



Unified Data Manager - Registers



April 2010

Description: Guide to configuring registers in the Unified Data Manager.

OS Requirement: Win 2000, XP Pro, Server 2003, Vista, Server 2008, Windows 7

General Requirement: GENESIS32 v 9.2

Introduction

The Unified Data Manager (UDM) enables the centralized management of commonly used Expressions, Value sets, Groups, Alarm subscriptions, Filters, Recipes, and Event triggers across GENESIS32 and BizViz products.

This document will help you understand registers from the configuration point of view and will demonstrate how they are used.

In order to get global overview of all UDM functions you can see either other application notes about this tool or complex UDM whitepaper.

Registers

In general, registers are named variables that all GENESIS32 and OPC clients can use.

If you have used registers inside DataWorX32 then the features of UDM registers will be familiar. Unified Data Manager registers are a subset of the registers available in DataWorX32.

The most significant difference between Unified Data Manager and DataWorX32 registers is that UDM registers are not real OPC tags. UDM registers cannot be accessed without GenClient and the appropriate GenBroker plug-in. This means that 3rd party clients may not be able to access them.

The other differences between UDM and DataWorX32 registers are noted in the table below.

Table 1 - UDM and DataWorX32 Registers Comparison

	UDM Registers	DataWorX32 Registers
Available through OPC	No	Yes
Available through Automation	No	Yes
Switch register	No	Yes
Alias register	No	Yes
Redundancy register	No	Yes
Online changes	Automatic	Manual
Data Propagation	Limited, can be based on tag	Limited, can be delayed
Ranges	No	Yes

NOTE: For Licensing information regarding UDM and DataWorX32 Registers, please refer to the "Licensing – Point Count Calculation" Application Note.

Creating a New Register

1. Launch the Unified Data Manager by going to Start → Programs → ICONICS Tools → Unified Data Manager
2. In the tree-control in the left-hand pane, right-click on Registers and select New → Register Item

NOTE: You can select to create a new folder instead of a new register item. Folders are used to logically organize the registers.

Bridging Registers

1. The default setting of a new register is for Bridging – reading and propagating Input tag to an Output tag where the two tags are not the same.

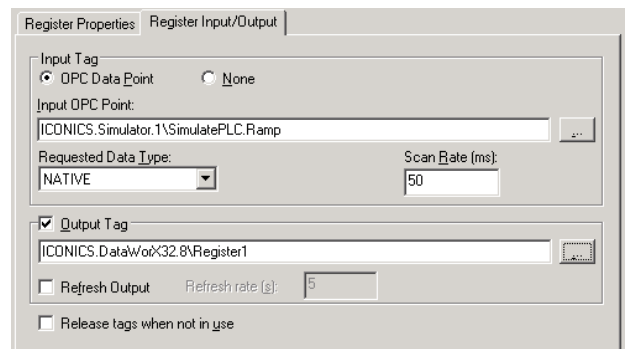


Figure 1 - Register Input/Output for Bridging

2. For the purpose of Bridging you only need to select an Input OPC Point and an Output Tag. Both can be performed by clicking on the appropriate ... button, which opens ICONICS Unified Data Browser (UDB).

NOTE: Checking the "Release tags when not in use" checkbox will prevent bridging from working. This feature disconnects the Input as well as the Output tag when no client is connected to the register.

Aggregation Registers

Aggregation registers are those where the Input OPC Point is the same as Output Tag. It is usually used when you have multiple OPC servers but you want all clients connect to only one server.

For this use you need to disable input updates propagation on the Register properties tab.

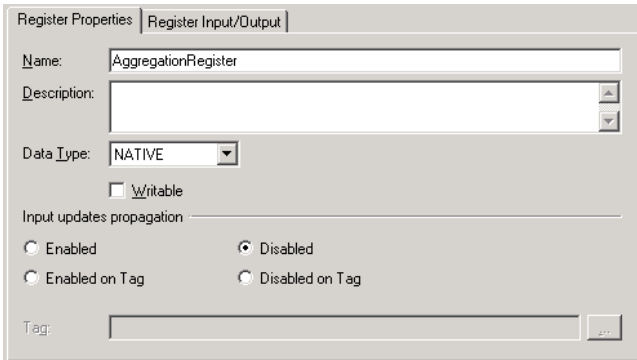


Figure 2 - Register Properties for Aggregation

NOTE: You can also enable/disable this feature based upon an OPC data point value.

Input Registers

If not combined with an output tag, registers usually serve as holding registers or read only registers connected to another OPC point.

1. Uncheck the Output tag checkbox

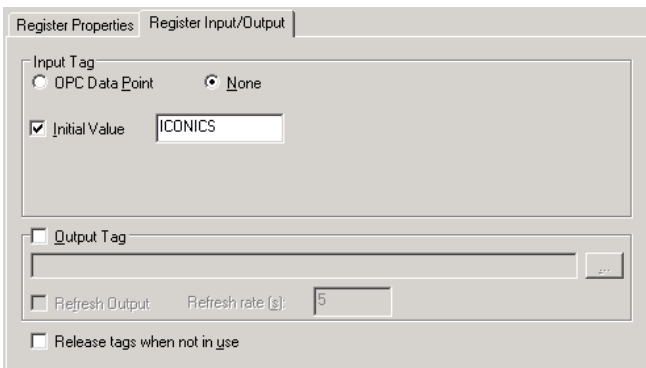


Figure 3 - Register Input/Output for Input Registers

2. Now you have a register that you can use to read the OPC point defined as the Input OPC point.
3. If you want to create a holding register select the “None” radio button. You can decide to define an Initial value.
4. Now, go under Register Properties tab and make the register Writeable.

NOTE: Making a writeable register that has an input OPC tag but no output tag is not recommended. If you enter a value in such register it is stored in the register but the input OPC Data Point value does not change. The entered value is propagated nowhere because there is no tag defined as the register’s output.

Using UDM Registers

You can use the UDM registers in the same way as any other OPC points in your clients with the limitation described at the beginning of this document. When browsing for your registers in Unified Data Browser you should look under UDM Data tab.

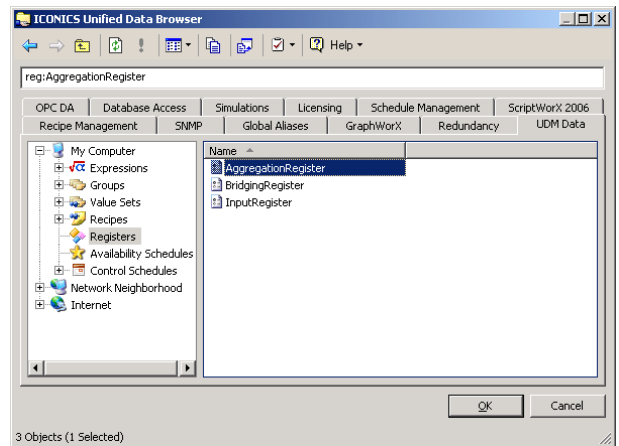


Figure 4 - Browsing for Registers

NOTE: You can always recognize a UDM register point by “reg:” prefix in the point name.

You may have noticed that there is a traffic light icon in the Unified Data Manager’s toolbar. All items in the Unified Data Manager are available and work regardless the status of this light except for registers. If you want the registers to work you need to start this traffic light.