



Application Note 0001 Using ReportBuilder™ with Intellution iHistorian

Introduction

ReportBuilder™ can access iHistorian Data via the ReportBuilder™ **iHistorian Logging Functions** FunctionPack. This document describes the steps for installing and configuring this FunctionPack.

Materials

Your ReportBuilder™ package contains two (2) discs:

Disc 1 (ReportBuilder™):

ReportBuilder™ Server

Used for editing your ReportBuilder™ configuration file. Enter your database locations, table names and tagnames here. This application can reside anywhere on the network.

ReportBuilder™ Client

This Microsoft Excel add-in allows you to build and run reports in Excel. When you open a report in Excel, the ReportBuilder™ configuration file is read. The list of available tags is then presented by the Client add-in. Install a ReportBuilder™ Client on each machine that you want to build and run reports.

Disc 2 (ReportBuilder™ FunctionPack for iHistorian):

iHistorian FunctionPack

The **iHistorian Logging Functions** FunctionPack allows ReportBuilder™ to access data logged to iHistorian. This FunctionPack communicates with iHistorian via the iHistorian OLE DB Provider (provided by Intellution). The OLE DB provider is installed when you install iHistorian.

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.

iHistorian Logging Functions FunctionPack

Install the FunctionPack on the same machine as ReportBuilder™ Server.

Important Note: You must install ReportBuilder™ Server first THEN install the iHistorian FunctionPack on the same machine. Please refer to the next section for more details.

Install iHistorian FunctionPack

Before proceeding, verify the following:

- You have successfully installed the ReportBuilder™ application
- Have the ReportBuilder™ Server/Client CD available (you may be asked to insert this CD during function pack installation)

Perform these steps:

1. Shutdown the ReportBuilder™ Server application.
2. Insert the CD labeled ReportBuilder™ FunctionPack for iHistorian.
3. Run the iHistorian Function Pack Installation program (RB iHistorian FP.exe). The ReportBuilder™ Server Patch InstallShield wizard will run.
4. Follow the prompts until finished.

Configure ReportBuilder™

Before proceeding, verify the following:

- You have successfully installed the iHistorian OLE DB Provider (supplied by Intellution). The OLE DB provider allows third-party applications to access iHistorian data.

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**.

Database Name: Enter a Name for this database, e.g. **iHistorian** (*this is an arbitrary name chosen by you.*)

Description: Enter a description for this database, e.g. **iHistorian Data** (*optional.*)

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

2. From the **Provider** tab, highlight **iHistorian OLE DB Provider** then click **Next**.
3. From the **Connection** tab, leave all fields at their default values.
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:

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

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

Table Name: Enter the text **ihRawData** in this field

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

DateTime Column Name: Enter the text **timestamp** in this field

Summary Column Name: Enter the text **IntervalMilliseconds** in this field

Tagname Column Name: Enter the text **tagname** in this field

2. Assign the iHistorian Time Format to the table. The SQL Time Format Dictionary window will appear.
 - 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 iHistorian Time Format and then click **Close**.
 - d. Click **Less**. The Time Format tab will disappear.

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

3. Click the **Summary Value Lists** button. The Summary Value List Dictionary window will appear. Select the iHistorian Summary Value List and then click **Close**.

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

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

DISPLAY NAME	COLUMN NAME
1 hour	1h
1 minute	1m
1 day	1440m

(You may add more time intervals as desired, following the format shown above.)

4. Click the **Column Lists** button. The Column List Dictionary window will appear. Select the iHistorian Column List and then click **Close**.

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

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

DISPLAY NAME	COLUMN NAME
Interval	intervalmilliseconds
Sample Count	NumberOfSamples

Tag Group Definition

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

1. 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:

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

Tag Name: Enter the name of the tag exactly as it appears in the Intellution database (typically, Intellution tagnames follow the format NODE.TAGNAME.FIELD)

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 iHistorian 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 **ihRawData**.
 - 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 iHistorian Database Connection *(from Step 1 under the Database Configuration section)*
 - b. For Data Source Table step, select or enter **ihTags**. *(The ihTags table contains information about each tag being logged to iHistorian.)*
 - c. For the Matching Fields step, select or enter the following in each field:
 - i. Tagname: **TagName**
 - ii. Description: **Description**
 - iii. Eng Units: **EngUnits**
 - iv. Column: Enter '**Value**' *(Text inside of single quotes is imported implicitly, type the word Value surrounded by single quotes.)*
 - v. Data Type: **DataType**
4. For the ReportBuilder™ Database and Table step, select the name of the iHistorian database followed by the name of the table e.g., iHistorian:ihRawData.
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.