Tech Note 614
Monitoring and Troubleshooting Communication with the Wonderware Client Utility

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Topic#: 002371
Created: June 2009

Introduction

This *Tech Note* is provided courtesy of **Wonderware PacWest**.

When troubleshooting communications between your HMI and data source it can be useful to utilize the Wonderware Client (WWClient) utility to verify connection status and read values. This document lists the procedures necessary to install and use the WWClient utility to help troubleshoot communications.

Application Versions

- All Wonderware software packages that utilize SuiteLink or DDE communication protocols.

- Wonderware Client Utility (WWClient).

Procedure

1. Locate and install the WWClient utility.

   You can find it at the following locations:

- If you have FactorySuite 2000 Common Components installed on your system, click **Start > All Programs > Wonderware FactorySuite > Common > WWClient**.

- You can download and install the utility **from the Wonderware Developer Network** under the **General** list.

- You can also install the utility from Device Integration CD 1 of 2 at **X:\WW\Diagnostic Utilities\Diagnostic.exe**. X is the drive letter of your 0CD/DVD-ROM (Figure 1 below).
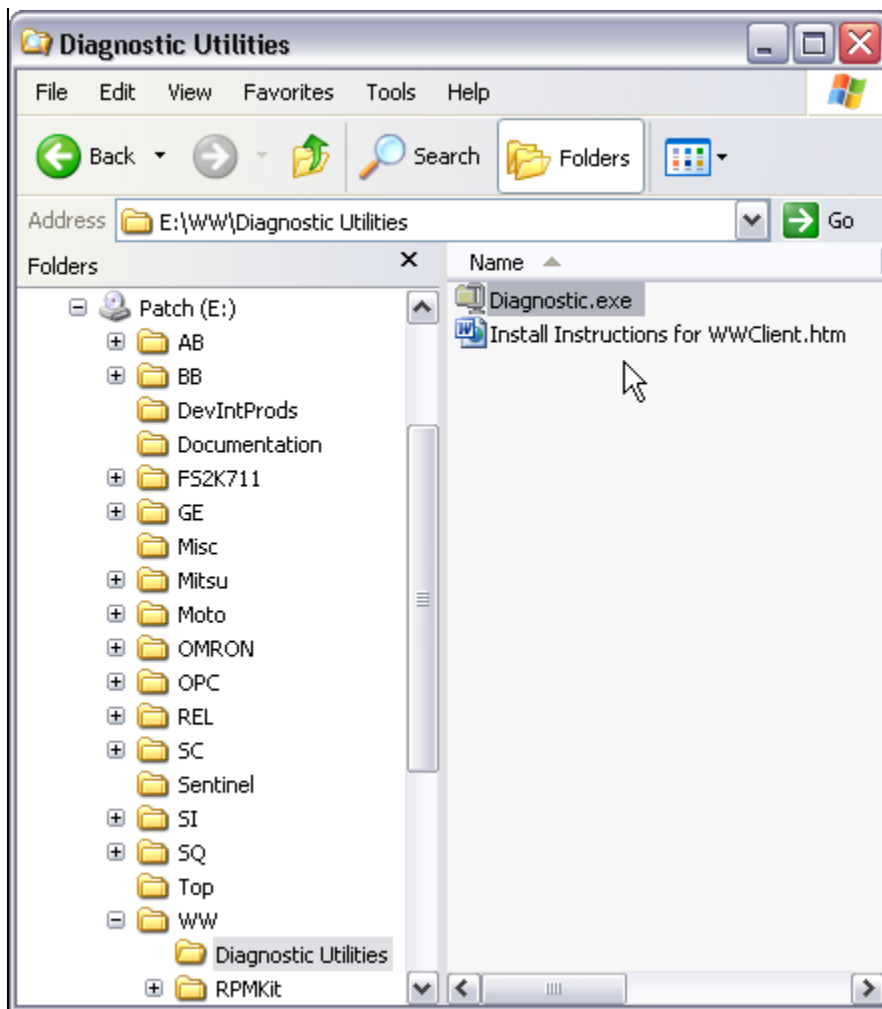
FIGURE 1: WW DEVICE INTEGRATION CD DOWNLOAD LOCATION

2. Double-click **Diagnostic.exe**. The WinZip Self-Extractor window appears.

3. Browse to or type the directory to which the contents will be unzipped. When finished click the **Unzip** button.

   The utility extracts 2 files: **wwclient.exe** and **wwclintf.dll**.
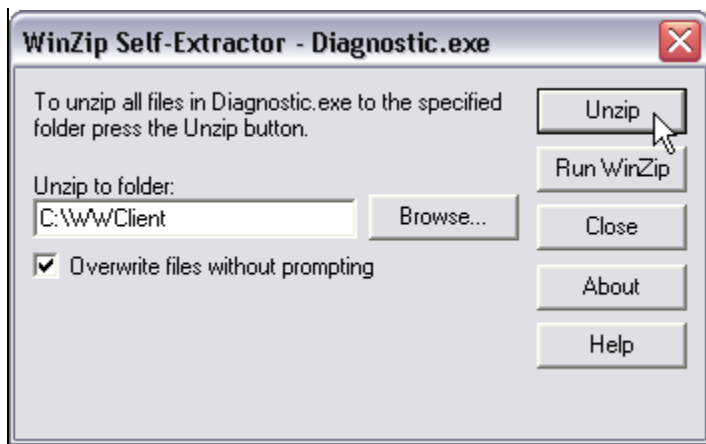
FIGURE 2: WINZIP SELF-EXTRACTOR FOR WWCLIENT

4. When the unzip process is complete a status message appears. Click **OK** to proceed (Figure 3 below).
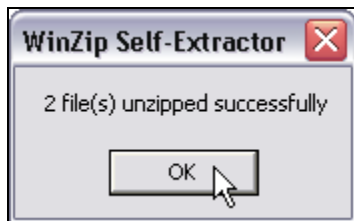

FIGURE 3: STATUS MESSAGE

5. Navigate to the directory where you unzipped the utility.

Note: If you have any other Wonderware products installed on the machine that the WWClient utility was extracted to, delete the **wwclintf.dll** file **BEFORE** using the WWClient utility. The **wwclintf.dll** file is included ONLY for systems that do not have any Wonderware products installed. Failure to delete the DLL file can cause a conflict when attempting to open any other Wonderware products.
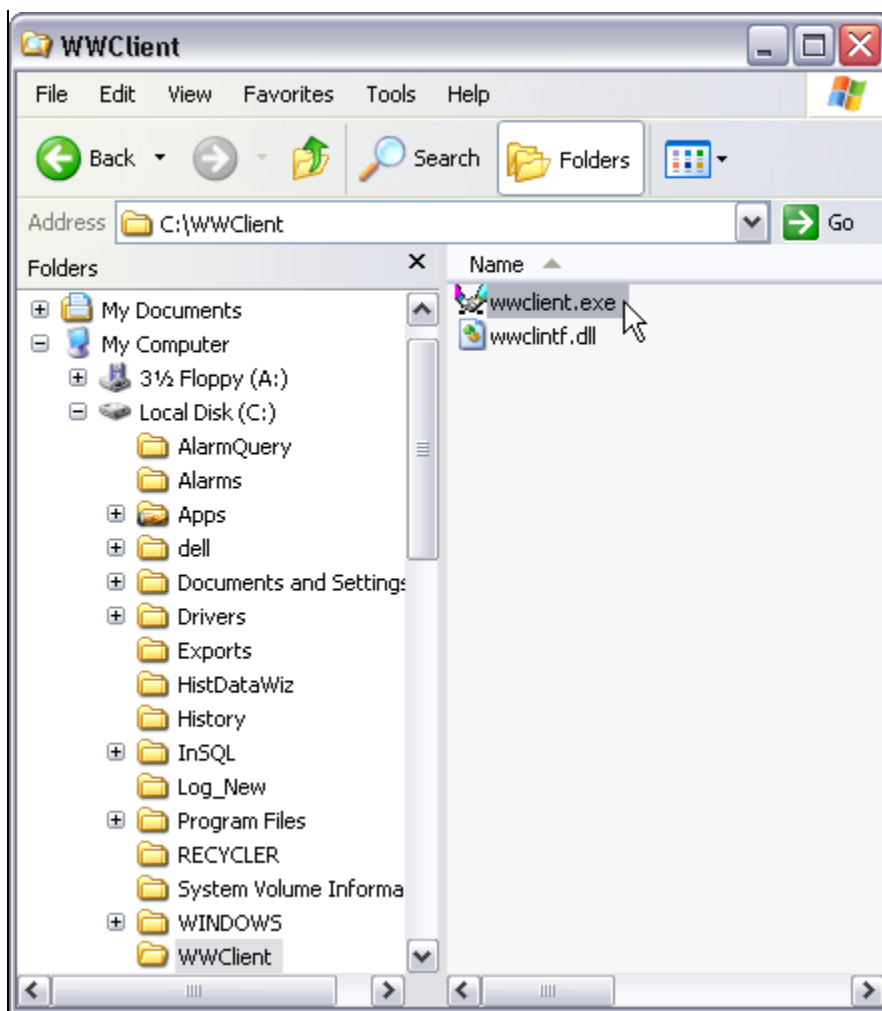
FIGURE 4: WWCLIENT.EXE INSTALL LOCATION

6. Double-click the **wwclient.exe** file. The **Wonderware Client** window appears.

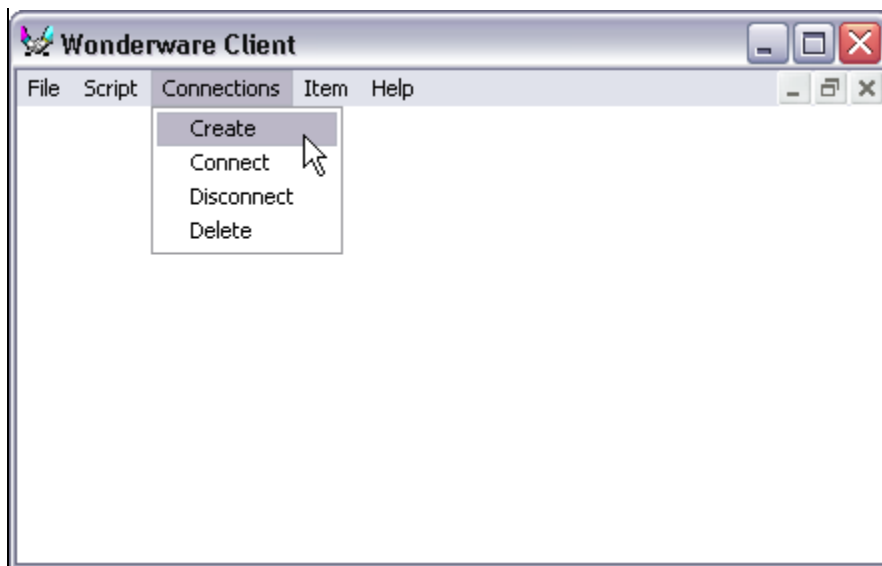7. On the main menu, click **Connections > Create**.

FIGURE 5: CONNECTIONS > CREATE

8. The **Create Connection** window appears. The configuration options are similar to an Access Name for InTouch.
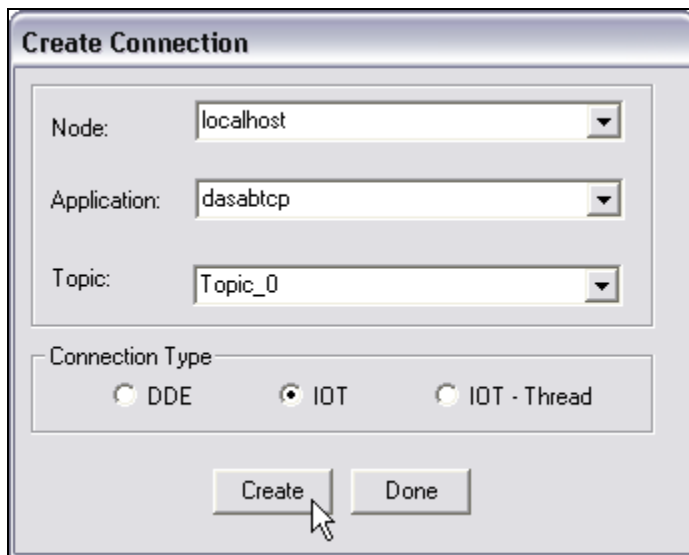
9. Configure a connection and click **Create**.

FIGURE 6: CONFIGURE THE CONNECTION

Configuration for our example:

- **Node:** localhost. Connect to a DAServer installed on the local machine.
- **Application:** dasabtcp. Connect to the Wonderware DASABTCP DAServer.
- **Topic:** Topic_0. This is the default name used when defining a topic in the DASABTCP DAServer.
- **Connection Type:** For this *Tech Note* the **IOT** connection type is used. IOT is the original name for the SuiteLink protocol. IOT

Thread starts the protocol in a separate thread and is not advised for this use.

10. You will see a line of text in the Wonderware Client window. The text displays information about the protocol in use, the path to connect to the end device, and the connection status.
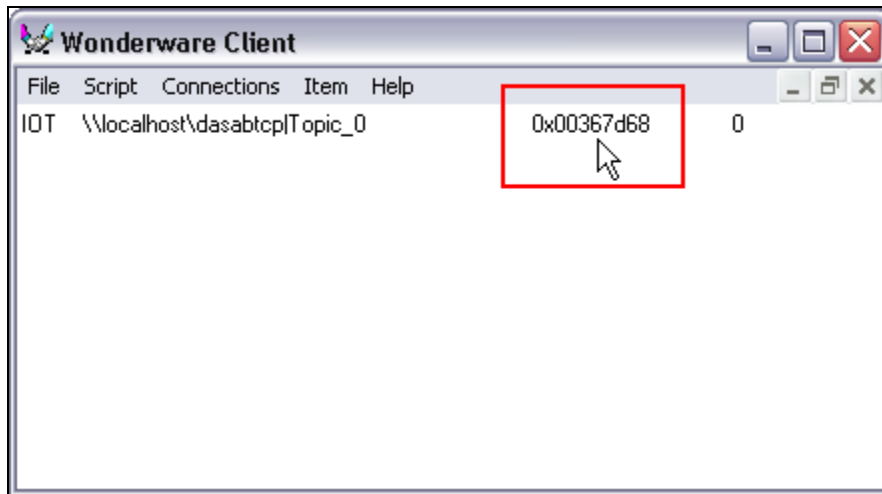

FIGURE 7: PROTOCOL, PATH AND STATUS ITEMS

Understanding the Items' Values

Notice that the hexadecimal value does not read 0x00000000.

**To see the actual value and what it means**

1. From the **Wonderware Client** window menu select **Item**. The **Item** window appears.

2. Select the connection in question in the Connections pane, and type a valid data point.

3. Select the appropriate data type in the Item section.

4. Click **AdviseEx**.
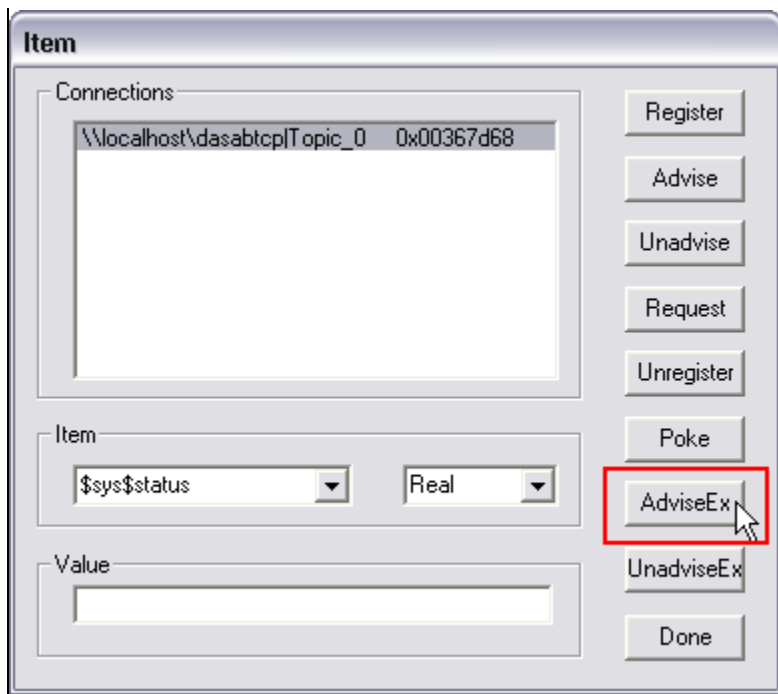
5. You now see the advised item information displayed under the connection information in the main **Wonderware Client** window.

Between the item name and the timestamp you will see the actual value of the item advised. To the far right is another set of hexadecimal values, where **0x00c0** represents a good connection to the data source.

A legend of these hexadecimal (and their respective decimal) values is located in the **OPC Quality Code Legend** section below.
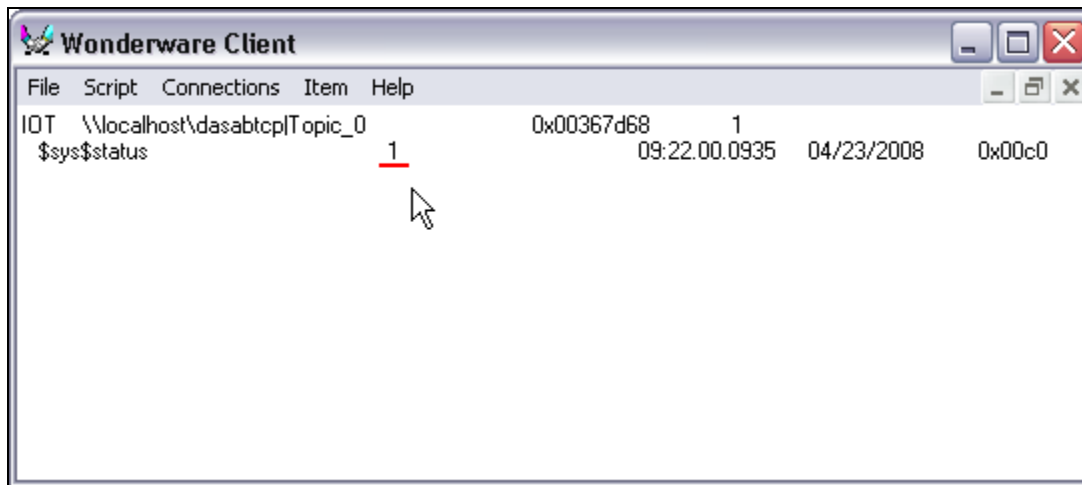
OPC Quality Code Legend

Hexadecimal	Decimal	Description

0x0000	0	Bad
0x0001	1	Bad, Low Limited
0x0002	2	Bad, High Limited
0x0003	3	Bad, Constant
0x0004	4	Bad, Configuration Error
0x0005	5	Bad, Configuration Error, Low Limited
0x0006	6	Bad, Configuration Error, High Limited
0x0007	7	Bad, Configuration Error, Constant
0x0008	8	Bad, Not Connected
0x0009	9	Bad, Not Connected, Low Limited
0x000A	10	Bad, Not Connected, High Limited
0x000B	11	Bad, Not Connected, Constant
0x000C	12	Bad, Device Failure
0x000D	13	Bad, Device Failure, Low Limited
0x000E	14	Bad, Device Failure, High Limited
0x000F	15	Bad, Device Failure, Constant
0x0010	16	Bad, Sensor Failure
0x0011	17	Bad, Sensor Failure, Low Limited
0x0012	18	Bad, Sensor Failure, High Limited
0x0013	19	Bad, Sensor Failure, Constant
0x0014	20	Bad, Last Known Value
0x0015	21	Bad, Last Known Value, Low Limited
0x0016	22	Bad, Last Known Value, High Limited
0x0017	23	Bad, Last Known Value, Constant
0x0018	24	Bad, Comm Failure
0x0019	25	Bad, Comm Failure, Low Limited
0x001A	26	Bad, Comm Failure, High Limited
0x001B	27	Bad, Comm Failure, Constant
0x001C	28	Bad, Out of Service
0x001D	29	Bad, Out of Service, Low Limited
0x001E	30	Bad, Out of Service, High Limited
0x001F	31	Bad, Out of Service, Constant
0x0020	32	Bad, Waiting for Initial Data
0x0021	33	Bad, Waiting for Initial Data, Low Limited
0x0022	34	Bad, Waiting for Initial Data, High Limited
0x0023	35	Bad, Waiting for Initial Data, Constant
0x0040	64	Uncertain
0x0041	65	Uncertain, Low Limited
0x0042	66	Uncertain, High Limited

0x0043	67	Uncertain, Constant
0x0044	68	Uncertain, Last Usable Value
0x0045	69	Uncertain, Last Usable Value, Low Limited
0x0046	70	Uncertain, Last Usable Value, High Limited
0x0047	71	Uncertain, Last Usable Value, Constant
0x0050	80	Uncertain, Sensor Not Accurate
0x0051	81	Uncertain, Sensor Not Accurate, Low Limited
0x0052	82	Uncertain, Sensor Not Accurate, High Limited
0x0053	83	Uncertain, Sensor Not Accurate, Constant
0x0054	84	Uncertain, Engineering Units Exceeded
0x0055	85	Uncertain, Engineering Units Exceeded, Low Limited
0x0056	86	Uncertain, Engineering Units Exceeded, High Limited
0x0057	87	Uncertain, Engineering Units Exceeded, Constant
0x0058	88	Uncertain, Sub-Normal
0x0059	89	Uncertain, Sub-Normal, Low Limited
0x005A	90	Uncertain, Sub-Normal, High Limited
0x005B	91	Uncertain, Sub-Normal, Constant
0x00C0	192	Good
0x00C1	193	Good, Low Limited
0x00C2	194	Good, High Limited
0x00C3	195	Good, Constant
0x00D8	216	Good, Local Override
0x00D9	217	Good, Local Override, Low Limited
0x00DA	218	Good, Local Override, High Limited
0x00DB	219	Good, Local Override, Constant

Additional References

- **WW Tech Note 48 Using WWClient to Check I/O Server Communication**

N. Edgett

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

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