OPC Server Driver User Guide

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Chapter 1

Installation

Install mlsOpcServer-rt.jar and mlsOpcServer-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 mlsOpcServer 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 mlsOpcServer.

Apart from installing the 4.*n.nn* version of the Niagara distribution files in the JACE, make sure to install the mlsOpcServer 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 OPC software integration, as described in the rest of this document.

Requirement

- N4 workbench 4.0.22 or higher (for commissioning).
- Niagara N4 platform support:

  1. JACE-3E.
  2. JACE 6xx.
  3. JACE 7xx.
  4. JACE 8000 (Titan JACE).
  5. Web Supervisor

Note: Only the OPCServerService able run into the all type of Niagara N4 platform, and for the OPC application (AXOPCServer.exe) only applicable to run into the Windows operating system.

Chapter 2

Quick Start

This section provides a collection of procedures to use the Niagara N4 OPC server drivers to build services with OPC server points. Like other Niagara N4 drivers, you can do most configurations from special "manager" views and property sheets using Workbench.

- For any of the OPC Server Service:
  - "Configure the OPC Server Service"
  - "Create OPC Server points"

Configure OPC Server Service

To add and configure a OPC Server Service, perform the following main tasks:

- Only one (1) OPC Server Service component required to install in the running station:-
  - Add a OPCServerService

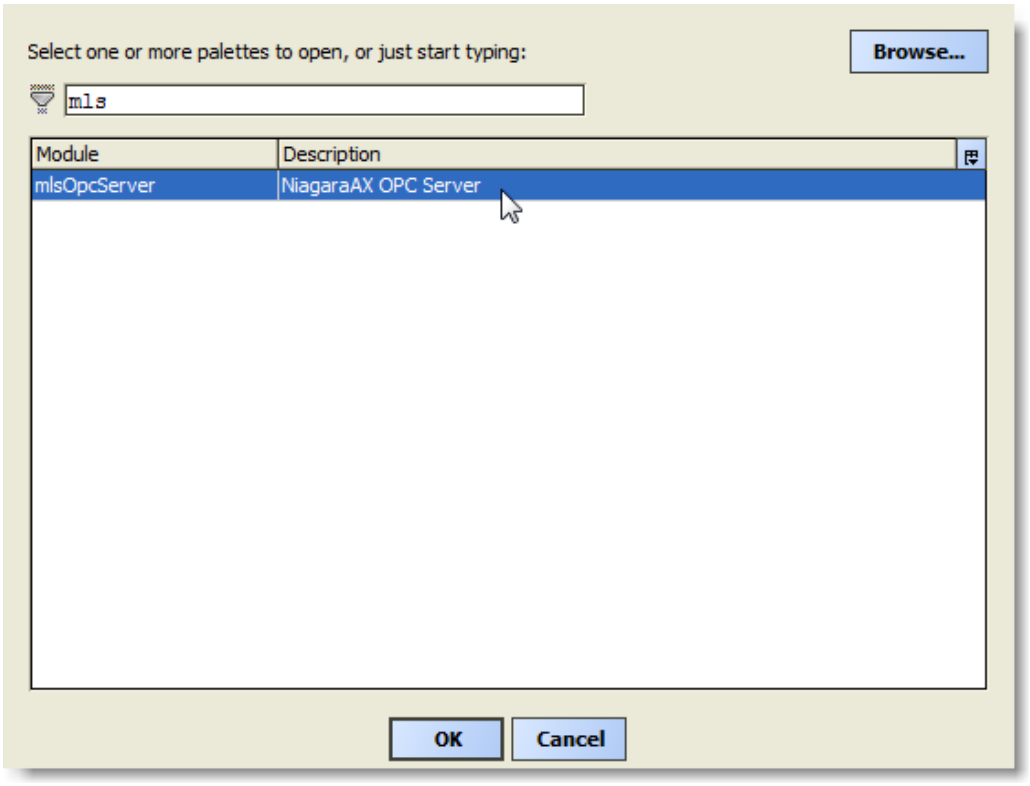
Add a OPCServerService

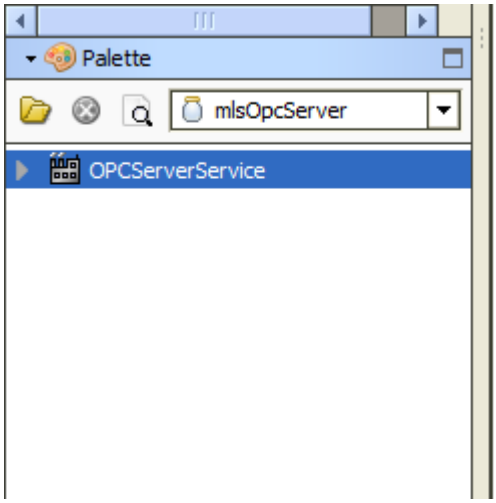
To add a OPCServerService in the station

Use the following procedure to add a OPCServerService component under the station's Services container.

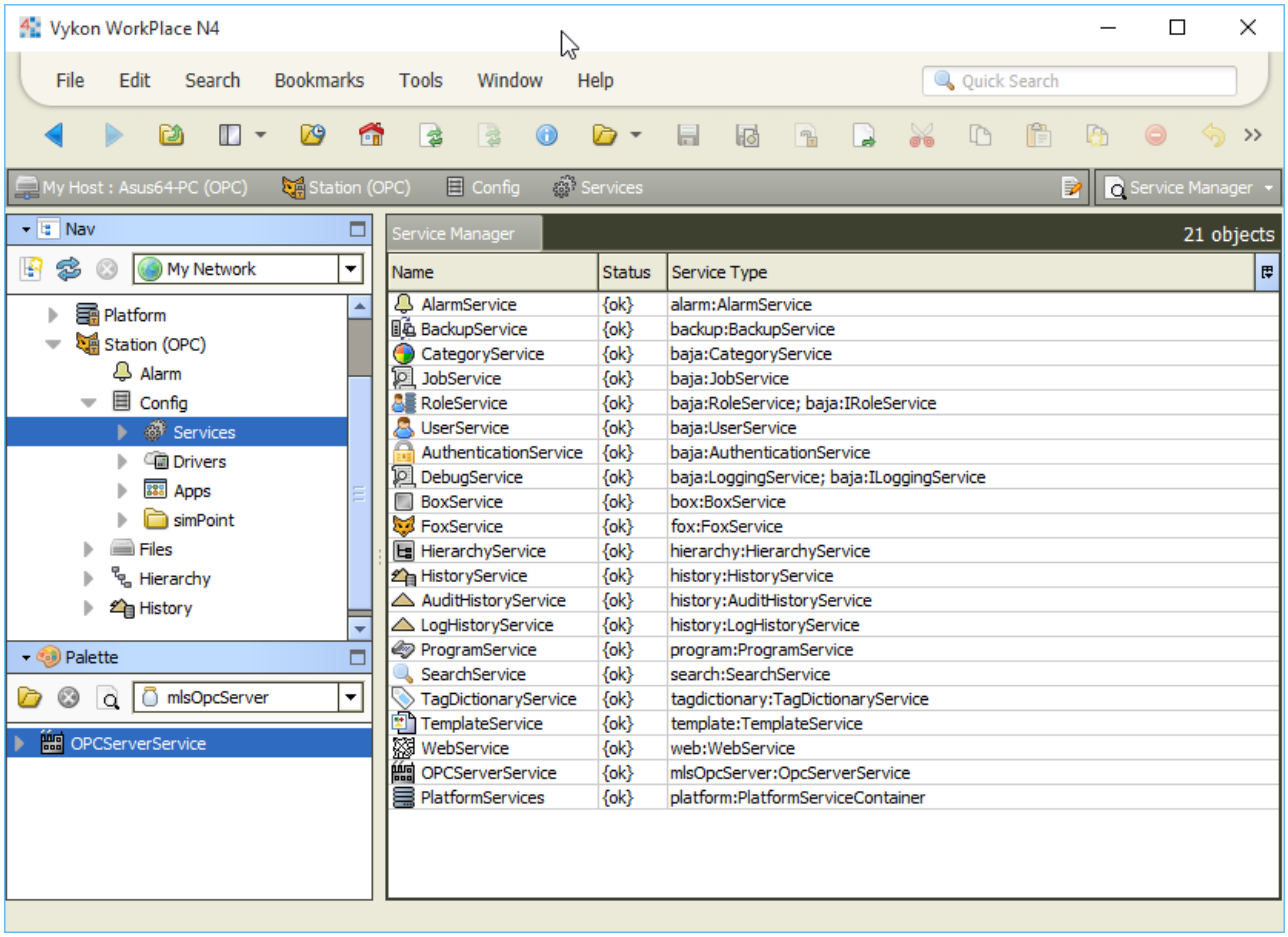
To add a OPCServerService in the station:

- Double-click the station's **Services** container, to bring up the **Service Manager**.
- Open the palette from windows side bar menu. Windows -> Side Bars -> Palette.
- Open the palette folder and dialog bog as below will pop-up, from the filter type "mlsOpcServer" and finally click button ok.





- After open the mlsOpcServer palette copies the OPCServerService object and paste to the station ***Services*** container.



Add a OPC Server Points

After adding a OPCServerService, you can use the service's default "OPC Server Export Manager" view to add the appropriate OPC Server Points.

To add a OPC Server Points in the services

Use the following procedure to add the correct type of OPC Server point in the service. To add a OPC Server point:

- In the Nav tree or in the Service Manager view, double-click the OPCServerService, to bring up the OPC Server Export manager. All of these point manager views operate in a similar fashion.
- Click the **Discover** button to bring up the **discover table**, Pick the point (control point type) and drop into the database table

- Click **OK** to add the OPC Server Point(s) to the service.
  You should see the point(s) listed in the OPC Server Export Manager view, showing a status of "{ok}" and enabled as "true."

Configure Web Service

After adding an OPCServerService by default the HTTP service port is disable and station only allowed to access with HTTPS service only.

- In the Nav tree or in the Service Manager view, double-click the Web Service, to bring up the Web Service property. Set the parameter setting as below:-

  a) Http enable: true.
  b) Https Only: false.

User Service

The AXOPCServer.exe application is required to access the N4 station via the Web Service. The OPCServerService will automatically added the special user call "MMIUser". This is required for the AXOPCServer.exe application to access the N4 station point database to retrieve the point list, read and write the point from the AXOPCServer.exe application.

Note : Do not modified or remove this user.

Authentication Service

Another important service is to create the additional HTTP basic Authentication. This will allowed the AXOPCServer.exe application to access using the standard basic authentication. The OPCServerService also automatically create this additional HTTP basic Authentication scheme at the station startup. This HTTP basic Authentication has tie to the MMIUser user.

Note : Do not modified or remove this service.

Chapter 3

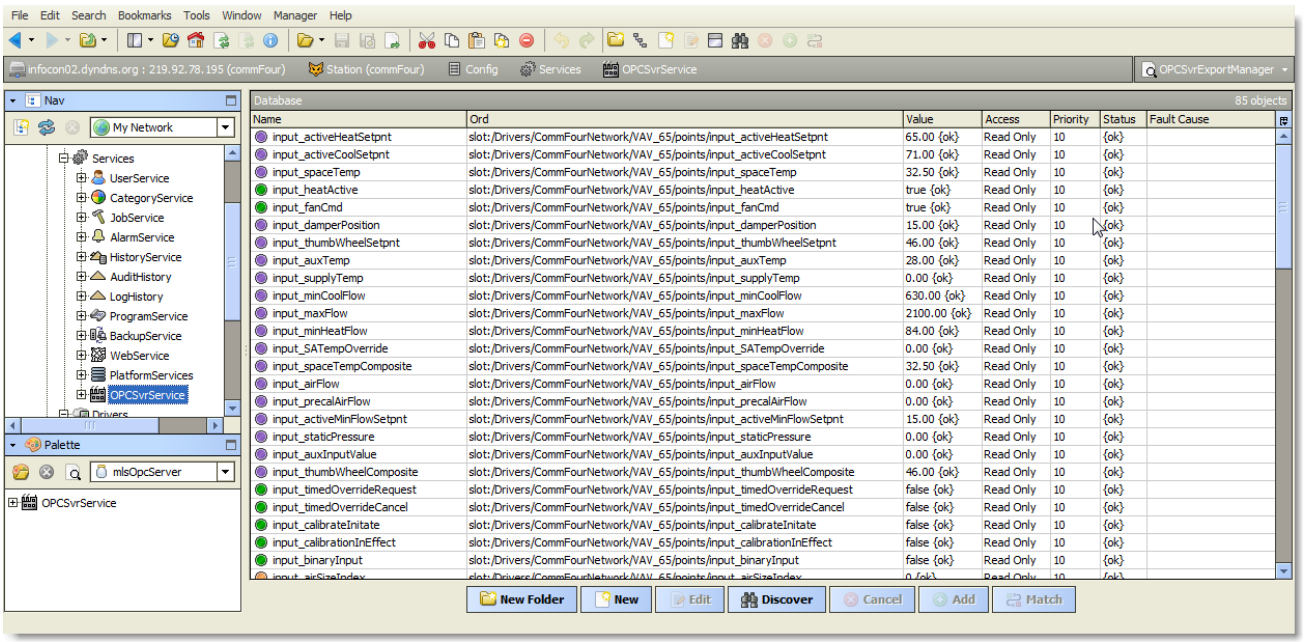
OPC Server View

OPC Server Export Manager

The OPC Server Export Manager is the default view when you double-click on a "OPCServerService" under a Services in the Nav tree. This manager view provides a quick and easy way to display and learn OPC Server points in a station database.

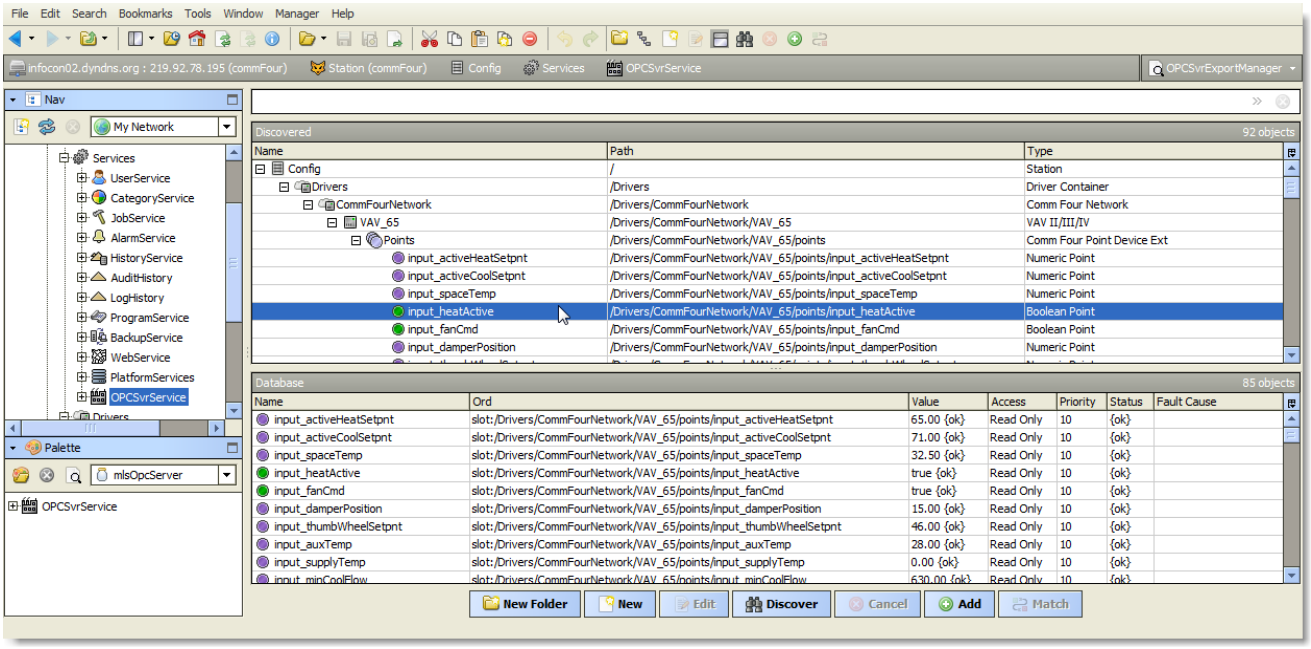
The OPC Server Export Manager is the default view for any OPCServerService container. The OPC Server Export Manager is a table-based view, where each row represents a information about the point.

Below is an example OPC Server Export Manager view.



The "New Folder", "New", and "Edit" buttons are not unique to the OPC Server Export Manager, and are explained in the "Niagara N4 User's Guide" in the "Driver Architecture" section. The "Match" button is not used for the OPC Server driver.

The "Discover" button implements functionality that is unique and tailored to discovering Niagara N4 database control 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 by selecting the discovered row(s) in the top pane, and clicking add. Doing so will cause the "Add" dialog box to appear:
Once the point(s) are satisfactorily edited, click "OK" to create the proxy points corresponding to the point property.

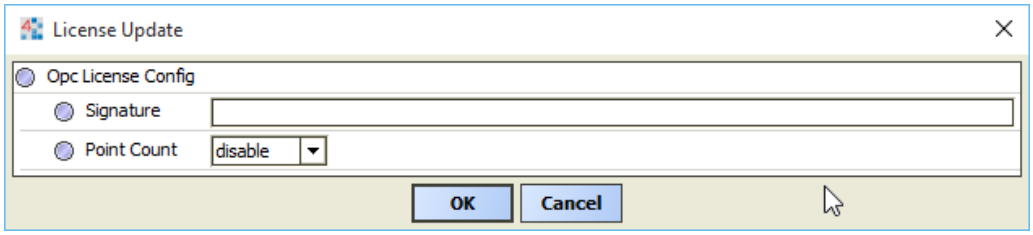
Chapter 4

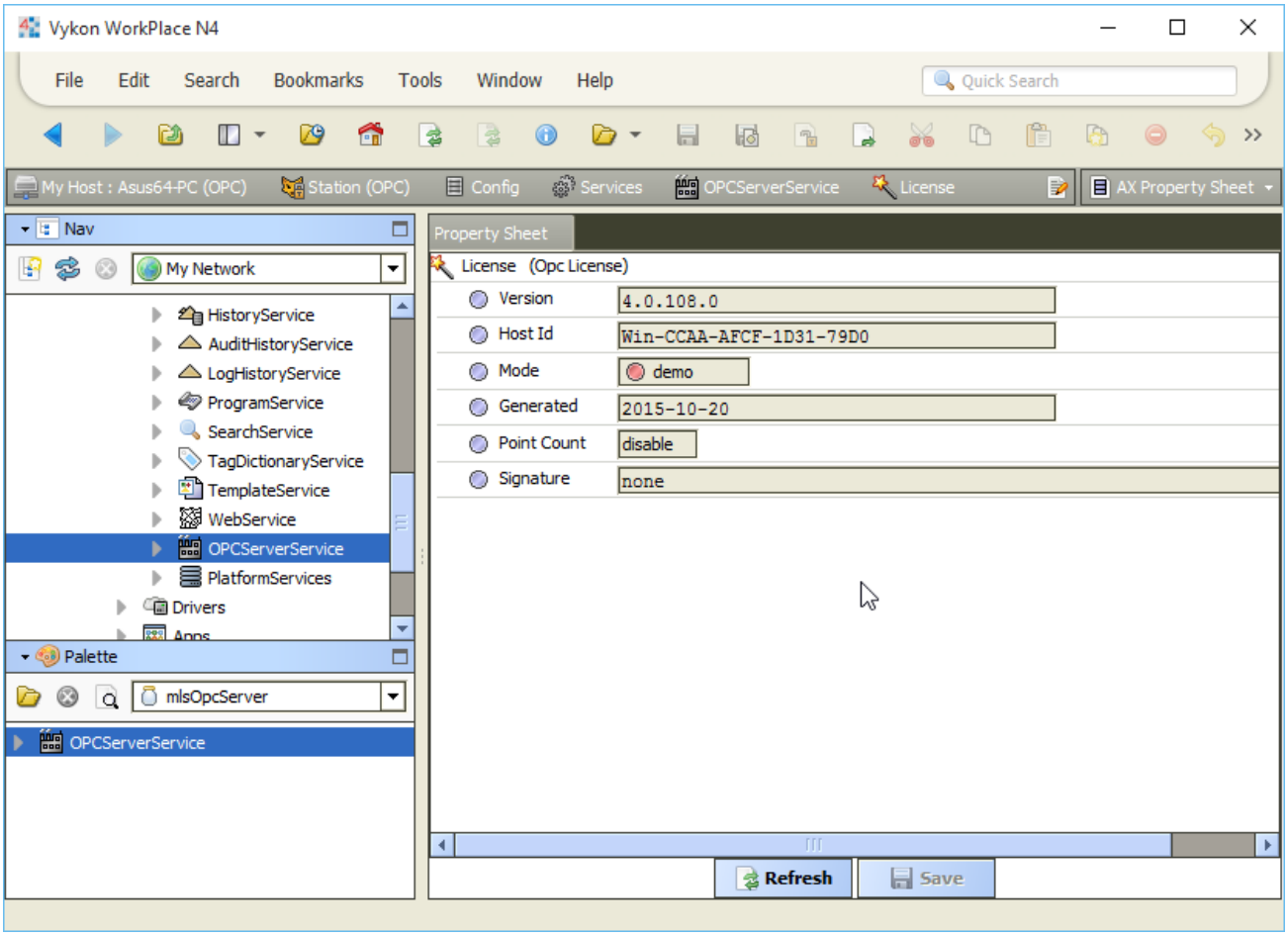
Licensing

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

The OPC Server license provide 2 hour demo license without the unlock code. After the demo license expired the OPC Server Driver communication will stop automatically and will show fatal fault at the OPC Server Network level. "mlsOpcServer license expired". To extend the demo period user required to restart the station or reboot the JACE.

To request the license please submit the JACE/Web Supervisor host ID, to unlock the driver simply go to the license property, select the word "License" and click right 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.




Vykon WorkPlace N4
File
Edit
Search
Bookmarks
Tools
Window
Help
Quick Search
My Host : Asus64-PC (OPC)
Station (OPC)
Config
Services
OPCServerService
License
AX Property Sheet
Nav
My Network
HistoryService
AuditHistoryService
LogHistoryService
ProgramService
SearchService
TagDictionaryService
TemplateService
WebService
OPCServerService
PlatformServices
Drivers
Palette
mlsOpcServer
OPCServerService
Property Sheet
License (Opc License)
Version
4.0.108.0
Host Id
Win-CCAA-AFCF-1D31-79D0
Mode
demo
Generated
2015-10-20
Point Count
disable
Signature
none
Refresh
Save

Chapter 5

OPC Server Application

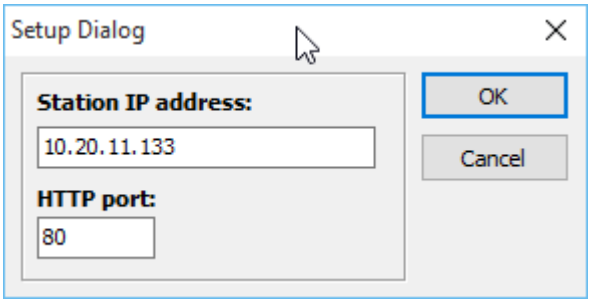
OPC Server application required windows operating system application to run, the OPC Server application cannot run in the embedded operating system such a JACE and other type operating system such a Linux, and none windows operating system. More information about the required please refers to this link http://en.wikipedia.org/wiki/Opc_server or http://www.opcfoundation.org.

User required has a knowledge on the windows DCOM configuration and more information about the setting please refer to this link http://www.opcconnect.com/dcomcnfg.php

Configure OPC Server Application

To configure an OPC Server Application, perform the following main tasks:

- Execute the "AXOPCServer.exe" and at the menu System -> Setup.



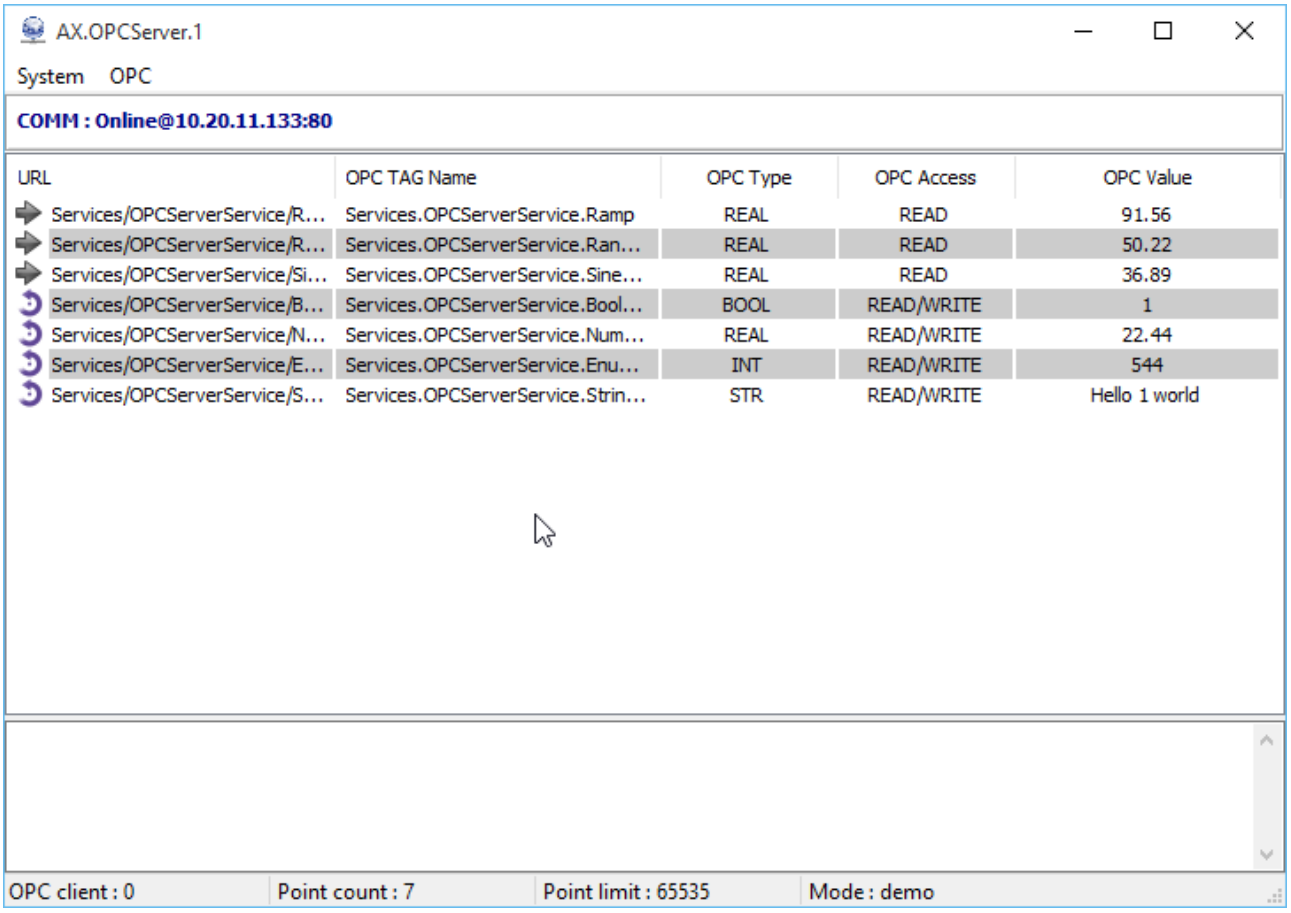
- Insert the station IP address of the Niagara N4 station and the Niagara N4 web port and usually the default port is 80. Finally click button ok.

- The IP address can be a local/remote where is the OPCServerService was install in the Niagara N4 station.

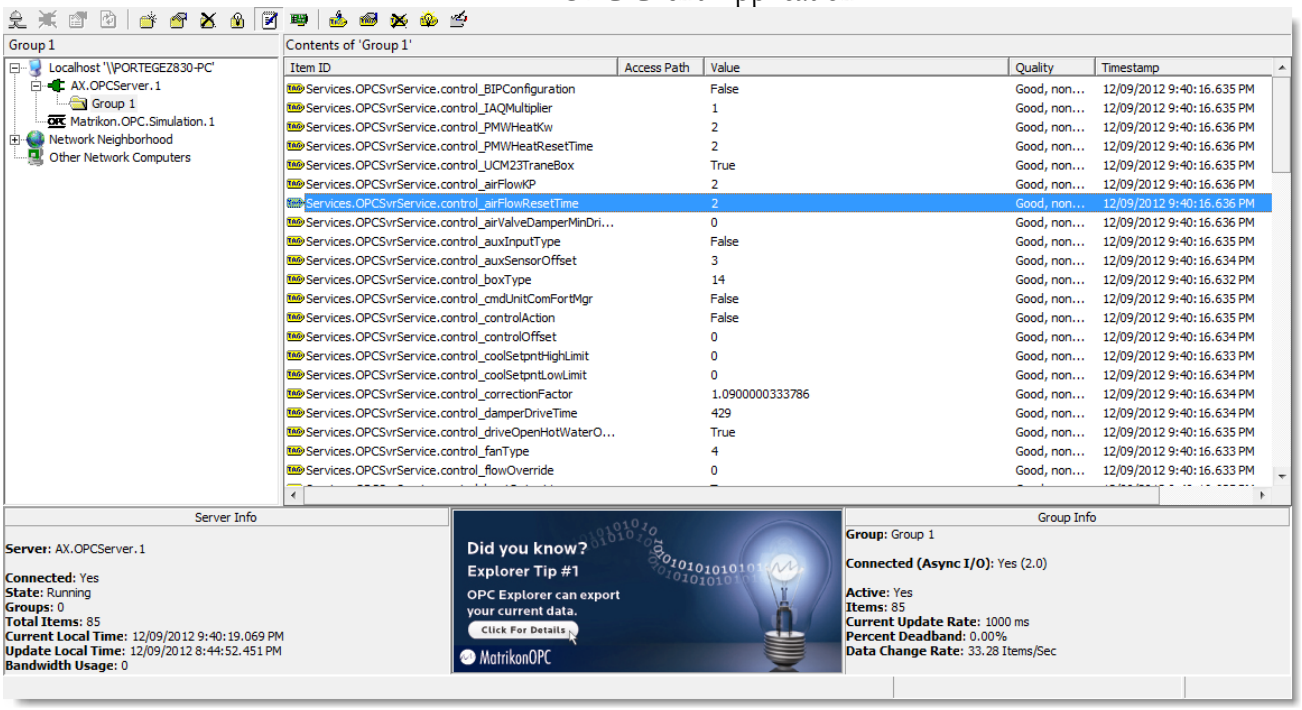
  Note: When work with the Windows operating such a windows 7 make sure the firewall was proper configure to avoid any issue on the connection.

- For the first time configuration make sure restart the OPC Server application and the system will retrieve all the entire point that already being configured from the Niagara N4 workbench side.

OPC Server Application



OPC Client Application



end