Data Mining – Version 9 Enhanced Features in Data Mining OPC Server

APPLICATIONS NOTE

October 2013

Description: guide to enhanced features in ICONICS Data Mining OPC Server for version 9.
OS Requirement: Win 2000, XP Pro, Server 2003, Vista, Server 2008, Windows 7
General Requirement: N/A

Introduction

The data Mining OPC Server was developed in order to visualize database data in the form of OPC-DA. Some of the new enhanced features concerning both the ICONICS Data Mining OPC Server Engine and its Configurator will be discussed in this document. We will also touch on features existing in previous versions of GENESIS32. For quick start guidance and more information, see the application note entitled *Genesis32 - Data Mining Quick Start* and the other application notes on data mining.

Data Mining OPC Server

Running as a Service

The ability to run DBOPCServer as a service is supported in version 9. The executable's name is "DBOPCServerService.exe". When DBOPCServer is registered as a service, its startup type is "Automatic". It also enables the "Allow service to interact with desktop" option. The service is registered under "DBOPC Server" service name with no description.

> **NOTE:** You can set up the "DBOPCServerService.exe" as service from MonitorWorX or with the command line:
> DBOPCServerService.exe /service

Empty Tags as Good Quality

Good quality is returned when the result of a database query is empty – when no data fits the query conditions. This enables the OPC client like GraphWorX32 to see an empty field returned from a table instead of a bad quality result (asterisks in GraphWorX32).

Data Mining Configurator - Data Sources

Parameters are Already Included in Data Items

When a data item is created for an existing data source, parameters configured for the data source are automatically added to the data item. These parameters are initialized to VT_EMPTY Data Type "<not initialized>". In previous versions, these parameters needed to be added manually.

When adding, changing, or removing parameters in a data source, the child data items will be updated automatically. The user will be prompted to check the data item parameters that were automatically changed by this feature.

New "Read SQL Command" Textbox

A new "Read SQL statement" read-only field has been added to data sources. Previously this information was only available by editing the SQL statement. Note that question marks represent parameters within the command.

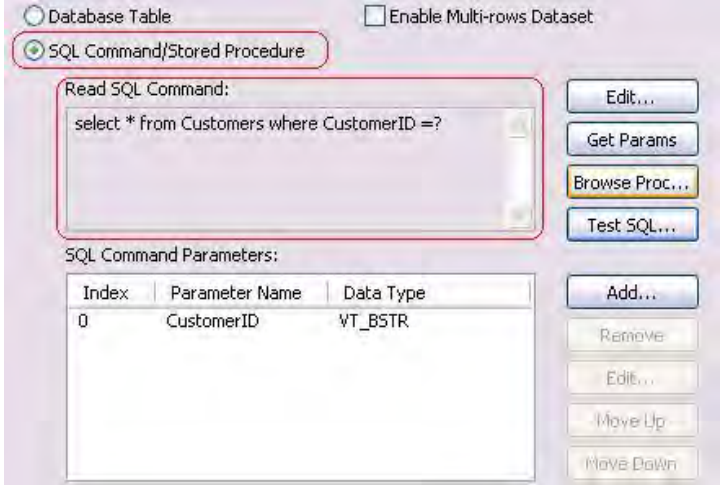

Figure 1 - SQL Command - Read and Test Features

Test SQL Query

We have added the ability to test SQL queries into the "SQL Command/Stored Procedure" configuration option of Data Source items. You can click the "Test SQL" button (see Figure 1) to use this feature. Select a parameter from the list, then click "Edit Parameter" and give it a value to use in the test. Click the "Test SQL Query" button to see the result returned from the database.

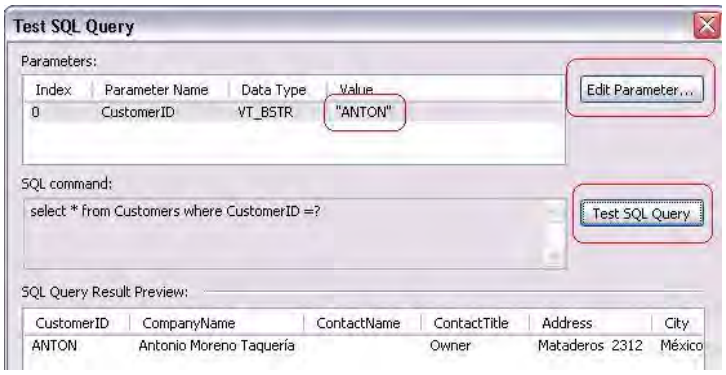

Figure 2 - Test SQL query

Browsing for Stored Procedures

Click the "Browse Proc…" button (see Figure 1) to browse for stored procedures or functions. When one is selected, its body is displayed in the "Read SQL Statement" textbox and its

parameters are displayed in the "SQL Command Parameter" field.

NOTE: System procedures are not available for browsing

Data Mining Configurator - Configuration Wizard

Clicking the "Configuration Wizard" button or going to File → Configuration Wizard will bring up the Data Mining Configuration Wizard. The behavior of the Wizard has been enhanced; namely, the support for Dynamic Tags has been improved. It gives you more options and instructions when creating Data Sources or Data Manipulators. Go through the Wizard to see how easy it is to create a configuration.

Data Mining Configurator – Database Connection

There were certain changes to the Data Mining OPC Server that could not be reflected in runtime without stopping and restarting the Data Mining OPC Server. In the Data Mining OPC Server Configurator there is now a "Restart Connection" button on the data connection level. When clicked, the server will reconnect to the database, apply the changes and possibly update the database queries.

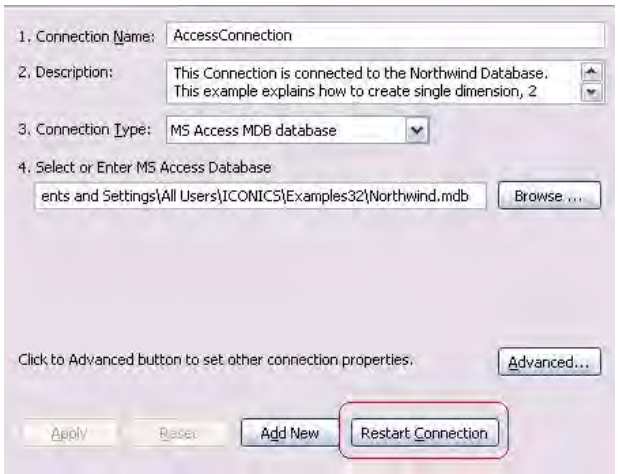

Figure 3 - Restart Connection