NumericSwitch
Ramp
Random
SineWave
StatusDemux
SendGroup_emsAv1
Numeric Writable
Out 13.44 {ok} @ 10
In10 6.67 {ok}
In16 - {null}
OutsideTemp
Ramp
Out 6.7 {ok}

Below is the example of the logic programming inside the MZII controller.






No Connected Device ¦ Directory: [C:\PSI\MZ2]
Edit Block: DO:7 <FIRE FAN>
-Parameters-
<ACTON> DIRECT ACTING
<NAME > FIRE FAN
-Inputs-
<DI > RGRP:1:DV1
-Outputs-
<DV > *****
Edit
DEVICE
FILE
Files
-NEW-
-DIR-
BSN101
BSN102
BSN102
BSN103
Data
-ACCESS-
AO:1
AO:2
AO:3
AO:4
DO:1
DO:2
DO:3
DO:4
DO:5
DO:6
DO:7
DO:8
EMS:1


No Connected Device ¦ Directory: [C:\PSI\MZ2]
Edit Block: UTIL:14 <OUTSTEMP>
-Parameters-
<CONFG> SELECT
<NAME > OUTSTEMP
<OPER > SWITCH
<IUNIT> NONE
<OUNIT> NONE
-Inputs-
<IN1 > RGRP:1:AV1
<IN2 > 0.0
<SLECT> OFF
-Outputs-
<OUT1 > *****
<OUT2 > *****
Edit
DEVICE
FILE
Files
-NEW-
-DIR-
BSN101
BSN102
BSN102
BSN103
Data
UTIL:1
UTIL:2
UTIL:3
UTIL:4
UTIL:5
UTIL:6
UTIL:7
UTIL:8
UTIL:9
UTIL:10
UTIL:11
UTIL:12
UTIL:13
UTIL:14

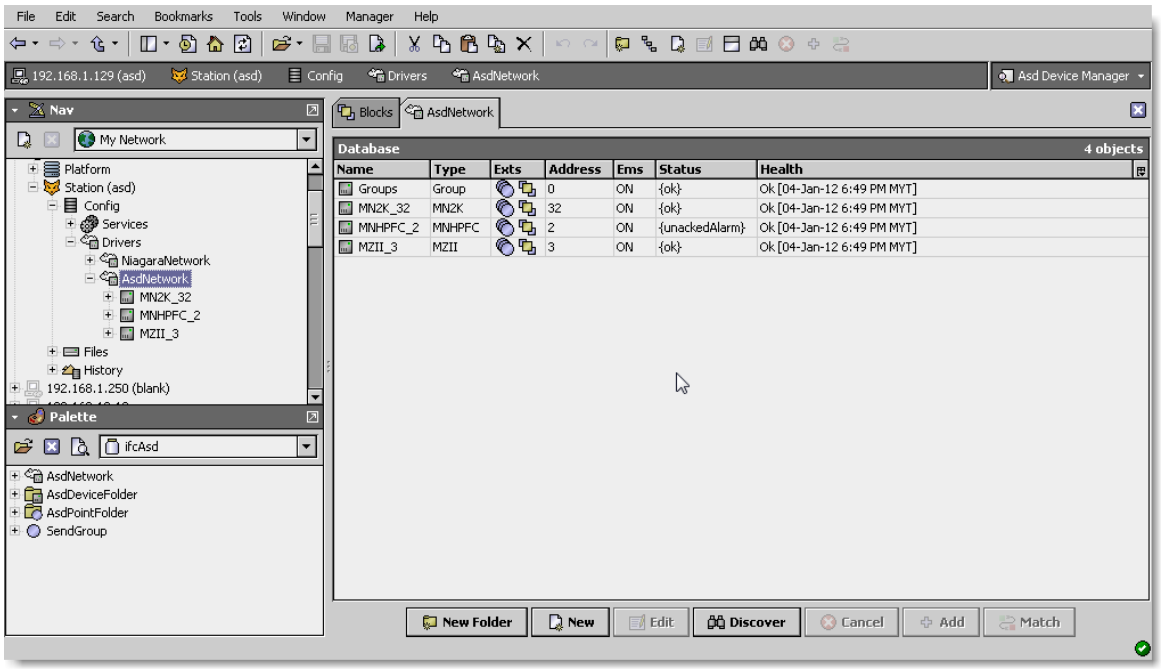
Chapter 3

Asd View

Asd Device Manager

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

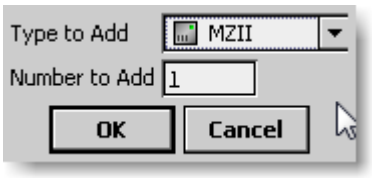
The Asd Device Manager is the default view for any Asd Network container. The Asd Device Manager is a table-based view, where each row represents a unique device. When building a network in the station, you use this view to create, edit, and delete device-level components. Below is an example Asd Device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



The view above shows a typical Asd Device Manager view.

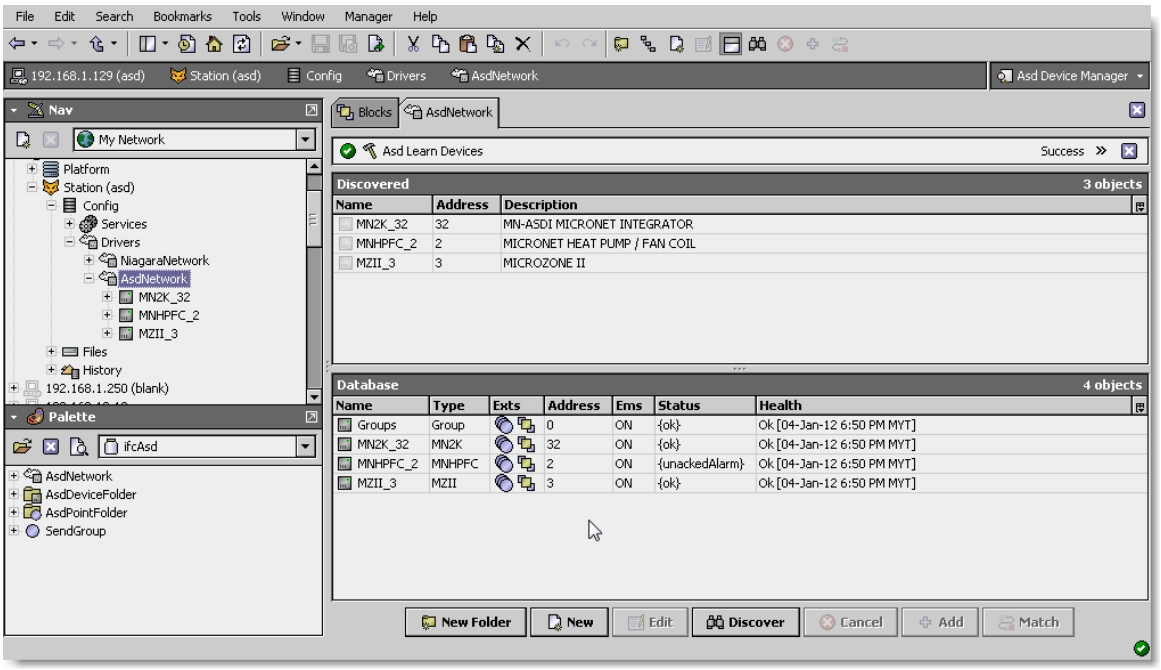
The “New Folder”, “New”, and “Edit” buttons are not unique to the Asd Device Manager, and are explained in the “Niagara AX User’s Guide” in the “Driver Architecture” section. The “Match” button is not used for the Asd driver.

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 Asd 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) .



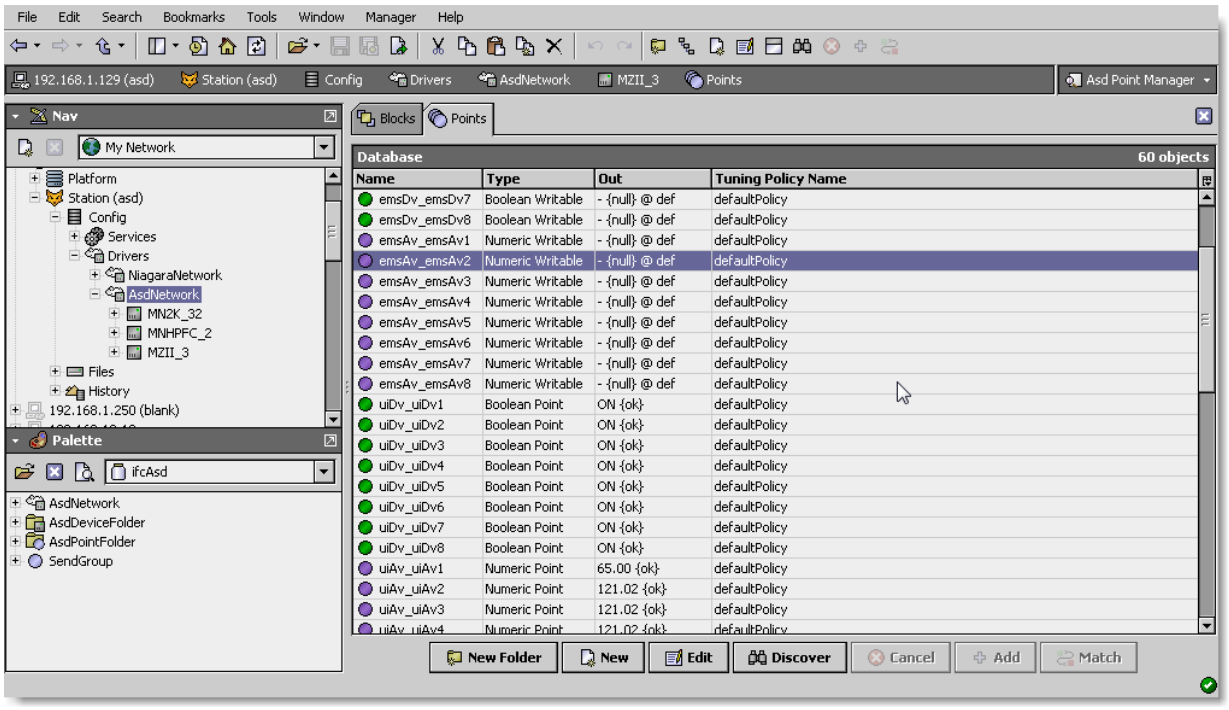
Single or multiple Asd devices can be added as device by selecting the discovered row(s) in the top pane, and clicking add. Doing so will cause the “Add” dialog box to appear:
Once the device(s) are satisfactorily edited, click “OK” to create the device corresponding to the device property.

Asd Point Manager

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

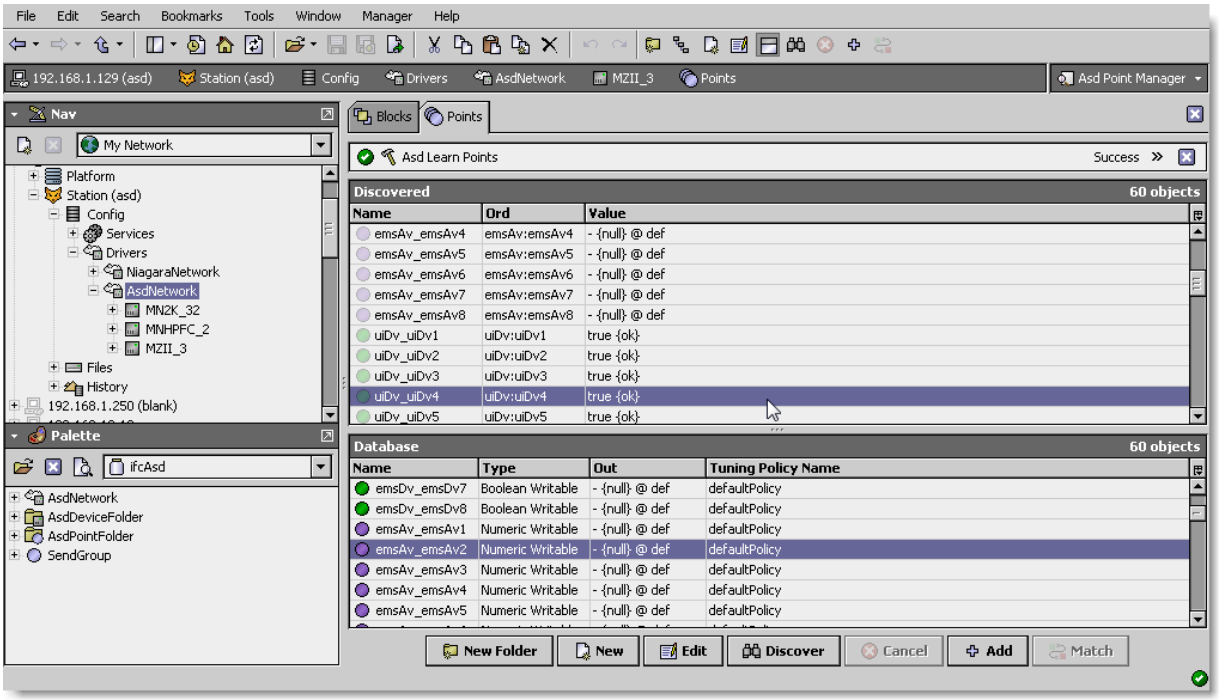
The Asd Point Manager is the default view for any AsdPointDeviceExt container. The Asd Point Manager is a table-based view, where each row represents a unique address within a device.

Below is an example Asd Point Manager view.



The “New Folder”, “New”, and “Edit” buttons are not unique to the Asd 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 Asd driver.

The “Discover” button implements functionality that is unique and tailored to discovering Asd 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) .



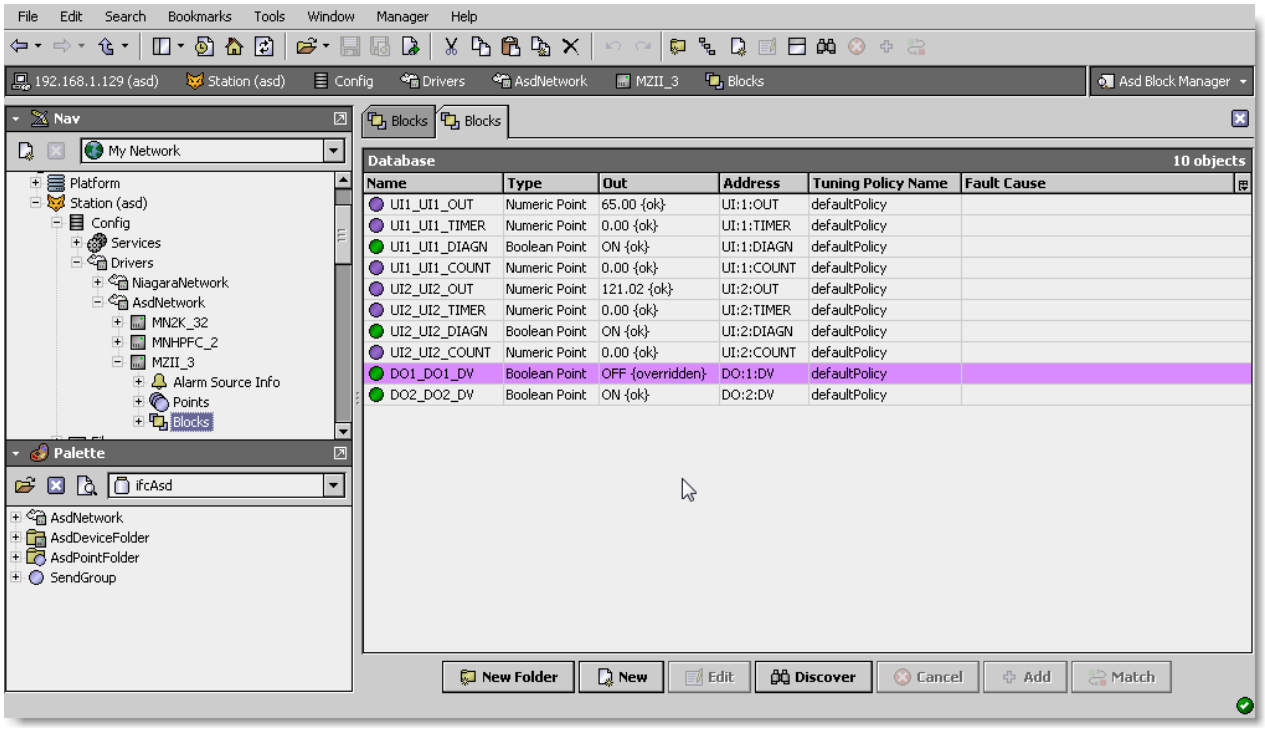
Single or multiple points can be added as control points with AsdProxyExt extensions by selecting the discovered row(s) in the top pane, and clicking add. Doing so will cause the “Add” dialog box to appear:
Once the point(s) are satisfactorily edited, click “OK” to create the proxy points corresponding to the point property.

Asd Block Manager

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

The Asd Block Manager is the default view for any AsdBlockDeviceExt container. The Asd Block Manager is a table-based view, where each row represents a unique address within a device.

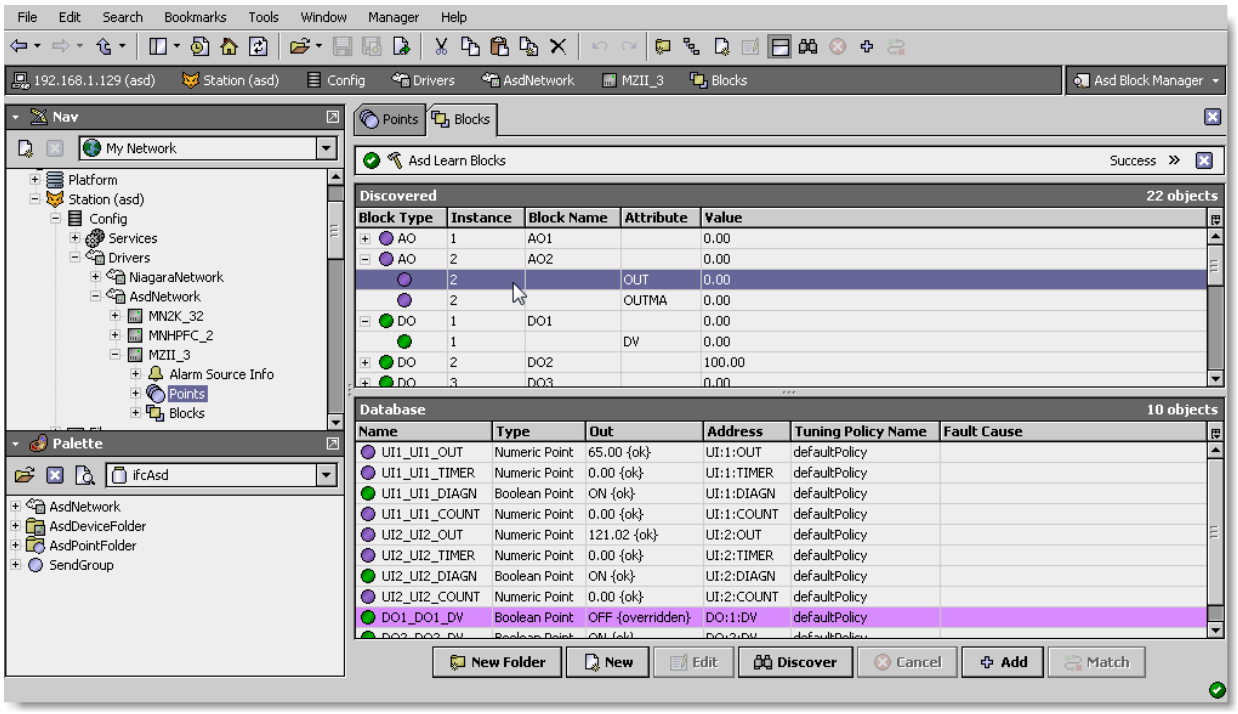
Below is an example Asd Block Manager view.



The “New Folder”, “New”, and “Edit” buttons are not unique to the Asd 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 Asd driver.

The “Discover” button implements functionality that is unique and tailored to discovering Asd 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).

The Asd block is use for the user to override the point directly to the controller.



Single or multiple blocks can be added as control points with AsdBlockProxyExt 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.

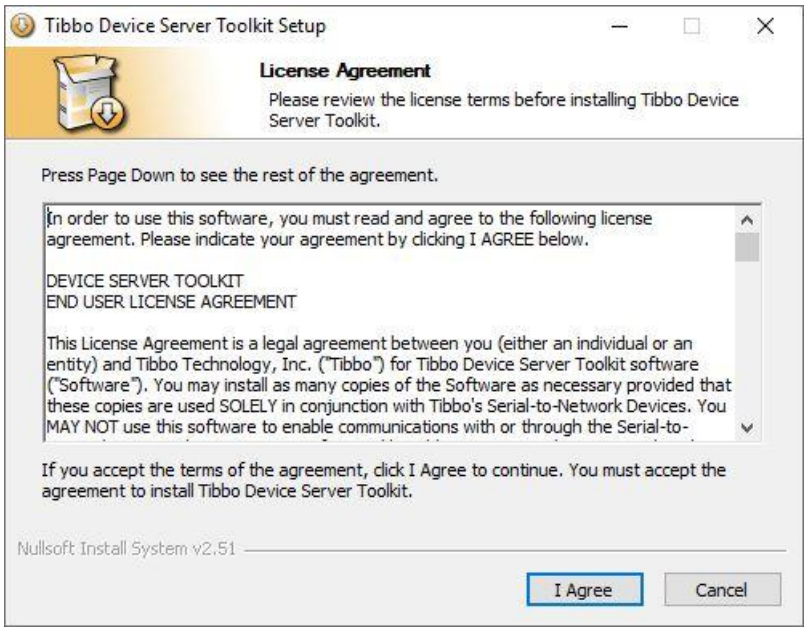
Chapter 4

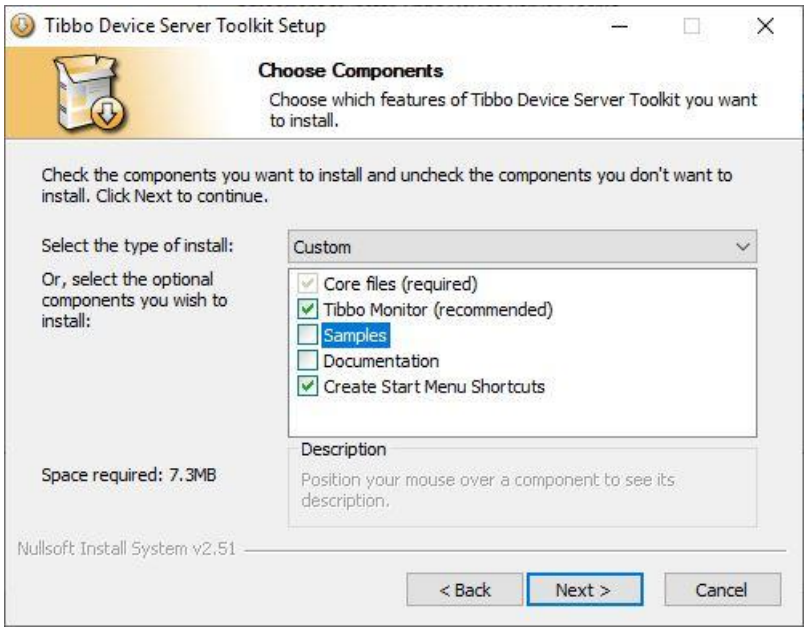
Asd Tunnel

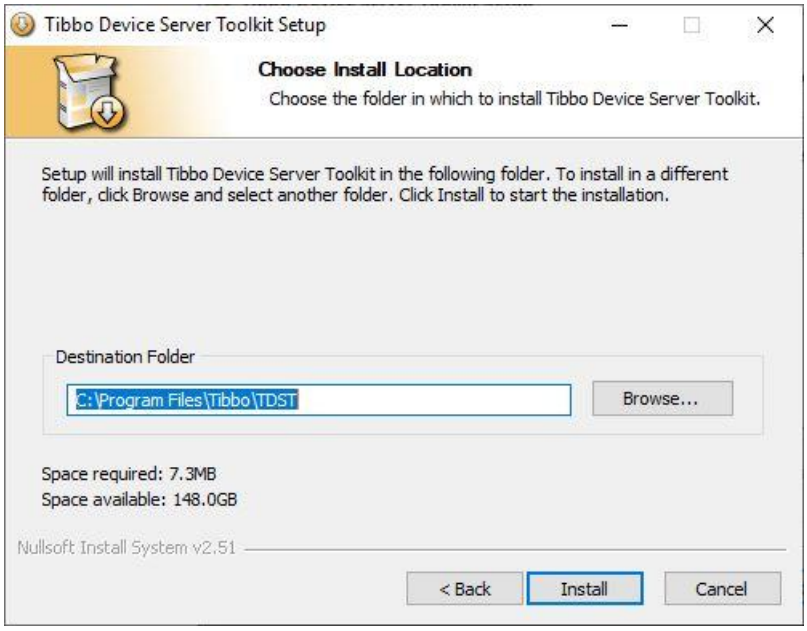
The Asd Tunnel will allowed user to program the controller by using the XPSI software. The XPSI tunnel only can support for none Micronet device such *MicroZone2, MicroFlo2, LIM and PEM.*

Note: The PSI or XPSI software is now support both type of 32 and 64 bit OS, however with PSI version 3.0 only support 32 bit OS. Incase the system are running with Windows 64 bit operating system user could run the VM or Dosbox (https://www.dosbox.com/download.php?main=1) *, more information about the Dosbox configuration please refer to this link* https://www.dosbox.com/wiki/Basic_Setup_and_Installation_of_DosBox. *For PSI version 4.1 is support both 32 and 64 bit OS.*

Install the 3rd party Tibbo VSP Manager, you can find this setup application in the download zip file. Execute the file call “tdst-5-10-01-x86.exe” or “tdst-5-10-01-x64.exe” base on your operating system.

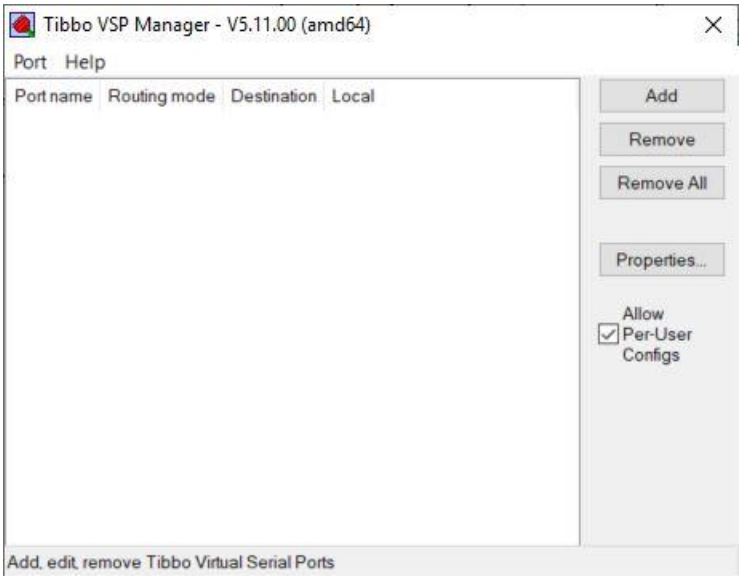



Tibbo Device Server Toolkit Setup
Choose Components
Choose which features of Tibbo Device Server Toolkit you want to install.
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.
Select the type of install:
Custom
Or, select the optional components you wish to install:
Core files (required)
Tibbo Monitor (recommended)
Samples
Documentation
Create Start Menu Shortcuts
Description
Position your mouse over a component to see its description.
Space required: 7.3MB
Nullsoft Install System v2.51
< Back
Next >
Cancel


Tibbo Device Server Toolkit Setup
Choose Install Location
Choose the folder in which to install Tibbo Device Server Toolkit.
Setup will install Tibbo Device Server Toolkit in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
C:\Program Files\Tibbo\TDST
Browse...
Space required: 7.3MB
Space available: 148.0GB
Nullsoft Install System v2.51
< Back
Install
Cancel

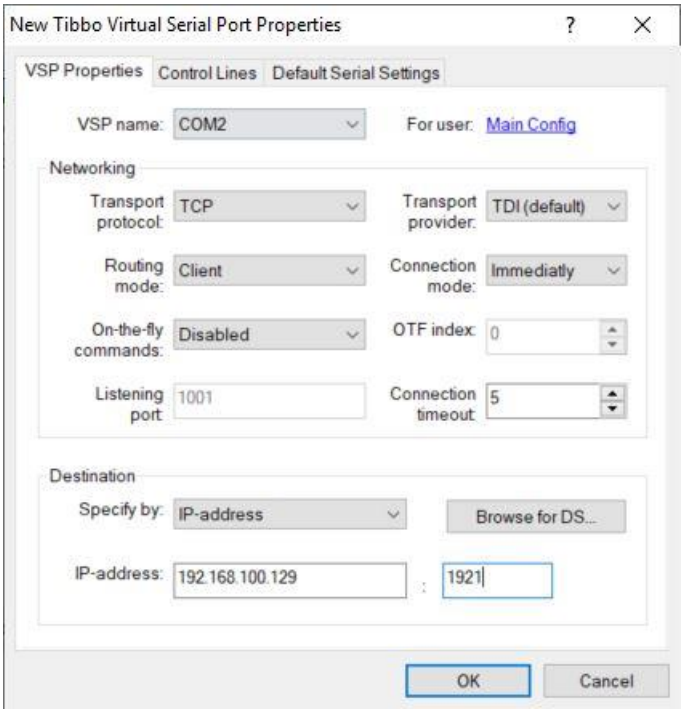
Reboot the computer.

After windows is start, from the windows start menu look for “Tibbo VSP manager”, press the button “Add” to create the virtual serial port, make sure the communication port for COM1/COM2 is physically is not available in the windows system. PSI/XPSI software only allowed user to select COM1 and COM2. Incase the COM1/COM2 is physically available in the computer user has to disable before able to create the virtual communication port from the Tibbo VSP Manager.



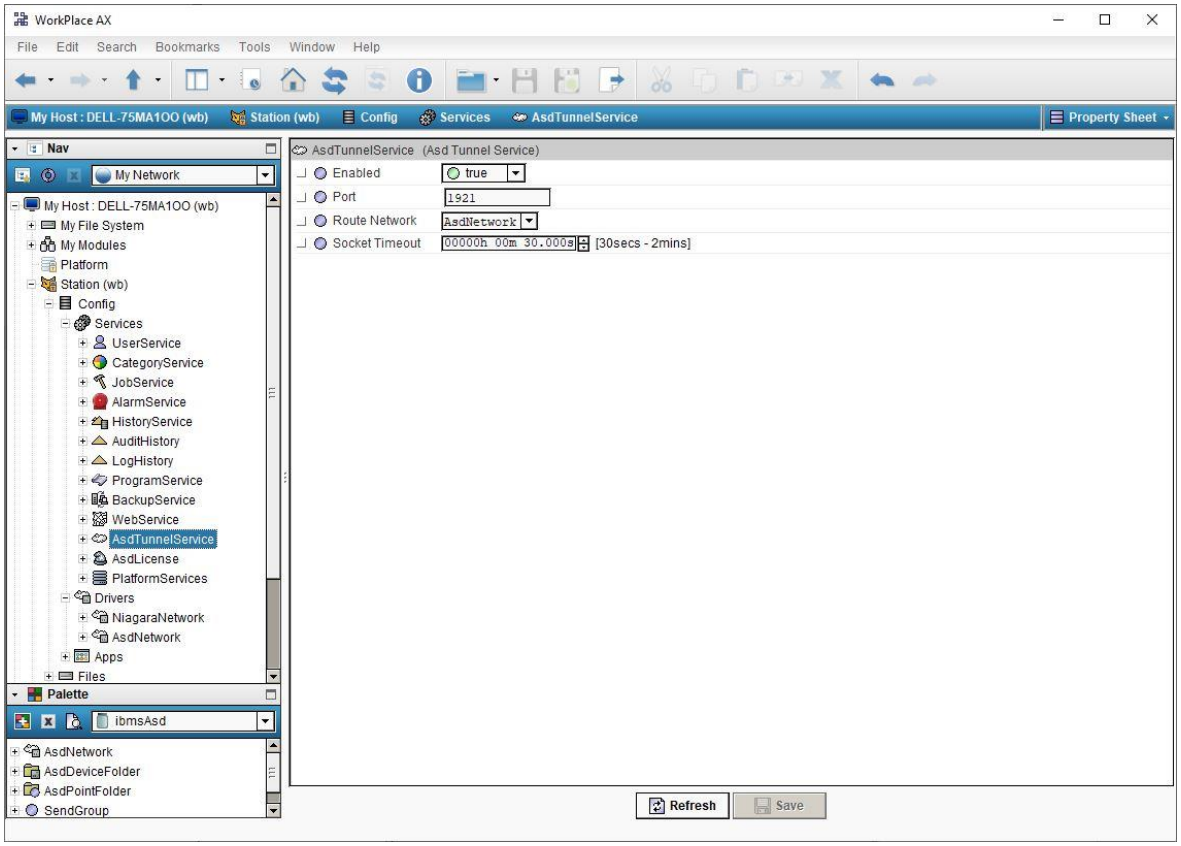
Follow exactly as the configuration below:-

a) VSP name: select COM1 or COM2.
b) Specify By: IP address or Host Name incase you are working with DNS name such a “maxline2.asuscomm.com”.
c) IP-address: The JACE IP address.
d) Port : 1921, it can be change at the “AsdTunnelService” from the Niagara station.



e) Click button OK to complete the process.

Below is the example configuration at the Niagara side. There is a list for user to select for the “Route Network” incase you have a multiple Asd Network in the station. This will route the PSI tunnel to the specific network. You do not have to create or copy the AsdTunnelService, it will create automatically whenever the station start if it was not available in the service folder.

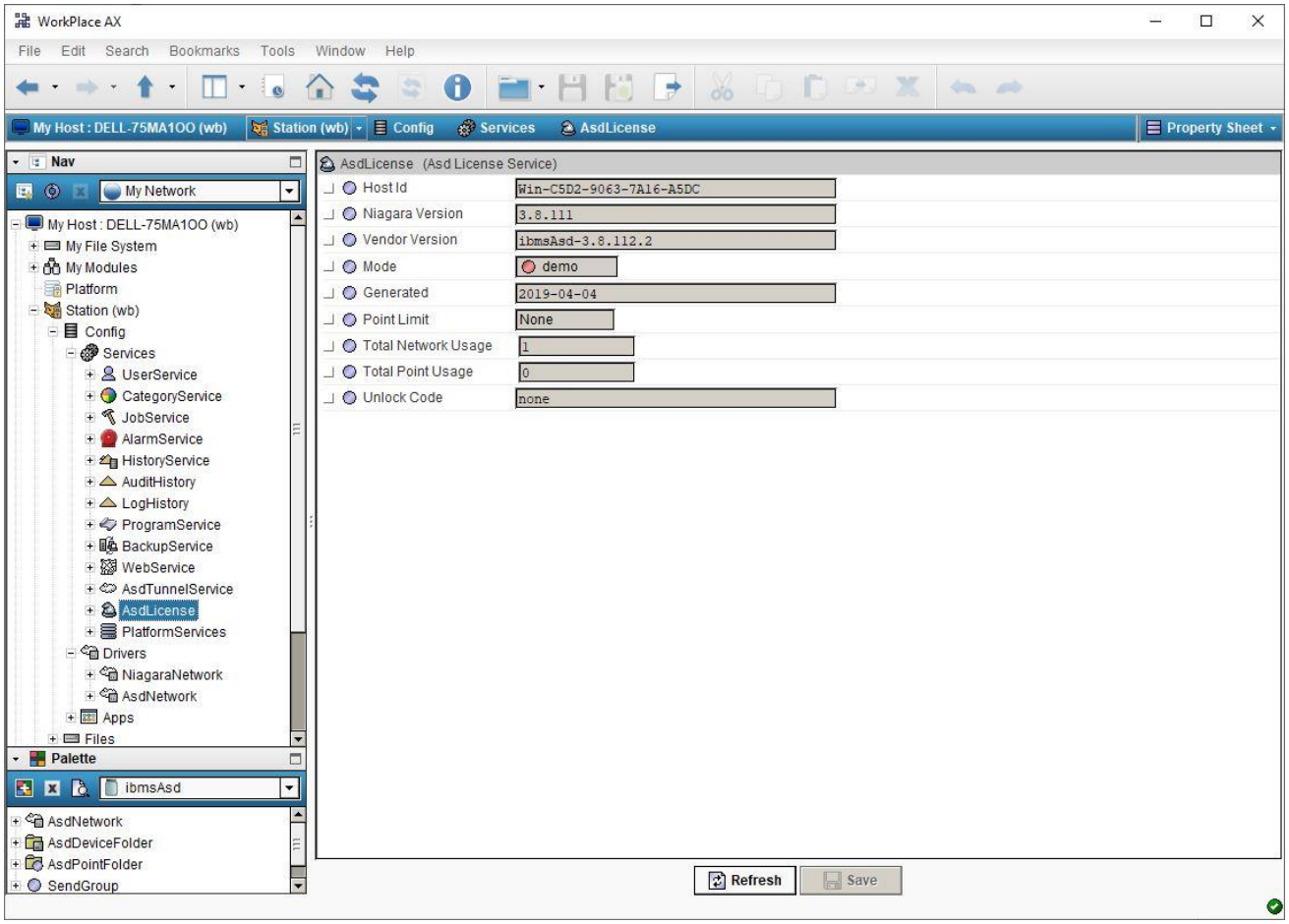


Chapter 5

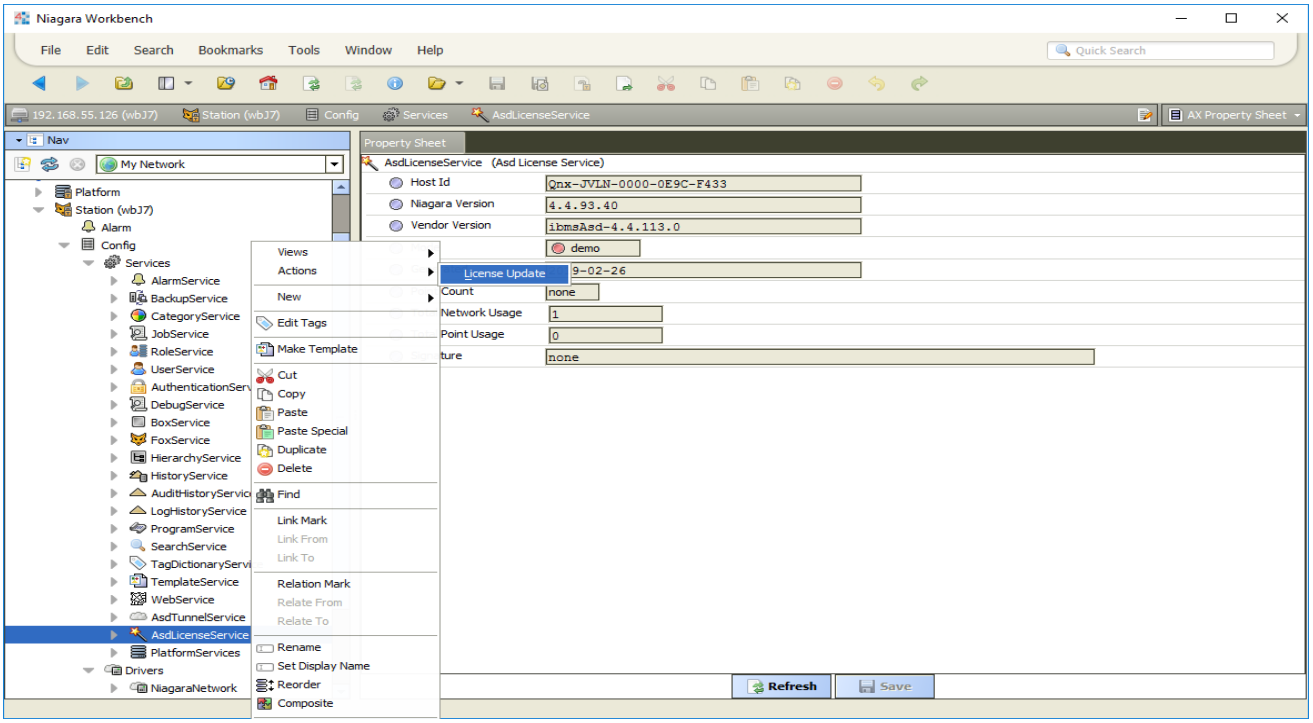
Licensing

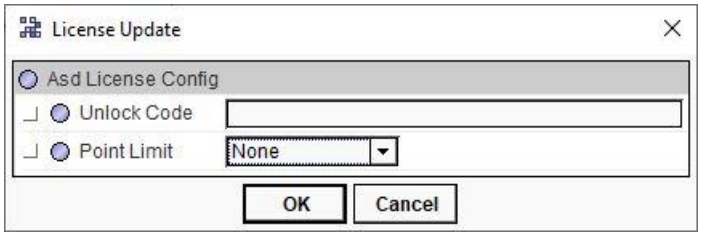
Asd driver License is running independently from the Tridium license, it has no restriction to run to any of the existing license vendor.

The Asd license provide 2 hour demo license without the unlock code. After the demo license expired the Asd Driver communication will stop automatically and will show fatal fault at the Asd Network level. “ibmsAsd license expired". To extend the demo period user required to restart the station.



To request the license 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 signature code at the “Signature” property. Please take note the license only provide by authorize vendor. If the signature code is successful enter the property “Mode” will automatically change to “registered” and user is required to restart the station to apply the change.





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