

[Tech Note 392](#)

How to Configure FSGateway and RSLinx Data Source

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Introduction

FSGateway can be configured to access data sources using DDE, SuiteLink, and OPC protocols.

This technote explains the step-by-step procedure to configure the FSGateway and the Rockwell Software's RSLinx data source to access data in an Allen-Bradley PLC (a ControlLogix PLC is being used in this example).

Before you continue, make sure you have the following:

- Install and configure RSLinx (OEM version minimum, Professional or higher recommended) so that it communicates with the PLC. RSLinx needs to have at least one topic defined.
- Check the Readme file for the system requirements and the installation information before installing the FSGateway.
- Install the latest version of the FSGateway. If a previous version was installed, be sure to uninstall it using Control Panel - Add/Remove Programs. To check the version number of the server, use Control Panel - Add/Remove Programs - select Wonderware ABCIP DAsServer, then click **Support Information**.

Assumptions

- FSGateway version **1.0.001** is used in this technote.
- RSLinx Gateway version 2.42.00 (Build 18) is used.
- Both FSGateway and RSLinx are installed on the same computer with Windows®2000 Professional Service Pack 4.
- This technote assumes the user has a basic working knowledge and understanding of Allen-Bradley software/hardware, Microsoft® Operating System, and Wonderware® products. If you have problem configuring the ControlLogix or RSLinx, please contact Allen-Bradley for assistance at www.ab.com
- The configuration of the ControlLogix PLC project is outside the scope of this tech note. However, typical Control Scope tags have been added in the PLC: **MyInt**, **MyFloat**, and **MyBool**. These tags are of types integer, floating point (or real), and Boolean respectively.

Configure RSLinx Data Source

1. Launch RSLinx.
2. Verify that the communication driver has been added, correctly configured, and is running.

In this example, the **Ethernet Device** is used to communicate with a ControlLogix (Model 1756-L63) over the Ethernet network.

To configure this, under Communication /Configure Driver, highlight the Ethernet Device driver (named AB_ETH-1) and click **Configure**.

The PLC in this example has an IP address of **192.168.10.25**. You should see the IP address for the intended PLC in the Station Mapping grid similar to Figure 1 (below):

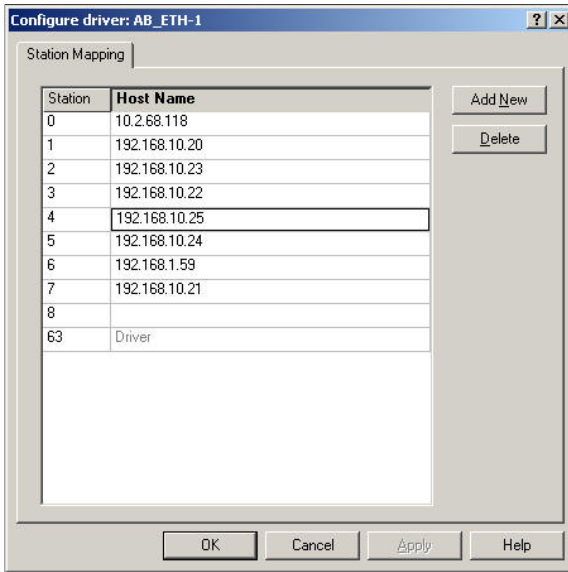


FIGURE 1: PLC STATION MAPPING

3. Click **OK** to close the Configure driver dialog box.

The **Configure Drivers** dialog box should show of the driver is running:

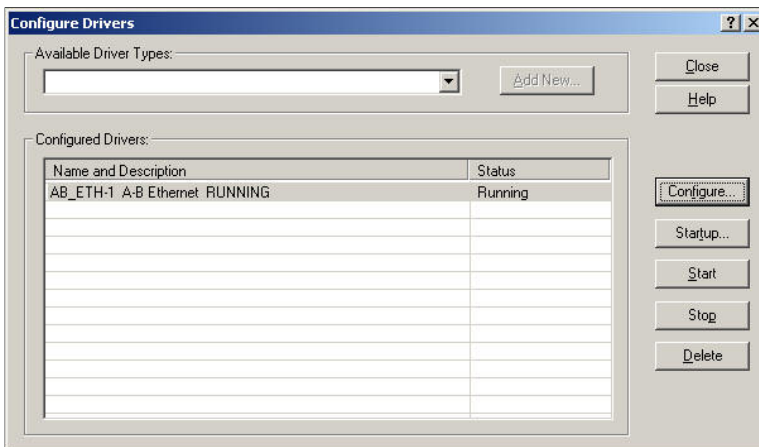


FIGURE 2: RSLINX ETHERNET DEVICE COMMUNICATION DRIVER

4. Verify that RSLinx recognizes the PLC on the Ethernet network by using **Communications/RSWho**.

Figure 3 (below) indicates that RSLinx can browse the PLC on the Ethernet network:

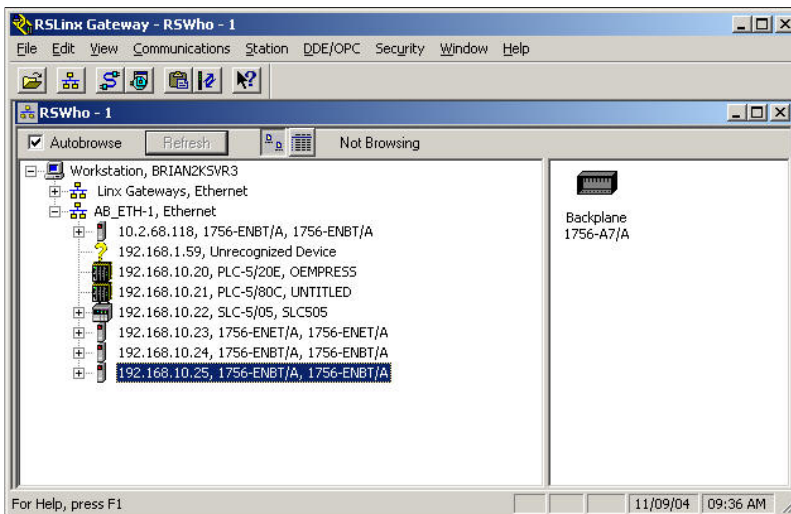


FIGURE 3: RSWHO FOUND THE PLC

5. Select **DDE/OPC /Topic Configuration** from the main menu .
6. High light the topic (Topic CLx5563) for the controller.

The respective PLC processor should also be highlighted on the right pane as shown in Figure 4 (below):

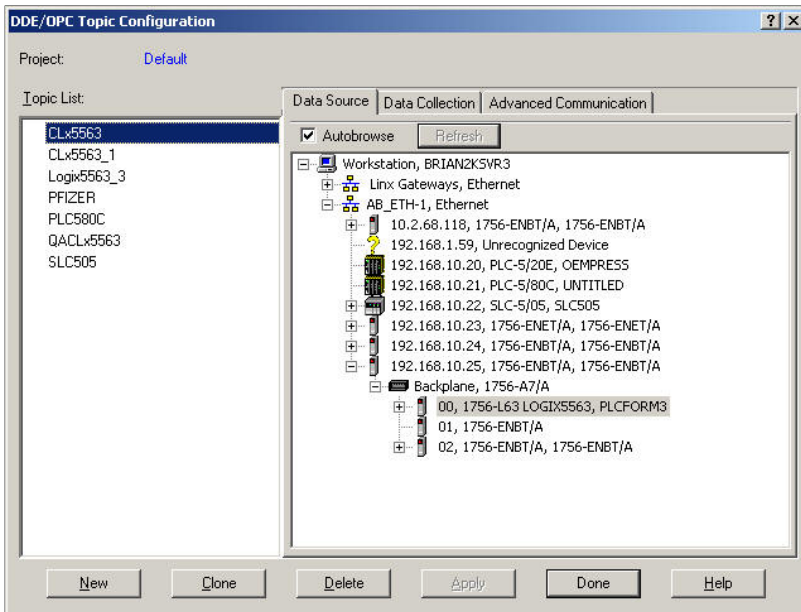


FIGURE 4: RSLINX DDE/OPC TOPIC CONFIGURATION

7. Click **Done** to close the Topic Configuration window.

Configure FSGateway

1. Select **Start/Programs/Wonderware/System Management Console** to launch the System Management Console (SMC).
2. From the System Management Console, navigate in the DAServer Manager to the FSGateway hierarchy (expand **DAServer Manager/Default Group/ Local/Archestra.FSGateway.1**).

See figure 5 (below):

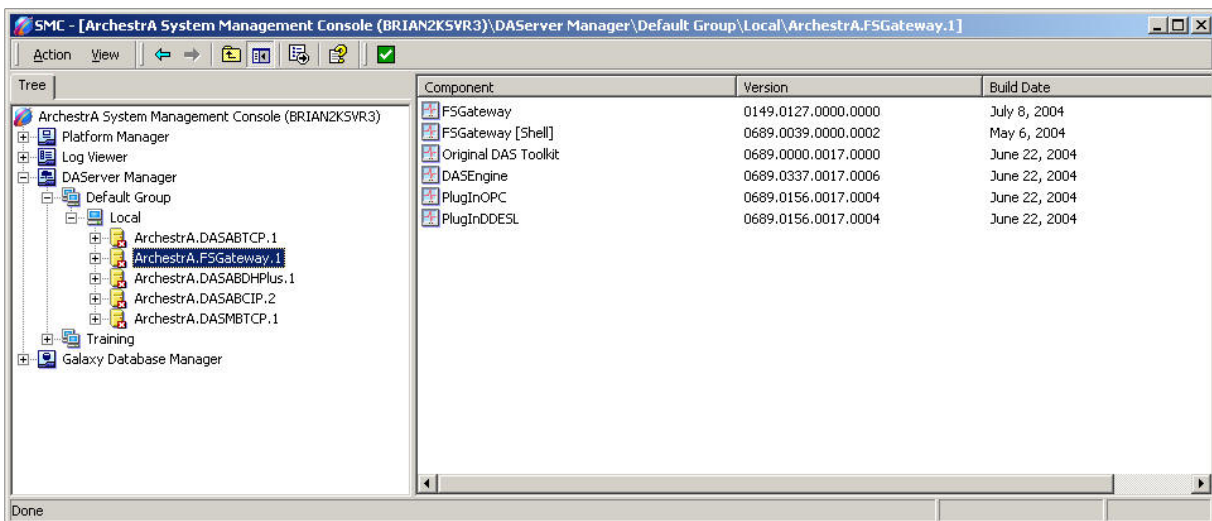


FIGURE 5: FSGATEWAY IN THE SMC

3. Expand the **Archestra.FSGateway.1** icon.
4. Click on **Configuration object**. The Global Parameters dialog box will appear on the right pane of the window.

See Figure 6 (below):

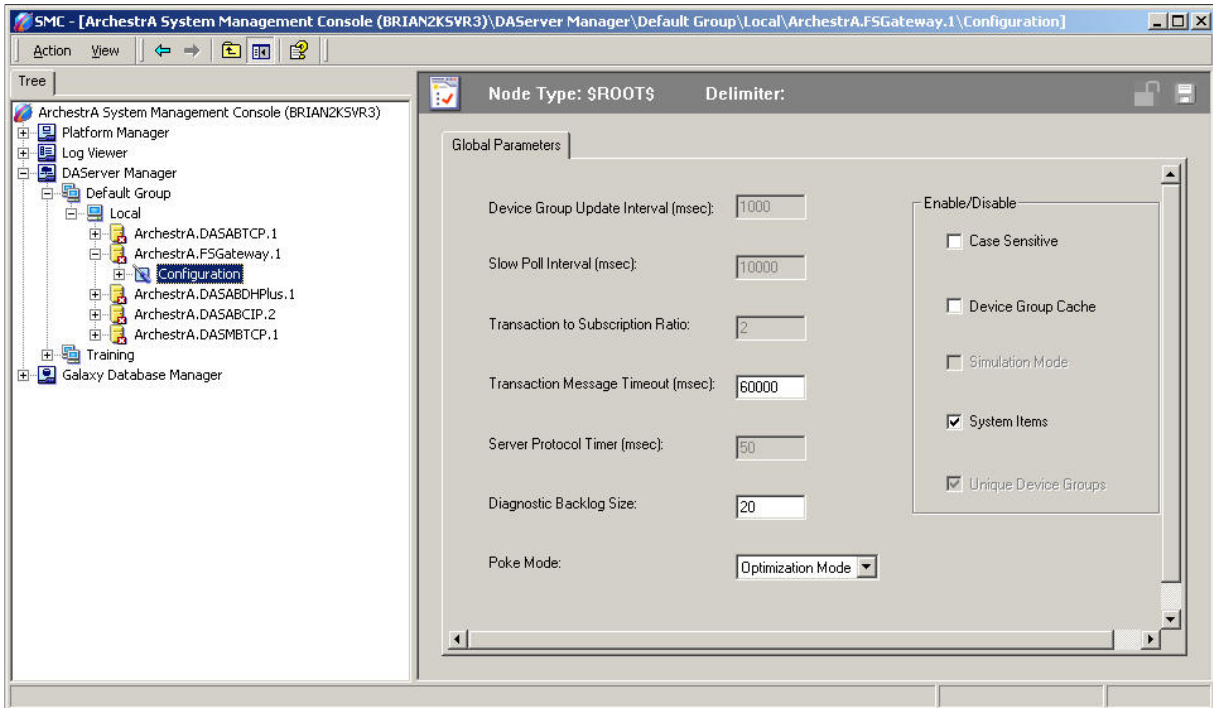


FIGURE 6: FSGATEWAY GLOBAL PARAMETERS

Note If the system has more than 5,000 items on advise, it is recommended that the Transaction Message Timeout should be set to 120 seconds.

- Right click the **Configuration** object and select **Add OPC Object**.

A new default **New_OPC_000** object is added to the hierarchy tree.

- Right click **New_OPC_000** and select **Rename** to change it to a meaningful name such as **RSLinxOPC**.

- Accept the default Server Node name of **localhost** (On the **OPC Parameters** window **RSLinxOPC Parameters** area , which indicates that RSLinx is running on the same computer with FSGateway.

Note: If RSLinx and FSGateway are on different computers, RSLinx Gateway version is required for remote connection.

If RSLinx and FSGateway are on different computers, the server node name should be the name of the computer running RSLinx.

- Click on the browse button to browse the OPC server, then select the **RSLinx OPC Server**.

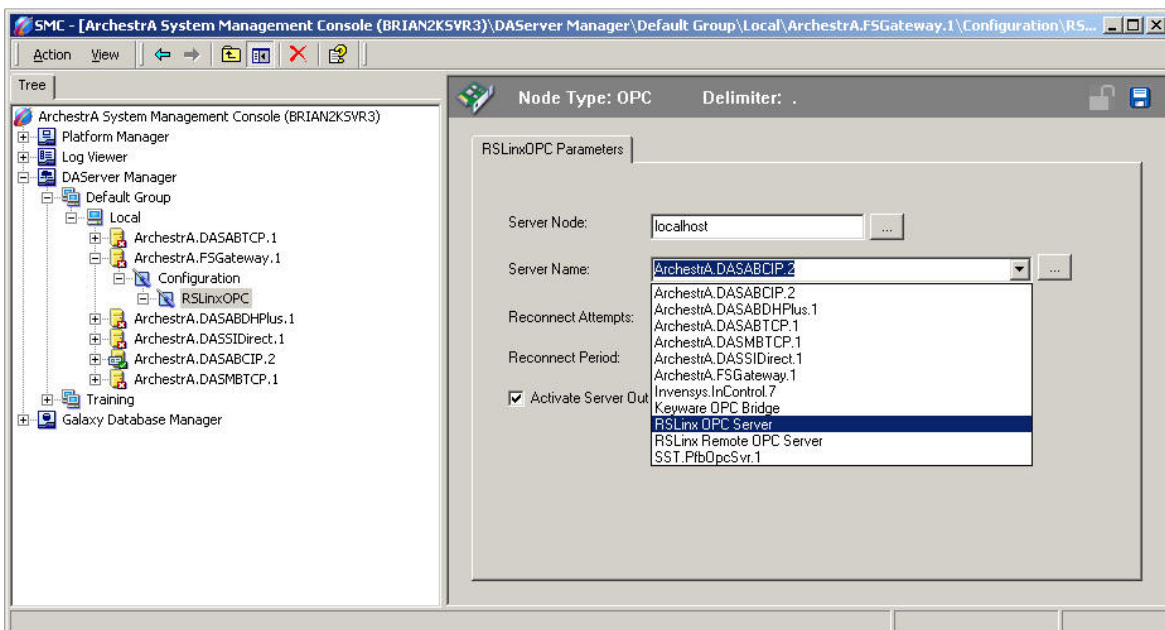


FIGURE 7: SELECTING THE RSLINX OPC SERVER

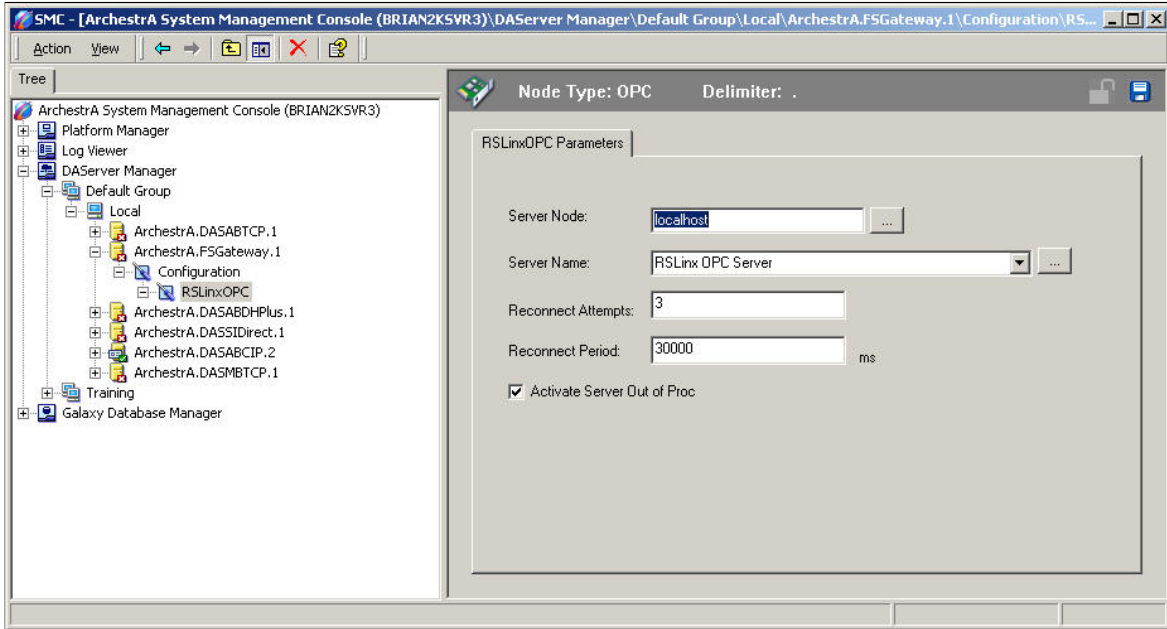


FIGURE 8: OPC OBJECT PARAMETERS

- Right-click **RSLinxOPC** to add a new OPC group object **New_OPC_Group_000**.
After every change, if you haven't saved the configuration, you will be prompted to save it.

- Click **Yes** to save the changes:

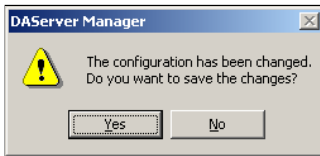


FIGURE 9: SAVE PROMPT

- Rename the default New_OPC_Group_000 to a meaningful name such as **CLX5563** (Figure 10 below):

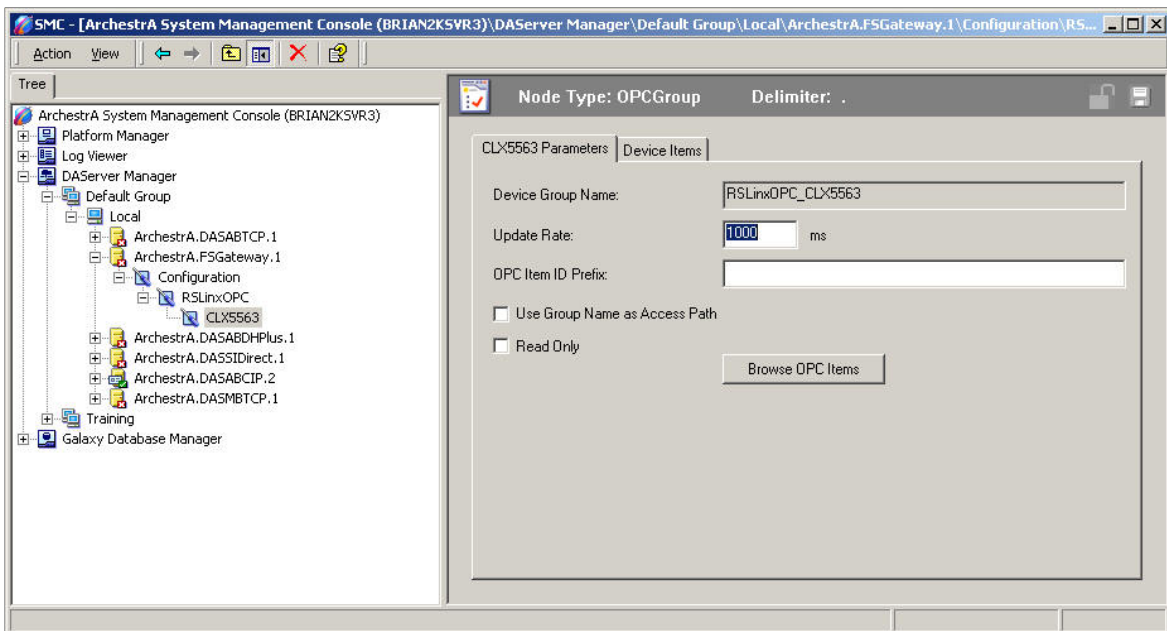


FIGURE 10: OPC GROUP PARAMETERS

- Click the **Browse OPC Items** button .

The **OPC Item Browser** appears.

13. Select and expand the topic (**CLX5563**) defined in RSLinx as shown in the above step:

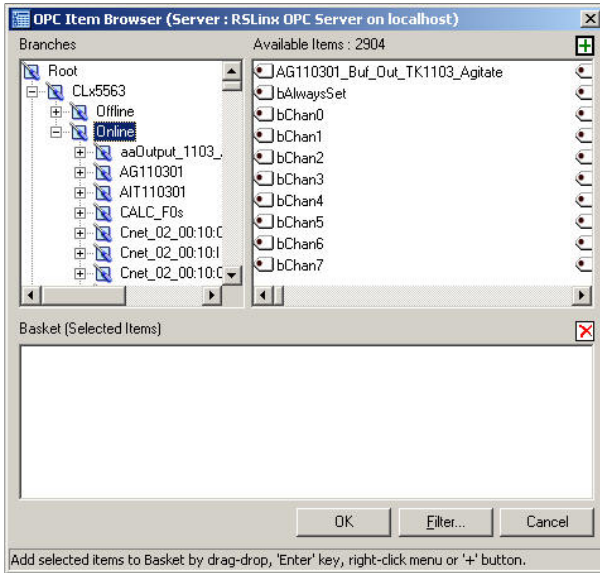


FIGURE 11: OPC ITEM BROWSER - SELECT THE OPC GROUP (RSLINX TOPIC)

14. Expand the **Online** folder and select items in the PLC.

Since the PLC tags MyBool, MyFloat, and MyInt are defined as arrays of 10 elements each, we will add only the first element for each tag.

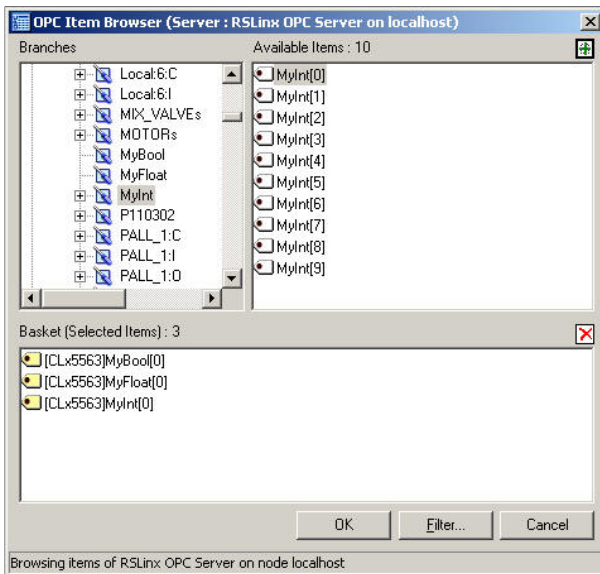


FIGURE 12: ADD PLC TAGS

15. Click **OK** to return to the OPC Group Parameters tab field as shown in Figure 10 above.
16. Select the **Device Item** tab to display all the items we just added:

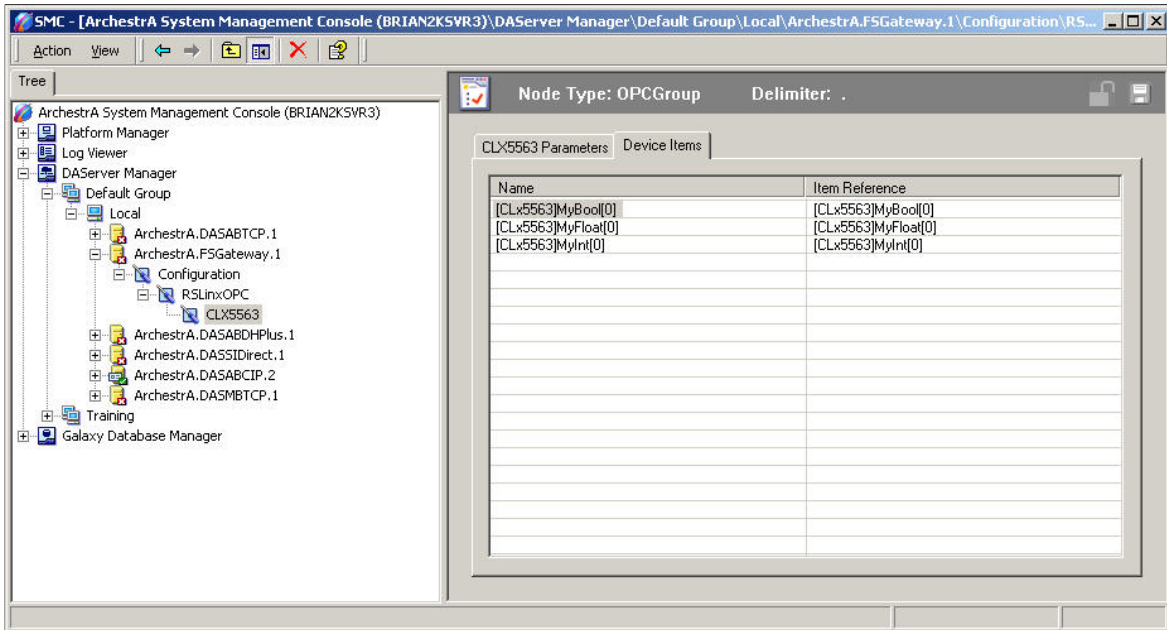


FIGURE 13: DEVICE ITEMS

The Device Items table includes two columns: **Name** and **Item Reference**. This is where aliases are assigned for each item reference.

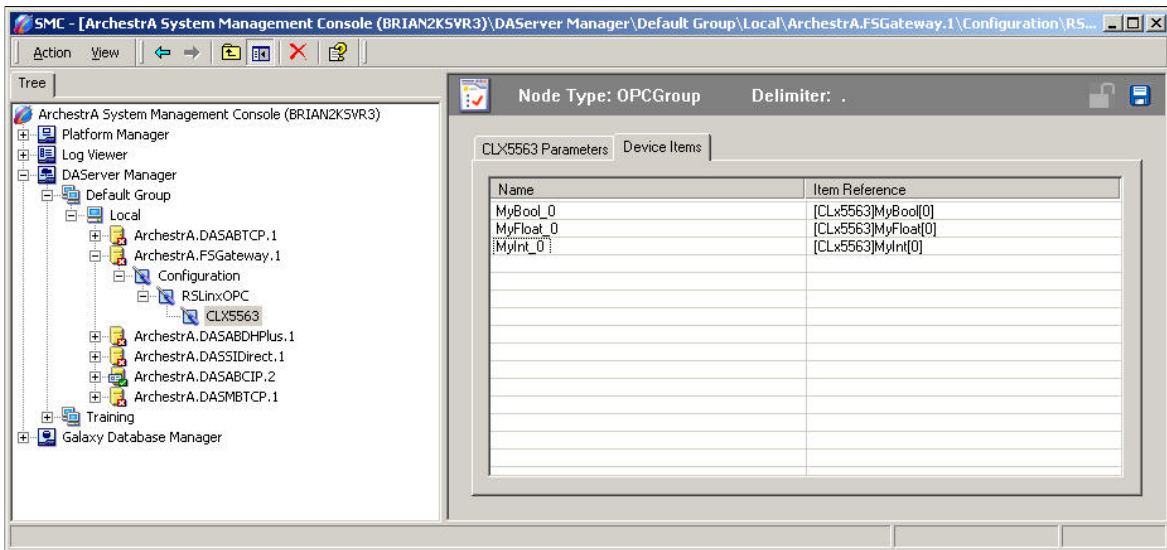


FIGURE 14: DEVICE ITEM ALIASES

The FSGateway is now ready for use. In order to use it, you must activate it.

- Right-click **ArchestrA.FSGateway.1** and click on **Activate Server** on the shortcut menu.

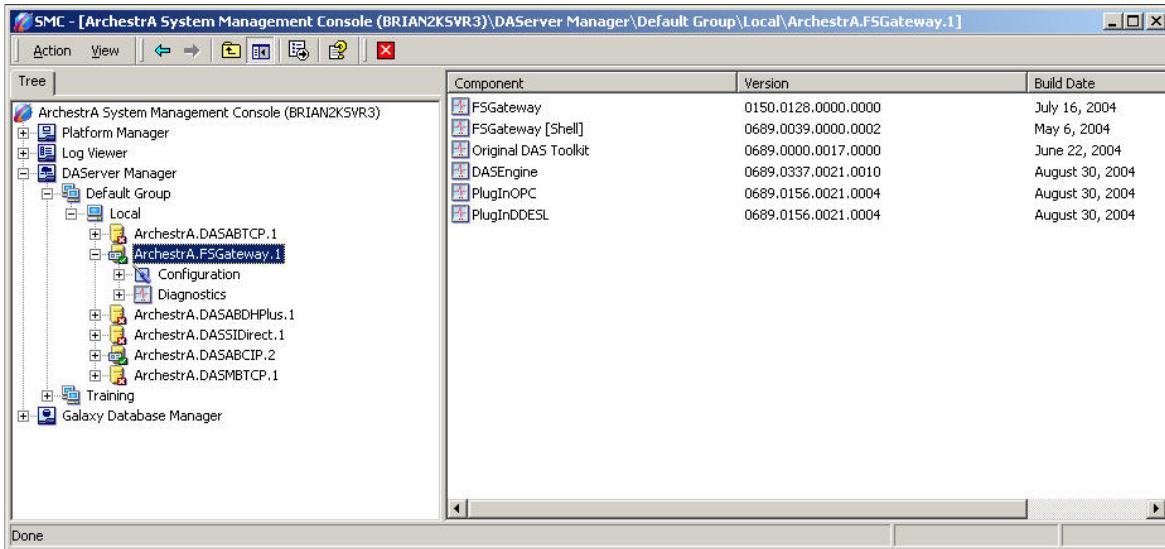


FIGURE 15: ACTIVATE THE FSGATEWAY

Test Communications

You can now test the connections to the PLC. We will use the **WWClient** utility for the test (click [here](#) to download).

To launch the WWClient:

1. Click **Start/Run** from the Windows taskbar.
2. Enter **WWClient** to launch the Wonderware WWClient program.
3. Select **Connections/Create** from the main menu bar.

The **Create Connection** dialog box appears.

4. Enter appropriate information as shown in the following figure:

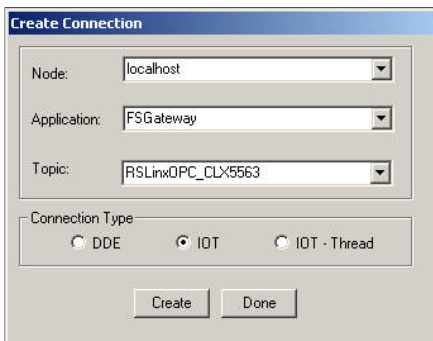


FIGURE 16: WWCLIENT - CREATE CONNECTION DIALOG BOX

5. Select **Item** on the main menu.
6. Enter a known good PLC tag in the Item entry box, and click **AdviseEX**.

In this example, alias items **MyBool_0**, **MyFloat_0**, and **MyInt_0** are entered:

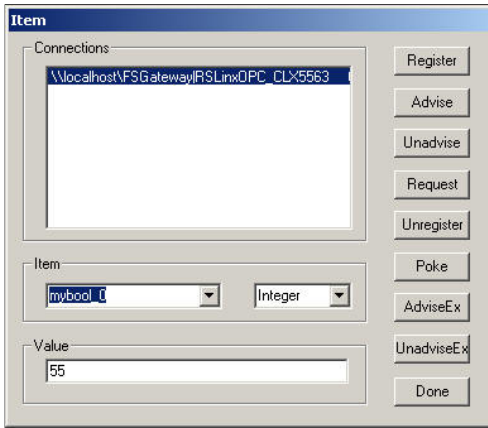


FIGURE 17: ADVISING TAGS

The following figure (Figure 18 below) shows an example of WWClient successfully advising items **MyBool_0**, **MyFloat_0**, and **MyInt_0**:

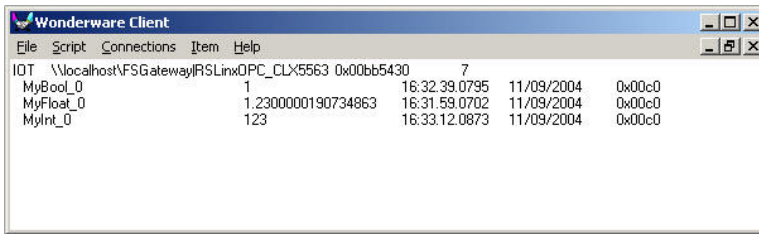


FIGURE 18: SUCCESSFUL ADVISE

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