[Tech Note 853](#)
# Using FSG DDE Client With Excel DDE Server in Windows 7 and Windows 2008

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## Introduction

FactorySuite Gateway's DDE Client is often used to connect Excel with Wonderware client applications such as Industrial Application Server and InTouch.

This *Tech Note* demonstrates connecting the FactorySuite Gateway (FSG) DDE client to Microsoft Excel spreadsheet as a DDE server, under newer MS Operating Systems such as Windows7 or Windows2008.

### Application Versions

- FactorySuite Gateway 2.0

## Before You Begin

This *Tech Note* uses **Windows Task Manager** to monitor the session IDs that are assigned to each logged in user. The **Session ID** column does not appear in Task Manager by default.

You can add the Session ID column using the following steps:

1. Start Windows Task Manager (right-click the Windows task bar and click **Start Task Manager**).

2. Click the **Processes** tab.

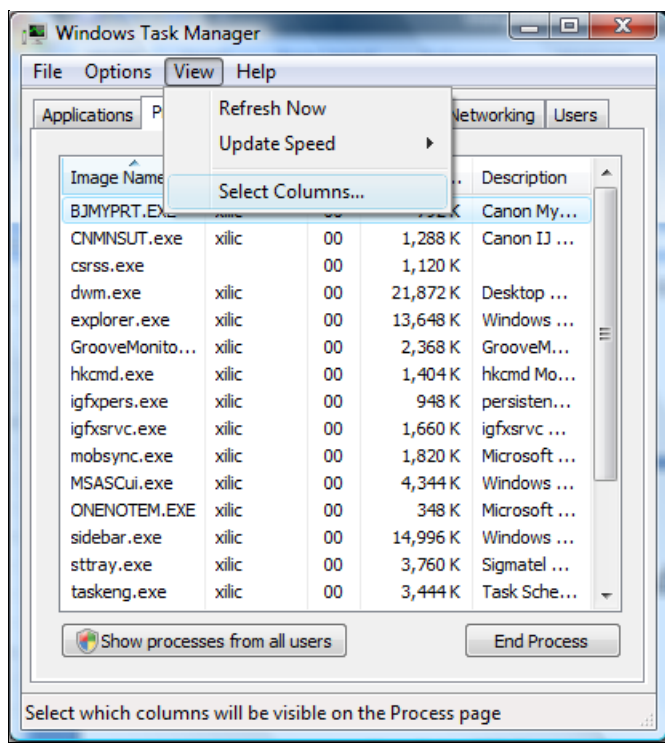3. Click **View/Select Columns** (Figure 1 below).

FIGURE 1: VIEW/SELECT COLUMNS

4. The **Select Process Page Column** window appears. Check the **Session ID** option to add the Session ID column to the Task Manager display.
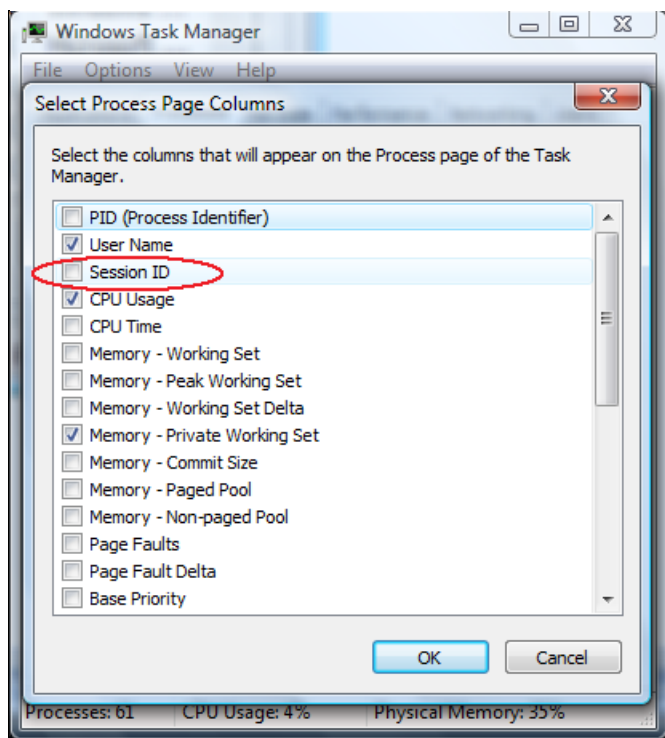
**FIGURE 2: ADD SESSION ID COLUMN TO THE PROCESS PAGE DISPLAY**

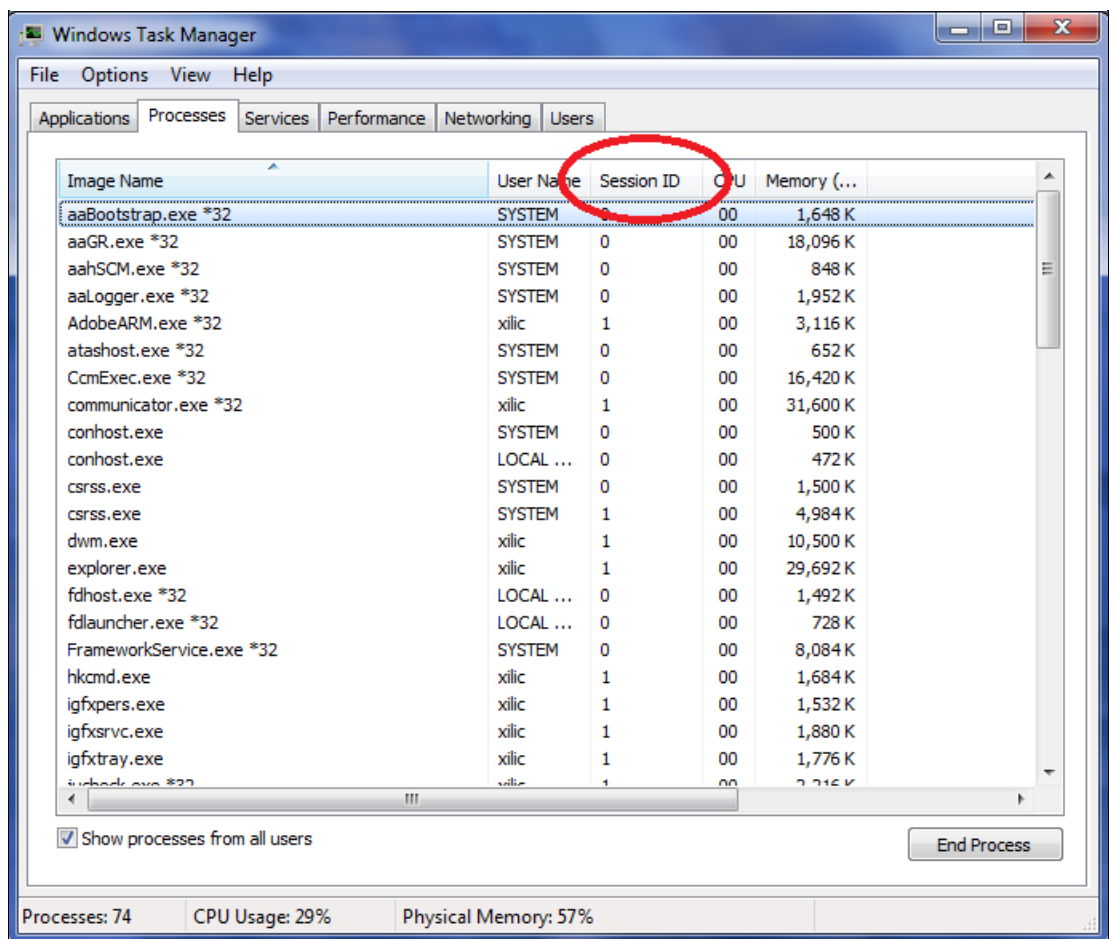The **Session ID** column now appears in Task Manager (Figure 3 below).

**FIGURE 3: SESSION ID COLUMN**

## Connecting FSGateway to Excel in Windows 2003 or Earlier

In older Windows Operating System such as Windows 2003 Server or prior, getting data from Excel DDE server is fairly easy. You can run both Excel and a DDE client (such as FSGateway DDE Client) as services or as applications in the Console mode, and you can establish the DDE Connection between Excel and FSGateway using DDE protocol.

Figures 4-6 (below) show the connection between FSG and Excel in Windows Task Manager. WWClient is our client application for this demo. Running FSGateway as a service and Excel as an application in Windows 2003 console, both the logged-in user and the System account are running in session **ID 0** – the Console session (Figure 4 below).
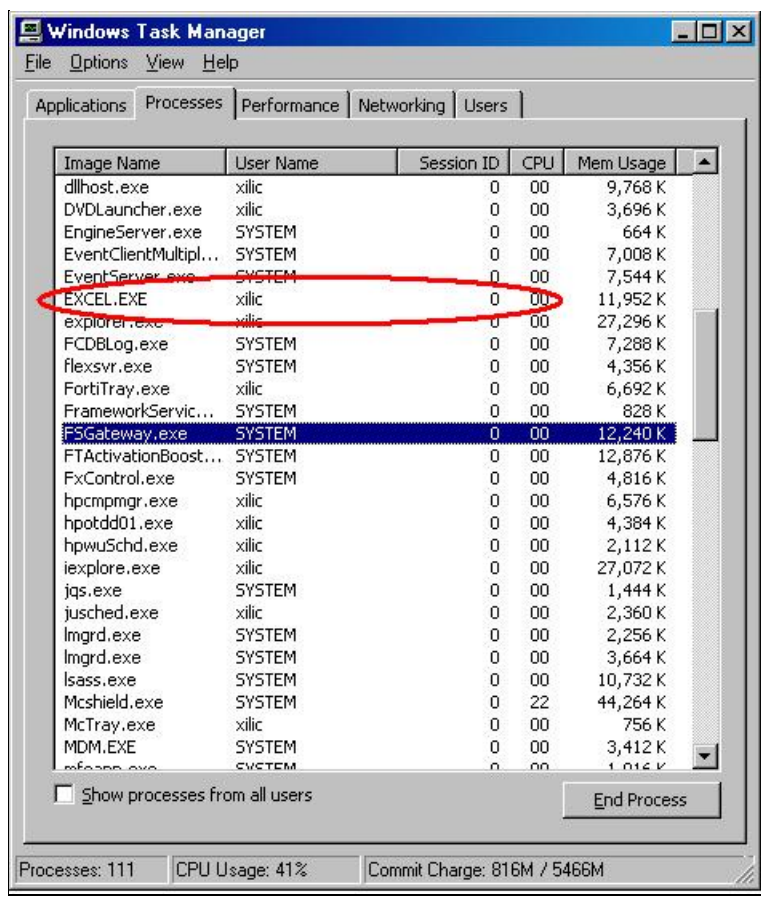
**FIGURE 4: SESSION ID IN WINDOWS TASK MANAGER**

- Configure FSGateway with the DDE and Group objects. Figure 5 (below) shows the FSGateway Object running as a Service.
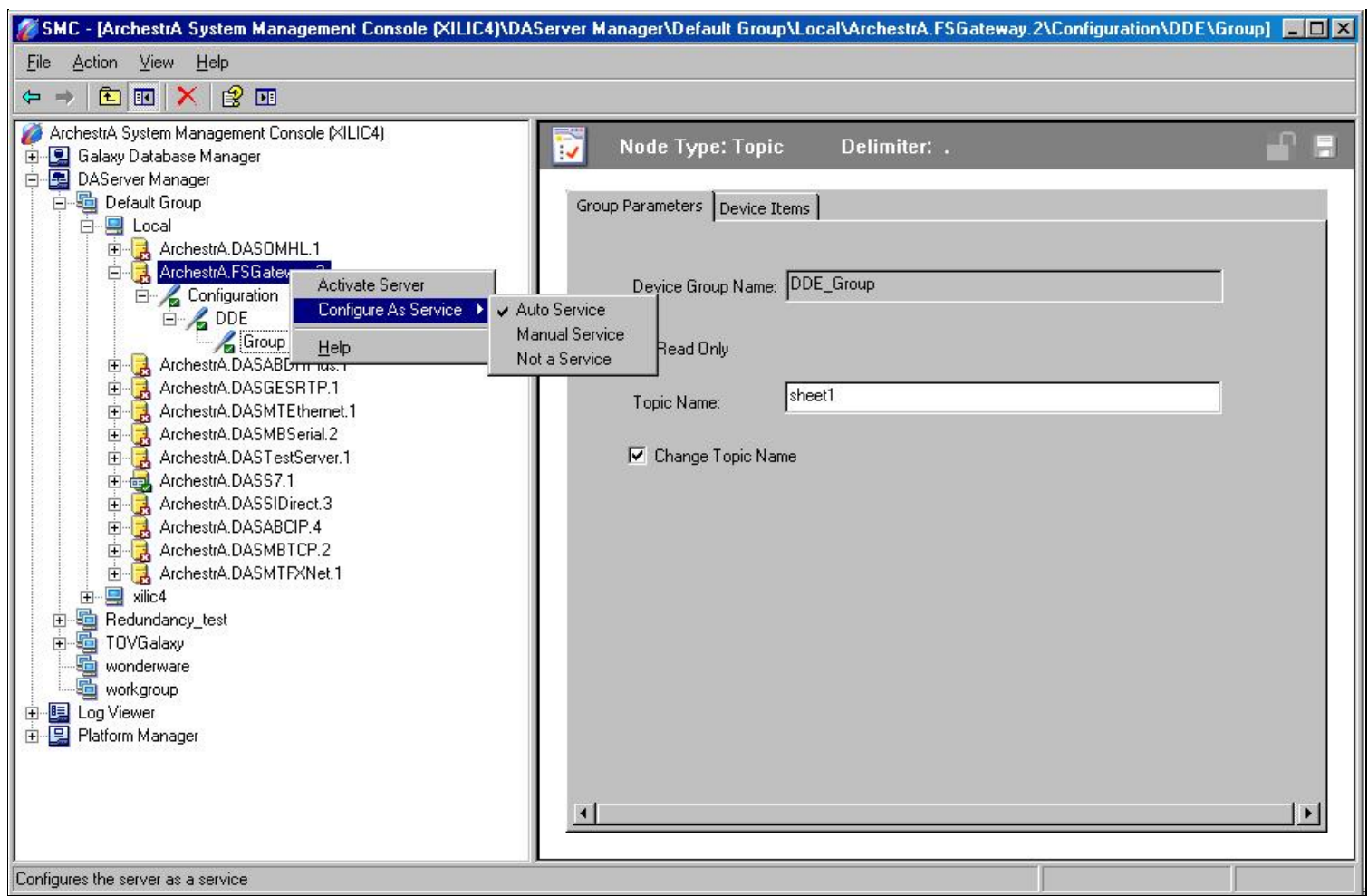
**FIGURE 5: FSGATEWAY RUNNING AS A SERVICE**

Figure 6 (below) shows the DDE Object configuration parameters pointing to Excel as the DDE Server.
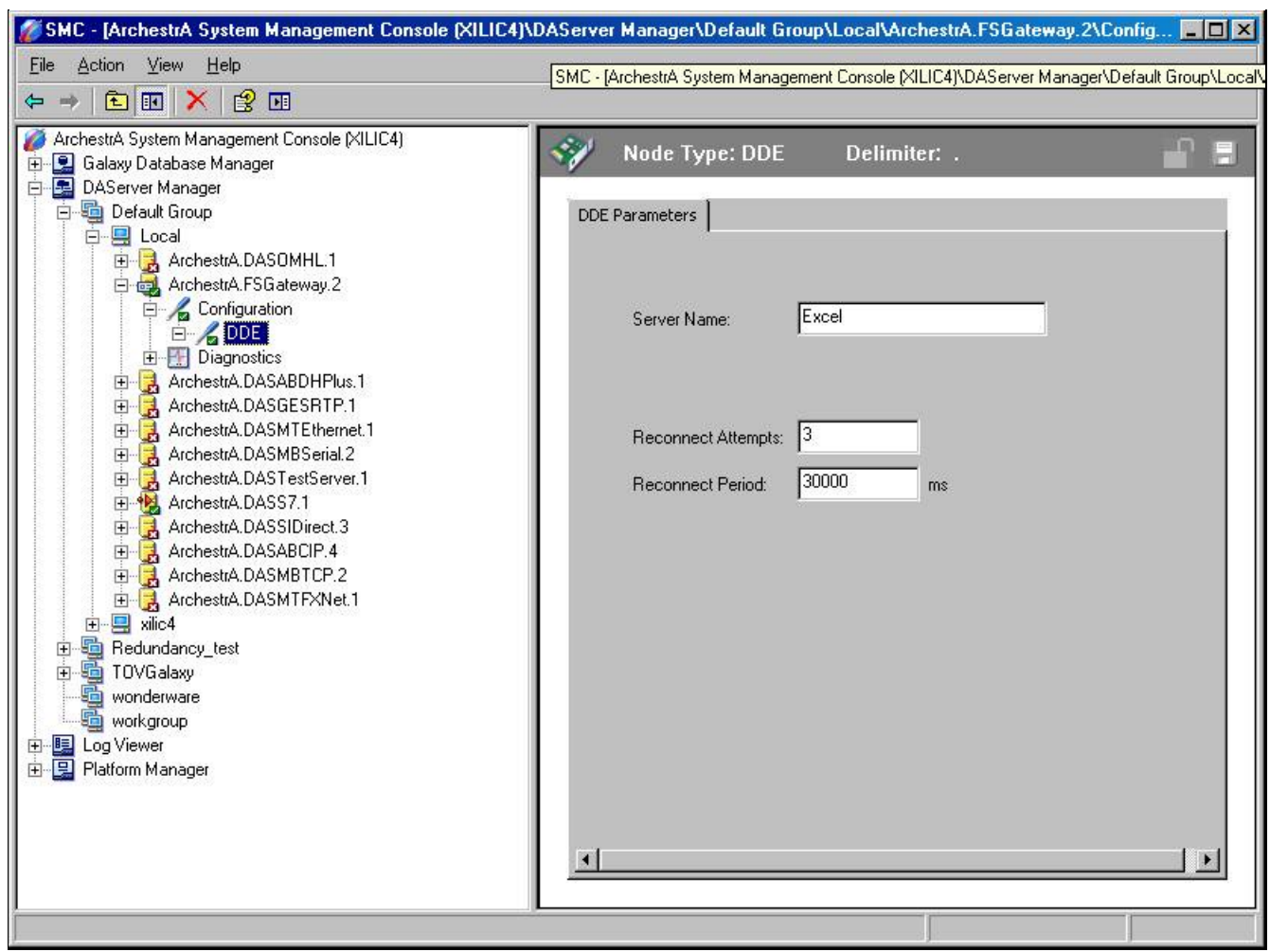
**FIGURE 6: EXCEL AND FSGATEWAY IN SAME SESSION**
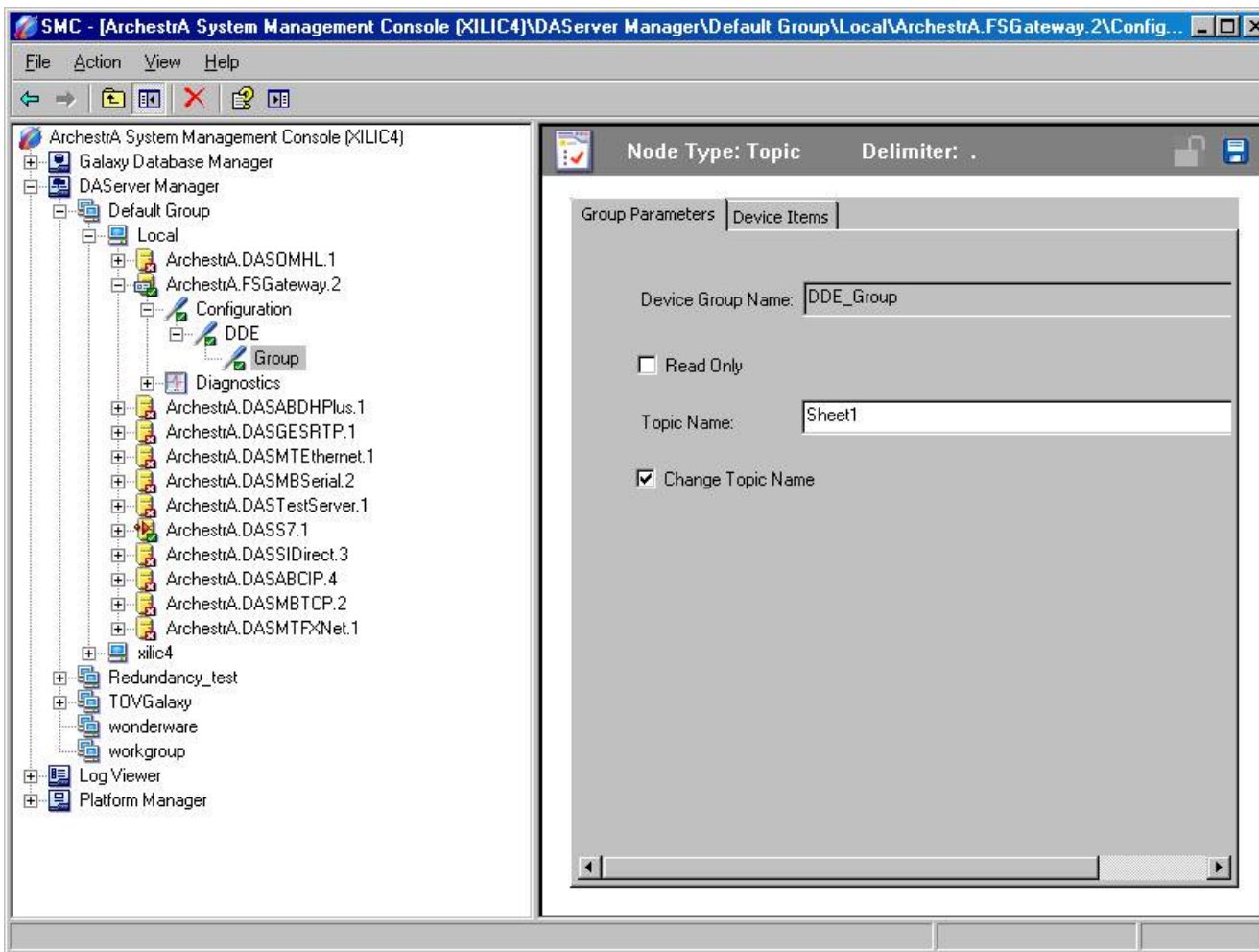
Figure 7 (below) shows the Group Object configuration.

**FIGURE 7: GROUP OBJECT CONFIGURATION**

Figure 8 (below) shows the WWClient getting Excel updates via the FSGateway DDE Client Configuration.
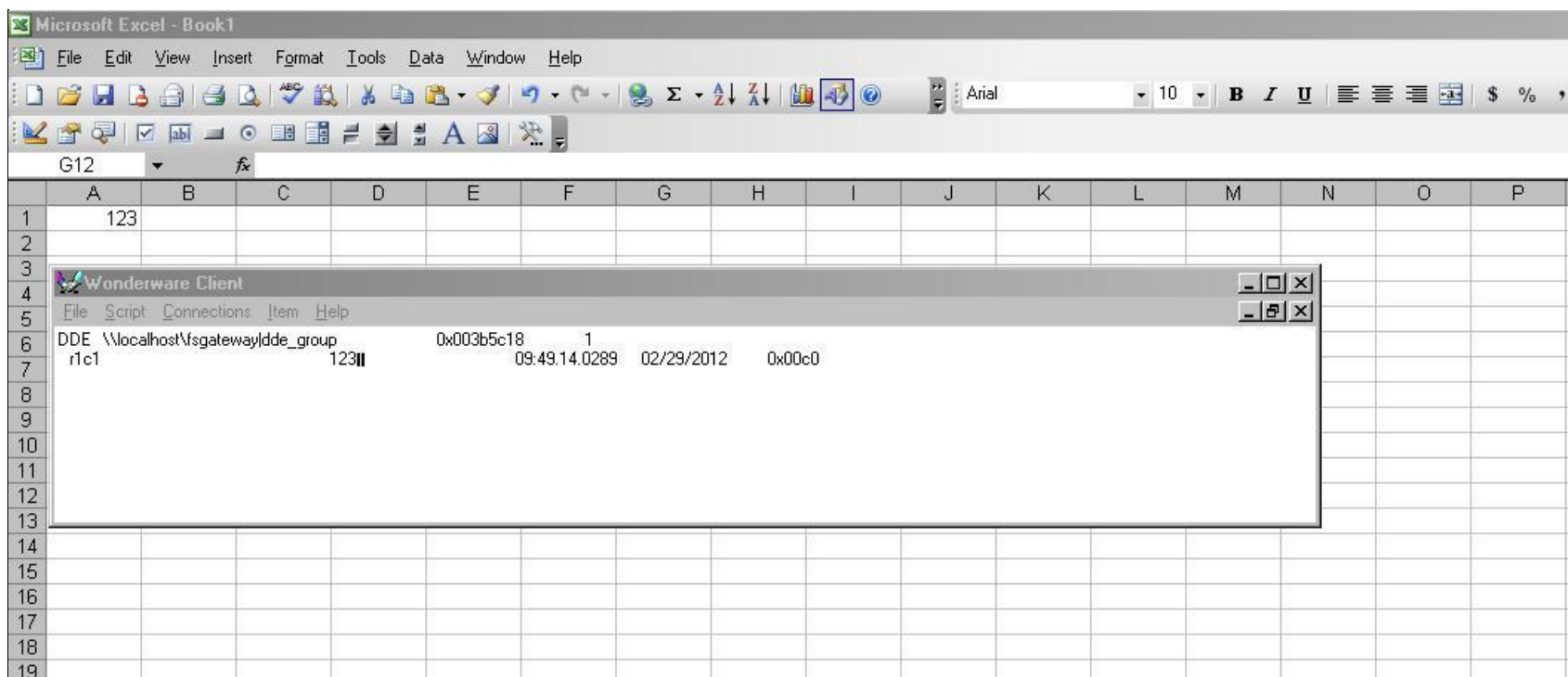
**FIGURE 8: DDE CONNECTION TO EXCEL SPREADSHEET**

## Connecting FSGateway to Excel DB in Windows 7 and Windows 2008

In the newer Windows Operating Systems, the Console Mode is a thing of the past. The newer OS always runs all Services in Session **0**, and each logged-in user is assigned a *different* Session ID.

What this means is that if you are running any program as a service, it is automatically assigned the Session ID of **0**. MS Excel cannot run as service. It runs as an application under the logged in user. Once Excel starts you will see it runs under a different Session ID.

Figure 9 (below) shows Excel and FSGateway running under the same logged in user, but in different Session IDs. Excel runs as an application (not as a service), and FSGateway is running as Service with the Session ID of **0**.

**FIGURE 9: APPLICATION AND SERVICE UNDER THE SAME LOGGED-IN USER AND DIFFERENT SESSION IDS**

Figure 10 (below) shows the FSGateway DDE Client Object configurations to the Excel as a DDE Server on the Windows7 Operating System.
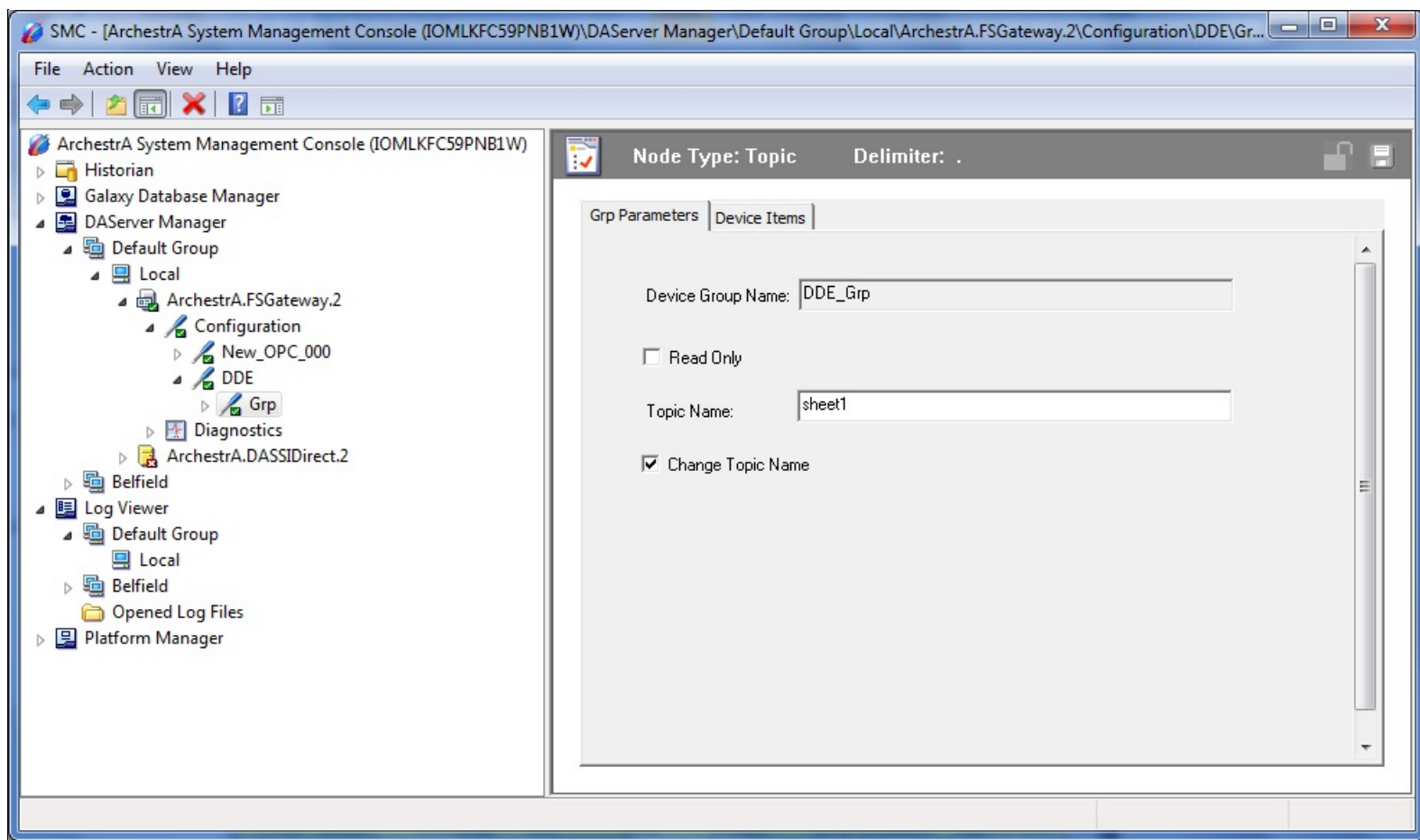
**FIGURE 10: OBJECT CONFIGURATION FOR DDE**

In newer operating systems, running Excel and FSGateway in two different sessions is equivalent to running in a networked environment. This requires NetDDE. However, NetDDE is obsolete, and no longer available. The WWCleint application cannot make a connection between the FSGateway DDE client and Excel in this demo because NetDDE is not present.
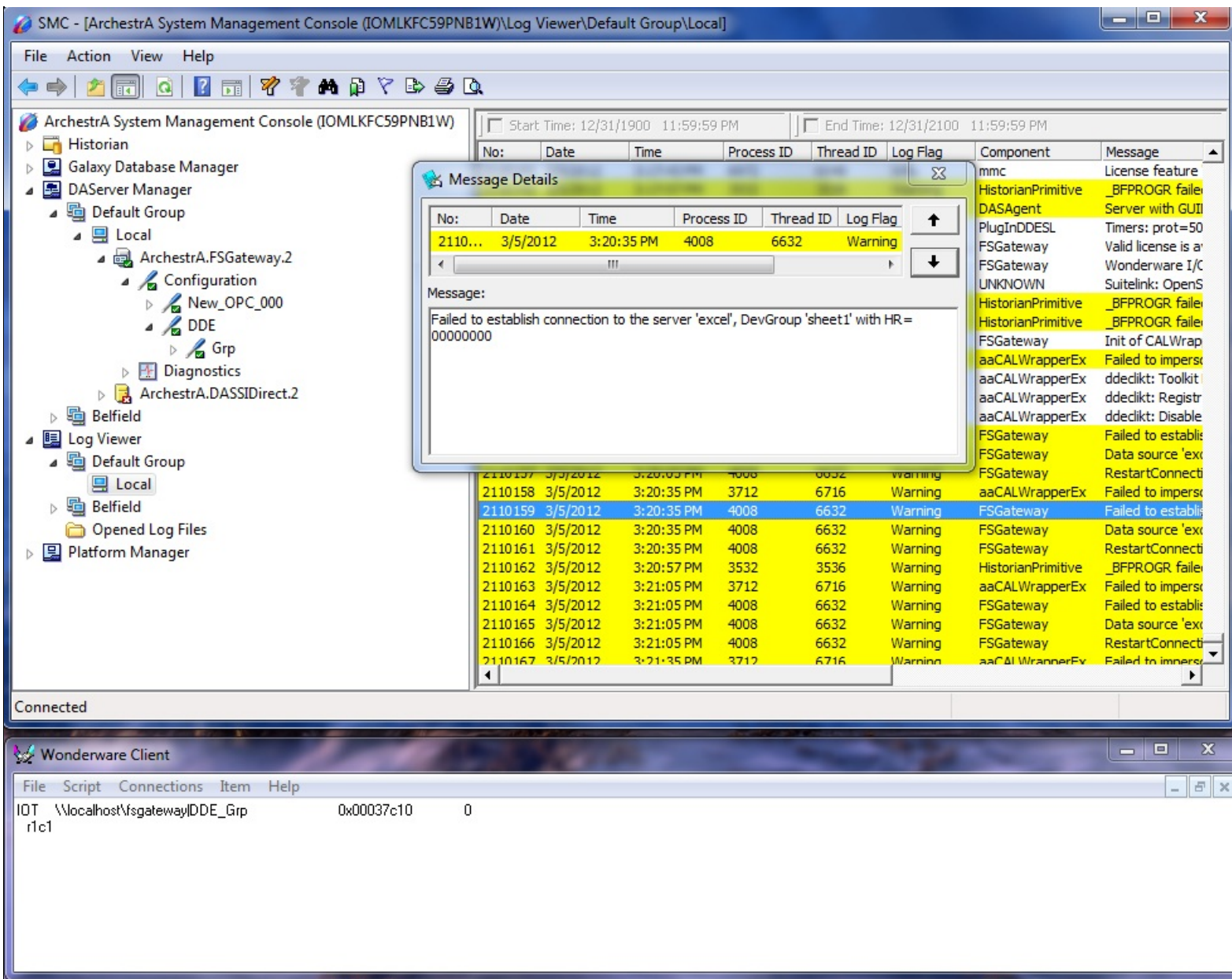
**FIGURE 11: NO COMMUNICATIONS AVAILABLE ACROSS SESSIONS**

## Resolution

To resolve this problem, start FSGateway from the local installation folder. This starts FSGateway as an Application.
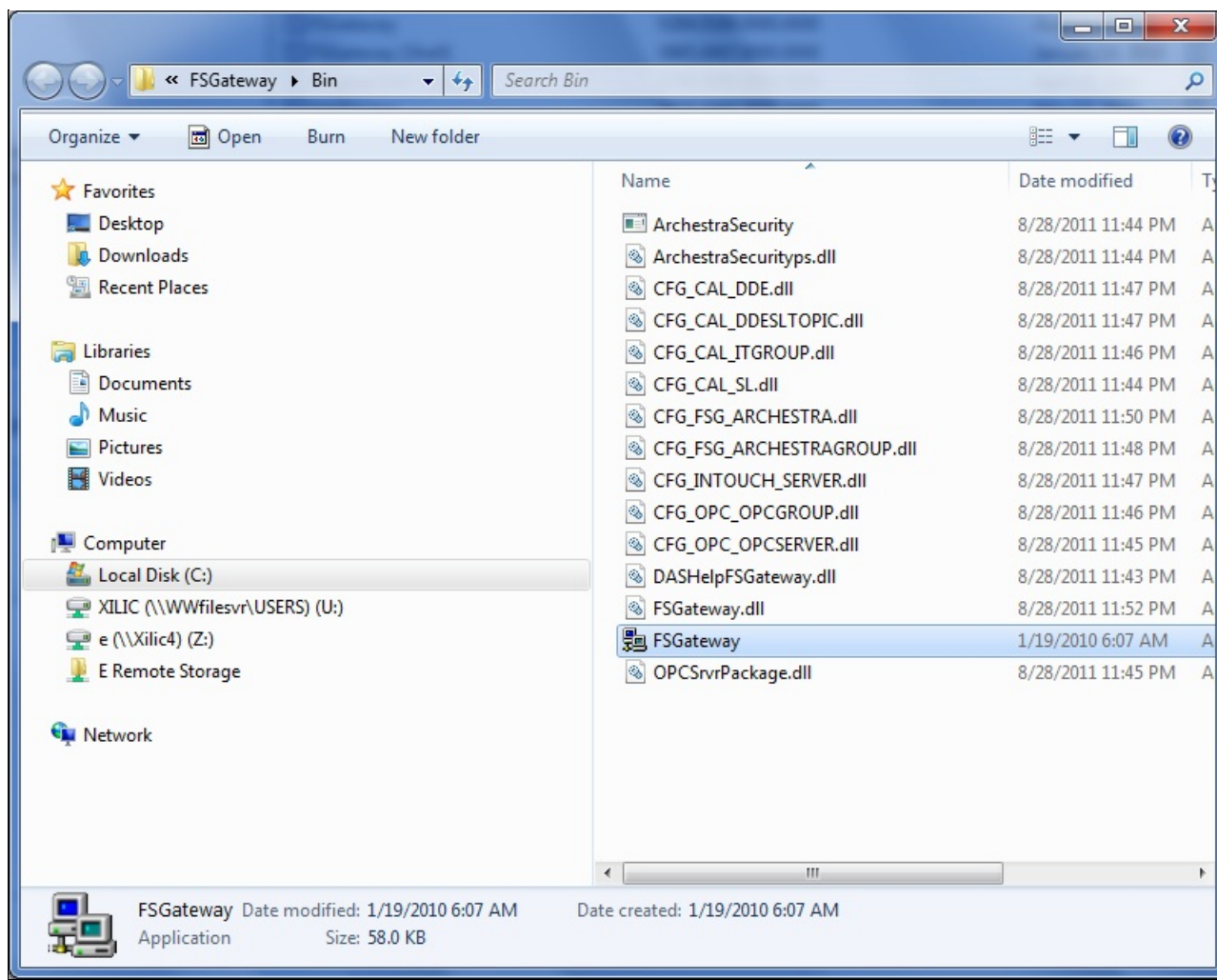
**FIGURE 12: RUN FSGATEWAY AS AN APPLICATION, FROM THE LOCAL INSTALLATION FOLDER**

When FSGateway is showing **Activated**, return to the Task Manager and check the Session ID. You will see FSGateway and Excel running under the same Session ID.
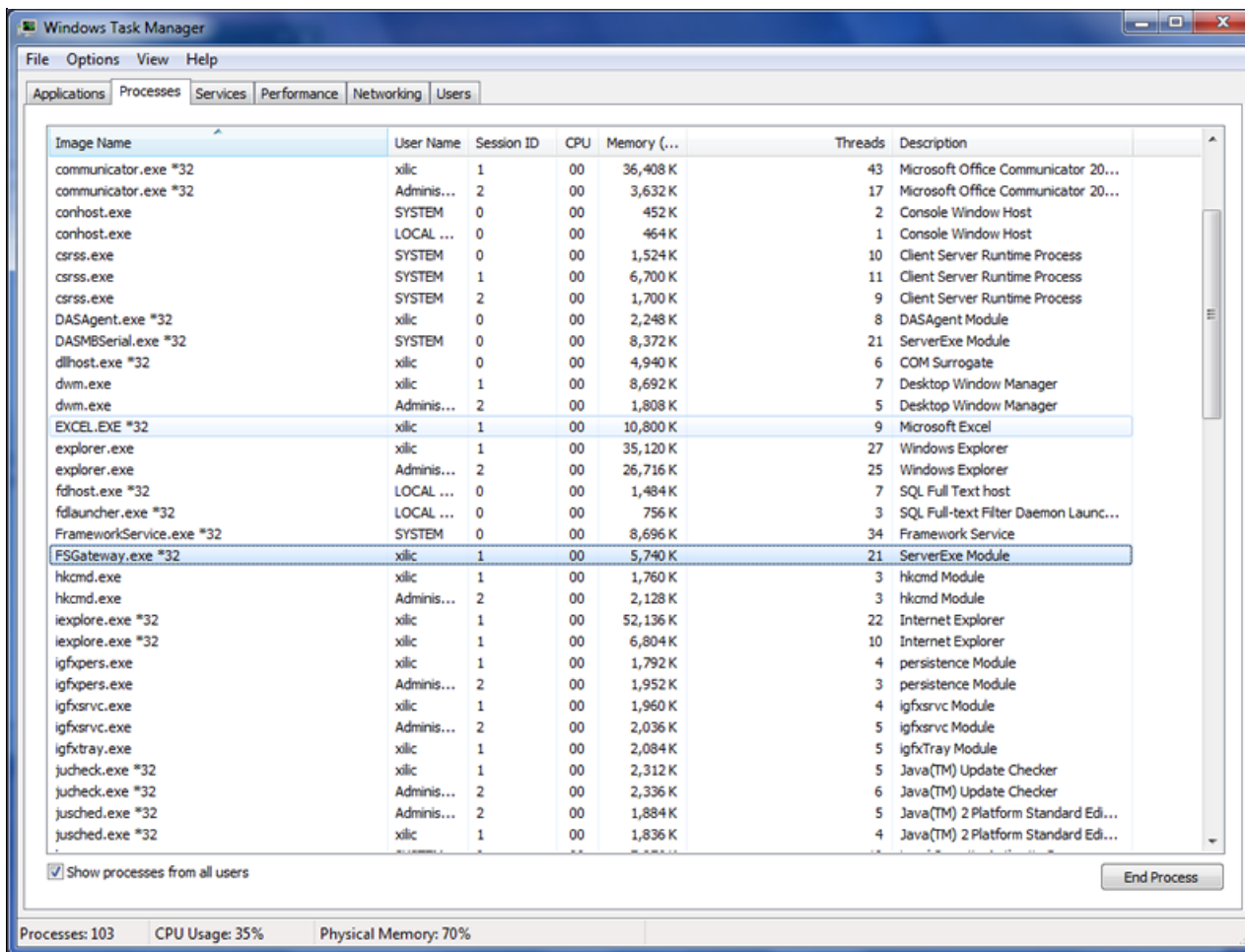
**FIGURE 13: FSGATEWAY AND EXCEL RUNNING IN SESSION 1**

You can run FSGateway as a local application in different ways (such as from Task Manager).

After both Excel and FSGateway are running in the same session, check and make sure you are still using the same configuration showing in Figure 10 (above). WWClient now receives a proper data update (Figure 14 below).



**FIGURE 14: DATA UPDATE IS SUCCESSFUL ON SESSION 1**

## Final Note

Both Excel and FSGateway must run as applications *under the same user login* to communicate. If you run Excel and FSGateway under different user accounts, they will run in different Session IDs and the communication fails (Figure 15 below).



**FIGURE 15: EXCEL AND FSGATEWAY RUNNING IN DIFFERENT LOGINS/DIFFERENT SESSIONS: COMMUNICATION FAILS**

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For technical support questions, send an e-mail to **wwsupport@invensys.com**.

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