

Description: Guide to use advanced settings for TraceWorX32.
OS Requirement: Win 2000 Pro/Server, XP Pro, Server 2003, Vista, Server 2008, Windows 7
General Requirement: Installation of GENESIS32 9.x.

Introduction

TraceWorX32 provides online diagnostics and tuning of applications running in the GENESIS32 system. It is designed for system integrators, OEMs, and customers who want tools for doing their own troubleshooting and diagnostics.

TraceWorX32 tracks the runtime activity for each GENESIS32 applications and logs the runtime data to a log file based on user-configured trace levels. 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.

This document will describe how to take advantage of some advanced TraceWorX32 settings to customize how information about the application in question is stored.

TraceSetup.ini

The average TraceWorX32 user normally configures TraceWorX32 from the graphical user interface you can launch from the ICONICS Tools group in the Start Menu, as explained in the *TraceWorX32 – TraceWorX32 Quick Start Application Note*.

From the user interface, you can configure which applications you want to enable trace, as well as some other settings like the trace level, file location, and file size.

The TraceWorX32 configuration is then stored in an *ini* file in a common folder. It is by default located in C:\Documents and Settings\All Users\Application Data\ICONICS\TraceSetup.ini

Understanding how this file is managed and used by TraceWorX32 is important in order to be able to work with the advanced settings. In fact, we will need to modify a few *ini* file switches in order to alter these settings. We will see how that can be done shortly. But first, we will analyze how this file changes when enabling tracing on some applications.

In this example, we will suppose we want to enable tracing for GenClient (and GenClient Unicode). Before doing that, we open the TraceSetup.ini file and we look for the section named “[GENBROKER\GenClientU]”. This section will read similar to the lines shown below if you haven’t enabled trace on the module yet:

```
[GENBROKER\GenClientU]
ReleaseTraceModuleDesc=GenBroker Client (Unicode)
```

We will now enable tracing for Gen Client (Unicode), setting the trace level to “Debug (400)” as shown in Figure 1.

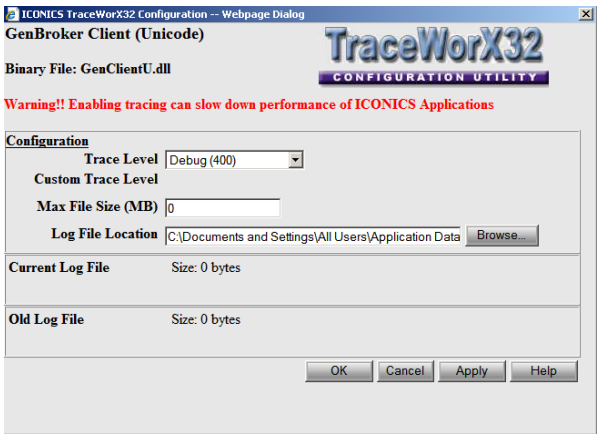


Figure 1 - Enabling tracing on GenClient (Unicode)

If we open again the TraceSetup.ini file after having applied the changes, we will notice the [GENBROKER\GenClientU] section changed to reflect our configuration changes as shown below:

```
[GENBROKER\GenClientU]
ReleaseTraceModuleDesc=GenBroker Client (Unicode)
ReleaseTraceLevel=400
ReleaseTraceMaxFileSize=0
ReleaseTraceLogFile=C:\Documents and Settings\All
Users\Application Data\ICONICS\logs\GenClientU.dll.log.xml
```

Essentially, a few switches have been added to specify the trace level, the file location, and the file growth. Having the MaxFileSize set to 0 means the file can grow indefinitely large.

This explained how the TraceSetup.ini file manages TraceWorX32 standard configuration behind the scene. We can now move forward to advanced configuration.

TraceWorX32 Advanced Settings

In the previous section, we became familiar with how TraceWorX32 settings are stored on disk. We have seen that a few switches get added to the TraceSetup.ini file.

Performing advanced configuration for TraceWorX32 is as simple as adding a few other switches to that file. The available switches will allow you to filter the trace messages depending on several parameters, thus logging only the data you need. You will also be able to configure how many trace files you want to

keep, as well as to use a timestamp in their names to better identify the information they contain.

The list of available switches is as follows:

- ReleaseTraceLogFileMax
- ReleaseTraceTimestampedFiles
- ReleaseTraceFilterCol
- ReleaseTraceFilterVal

We will now discuss each of them in detail.

ReleaseTraceLogFileMax

This option specifies the maximum number of trace files you want to keep. If the number of trace files is greater than this number, then the oldest trace file gets deleted.

Each trace file will have the maximum size specified from the user interface. For example, if the maximum size is 1 MB and the value for this switch is 10, this means you will have no more than 10 files, each of them no bigger than 1 Mb. The current trace file is not counted here, only the “archive” files are counted.

ReleaseTraceLogTimestampedFiles

This is a Boolean value, which allows you to specify if you want to use timestamps inside the file names. This can be useful for archiving trace files and later on understanding when each file was created.

ReleaseTraceFilterCol and ReleaseTraceFilterVal

These two switches need to be used together. They allow you to specify a column you want to filter on, and a value for the filter. The columns you can use are all ones you see in a TraceWorX32 trace file.

ICONICS TraceWorX Log -- version 9.10.178.0				
Timestamp	Level	Message	Process ID	Thread ID
2009-05-25T16:07:39.943	400	InitInstance	2224	4600

Figure 2 - Some of available columns to filter on

For example, you might want to filter on a specific Process ID to only log information related to a running process. This can be useful to trace only the information you need, keeping the log file smaller.

It is important to note that this is not a “client side filter”, meaning it does not simply filter on what you see in the window shown in Figure 2. This filter will prevent information from logging into the trace file; therefore, you cannot simply go back and remove the filter from the *ini* file and expect to see other information from the original log.

Configuration Example

To complete this document we want to present an example of how to use these switches to alter the *ini* file.

```
[GENBROKER\GenClientU]
ReleaseTraceModuleDesc=GenBroker Client (Unicode)
ReleaseTraceLevel=0
ReleaseTraceMaxFileSize=1
ReleaseTraceLogFile=C:\GenClientU.dll.log.xml
ReleaseTraceLogFileMax=3
ReleaseTraceTimestampedFiles=1
ReleaseTraceFilterCol=PNTNAME
ReleaseTraceFilterVal=ICONICS.Simulator.1\SimulatePLC.Sine
```

You should compare above lines with what was generated by the TraceWorX32 user interface we analyzed in an earlier section.

In this case, we have configured TraceWorX32 to use a maximum of 3 log files with a timestamp in their names. We also filter on the “PNTNAME” (Point Name) column to trace only information related to the specified simulated data source.

The other settings are those that you can edit from the user interface. We specify that the file should be created in the root folder (C:\), that all the available information should be logged (provided they comply with the filter), and that the file size should not be over the 1 MB limit.

NOTE: When you make changes to the TraceWorX32 configurator or to INI file, these changes may affect the application loaded. For example, when you make changes in TraceWorX32 for GraphWorX32, you have to restart the GraphWorX32 application for the changes the take effect.

This is an example of the files being generated with such settings.

GenClientU.dll.log.xml	157 KB
GenClientU.dll.log.xml.xml	3 KB
GenClientU20090522145905_0.dll.log.xml	1,025 KB
GenClientU20090522150004_1.dll.log.xml	1,025 KB
GenClientU20090522150049_2.dll.log.xml	1,025 KB

Figure 3 - Trace Files with Timestamp in Their Names