ICONICS V10.8
What's New

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Microsoft Partner
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Application Development

Contents

Platform Services

BACnet

The BACnet Runtime now allows users to modify parameters in the readPropertyMultiple service type when communicating with certain devices. The parameters are: CCacheParameters params; params.SetReadPropertyMultipleMaxQuantity(deviceID, Qty);
Database settings for Maximum Read Retries and Maximum Active Requests per Device have been added to the BACnet Configuration to prevent network issues.
It is now possible to decide which discovered devices get added to the BACnet Cache during BACnet Discovery.
ScheduleWorX now includes a mode for viewing BACnet Schedules. This Viewer is contained within the ScheduleWorX Viewer in GraphWorX64 and is available in the Controls Tab of the Ribbon Menu.
Default values for the BACnet Configuration relating to the MaxActiveRequestsPerDevice (new value: 5) and MaxReadRetries (new value: 5).
Support has been added for the Analog Object property to provide the Present Value and Units in a string (with the PresentValue formatted with a certain number of decimal places).
The BACnet API has been updated.
It is now possible to import an EDE file into our BACnet Address Space.
The Workbench-SL has been updated to include a BACnet Configurator (previously only available in Workbench Classic).

Cloud Connector for Windows Azure™

TraceWorX integration has been added to the Azure Cloud Connector.
Diagnostic Variables are exposed with the Azure Cloud Connector to allow for enhanced monitoring of Cloud Applications.

Commanding

Commanding now supports Deleting Pens out of TrendWorX64 Viewers.
The Set Time Range Command now supports Time Expressions. Time Expressions utilize the Expression engine from the Unified Data Manager to combine functions like now(), utcnow() and fromminutes().
Global Aliasing and additional Parameters have been added as options to the Run Transaction Command for use in GraphWorX64 Pick Actions or Commanding.
The AssetWorX 'Acknowledge' Command now supports Global Aliases as parameters for the LowSeverity and HighSeverity Properties.
New options have been added to the Select Asset Command. On Execute the user configuring the system will choose between None, Default and Specific (commands are entered and separated by a semi-colon).
A new command has been added for TrendWorX64 to allow users to reset a TrendWorX64 Viewer zoom without using a right-click context menu (which is difficult on small or touch screens).

The Run Report Command now supports Global Aliasing and allows users to enter parameters into new configuration fields for commanding, GraphWorX64 Pick Actions and AssetWorX Equipment Property Commands.
The Go To Location Command now supports Global Aliasing for the Latitude, Longitude and Zoom Properties.

FrameWorX

Authentication has been added to the ICONICS Modbus 3.5 XML DA Server.
A graphical user interface has been added so that Clients can be configured to use security and data from a remote server while still using the local server for licensing. This was previously only available through external configuration files.
It's now possible to define a user and let a client application run under that account (automatically) as well as add an unsecured client (must be another FrameWorX server). These two items help to achieve a full access client node.
The OPC XML DA Server Login Credentials now have a secure interface for storage.
The status for all services has now been implemented as real-time tags that can be accessed from the Data Browser for use in GraphWorX64 displays.
A new event has been added to the GenClient component to allow a forced alarm re-subscription of FrameWorX which allows external devices that support redundancy to help trigger changes in the system.
GenClient now sends the FrameWorX Server node name instead of the security and license server location. This will enable better security between GENESIS32 and GENESIS64 installations.
It is now possible to configure a list of IP addresses and node names that are allowed by Security to connect to a FrameWorX Server and a list where all nodes are allowed full access.
Browsing OPC UA data no longer adds the node name for local points.

Global Aliasing

The Global Aliasing Engine and Database now support up to 4000 characters instead of the original 256.

Installation

The Northwind Demo Database is now only installed when GridWorX is installed. To disable this users can uncheck GridWorX64 in a custom installation.
Installation Logging is now much more robust allowing better debugging of installations and is saved in the location: C:\Users\Administrator\AppData\Local\Temp
Changes have been made in the installation to amend the Output Caching rule in Internet Information Services (IIS) Virtual Folders. This will prevent web clients from pulling older, cached versions of displays.

Language Aliasing

Default translations in Language Aliasing are now not required in Workbench-SL.

Licensing

The License Service now keeps track of which node has requested and failed to receive a license. The license count is 0 and the License Monitor will display it in red text.

Security

Redundant configurations can now benefit from the FrameWorX Server copying the Security configuration database for local use if the SQL Server loses connection.
An option has been added to the Security Configuration to allow for automatic database replication of an Active Directory database for better integration.
The Platform Services FrameWorX Server now supports the ability to create preferred or reserved users. This will allow specific users to be guaranteed a license should they need to login to the application.
Within Security there is an improved LDAP query method for large domain forests allowing queries to span to through a hierarchy instead of stopping at the local domain (which may not contain the user requested).
Licensing Server updates now allow for the support for preferred or reserved users in GENESIS64.
Due to work done in the Global Color Palette it is now possible to set colors on the Security Login Dialog.

Web Services

The minimum value for the Web Services Configuration Refresh Rate has been lowered to 1 second from 10 seconds.

Workbench Classic

Workbench now uses the same logic as SQL for backing up databases. If '\' or '/' appears in the name they are replaced with '_' in the backup file name.
Workbench Classic files for GraphWorX64, TrendWorX64 and AlarmWorX64 are now sorted alphabetically by default.

Workbench-SL

Workbench Silverlight now allows for right-click Copy and Paste in Text Fields.
HTTPS has been added as an option for Silverlight Clients and the Workbench-SL configuration.
Workbench-SL Import/Export is now supported for the SNMP Provider.
Workbench-SL Import/Export is now supported for the BACnet Provider.
The BACnet Provider in Workbench-SL now supports CSV Import/Export.
The AlarmWorX64 Logger Provider in Workbench-SL now supports XML and Microsoft Excel Import/Export.
The Language Aliasing Provider in Workbench-SL now supports XML and Microsoft Excel Import/Export.
The Global Aliasing Provider in Workbench-SL now supports XML Import/Export.
The Unified Data Manager Provider in Workbench-SL now supports XML, CSV and Microsoft Excel Import/Export.

It is now possible in the Workbench-SL to configure the databases from remote clients providing better support for configuration options.
Updated search logic now allows for dynamic typing that will populate search results as characters are entered. You can edit, delete and multiply found items through the results grid.
Optimistic Concurrency checks have been implemented. When items are updated simultaneously by two or more clients a dialog will appear to help the user override or keep changes.
Workbench-SL Import/Export is now supported for the Hyper Historian Provider.
A new Project Management capability has been added in Workbench-SL that allows versioning and project settings to be saved in the configuration database.

GENESIS64

AlarmWorX64

New control has been added in the AlarmWorX64 Viewer to allow custom messages instead of link paths for columns allowing operators to see something like "Click Here" instead.
An option to make an AlarmWorX64 Grid read-only has been added via checkbox on the Behavior tab of the Grid configuration dialog. When read-only it will not be possible to sort, group or re-order in Runtime. Acknowledging alarms is still allowed.
AlarmWorX64 now uses the system beep sound that can be changed in the sound preferences of the computer. Note: system sounds are not supported in Silverlight or Windows Runtime (WinRT).
The AlarmWorX64 Silverlight Viewer now includes support for the Grouping Panel functionality.
Filters are now available for the Chart View in the AlarmWorX64 Viewer Control.
Security has been extended to cover columns in the AlarmWorX64 Viewer so they can be shown or hidden based on ICONICS Security.
AlarmWorX64 Clients are now notified if alarms have been deleted or renamed in the AlarmWorX64 Server configuration. This prevents the clients from requesting an alarm that no longer exists causing extra load on the server.
Pasting alarms in the AlarmWorX64 Server had an issue in some cases that has been fixed to work properly.
The AlarmWorX64 Viewer now supports drill-down functionality for Charts. Drill-down must be enabled on the toolbar, double-clicking on the chart bar shows alarms from that specific field.
An addition to the AlarmWorX64 Viewer API will now allow developers to utilize MiddleClickItem or SelectOnMiddleClick in scripting.
AlarmWorX64 Filters now support multi-condition filtering requiring all Filters that are checked (selected) to resolve to True in order for an alarm to be shown.
Updates to the AlarmWorX64 Silverlight Viewer have enabled the option to save sorting within Silverlight displays.
Exporting Reports is now possible from the AlarmWorX64 Viewer based on the current grid configuration which allows users to preview the report based on the look of the grid in Runtime.
AlarmWorX64 now includes a different paging mechanism which allows operators to choose to see "More" or "All" alarms.

Functionality similar to the AlarmWorX32 reporter in GENESIS32 has been added to GENESIS64 to allow for SQL Expressions to determine Virtual Columns within the AlarmWorX64 Viewer.
The details panel of the AlarmWorX64 Viewer is now configurable to allow users to show information they desire to see in Runtime.
The AlarmWorX64 Viewer can now be grouped in charts by using field names or Global Aliases (set by using the Text Translation and using the Global Alias in the FILTERS WHERE section).
Grouped alarms can now be charted by frequency or sum. The groups can be changed in runtime using the "Sorting" control of the chart. Click on the "Sorting" button in the toolbar or in the context menu after selecting a chart to access the functionality.
You can now change the legend in the AlarmWorX64 Viewer using the "LegendFormat" value in the advanced tab. Use %v to show values (Y Axis) and %c to show fields (X Axis).
It's now possible in the AlarmWorX64 Viewer Charts to set the title, font family, font size and color.
A change has been made to the Silverlight AlarmWorX64 Viewer behavior to allow users to set a transparent MouseOverBackground and SelectionBackground (Advanced Properties) to disable color changes on mouse over.
Exception Errors in the AlarmWorX64 Viewer are now unique preventing multiple errors to return with the same StatusCode and different Messages.
Disabled scrolling was previously partially implemented in the AlarmWorX64 Viewer by disabling the mouse, but now keyboard buttons like the down arrow have also been disabled.
A JumpOnAlarm option has been added to the AlarmWorX64 Viewer to scroll to the top of the viewer when a new alarm appears.
It is now possible to associate static resources to almost all of the properties of the AlarmWorX64 Viewer. All areas can have an associated with a color and Global Color.
Logic in the AlarmWorX64 Viewer regarding the Default Subcondition type has been changed to default to Limit instead of Rate of Change if the combination of logic from the quality status demands that a condition should be shown.
Updates to the AlarmWorX64 Viewer now support color changes to the scrollbars, headers, borders, cursors and columns to better support a Day/Night mode.
The AlarmWorX64 Viewer now utilizes an inherited font size from parent controls allowing for global changes in the font size of a grid.
In the AlarmWorX64 Logger Configurator it is now possible to have alarm columns automatically added for new Alarm Configurations. Columns are created with the Apply button and will appear "Pending" until that is done.
A property has been added to the AlarmWorX64 Viewer to allow for sorting of groups by the number of grouped items each contains.
In Commanding, Print and Print Preview functionalities have been added to the CHART and GRID views of AlarmWorX64. The purpose of the LIST view is to show simplified data on mobile devices and as such does not support printing.
It's now possible in AlarmWorX64 to set the "Enable Drill Down" to be True by default.
Language and Global Alias' are now supported in the AlarmWorX64 Viewer Chart Series Titles.

A change has been made in the AlarmWorX64 Viewer grouping logic so that collapsed groups remain collapsed even if new alarms come in so that it's easier to view during changing conditions.
The AlarmWorX64 Silverlight Viewer has been updated to use different base components allowing a scroll mode of real-time so the alarm grid updates as you use the scroll cursor.
It is now possible to log BACnet Alarms to the AlarmWorX64 Logger.
The AlarmWorX64 Server now includes the configuration interface for the Clear feature that was available in GENESIS32.
Updates to the AlarmWorX64 OPC DA Server have been added to improve the performance of the server under load. The Server provides real-time OPC DA data for use in GraphWorX64 Displays, Expressions and other providers.

AssetWorX

Sequencing Commands is now possible via the ExecuteCommands option. The syntax is based on separating commands by a semi-colon (one is not required on the last command).
An issue with the clickable area associated with the "Expand" triangle in AssetWorX has been fixed. The area around the triangle is now part of the clickable area.
In the AssetWorX Configuration of Equipment Properties the Details Grid now includes values for configured properties.
A setting has been added in the Platform Services Settings tab relating to support for a Minimum Scan Rate to avoid overloading controls like the AssetWorX Navigator (which would otherwise take the default scan rate from the OPC Servers).
The default values for the AssetWorX Polling Groups have been set to zero. Original default values included the current time when use cases ranged from seconds to hours (instead of a time of day).
Global Color Palette support has been added to the AssetWorX Navigator.
Language Aliasing has been added to AssetWorX Assets.
Language Aliasing is now supported on AssetWorX Command Names.
Hyphens are now allowed within Folder Names in AssetWorX.
AssetWorX now supports the ability to export a selected asset and its children within the AssetWorX Navigator.
It's now possible to search the Read Expression field in the Equipment Property configuration of AssetWorX.
It is now possible to manually order the AssetWorX Navigator to avoid the default alphabetical organization.
There is a new property in the AssetWorX Navigator to show or hide the root asset item "Assets" in the tree.
It is now possible to display the path of a selected Asset using the SelectedAssetPathStorage (#SA) and SelectedAssetDisplayNameStorage (#LSA). These can be set with the normal #SA=<value>; syntax and read with <#SA#>.
It is now possible in AssetWorX to copy commands from one asset to another which should help in speeding up AssetWorX configuration.
The Unified Data Manager Expression engine is now supported in the AssetWorX Navigator.

There are now two options in the AssetWorX Export to allow users to export sub items or export only the user selection.
In the Workbench-SL AssetWorX Configurator the "Instantiate" option now includes "Multiply" functionality to allow multiple Equipment Classes to be made at the same time.

ConverterWorX

Converted Displays will now report more information on any ActiveX Controls that were removed when converting to GraphWorX64. Reports include errors, warnings, and a ProgID when available.
The GraphWorX64 Display Convertor now includes an option to copy the GraphWorX32 Object Name to the GraphWorX64 Title property (this was required because the Title and Object Name are unique identifiers for GraphWorX).
A change in the GraphWorX64 Display Translator now appends an underscore to any GraphWorX32 Object (when the Object Name begins with a number). Invalid characters (e.g., /) are also converted to underscores.

EarthWorX

The ability to save Proxy Server information for EarthWorX connections has now been added to GraphWorX64. Users can specify Host, Port, Username, Password, and Domain within the Document Properties per Display.
Multiple Map Layers are now supported for EarthWorX Maps allowing users to place multiple map layers on a display for an overlay effect. Uses include, but are not limited to weather, population or area-based data.
The ESRI map implementation now supports private ESRI maps through ESRI authentication (requires Username, Password and Root URL for the service).
EarthWorX now supports OGC WMS map tiles as an optional map provider.

GraphWorX64

Runtime Stretch has been added to the Default Settings for a new Label in GraphWorX64.
The new VideoWorX Viewer Control supports RTSP and streaming h264 protocols as well as Pan-Tilt-Zoom (PTZ) through the ONVIF standard. More information can be found in the Application Note: GraphWorX64 - Using the Camera Control.
GraphWorX64 now has the ability to "collapse" items. Previously hidden items could still occupy the virtual space they had when visible which prevented grid or list type of implementations to have gaps where hidden objects were.
The Extended Point Syntax in the Data Browser has been improved to include TimestampLOCAL() and TimestampUTC().
As part of the new Global Color Palette support it is now possible to customize all colors to be connected to a Global Color including the ability to customize scrollbar colors when active or inactive.
As part of the new Night/Day support for Global Colors the GraphWorX64 Viewer Frame Border can now be customized to take any standard or Global color.

New Print Functionality has been added to Commanding for GraphWorX64 WPF and Silverlight displays.
A new local simulation variable has been added to GraphWorX64 to expose the current scale of the display as localsim::currentScale.
The ability to hide and show layers based on the new local simulation value currentScale has been implemented allowing users to create Hide Dynamics tied to this value.
A new 3D camera interaction has been developed allowing users to manipulate 3D Views in 1st-person viewing. Pan, Tilt, Zoom and more have been added for a new unique view.
A new local simulation has been added in GraphWorX to determine the Orientation. Referenced as currentOrientation the values correspond to the Orientation Modes (0=None, 1=Horizontal/Landscape, 2=Vertical/Portrait).
GraphWorX64 now includes StringLocalAliasesData and StringLocalAliasesFile for properties to allow users to specify Local Alias sources in Smart Symbols.
Popup Menus can now have fonts configured for WPF and Silverlight displays.
A new generic local simulation has been added to GraphWorX64 that will alleviate most scripting needs. It exposes any property in GraphWorX as localsim:property:propertyPath (e.g., localsim:property:Source or localsim:property:MyRect1.Opacity).
The translation of Metafiles to Native Objects is now done in the GraphWorX Translator.
It is now possible to edit GraphWorX64 Smart Tile content through the right-click context menu (or expanding and selecting the child object in the Object Explorer).
Sorting of Object Names in the Smart Binding Editor has been changed to alphabetical.
Width adjustment and a wider dropdown menu has been added to the Advanced Smart Binding editor for convenience.
An Autodesk 2D importer is now implemented that is able to import DXF and DWG filetypes.
A new Global Color Palette Management system has been implemented to allow for named colors and theme switching. Using the Global Aliasing structure colors can be named, linked and reused. Updating colors later is possible via Palette configuration.
A new Natural User Interface (NUI) Ribbon has been added to GraphWorX64 for Kinect Integration.
Support for Symbol Name conversion has been added to the GraphWorX64 Display Translator when converting Symbol Library files.
ActiveX Controls are now supported in the GraphWorX Display Translator and exported into an intermediate XML format.
The GraphWorX64 Import/Export functionality now supports the .DWG format from Autodesk.

GridWorX

It is now possible to hide the Page Size box to be hidden from view in the GridWorX Viewer.
Relative Paths are now supported in GridWorX configuration files in Published Displays.
GridWorX Methods have been exposed to Commanding for use in the Call Method Command.
A popup prompt has been implemented to allow users to select whether columns should be refreshed when the underlying SQL query changes.

PortalWorX-SL

The currently logged in User is now shown in the bottom corner of PortalWorX-SL to keep it consistent with Workbench and GraphWorX64.
When executing ReportWorX reports within the Report Execution Web Part the configured ReportWorX Report Description is now shown.
A context-menu has been added to PortalWorX-SL to allow easier access to Layout features.
Smart Tiles have been added for use in PortalWorX-SL for Key Performance Indicator (KPI) Dashboards.
Expanded Layout and User Profile Support has been added to PortalWorX-SL to allow for greater customization and storage of user changes.

ReportWorX Express

A new module called ReportWorX Express is a Microsoft Excel plug-in used for generating on-demand reports.
Users are now able to get Real-time and Raw, Aggregated values from Hyper Historian.

ScheduleWorX64

Support has been added in ScheduleWorX64 to allow for the 24-hour Time Format in Events (Start/End Times) when the regional settings are changed to a European Union Country.
ScheduleWorX64 now includes a Viewer to embed in GraphWorX64 Runtime for schedule viewing and control.
ScheduleWorX64 is now able to set a "Refresh Output" and "Refresh Rate" to allow it to write to output tags periodically.
BACnet Schedules are now browsable via the ScheduleWorX64 Control configuration for Schedules and Calendars.
The ability to set and switch Global Alias values in the Device ID for the BACnet ScheduleWorX64 Viewer has been added.
BACnet Calendars now allow for Global Aliasing to be used within the Schedule ID for BACnet Schedules within the ScheduleWorX64.
Commanding and Security support have been added to the BACnet Calendar View of the ScheduleWorX64 Viewer in GraphWorX. The basic commands added are "Load Schedule Control Configuration" and "Save Configuration".

TrendWorX64

The Minimum Period for TrendWorX64 Logging has been lowered to accommodate faster data updates. It was previously 6 seconds.
TrendWorX64 now has the ability to get a TrendWorX64 Pen and Chart via scripting as the public methods FindChartComponent, FindSeries and FindPen in TwxViewControl class.
The TrendWorX64 Column "Pen Status" has been renamed to a more appropriate "Connection Status" as it relates more to the connection to the data server than it does the specific point.
Operator Comments within the TrendWorX64 Viewer have been changed so that the ICONICS Username is logged instead of the Windows Username.

Operator Comments now show the Tag Name, Description, and Value in the Annotation Box. The Annotation Marker is based on the Pen Color.
Horizontal Lines in the TrendWorX64 Viewer have been updated to relate to the Pen Ranges instead of the Global Range to provide better visualization of Trend Pens.
It is now possible in the TrendWorX64 Viewer to scale the Minimum and Maximum Range value independently (e.g., Minimum can be set to 0 and Maximum can be Auto Scale).
Colors within the TrendWorX64 Viewer have more configurability in color to support the new Night/Day Global Colors.
The TrendWorX64 configuration of Table Names can now support 255 characters.
An issue was resolved within the TrendWorX64 HDA Service to now start and stop in correlation with the TrendWorX64 Logger Service removing the requirement to restart it separately.
The ability to Show/Hide All in the TrendWorX64 Legend has been added in the header of the Visibility column of the Legend.
In TrendWorX64 it is now possible to select multiple Pens in Runtime and delete them. This is accomplished through Commanding support for Delete.

Founded in 1986, ICONICS is an award-winning independent software developer offering real-time visualization, HMI/SCADA, energy, fault detection, manufacturing intelligence, MES and a suite of analytics solutions for operational excellence. ICONICS solutions are installed in 70% of the Fortune 500 companies around the world, helping customers to be more profitable, agile and efficient, to improve quality and be more sustainable.

ICONICS products are used in building automation, oil & gas, renewable energy, utilities, water/wastewater, pharmaceuticals, automotive and many other industries. ICONICS' advanced visualization, productivity, and sustainability solutions are built on its flagship products: GENESIS64™ HMI/SCADA, Hyper Historian™ plant historian, AnalytiX® solution suite and MobileHMI™ mobile apps. Delivering information anytime, anywhere, ICONICS' solutions scale from the smallest standalone embedded projects to the largest enterprise applications.

ICONICS promotes an international culture of innovation, creativity and excellence in product design, development, technical support, training, sales and consulting services for end users, systems integrators, OEMs and Channel Partners. ICONICS has over 300,000 applications installed in multiple industries worldwide.

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