

Description: Guide to the features of the ICONICS DataStore OPC Server v3.1

OS Requirement: Win 2000 Pro/Server, XP Pro, Server 2003

General Requirement: installation of the DataStore OPC Server v3.1 or above

Introduction

The ideal OPC Server exposes all data elements (tags) relevant to the device or data source it represents. As an example, an energy monitoring and distribution OPC Server would allow the user to monitor and control switches, valves, pumps and other relevant control objects. An object would have tags for the current process value as well as for set-points, control limits, maintenance indications, and textual information.

Unfortunately, the ideal OPC Server is not always available to today’s automation market and the OPC server only exposes a few of these tags. The DataStore OPC Server allows the user to configure tags available to any OPC Client program. The values of the tags are automatically read/written to and from a database (Microsoft Access *.mdb) and are therefore persistent.

The DataStore OPC Server can also be used as a generic pool of SCADA parameters, which may be useful to control the behavior of the SCADA system. Some examples may be starting or stopping trend logging, trigger reports, trigger scripts, etc. The DataStore OPC Server is an OPC Data Access v2.04 compliant server as well as an OPC Alarm & Event v1.01 compliant server.

Configuration

The DataStore OPC Server allows the user to configure tags and group them in logical folders and sub-folders (OPC Address Space).

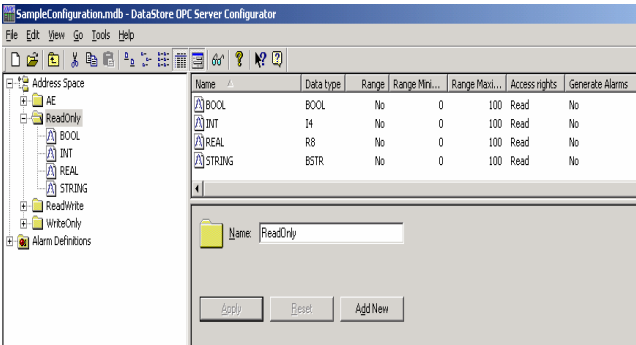


Figure 1 - OPC DataStore Configurator

The tag can represent an Integer (I4), a double precision Float (R8), a Boolean (True/False), or a String.

Optionally, the user can specify range information, access rights, and specify alarm limits. All configuration parameters are saved in a standard MS-Access database.

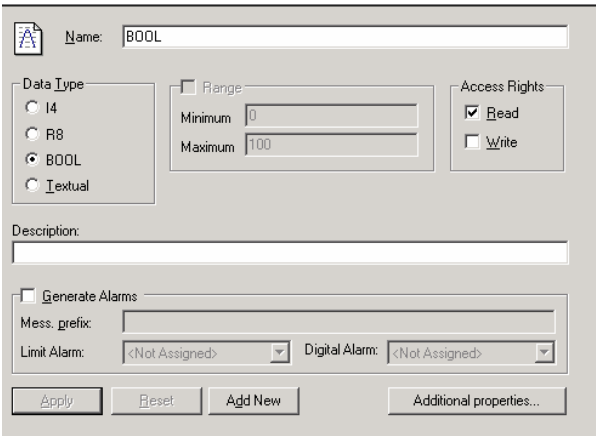


Figure 2 - Tag Configuration

Runtime Operation

As soon as the DataStore OPC Server goes into runtime, it will load its configuration database and make the tags available to the OPC Clients. An OPC client can browse to the OPC Server and select the required tag.

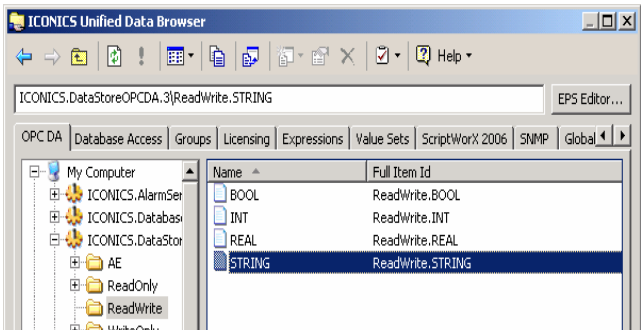


Figure 3 - Data Tag in Unified Data Browser

If the OPC Client writes a new value to the tag, the OPC Server will write it to the DataStore Runtime Database (*.mdb).

Additionally, some VB or C++ programs may be designed to connect to the runtime database and manipulate tag values by writing to the database records directly. The OPC clients subscribed to the DataStore OPC Server will see the changes.

Since the tag values are stored in the database, the values are remembered even if the computer is restarted. This makes the DataStore OPC Server a perfect generic industry standard data pool.