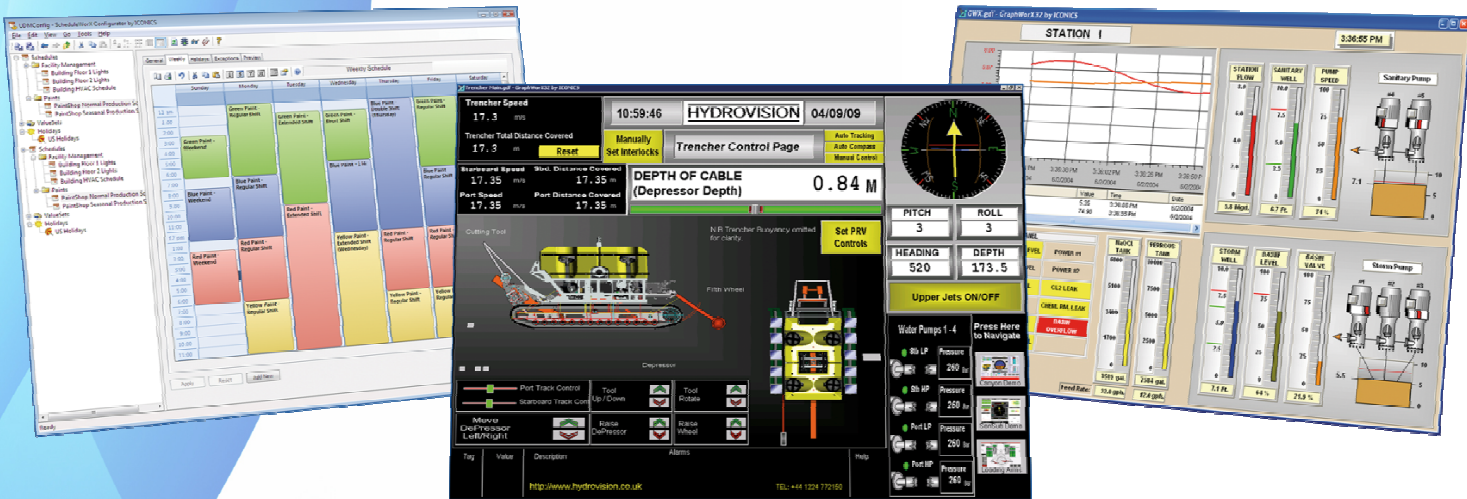




GENESIS 32™

What's New in GENESIS32 V9.2
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Microsoft
GOLD CERTIFIED
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GENESIS32™ V9.2 Enhancements

New in Version 9.2:

With the release of GENESIS32 V9.2 new modules have been added to the GENESIS32 Suite of applications. Some of the new components are included in the GENESIS32 Standard product others are sold optionally.

- TrendWorX32 SQL Query Engine
- BACnet Connectivity – Optional Product
- WorkBench32 – Optional Product

AlarmWorX™32 V9.2 Enhancements

Summary

AlarmWorX32 Viewer:

- Enhanced the AlarmWorX32 Viewer to support a comparison acknowledge. This type of acknowledge allows the user to pick a string and an alarm field (i.e. area) to acknowledge. This allows the user to pre-create displays that only allow acknowledgement to an area.
- Enhanced the AlarmWorX32 Viewer adding an option to disable flash on cells. To enable this option, set 'Disable Override Flash' on the default tab. When this setting is enabled, any cell that has enabled override text color or override background color will not flash.
 - With setting enabled:
 - override text color - only cell background flashes.
 - override color - only cell text flashes.
 - override text color and override color - cell does not flash.
- Enhanced the AlarmWorX32 Viewer adding support for priority-based colors via automation. The new methods added are:
 - boolean AddRowSeverity(short Id, long LowSeverity);
 - boolean RemoveRowSeverity(short Id, long LowSeverity);The alarm viewer must be in configuration mode (ExitAnimate()). The method returns true on success.
- Enhanced the AlarmWorX32 Viewer adding support to allow the User to set how many digits can be shown after the decimal point if scientific notation is not enabled.
- Enhanced the AlarmWorX32 Viewer's automation interface to support configuring Beep, Flash, Enabled, and Speed. The following new methods were added:
boolean SetRowBeep(short Id, long LowSeverity, boolean bBeep, short iFreq)
boolean SetRowFlash(short Id, long LowSeverity, boolean bOn, short iFreq)
Id is alarm type (not an enum so it supports vbscript natively)
LowSeverity – number between 1 - 1000
bOn - on / off
iFreq - 0 – 2 (may change in the future)
Alarm = 1,
Acknowledge = 2,
Unacknowledge = 3,
Operator = 4,
Tracking = 5,
Normal = 6,
CLEAR 7
- Added a configurable option to the AlarmWorX32 viewer to bypass (not implement) the support for Global Aliasing and Language Aliasing. Previously, this feature was always enabled, even if the user was not using aliasing. To achieve faster startup of the Alarm viewer, the user can now disable its support for aliasing (if they are not using aliasing). Disabling aliasing support can be done by setting the following Alarm Viewer IcoSetup.ini setting:
 - disableAlias=1
- Enhanced the AlarmWorX32 Viewer adding support for loading configuration files using Global Aliasing.
- Enhanced the AlarmWorX32 Viewer to support generating an event when a

LoadSaveFile for a URL is done.

- Enhanced the AlarmWorX32 Viewer's automation interface adding support for configuration of fonts. The following new methods were added:
boolean SetRowFont(short Id, long LowSeverity, IFontDisp* Font);
IFontDisp* GetRowFont(short Id, long LowSeverity);

AlarmWorX32 Alarm Indicator:

- Enhanced the AlarmWorX32 Alarm Indicator adding support for relative paths, making it easier to go from WebHMI pages to GraphWorX32 pages.
- Enhanced the AlarmWorX32 Alarm Indicator to disable / grey-out the "Set Properties" menu option when it is in the run-time mode of operation.
- Enhanced the AlarmWorX32 Alarm Indicator to support setting the working directory for launching displays.

AlarmWorX32 Container:

- Enhanced the AlarmWorX32 container to support VBA 6.5.

AlarmWorX32 Logger Configurator:

- AlarmWorX32 Logger configuration can now be done remotely and over the Web using the new WorkBench32-based AlarmWorX32 Logger Configurator.
- Added configuration settings (GUI changes) to the AlarmWorX32 Logger configurator for the new v9.2 archive settings and for the new v9.2 printer redundancy settings
- Enhanced the AlarmWorX32 Logger Configurator to automatically add a 'localhost' to new configuration databases.

AlarmWorX Logger:

- Improved the overall performance of the AlarmWorX32 Logger's redundancy support. Changes include a new watchdog subsystem and state engine that can detect a failure in the active alarm logger and can switch the system to the backup alarm logger in less than 1 second in typical situations.
- Made significant improvement to the AlarmWorX32 Logger's support for archiving, especially for handling very large (abnormally large) archive tables. For better support of archiving, five archiving modes are now supported:
 - Standard (Archive Mode = 0) – Performs iteration through database.
 - Features Supported: Archive on Size, Archive on Time, Archive table size limited. Archive table time limited.
 - Database Supported: MySQL, SQL, Access, and Oracle.
 - Performance Time: Unknown,
 - Active Table Size Limit: 1 million to 1.5 million records.
 - View (Archive Mode = 1) – Reserved for future use.
 - Features Supported: Archive on Size, Archive on Time, Archive table size limited.
 - Database Supported: Current SQL, Future MySQL, and Oracle.
 - Performance Time: approx 2 min 49 sec to move 700,000 records in 100,000 record chunks
 - Active Table Size Limit: greater than 1.5 million records
 - Cons: Memory intensive.
 - Requires application of patch:
<http://support.microsoft.com/kb/926292>
 - Fast Archive (ArchiveMode = 2) – uses SQL triggers
 - Features Supported: Archive on Size, Archive on Time, Archive table size limited.

- Database Supported: SQL 2005, SQL 2008
- Performance Time: approx 2 min 40 sec to move 700,000+ records in 100,000 record chunks
- Active Table Size Limit: greater than 1.5 million records
- Cons: Limited to SQL 2005 or later
- Set Time (ArchiveMode = 3) – Archives once daily. All records are moved at time of archive
 - Features Supported: NA
 - Database Supported: SQL 2005, SQL 2008
 - Performance Time: Unknown
 - Active Table Size Limit: greater than 1.5 million records
- Daily Table (ArchiveMode = 4) – Creates one new archive table once each day. Records are archived each archive period based on Standard mode archive.
 - Features Supported: Archive on Size, Archive on Time, Archive table size limited. Archive table time limited.
 - Database Supported: SQL 2005, SQL 2008
 - Performance Time: Unknown
 - Active Table Size Limit: greater than 1.5 million records
- Enhanced the AlarmWorX32 Logger adding support for scheduling of the Archiving function. This feature moves all of the records from active table. It can be invoked via the following settings:
 - On Time (enables feature)
 - Hour of day (hour that that archive should occur on)
 - Archive Period (period for the archive task to run)
- Note, enabling this feature disables all other archive modes. TimeOfDay is not an exact setting. It is an hour check that occurs when the archive task runs. By default this check occurs once an hour. It is recommended that the archive period be reduced appropriately when using this feature.
- Enhanced the AlarmWorX32 Logger adding support for indexing to the database to improve the performance.
- Enhanced the AlarmWorX32 Logger adding support for the use of redundant printers for the printing of alarms. The AlarmWorX32 Logger can now use SNMP to monitor the status and health of the printers it is using and can switch to a backup printer if the primary printer goes offline.
- Enhanced the AlarmWorX32 Logger adding support for a setting to optionally squelch repeated events with same state. This can be useful for situations when an alarm is ACTIVE and communications to the alarm server goes down and recovers while the alarm is still ACTIVE. When the communications are restored, we would normally get ANOTHER event in the Alarm Log table for the SAME alarm, saying that the alarm is active again. This can cause issues for productivity analytics applications that need to close out all active alarm records when it detects an alarm return-to-normal occurs. The new "squelch" setting turns on a filter that filters out the repeat Alarm Active events.
- Enhanced the AlarmWorX32 Logger adding support for additional tracing, especially in the area of table creation and logging.
- Enhanced the AlarmWorX32 Logger adding support for reporting the state of SQL Server to the GenEvent server.
- Enhanced the AlarmWorX32 Logger adding checking to the time / date entries to verify they are valid to prevent potential crashes that could result from non-supported time / date formats.

AlarmWorX32 Report ActiveX

- Enhanced the AlarmWorX32 Report ActiveX's automation interface adding support for the new method "ShowFiltersDialog":
- Enhanced the AlarmWorX32 Report ActiveX to show an image with an hourglass (instead of an empty grid) when the display is getting loaded
- Added two new properties to the AlarmWorX32 Report ActiveX for turning on/off the scroll bars (HScrollBarVisible and VScrollBarVisible) and two checkboxes to the "Grid Configuration" property page for this.
- Enhanced the AlarmWorX32 Report ActiveX's Web Access field to support Global Aliasing

AlarmWorX32 Server Configurator:

- AlarmWorX32 Server configuration can now be done remotely and over the Web using the new WorkBench32-based AlarmWorX32 Server Configurator
- Enhanced the AlarmWorX32 Server Configurator adding support for Alarm templates.
- Enhanced the AlarmWorX32 Server configurator adding support for the following new configuration settings:
 - Enable Clear – enables the optional new alarm clear function
 - Delay on Alarm Only
 - Exclude Equal To
- Enhanced the AlarmWorX32 Server configurator adding support for Tooltips for viewing the tags and expressions.
- Enhanced the AlarmWorX32 Server configurator adding support to show base text columns when viewing alarms by area. Added all columns except the source template columns. The new columns are virtual columns. That means the data for these columns must be loaded manually. Note, this can slow-down the application if there are large amounts of data. Note, when the change is made in the configuration it is not automatically exposed to the Area items (need to run global refresh).
- Enhanced the AlarmWorX32 Server configurator adding support for a new configuration field (Alarm-Tree Writes Enabled) for the Alarm-Tree view ActiveX control.

AlarmWorX32 Server:

- Enhanced the AlarmWorX32 Server adding support for Alarm Templates.
- Enhanced the AlarmWorX32 Server's support for TLA (Trigger Level Alarms). The previous value attribute was added to TLA alarms. In addition, a new OPC DA point was added named "TLA_Previous_Value".
- Enhanced the AlarmWorX32 Server adding write support for the following OPC DA Tags:
 - RLM_RTNTText
 - LIM_RTNTText
 - DIG_RTNTText
 - ROC_RTNTText
 - TLA_RTNTText
 - REV_RTNTText
 - Alarm.BaseText

Note, the write behaves in the same manner as the writes to message text entries. Also note the DA writes are not written to the database.

- Enhanced the AlarmWorX32 Server adding support for logging "time to respond". The time to respond is the amount of time elapsed from when the

alarm goes active and the time the alarm is acknowledged. An extra attribute and DA tags were added for TimeToRespond for all 6 types of supported alarm types. By putting this support in the AlarmWorX32 Server, the TimeToRespond value can be used by any OPC AE client including the AlarmWorX32 Logger.

- Enhanced the AlarmWorX32 Server adding support for TimeInAlarm as an extra attribute and as an OPC DA tag. The TimeInAlarm units are in seconds.
- Improved the overall performance of the AlarmWorX32 Server's redundancy support. Changes include a new watchdog subsystem and state engine that can detect a failure in the active alarm server and can switch the system to the backup Alarm server in less than 1 second in typical situations.
- Enhanced the AlarmWorX32 Server adding support for an alarm range ">" (greater than) check. This is in addition to the previously supported ">=" (greater than or equal to) check.
- Enhanced the AlarmWorX32 Server adding support for an optional "Alarm Clear" feature. When this feature is enabled, alarms must be "cleared" by the user before they will disappear (i.e. be removed) from the Alarm Viewer displays.
- Enhanced the AlarmWorX32 Server's OPC DA interface adding support for OPC DA tags for related values.
- Enhanced the AlarmWorX32 Server adding an option to disable the delay on Acknowledge and clear operations.
- Added the capability to disable the use of aliasing and security in the AlarmWorX32 Server, giving the user the ability to significantly improve performance when these features are not being used. To turn off language and global aliasing, use the following IcoSetup.ini setting:
DisableAlias=1
To turn off security checking, use the following IcoSetup.ini setting:
DisableAckSecurity=1
- Enhanced the AlarmWorX32 Server's OPC DA interface adding support for the following new tags:¹
 - UnAked – Write of 0 acknowledges all unacknowledged alarms
 - Area_Clear_Count -- Write of 0 clears all un-cleared alarms
 - Recursive_Area_Clear_Count – Write of 0 clears all un-cleared alarms in an area
 - Area_UnAked_Count -- Write of 0 acknowledges all unacknowledged alarm Number of Unacknowledged alarms in an area
 - Recursive_UnAked_Count -- Write of 0 acknowledges all unacknowledged alarms
 - Active_Count
 - Clear_Count
 - DIG_Clear
 - LIM_Clear
 - RLM_clear
 - ROC_Clear
 - TLS_Clear
 - *Area_MaxSeverity_Alarm*
 - *Recursive_MaxSeverity_Alarm*
 - *Area_MaxSeverity_Ack*
 - *Recursive_MaxSeverity_Ack*
 - *Area_MaxSeverity_NormalAndNotAked*
 - *Recursive_MaxSeverity_NormalAndNotAked*
 - *Area_MaxSeverity_Clear*

- *Recursive_MaxSeverity_Clear*

Notes:

- For the alarm areas, any tags beginning with "Recursive" apply to all sub-areas as well. Therefore writing 0 to Recursive_Unacked will acknowledge all alarms including ones in sub-areas. But writing 0 to Area_Unacked will only acknowledge the alarm tags directly inside the area
- Unack_count returns count of 'Normal needs ack' And 'Alarm needs ack'
- *Area_MaxSeverity_NormalAndNotAcked* returns severity of 'Normal needs ack'
- *Enhanced the AlarmWorX32 Server adding an optional feature to reload the Alarm Configuration when any change is made to one of the Alarm Attributes (limits, enable field, etc). When used in redundant configurations, this feature enables the active Alarm Server to send any Alarm Attribute changes it receives (via the OPC DA interface) to the backup Alarm Server.*¹

AlarmWorX™32 MMX V9.2 Enhancements

Summary

AlarmWorX32 MMX Server:

- Enhanced the AlarmWorX32 MMX Server to support detection of MMX Agents failing to respond. The implementation includes a change to the AlarmWorX32 MMX Server configurator, where the selection of "action destination" to call in the case of timeout is entered. In addition, an entry in IcoSetup.ini is used to specify the "agent timeout" value:

```
[AWX32\AWXMMX32]
```

```
MMXAgentTimeout=6000
```

The default value is 0 meaning no timeouts. Any other value is the timeout in seconds. If MMX server does not receive the agent's callback within this number of seconds, it would assume agent is dead.

This feature should be used with caution: there can be delays for the agent's callback. For example, several faxes or pager messages queued up to go out via modem; MMX server may see the "agent timeout" and process "report hardware failure" although the agent is not really crashed or not-responding.

- *Enhanced the AlarmWorX32 MMX Server to support configurable delimiter characters for the SMS alarm acknowledge messages. An IcoSetup.INI file setting was added for specifying the delimiter.¹ It is:*

```
[AWXMMX32\MMXPager]
```

```
Delimiter=?
```

AlarmWorX32 MMX Server Configurator:

- AlarmWorX32 MMX Server configuration can now be done remotely and over the Web using the new WorkBench32-based AlarmWorX32 MMX Server Configurator
- Improved the look of the AlarmWorX32 MMX Configurator's GUI, making it more consistent with the other configurators:
 - Added CSV import and export buttons to the toolbar
 - The "Export CSV" and "Import CSV" options in the File menu were changed to read "CSV Export" and "CSV Import", like the AlarmWorX32 Server Configurator.
 - Added a "Connection Properties" item to the File Menu.
- *Enhanced the AlarmWorX32 MMX Server configurator to support for the generic configuration of MMX agents. This was implemented in both the MMX Configurator and MMX WorkBench Configurator.¹*

AlarmWorX32 MMX Phone Agent:

- Enhanced the AlarmWorX32 MMX Phone Agent adding the ability to configure the speech engine used.

AlarmWorX32 MMX Sound Agent:

- Enhanced the AlarmWorX32 MMX Sound Agent adding the ability to configure the speech engine used.

Application Setup Utility V9.2

Summary

- Enhanced the AppSetupUtility adding support for the DBOPC Server Runtime. The DBOPC Server Runtime is registered as an NT Service.
- Enhanced the AppSetupUtility to always save the user entered settings to its configuration (ini) file.
- Enhanced the AppSetupUtility adding support for the ScheduleWorX32 and FacilityWorX runtimes. *ScheduleWorX is set up as a service.*¹

New BACnet Connector V9.2

Summary

- The new ICONICS BACnet Connector brings BACnet communications directly into the GENESIS32 and BizViz systems. Unlike most other data connectors, the BACnet connector typically does not require the pre-configuration of the devices and tags. The GENESIS32 / BizViz system automatically scans / browses the BACnet network for its devices and auto-configures the system. As a result, in most cases, the BACnet devices, their objects, and their properties will automatically appear in the Unified Data Browser, without pre-configuring the devices and their tags.

Data Mining V9.2 Enhancements

Summary

Data Mining ActiveX Control:

- Enhanced the Data Mining ActiveX Control printing support so that the dates that appear in the header respect the machine's regional settings for format and the names of days and months.
- Changed the default font used by the Data Mining ActiveX control to one that is compatible with international character sets (including Russian).

Data Mining OPC Server:

- Added GENESIS32 Licensing to the Data Mining OPC Server Runtime complete with a 2-hour demo mode.

Data Mining OPC Server Configurator:

- Changed the default polling rate used by the Data Mining OPC Server to 10 seconds.
- Enhanced the Data Mining OPC Server Configurator adding automation methods to import and export configurations.

DataWorX™32 V9.2 Enhancements

Summary

- DataWorX32 configuration can now be done remotely and over the Web using the new WorkBench32-based DataWorX32 Configurator.
- Improved the look of the DataWorX32 Configurator's GUI, making it more consistent with the other configurators:
 - Added CSV import and export button to the toolbar
 - Made the CSV buttons consistent with the other configurators
- Enhanced the DataWorX32 Configurator adding support for enabling/disabling all registers in a folder and subfolders. This can be done by right-clicking a group in the tree view and selecting the Group Properties.
- Improved the DataWorX32 Configurator's wording for the delay feature – revising it to say "Delay between input and output:".
- Enhanced the DataWorX32 Configurator automation interface adding support for CSV import.
- Enhanced the DataWorX32 Tunneling function. Enhancements include:
 - Support for OPC DA 1.0 communications
 - Support for auto-recovery and reconnection following a failure in the communications between client and the OPC Server
 - Support for use of "::" as delimiting characters to separate strings
- Enhanced the DataWorX32 Configurator to display the description field for registers in a new additional column. The description field column was added to the register property page and description column can be displayed in the list view. Note the description field is limited to 50 characters.

DataWorX™32 Professional V9.2 Enhancements

Summary

- Enhanced the DataWorX32 Professional Redundancy support. Improvements include:
 - New Redundancy state engine that is simpler (removing the need for synchronization states) and consequently more reliable.
 - Enhanced the watchdog timeout implementation enabling the detection of failures and subsequent failovers in less than one second for typical configurations.
 - Improved Store-and-Forward Logic in the Alarm Logger and Trend Logger
 - Enhanced the AlarmWorX32 Logger Archive function to provide significantly better performance
 - Improved the TrendWorX32 Logger logging implementation. It now logs data to separate Primary and Secondary tables, depending on the source. This ensures good quality data can get logged even when there is a network disconnection or failure
 - Improved the efficiency of the TrendWorX32 Logger's Store and Forward. All databases writes are now direct. In addition, the synchronization state has been eliminated resulting in faster, more efficient failovers.
 - Improved MonitorWorX
 - Enhanced the redundancy support for redundant OPC DA Servers to take into account the health of the OPC Servers (not just on whether or not the OPC Server is running). Users can now specify an OPC DA Tag for each OPC DA Server, a tag indicating the health of the server. If the tag indicates bad health for a particular OPC DA server, the GENESIS32 clients will be automatically switched to the backup OPC DA Server (if the backup's health is OK).
- Enhanced MonitorWorX32 and MonitorWorX32 Viewer to display the redundancy status of (redundant) GenEvent Servers.
- Enhanced the TrendWorX32 HDA Server adding support for the new, improved TrendWorX32 redundancy implementation, adding support for the separate primary and secondary logging tables.
- *Enhanced the AlarmWorX32 Server adding an optional feature to reload the Alarm Configuration when any change is made to one of the Alarm Attributes (limits, enable field, etc). When used in redundant configurations, this feature enables the active Alarm Server to send any Alarm Attribute changes it receives (via the OPC DA interface) to the backup Alarm Server.*¹

GenBroker V9.2 Enhancements

Summary

- Enhanced GenClientWrapper adding support for remote access to security
- Enhanced the way GenClient/GenBroker identifies and keeps track of remote clients. It now uses a combination of the real computer name and the client name. This improves the security in cases where Remote Desktop is used with GENESIS32 (and BizViz), especially when clients are connecting to (for example) a Citrix terminal server as an intermediary between the client and application servers.
- Improved the wording on the GenBroker Configurator's User Interface for adding node names under the advanced settings.
- Revised the GenBroker Configurator changing the default setting for time synchronization to be off, and changed the choices for enabling it to only primary or secondary.
- Improved the default value for the GenBroker Configurator watch-dog timer settings. (The new setting, 500 ms, is appropriate for the new DataWorx32 Professional watchdog implementation).

Global Aliasing V9.2 Enhancements

Summary

- Global Aliasing configuration can now be done remotely and over the Web using the new WorkBench32-based Global Aliasing Configurator.
- Improved the user-friendliness of Global Aliasing Configurator's GUI. Changes include renaming the "Reload Configuration" button to "update Runtime" to avoid confusion with the Global Refresh function.

GraphWorX™32 V9.2 Enhancements

Summary

- Enhanced GraphWorX32 to support larger VB Scripts and JScripts. The limit has been increased from 32,767 characters to 296,000 characters.
- Enhanced the Keypad to support having an OPC tag name in the number pad title. To enable tag name in number pad window title, add following key to ini file:

```
[ICOKEYPAD]
Show Description=1
```

'User description' is displayed instead if provided in PPT configuration.
- Enhanced the GraphWorX32 Find/Replace function to support replacing aliases on pick actions.
- Enhanced GraphWorX32 adding
- Enhanced the GraphWorX32 container to support VBA 6.5.
- Enhanced GraphWorX32 adding a new dialog through which users can add a comment when they are changing the value. After this, a GenEvent is generated. This works on process points (Alnum), but not currently supported on pick actions.
- Enhanced GraphWorX32 adding support for importing scripts from file and in the Event scripts. To support this, a new class (CScriptEngine) was added for VBScript and Jscript functions. Some functions were moved from the OPick class and some functions was moved from the ODisplay class. In the future, all functions for VBScript and JScript should be in this class.
- Enhanced the GraphWorX32 CreateBitmap function to allow the use of JPG images on WebHMI displays
- Improved the error message that GraphWorX32 generates when it is unable to communicate to the Security Server. The text was changed from "An error has occurred: you may be experiencing a network communication problem or you may has Insufficient Security Level to continue..." to simply "Insufficient security level to perform this action. Please log in with a user with sufficient security rights." And the icon was changed to an error icon to an information icon.
- Enhanced GraphWorX32 to optionally show only the tag name instead of the whole tag path. Application settings in the GraphWorX32 were added to allow the full Tag Name, short Tag Name, or Tag Description to be displayed.
- Enhanced GraphWorX32 adding support to allow the user to select whether or not the GraphWorX32 Viewer should force Internet Explorer to use cached displays.
- Enhanced the GraphWorX32 Automation Interface adding support for control of the scrollbar. The new automation functions ToggleHorizontalScrollbar, ToggleVerticalScrollbar and ToggleBothScrollbars were added.
- Enhanced the GraphWorx32 support for configuration passwords on displays. In the previous versions of GraphWorX32, if the user had set the configuration password on a display and opened it in configuration mode, GraphWorX32 would ask for the password. If the user then opened a second instance of GraphWorX32 with the same display (with password), the second instance did not ask the user for the password. It is now configurable whether or not GraphWorX32 should require the user to enter the password for each instance. This option can be set via IcoSetup.ini setting ([GWX32\Configuration Settings] - AskForPasswordEveryTime) or via the Application Switches in GraphWorX32.
- Enhanced GraphWorX32 to optionally verify the write occurred whenever

Summary

GraphWorx32 writes to an OPC tag. When this option is enable, GraphWorX32 will automatically poll the server after the defined scan rate to make sure that the value on the server matches the value that GraphWorx32 wrote. If the values do not match, it updates the value on display with the value from the server. This new option is enabled by setting the following IcoSetup.ino file setting:

```
[GWX32\Runtime Settings]
```

```
ReadValueAfterWrite=0
```

- Enhanced GraphWorX32 adding the ability to specify the default folder to open when using the open / save dialog. To implement this, two new keys were added to IcoSetup.ini ([GWX32\Configuration Settings] - LastBrowsePath, FileDialogPath). The user can choose to use system settings for browsing (behavior before the fix - default value), use the working directory as the initial directory for the file dialog, or can select to use the last browsed directory. Settings can be changed in the Application Settings in the GraphWorX32
- Enhanced the GraphWorX32 automation interface adding a new function for changing the title caption in runtime mode. The new function is named SetWindowTitle(BSTR bstrWindowTitle). This function can be called in runtime only and has effect only in runtime. The text may contain a global alias or a language alias.
- Enhanced GraphWorX32 automation interface adding a new function for resizing the data source box in a PPT. Also added the CheckScrollbars() function which can calculate if the CEdit needs to display scrollbars. If the text is larger, then the scrollbars are displayed. This function can be used for any CEdit object.
- Enhanced GraphWorX32 to preserve the alias definitions for group objects when an update Shared Object is performed.
- Enhanced GraphWorX32 to support the saving of the toolbar positions through a menuitem (View → Save Toolbars Position). This allows the toolbars to return to specific locations after shrinking and expanding the display.
- Enhanced GraphWorX32 adding support for an "Upload" recipe Pick Action.
- Enhanced GraphWorX32 adding support for allowing dynamic parameters in the Run Report pick action.
- Enhanced GraphWorX32 and ScheduleWorX32 adding support for security to the ScheduleWorX Override pick actions.
- Enhanced GraphWorX32 adding an option to have GraphWorX32 save as non-VBA as its default behavior. The IcoSetup.ini file setting for this option is "SaveAsVBA". Note, when GraphWorX32 is started for the first time (for specific user) the value from the IcoSetup.ini file is used. The user can override this value through the General tab in the Application Preferences (the value is saved to the registry - Current User). After this the value from the registry is used.

Licensing V9.2 Enhancements

Summary

- Enhanced the GENESIS32 Licensing system adding a number of significant changes and improvements. They include:
 - Updated the licensing to be fully compatible with the latest editions of the MS Windows operating systems including Windows 7 and Windows Server 2008 R2.
 - The Software licensing model with changed away from being based on (locked down on) the hard drive. As a result, the new Software-based licensing is compatible with RAID drives.
 - Changed the WebHMI and GenBrowser licensing models from models based on "client units" to being based on "client nodes".
 - Added license checking to the following Servers and Runtimes:
 - Data Mining OPC Server
 - DataWorX32 Standard
 - SNMP Runtime
 - ScriptWorX32
 - ScriptWorX2010 Runtime
 - Unified Data Manager Runtime
 - AlarmWorX32 MMX Server
 - BACnet Runtime
 - GENESIS32 Navigator Runtime
 - Implemented a centralized licensing model where multiple instances of the Servers and Runtimes can be licensed from a centralized licensing server.
 - Removed the periodic continuous checking that was being made on the software licenses for validity. It is believed that under high CPU load, these calls were not returning correct status, causing an improper and pre-mature license expiration message to appear (even the license was fine).
 - Improved the License Utility's error message that is displayed if and when an older version of the hardware license key is installed.
 - Improved the License Monitor's error message that is displayed if an older version of the hardware key is installed. It reports "The Hardware Key has not been Programmed" if the hardware key is formatted with the current version and it has no version number. It also reports this if none of the security checks pass as the key is most likely not formatted.
 - Added the following system information to the genlog.dat file with every entry:
 - Computer Name
 - License Utility Version
 - Logged in User
 - Windows operating system
 - Enhanced the License Utility's View license dialog box, adding support for the display of the following system information:
 - Computer name
 - License Utility Version
 - Logged in User
 - Windows operating system
 - License Utility software version
- Added a copy button to copy this information to the Windows clipboard

- Enhanced the License Utility's authorize license dialog box, adding support for the display of the following system information:
 - Computer name
 - License Utility Version
 - Logged in User
 - Windows operating system

Recipe Mgmt System V9.2 Enhancements

Summary

- Enhanced the Recipe Management system to support the upload of OPC values back into the Recipe Grid.
- Enhanced the Recipe Tree Explorer to support a manually requested refresh via a right-click click
- Enhanced the Recipe Tree Explorer to support sorting the recipes alphabetically, reverse alphabetically, and by Recipe ID.
- Enhanced the automation interface of Recipe Tree Explorer adding support for selecting a recipe item in the tree. Added automation method "SelectNode". This function "SelectNode" can be used to select a visible child node of the currently selected node in the tree. You must provide the exact name of the node that you want to select. That node must currently be visible in the tree, and you must currently have that parent of that node selected.
- Enhanced the automation interface of Recipe Tree Explorer adding support for selecting a schedule in the tree. Added automation method "SelectNode" which can be used to select a visible child node of the currently selected node in the tree. You must provide the exact name of the node that you want to select. That node must currently be visible in the tree, and you must currently have that parent of that node selected.
- Enhanced the automation interface of Recipe Tree Explorer adding support for a Refresh method. The name of the method is "Refresh Tree".
- Enhanced the automation interface of Recipe Tree Explorer adding support for querying the selected named item. The new of the new method is "GetSelected".
- Enhanced the Recipe Tree Explorer ActiveX control adding the ability to sort recipes by index (in addition to sorting by recipe name).

ScheduleWorX32 V9.2 Enhancements

Summary

- Enhanced the ScheduleWorX32 runtime to support sending a GenEvent when a failure occurs with writing to a Tag or ValueSet.
- Enhanced the ScheduleWorX32 Configurator adding three new columns to the Monitor mode to display information for the next event. This is also supported in the GraphWorX32 schedule tags by the point extensions: NextEventSubject, NextEventDate, and NextEventValue.
- Enhanced the ScheduleWorX32 Configurator to allow the user to deselect/select a blank value when attaching the time setting to a holiday.
- Enhanced the ScheduleWorX32 Configurator adding UDM and Security icons in ScheduleWorX toolbar
- Enhanced the ScheduleWorX32 Configurator adding messages to let the user know if they are working offline or when synchronization is occurring. If disconnected from the UDM, the traffic light support will trigger a message to the user every 15-60 seconds that tells them to close the application if a reconnection is not possible.
- Enhanced the ScheduleWorX32 Configurator to be compatible with Remote Desktop. In the previous version, the Monitor View did not work over Remote Desktop – all of the values would show up as N/A.
- The ScheduleWorX32 Runtime engine was separated from the Unified Data Manager runtime component. ScheduleWorX32 now has its own Runtime component.
- Enhanced ScheduleWorX32 and GraphWorX32 adding support for security to the ScheduleWorX Override pick actions.

ScriptWorX™ 2006/2010 V9.2 Enhancements

Summary

- ScriptWorX2006 was renamed to ScriptWorX2010
- Enhanced ScriptWorX2006/2010 adding support to auto-register the project dlls (listed in the current project) before it goes into runtime.
- Enhanced the ScriptWorX2010 tracing support to provide a trace message mentioning when a Watchdog Timeout has occurred.
- Improved the look of the ScriptWorX2010 Configurator's GUI, making it more consistent with the other configurators:
 - The CSV Import and Export buttons in the toolbar were made to look like the AWX Server Configurator for the button order and tooltips.
- *Added GENESIS32 Licensing to ScriptWorX2010 Runtime complete with a 2-hour demo mode.¹*

Security V9.2 Enhancements

Summary

- Enhanced the Security Server adding support for generating a GenEvent message when there is a failed login attempt. The GenEvent message includes the user name and node name / station where the failed login attempt occurred.
- Enhanced the Security Server's automation interface adding a method to get the name of the group(s) to which a logged-in user belongs. The name of the new method is: ISecDual4::LoggedInGroups.
- Improved the error message generated when a GENESIS32 product cannot communicate to the security server. Previously it would give this message:
"The security server is not installed on the local computer. Please install the security server, or select preferences from the option menu and choose the network node where the security server has been installed."
Most often the problem is DCOM communication or the security server is not registered. Very rarely is the security server actually not installed. To account for this, this message was changed to something like this:
"Cannot contact the security server. Please make sure your GenBroker Configurator is set to look at the correct machine for security, the DCOM permissions are set correctly, and the security server is registered."
- Enhanced the Security Server and Login.exe adding UNICODE support
- Enhanced the Security Configurator adding support to synchronize with an Active Directory group that has multiple subgroups and users in those subgroups. Note, this includes just the groups that are subgroups of the main group that is being synchronized (not ALL of the groups the users are members of).
- *Enhanced the Security LoginActiveX to include a function for NT Integrated security. A call to LoginUser() with both parameters set to empty strings indicates that the caller wants to use "auto NT logon" feature. The LoginActiveX.dll internally figures out on behalf of which user account the call is made; those account details are sent to the security server.*¹
- Enhanced the Security LoginActiveX updating the following methods to support silent execution where an error code is returned rather than popping up an error message box:
HRESULT LoginUser(BSTR, BSTR)
HRESULT LogoutUser(BSTR)
HRESULT Logout()
HRESULT LogoutUser2(BSTR, BSTR)
HRESULT GetLoggedInUsersNames(VARIANT*)
- Enhanced the Security Server's automation interface to expose a property to modify the Domain. Property Domain (string, Put, Get) was added to the IAd3 object to accomplish this.
- Enhanced the Security Login ActiveX and Security Login Exe to support the identification and the keeping track of remote clients. The system now uses a combination of the real computer name and the client name. This improves the security in cases where Remote Desktop is used with GENESIS32 (and BizViz), especially when clients are connecting to (for example) a Citrix terminal server as an intermediary between the client and application servers.
- Enhanced the Security Server supporting the capability to synchronize security at a particular time on a particular day of the week. The IcoSetup.ini file settings related to the feature are:
[ICONICS SECURITY SERVER\NtSync]

DiscoverAllGroupsForUser=0
[ICONICS SECURITY SERVER\SyncTime]
MinuteOfDay=xxx
DayOfWeek=y

- Improved the Security Configurator's GUI, in particular, the "Allow Writing" and "Deny Writing" fields in the Critical Points tab were re-labeled with more meaningful labels.

SNMP Connectivity V9.2 Enhancements

Summary

- New SNMP Connector WorkBench Configurator:
SNMP Connector configuration can now be done remotely and over the Web using the new WorkBench32-based AlarmWorX32 Logger Configurator.
- Enhanced the SNMP Runtime and configurator to support exposing SNMP Traps as OPC A&E Tags. This allows the visualization of complex SNMP traps in the AlarmWorX32 Viewer.
- Enhanced the SNMP Runtime and configurator to support receiving all SNMP traps from a segment of network. In the previous version, you needed to manually add all devices one-by-one and configure them to receive SNMP traps. Now the SNMP Runtime can receive all of the traps from all of devices on a network segment.
- Enhanced the SNMP runtime and configurator to support for a heartbeat tag for each device to know if it is alive. Each configured SNMP device now has a hardcoded heartbeat tag that returns online availability of device.
- Enhanced the SNMP configurator to support the automation interfaces needed by ProjectWorX (import/export configuration automation interfaces).
- Added GENESIS32 Licensing to the SNMP Runtime complete with a 2-hour demo mode.
- Enhanced the SNMP Configurator to add all of the default MIBs when a new configuration database is created.
- Changed the terms 'Polling Rate' and 'Scan Rate' to 'Update Rate' in the SNMP configurator.
- Enhanced the Automation Interface to the SNMP Configurator to support ProjectWorX32.

TraceWorX32 V9.2 Enhancements

Summary

- Enhanced TraceWorX32 adding the following configurable options (configurable via the TraceSetup.ini file):
 - ReleaseTraceFilterCol - Column name used for filtering; can be ProcessID, ThreadID, or any custom (= listed after Line #) column (not case sensitive). Empty or undefined -> No filter. (for #4, #3 and #1)
 - ReleaseTraceFilterVal - Value to compare with when filtering. When it does not match required column value (case sensitive), the message will be discarded. (for #4, #3 and #1)
 - ReleaseTraceLogFileMax - Maximum archived logging files. When exceeded, oldest log file is deleted. (for #2)
 - ReleaseTraceTimestampedFiles - BOOL value defining if a timestamp should be included in the names of archived files. (for #2a)
 - ReleaseTraceStartIndex - Index of the currently newest file. Will be created and maintained automatically, no manual changes desired. (helper for #2)

An example of usage in the .ini file (For messages from GenClientU module, use max. 3 files of ~1MB, archive names with timestamps, log only messages with ICONICS.Simulator.1\SimulatePLC.Sine in the column PNTNAME):

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

TrendWorX™32 V9.2 Enhancements

Summary

New - TrendWorX32 SQL Query Engine

- OLEDB Provider for TrendWorX32
- Powerful SQL Query Interface includes support for
SELECT
TOP
ORDER BY
GROUP BY
HAVING
IN

TrendWorX32 Logger:

- Enhanced the TrendWorX32 Logger to support forced data logging on static values. The IcoSetup.ini file setting to enable this feature is:
[TWXSQLSvr\Data]
SamplesToSkip=10
IgnoreDeadBand=1

TrendWorX32 Logger Configurator:

- Improved the look of the TrendWorX32 Logger Configurator's GUI, making it more consistent with the other configurators:
 - Added CSV import and export buttons to the toolbar
 - The "Export CSV" and "Import CSV" options in the File menu were changed to read "CSV Export" and "CSV Import", like the AlarmWorX32 Server Configurator.
- Revised the TrendWorX32 Logger Configurator's default for the Tables(s) management tab to create a table every day. The new default settings are:
Table name: same as the Logging group name
number of tables: 10
Startup Table: 1
"On Time": 23:59:59
"Any Time Logging Starts" is not checked as default
- Enhanced the TrendWorX32 Logger Configurator adding an "update" button that can get the logger to accept the configuration changes in a single action. This new button in the toolbar (Update Runtime Configuration) stops the logger, updates the configuration, and then starts the logger again. There is also a warning message which must be acknowledged by the user, that alerts the user that the logger will be taken offline and restarted.
- Enhanced the TrendWorX32 Logger Configurator adding checking on the CSV import function for invalid tag handles. After the import of the CSV or XML file is done, the check for the tag handle duplicities is made. It is also possible to run this check from the menu Tools (Check Tag Handles Duplicities).
- Enhanced the TrendWorX32 Logger Configurator to enable UTC Logging by default.

TrendWorX32 Viewer:

- Enhanced the TrendWorX32 Viewer to optionally Show date/time on start and end of the X-Axis when in the freeze mode or when the grids are not

moving.

- Enhanced the TrendWorX32 Viewer adding support for the "StretchLastSample" option. When this option is set to zero, the TrendWorX32 Viewer by default will not draw a line from the last sample up to the current time. When the option "StretchLastSample" is set to 1, the option "DrawLineIntoFuture" can be additionally set to 1, and then the last sample will stretch over the current time to the end of the Trend Time Period. Both options can be controlled from the User Interface in version 9.20. In v9.2, IcoSetup.ini file settings for these options just provide initial settings for the User Interface.
- Enhanced the TrendWorX32 Viewer to support the ability to have the toolbar open and docked upon going to runtime.
- Enhanced the automation interface of the TrendWorX32 Viewer to support docking the toolbar and checking if the toolbar is visible. The new VBA properties are:
 - MainToolbarVisible
 - MainToolbarDocked
- Enhanced the TrendWorX32 Viewer to support the plotting of bad or uncertain data. There are four settings in IcoSetup.ini for this feature:
 - ShowSamplesForBadQuality=1
 - ShowLinesForBadQuality=0
 - ShowSamplesForUncertainQuality=1
 - ShowLinesForUncertainQuality=0The ShowSamplesXXX has the options of 0/1 and indicate whether markers will be drawn for the specified qualities.
The ShowLinesXXX has three options (0/1/2), with the following meanings:
 - 0 - no line drawn
 - 1 - draw line connecting the exact sample values (will be 0 for bad quality data most of the time)
 - 2 - interpolate the line using surrounding
- Enhanced the TrendWorX32 Viewer to support the loading of URL configuration paths for even non-WebHMI clients.
- Improved the TrendWorX32 Viewer User Interface with regards to Global Ranges. In particular, renamed "Format" to "Global R. Format" and now the Global ranges are grayed out when they are not enabled.
- Added a TrendWorX32 Viewer example for demonstrating the Scatter/XP plot. It is included in the installation and can be found in the "Examples/TrendWorX32 VBA Examples" folder.

TrendWorX32 Container:

- Enhanced the TrendWorX32 container to support VBA 6.5.

TrendWorX32 Report:

- Enhanced TrendWorX32 Report adding an option to use the Tag Logging Name (as opposed to the Tag Description) for the column names. This option can be useful if multiple tags are using the same Tag Description. To enable this feature, use the following IcoSetup.ini setting:
 - [TWXREPORT\Logging Preferences]
 - UseTagDescription=0If the above entry is added, then the MS Excel report, CSV and database reports will utilize the Tag Logging Name, as it is set in the TrendWorX32 configurator, to define the column names. (Note, "." will be replaced by "-").

- Enhanced TrendWorX32 Report's interface to the TrendWorX32 Logger database adding support for the dual logging tables (Primary and Secondary Logging tables).
- Enhanced TrendWorX32 Report to optionally end the report at the current time (rather than showing data with bad quality for the future values). The IcoSetup.ini entry to enable this feature is:
 TWXREPORT\Runtime]
 ProtectReportEndTime=1
 Note, if the end time or report is greater than the current time, the current time will be utilized as the end time of the report.

TrendWorX32 HDA Server:

- Enhanced the TrendWorX32 HDA Server adding support for the new, improved TrendWorX32 redundancy implementation, adding support for the separate primary and secondary logging tables.

Unified Data Browser V9.2 Enhancements

Summary

- Enhanced the Unified Data Browser adding support to make its timeout configurable. The IcoSetup.INI file setting can be used to set the timeout:
[UNIVERSALBROWSER\Timeout]
LocalNode=60000
RemoteNode=60000

Unified Data Manager V9.2 Enhancements

Summary

- Enhanced the automation interface of the Unified Data Manager Configurator adding support to import .xml files. At this time the automation interface supports OpenDatabase, CloseDatabase, ImportXML, ExportXML, GetActiveDatabase, and MakeActive.
- Added GENESIS32 Licensing to the Unified Data Manager Runtime complete with a 2-hour demo mode.
- Enhanced the Unified Data Manager runtime to support sending a GenEvent when a failure occurs with writing to a Tag or ValueSet.
- Enhanced the Unified Data Manager runtime to support having both ActiveTime and EventTime in received alarm packets. The supported attributes now include:
 - 16: Active Time
 - 17: Active Time(ms)
 - 18: Change Mask
 - 19: New State (7 - Alarm, 5 - RTN)
 - 20: Ack Req
- Enhanced the tracing support in the Unified Data Manager Runtime. Tracing includes:
 - Trace messages when configuration is loaded
 - Trace messages identifying each trigger (by name) that is loaded by the runtime part
 - Trace messages to identify which client requests which triggers
 - Trace messages to identify any trigger configuration error messages
 - Trace messages to identify why a trigger status is set to failed
 - Trace messages to identify why a client's request for a trigger resulted in some error
 - Trace messages when triggers are fired
 - Trace messages to see when a client request a trigger (or trigger group) so that we may have a chance to troubleshoot the timing issues we are seeing
 - Trace messages for when UTMRuntime goes into runtime mode after initial load of configuration
 - Trace messages when the underlying OPC tags for the triggers and related values receive bad quality
 - Trace messages when the underlying OPC tags for the triggers and related values resume good quality
- Improved the samples in the Unified Data Manager's default configuration database including adding samples for Registers.

WebHMI™ V9.2 Enhancements

Summary

- Enhanced GraphWorX32 adding support to allow the user to select whether or not the GraphWorX32 Viewer should force Internet Explorer to not use cached displays.
- Changed the WebHMI publishing to use the FTP channel as the default setting. Note, to use the FTP channel will require installation and enabling of an FTP communications software package.
- *Enhanced WebHMI to support Internationalization. International version of the WebHMI cab files that include localized translations are planned. More information will be available in the GENESIS32 V9.2 International Edition.¹*
- *Enhanced the Web Publishing Utility adding support for a new languages tab – for selecting language cab files to be downloaded to the client.¹*

Other V9.2 Enhancements

Summary

- Enhanced the GENESIS32 installation adding support for “one-click” installation where the user can enter all of the setup information up front and “Click and walk away”.
- Enhanced the Global Aliasing documentation adding more information on the Automation Interface
- Enhanced the AlarmWorX32 Multi-Media help file adding information on configuring the announcing alarms that are in the ACK state and information on setting up the MMX Mail Agent with regards to firewalls and security.
- Enhanced TraceWorX32 adding support for ScheduleWorX32 and FacilityWorX.

- Enhanced GenTray to support the new ScheduleWorX32 Runtime
- Enhanced the Language Configurator adding the ability to import/export CSV files.
- Enhanced the GENESIS32 installations adding checking for Home versions of Operating Systems. In the case a Home version of the operating system is detected, a warning message is displayed.
- Enhanced the MonitorWorX Viewer’s NT Event Reporting window to list the applications in alphabetical order by their display name. As a result, the Productivity Analytics events will appear lower in the list.



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