# ALLEN BRADLEY (CIP) DRIVER QUICK REFERENCE GUIDE

#### **Niagara Ax Platform**

The (isoftAb) Allen Bradley CIP (Common Industrial Protocol) driver can work with Web Supervisor, JACE-NXS or NX, AX SoftJACE as well embedded JACE.

#### **Supporting Devices**

The Allen Bradley supports the devices as below:

- 1. AbLogix5 series.
- 2. PLC/SLC 5 series.
- 3. PLC/SLC 2 Series.

All the connection to the devices must go through via the CIP device such a **1756-ENBT/A** Ethernet module or **1769-L32E** Ethernet port.



### **Niagara Ax Driver Installation**

- 1. Workbench computer installation
  - a) Open window explorer and copy the 'isoftAb' file to the Niagara Ax installation folder e.g. c:\Niagara\Niagara-3.x.xx\modules
  - b) Restart the workbench computer or restart the Niagara Ax Service.
- 2. JACE installation.
  - a) Before the JACE can be installing the step No.1 is required.
  - b) Make sure the JACE has done the commissioning before installing the 'isoftAb.jar' file.
  - c) Open the JACE platform and go to the software manager.
  - d) Look for the 'part name' isoftAb. Click on it and press the 'install' button.

| art Name             | Туре   | Installed Version | Avail. Version                | File                   |               |  |
|----------------------|--------|-------------------|-------------------------------|------------------------|---------------|--|
| easdemo              | Module | -                 | Tridium 3.4.51                | 🗍 easdemo              | Not Installed |  |
| eclipseWizardSupport | Module | -                 | Tridium 3.4.7                 | 📋 eclipseWizardSupport | Not Installed |  |
| eibnetIp             | Module | -                 | Tridium 3.4.51                | 📋 eibnetIp             | Not Installed |  |
| email                | Module | -                 | Tridium 3.4.51                | 🗍 email                | Not Installed |  |
| flexSerial           | Module | -                 | Tridium 3.4.51                | 🗍 flexSerial           | Not Installed |  |
| gcm                  | Module | -                 | www.source-ibms.com 3.4.51    | 🗍 gcm                  | Not Installed |  |
| help                 | Module | -                 | Tridium 3.4.51                | 🗍 help                 | Not Installed |  |
| historyFunc          | Module | -                 | Tridium 3.4.51                | 🗍 historyFunc          | Not Installed |  |
| j iqTcpSlave         | Module | -                 | Isoft Solution Sdn Bhd 3.4.51 | 🚺 iqTcpSlave           | Not Installed |  |
| isoftAb              | Module | -                 | www.isoft-solution.com 3.4.51 | 🗍 isoftAb              | Not Installed |  |
| isoftAlarm           | Module | -                 | Isoft Solution Sdn Bhd 3.4.51 | 🗍 isoftAlarm           | Not Installed |  |
| isoftR2Alarm         | Module | -                 | www.isoft-solution.com 3.4.51 | 🗍 isoftR2Alarm         | Not Installed |  |
| ) isoftYork          | Module | -                 | www.isoft-solution.com 3.4.51 | 🚺 isoftYork            | Not Installed |  |
| ) jennic             | Module | -                 | Tridium 3.4.51                | 🗍 jennic               | Not Installed |  |
| kitIo                | Module | -                 | Tridium 3.4.51                | 🗍 kitIo                | Not Installed |  |
| kitLon               | Module | -                 | Tridium 3.4.51                | 🗍 kitLon               | Not Installed |  |
| kitPxDisplay         | Module | -                 | Tridium 3.4.51                | 🗍 kitPxDisplay         | Not Installed |  |
| kitPxHvac            | Module | -                 | Tridium 3.4.51                | 🚺 kitPxHvac            | Not Installed |  |
| kitPxR2              | Module | -                 | Tridium 3.4.51                | 🚺 kitPxR2              | Not Installed |  |
| dap                  | Module | -                 | Tridium 3.4.51                | 🗍 Idap                 | Not Installed |  |
| lonAaon              | Module | -                 | Tridium 3.4.51                | 🗍 IonAaon              | Not Installed |  |
| lonAbb               | Module | -                 | Tridium 3.4.51                | 🚺 lonAbb               | Not Installed |  |
| lonAct               | Module | -                 | Tridium 3.4.51                | 🚺 lonAct               | Not Installed |  |
| lonActech            | Module | -                 | Tridium 3.4.51                | 🗍 IonActech            | Not Installed |  |
| lonAcutherm          | Module | -                 | Tridium 3.4.51                | 📋 IonAcutherm          | Not Installed |  |
| lonAerco             | Module | -                 | Tridium 3.4.51                | 🚺 lonAerco             | Not Installed |  |
| lonAlco              | Module | -                 | Tridium 3.4.51                | 🗍 IonAlco              | Not Installed |  |

e) Follow the step and the JACE may re-boot automatically.



f) After JACE has started open again the JACE platform and next step is to create the new station.

#### Niagara Ax 'Station' installation

- 1. Create the station from the workbench menu 'tools' > 'New Station'.
- 2. Follow the step of the 'New station wizard'.

| Hew Station Wizard                       | ×  |
|--|----|
| New Station Wizard                       |    |
| Station Name<br>ABC<br>Station Directory |    |
| d:\niagara\niagara-3.3.23\stations\ABC   |    |
|  |    |
|  |    |
| 🖙 Back 🖙 Next 🛷 Finish 🗙 Cance           | el |

- 3. You could configure the offline station but we recommended doing online configuration.
- 4. Go directly to tree navigation and open the JACE platform, select the 'station copier'.

| 🛲 Niagara Workbench                                 |                                       |                |                                |                    |
|---|---------------------------------------|----------------|--------------------------------|--------------------|
| File Edit Search Bookmarks Tools W                  | Vindow Help                           |                |                                |                    |
| 🌤 • 🔿 • 🎕 • 🔲 • 🚱 🏠 😂 😂                             | - 🖬 🖬 🕻 X 🔓 🛍 🦕 X   🗠 🖓 📕 193         | 2.168.10.120 💌 | 8                              |                    |
| 📮 192.168.10.120 (GcmTest) 🛛 🗮 Platform             |                                       |                |                                | 🧿 Station Copier 👻 |
| - 🔀 Nav   | 📀 platform: 🚍 Platform                |                |                                | ×                  |
| 📮 区 💽 My Network 🔽                                  | Stations on this computer             |                | 🚍 Stations on "192.168.10.120" |                    |
| 📄 licenses.lar                                      | /D:/niagara/Niagara-3.3.23/stations 📄 |                | /niagara/stations              |                    |
|   | ABC                                   |                |                                |                    |
| + 🖃 A:  | asdTest                               |                |                                |                    |
|   | AZMI                                  |                |                                |                    |
|   | demo                                  |                |                                |                    |
| Platform  | demoAppliance                         |                |                                |                    |
| Station (Kaust)                                     | GemTest                               |                |                                |                    |
| + 🖳 192.168.0.120 (iLonTest)                        | Kaust                                 |                |                                |                    |
| 192.168.0.129 (test)                                | mdbcTect                              |                |                                |                    |
|   | NAC 2                                 |                |                                |                    |
|   | NAC_2                                 |                |                                |                    |
| 192.168.1.125                                       | test                                  |                |                                |                    |
| 🔁 🔜 192.168.1.129 (NAC_2)                           |                                       | 🖙 Copy         |                                |                    |
| 🖃 🖳 192.168.10.120 (GcmTest)                        |                                       | A Canu         |                                |                    |
| Platform  |                                       | /~ cobx        |                                |                    |
| Application Director                                |                                       | 🕮 Rename       |                                |                    |
| Solution  |                                       |                |                                |                    |
| Diatup Configuration                                |                                       | X Delete       |                                |                    |
| File Transfer Client                                |                                       |                |                                |                    |
|   |                                       |                |                                |                    |
| License Manager                                     |                                       |                |                                |                    |
| Platform Administration                             |                                       |                |                                |                    |
| 🗌 🗍 Software Manager 📃                              |                                       |                |                                |                    |
| Station Copier                                      |                                       |                |                                |                    |
| ିଳ୍ଲ TCP/IP Configuration                           |                                       |                |                                |                    |
| 🕀 🖃 Remote File System                              |                                       |                |                                |                    |
| - 🥪 Station (GcmTest)                               |                                       |                |                                |                    |
|   |                                       |                |                                |                    |
| Copy: Transfer the selected station from this compu | uter to the remote host               |                |                                |                    |

- 5. Press the button 'copy' for further action.
- 6. Follow the step to complete the station installation and the JACE may re-boot automatically.
- 7. After the JACE up open again the JACE platform and go to the 'Application Director' and look on the column 'status' and make sure is running.

| 30  true   true | Name   | Type    | Status  | Details          | Auto-Start | Restart on Failure |
|-----------------|--------|---------|---------|------------------|------------|--------------------|
|                 | 📕 test | station | Running | fox=1911,http=80 | true       | true               |
|                 |        |         |         |                  |            |                    |
|                 |        |         |         |                  |            |                    |
|                 |        |         |         |                  |            |                    |
|                 |        |         |         |                  |            |                    |
|                 |        |         |         |                  |            |                    |

### **Opening Niagara Ax 'Station'**

1. Open the JACE station from the Workbench menu 'File' > 'Open' > 'Open Station (fox)'.

| 🗯 Niagara Workbench          |  |   |                         |
|------------------------------|--|---|-------------------------|
| File Edit Search Bookmarks   | s Tools Window Help                          |   |                         |
| 😅 Open                       | O Open Ord Ctrl+L                            | B B X ∽ ∝ ■ 192.168.10.120 ▼ ■  |                         |
|                              | Open File Ctrl+O                             |   | And institute Disasters |
| Ctrl+T                       | Copen Directory                              |   | Application Director 👻  |
| Close Tab                    | Q Open Query                                 |   |                         |
| Close Other Tabs             | 😽 Open Station (fox) Ctrl+Shift+O            | Details Auto-Start Restart on Failure   | ₽                       |
| Next Tab Ctrl+PageUp         | Open Platform Ctrl+Shift+P                   | fox=1911,http=80 true true  |                         |
| Previous Tab Ctrl+PageDow    | WD AB Find Stations                          | May-09 MYT1[sys.registry] Out-of-date: Missing "/ffs0/niagara/registr   | Auto-Start              |
| Save Ctrl+S                  | Gig This Stations                            | May-09 MYT][sys.registry] Rebuilding registry   | Pectart on Failure      |
| 🔚 Save All                   | MESSAGE [14:03:34 13<br>MESSAGE [14:03:34 13 | 3-May-09 MYT][sys.registry] Loaded [545ms]<br>3-May-09 MYT][sys.registry] Rebuilt: 1576 types [10410ms]       | Chart                   |
| Save Bog                     | MESSAGE [14:03:34 13                         | 3-May-09 MYT][sys] Baja runtime booted ("/ffs0/niagara")  | Start                   |
| A Export                     | MESSAGE [14:03:36 13<br>MESSAGE [14:03:43 13 | 3-may-09 MYI][sys] Loading "/ffs0/niagara/stations/ABU/config.bog"<br>3-May-09 MYT][sys] Loaded (7272ms)      | Stop                    |
|                              | MESSAGE [14:03:48 13                         | 3-May-09 MYT][alarm.database] Created   | Restart                 |
| Eorward Alt+Left             | MESSAGE [14:03:40 13<br>MESSAGE [14:03:48 13 | 3-May-09 MYI][sys] services inicialized (2095ms)<br>3-May-09 MYT][sys.mixin] Updated [17ms]                   | Reboot                  |
|                              | Invalid shutdown del                         | lay detected, setting to default<br>3-May-09 MVT1(web server) HTTP Server started on port 80                  | Kill                    |
|                              | MESSAGE [14:03:49 13                         | 3-May-09 MYT][fox] Service started on port 1911   | Dump Threads            |
| Recent Ords Alt+Space        | MESSAGE [14:03:49 13<br>MESSAGE [14:03:49 13 | 3-May-09 MYT][sys] nre.version: 3.3.23<br>3-May-09 MYT][sys] *** Station Started (1761ms) [30127ms total] *** | Save Bog                |
| Alt+Home                     | niagara>                                     | o hay os hari[ois] — sodoron sodroca (rioims) [oorsims coodr]   | Verify Software         |
|                              |  |   |                         |
|                              |  |   | Clear Output            |
| Close                        |  |   | Pause Output            |
| Platform                     |  |   | Output Dialog           |
| - 🤯 Station (Kaust)          | E I  |   | Stream To File          |
| ⊕ 192.168.0.120 (iLonTest)   |  |   |                         |
| + 192.168.0.129 (test)       |  |   | Output Settings         |
| 192.168.1.122                |  |   |                         |
|                              | E  |   |                         |
|                              |  |   |                         |
| - 🔜 192.168.10.120 (GcmTest) |  |   |                         |
| Station (GcmTest)            |  |   |                         |
|                              |  |   |                         |
| • · · · · · •                |  | m • •   |                         |
|                              |  |   |                         |

2. Enter the station password that you setup at the 'New station wizard'.

| Open Station                        |                             |
|-------------------------------------|-----------------------------|
| Connect to                          | tation<br>station using fox |
| Host IP<br>Port 1911                | ▼ 192.168.20.129 » 🦄 •      |
| Credentials<br>Username<br>Password | admin                       |
| ☑ Remember thes                     | e credentials               |

3. Open the 'Palette' from the menu 'Window' > 'Side Bars' > 'Palette'.

| Niagara Workbench   |   |  |  |           |
|---|---|--|--|-----------|
| File Edit Search Bookmarks Tools  | Window Help   |  |  |           |
| ⇔•⇒•હ• □•⊚ 🏠 🛃  | Side Bars   | Show Side Bar  |  |           |
| IP2.165.20.129 (test)     Station (test)       IP2.165.20.129 (test)     IP2.165.20.129 (test)       IP2.165.20.120 (test)     IP2.165.10.04       IP2.165.10.04     IP2.165.10.04       IP2.165.11.20 (Valino Circuit)     IP2.165.11.23 (Stage12_JACE3)       IP2.165.11.23 (test)     IP2.165.11.23 (test)       IP2.165.11.23 (test)     IP2.165.11.23 (test) | Pather Rugn Active Plugn Hide Console F1 Console F2 Files Syy Hide Console F2 Files Fil | Bookmarks Help Help Help Help Paiste Todo List Diagnosese reconsider na recenter | Station Sur<br>4 c<br>esesion<br>mote VM |           |
| 🕀 🔜 easyio.selfip.com (mdbsTest)  | Summary F   | roperties  |  | 9 objects |
| 🗈 🔜 fiona-pc  | Property  | Value  |  | <b>4</b>  |
| 🗄 🔜 loganhosp.dynalias.org (LoganHospital)  | Station Name  | test   | 1.100                                    |           |
|   | Host Model  | 192.100.1.129/192.108.1<br>NDM2  | 1.129                                    |           |
|   | Host Td   | Opv_NPM2_0000_0E56_6D  | 737                                      |           |
|   | Niagara Versi   | 0 3 3 23   | <i>337</i>                               |           |
|   | Java Version  | 19.2.3   |  |           |
|   | OS Version  | DDC ONX 6.3.2  |  |           |
|   | Locale  | en US  |  |           |
|   | Current Time  | 04-1up-09 11:47 AM SGT   |  |           |
|   |   |  |  |           |

4. See it on the left below navigation.



- 5. Click the button open palette.
- 6. Look at the row module and find out 'isoftAb', finally click button 'ok'.

| ielect one or more pa | lettes to open:                              | Browse   |
|-----------------------|--|----------|
| Module                | Description                                  | ₽        |
| docCodeExamples       | Niagara Code Examples                        | <b>^</b> |
| driver                | Niagara Driver Framework                     | 1        |
| dust                  | Dust Driver                                  | 111      |
| eas                   | Energy Application System                    |          |
| easdemo               | Enery Application System Demo Data Generator |          |
| eibnetIp              | EIBNet IP Driver for AX                      |          |
| email                 | Niagara Email Module                         |          |
| flexSerial            | Flexible Serial Driver                       |          |
| fox                   | Fox Protocol                                 |          |
| gcm                   | GCM RS232 Serial Driver v1.0.0.9             |          |
| history               | Niagara History Engine                       |          |
| iqTcpSlave            | IQ TCP Slave driver                          |          |
| isoftAb               | Allen Bradley CIP Driver v1.0.0.3            |          |
| isoftAlarm            | Isoft Niagara AX Alarm Console               |          |
| isoftIq               | Trend Iq2 Serial Driver v1.0.0.3             |          |
| isoftIqTcp            | TrendIq TCP driver v1.0.0.3                  |          |
| isoftMdbs             | Mdbs Driver v1.0.0.3                         | •        |



### Adding Allen Bradley object to the Driver folder

1. Look the JACE station and expend the 'Config' and double click on the 'Driver'.

| 🗎 Niagara Workbench                              |                  |                    |            |         |             |                    |
|--|------------------|--------------------|------------|---------|-------------|--------------------|
| File Edit Search Bookmarks Tools Window          | Manager Help     |                    |            |         |             |                    |
| ⇔•⇒•६• 🛛•୭ 🏠 😫 📂• 🔙                              | 13 🔉 🗴 🗅 🖻       | <b>₽</b> × ∞ ∝     |            |         |             |                    |
| 💂 192.168.20.129 (test) 🛛 😾 Station (test) 🗧 Con | fig 📸 Drivers    |                    |            |         |             | 🔊 Driver Manager 👻 |
| - 🔀 Nav 🗵  | Driver Manager   |                    |            |         |             | 4 objects          |
| 🔉 🖂 🚳 My Network                                 | Name             | Туре               | Status     | Enabled | Fault Cause | 4                  |
|  | MiagaraNetwork   | Niagara Network    | {ok}       | true    |             |                    |
|  | SerialLcdNetwork | Serial Lcd Network | {disabled} | false   |             |                    |
| 192.168.1.124 (MainPlant)                        | MdbsTcpNetwork   | Mdbs Tcp Network   | {ok}       | true    |             |                    |
| - 192.168.20.129 (test)                          | MdbsAsyncNetwork | Mdbs Async Network | {ok}       | true    |             |                    |
| Platform   |                  |                    |            |         |             |                    |
| B Config   |                  |                    |            |         |             |                    |
| + B Services                                     |                  |                    |            |         |             |                    |
| + C Drivers                                      |                  |                    |            |         |             |                    |
| + 📬 SCHEDULE                                     |                  |                    |            |         |             |                    |
| 🛨 🧰 PxHome                                       |                  |                    |            |         |             |                    |
| 🛨 📼 Files 📃                                      |                  |                    |            |         |             |                    |
| 🕂 🕰 History                                      |                  |                    |            |         |             |                    |
| 🕀 🔜 444armlec.dynalias.com (Da_Vinci)            |                  |                    |            |         |             |                    |
| + 😓 83.244.203.234 (Iq2OnTest)                   |                  |                    |            |         |             |                    |
| bms.hotelrichmond.com.au (RICHMOND)              |                  |                    |            |         |             |                    |
| easyio.selfip.com (mdbsTest)                     |                  |                    |            |         |             |                    |
| H H tiona-pc                                     |                  |                    |            |         |             |                    |
| + logannosp.dynalias.org (LoganHospital)         |                  |                    |            |         |             |                    |
| 👻 🥑 Palette 🛛                                    |                  |                    |            |         |             |                    |
| 🗃 🖾 📋 isoftIqTcp 🔽                               |                  |                    |            |         |             |                    |
| 🛨 🍘 IqTcpNetwork                                 |                  |                    |            |         |             |                    |
|  |                  |                    |            |         |             |                    |
| 🗉 🔜 IqTcpDevice                                  |                  |                    |            |         |             |                    |
| 🗉 🔜 Iq2GatewayDevice 😑                           |                  |                    |            |         |             |                    |
| 🕀 🔜 Iq3GatewayDevice                             |                  |                    |            |         |             |                    |
| IqLvavGatewayDevice                              |                  |                    |            |         |             |                    |
| IqTcpDeviceFolder                                | L                |                    |            |         |             |                    |
| + InPointFolder                                  |                  |                    |            |         | Rew Edit    |                    |

- 2. Before copying the 'AbLogixNetwork' to the driver you need choose correct network object, below as the details:
  - a) AbLogixNetwork Connect directly to the 'Logix5xxx' device via TCP IP connection.
  - b) AbGateway Connect the PLC 5 series and SLC 2 series '1756-ENBT T/A' Ethernet Module.
- 3. Example below is the connection to AbGateway (connect via the 1756-ENBT T/A).
  - a) Copy the AbGateway from the palette and paste it to the station driver's folder.

| 器 EasyIO Ax Supervisor                   | Contraction of the    |                    |            | Sec. 1  |              | - U X            |
|--|-----------------------|--------------------|------------|---------|--------------|------------------|
| File Edit Search Bookmarks Tools         | Window Manager        | Help               |            |         |              |                  |
| 🌤 - 🕆 - 🌜 - 🚺 - 🔕 🏠 🛃                    | 🖻 • 🔚 🖬 🕞 👌           | 6 B B A X          | SCH        |         |              |                  |
| 💂 192.168.20.129 (officeDemo) 🛛 👹 Statio | n (officeDemo) 🛛 🗏 Co | nfig 🏘 Drivers     |            |         | ه [          | Driver Manager 👻 |
| - 🔀 Nav 🛛                                | Driver Manager        | 1                  | -          | -       |              | 4 objects        |
| 🗋 🖂 💽 My Network 💌                       | Name                  | Type               | Status     | Enabled | Fault Cause  | <b>₽</b>         |
| Station (CairosPort)                     | Can MagaraNetwork     | Mdbs Tcp Network   | {OK}       | true    |              |                  |
| +  | MdbsAsyncNetwork      | Mdbs Async Network | {disabled} | false   |              |                  |
| 192.168.10.120                           | AbGateway             | Ab Gateway         | {ok}       | true    |              |                  |
| E 4 192.168.20.129 (officeDemo)          |                       |                    |            |         |              |                  |
| Platform Station (officeDemo)            |                       |                    |            |         |              |                  |
|  |                       |                    |            |         |              |                  |
| 主 🔜 83.244.203.234 (Iq2OnTest)           |                       |                    |            |         |              |                  |
| ⊕ 96.10.174.152 ⊕                        |                       |                    |            |         |              |                  |
| + - 96.10.174.155                        |                       |                    |            |         |              |                  |
| + . bms.hotelrichmond.com.au (RICHMO     |                       |                    |            |         |              |                  |
| easvin selfin com (officeDemo)           |                       |                    |            |         |              |                  |
| • 🙆 Palette 🕅                            |                       |                    |            |         |              |                  |
|  |                       |                    |            |         |              |                  |
|  |                       |                    |            |         |              |                  |
| AbLogixNetwork                           |                       |                    |            |         |              |                  |
| AbLogixDevice                            |                       |                    |            |         |              |                  |
| + AbGateway                              |                       |                    |            |         |              |                  |
| + AbPlcDevice                            |                       |                    |            |         |              |                  |
| AbSIcDevice                              |                       |                    |            |         |              |                  |
| AbGatewayDeviceFolder                    |                       |                    |            |         |              |                  |
| + C AbSicPointFolder                     |                       |                    |            |         |              |                  |
|  |                       |                    |            |         |              |                  |
|  |                       |                    |            |         |              |                  |
|  |                       |                    |            |         |              |                  |
|  |                       |                    |            |         | D New E Edit |                  |
|  |                       |                    |            |         |              | <u>^</u>         |
|  |                       |                    |            |         |              |                  |
|  |                       |                    |            |         |              |                  |
| d:\niagara\niagara-3.4.51>               |                       |                    |            |         |              | -                |

- b) Before setup the AbGateway network you need the information as below.
  - i) 1756-ENBT T/A IP address.
  - ii) PLC/SLC node address.
- c) Select the AbGateway right mouse button > view > property Sheet.

| Driver Manager     |                    |             |       |                             | 4 ob | jects |
|--------------------|--------------------|-------------|-------|-----------------------------|------|-------|
| Name               | Туре               | Status      | Enabl | ed Fault Cause              |      | 臣     |
| C NiagaraNetwork   | Niagara Network    | {ok}        | true  |                             |      |       |
| C MdbsTcpNetwork   | Mdbs Tcp Network   | {ok}        | true  |                             |      |       |
| C MdbsAsyncNetwork | Mdbs Async Network | disabled}   | false |                             |      |       |
| 🍋 AbGateway        | Ab Gateway         | {ok}        | true  |                             | 1    |       |
|                    | Vie                | WS          |       | 🕤 Ab Gateway Device Manager |      |       |
|                    | Act                | tions       |       | Property Sheet              |      |       |
|                    | Ne                 | W           | •     | L Wire Sheet                |      |       |
|                    |                    |             |       | 🕤 Category Sheet            |      |       |
|                    | ¦∦ ⊂u              | t ⊂tr       | +)(   | Slot Sheet                  |      |       |
|                    | Ľb ⊂o              | py ⊂tr      | l+C   | 🖅 Link Sheet                |      |       |
|                    | 🔁 Pa:              | ste Ctr     | +V -  |                             | -    |       |
|                    | 🔁 Pa:              | ste Special | -     | ງໆ New View                 |      |       |
|                    | Du Du              | plicate Ctr | I+D   | 🤉 Guide Help                |      |       |
|                    | X De               | lete Del    | lete  | 🕺 Bajadoc Help              |      |       |
|                    | AA Fin             | d           |       | 🚊 Spy Local                 |      |       |
|                    | PG                 | u           |       | 🛱 Spy Remote                |      |       |
|                    | Lin                | k Mark      | Ľ     |                             |      |       |
|                    | Lin                | k From      |       |                             |      |       |
|                    | Lin                | k To        |       |                             |      |       |
|                    | E Pa               | name Ch     | LED   |                             |      |       |
|                    | Et De              | name Car    | TTK   |                             |      |       |
|                    |                    |             |       |                             |      |       |
|                    | EM CO              | mposice     |       |                             |      |       |
|                    | Exp                | port        |       |                             |      |       |
|                    | D Ne               | W           |       |                             |      |       |
|                    | Edi                | t           |       |                             |      |       |
|                    |                    |             |       |                             |      |       |

d) Key in the information as below:

i) Ip Address : The 1756-ENBT T/A IP address.

| 😋 AbGateway (Ab Gateway)        |                            |
|---------------------------------|----------------------------|
| 🔲 🔘 Status                      | (ok)                       |
| 💷 🔘 Enabled                     | ◯ true 💌                   |
| 🔲 🔘 Fault Cause                 |                            |
| 🗉 🔣 Health                      | OK [03-5ep-09 3:41 PM MYT] |
| 🛨 🐥 Alarm Source Info           | Alarm Source Info          |
| 🖭 🔣 Monitor                     | Ping Monitor               |
| 🛨 🗞 Tuning Policies             | Tuning Policy Map          |
| 표 흉~ Poll Scheduler             | Basic Poll Scheduler       |
| 🗌 🔘 Retry Count                 | 1                          |
| 🔲 🔘 Response Timeout            | +00000h 00m 02.0008        |
| 🛨 🤗 License                     | Ab License                 |
| 🔲 🔘 Max Fails Until Device Down | 3 [0 - 10]                 |
| 💷 🚫 Ip Address                  | 172.18.17.188              |
| 💷 🔘 Ip Port                     | 44818                      |
| 🔲 🔘 Unique Id                   | 0x                         |
| 💷 🔘 Model                       |                            |
| 표 👮 Channel                     | Ab Channel                 |
|                                 |                            |
|                                 |                            |
|                                 |                            |
|                                 |                            |
|                                 |                            |
|                                 | Refresh Save               |

## Adding the controller

1. Click button new. See the figure as below.

| Datab | ase  |      |          |      |             |   |             | 0                 | objects |
|-------|------|------|----------|------|-------------|---|-------------|-------------------|---------|
| Name  | Туре | Exts | Channel  | Node | Device Name | Connection Id                           | Status      | is Health         | R       |
|       |      |      | <u>.</u> |      | T;<br>N     | New<br>ype to Add<br>umber to Add<br>OK | Ab Plc Devi | evice v<br>eel    |         |
|       |      |      |          |      |             |   | 💭 New I     | w Folder Dew Edit | _       |

- 2. Select the correct device type by selecting drop down menu from the 'Type to Add'.
- 3. Click button "Ok'.
- 4. Key in the Channel, node number and finally click the button 'OK'.

|                        | Туре                        | Channel | Node | Enabled | R |
|------------------------|-----------------------------|---------|------|---------|---|
| 🔜 AbPlcDevice          | Ab Plc Device               | A       | 1    | true    | 8 |
| ○ Name                 | AbPlcDevice<br>Ab Plc Devic | e 🔻     |      |         |   |
| ○ Channel [/<br>○ Node | 4 🔽                         |         |      |         |   |
|                        |                             |         |      |         |   |

| Database              |               |      |         |      |             |               |                           | 17 objects                               |
|-----------------------|---------------|------|---------|------|-------------|---------------|---------------------------|--|
| Name                  | Туре          | Exts | Channel | Node | Device Name | Connection Id | Status                    | Health 🛱                                 |
| 🔚 FIU_1               | Ab Plc Device | 0    | A       | 1    | BMS_ST01    | B4E×AA==      | {ok}                      | Ok [03-Sep-09 5:49 PM EST]               |
| 🔜 FIU_2               | Ab Plc Device | 0    | A       | 2    | BMS_ST02    | Ct8×AA==      | {ok}                      | Ok [03-Sep-09 5:49 PM EST]               |
| FIU_3                 | Ab Plc Device | 0    | A       | 3    | BMS_ST03    | C+E×AA==      | {ok}                      | Ok [03-Sep-09 5:49 PM EST]               |
| FIU_4                 | Ab Plc Device | 0    | A       | 4    | BMS_ST04    | AAFKAA==      | {down,alarm,unackedAlarm} | Fail [03-Sep-09 5:48 PM EST] No response |
| 🔜 FIU_6               | Ab Plc Device | 0    | A       | 6    | BMS_ST06    | CJUXAA==      | {ok}                      | Ok [03-Sep-09 5:49 PM EST]               |
| 🔜 FIU_7               | Ab Plc Device | 0    | A       | 7    | BMS_ST07    | DHs×AA==      | {ok}                      | Ok [03-Sep-09 5:49 PM EST]               |
| FIU_8                 | Ab Plc Device | 0    | A       | 10   | BMS_ST10    | CZ0×AA==      | {unackedAlarm}            | Ok [03-Sep-09 5:48 PM EST]               |
| FIU_9_10              | Ab Plc Device | 0    | A       | 11   | BMS_ST11    | AAFJAA==      | {down,alarm,unackedAlarm} | Fail [03-Sep-09 5:47 PM EST] No response |
| 🔜 FIU_13              | Ab Plc Device | 0    | A       | 14   | BMS_ST14    | CZsxAA==      | {unackedAlarm}            | Ok [03-Sep-09 5:47 PM EST]               |
| AIR_5                 | Ab Slc Device | 0    | A       | 31   | ABS         | DZ8×AA==      | {unackedAlarm}            | Ok [03-Sep-09 5:48 PM EST]               |
| 🔜 AIR_6               | Ab Slc Device | 0    | A       | 32   | AB6         | DqE×AA==      | {unackedAlarm}            | Ok [03-Sep-09 5:48 PM EST]               |
| BRIDGE_2              | Ab Slc Device | 0    | A       | 33   | AB2         | D6MxAA==      | {down}                    | Fail [03-Sep-09 5:48 PM EST] No response |
| BRIDGE_3              | Ab Slc Device | 0    | A       | 34   | AB3         | EKU×AA==      | {unackedAlarm}            | Ok [03-Sep-09 5:49 PM EST]               |
| BRIDGE_4              | Ab Slc Device | 0    | A       | 35   | AB4         | Eac×AA==      | {unackedAlarm}            | Ok [03-Sep-09 5:49 PM EST]               |
| AIR_1                 | Ab Slc Device | 0    | A       | 36   | AB1         | EqkxAA==      | {unackedAlarm}            | Ok [03-Sep-09 5:49 PM EST]               |
| BAGGAGE               | Ab Slc Device | 0    | A       | 30   |             |               | {ok}                      | Ok [03-Sep-09 5:49 PM EST]               |
| AbPlcDeviceAzmiSample | Ab Plc Device | 0    | A       | 1    | BMS_ST01    | E6s×AA==      | {unackedAlarm}            | Ok [03-Sep-09 5:49 PM EST]               |
|                       |               |      |         |      |             |               |                           |  |
|                       |               |      |         |      | 💭 Net       | w Folder      | New Edit                  |  |

### Adding controller points

1. Expend the Allen Bradley controller and double click on the 'Points'. User also can directly click on the point extension to view the point manager. To add the point user must access to the controller point manager.



| 諸 EasyIO Ax Supervisor                      |                             |               | States & St.    | a wall   | - 20.00       |        |        | and the second second |                        |
|---|-----------------------------|---------------|-----------------|----------|---------------|--------|--------|-----------------------|------------------------|
| File Edit Search Bookmarks Tools            | Window Manager Help         |               |                 |          |               |        |        |                       |                        |
| ⇔・⇒・৫・ 🛛・🖗 🔂 🕼                              | ≈- 🗟 🕼 🕻 🖁 🛱                | 3 X   10 0    | > 💭 % 🗋         | . 🖪      |               |        |        |                       |                        |
| 📮 172.31.4.5 (CairnsPort) 🛛 😽 Station (Cair | rnsPort) 🗏 Config 📸 Drivers | 🏝 AbGateway   | / 📕 FIU_1       | o Points |               |        |        |                       | 👧 Ab Plc Point Manager |
| * 🖄 Nav 🛛                                   | Database                    |               |                 |          |               |        |        |                       | 68 object              |
| D Mu Naturak                                | Name                        | Туре          | Out             | Tag Name | Tuning Polic  | y Name |        |                       |                        |
|   | AHU1/I_ONTIMEHRS            | Numeric Point | 2 hr {ok}       | N20:115  | defaultPolicy |        |        |                       |                        |
| 🛨 🖓 ObixNetwork                             | AHU1/I_ONTIMEMIN            | Numeric Point | 0 min {ok}      | N20:116  | defaultPolicy |        |        |                       |                        |
| 🗄 🚰 OpcNetwork                              | AHU1/I_OFFTIMEHRS           | Numeric Point | 22 hr {ok}      | N20:117  | defaultPolicy |        |        |                       |                        |
| 🗉 💓 Special1Schedule                        | AHU1/I_OFFTIMEMIN           | Numeric Point | 30 min {ok}     | N20:118  | defaultPolicy |        |        |                       |                        |
| 🗉 🎇 Special25chedule                        | AHU1/I_OPRTNMODE            | Numeric Point | 0 hr {ok}       | N20:119  | defaultPolicy |        |        |                       |                        |
| Generation AbLogixNetwork                   | AHU1/J&K_ONTIMEHRS          | Numeric Point | 2 hr {ok}       | N20:120  | defaultPolicy |        |        |                       | 1                      |
| + genericSchedule                           | AHU1/J&K_ONTIMEMIN          | Numeric Point | 0 min {ok}      | N20:121  | defaultPolicy |        |        |                       |                        |
| + inav                                      | AHU1/J&K_OFFTIMEHRS         | Numeric Point | 22 hr {ok}      | N20:122  | defaultPolicy |        |        |                       |                        |
| H Sa AbGateway                              | AHU1/J&K_OFFTIMEMIN         | Numeric Point | 30 min {ok}     | N20:123  | defaultPolicy |        |        |                       |                        |
| ADGateway1                                  | AHU1/J&K_OPRTNMODE          | Numeric Point | 0 hr {ok}       | N20:124  | defaultPolicy |        |        |                       |                        |
| E Mistory                                   | IMMI_ESS_DLY_KWHRS          | Numeric Point | 5 kW-hr {ok}    | F14:0    | defaultPolicy |        |        |                       |                        |
| + 192 168 1 121 (Mbus)                      | IMMI_NONESS_DLYKWHRS        | Numeric Point | 14 kW-hr {ok}   | F14:2    | defaultPolicy |        |        |                       |                        |
| 192 168 10 120                              | CATHPAC_NONESS_DLYKWHRS     | Numeric Point | 0 kW-hr {ok}    | F14:3    | defaultPolicy |        |        |                       |                        |
| ▲   | PDE340QNTS_ESS_DLYKWHRS     | Numeric Point | 128 kW-hr {ok}  | F14:4    | defaultPolicy |        |        |                       | 1                      |
| 🝷 🥑 Palette 🛛 🛛                             | QNTS_ESS_DLYKWHRS           | Numeric Point | 0 kW-hr {ok}    | F14:6    | defaultPolicy |        |        |                       |                        |
| 🖙 🖸 🗇 isoftáb                               | QNTS_NONESS_DLYKWHRS        | Numeric Point | 0 kW-hr {ok}    | F14:7    | defaultPolicy |        |        |                       |                        |
|   | IMMI_ESS_DLY_PRVKWHRS       | Numeric Point | 97250 kW-hr {o  | ()F8:0   | defaultPolicy |        |        |                       |                        |
| + 🛱 AbLogixNetwork                          | IMMI_NONESS_PRVDLYKWHRS     | Numeric Point | 90734 kW-hr {ok | ()F8:2   | defaultPolicy |        |        |                       |                        |
| 1 E AbLogixDevice                           | CATHPAC_ESS_PRVDLYKWHRS     | Numeric Point | 20 kW-hr {ok}   | F8:3     | defaultPolicy |        |        |                       |                        |
| AbLogixDeviceFolder                         | PDE340QNTS_ESS_PRVDLYKWHRS  | Numeric Point | 70078 kW-hr {o  | ()F8:4   | defaultPolicy |        |        |                       |                        |
| Contension                                  | PDE339QNTS_ESS_PRVDLYKWHRS  | Numeric Point | 241716 kW-hr {  | F8:5     | defaultPolicy |        |        |                       |                        |
| AbPicDevice                                 | BDRAMCHKSUM_PWRUP           | String Point  | -12223 {ok}     | 51:0     | defaultPolicy |        |        |                       |                        |
|   | PLC5_RUN                    | String Point  | 14287 {ok}      | 51:1     | defaultPolicy |        |        |                       |                        |
| AbDisDeietEelder                            | BATT_MISS                   | String Point  | 0 {ok}          | S10:0    | defaultPolicy |        |        |                       |                        |
| AbsicPointFolder                            | PLC MAJOR FAULT             | String Point  | 0 {ok}          | 52:11    | defaultPolicy |        |        |                       |                        |
|   | C RLTM_CHKHRS               | String Point  | 17 {ok}         | 52:21    | defaultPolicy |        |        |                       |                        |
|   | C RLTM_CHKMIN               | String Point  | 52 {ok}         | 52:22    | defaultPolicy |        |        |                       |                        |
|   | FIU6_OFFALMDLYTMR           | Boolean Point | false {ok}      | T4:52.DN | defaultPolicy |        |        |                       |                        |
|   |                             |               |                 |          | New Folder    | 🗋 New  | 🔣 Edit | ]                     |                        |

- 2. To add the point simply clicks at the button 'New'.
- 3. Select the correct point type by selection the drop down menu at the 'Type to Add' property.

| Database                   |               |                 |               | 68 0                      | bjects |
|----------------------------|---------------|-----------------|---------------|---------------------------|--------|
| Name                       | Туре          | Out             | Tag Name      | Tuning Policy Name        | [7     |
| AHU1/I_ONTIMEHRS           | Numeric Point | 2 hr {ok}       | N20:115       | defaultPolicy             | -      |
| AHU1/I_ONTIMEMIN           | Numeric Point | 0 min {ok}      | N20:116       | defaultPolicy             |        |
| AHU1/I_OFFTIMEHRS          | Numeric Point | 22 hr {ok}      | N20:117       | defaultPolicy             |        |
| AHU1/I_OFFTIMEMIN          | Numeric Point | 30 min {ok}     | N20:118       | defaultPolicy             |        |
| AHU1/I_OPRTNMODE           | Numeric Point | 0 hr {ok}       | N20:119       | defaultPolicy             |        |
| AHU1/J&K_ONTIMEHRS         | Numeric Point | 2 hr {ok}       | N20:120       | defaultPolicy             |        |
| AHU1/J&K_ONTIMEMIN         | Numeric Point | 0 min {ok}      | N20:121       | defaultPolicy             |        |
| AHU1/J&K_OFFTIMEHRS        | Numeric Point | 22 hr {ok}      | N20:122       | defaultPolicy             |        |
| AHU1/J&K_OFFTIMEMIN        | Numeric Point | 30 min {ok}     | N20:123       | defaultPolicy             |        |
| AHU1/J&K_OPRTNMODE         | Numeric Point | 0 hr {ok}       | N20:124       | defaultPolicy             |        |
| IMMI_ESS_DLY_KWHRS         | Numeric Point | 5 kW-hr {ok}    | F14:0         | defaultPolicy             |        |
| IMMI_NONESS_DLYKWHRS       | Numeric Point | 14 B New        |               |                           |        |
| CATHPAC_NONESS_DLYKWHRS    | Numeric Point | 0               |               |                           |        |
| PDE340QNTS_ESS_DLYKWHRS    | Numeric Point | 12 Type to Ad   | d Boolean V   | Writable 🔻                |        |
| QNTS_ESS_DLYKWHRS          | Numeric Point | 01 Number to    | add Boolean V | Writable                  |        |
| QNTS_NONESS_DLYKWHRS       | Numeric Point | 01              | Boolean P     | Point                     |        |
| IMMI_ESS_DLY_PRVKWHRS      | Numeric Point | 97              | OK Ab Bit Poi | int                       |        |
| IMMI_NONESS_PRVDLYKWHRS    | Numeric Point | 90              | Numeric V     | Writable                  |        |
| CATHPAC_ESS_PRVDLYKWHRS    | Numeric Point | 20 kW-hr {ok}   | F8 Numeric P  | Point                     |        |
| PDE340QNTS_ESS_PRVDLYKWHRS | Numeric Point | 70078 kW-hr {oł | k)F8          | itable                    |        |
| PDE339QNTS_ESS_PRVDLYKWHRS | Numeric Point | 241716 kW-hr {  | ol F8         |                           | 11     |
| BDRAMCHKSUM_PWRUP          | String Point  | -12157 {ok}     | S1 Chies Dei  |                           |        |
| PLC5_RUN                   | String Point  | 14287 {ok}      | S1 String Pol |                           |        |
| BATT_MISS                  | String Point  | 0 {ok}          | S10:0         | defaultPolicy             |        |
| PLC MAJOR FAULT            | String Point  | 0 {ok}          | 52:11         | defaultPolicy             |        |
| RLTM_CHKHRS                | String Point  | 17 {ok}         | 52:21         | defaultPolicy             |        |
| RLTM_CHKMIN                | String Point  | 54 {ok}         | 52:22         | defaultPolicy             |        |
| FIU6_OFFALMDLYTMR          | Boolean Point | false {ok}      | T4:52.DN      | defaultPolicy             |        |
|                            |               |                 |               | New Folder 🛛 💭 New 🔄 Edit |        |

- 4. Click button 'OK' to go next step.
- 5. Key in the 'Tag Name'. Please refer to the Allen Bradley 'RsLink' or 'RxLogix'.

| Name                   | Гуре             | Tag Name       | Bit Number | Enabled | Facets                        | Tuning Policy Name | Device Facets                 | Conversion |
|------------------------|------------------|----------------|------------|---------|-------------------------------|--------------------|-------------------------------|------------|
| 🔵 Boolean Writable 🏻 🗄 | Boolean Writable |                |            | true    | trueText=true,falseText=false | defaultPolicy      | trueText=true,falseText=false | Default    |
| Name                   | Rooleen          | Uritable       |            | 7       |                               |                    |                               |            |
| ) Type                 | Boolean          | Writable 🔻     | ]          |         |                               |                    |                               |            |
| 🕽 Tag Name             |                  |                |            |         | I I III                       |                    |                               |            |
| 🔵 Bit Number           | Cannot edit      |                |            |         |                               |                    |                               |            |
| 🔘 Enabled              | 🔘 true           | •              |            |         |                               |                    |                               |            |
| 🔵 Facets               | trueText=tru     | ue,falseText=f | alse » 🔞   | -       |                               |                    |                               |            |
| 🔘 Tuning Policy Nar    | ne Default       | Policy         | -          |         |                               |                    |                               |            |
| 🔘 Device Facets        | trueText=tru     | ue,falseText=f | alse » 🔞   | -       |                               |                    |                               |            |
| O Conversion           | 🔲 Default        |                | -          |         |                               |                    |                               |            |

### Niagara Ax Isoft Allen Bradley Licensing

1. The Allen bradley driver could run one(1) hour with full function without the license key. After the time trial expired user need to restart the JACE or station to make it run again.

- 2. To unlock the license go to any AbLogixNetwork or AbGateway, from the property sheet, expend the 'License'. User should see the 'HostId', 'Unlock Code' and 'License Mode'.
- 3. To request the license simply copy the 'HostId' from the property and sent to us. We will provide the unlock code and user required to key-in the unlock code to make permanent license. After key in the unlock code user not required to restart the station.

| ්ඩ AbGateway (Ab Gateway)      |                                | -    |
|--------------------------------|--------------------------------|------|
| 💷 🔘 Status                     | (ok)                           |      |
| 💷 🔘 Enabled                    | ◯ true ▼                       |      |
| 📃 🔘 Fault Cause                |                                |      |
| 🛨 🔣 Health                     | OK [03-Sep-09 6:06 PM EST]     |      |
| 🗉 🔔 Alarm Source Info          | Alarm Source Info              |      |
| 🗉 🔣 Monitor                    | Ping Monitor                   |      |
| 🛨 🗞 Tuning Policies            | Tuning Policy Map              | =    |
| 🖭 😽 Poll Scheduler             | Basic Poll Scheduler           | -    |
| 📃 🔘 Retry Count                | 1                              |      |
| 🔄 🔘 Response Timeout           | +00000h 00m 03.000s +          |      |
| 🖃 🤗 License                    | Ab License                     |      |
| 🗌 🔘 Host Id 🛛 🛛 🕅              | n-021F-45C4-A0A6-F318          |      |
| 💷 🔘 Unlock Code 🛛 🧿            | 1A408CAC168746EE4B2E2500B2585F |      |
| 🗌 🔘 License Mode 🛛 🔽           | gistered                       |      |
| 🔄 🔘 Max Fails Until Device Dov | wn 3 [0-10]                    |      |
| 💷 🔘 Ip Address                 | 172.18.17.188                  |      |
| 🗆 🔘 Ip Port                    | 44818                          |      |
| 🗆 🔘 Unique Id                  | 0x117470211                    |      |
|                                |                                | -    |
|                                |                                | - 11 |
|                                | eb Craineo<br>Mo Di Device     |      |
|                                | ab Fil. Device                 |      |
|                                |                                | -    |
|                                | Refresh Save                   | 1    |

End of document