

Description: Guide to configuring and using the Unified Data Manger (UDM).

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

General Requirement: Genesis32 installation

Introduction

Unified Data Manger (UDM) is a centralized approach for managing and configuring commonly used items. You can configure expressions, value sets, tag groups, alarm subscriptions, alarm filters, recipes, event triggers, and registers. Some of these items are exposed as OPC items and can be accessed from ICONICS applications via the Unified Data Browser.

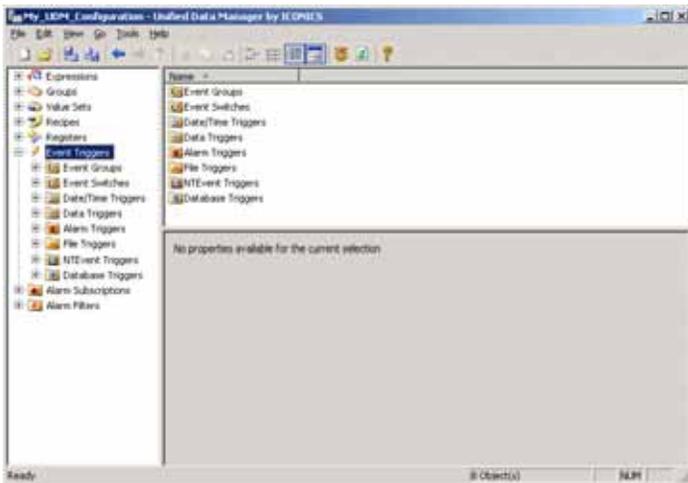


Figure 1 - Unified Data Manager

By using the UDM, you can reduce development time and eliminate redundant work. This document will walk you through the steps of setting up your Unified Data Manager and use the Alarm Subscription that you have setup in GraphWorX32.

Configuring the Unified Data Manger

1. Launch the Unified Data Manager by going to Start → Programs → ICONICS Tools → Unified Data Manager.
2. Create a new configuration database by going to File → New.
3. Follow the configuration wizard to create an MS Access configuration database.
4. You should now have a new configuration database.
5. In the tree-control in the left-hand pane, right-click on Alarm Subscriptions and select New → Alarm Subscription Item.
6. Give the subscription a name and an optional description.

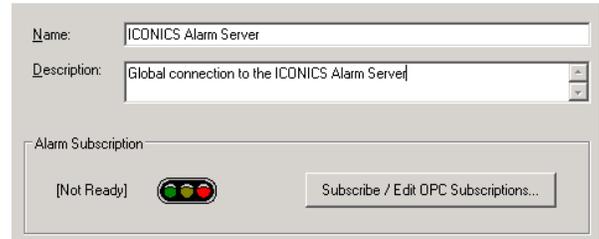


Figure 2 - Alarm Server Subscription - Not Ready

7. Click on the “**Subscribe/Edit OPC Subscriptions...**” button.
8. In the Subscriptions Properties window, click on “**Add**”, the Event Subscription window will automatically come up.
9. Click on the “**Browse**” button to bring up the Unified Data Browse (**UDB**). Select the OPC server that you want to subscribe to and click on “**OK**”.

NOTE: If you would like to make any other subscription edits (i.e. server side filtering) you should do this before clicking on “**OK**” in the Event Subscription window.

10. Change the name of your subscription to something more meaningful and then click “**OK**” to return to your Unified Data Manager configurator.

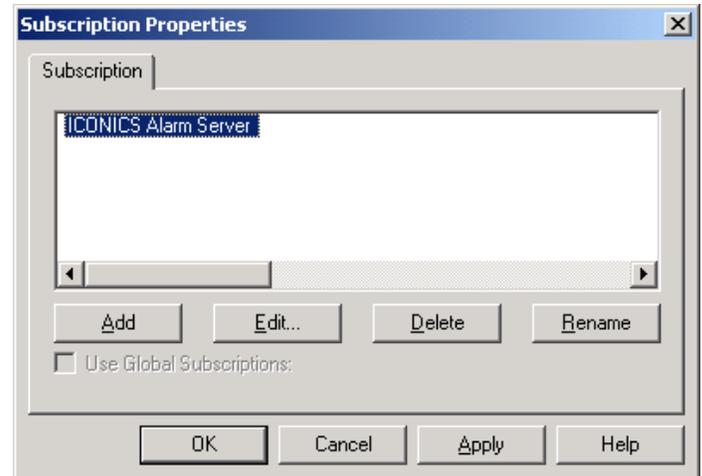


Figure 3 - Subscription Properties

11. You should see a green light for your subscription now. Click on “**Apply**” to save your changes.

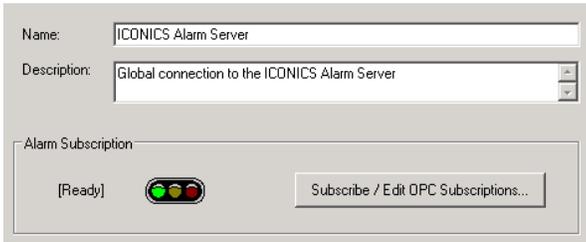


Figure 4 - Alarm Server Subscription - Ready



Figure 6 - Selecting the Global Alarm

Using the Alarm Subscription

1. Launch GraphWorX32 by going to Start → Programs → ICONICS GENESIS32 → GraphWorX32 → GraphWorX32
2. Add an **AlarmWorX32 Viewer ActiveX** into the work space by click on the “ICONICS AWXView32” button.
3. Double-click on the ActiveX to bring up the properties inspector.
4. Click on the **Subscription** tab. There are two subscriptions in there by default: the ICONICS Alarm Server and the Event server.
5. **Delete** the default subscriptions by selecting each and click on the “Delete” button.
6. Check the option “**Use Global Subscriptions**” at the bottom.

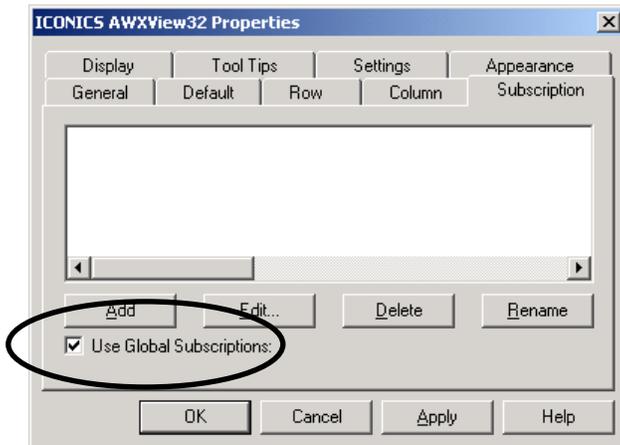


Figure 5 - Alarm Viewer Subscription: Use Global Subscriptions

7. Click on the “**Add**” button. It will bring up the **Unified Data Browser**.
8. Select the alarm subscription you have made in the previous section and click on “**OK**”. Noticed that the name of your subscription is the name of the subscription you have made in the UDM with a prefix of “awxs:” appended to it.

9. Click “**OK**” again to return to GraphWorX32.
10. Go into runtime and you should see alarms from the subscribed alarm server.

UDM Items

You can use most of the UDM items similar to the procedure described in the previous sections. There are two principles of all UDM items:

Configuration in the **Unified Data Manager**
Selection via **Unified Data Browser**

Below is a description of each item in the UDM. If you are more interested in any particular item you may have a look at their respective application notes, where you can find more details about their configuration and use.

Expressions

You can create expressions in the UDM and use them in all other ICONICS applications. Each global expression is implemented as a single expression data tag which recalculates on input values or on trigger data tags. Client applications can access these expression data tags as read/write data tags. Expressions can also accept parameters.

Groups

Group is a collection of data tags that are manipulated as a single item and is represented by a single group tag. Each group tag is treated as a Read/Write variant data type. Any value written to a group tag is written to all the tags included in the group such that all of the tags in the Group have the same value. Group Values are written synchronously to targeted OPC Server(s). Group tags can be accessed in ICONICS applications through UDB.

Value Sets

A Value Set allows you to write preconfigured sets of values into a group of data tags. Any writes to a value set data tag will distribute written values to all data tags included in the value set. Unlike a Group, each tag in the value set will be written with the present value, which could be different from tag to tag. Value set data tags are of string data types and are available as



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Read/Write data tags. Value sets values are written synchronously to target OPC server (similarly to Groups). Parameters are also supported by Value Set data tags.

Recipes

Recipe is a list of “ingredients” that are used to create a product that represents a variation of a specific product type. For each product type, you can have multiple recipes. Each recipe constitutes of ingredients (parameters). Each ingredient corresponds to a data tag. Furthermore you can assign a human readable name against each recipe ingredients.

Recipes can be accessed in GENESIS32 applications using two ActiveX controls called **Tree Explorer ActiveX** and **Recipe ActiveX**. Tree Explorer ActiveX allows you to browse recipes while Recipe ActiveX displays recipe details. For more information on these ActiveX, please refer to the application note entitled *Unified Data Manager - Recipes*.

Registers

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

If you have used registers inside DataWorX32, then the features of UDM registers are a subset of the features available for registers in DataWorX32.

The most significant difference between UDM and DWX registers is that UDM registers are **not real OPC tags**, and UDM registers cannot be accessed without GenClient and the appropriate GenBroker plug-in. That means that no 3rd party clients may access them. To see other limitations you should have a look in the help of UDM or see the related application note.

Event Triggers

Event Triggers are triggers that are executed when a certain condition occurs. Triggers are used by ScriptWorX2010, ReportWorX, and BridgeWorX to perform operations. Event Triggers are subdivided into the following categories.

Events Groups – this trigger allows different type of triggers to be grouped together under one trigger. Event group trigger will fire when an event trigger from its list of triggers is executed.

Event Switches – this contain a list of triggers and an input value tag. A single event trigger from the list of tags is selected among different triggers based on the input value.

Date/Time Triggers – executes an event periodically according to a specified recurrence pattern.

Data Triggers – you can set Data Triggers to go off based on OPC Data source change.

Alarm Triggers – executes an event when a certain alarm of a predefined alarm subscription occurs.

File Triggers – specifies events occur for a selected directory. These event are On File Create, On File Delete, On File Length Change, On File Last Write Time Change, On File Last Access Time Change, On File “Hidden” Attribute Change, On File “Read Only” Attribute Change, On Subfolder Create, On Subfolder Delete, On Subfolder “Hidden” Attribute Change, On Subfolder “Read Only” Attribute Change, and Subfolder Recursive Monitor.

NT Event Triggers – fire when new entries are posted to the Windows event log. You can select from various categories and sub-categories of events you want to monitor.

Database Triggers – fire when changes are detected in specified database tables.

Alarm Subscriptions

An alarm subscription defines a connection to an alarm server. The Alarm Subscriptions tree control in the Unified Data Manager enables you to set up subscriptions to OPC Alarm and Event servers. Alarm Subscription in UDM allows global management of alarm subscriptions. User can define local and global alarms.

Alarm Filters

Alarm filters allow users to filter an alarm subset. The Alarm Filters tree control in the Unified Data Manager enables you to set up alarm filters for subscribed OPC Alarm and Event servers. You can make filters that only filter a specific alarm tag or filters that filter a group of alarms. Creating Alarm Filters in UDM allows global management of alarm filters. User can define local and global alarm filters.