



**Description:** Guide to diagnostic and troubleshooting Tools for GENESIS64.

**OS Requirement:** Vista x64/ Windows 7 x64/ Windows 8 x64/ Windows Server 2008 x64/ Windows Server 2008 R2 x64/ Windows Server 2012.

**General Requirement:** Installation of GENESIS64.

## Introduction

With a system as complex and customizable as GENESIS64 you will occasionally run across unexpected behavior that needs troubleshooting. This application note will give you some guidance on using the following troubleshooting tools:

- TraceWorX
- GenEvent Server
- Event Viewer

## TraceWorX

TraceWorX provides online diagnostics and tuning of applications running in the GENESIS64 system. It is designed for system integrators, OEMS, and customers who want tools for doing their own troubleshooting and diagnostics. Trace files provides valuable information that you can present when you contact ICONICS Technical Support.

It is not recommended to have TraceWorX enabled constantly because it may put additional load on your system resources. The best practice is to enable it only when you are actively troubleshooting something and turn it back off when it is not needed.

TraceWorX tracks the runtime activity for each GENESIS64 application and logs the runtime data to a log file. The amount of data logged is filtered by severity level. The log file provides a thorough, color-coded report detailing all activity for the application, including the time, the date, the severity level, and the description of the event or problem. You can launch TraceWorX either directly from the Start Menu or through Workbench. The following example will use Workbench.

1. Launch TraceWorX by clicking on File → Tools → TraceWorX.
2. This action will open a TraceWorX panel as shown in Figure 1.

TraceWorX

| Trace Configuration |                                             |             |               |               |             |            |
|---------------------|---------------------------------------------|-------------|---------------|---------------|-------------|------------|
|                     | Module Name                                 | Trace Level | Module Filter | Custom Filter | Current Log | Max L Size |
| ▶                   | Alarm Logger Point Manager Out-proc Service | None (1000) | Off           | Off           | None        | 0          |
|                     | AlarmWorX64 Logger                          | None (1000) | Off           | Off           | None        | 0          |
|                     | AlarmWorX64 Server                          | None (1000) | Off           | Off           | None        | 1          |
|                     | AnalystX Point Manager Out-proc Service     | None (1000) | Off           | Off           | None        | 0          |
|                     | AssetWorX Point Manager Out-proc Service    | None (1000) | Off           | Off           | None        | 0          |
|                     | BACnet Runtime x64                          | None (1000) | Off           | Off           | None        | 0          |
|                     | Energy AnalystX                             | None (1000) | Off           | Off           | None        | 0          |
|                     | FDDWorX Service                             | None (1000) | Off           | Off           | None        | 0          |
|                     | FrameWorX Server                            | None (1000) | Off           | Off           | None        | 0          |
|                     | GenBroker Client (32-bit)                   | None (1000) | Off           | Off           | None        | 0          |

Figure 1 – TraceWorX Tab in Workbench

**NOTE:** By default, tracing is disabled for all applications.

3. The tab shows you all modules that can be traced and for each application, you may select a different trace level, which filters the results. You may choose out of eight tracing levels starting with None to log nothing and ending with All to log everything. A lower trace level (like Error) will have less impact less on your system performance than a higher level (like Debug Verbose).
4. You can change the Max Log Size if you wish. A size of 0 MB means the file can grow indefinitely big. It is not recommended to leave tracing running for long with a 0 MB limit, as this can cause the trace file to grow out of control.
5. If desired, change the Log File Location to a more convenient place for you to retrieve and view the files later.
6. Click on **Save Changes** once you are done configuring tracing for all applications in question.
7. Run the application in question and reproduce the problem you are experiencing, or let the application run until the problem occurs. Once you have reproduced the error, you should turn off tracing for the application by setting the trace level back to None.
8. Click one of the **Refresh** buttons, and view the trace file by clicking on the button in the Current Log column and selecting **View log....** You can also use this button to pack the file into a zip archive or delete the file.

## GenEvent Server

Almost every GENESIS64 component posts messages to the internal Event Server called GenEvent Server. This server is an OPC AE server to which your clients can subscribe that allows you to view informational messages. These messages contain basic status information about applications, operator changes, etc. The most common way to view them is by means of the AlarmWorX64 Viewer.



1. Open GraphWorX64 and insert an AlarmWorX64 Viewer from the Controls Ribbon, or open Workbench, go to the AlarmWorX64 provider, and configure a new AlarmWorX64 Viewer.

**NOTE:** For more information on how to configure an AlarmWorX64 Viewer, see the application note entitled, "AlarmWorX64 Viewer – Getting Started".

2. Subscribe this control to the built-in "Event Subscription (Read Only)" subscription, or add a new subscription and browse for the **Event Logger**.

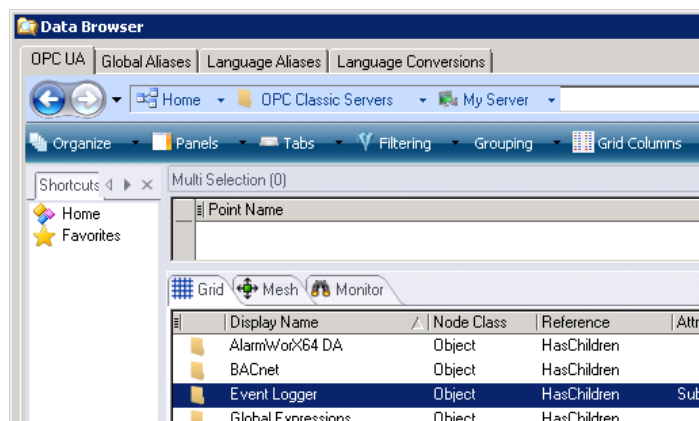


Figure 2 - GenEvent Server Selection in Data Browser

3. Put the display or viewer into runtime to see the events.

| Time / Date        | Tag         | Priority | Type | Quality | Description                                     |
|--------------------|-------------|----------|------|---------|-------------------------------------------------|
| 5/21/2012 12:21 PM | AWXSVr64    | 500      | Good |         | License Enabled                                 |
| 5/21/2012 12:21 PM | AWXSVr64    | 500      | Good |         | ICONICS AlarmWorX64 Server Started.             |
| 5/21/2012 12:20 PM | AWXSVr64    | 500      | Good |         | ICONICS AlarmWorX64 Server Stopped.             |
| 5/21/2012 12:18 PM | AlarmWorX64 | 500      | Good |         | AlarmWorX64 Viewer is correctly connected to... |

Figure 3 - Genesis Events in AlarmWorX64 Viewer

**NOTE:** To store events for future reference you can log them with the AlarmWorX64 Logger. For more information on the AlarmWorX64 Logger, see the help files.

## Event Viewer

For your convenience GenEvent messages are also reported to the Windows Event Viewer so that you can easily store and review them together with other application event messages. All these application event messages are stored in the Application section of Windows Log.

1. Select the **FrameWorX** provider in Workbench.
2. Expand the server branch and double-click **GenEvents**.

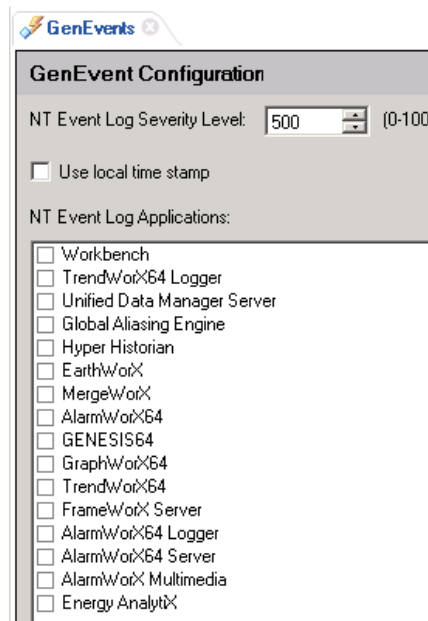


Figure 4 - GenEvent Configuration Tab

3. Check the box for the applications that you want to post events to Event Viewer. If desired, change the severity level, which determines the level of events that are sent to the Event Viewer. Click **Save Changes**.

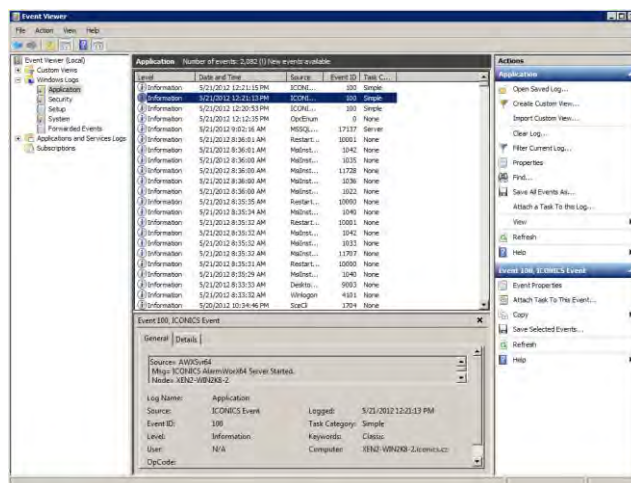


Figure 5 - Event Viewer Application

**NOTE:** All ICONICS application messages have a source of "ICONICS Event".

4. You can now see your events in the Event Viewer, which can be launched from Control Panel → Administrative Tools.