

Description: Guide to using AlarmWorX64 Multimedia

OS Requirement: Windows Server 2003 x64/Vista x64/ Server 2008 x64/Windows 7 x64/ Server 2008 R2 x64

General Requirement: General understanding of GENESIS64, OPC Alarms and Events, and necessary hardware.

Introduction

AlarmWorX64 Multimedia adds multimedia capabilities to your OPC Alarm & Event Servers. You can send out alarm notifications using different multimedia agents to alert necessary parties of the alarm status.

The AlarmWorX64 Multimedia Server subscribes to OPC Alarm and Event servers, and filters out unnecessary alarms to send notification for only the required alarms. The Multimedia Server then triggers the appropriate multimedia agent, which performs the actual notification.

AlarmWorX64 Multimedia provides the following capabilities:

- Multimedia alarm notification
- Configurable media templates
- Configurable personnel schedules
- Alarms subscription to OPC Alarm and Event servers on the local computer or the intranet/internet
- Alarms notification to multimedia agents on the local computer or to agents on the intranet/internet
- Remote configuration through the Workbench

In this Application Note, we will walk you through a simple example of how AlarmWorX64 Multimedia works. You will setup a Popup Media Agent, which will display information about an alarm when it occurs.

Before you begin, please make sure that UAC is turned off on your computer.

Creating Your Own Project

To configure a new AlarmWorX64 Multimedia configuration, please start by creating a new configuration database by performing the following:

1. Open the Workbench from Start → All Programs → ICONICS GENESIS64 → Workbench.
2. Select the AlarmWorX Multimedia Provider. Then from the ribbon select Database → New Database.
3. Follow the instructions for the Create Database Wizard, and make sure the “Include Sample Data” checkbox is unchecked.

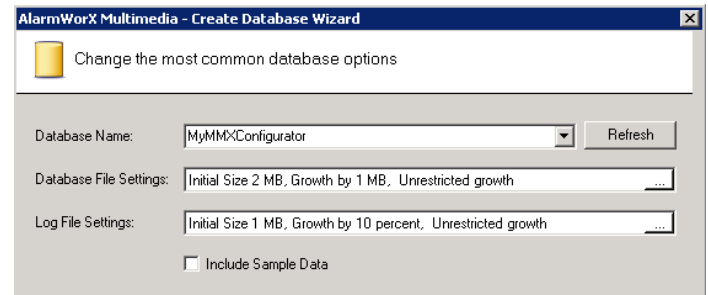


Figure 1- Create Database Wizard

4. Right-click on your new configuration database and select “Make Active”.

Subscriptions

Subscriptions identify connections to OPC Alarm and Event servers. It specifies which alarms the multimedia component should use during runtime.

1. Expand your configuration database and select Alarm Inputs → Alarm Subscriptions.
2. Right-click on Alarm Subscriptions and select “Alarm Subscription” to add a new subscription.
3. Enter a name for the Alarm Subscription.
4. Click on the “Add”  button to add a new Event Point. This will launch the OPC UA browser. If you already have a point subscribed as shown in Figure 2, then you can skip this part and go to the Filters section.
5. Select OPC Classic Servers → My Server → AlarmWorX64 and then click on “OK”.

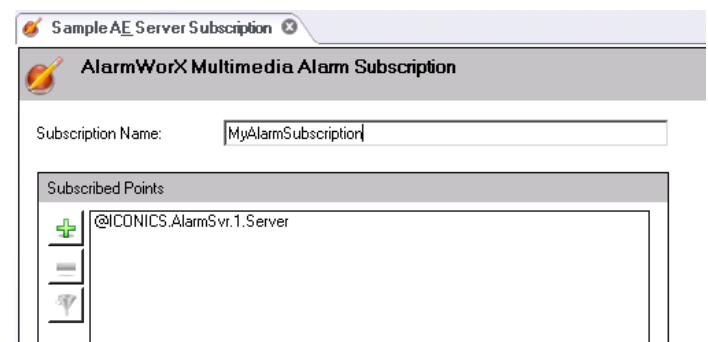


Figure 2 - Subscription to ICONICS AlarmWorX64 Alarm Server

6. Click on the “Apply” button to save your changes.

Filters

Filters allow you to retrieve specific subset of alarms from your Subscription. This will allow triggering certain agents on a specific alarm or group of alarms as needed.

1. Expand your configuration database and select Alarm Inputs → Alarm Filters.
2. Right-click on Alarm Filters and select “Alarm Filter”.
3. Enter a name for the Alarm Filter.
4. Click the “Edit Filter...” button to open the Expression Editor and create your expression. The editor allows you to create and edit complicated Filtering String with the most commonly used expressions.
5. The expression seen in Figure 3 filters for an alarm named “MyAlarm”. You should change this according to your Alarm Server configuration.

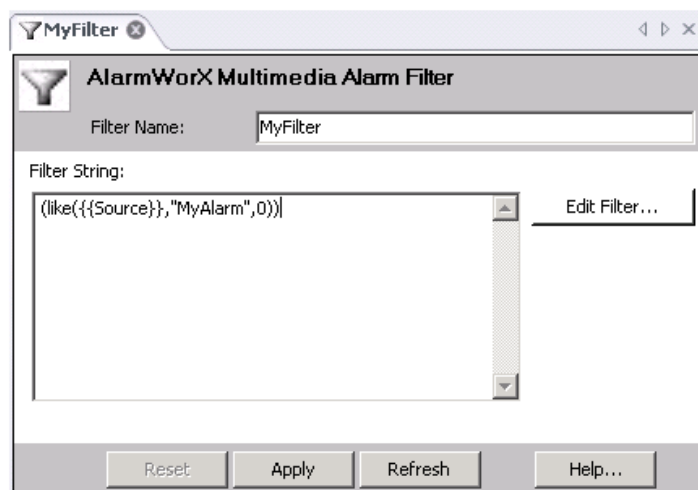


Figure 3 - Alarm Filter for an alarm called "MyAlarm"

6. Click on the “Apply” button to save your changes.

Media Templates

Media Templates define the content that will be used in the different Media Agents.

1. Expand your configuration database and select Configurations → Templates.
2. Right-click on Templates and select “Multimedia Template”.
3. Enter a name for the Template.
4. Select the appropriate Template Type. In this Application Note, we selected “Popup Window”.
5. In the Body field you can click the ellipsis button to open the “Template Definition Wizard”. This wizard allows you to insert attributes of the alarm it is applied to.
6. Select “Alarm Field” in the Select Field Type, and from the Field Name drop down select “Message”.
7. Click on “Insert” and you should see `{{6:Source,80}}` added to the Body field.
8. Repeat this process and add the “Time” field.

9. Adding some plain text to the body. For example, you could have a Body of **Alarm “`{{6:Source,80}}`” occurred at `{{4:Time,80}}`.**

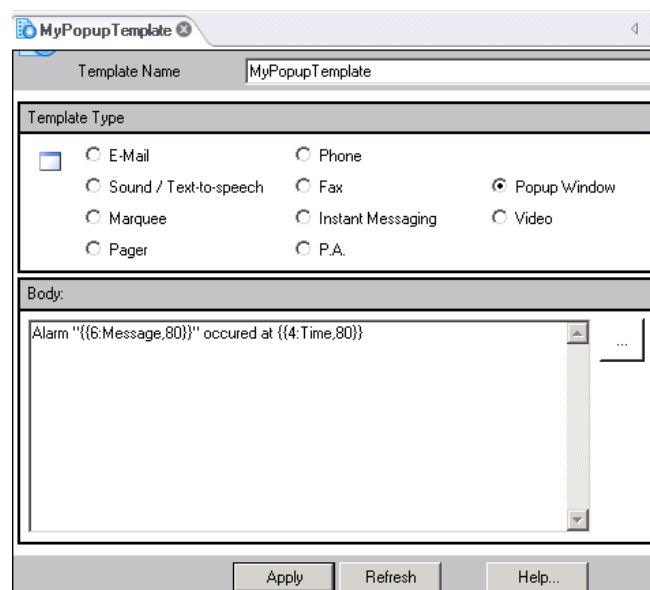


Figure 4 - Example Popup Template

10. Click on the “Apply” button to save your changes.

Media Agents

Media Agents perform the actual notification using assigned media template.

1. Expand your configuration database and select Configurations → Multimedia Agents → Popup.
2. Right-click on Popup and select “Multimedia Agent Setting”.
3. Enter a name for the Popup Agent.
4. Leave the “Node” field empty so the Popup Agent will run locally on your PC.
5. From the “Media Template” dropdown, select the Template you created in the previous section. In this Application Note we selected “MyPopupTemplate”.
6. You can leave the “Scheduling” and “Role” dropdowns empty for this example.
7. Click on the “TEST” button to get an idea of what your Popup Agent will look like.

Alarm Action Sets

Alarm Action Sets tie the previous components together. Using a configuration wide subscription, they are triggered based on the Filter that is applied. Alarm Action Sets can also have several Media Agents execute, and define how often this occurs.

1. Expand your configuration database and select Configurations.
2. Right-click on Configurations and select “Configuration” to add a new Configuration.
3. Enter “Default” in the Name field.
4. Select your Alarm Subscription you created near the beginning from the “Alarm and Event OPC Subscription to be used in this configuration” dropdown list. In this Application Note, we selected “MyAlarmSubscription”.
5. Click on the “Apply” button to save the changes.

NOTE: If you use a name other than “Default” you will have to link this configuration to a node from the “Nodes” section at the bottom of the tree.

6. Right click on the newly created configuration and select “Action Set”.
7. Enter a name for the Action Set. In this Application Note, we selected “MyActionSet”.
8. Select the previously created Alarm Filter from the “Alarm Filter to use:” dropdown list. In this Application Note, we selected “MyFilter”.
9. Set the Action Destination for the “On Alarm” Action Type to locate the Popup Agent that was already created.

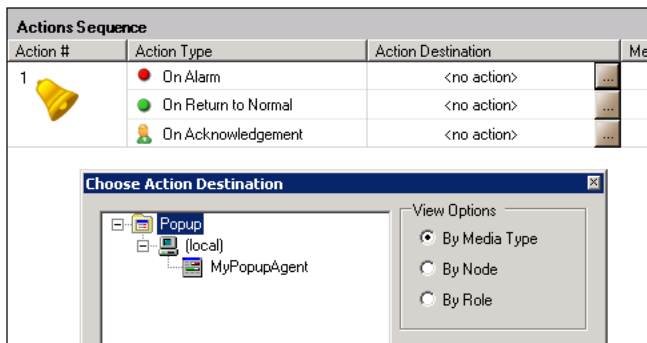


Figure 5 - Assigning an Action Destination

10. Click on the “Apply” button to save the changes. You can leave the other settings alone for this example.

Runtime

Click on the traffic light to start the AlarmWorX64 Multimedia Server Runtime. The green light indicates that the server is running. The server can also be setup to be an automatic Windows Service from GenTray.

When you trigger the alarm, it should generate a popup window, similar to the one in Figure 6, with information regarding it.



Figure 6 - Popup Window Triggered from Alarm

Journal Log

As with AlarmWorX32 Multimedia, AlarmWorX64 Multimedia provides a Journal Log, which can be useful during development of an AlarmWorx64 Multimedia application.

The Journal Log is accessible from the Workbench at all times. It provides detailed information about the runtime engine including:

- Alarms detected
- Action Sets triggered
- Agents triggered
- Success/Failure of Agents
- Action Sets completed

To view the Journal Log and its contents, right-click on Server Journal Log in the Project Explorer under System Tools, and select **View Multimedia Server Log**. If you triggered your Popup alarm earlier, you should have some entries in the Journal Log as shown in Figure 7.

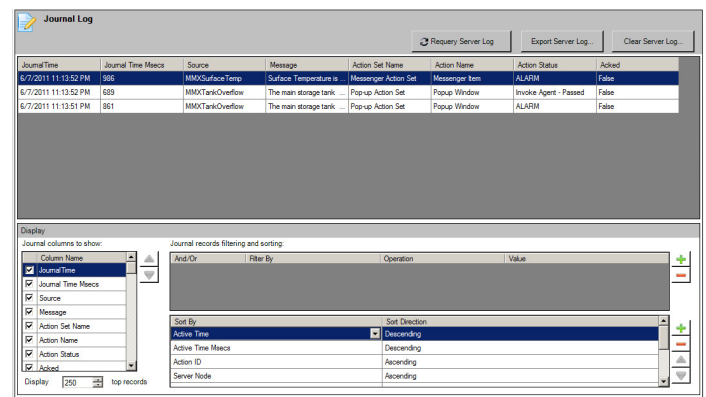


Figure 7 - Journal Table

If there is too much information shown in the Journal Log, you can modify what is shown by utilizing the following features:

- **Journal Columns to show** – Add/Remove columns displayed in the log.
- **Display XXX top records** – Only show the top number of records defined by XXX.

Journal records filtering and sorting - Apply different combinations of filters to show only log entries for a certain Source, or Action Target for example. Sorting can also be applied to the log to order events in descending order so the most recent are on top for example.