



Application Note 0003 Using ReportBuilder™ with Wonderware InSQL

Introduction

ReportBuilder™ can access InSQL Data via the ReportBuilder™ **Database Summary Logging Functions** FunctionPack. This document describes the steps for configuring ReportBuilder™ to report data from the Wonderware InSQL database.

Note: This Application note assumes you are working with ReportBuilder™ version 1.3. The same information applies to earlier versions of ReportBuilder™; however, some windows are different between the two versions and the steps will differ slightly. The Tag Import Wizard described at the end of this document is not available in earlier versions of ReportBuilder™.

Configure ReportBuilder™

Start the ReportBuilder™ Server application (Start | Programs | WorkSmart Automation ReportBuilder | ReportBuilder Server).

Create a new ReportBuilder™ Project

To create a new ReportBuilder™ Project, perform these steps:

1. From the File menu, Click **New Project...**
2. From the Create New ReportBuilder Project Dialog, enter a valid path and filename for the project file and Click **Save**. A new ReportBuilder™ project will be created.

Database Configuration

To configure a ReportBuilder™ Database, perform these steps:

1. In the left-hand pane, select Databases. Click **New**. Enter the following information into the Database Dictionary Window:

Database Name: InSQL (*This is an arbitrary name chosen by you.*)

Description: InSQL Tags (*Optional, Tags logged in InSQL.*)

Connection String: Click **Build**. The Microsoft Data Link Properties window will appear.

2. From the **Provider** tab, highlight **Microsoft OLE DB Provider for SQL Server** then click **Next**. The Connection tab will appear.

3. From the **Connection** tab,
 - a. Select or enter the name of your InSQL system. *(This is typically the name of the computer that InSQL is installed.)*
 - b. Click **Use a specific user name and password** radio button.
 - i. Enter **wwUser** for the user name.
 - ii. Enter **wwuser** for the password. (Your password may be different)
 - c. Check **Allow Saving Password** checkbox.
 - d. Click **Select the database on the server:** radio button.
 - i. Select the **Runtime** database from the drop-down list.
4. Click **OK** when finished; you will return to the ReportBuilder™ Database Dictionary window. Click **Save and Close** to save this database definition.

Table Configuration

To configure a ReportBuilder™ Table, perform these steps:

Note: InSQL stores data into different tables depending upon the type of tag that is being logged. You will need to define a table for each of the following that may apply to your application. ReportBuilder™ supports the following InSQL Tables:

- v_AnalogHistory for all tags of analog type.
- v_DiscreteHistory for all tags of discrete type.

1. In the left-hand pane, select Tables. Click **New**. Enter the following information into the Table Dictionary Window:

Database: Select the InSQL Database Name from the drop down list

Table Name: v_AnalogHistory or v_DiscreteHistory from the drop down list

Function Pack: Select **Database Summary Logging Functions** from the drop down list

DateTime Column Name: Select or enter **DateTime** from the Date/Time Column tab

Tagname Column Name: Select or enter **TagName** from the Tagname Column tab

2. Assign the Microsoft SQL Server Time format to the table.
 - a. Click **More...** from the Date/Time Column tab. The Format Time tab will appear.
 - b. Click **Select...** to see a list of available SQL Time Formats
 - c. Select **Microsoft SQL Server Time Format** and then Click **Close**.
 - d. Click Less. The Time Format tab will disappear.

Note: The if the Microsoft SQL Server Time Format is not configured on your system, build a new one that will format the time as: '**yyyy-mm-dd hh:mm:ss AM/PM**'. The result should look like this: '2004-08-07 09:15:22 AM' Note the entire date is surrounded with single quotes.

- Click the **Column Lists** button. The Column List Dictionary window will appear. Select the **InSQL History List** and then Click **Close**.

Click **Save and Close** to save this table definition.

Note: If the InSQL History List is not configured on your system, build a new one with the following entries:

DISPLAY NAME	COLUMN NAME
Number of rows to return	wwRowCount
Data Resolution	wwResolution
Data Quality	Quality
Data Quality Detail	QualityDetail
Retrieval Mode	wwRetrievalMode
Time Deadband	wwTimeDeadband
Value Deadband	wwValueDeadband

(These columns can be used to build Secondary Conditions within ReportBuilder™ Functions. Refer to the InSQL documentation to learn how to use these columns to filter and control how data is displayed in your report.)

Tag Group Definition

To configure a ReportBuilder™ Tag Group, perform these steps:

- In the left-hand pane, select **Tag Groups**. Click **New**.

Group Name: Enter a Name for the new Tag Group *(This is an arbitrary name chosen by you.)*

Description: Enter a Description for the new Tag Group *(Optional)*

Menu Order: Enter a numeric value for the Menu Sort Order *(0=Top of the List)*

Tag Definition

To configure a ReportBuilder™ Tag, perform these steps:

- In the left-hand pane, select Tags. Click **New**.

Tag Name: Enter the name of the tag exactly as it appears in the InTouch Tagname Dictionary

Description: Enter a Description for the new Tag

Eng Units: Enter the Engineering Units for the new Tag

Group Name: Select the desired Tag Group from the drop down list

Database /Table: Select the Database and Table to which the tag belongs

Column: Enter the text **Value** in this field

Data Type: For sorting purposes only

Note: You must add a tag definition to the ReportBuilder™ Tagname Dictionary for each tag that you wish to report on. Users of ReportBuilder™ 1.30 can import all tags automatically into ReportBuilder™ via the Tag Import Wizard.

Importing Tags with Tag Import Wizard

To import tags from InSQL to a ReportBuilder™ Project, perform these steps:

1. From ReportBuilder™ Server, perform the following configuration as a minimum:
 - a. ReportBuilder™ Database definition.
 - b. ReportBuilder™ Table definition for v_AnalogHistory and v_Discrete History
 - c. ReportBuilder™ Tag Group definition.
2. From the Tools menu, Click **Import/Export.../Import Tags from SCADA Data Source...**
The Tag Import Wizard appears.
3. Follow the steps as requested by the Tag Import Wizard by clicking **Next** until finished:
 - a. For the ReportBuilder Database Connection step, select the name you called your InSQL Database Connection *(from Step 1 under the Database Configuration section of this document)*
 - b. For Data Source Table step, select or enter **Tag**. *(The Tag table contains information about each tag being logged to InSQL.)*
 - c. For the Matching Fields step, select or enter the following in each field:
 - i. Tagname: **TagName**
 - ii. Description: **Description**
 - iii. Skip Eng Unit *(No corresponding column exists for Eng Unit.)*
 - iv. Column: Enter '**Value**' *(Text inside of single quotes is imported implicitly, type the word Value surrounded by single quotes.)*
 - v. Data Type: **TagType**
4. For the ReportBuilder™ Database and Table step, select the name of the InSQL database followed by the name of the table e.g., InSQL:v_AnalogHistory.
5. For the ReportBuilder™ Tag Group step, select the name of the group that you would like these tags to be imported to. *(This can be changed later using the ReportBuilder™ PowerEditor.)*
6. For the Existing Tags step, choose whether to overwrite or skip existing tags in your ReportBuilder™ Project. Check **the Overwrite existing tags** checkbox to overwrite tags. Un-check to skip existing tags.
7. Click **Finish** to begin the import.

Note: Once all tags are imported, you will need to change some settings. For example, all discrete tags that were imported will need to be re-assigned to the v_DiscreteHistory table. You may also want to define more groups and move tags of similar grouping to those groups. Some tags you may want to delete from the application altogether. These changes can be performed in one step using the ReportBuilder™ PowerEditor. See the on-line help for more information about PowerEditor.