



Application Note 0003 Using ReportBuilder™ with Wonderware Historian

Introduction

ReportBuilder™ can access data logged to Wonderware Historian Data (*formerly InSQL or Industrial SQL Server*) via the **Database Summary Logging Functions** FunctionPack . This document describes the steps for configuring ReportBuilder™ to report data from the Wonderware Historian database.

Overview

The Database **Summary Logging Functions** FunctionPack enables ReportBuilder™ to access data logged to Wonderware Historian.

Installation Notes

ReportBuilder™ Server and Client Location

The ReportBuilder™ Server application can exist anywhere on the network. Install a ReportBuilder™ Client on each machine that you want to build and run reports.

Configure a new ReportBuilder™ Server Project

Before proceeding, verify the following:

- You have successfully installed the WorkSmart Automation ReportBuilder™ Server and ReportBuilder™ Client components.

Create a new ReportBuilder™ Project

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

1. Start the ReportBuilder™ Server application.
2. From the File menu, Click **New**.
3. From the **Save As** Dialog, enter a valid path and filename for the project XML file and Click **Save**. A new ReportBuilder™ Server application XML file will be created. (This should be saved in a folder that is shared out over your network to allow other ReportBuilder™ Client installations to connect to it.)

Configure a ReportBuilder™ Server Database Definition

To configure a ReportBuilder™ Database, perform these steps:

- In the left-hand pane, select Databases then right-click in the right-hand pane. Click **New**.

STEP 1: Enter a Database Name:

Enter a name for this database, e.g. **Wonderware Historian** (*This is an arbitrary name chosen by you.*)

STEP 2: Enter a Description (optional):

Enter a description for this database e.g., **Wonderware Historian Data**.

STEP 3: Build a Connection String:

Click **Build ...**. The Microsoft Data Link Properties window appears.

- a. From the **Provider** tab, highlight **Microsoft OLE DB Provider for SQL Server** then click the **Next** button.
- b. From the **Connection** tab,
 1. Step 1, select or enter the name of your Wonderware Historian system .
(*This is typically the name of the computer that Wonderware Historian is installed.*)
 2. Step 2,
Click **Use a specific user name and password** radio button.
Enter **wwUser** for the user name.
Enter **wwuser** for the password. (Your password may be different)
Check **Allow Saving Password** checkbox.
 3. Step 3,
Click **Select the database on the server:** radio button.
Select the **Runtime** database from the drop-down list.
- c. Click **OK** when finished; you will return to the ReportBuilder™ Database Dictionary window.

2. Click **Save and Close** to save this Database definition.

Configure a ReportBuilder™ Server Table Definition

To configure a ReportBuilder™ Table, perform these steps:

1. In the left-hand pane, select Tables then right-click in the right-hand pane. Click **New**.

STEP 1: Select the Database for this Table:

Select the Wonderware Historian Database Name from the drop down list.

STEP 2: Select or Enter a Table Name:

Select from the drop down list or enter the table name **History**.

STEP 3: Select a FunctionPack for this Table:

Select **Database Summary Logging Functions** from the drop down list.

STEP 4: Enter Columns require for this FunctionPack:

From the Date/Time Column tab, select or enter the name of the column where the date and time stamp is logged for this table. Enter or select the column name **DateTime** for this field.

- a) Click ... to see a list of available columns.
- b) Select the **DateTime** column for this field then click **OK**.

From the Format Time tab, assign the **Microsoft SQL Server Time Format** to the table.

- a) Click **Select...** to see a list of available SQL Time Formats.
- b) Select **Microsoft SQL Server Time Format** and then click **Close**.

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.

From the Tagname Column tab, select or enter the name of the column where the tag names are logged for this table. Enter or select the column name **TagName** for this field.

- a) Click ... to see a list of available columns.
- b) Select the **TagName** column for this field then click **OK**.

STEP 5: Assign a Column List to this Table (optional):

Click the **Column Lists ...** button to see available lists. Select the **Wonderware Historian Column List** and then click **Close**.

Note: If the Wonderware Historian Column List is not configured on your system, build a new one with the following entries:

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

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

2. Click **Save and Close** to save this Table definition.

Configure a ReportBuilder™ Server Tag Group Definition

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

1. In the left-hand pane, select **Tag Groups** then right-click in the right-hand pane. Click **New**.

STEP 1: Enter a Group Name:

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

STEP 2: Enter a Description (optional):

Enter a description for the new Tag Group.

STEP 3: Enter a Menu Order (0-Top):

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

2. Click **Save and Close** to save this Tag Group definition.

Configure a ReportBuilder™ Server Tag Definition

You should skip this step if you have multiple tags in your Wonderware Historian and move ahead to the next section titled Importing Tags with Tag Import Wizard.

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

1. In the left-hand pane, select Tags then right-click in the right-hand pane. Click **New**.

STEP 1: Enter Tag Name:

Enter the name of the tag exactly as it appears in the InTouch Tagname Dictionary.

STEP 2: Enter a Description (optional):

Enter a description for the new tag.

STEP 3: Enter the Eng Units (optional):

Enter the engineering units for the new tag.

STEP 4: Select a Group Name:

Select the desired Tag Group from the drop down list for the new tag.

STEP 5: Select a Database:Table:

Select the Database and Table to which the tag belongs from the drop down list.

STEP 6: Select or Enter a Column:

Select or enter the name of the column where the data values are logged in this table for this tag. Enter the text **Value** in this field.

- a) Click ... to see a list of available columns.
- b) Select **Value** for this field then click **OK**.

STEP 7: Enter a Data Type (optional):

For sorting purposes only. You may enter anything you wish here.

Note: You must add a tag definition to the ReportBuilder™ Tagname Dictionary for each tag that you wish to report on.

2. Click **Save and Close** to save this Tag definition.

Importing Tags with Tag Import Wizard

To import tags from Wonderware Historian 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 **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 Wonderware Historian 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 Wonderware Historian.*)
 - c. For the Matching Fields step, select or enter the following in each field:
 - i. Tagname: **TagName**

Note: The following fields require that you place a check mark in the checkbox next to the field. Un-checked fields are not imported.
 - 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 Wonderware Historian database followed by the name of the table e.g., Wonderware Historian:History.
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™ Import/Export via Excel feature.*)
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.