

Allen Bradley (Cspv4) Driver User Guide

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Installation

Install `ifcCspv4-rt.jar` and `ifcCspv4-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 `ifcCspv4` 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 `ifcCspv4`.

Apart from installing the `4.n.nnn` version of the Niagara distribution files in the JACE, make sure to install the `ifcCspv4` module too (if not already present, or upgrade if an older revision). For more details, see “About the Commissioning Wizard” in the JACE Niagara N4 Install and Startup Guide.

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

Requirement

- Niagara N4 workbench 4.0.22.x or higher.
 1. TCP/IP.
- Niagara N4 platform JACE support:
 1. JACE-3E.
 2. JACE 6xx.
 3. JACE 7xx.
 4. JACE 8000 (Titan JACE).
- Niagara N4 platform PC support:
 1. Windows OS 32/64.
- Allen Bradley Devices support:
 1. Control Logix 5x
 2. MicroLogix 5x

Note: The device must running with the legacy Cspv4 protocol. The latest protocol such a CIP protocol not support on this driver.

Quick Start

This section provides a collection of procedures to use the Niagara AX Allen Bradley (Cspv4) 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 Allen Bradley networks:
 - [“Configure the Csp network”](#)
 - [“Add Csp devices”](#)
 - [“Create Csp proxy points”](#)

Configure Csp Network

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

- Add the Csp network, as needed:
 - [Add a CspNetwork](#)

Add a CspNetwork

To add a CspNetwork in the station

Use the following procedure to add a CspNetwork component under the station’s Drivers container.

Note: Only one CspNetwork is needed, even if the JACE host has two Ethernet ports connected to two different (non-routed) TCP/IP LANs. In this case, the destination IP addresses of child CspDevices will automatically determine the Ethernet port utilized.

To add a CspNetwork 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 “Csp Network,” number to add: 1 and click **OK**. This brings up a dialog to name the network.
- Click **OK** to add the CspNetwork to the station.
- You should have a CspNetwork named “CspNetwork” (or whatever you named it), under your Drivers folder, initially showing a status of “{ok}” and enabled as “true.”
- Right-click the CspNetwork and select **Views > Property Sheet**. The **Property Sheet** appears. See “[Review network-level CspNetwork configuration](#)”.

Add a Csp Devices

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

To add a Csp device in the network

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

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

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 Csp device Ip address and port (by default the port is 2222)
- Click **OK** to add the client device(s) to the network. You should see the device(s) listed in the Csp 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 the device IP 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 Csp Proxy Point


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

***Note:** Unlike the point managers in many other drivers, the **Csp Point Manager** does not 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 Csp device.*

To add Csp proxy points

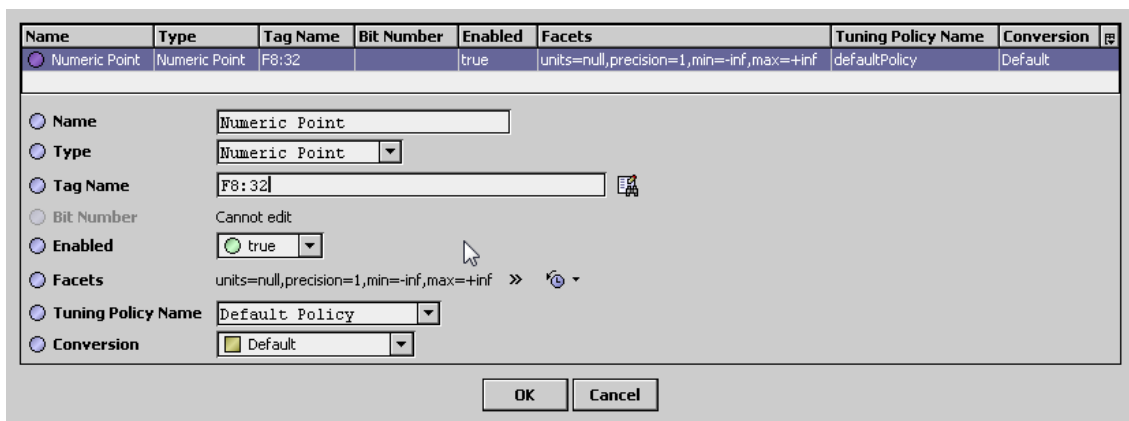
Once a Csp device is added, you can add proxy points to read and write data. If programming online (and the device shows a status of “{ok}”), you can get statuses and values back immediately, to help determine if point configuration is correct. Use the following procedure:

To create Csp 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 **Csp 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 **Csp 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,” “Tag Name”



For more details, see [“About Csp 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 Csp “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 Csp 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.

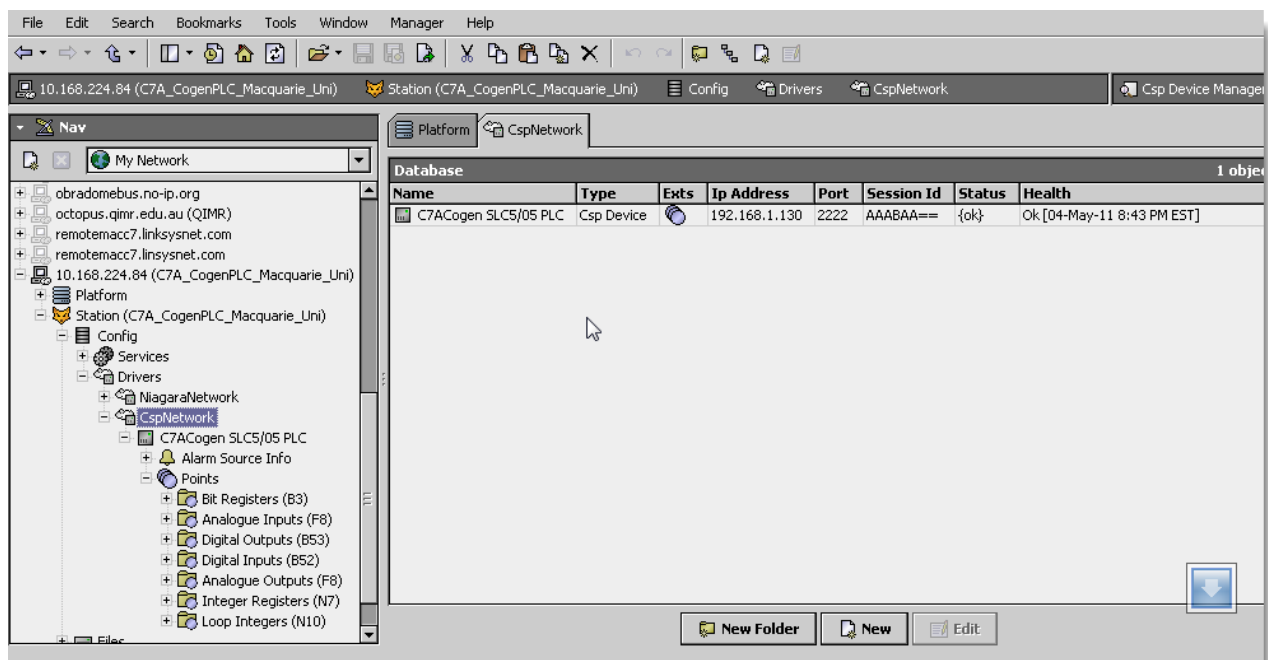
Csp View

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

Csp Device Manager

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

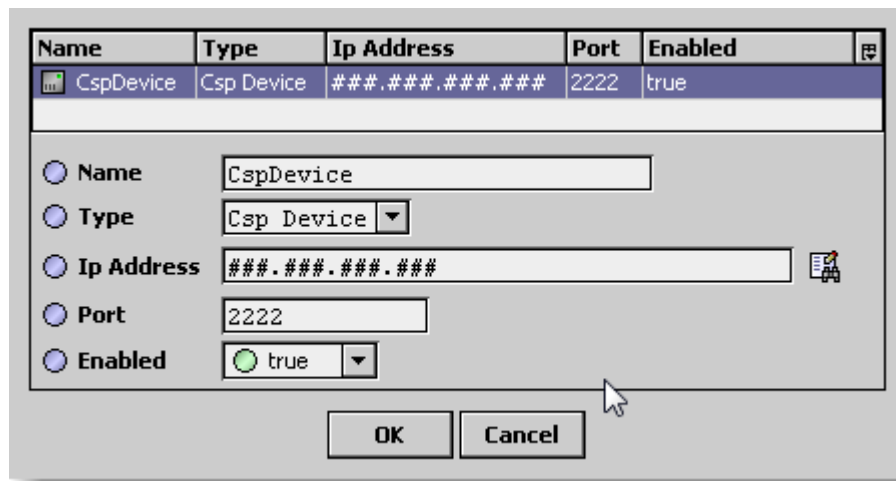
The Csp Device Manager is the default view for any Csp Network container. The Csp Device Manager is a table-based view, where each row represents a unique device. When building a network in the station, you use this view to create, edit, and delete device-level components. Below is an example Csp Device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



The view above shows a typical Csp Device Manager view.

The “New Folder”, “New”, and “Edit” buttons are not unique to the Csp Device Manager, and are explained in the “Niagara AX User’s Guide” in the “Driver Architecture” section.

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



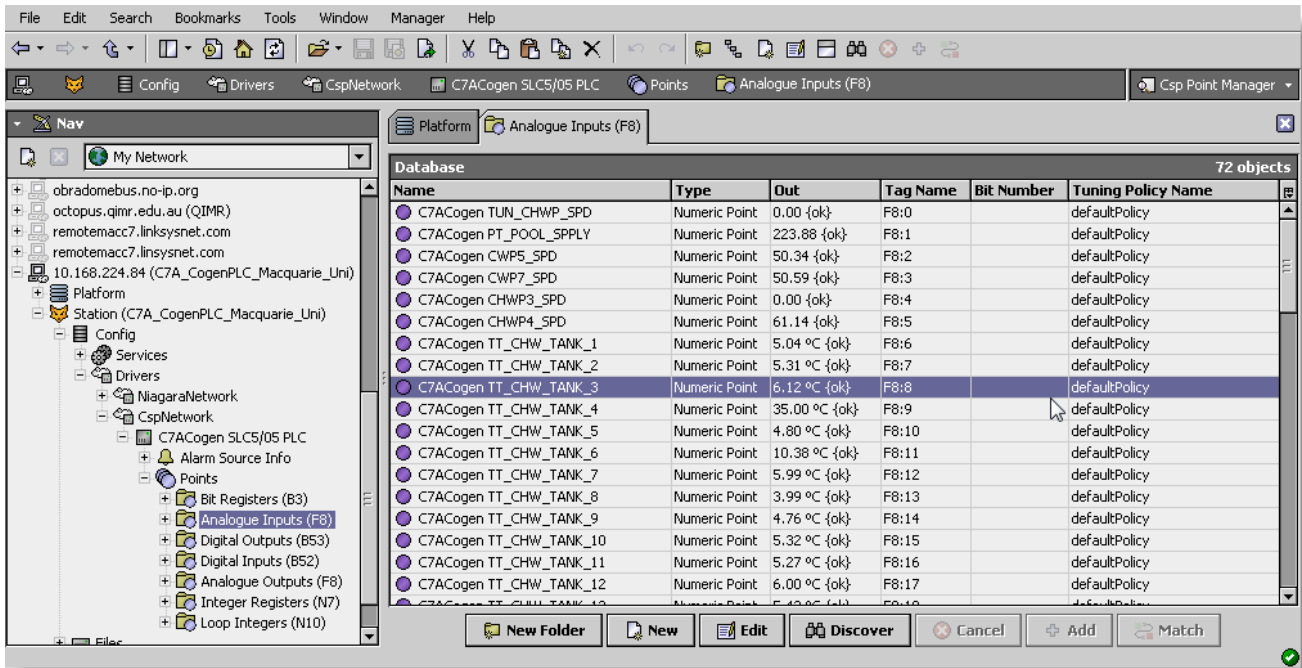
The “Add” dialog box affords you the opportunity to tweak the display name, enabled state, and/or IP address of each of the selected devices. Click the “OK” button to add the devices to the database, or click “Cancel” to bail out.

Csp Point Manager

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

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

Below is an example Csp Point Manager view.



The “New Folder”, “New”, and “Edit” buttons are not unique to the Csp Device Manager, and are explained in the “Niagara AX User’s Guide” in the “Driver Architecture” section.

Licensing

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

The Cspv4 driver is provide 2 hour demo license without the signature code. After the demo license expired the Cspv4 Driver communication will stop automatically and will show fatal fault at the Csp Network level. "ifcCspv4 license expired". To extend the demo period user required to restart the station.

To request the license please submit the JACE/Web Supervisor host ID, to unlock the driver simply go to the license property, select at the word "License" and right click mouse button, action and invoke command "License Update", the dialog "License Update" will appear as below. Place the Signature code at the "Unlock Code" and select the point Count (if applicable) 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 reboot the JACE to apply the change.

Application Director License

Property Sheet

License (Csp License)

Version	4.1.100.1
Host Id	Qnx-JVLN-0000-0E9C-F433
Mode	demo
Generated	2015-12-10
Point Count	disable
Signature	none

Refresh Save