[Tech Note 686](#)
Using FSGateway and SuiteLink® to Replace NETDDE

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Introduction

This Tech Note outlines using FSGateway to communicate with off-node (remote) DDE data sources using SuiteLink instead of NETDDE.

Application Versions

- Industrial Application Server 2.1 and later
- Wonderware Application Server 3.1
- FSGateway 1.5 SP1
- KEPServer 4.5

Why Stop Using NETDDE

NETDDE is not supported in new Microsoft Operating Systems. Microsoft is beginning to remove NETDDE functionality from operating systems due to security vulnerability concerns. NetDDE was still included with Windows Server 2003 and Windows XP Service Pack 2, although it was disabled by default. It has been removed entirely beginning in Windows Vista and 2008 Server. Local DDE is still supported.

For more information, **see this Technet article**.

Communicating with Legacy DDE IO Servers and Remote Data Sources

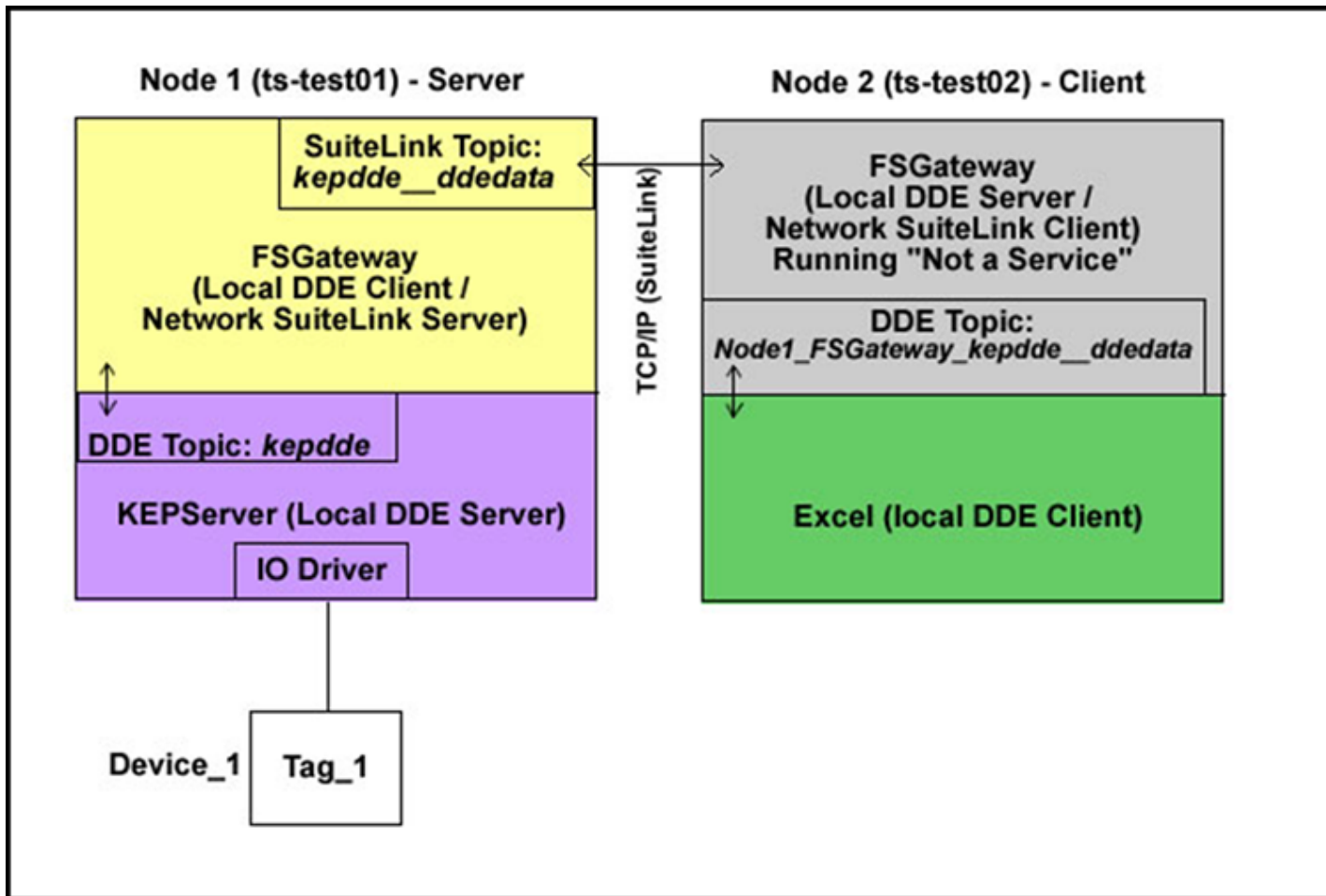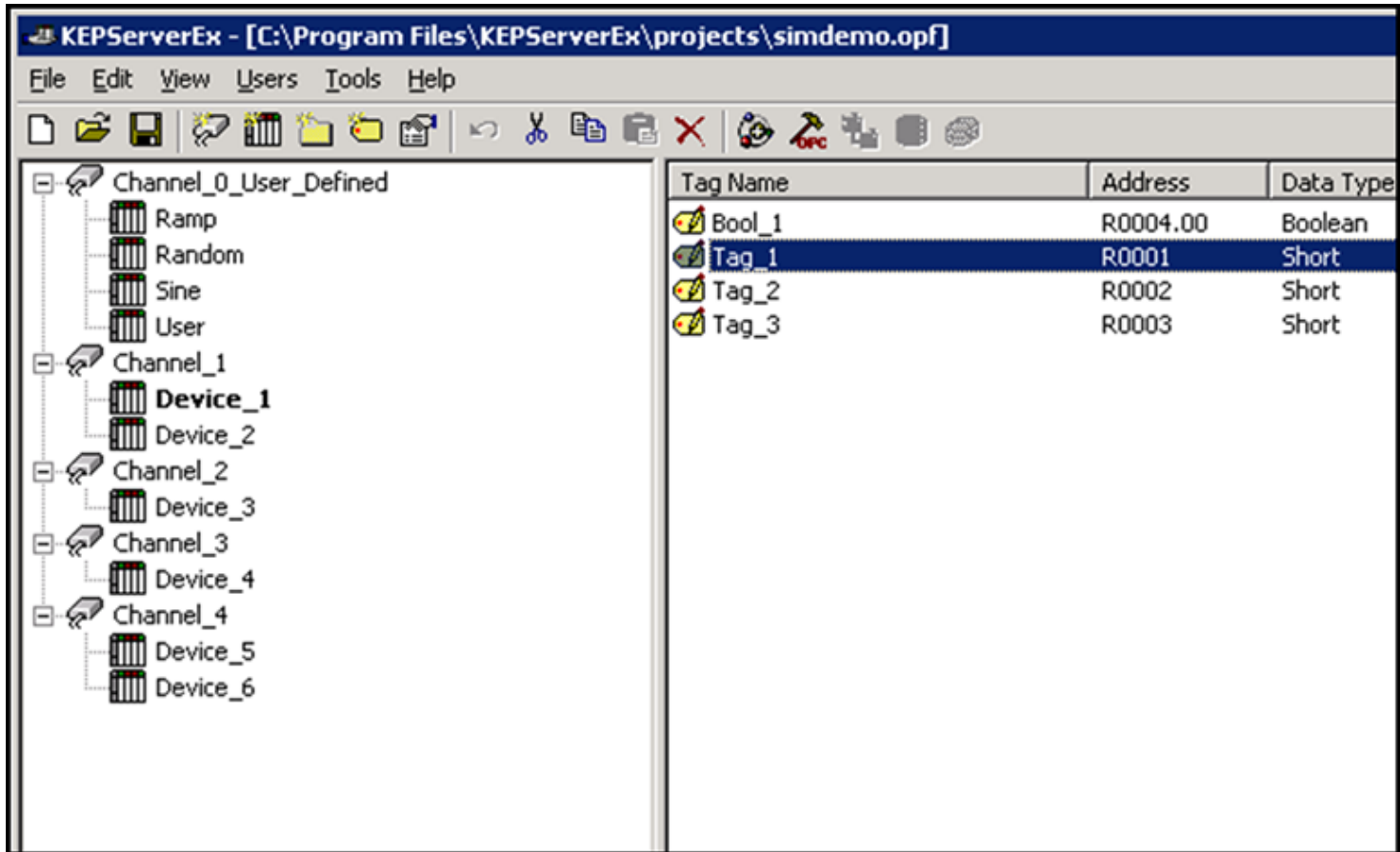You can use FSGateway as a DDE-to-SuiteLink-to-DDE protocol converter (Figure 1 below).

FIGURE 1: CONFIGURATION OVERVIEW

Node 1 Configuration

Use KEPServer as DDE Server and FSGateway as a Local DDE Client.

KEPServer is the local DDE data source with item **Channel_1.Device_1.Tag_1** and FSGateway as the client (Figures 2 & 3 below).
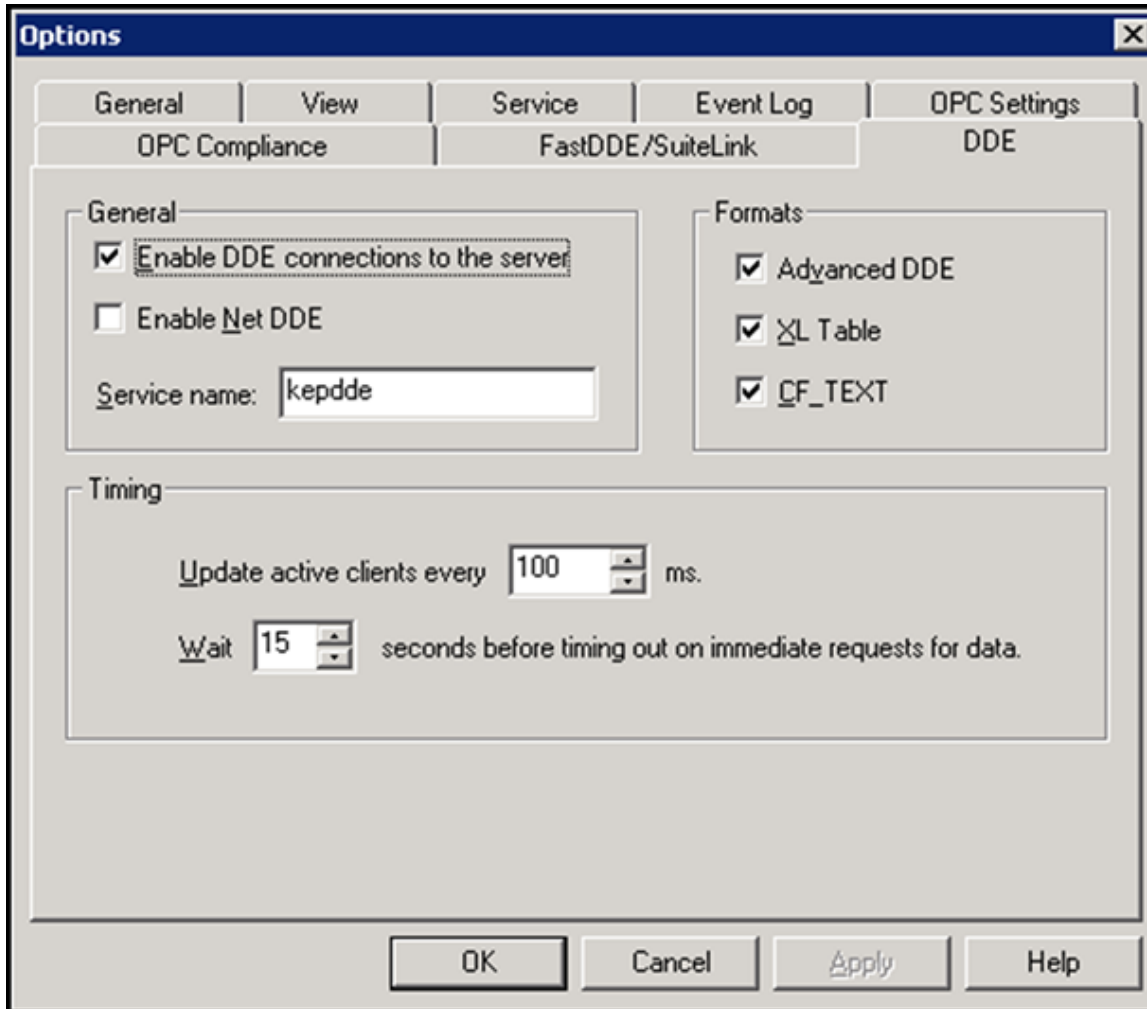
FIGURE 2: KEPSERVER ITEM

FIGURE 3: KEPSERVER DDE CONFIGURATION

Install FSGateway on Node 1, launch the System Management Console (SMC) and configure FSGateway as follows:

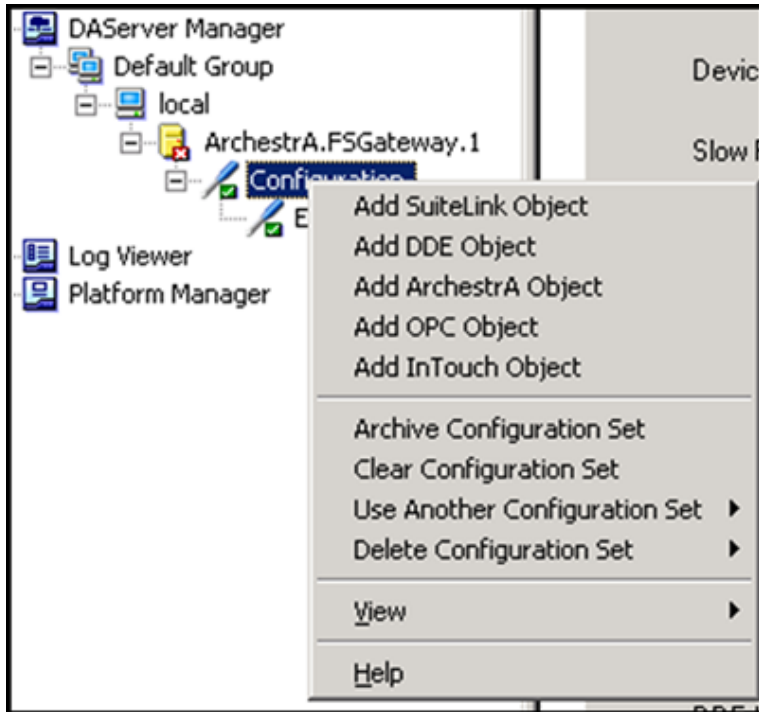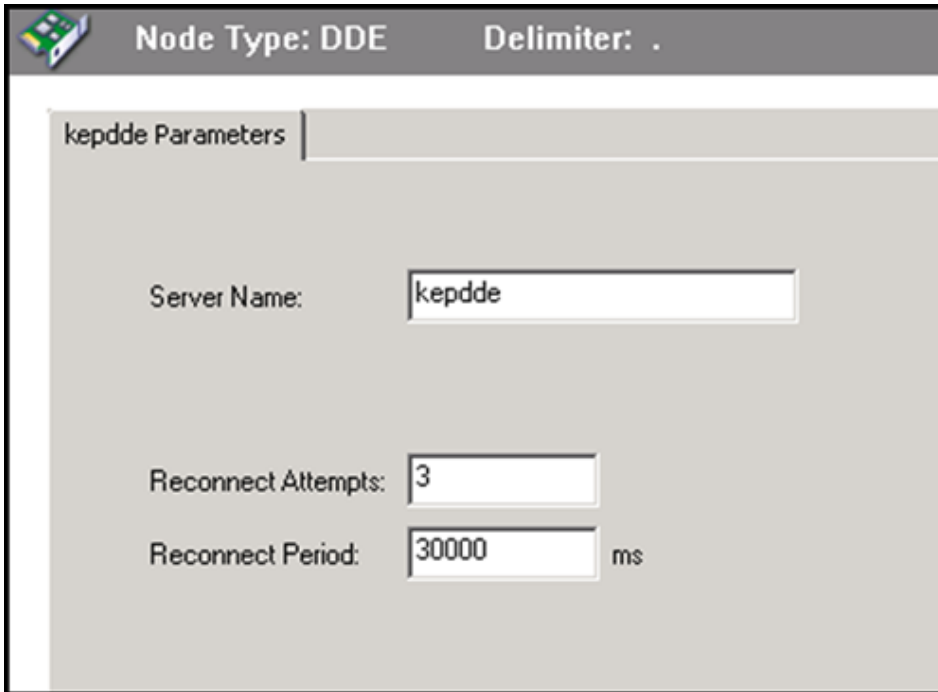1. Add a DDE Object (Figure 4 below).

FIGURE 4: ADD FSGATEWAY DDE OBJECT

2. Type the DDE Server Name (usually the executable as it would appear in Task Manager). In this case the KEPServer service name is **kepdde** (Figure 5 below).

FIGURE 5: DDE SERVER NAME

3. Add a Topic Object (Figure 6 below).

In this case we will use the KEPServer default DDE Access Name **_DDEData**.

On this screen, the **Topic Name** is the topic name on the data source. The **Device Group Name** is the topic name that clients of FSGateway will reference to read data. If you need a different Topic Name that what you named the configuration object in the hierarchy, you can check the **Change Topic Name** option.
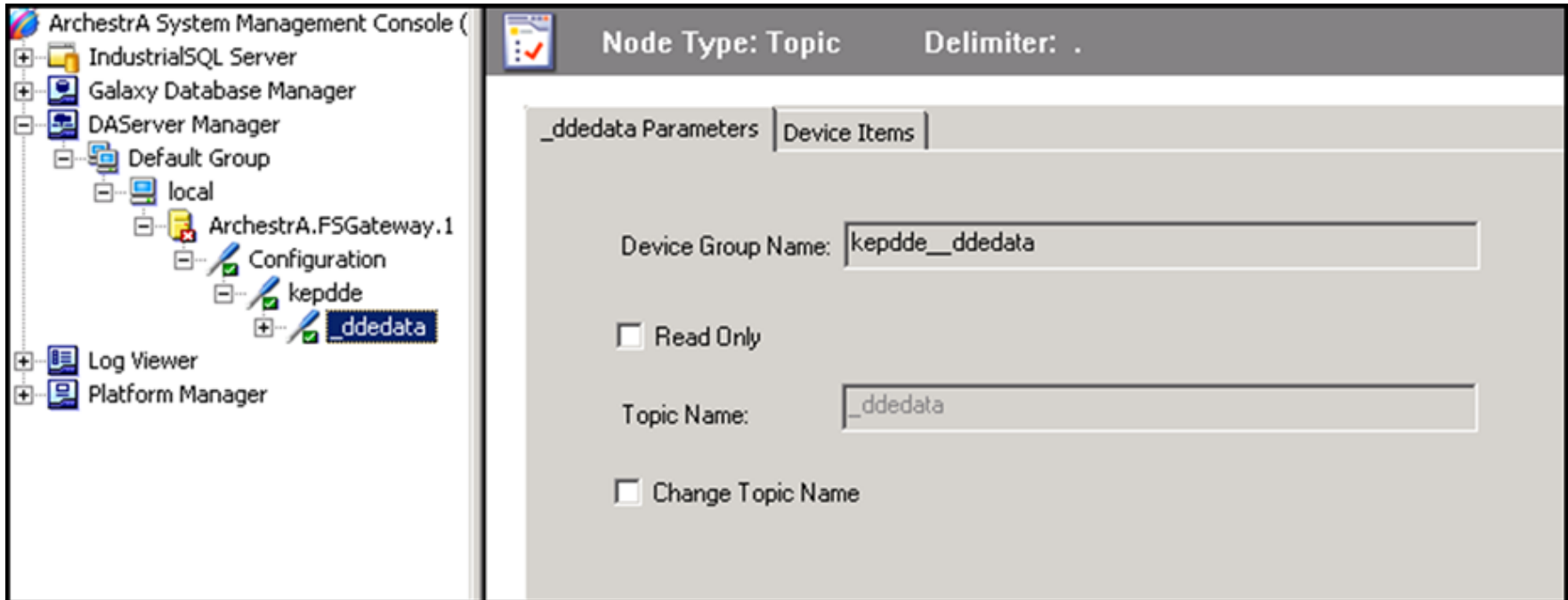
FIGURE 6: ADD TOPIC OBJECT

4. Save all changes and start FSGateway.

Node 2 Configuration

Excel reads from the local FSGateway (via DDE), which then reads from Node 1 FSGateway using SuiteLink

FSGateway is the local DDE source with Excel as the client. FSGateway on Node 2 is a SuiteLink client of FSGateway on Node 1.

Install FSGateway on Node 2, launch the System Management Console (SMC), and configure FSGateway as follows:

1. Right-click **FSGateway** and configure it as **Not A Service**. (Figure 7 below).

   Note: This is a very important step. You will not be able to establish communications to FSGateway via local DDE if it is set to run as a service.
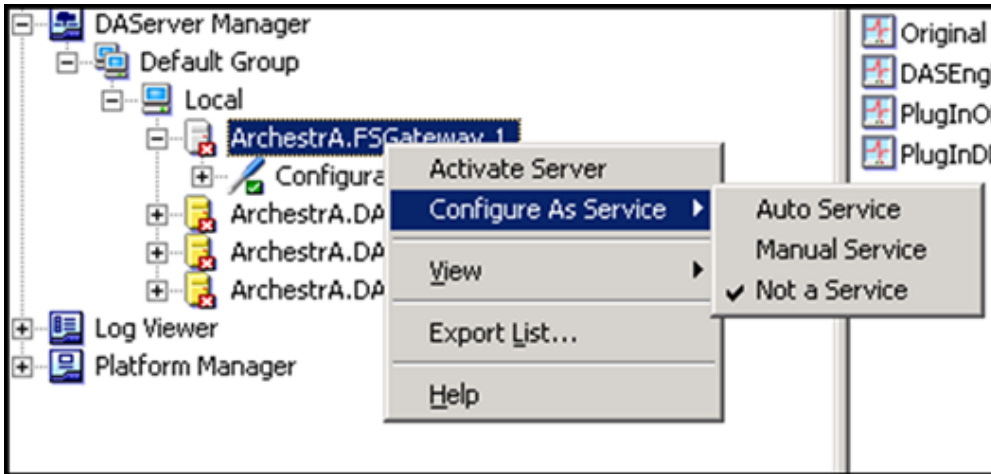
FIGURE 7: SET FSGATEWAY TO NOT A SERVICE

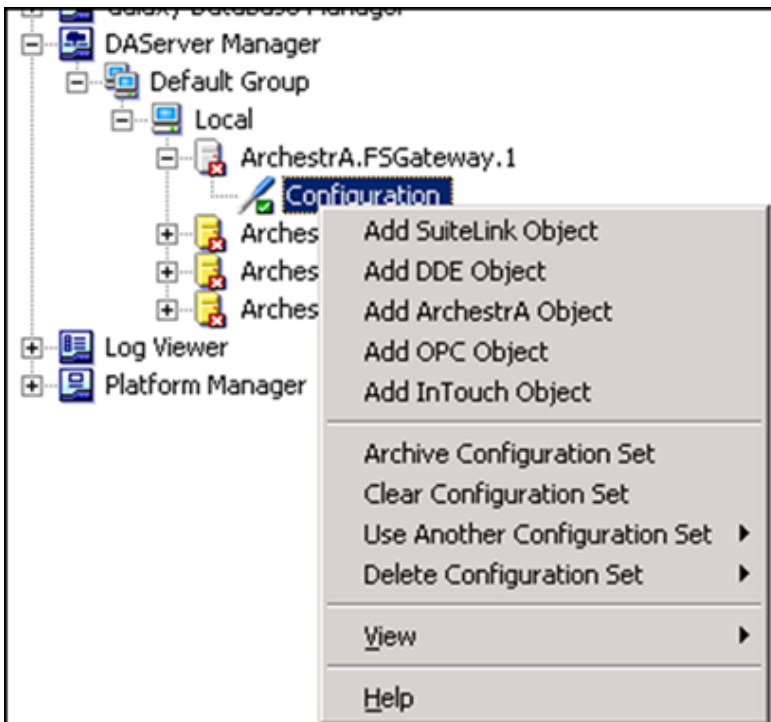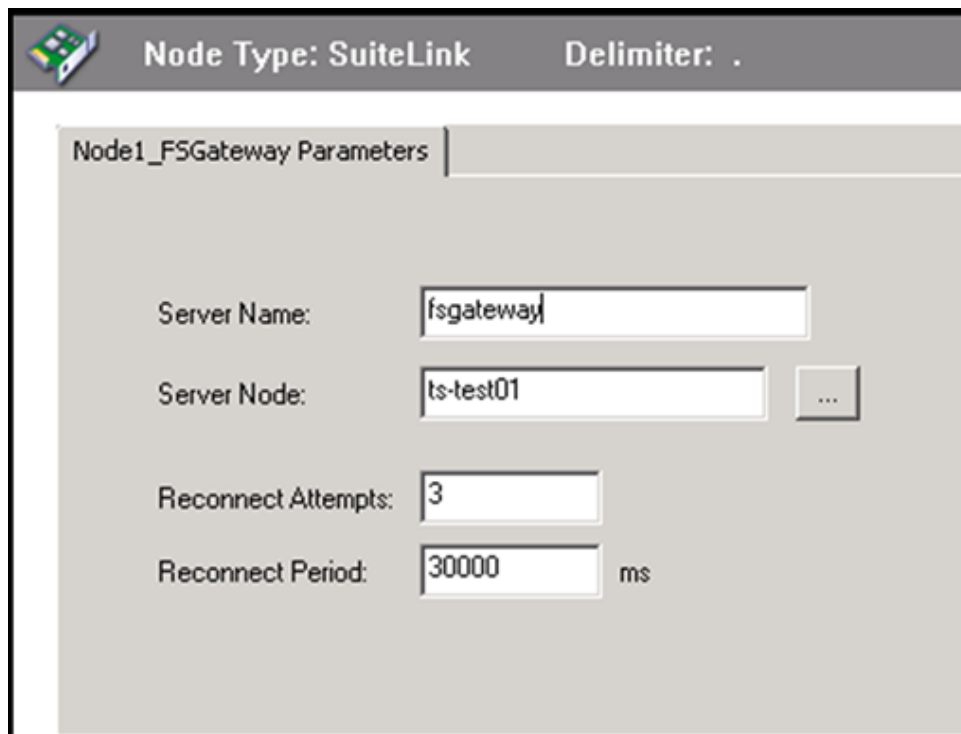2. Add a SuiteLink Object (Figure 8 below).

FIGURE 8: ADD FSGATEWAY SUITELINK OBJECT

3. Type the **SuiteLink** Server Name. In this example, FSGateway refers to the FSGateway *application* running on Node 1, the SuiteLink Server Node. **ts-test01** is the network name of Node 1 (Figure 9 below).

FIGURE 9: SUITELINK SERVER NAME AND SERVER NODE

4. Add a Topic Object (Figure 10 below).

This needs to match the Device Group Name for the FSGateway DDE object on Node 1. In this case the topic is **kepdde__ddedata** (note that there is a double underscore in this example).

On this screen, the Topic Name is the topic name on the SuiteLink data source. The Device Group Name is the topic name that *local* clients of FSGateway will reference to read data. If you need a different Topic Name than what you named the configuration object in the hierarchy, you can check the **Change Topic Name** option.
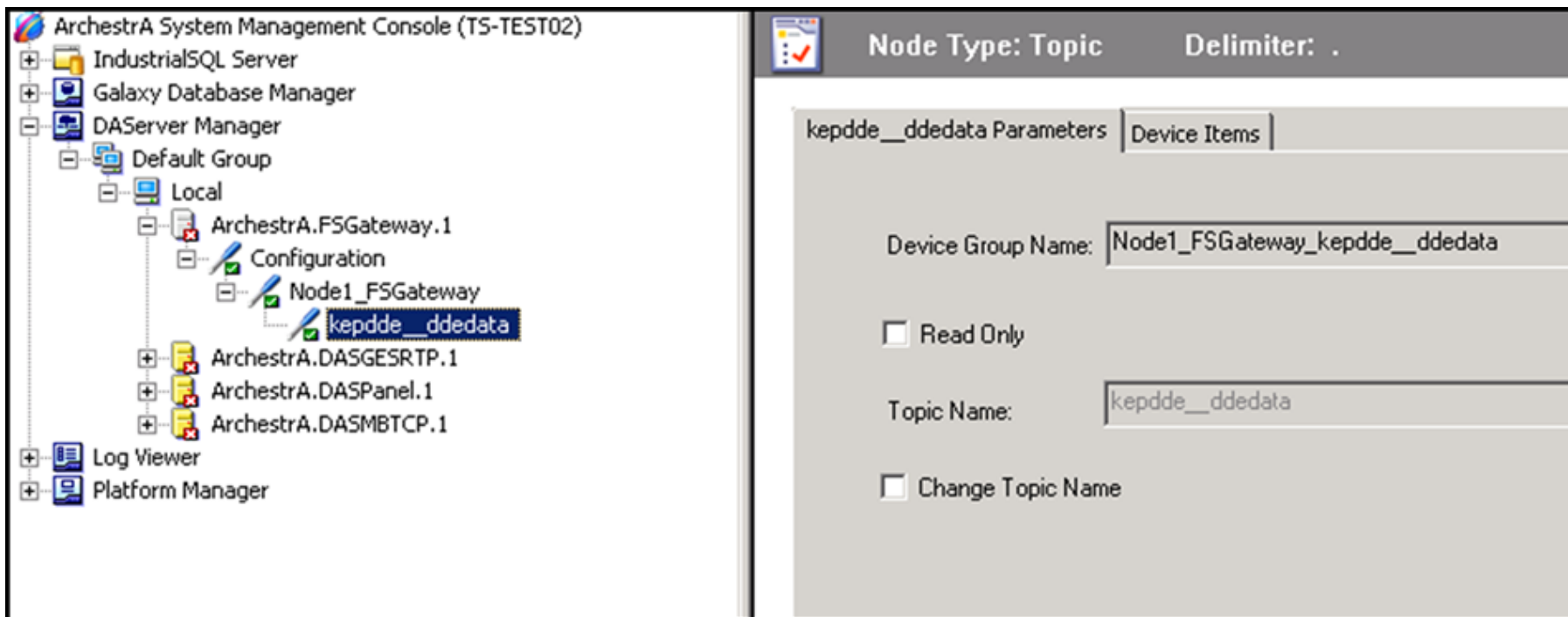
FIGURE 10: ADD TOPIC OBJECT

5. Save all changes.

   DO NOT activate FSGateway from the SMC.

   Start it by double-clicking the exe file at **C:\Program Files\Wonderware\DAServer\FSGateway\Bin\FSGateway.exe**.

   > **Note:** This is a very important step. You will not be able to establish communications to FSGateway via local DDE if it is set to run as a service, *and* is activated from the SMC.

6. Launch Microsoft Excel.
7. Enter the DDE formula in a cell (**=application|topic!item**) and press Enter (Figure 11 below).

   For this example:

   - **Application**: FSGateway
   - **Topic**: Node1_FSGateway_kepdde__ddedata (This is the local FSGateway Device Group Name)
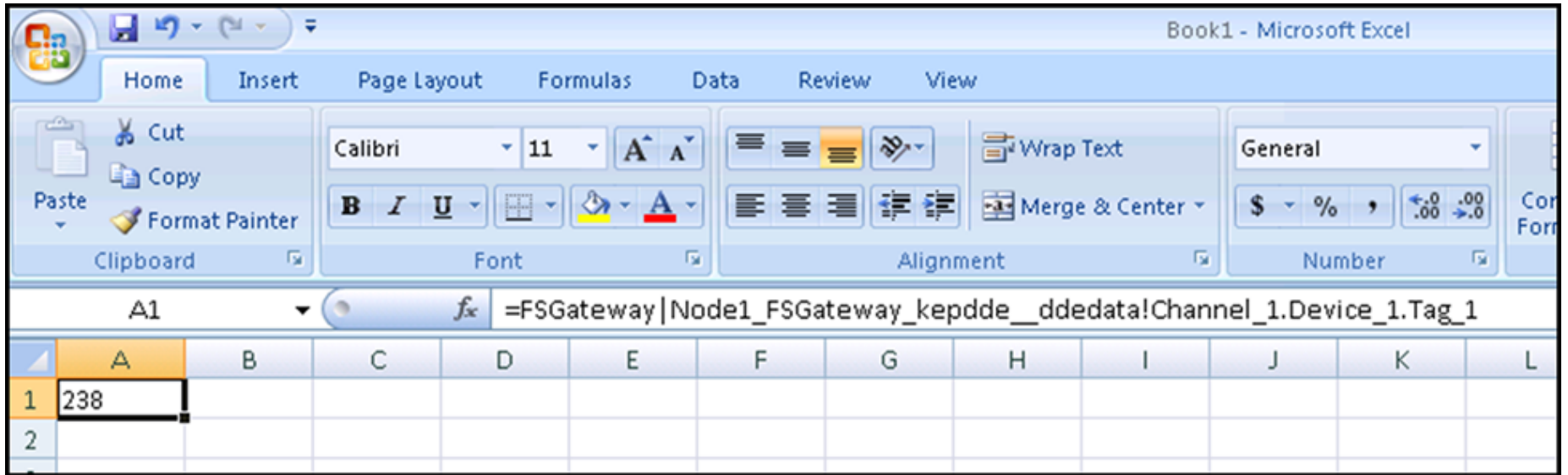   - **Item**: Channel_1.Device_1.Tag_1

FIGURE 11: DATA DISPLAYED IN EXCEL

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