GENESIS32 – Data Mining ActiveX v. AlarmWorX32 Report ActiveX

APPLICATIONS NOTE

April 2010

Description: Guide to determine whether the Data Mining ActiveX or the AlarmWorX32 Report ActiveX is more suitable for your application.
OS Requirement: Win 2000, XP Pro, Server 2003, Vista, Server 2008, Windows 7
General Requirement: GENESIS32 version 9.x; a relational database.

Introduction

The AlarmWorX32 Report ActiveX and Data Mining ActiveX are very similar. Both are designed to read data from a database and show it in tabular format. The AlarmWorX32 Report ActiveX was designed specifically to show logged alarm data while the Data Mining ActiveX is a general tool created to display data from any database. Though both ActiveX controls can display the same information, they are each better suited for different tasks.

AlarmWorX32 Report ActiveX

Pros:

- Display data in a variety of formats: table, bar chart, or pie chart.
- Manipulate filters and sorting in runtime with the toolbar.
- Generate detailed reports with Crystal Reporting.
- Page back and forth through archived alarm tables.

Cons:

- The only method of sending data to machines across the internet is the Remote Database Agent, which can be difficult to configure.
- No SQL Wizards or way to use stored procedures.

Data Mining ActiveX

There is more detailed information on the new Data Mining ActiveX features in version 9.2 in the *Data Mining ActiveX – User Interface Configuration* application note.

Pros:

- Connect either through ADO (directly to the database) or Data Mining (through an OPC-DA server).
- Can work with DataWorX32 Professional Redundancy when using Data Mining.
- Easily send database data to remote machines over TCP/IP, SOAP/XML or DCOM using the Data Mining OPC-DA Server.
- Can create queries using the SQL Wizards and can use custom SQL queries.
- Automatically format cells based on their value.
- Add a second-level header.
- Can export displayed information into a .csv file.

Cons:

- Must use a SQL Wizard or write a SQL query to filter data or specify sorting.
- Cannot easily manipulate filters or sorting in runtime.
- Can only show data in a tabular format.

Alarm Data in the Data Mining ActiveX

Sometimes it may be more appropriate to view your alarm log data in the Data Mining ActiveX instead of the AlarmWorX32 Report ActiveX. One example is when you want to view the data over WebHMI. Both of these ActiveX controls can retrieve data over the web using Remote Data Access, but this can be difficult to set up properly and can have problems if permissions are not configured correctly.

The Data Mining ActiveX has an alternative way to retrieve data. It connects to the Data Mining OPC server, which sends data as an OPC-DA server. This OPC-DA data can be served over GenBroker the same way other OPD-DA points appear on your WebHMI displays.

To configure the Data Mining ActiveX to retrieve alarm data, you can follow these steps:

1. In the properties of your Data Mining ActiveX, select the "General" tab and pick "Data Mining" as the Data Source Type.

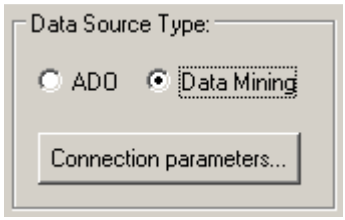

Figure 1 - Data Mining as the Data Source Type

2. Click the "Connection parameters" button.
3. Click "Add Tags".
4. Select the "Database Access" tab
5. Click the "Wizard" button in the lower left.

Figure 2 - Database Access Wizard

6. Hit "Next".
7. Choose "Create new Data Source", then hit "Next".
8. Choose "Create new connection", then hit "Next".
9. Enter a connection name of your choice, then choose the appropriate type for your database and hit "Next".
10. Configure the connection to your database according to the wizard (the exact steps depend on the database type). Hit "Next".
11. Confirm your database information, then hit "Next."
12. Enter a data source name of your choice. You may select "Database Table" to get the entire table or "SQL Command" to select only certain rows. Check the "Enable Multi-rows Dataset" then hit "Next".

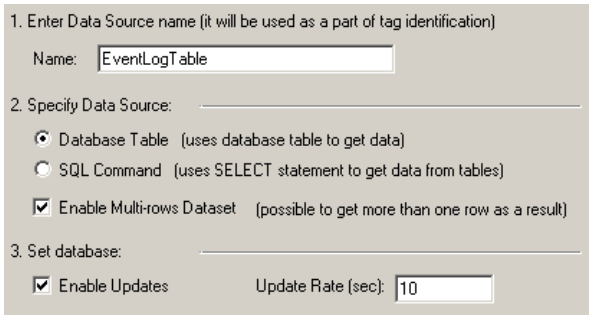

Figure 3 - Creating a Data Source

13. Select your table name (no parameters are necessary), or configure your SQL query, then hit Next.

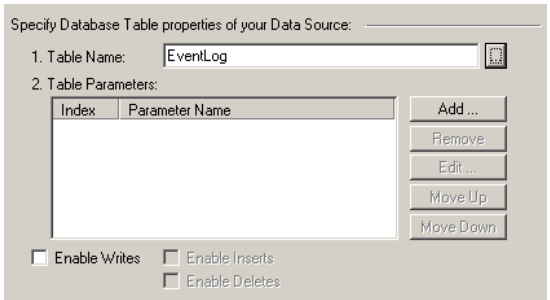

Figure 4 - Selecting the EventLog Table

14. Confirm your data object details and hit "Next", then "Finish" (no static data items are necessary).
15. Select the @@Recordset tag under the database connection and data source you just created.

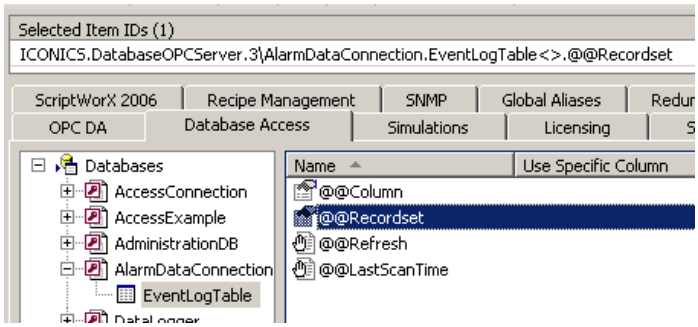

Figure 5 - the @@Recordset Tag

16. Click OK until you are back at the ActiveX properties, then go to the Columns Alias tab. Here you can add aliases to format your columns and create headers for them.
17. Now when you put your ActiveX into runtime you should be able to see your alarm log data. This is actually OPC-DA data, and will be easily available on remote clients. You can create headers on the Column Alias tab of the Data Mining ActiveX properties.

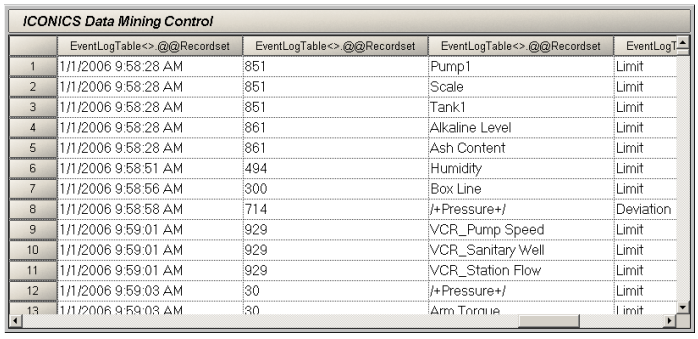

Figure 6 - Alarm Data in the Data Mining Grid

NOTE: Another way to do this is to use **Data Mining Configurator** to do setup first. For more information, please refer to the *Data Mining – Quick Start* application note.