Tech Note 601
HMI Reports: Creating a Historian (InSQL) Driver Configuration

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Introduction

This *Tech Note* outlines the steps to take to create a Driver connecting to a Wonderware Historian (InSQL).

HMI Reports uses ODBC to connect to any local or remote Historian Runtime database. Therefore, configuring a Historian Driver is a two step process.

1. Create an ODBC Data Source Name (DSN).
2. Configure the Historian Driver in HMI Reports.

An example using Historian data in the Data Definition Configuration is included.

Application Versions

- HMI Reports 3.4 and later
- Wonderware Historian 10.x

Create an ODBC DSN

1. Go to **Start > Control Panel > Administrative Tools > Data Sources (ODBC)**.

   In this example we will create a System DSN; however, you can create a User, System or File DSN.
2. Click the **System DSN** tab (Figure 1 below).

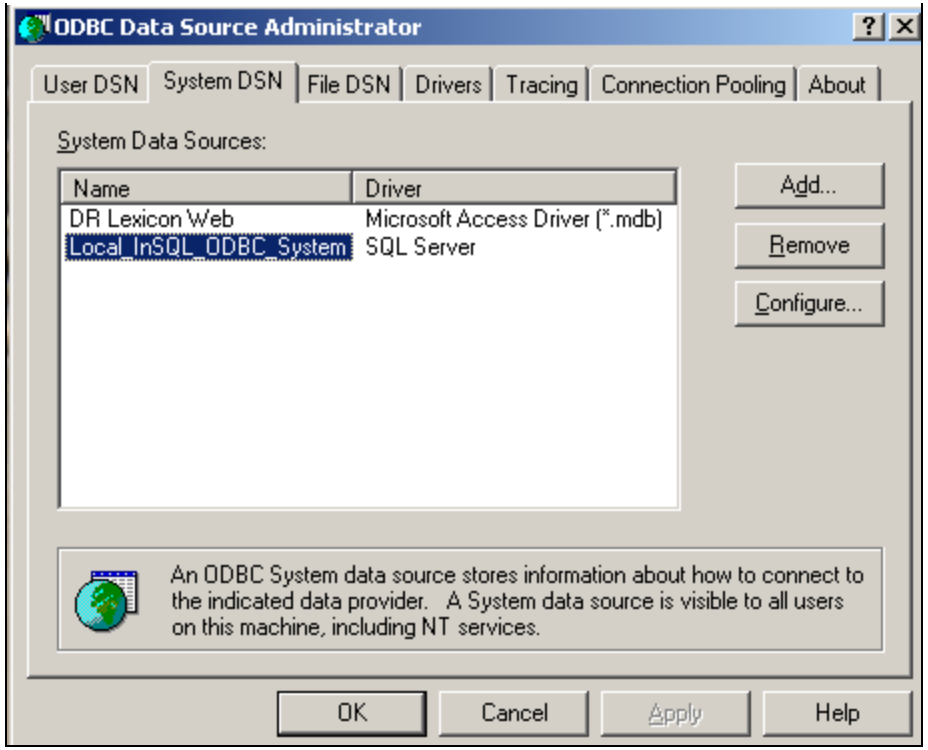

FIGURE 1: ODBC ADMIN > SYSTEM DSN TAB

3. Click **Add**, then select the **SQL Native Client** as the driver (Figure 2 below).

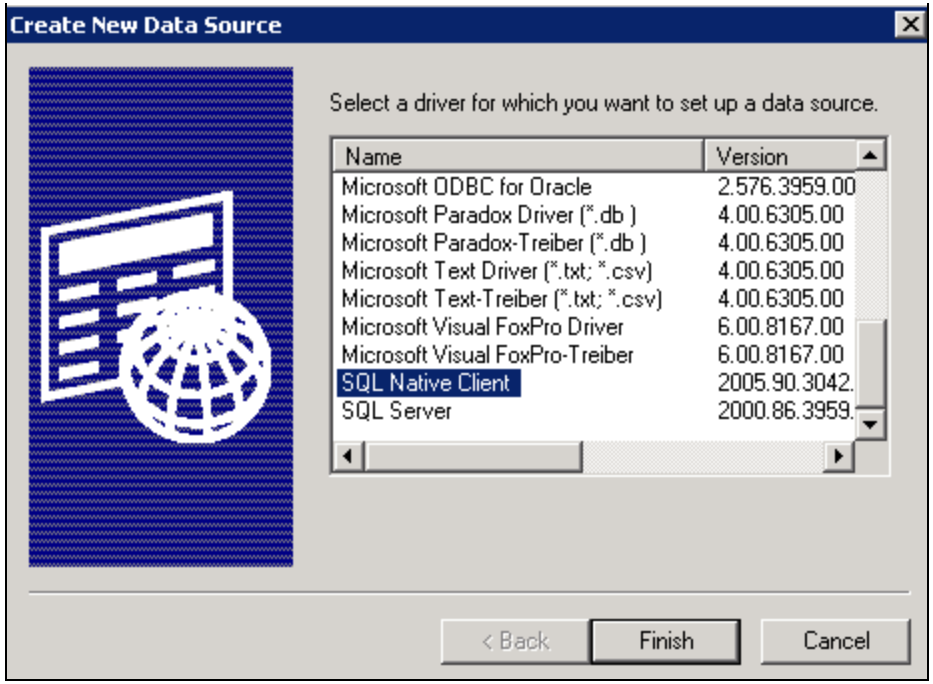

FIGURE 2: SQL NATIVE CLIENT DATA SOURCE

Note: To access Wonderware Historian 10.0, you might have to install the SQL Server 2008 Native Client. This applies if the (remote) Historian 10.0 is installed on top of the MS SQL Server 2008 version, and no SQL Server 2008 client tools are installed on the HMI Reports machine.

To install the SQL Server 10.0 client, run the **sqlncli.msi** setup file, which is available on your MS SQL Server 2008 CD in the **%CD%\Setup\x86** directory. Once finished, configure your ODBC connection to use the **SQL Native Client 10.0**.

4. Name your DSN and select your server. The description is optional (Figure 3 below).

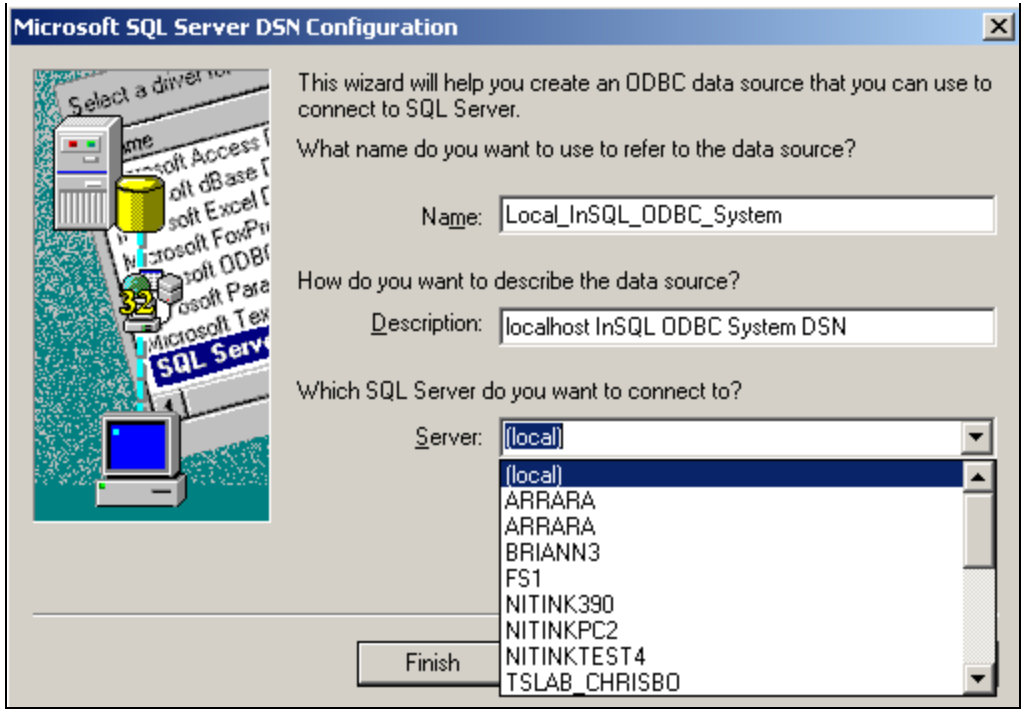

Figure 3: Name and Select Server

Note: It is not required that HMI Reports be installed on the Wonderware Historian node. If it is not on the Historian node, you must select the Server name where the Wonderware Historian is running instead of (local).

5. Click **Next** and use **SQL Server** authentication. Type the Login ID and Password.

Note: Figure 4 (below) shows the default sa/blank Login ID and Password. It is highly recommended you replace the defaults with "strong" Login ID and Passwords, in collaboration with your system administrator.

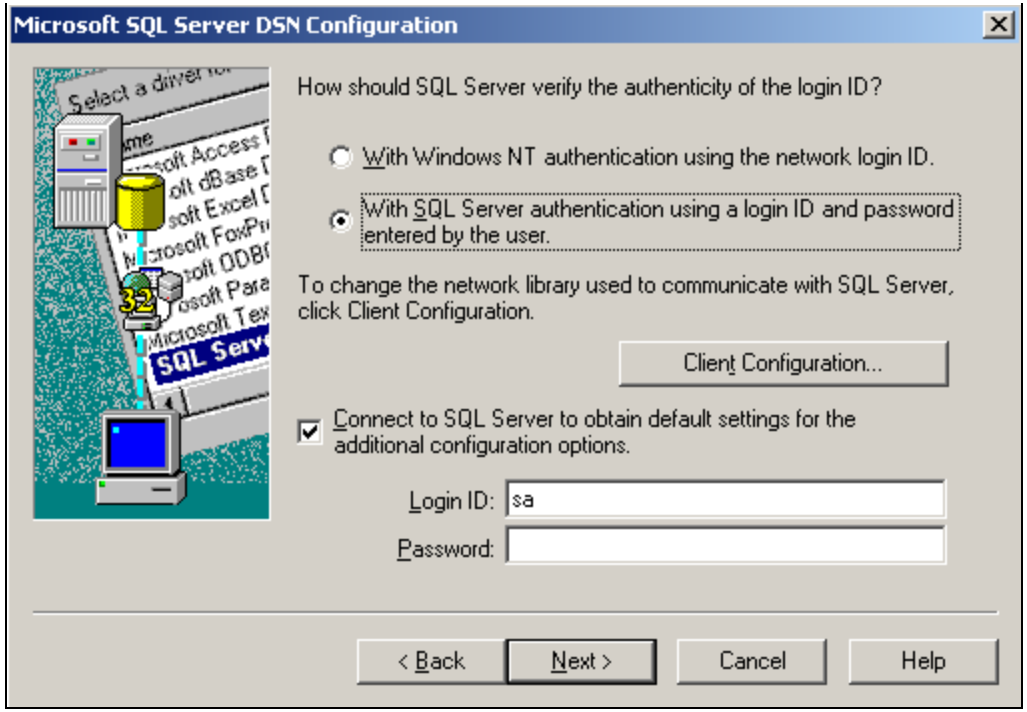

FIGURE 4: SQL SERVER AUTHENTICATION > CONNECT TO SQL SERVER

6. Click **Next**.
7. Click the **Change the default database to** option and select **Runtime** from the dropdown list as shown in Figure 5 (below). If necessary click the ANSI options shown in Figure 5.

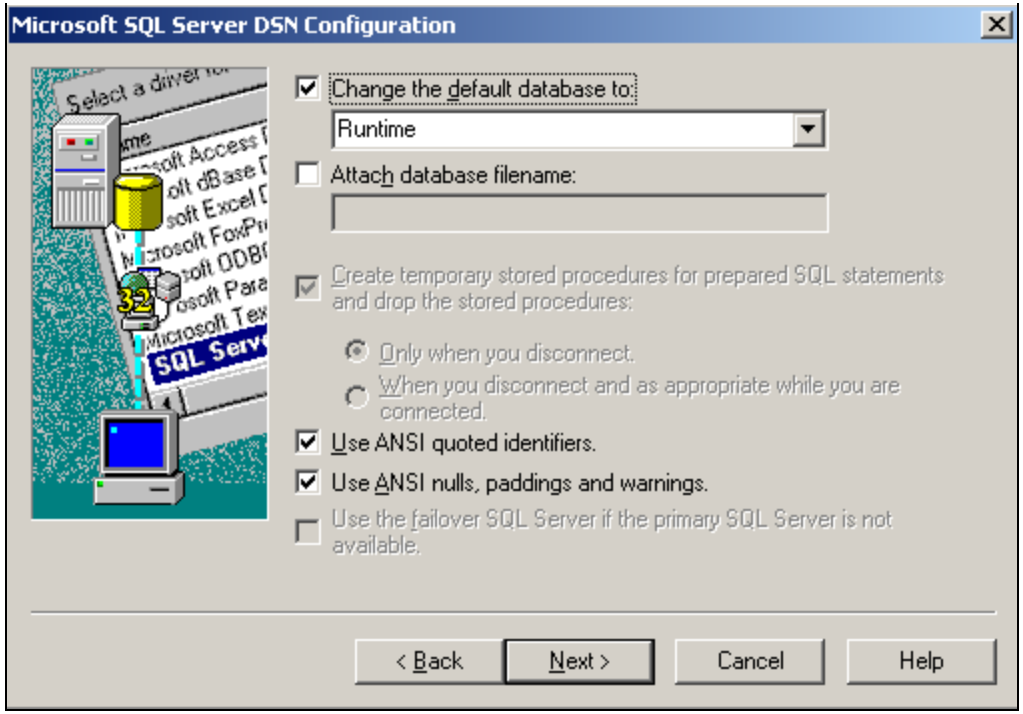

FIGURE 5: CHANGE THE DEFAULT DATABASE TO RUNTIME

8. Click **Next**, then **Finish**.

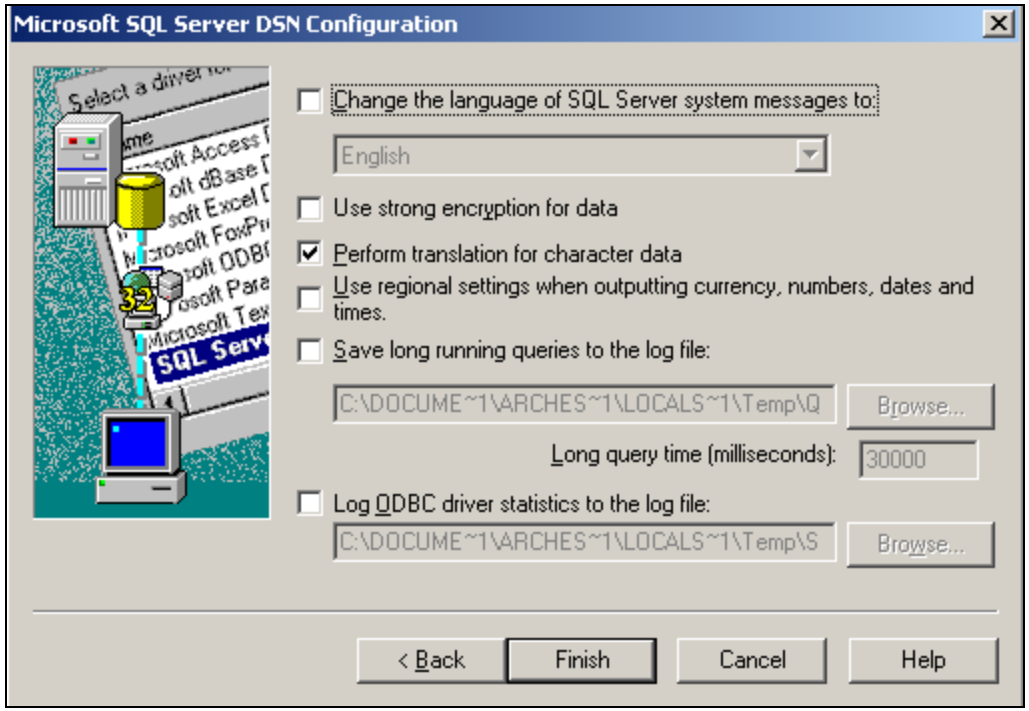

Figure 6: Click Finish

9. Click **Test Data Source** to make sure its been configured correctly (Figure 7 below).

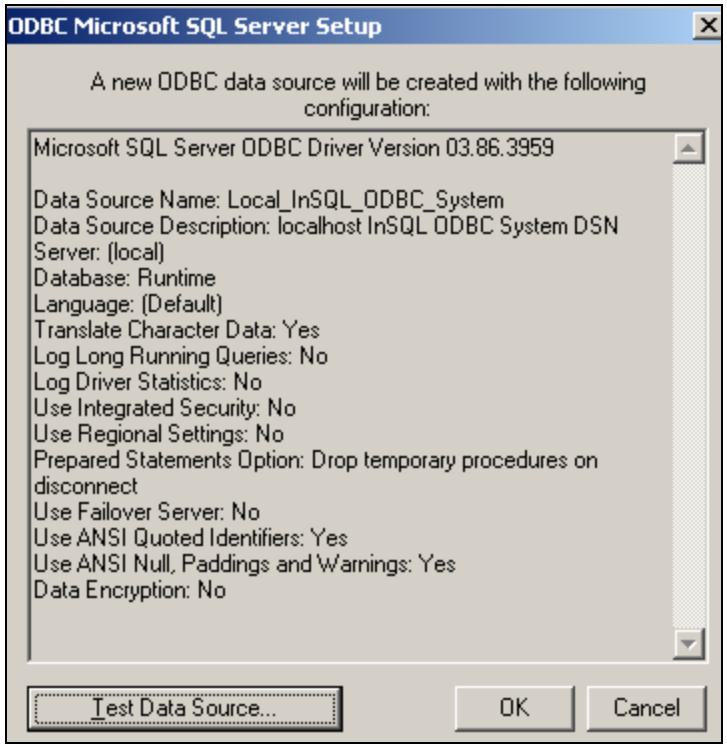

Figure 7: Test the Data Source

10. When the test completes successfully, click **OK** to close the dialog.

FIGURE 8: TESTS COMPLETED SUCCESSFULLY!

If the test completes unsuccessfully, repeat the previous steps and check for correctness.

Configure the Historian Driver in HMI Reports

Now that you've created a DSN, you can configure the Historian Driver in HMI Reports.

1. Open HMI Reports Studio and select **Logger/Driver Configuration** from the main menu.

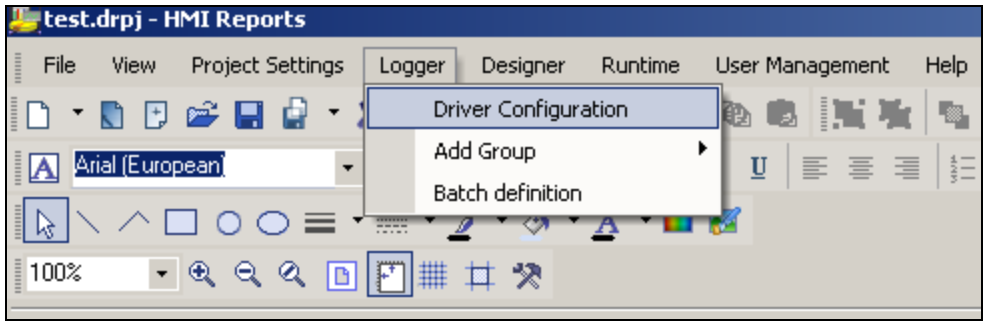

FIGURE 9: HMI REPORTS LOGGER / DRIVER CONFIGURATION

To create a Historian (InSQL) Driver use the **History Driver** dropdown list (Figure 9 below) and select **ODBC History Access**.

2. Click the **Configure** button next to the History Driver field. The Database Definition panel opens.

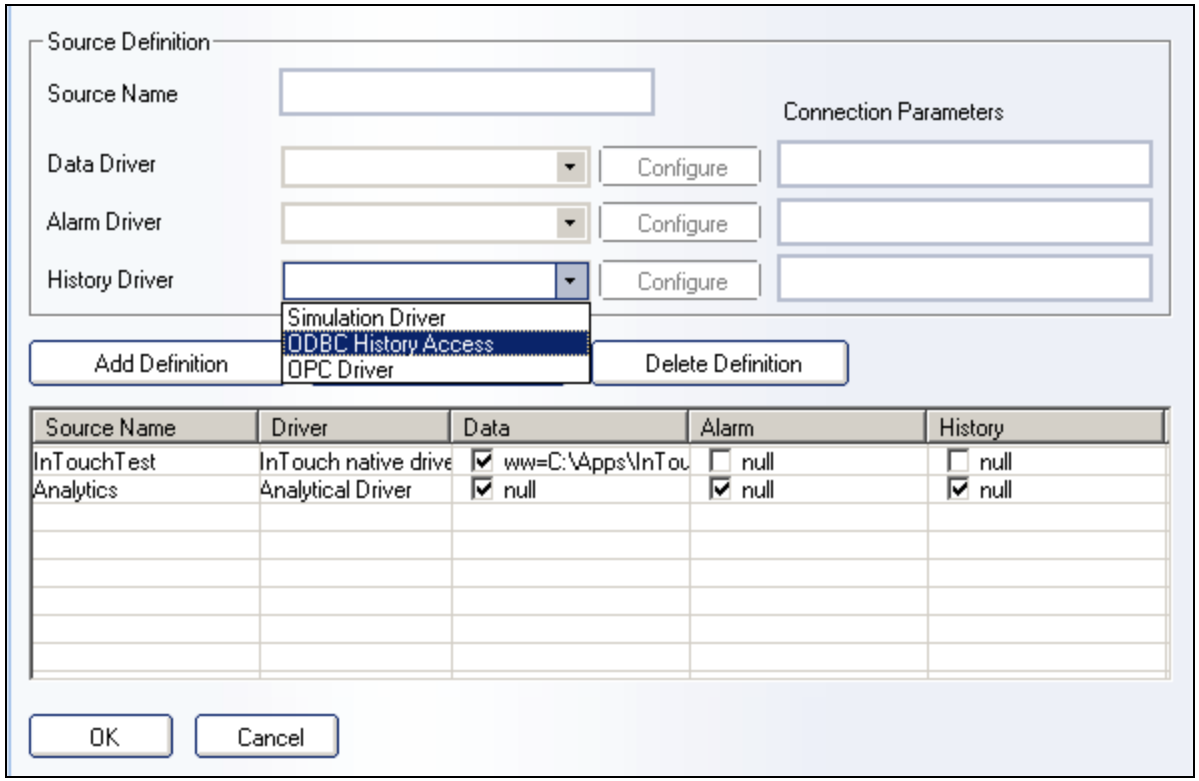

FIGURE 10: HISTORY DRIVER CONFIGURE

3. Select the DSN created earlier from the **DSN File** list and enter the **User Name** and **Password** (SQL).

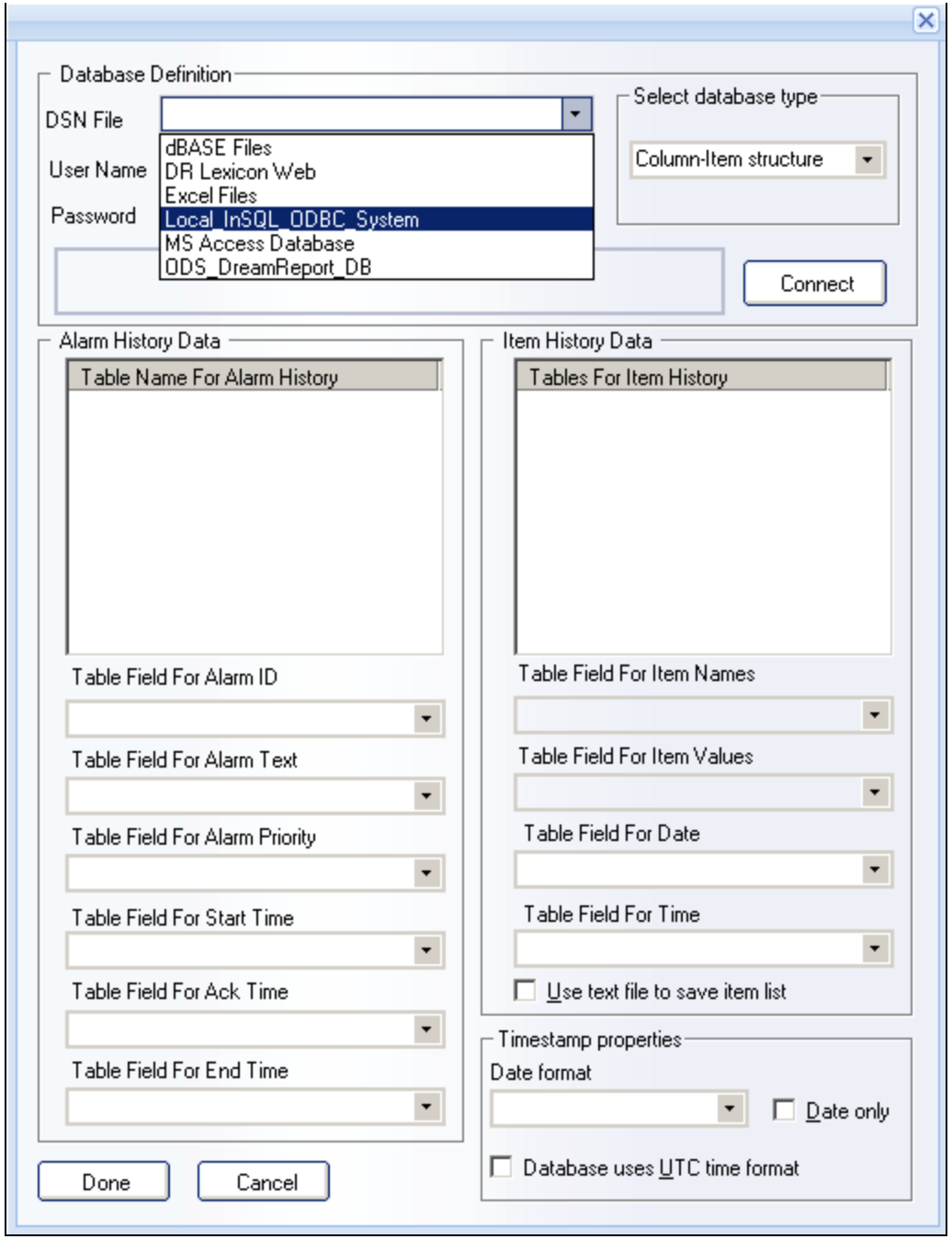

FIGURE 11: DSN FILE SELECTION

4. In the **Select database type** section, select **InSQL database** using the dropdown list (Figure 12 below).

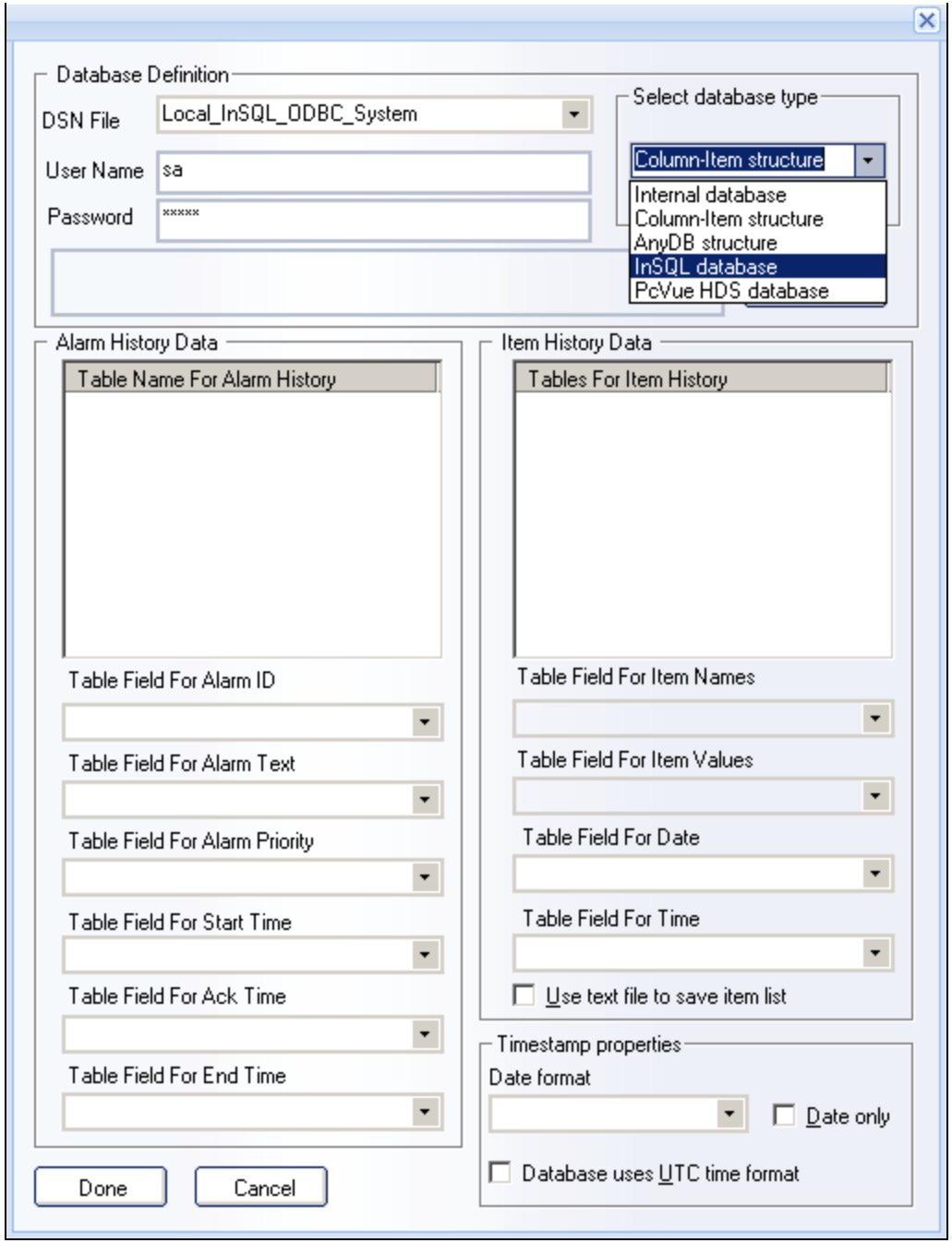

FIGURE 12: SELECT DATABASE TYPE > INSQL DATABASE

5. Click the **Connect** button to make sure the connection is successful. The **Alarm History Data** and **Item History Data** fields are populated automatically.

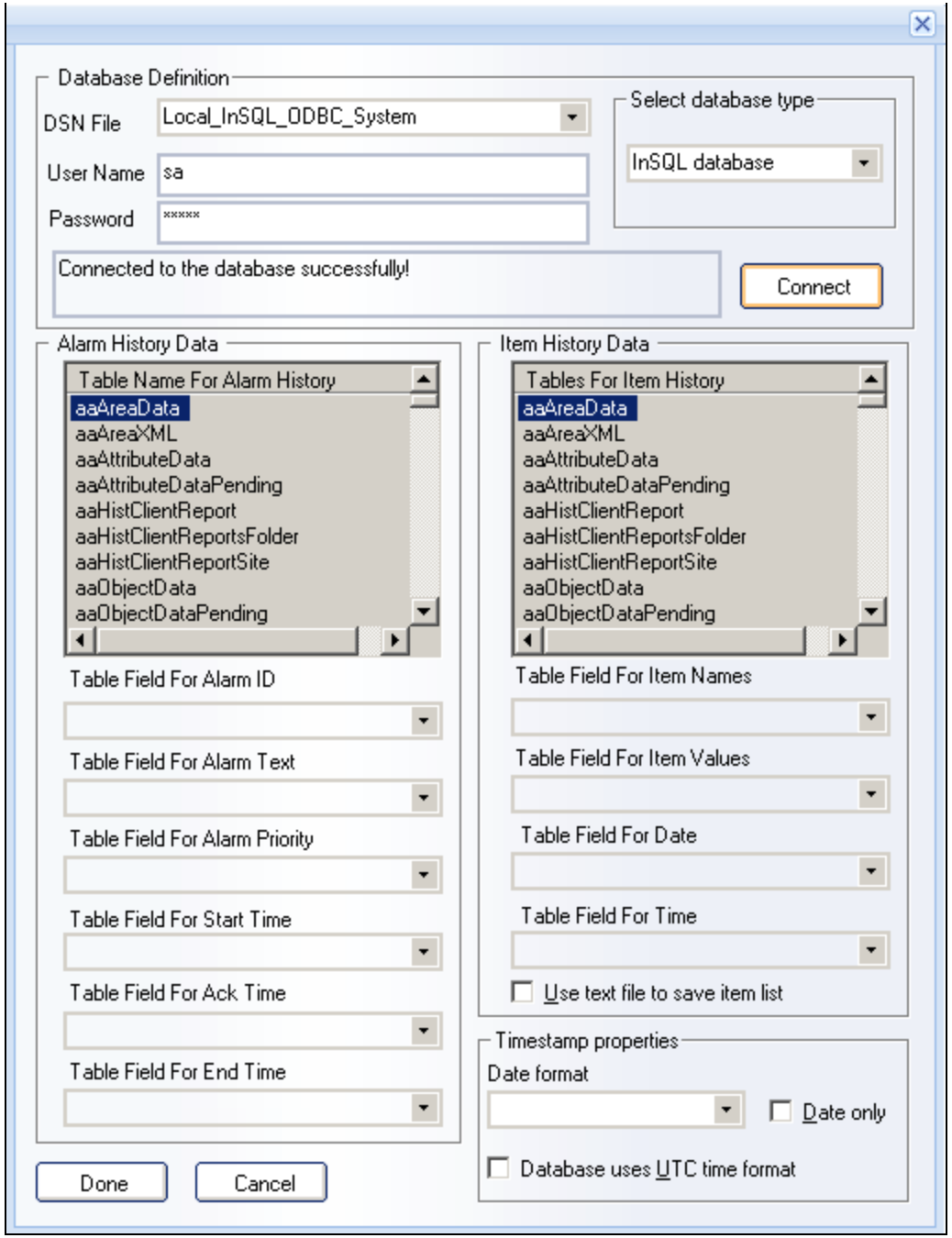

FIGURE 13: ALARM AND ITEM HISTORY DATA FOR INSQL DATABASE CONNECTION

6. Type a **Source Name** in the Source Definition area (any name).

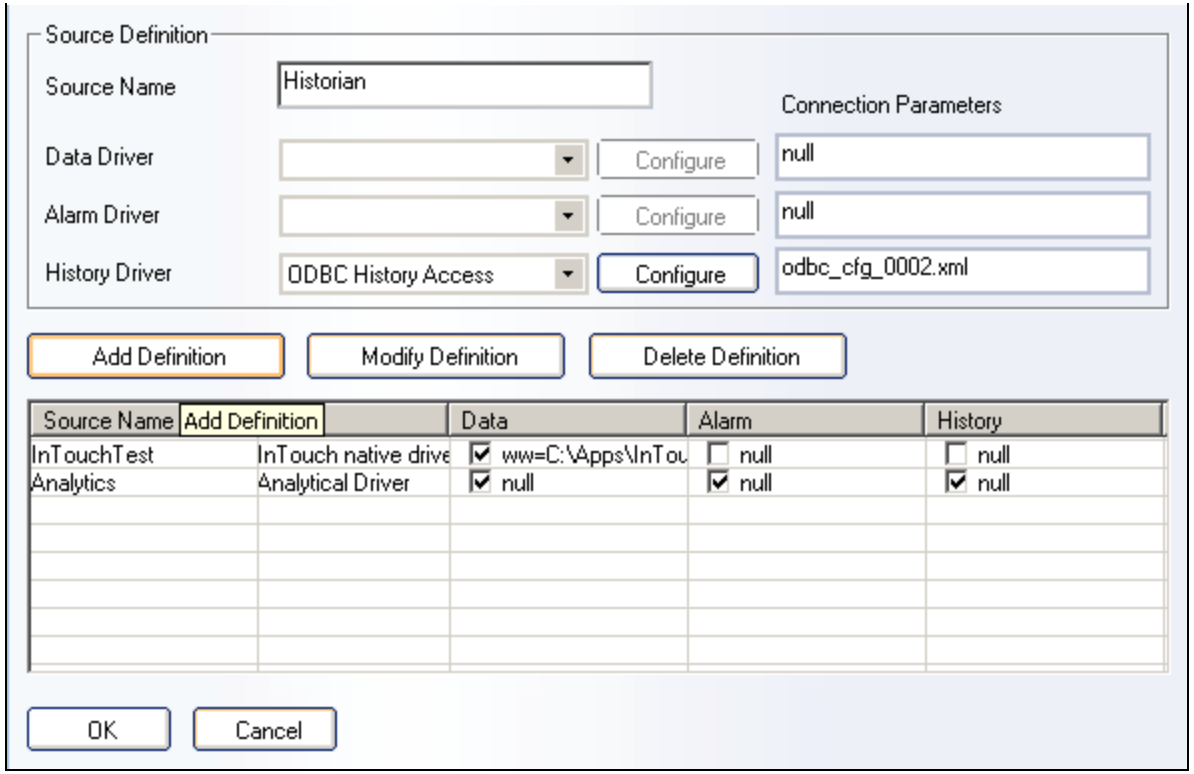

FIGURE 14: ASSIGN SOURCE NAME TO SOURCE DEFINITION

7. Click the **Add Definition** button. The new Definition appears in the **Source Name** column (Figure 15 below).

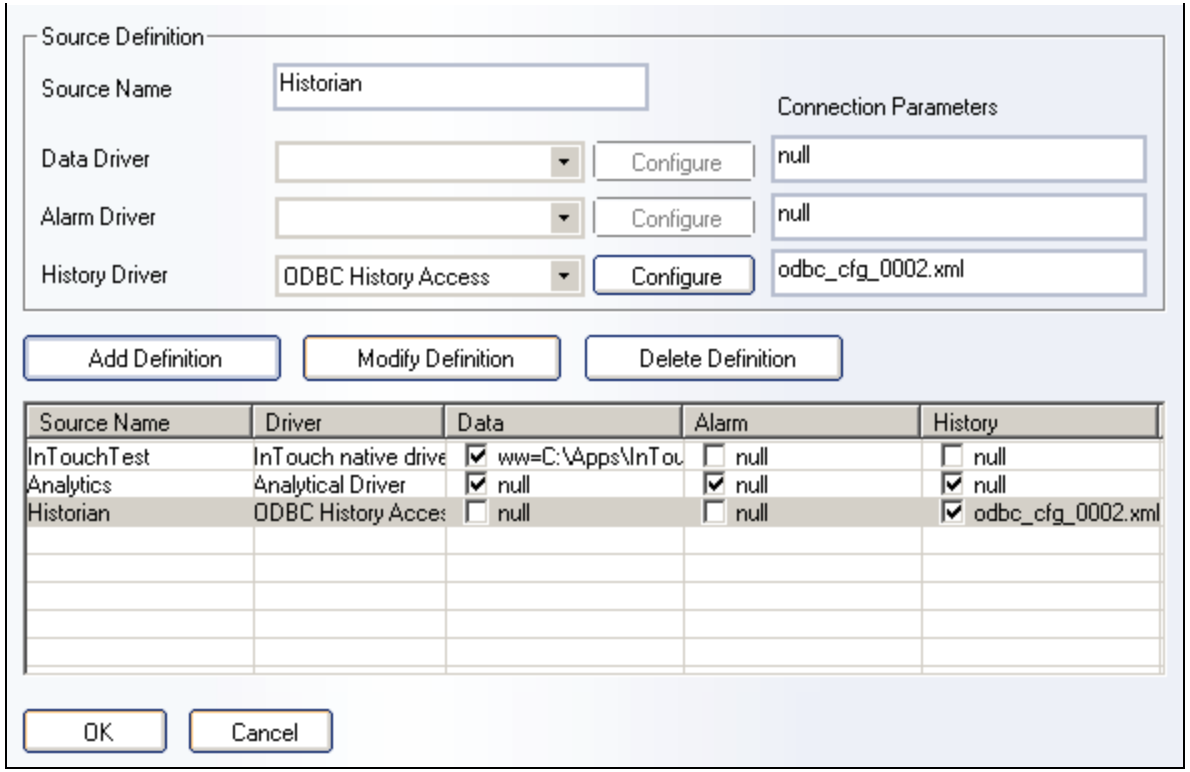

FIGURE 15: ADD DEFINITION

Note: Be sure to click the **Add Definition** button after configuring your Source Definition or the definition will not be saved.

Now you are ready to connect to Historian (InSQL) Data for use in your reports.

Historian Driver Data Definition Configuration

Here is a simple example using a Historian Driver in your Data Definition Configuration.

1. In the Report Designer Studio, create a Report and add the **Item Table** graphical element to the page.
2. Double-click on the table and select **External History Server** in the **Get Data From** section (Figure 16 below).

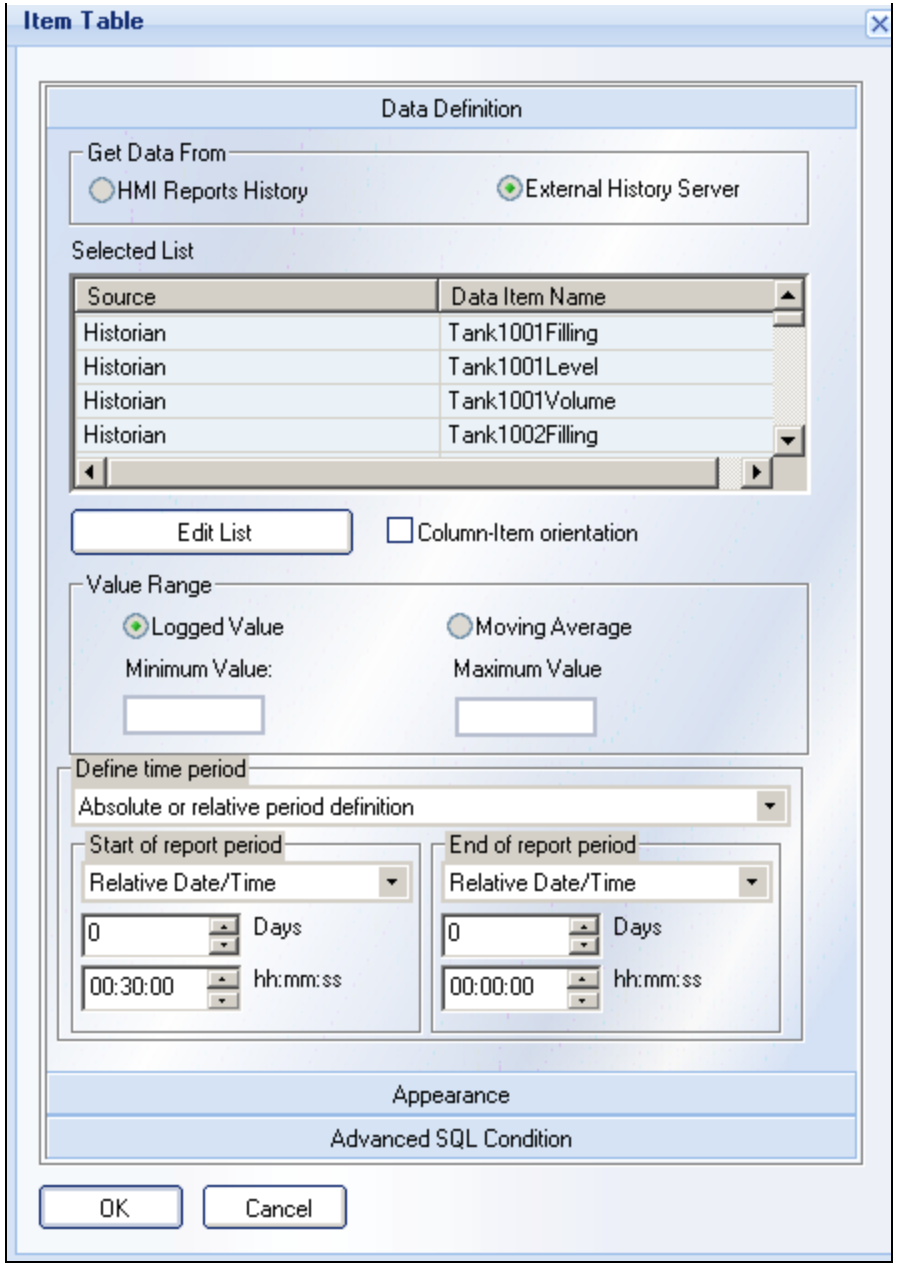

FIGURE 16: EXTERNAL HISTORY SERVER DATA DEFINITION

3. Click the **Edit List** button. The Select Data Items window appears (Figure 17 below).

   • Select Data Source from the drop down list which will contain all History Drivers you've configured (configured above).

   • Select specific items from the Available Data Items and click the Add/Remove buttons to complete your desired Added Data Items list for this specific instance of the item table. Select Ok then Save your report.

- You can use the Item Filter to efficiently locate your data items.

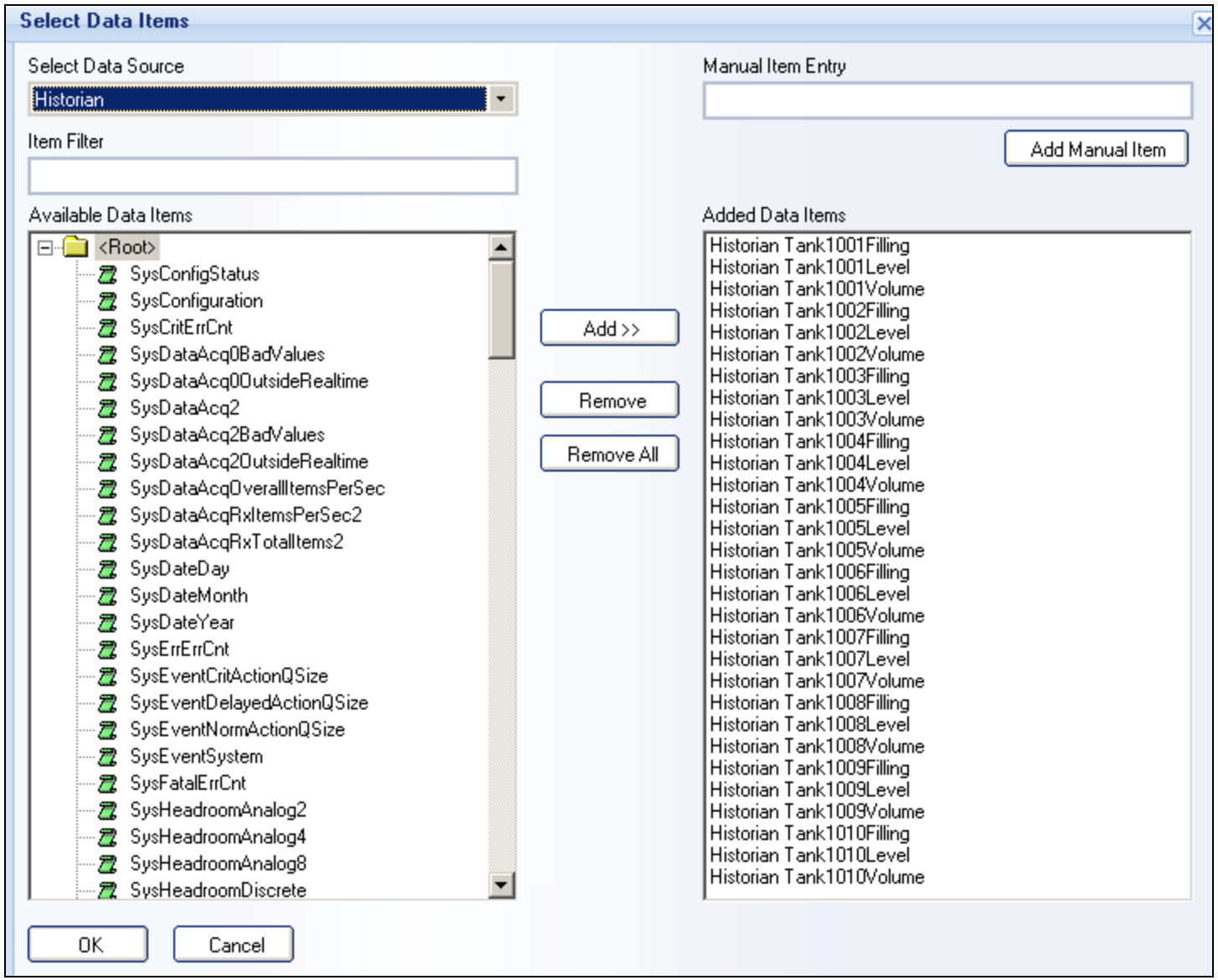

Figure 17: Select Data Items Window

Note: Although the Item table is used as an example, you can use Historical Data in all types of graphical elements.

Now you're ready to open HMI Reports Runtime, load your Project and generate your report.

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