TraceWorX

smar

FIRST IN FIELDBUS

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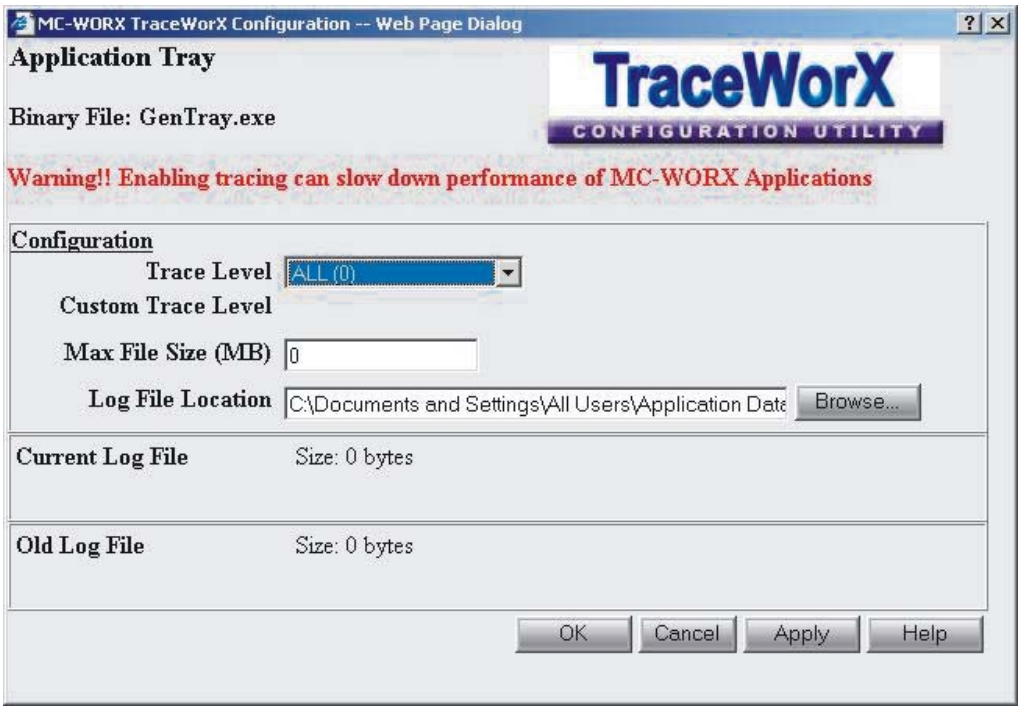
TraceWorX

VERSION 7.1

FOUNDATION

TraceWorX



P V I E W T W X M E

smar

web: www.smar.com

Specifications and information are subject to change without notice.
For the latest updates, please visit the SMAR website above.

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TraceWorX

Introduction to TraceWorX

Using a technology that has been incorporated into all Smar products, TraceWorX provides online diagnostics and tuning of applications running in the ProcessView system. TraceWorX is designed expressly for systems integrators, OEMs and customers who want to have tools for doing their own troubleshooting and diagnostics.

TraceWorX tracks the runtime activity for each ProcessView application 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 a description of the event or problem.

TraceWorX also features several options for reporting issues to technical support. If you are experiencing problems with any applications, the log file deployment options, such as compressing and e-mailing log files, are ideal for tracking and archiving data and sending detailed reports to technical support. Developers can use these reports to identify the source of the problems.

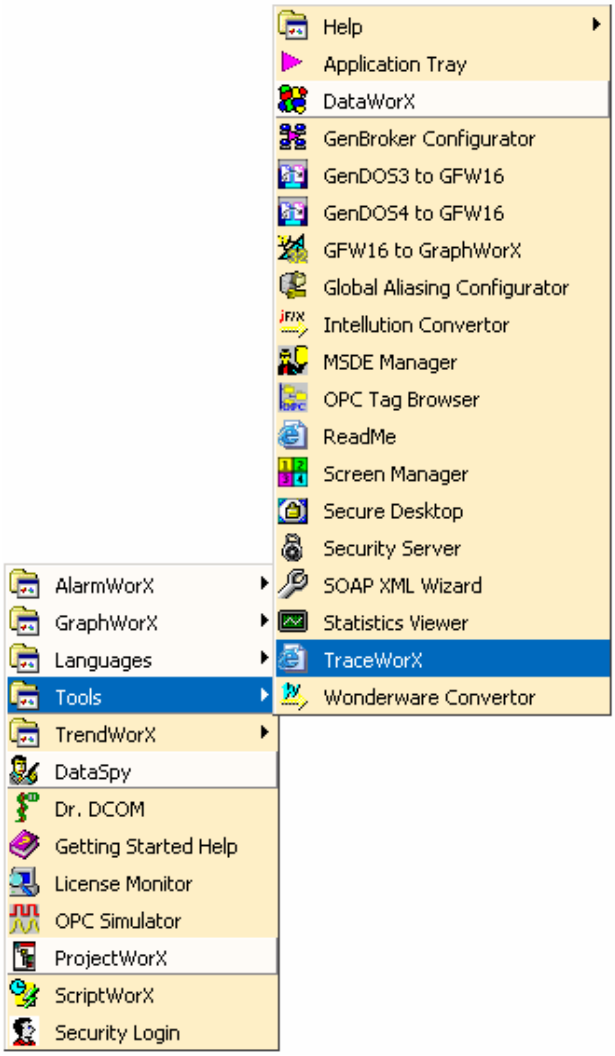
TraceWorX support has been added to the following ProcessView applications:

- AlarmWorX Container
- AlarmWorX Report ActiveX
- AlarmWorX Server
- AlarmWorX Viewer ActiveX
- Timer ActiveX
- Global Aliasing System (GAS) Client
- Global Aliasing System Engine (Server)
- GenBroker Server
- GraphWorX
- GraphWorX Viewer ActiveX
- Gauge ActiveX
- Numeric ActiveX
- Slider ActiveX
- Switch ActiveX
- Vessel ActiveX
- National Instruments ActiveX
- ProjectWorX
- Security Server
- SymbolWorX
- TrendWorX HDA Express Server
- TrendWorX Container
- TrendWorX OLE DB Provider
- TrendWorX Persistent Trending
- TrendWorX Report Server
- TrendWorX SQL Data Logger
- TrendWorX SQL Tool ActiveX
- TrendWorX Viewer ActiveX

Starting the TraceWorX Configuration Utility

To start the TraceWorX Configuration Utility:

1. From the Windows **Start** menu, select **Programs > Smar ProcessView > Tools > TraceWorX.**



Starting the TraceWorX Configuration Utility

2. The **TraceWorX32.htm** file, which contains the Configuration Utility, opens in your Web browser. As shown in the figure below, the Configuration Utility consists of a table with the following columns:

- **Module:** Contains a button for each ProcessView application. Clicking the button for an application opens the TraceWorX configuration dialog for that application. (Not all modules are shown in the figure below.)

Note: You can view ToolTips that contain information about a module by hovering the mouse pointer over the module's button. Each ToolTip lists the name of the binary file, the trace level, the trace log file size, and the maximum size of the trace log file.

- **Enabled:** Indicates whether tracing to a log file has been enabled for each module (**YES** in green type, or **NO** in red type). By default, tracing is not enabled. To enable tracing, you must specify a trace level in the module configuration.
- **Log File Size:** Lists the size (in bytes) of the current trace log file.
- **Binary File:** Lists the name of the .exe, .dll, or .ocx file for each application.

Module	Enabled	Log File Size	Binary File
AlarmWorX32 Logger	NO	0 bytes	AWXLog32.exe
AlarmWorX32 MDI Container	NO	0 bytes	Awx32.exe
AlarmWorX32 Multimedia Server	NO	0 bytes	AWXMMX32.exe
AlarmWorX32 RDS Data Factory Handler	NO	0 bytes	AWXReport32RDS.dll
AlarmWorX32 Report ActiveX	NO	0 bytes	AWXRep32.ocx
AlarmWorX32 Server	NO	0 bytes	awx32svr.exe
AlarmWorX32 Viewer ActiveX	NO	0 bytes	AWXview32.ocx
Application Tray	NO	0 bytes	GenTray.exe
AxTimer32	NO	0 bytes	AxTimer32.ocx
DataWorX32	NO	0 bytes	Dwx32.exe
Event Scheduler	NO	0 bytes	EventScheduler.dll
GenBroker Client	NO	0 bytes	GenClient.dll
GenBroker Client (Unicode)	NO	0 bytes	GenClientU.dll
GenBroker Server	NO	0 bytes	GenBroker.exe
Global Alias Client	NO	0 bytes	GASClient.exe
Global Alias Engine	NO	0 bytes	GASEngine.exe
GraphWorX32	NO	0 bytes	Gwx32.exe
GraphWorX32 Viewer ActiveX	NO	0 bytes	GWXview32.ocx

TraceWorX Configuration Utility

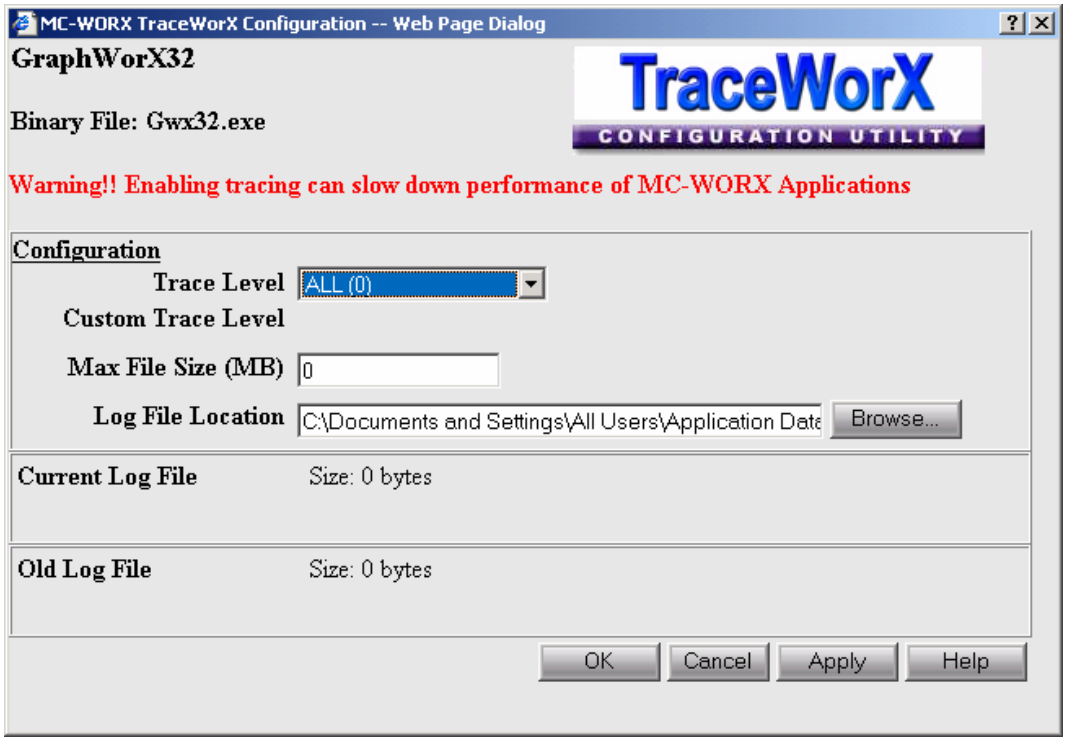
Configuring Trace Parameters for Modules

To configure each module, click the module's button in the Configuration Utility table, as shown in the figure below.

GenBroker Server	NO	0 bytes	GenBroker.exe
Global Alias Client	NO	0 bytes	GASClient.exe
Global Alias Engine	NO	0 bytes	GASEngine.exe
GraphWorX32	YES	0 bytes	Gwx32.exe
GraphWorX32 Viewer ActiveX	NO	0 bytes	GWXview32.ocx
GwxGauge	NO	0 bytes	GWXGauge.ocx
GwxNumeric	NO	0 bytes	GWXNumeric.ocx
GwxSlider	NO	0 bytes	GWXSlider.ocx
GwxSwitch	NO	0 bytes	GWXSwitch.ocx
GwxVessel	NO	0 bytes	GwxVessel.ocx
ProjectWorX32	NO	0 bytes	PWX32.dll
Screen Manager Command Bar	NO	0 bytes	ScrMgrBar.exe
ScriptWorX32	NO	0 bytes	ScriptWorX32.exe

Opening the Module Configuration Dialog Box

This opens the configuration dialog box for the module, as shown in the figure below. Every module uses the same basic configuration dialog, so the functionality is the same for all modules. The example figure below shows the GraphWorX configuration dialog box.

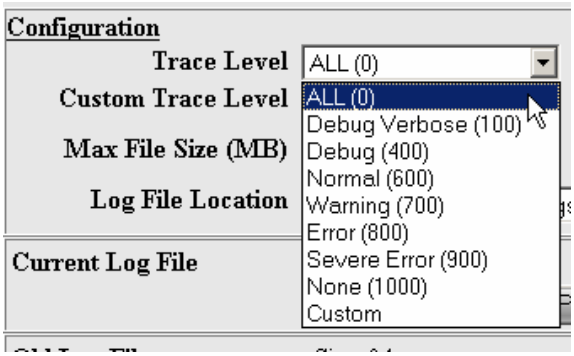


TraceWorX Module Configuration Dialog Box

Enabling Tracing to a Log File

When tracing is enabled for a module, the module's runtime activity is recorded in a trace log file. To enable tracing to a log file, you must specify a trace level in the module configuration dialog by selecting a **Trace Level** from the drop-down list, as shown in the figure below.

Note: Enabling tracing can slow down the performance of Smar applications.



Specifying a Trace Level

Runtime activity is logged to the log file based on the trace level specified. The trace level corresponds to the severity level of the runtime activity for the module. Runtime activity with a severity level greater than or equal to the specified trace level will be logged to the log file. For example, a trace level of **Normal (600)** filters out all activity with a severity level less than 600.

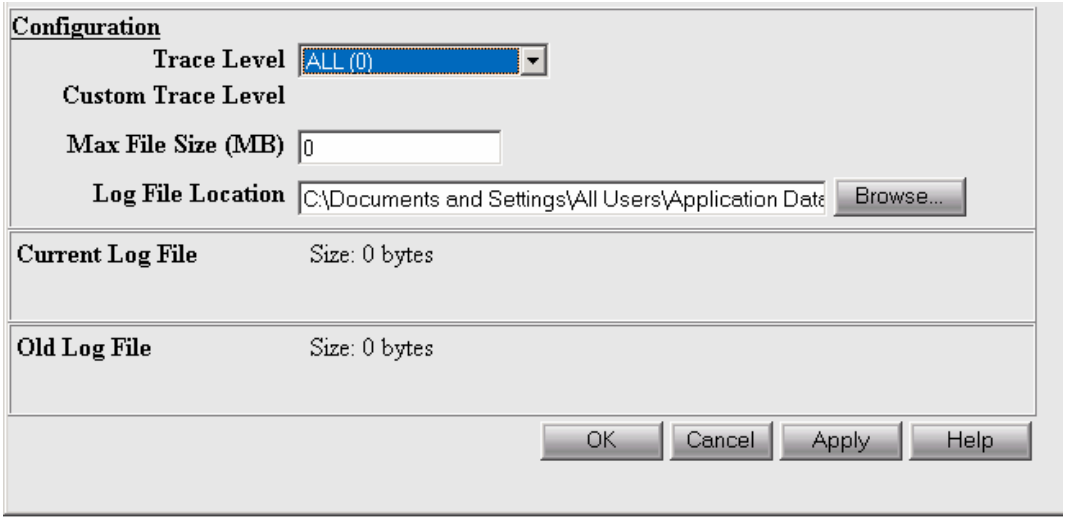
By default, tracing for modules is not enabled (i.e. the trace level is **None**). To log all activity to the log file (without regard to severity), select **ALL (0).** You can also specify a custom trace level by selecting **Custom** from the drop-down list. This enables the **Custom Trace Level** text box, where you can type in a specific trace value.

Configuring Log File Parameters

Once you have enabled tracing for a module, an XML log file is created and runtime activity for that module is logged to the file. To specify a directory location for the log file, click the **Browse** button to the right of the **Log File Location** field on the module configuration dialog box, as shown in the figure below.

If no maximum size for the trace log file is specified, the log file will grow indefinitely. To limit the growth of the log file, you can specify a maximum size (in megabytes) in the **Max File Size** field, as shown in the figure below.

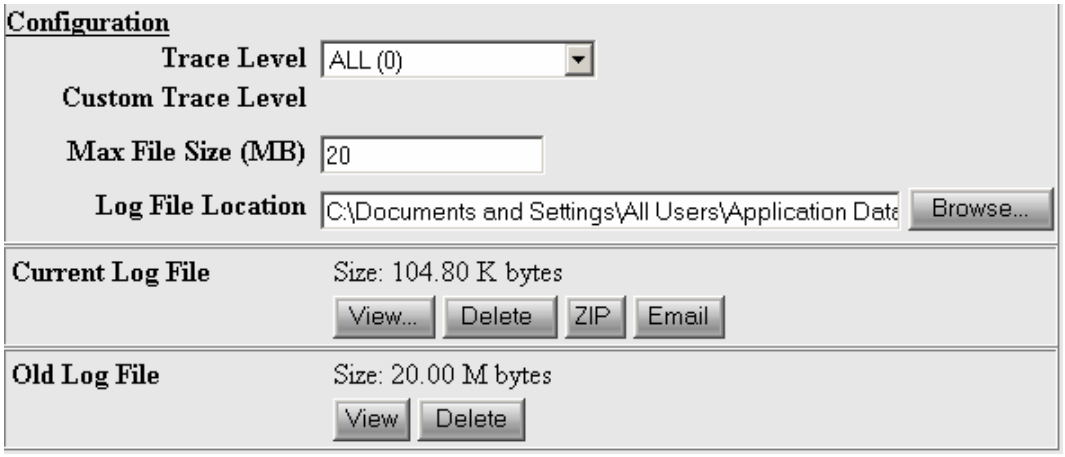
Note: If the **Max File Size** is "0," there is no limit to the log file size.



Setting Log File Parameters

Runtime data are actively logged to the **Current Log File.** The size of the current log file is displayed at the bottom of the configuration dialog, as shown in the figure below. When the log file size reaches the maximum file size, all data from the current log file are copied to an **Old Log File,** the data are expunged from the current log file, and new data are written to the current log file. For example, in the figure below, the **Max File Size** is 20 MB. The current log file has reached the 20 MB limit, so an old log file has been created. As you can see in the figure below, the size of the old log file is now 20 MB because all data have been transferred from the current log file to the old log file.

Note: You can manually delete either log file at any time by clicking the **Delete** buttons.

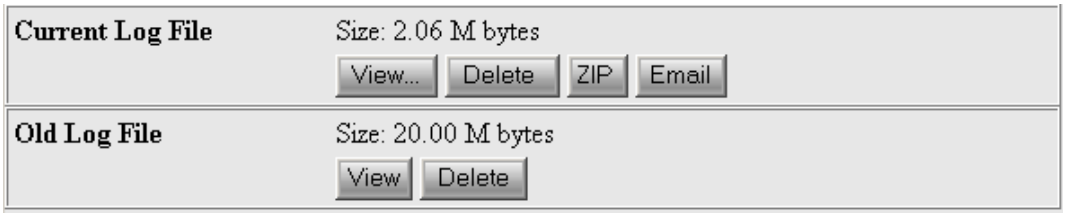


Current Log File Size Exceeded

Viewing the Trace Log File

To see the current log file or the old log file, click the **View** buttons at the bottom of the configuration dialog, as shown in the figure below.

Note: To view current log file statistics, you must refresh the TraceWorX Configuration Utility display in your Web browser window.



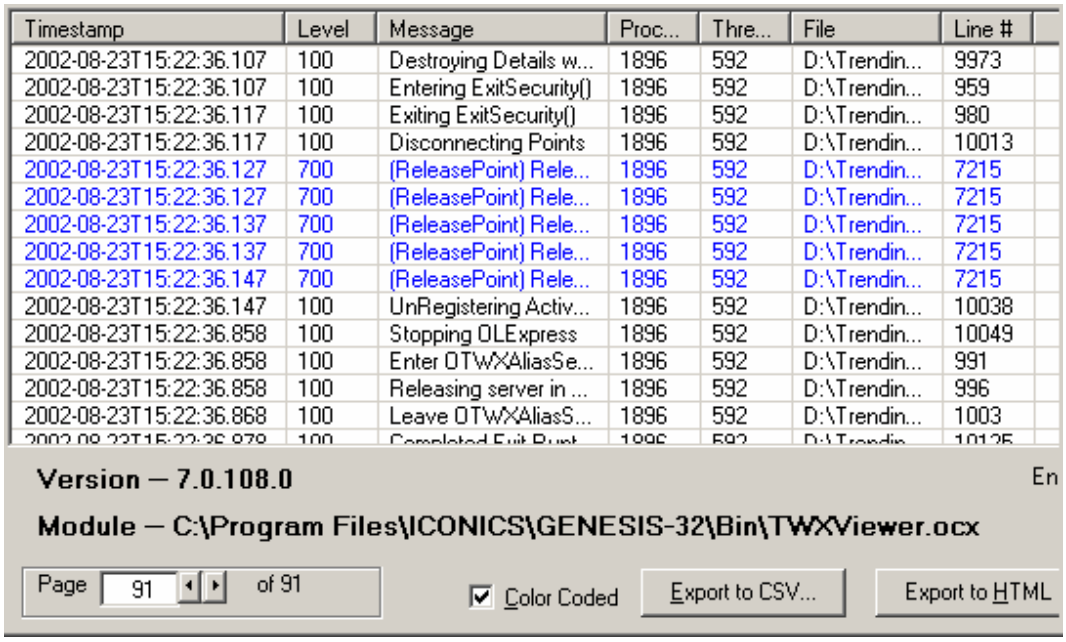
Viewing the Log File

A progress window appears as the log file loads, as shown in the figure below.

Note: Large log files may take a considerable amount of time to load.

Loading the Log File

The log file opens, as shown in the figure below. The file consists of a table with multiple columns listing runtime data for the selected module, including the time, the severity level, and the activity message. Because log files often contain several hundred and even thousands of rows of data, each log is divided into pages with 100 rows each. To browse between pages, click the left and right arrow buttons at the bottom of the dialog, as shown in the figure below. You can also type in a specific page number in the **Page** text box. If the **Color Coded** check box is checked, rows of data with are flagged by colored text based on the trace (severity) level, as shown in the figure below.



TraceWorX Log File

Log File Deployment

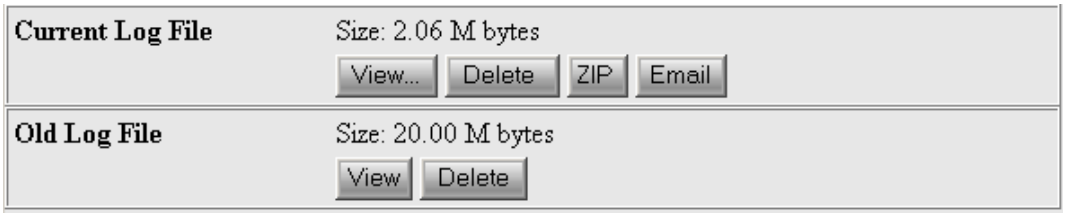
TraceWorX features several options for saving and deploying log file data. If you are experiencing problems with any applications, the log file deployment options are ideal for archiving data and sending detailed reports to technical support. Developers can use these reports to identify the source of the problems.

By clicking the **Export to CSV** button or the **Export to HTML** button in the log file, you can save the log file data to a Microsoft Excel .csv file or to an HTML page, as shown in the figure above.

You can also archive the current log file by clicking the **Zip** button on the configuration dialog, as shown in the figure below. The log file is compressed and saved as a zip file.

Clicking the **E-mail** button opens the default e-mail client for your system and enables you to send the log file as an attachment to an e-mail message.

Note: The **E-mail** button is invisible if no default e-mail client is found in your Windows configuration.



Viewing the Log File