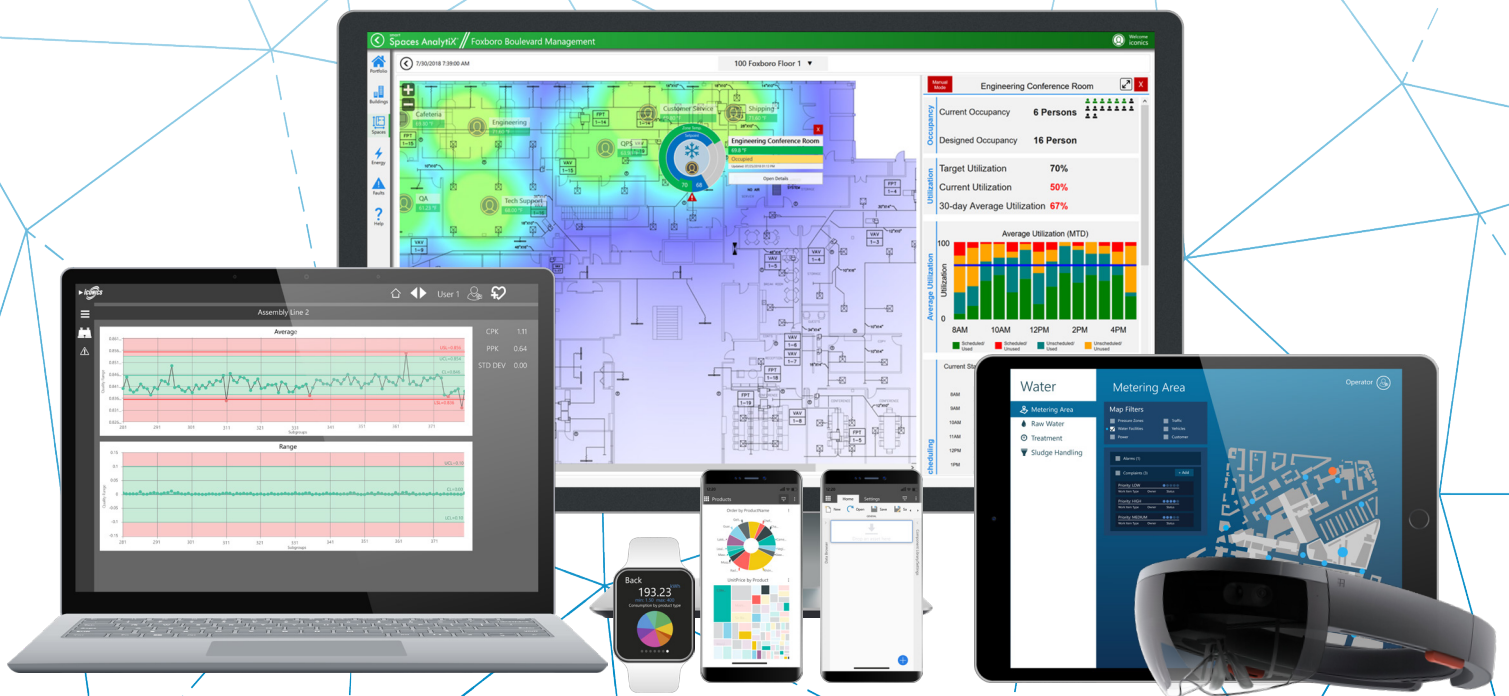


ICONICS 10.97

What's New | **ICONICS Suite™**

March 2021



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Introduction to What's New

This edition of the "What's New" describes many notable new features and enhancements in version 10.97 since the previous release (10.96.2). For information on features and enhancements made in earlier versions, see the appropriate "What's New" document for those versions.

For information on fixes made in version 10.97, see the appropriate "Resolved Issues" document.

Note that if updates need to be made, the most up to date "What's New" and "Resolved Issues" documents can be found in our online documentation here:

[Release Notes](#)

This document was last updated on March 15th, 2020.

Structure of the Document

This document is split into chapters for the different areas of the ICONICS Suite, then further into sections for major updates, representing significant enhancements or new functionality, followed by tables of additional enhancements and fixes.

Where appropriate, references to additional information, such as instructional application notes or help files, will be indicated.

Most Notable Features

Some of the most notable new features in 10.97 are listed below. Visit each link to learn more and see the "Major Enhancements" sections for each product for additional notable features.

- [New Hyper Alarm Server](#)
- ICONICS Suite installation is now [secure by default](#)
- CFSWorX now includes:
 - Integration with [Maximo, ServiceNow, and Azure Active Directory](#)
 - Support for [load balancing](#)
- Hyper Historian Data Exporter now supports [Amazon Simple Storage Service \(Amazon S3\) and Azure Data Lake Generation 2](#)
- Sankey Diagram [control](#) for GraphWorX64, MobileHMI, and [KPIWorX](#)
- Project Reporting now uses [ReportWorX64 technology](#) and no longer requires SQL Server Reporting Services

Common & Platform Services

General

Major Enhancements

Additional Data Sources for Query Interface

In version 10.97 a number of other data providers were enhanced to provide data via the query interface, making it easier and more efficient to display this data in the table control and opening the door for future compatibility. These providers include:

- [AnalytiX-BI Server](#)
- [AssetWorX Point Manager](#)
- [Web Services Point Manager](#)

The query interface is an ICONICS protocol for retrieving datasets. It has been designed to be more efficient at retrieving data, especially when the original dataset needs to be modified, such as by sorting, calculating aggregates, or displaying only a subset of the columns. The query interface allows the server to process those modifications more efficiently before sending the data to the client, whereas with the original dataset protocol the client had to retrieve the entire dataset and modify it on the fly in runtime.

Currently only a few controls can use the query interface to read data from these providers. These controls include the Table control, Fault Viewer, and [Sankey Diagram](#). Future enhancements will broaden this support to other areas of ICONICS Suite.

For Further Reference

- Help: [Data Sources for Query Interface](#)

Azure SQL Server Connections Now Support Azure Active Directory Integrated Security

(Reference ID: 77609)

Previously, configuration databases stored in Azure SQL Server could only be used with SQL authentication or with Azure Active Directory credentials specified in the connection string. Now, configuration databases can support Azure Active Directory Integrated Security when the ICONICS services are running under an Azure Active Directory account.

This support includes logging databases for AlarmWorX64 Logger and the legacy TrendWorX64 Logger. (Note, ICONICS still highly recommends Hyper Historian Express over the TrendWorX64 Logger for new projects.)

The Fault Viewer currently does not support Azure Active Directory. We plan to add Azure Active Directory support for this in a future version.

AlarmWorX64 Multimedia and Workbench Classic do not support Azure SQL Server or Azure Active Directory authentication.

Additional Enhancements

Commanding

Ref ID	Description
80772	The Axis Stroke property can now be set in the Create Pen command.

Data Browser

Ref ID	Description
49625	The data browser now contains a "Stop" button. This button can stop (cancel) a browsing operation if it is taking too long.

Expressions

Ref ID	Description
72069	The expression editor no longer automatically selects whole words when changing the selection.
74171	Enhanced the descriptive tooltips for the toepoch and fromepoch functions.

FrameWorX Server

Ref ID	Description
80220	For security reasons, the FwxServer.Network.config file has been moved into C:\ProgramData\ICONICS.
80325	The REST API transport option is no longer available in the FrameWorX Server Location dialog.
80326	Web Sockets is now the default transport protocol for FrameWorX in new installations.
80371	Previously, point managers could only be enabled or disabled after a restart of FrameWorX (for in-process point managers) or the specific point manager (for out-of-process point managers). Now, they can be enabled or disabled immediately upon applying the changes. This behavior is optional and is controlled with a checkbox on the bottom of the Point Managers tab in Platform Services Configuration.

GenEvents

Ref ID	Description
	The GenEvent messages for successful or failed writes can be replaced with custom messages. To specify a custom message or comment, edit FwxServer.Network.config (located by default in C:\ProgramData\ICONICS). Edit the items in the AuditLogMessagesOverride section. An empty value indicates the default message will be used. These messages are not localizable. FrameWorX must be restarted for the changes to take effect.
69195	Each string may contain the following parameters, which must be enclosed in curly brackets {}. They are not case-sensitive. Result PointName PrevValue NewValue Source

Ref ID	Description
	MachineName ProcessName IPAddress UserName Examples: <pre><WriteSucceededMessageFormat>Result={result}; PointName={pointName}; Prev={prevValue}; New={newValue}; Source={source};</WriteSucceededMessageFormat> <WriteSucceededCommentFormat>MachineName={machineName}; Process={processName}; IP={IPAddress}; User={userName};</WriteSucceededCommentFormat></pre>

Global Search

Ref ID	Description
81009	In Global Search Settings, the EtherNet/IP and Mitsubishi Electric providers are now configured to index by default. Their global search settings have been made consistent with the settings for other similar providers.
81012	The global search can now automatically recover if the search index database has become corrupted or damaged.

Health Monitoring

Ref ID	Description
74581	Health Monitor rules can now optionally specify an Event ID when logging system events. Previously all rules used an Event ID of 0.
82160	The ICONICS Health Monitor Services is now configured with a startup type of manual by default. This is to prevent the unintentional use of system resources by users who do not use Health Monitoring tags or pages. Users who do wish to use these features can start the service manual or change its startup type to automatic or automatic (delayed).

Installation

Major Enhancements

Secure by Default Installation

(Reference ID: 76614)

In previous versions, installing ICONICS Suite onto a new system without any previous configuration resulted in a system that was completely open as far as security was concerned. This was convenient from a demonstration or testing perspective but caused concern for security-minded users who may have wanted to minimize risk while setting up a production system.

Version 10.97 enhanced the installation procedure to create a more secure ICONICS installation from the start, while still offering users the option to create a conveniently open system for demonstration or testing, if needed.


During installation, the user is now prompted for an ICONICS security username and password. By default, ICONICS Suite is installed with security enabled, and a user is created using the name and password supplied during installation.

If desired, the user can choose to install a demonstration system. In this case, ICONICS Suite is installed with security in "testing" mode. A username and password are still required by the installation, and a user will be created in the initial security configuration, but no login will be required to use or configure the system.

Unless a demonstration system is chosen, a minimal set of applications are enabled after installation – only those necessary to run Workbench. Having as few applications and services running as possible provides a more secure and efficient system. As a first step after installation, the user should follow the steps below to use Workbench to enable the specific applications they need for their system.

The IcoGenApps application pool in IIS is now disabled by default unless a demonstration installation is chosen. Disabling this application pool creates a more secure system but prevents WPF WebHMI (usable in Internet Explorer only) clients connecting. HTML5 WebHMI and MobileHMI clients can still connect with this application pool disabled. Users who require WPF WebHMI can use Workbench to enable this application pool.

To activate additional applications or the GENESIS64 IIS application pool:

- 1) Open **Workbench**.
- 2) Log into ICONICS security.
- 3) Open the **Configure Application(s) settings** page with one of the following methods:
 - a. In **Project Explorer**, open the context menu for the project and select **Configure Application(s) settings**.
 - OR
 - b. Go to **Home** and select **Configure Application(s) settings**.
- 4) In the **Available Applications** section, find the applications you would like to enable and do the following for each:
 - a. Enable the checkbox.
 - b. Choose a SQL Server and catalog.
 - c. In the first column, select the  **Create or overwrite the database associated with this application** button.
 - d. A warning dialog will appear. Select **Ok**.
- 5) If desired, select the **Enable GENESIS64 IIS Application Pool**.
- 6) Select **Apply**.
- 7) A warning dialog may appear. Select **Ok**.
- 8) If prompted, restart the **ICONICS FrameWorX** service.

To activate and configure AlarmWorX64 Multimedia on a secure system:

- 1) Open the Windows **Services** control panel.
- 2) Change the **startup type** of the **ICONICS AlarmWorX64 Multimedia** service from Disabled to either **Manual**, **Automatic**, or **Automatic (Delayed)**, depending on your desired behavior.
- 3) The **Services** window can be closed.
- 4) Open **AlarmWorX64 Multimedia** or **Layout and Multimedia Manager**.
- 5) Go to **Project > Edit Project**.
- 6) Select **Add > AlarmWorX64 Multimedia**.
- 7) Select **Close**.
- 8) From the bottom of the **Project Explorer**, select **AlarmWorX64 Multimedia**.
- 9) Right-click on localhost and select **New Database**.
- 10) Follow the wizard to create an AlarmWorX64 Multimedia configuration database.
- 11) When the wizard is complete, right-click on the new database in **Project Explorer** and select **Make Active**.
- 12) Configure AlarmWorX64 Multimedia as needed.
- 13) When prompted, save your project file.

For Further Reference

- Help: [Secure by Default Installation](#)

Additional Enhancements

Ref ID	Description
52547	When performing a custom installation and selecting only the "Client" features, the installation will ask for the FrameWorX connection for the primary server. This functionality was originally part of the separate "ICONICS Client" installation. This makes installing a thick client more convenient, as users no longer need to run the FrameWorX Server Location utility after installation.
78998	The process of upgrading an existing installation has been improved. The database creation wizard now has greater clarity and does a better job guiding a user who is upgrading. Also, the wizard no longer forces the creation of configuration tables that were not part of the original configuration.

Language Aliasing

Language Aliasing Workbench Provider

Ref ID	Description
60137	The description for language alias groups is now visible and editable in Workbench.

Licensing

Ref ID	Description
54811	Enhanced the tracing when connecting to the cloud license server when an error occurs that could be due to an incorrect password or license pool ID.

MonitorWorX Viewer

Ref ID	Description
80675	If the standalone MonitorWorX Viewer is minimized to the task tray and the user attempts to launch it again from the start menu, the already running MonitorWorX Viewer window will be restored. Previously, attempting to launch the MonitorWorX Viewer again would result in no change, possibly leading users to conclude it was hung or broken if they did not realize it was running in the task tray.

Project Reporting

Ref ID	Description
52901	Project Reporting now supports Workbench projects that include multiple servers.
79115	Added an "Automatically fit report content" option to the Project Reporting forms.

Security

Security Workbench Provider

Ref ID	Description
44515	Users and groups now contain three new buttons at the bottom for "Administrator", "Operator", and "Read Only". These buttons can be used to quickly grant a user or group a standard set of permissions for the given level.
73286	The "Test current Allow/Deny configuration" field on the Files tab for users or groups now includes a file browser instead of a tag browser.

Tools

ConverterWorX

Ref ID	Description
35372	The ConverterWorX Importer now allows browsing for the SQL Server instance in the appropriate fields. Previously this value had to be entered manually.
50412	Enhanced the TrendWorX32 Logger to Hyper Historian conversion process to ensure a more accurate conversion of tags with expressions as the tag source.
53545	When converting GraphWorX32 displays to GraphWorX64, Popup Window pick actions are now converted to Load Display actions with a target type of Popup Window (Display Dependent). Previously they were converted to target type, Popup Window (Window Dependent). Display Dependent is more consistent with the behavior in GraphWorX32.
72705	Enhanced the AlarmWorX32 Logger to AlarmWorX64 Logger conversion process to ensure a more accurate
72147	conversion.
77659	Enhanced the DBOPC Server to GridWorX Server conversion process to ensure a more accurate conversion.

TraceWorX

Ref ID	Description
72816	Enhanced the speed of TraceWorX logging. Exact performance will vary per application, but controlled tests showed a 60-80% speed improvement. Users are still encouraged to only enable TraceWorX logging when troubleshooting an issue. Tracing may still have a noticeable effect on performance of the module being traced.

Triggers

Triggers Workbench Provider

Ref ID	Description
79126	Users can now use the expression editor when configuring points for data triggers. Select the tag browser button and go to the Expressions tab. (Expressions were supported previously, but they had to be entered manually.)

Web Platform Services (WebAPI)

Major Enhancements

General

Support for Docker, Kubernetes, and Redis

(Reference ID: 77678)

Web Platform Services now supports running in Docker containers. It also supports scaling using Kubernetes and sharing Machine Keys using Redis.

For more information about deploying the Web Platform Services Docker container, see the Extensibility ToolWorX documentation. (Contact your sales representative or distributor for information on obtaining Extensibility ToolWorX.)

REST OData Provider

Support for Standard and Historical Datasets

(Reference IDs: 71305, 78049)

REST API calls can now be used to return standard datasets and historical datasets.

The following is an example standard dataset API call that returns data from the Northwind Orders table where the ShipCountry is "Germany":

```
https://hostname/fwxapi/odata/v1/ODataDataset?pointName=db:Northwind.Orders&$filter=(ShipCountry eq 'Germany')&$count=true&$top=3&$format=application/json;odata.metadata=none
```

The following is an example historical dataset API call for the Signals > SineFast point.

```
https://hostname/fwxapi/odata/v1/ODataHistory?pointName=hh:\Configuration\Signals:SineFast&StartDate=2020-07-21T11:25:00-0400&EndDate=2020-07-21T11:27:00-0400&$count=true&$filter=(statusCode eq 0)&$top=8
```

For Further Reference

- Application Note: *GENESIS64 - Setting up WebAPI REST*
- Help: [Support for Standard and Historical Datasets](#)

Support for Swagger

(Reference ID: 71298)

Web Platform Services now supports Swagger. Swagger allows for autogenerated documentation of the REST API and the ability to test API endpoints in the browser. It also makes it easier to connect with third-party services, such as Microsoft Power Apps.

The Swagger documentation is accessible at <https://hostname/fwxapi/swagger/index.html>.

For Further Reference

- Application Note: *GENESIS64 - Setting up WebAPI REST*
- Help: [Support for Swagger](#)

Additional Enhancements

Ref ID	Description
72936	<p>WebAPI API calls now support real-time data updates when using WebSockets. See the help documentation for more information on how to configure real-time data updates.</p> <p>A REST API has been added for the global search. Below are some examples:</p> <p>To search the whole address space for "mySearchText": <a href="http://<hostname>/fwxapi/rest/Data/Search?text=mySearchText">http://<hostname>/fwxapi/rest/Data/Search?text=mySearchText.</p> <p>To search using a starting point of ac:Company (point name): <a href="http://<hostname>/fwxapi/rest/Data/Search?text=mySearchText&startPointName=ac%3ACompany">http://<hostname>/fwxapi/rest/Data/Search?text=mySearchText&startPointName=ac%3ACompany</p> <p>To search using a starting point of My Computer/Assets/Company (display path): <a href="http://<hostname>/fwxapi/rest/Data/Search?text=mySearchText&startPath=My+Computer%2FAssets%2FCompany">http://<hostname>/fwxapi/rest/Data/Search?text=mySearchText&startPath=My+Computer%2FAssets%2FCompany</p> <p>This REST API requires authentication. See the application note entitled, "GENESIS64 - Setting up WebAPI REST" or the help documentation for more information.</p>
77522	<p>Web Platform Services plug-ins can now use cookie authentication.</p> <p>In addition, URL rewrite support has been enhanced. It is now possible to specify allowed headers, the number of reverse proxies in the path, which proxy IP addresses are allowed, and more. This is configurable in <code>\CONICS\GENESIS64\WebSites\lcoWebAPIService\appsettings.json</code>.</p> <p>See Extensibility ToolWorX documentation for more information on these features. (Contact your local sales representative or distributor for information on obtaining Extensibility ToolWorX.)</p>
78769	<p>All API endpoints now support versioning (such as "/v1/" in the URL). This will aid in maintaining backwards compatibility while allowing more flexibility in implementing future improvements. URLs that do not specify a version will use the v1 API.</p>
78782	<p>Plug-ins for the Web Platform Services can now support localization using simple JSON files. See Extensibility ToolWorX for information on how to create a Web Platform Services plugin that leverages the localization capability.</p> <p>Web Platform Services REST API calls can now specify the culture used to translate language aliases that might be returned in the call. Previously all calls used the server's default culture for translating language aliases. Culture can be specified using a parameter, header, or cookie consistent with ASP.NET Core standard localization standards.</p>

Common & Platform Services - Web Platform Services (WebAPI)

Ref ID	Description
	<p>An example REST API call that specifies the culture would be: <code>https://hostname/fwapi/rest/v1/data?pointName=ac:MainBuilding/localizedProperty&culture=cs-CZ</code></p> <p>More documentation on specifying the culture can be found in Extensibility ToolWorX. (Contact your local sales representative or distributor for information on obtaining Extensibility ToolWorX.)</p>

AnalytiX

AnalytiX-BI



Major Enhancements

Support for Query Interface and Table Control

(Reference ID: 74982)

AnalytiX-BI can now provide data via the query interface. This means that controls that support the query interface (such as the table control, when using a type of "query") can connect to AnalytiX-BI and display data from a data model.

To see data from an AnalytiX-BI data model in the table control:

- 1) Configure the **table** control.
- 2) For **Query**, select **type**.
- 3) For **Data Source**, browse under **AnalytiX > BI Server > Data Models** and select your desired data model.
- 4) For **Table**, select the desired table from the data model.
- 5) Go to the **Fields** page.
- 6) Select the refresh  button.
- 7) Go to the **Columns** page.
- 8) Select the refresh  button.
- 9) Make further updates to **Fields** or **Columns** as desired.
- 10) Select **OK**.
- 11) Go into runtime to see your data.

Future ICONICS products that use the query interface will be able to access AnalytiX-BI information in a similar fashion.

Query interface support was added for additional data sources. See [Additional Data Sources for Query Interface](#) for more information.

For Further Reference

- Help: [Support for Query Interface and Table Control](#)

Additional Enhancements

AnalytiX-BI Server

Ref ID	Description
65346	AnalytiX-BI queries now support LEFT and OUTER joins.

Ref ID	Description
66951	The Real-time and Asset Property Values steps in data flows now include a "Batch read delay" property that specifies the amount of time to wait before each batch request.
76055	Previously, if the user is scrolled down in a data flow preview, adding a new step would refresh the preview and jump the user back to the top. Now, the scroll position is saved and restored after the refresh, so the user does not lose his place in the preview.
80393	Data flows can now read AssetWorX time zones. Dimensions > Assets, Asset Properties and Energy all return a new column called "TimeZoneId" which reflects the time zone for the asset or property as it is configured in AssetWorX. If the time zone is set "As Specified" the value for the asset / property will be returned; otherwise, the closest parent with its time zone set to "As Specified" will be returned. If no assets in the hierarchy for the selected asset / property has its time zone set, null or empty string will be returned as time zone id.

AnalytiX-BI Workbench Provider

Ref ID	Description
80394 80823	Data flows can now use the totimezoneinfo function (available for steps and parameters). This function takes two parameters, a datetime to convert, and a time zone ID. The datetime converted into the specified time zone. This can be used to align the times of two different datasets. The totimezoneinfo function can also take a third optional parameter that identifies the source time zone of the datetime value. If this parameter is not specified, the time zone is assumed to be local.

BridgeWorX64 & Workflow

Common

Ref ID	Description
71459	The delay activity now exposes an output dataset. This dataset exposes a single Boolean value in a column named "CompletedByTimeout". This value can be used by subsequent activities to tell if the delay ended due to the timeout or due to the expression.
75897	Activities that have a single data source now support expressions in the Point Name field. This includes the Data Set Reader, Historical Alarms Input, Data Manipulator, Bulk Data Manipulator, and Web Service Manipulator.
77723	Previously, Workflows, BridgeWorX64 transactions, and CFSWorX workflows could only hibernate on a delay block with a fixed wait period. Now the delay block can hibernate on variable delays. A workflow or transaction that is hibernating will periodically "awaken" to check the wait expression.

BridgeWorX64 Server

Ref ID	Description
66954	BridgeWorX64 configurations now have an "Automatic" option for the "Number of Threads" setting in the Advanced Properties section. Enabling "Automatic" will allow the BridgeWorX64 engine to dynamically check the CPU cores and set an appropriate thread pool.
75199 72707	"Send Push Notifications" activity added for BridgeWorX64 and CFSWorX workflows. This sends Azure-based push notifications that were introduced in 10.96 for the Universal Windows Platform (UWP) app and in 10.96.1 for iOS and Android apps.

BridgeWorX64 & Workflow Workbench Providers

Ref ID	Description
67000	Users can now upload an example JSON into the JSON Content Reader activity to automatically load the schema. Use the Load Schema link in JSON Reader Settings under JSON Parse Mode.

CFSWorX

Major Enhancements

General

Additional CRM and CMMS Integrations (Maximo, ServiceNow, Azure Active Directory)

(Reference ID: 77225, 77227, 77426)

Version 10.97 adds CFSWorX integration with the following CRM and CMMS systems.

Integration	Worker Contact Info	Groups & Skills	Schedules	Work Orders
<i>Maximo</i>	✓	✓		✓
<i>ServiceNow</i>	✓	✓	✓	✓
<i>Azure Active Directory</i>	✓	✓	✓	n/a

Note, Azure Active Directory does not manage work orders. Maximo does not currently make their schedules available via their APIs. ICONICS plans to add Maximo schedule integration when possible.

For Further Reference

- Help:
 - [Configuring Maximo](#)
 - [Configuring ServiceNow](#)
 - [Adding an Azure Active Directory Source](#)

Worker Access

Obtain Worker Location from Dynamics 365

(Reference IDs: 66124, 80598)

Instead of using MobileHMI device health data, the location of workers can now be determined from Dynamics 365. On the desired field worker source object, select the **Use CRM Location** box to get location from Dynamics 365. (See help files for information on how to enable the field technician location tracking feature in Dynamics 365 for Field Service.)

For Further Reference

- Help: [Obtain Worker Location from Dynamics 365](#)

Workflows and Alerts

Workflow Load Balancing and Redundancy

(Reference ID: 76066)

The load balancing and redundancy features introduced for BridgeWorX64 in version 10.96.0 are now available in CFSWorX for workflows. CFSWorX schedulers keep track of the queue of workflows that need to be executed and dispatch them to running CFSWorX workflow engines. If one engine fails, the schedule will dispatch transactions to the remaining engines. Redundant schedulers can be configured, but only one will run active at a time.

The configuration of load balancing is the same as for BridgeWorX64. CFSWorX workflows can have the same recovery modes as BridgeWorX64 transactions.

Note that interrupted workflows can either be restarted from the beginning or not recovered at all. CFSWorX is not able to resume the workflow where it left off.

For Further Reference

- Help: [Workflow Load Balancing and Redundancy](#)

Additional Enhancements

Ref ID	Description
68861	Field workers can be enabled or disabled based on the value of a Boolean tag. Select the user in Workbench under Connected Field Workers > Field Workers > source, check the box for "Enable on Tag", then fill in the desired tag value. Note, if the tag cannot be evaluated or if it is not a Boolean value, the worker will be disabled.
71723	In previous versions, users could retrieve the count of field workers that match a query by creating a query tag that specified an index of -1. This functionality is unchanged, but users can now browse for the @@Count tag under Connected Field Worker > Field Workers > worker source to get a tag with the index pre-filled with -1, eliminating the need to remember the correct syntax.
74296	Enhanced the TraceWorX tracing to better report when the product is disabled due to licensing.
74965	Added support for using Azure maps to calculate worker distance and travel time. See help documentation for AnalytiX Suite > CFSWorX > Templates > Sort Workers Based on Travel Time for instructions on how to configure Azure maps.
74977	Field worker images are now re-imported whenever the point manger is started or when performing a manual "Sync Now" from Workbench. Previously the worker images were only ever imported when the worker was first imported. Added these additional performance counters to the Connected Field Worker point manager:
79809	Active Geofence Alarms Azure AD API Calls Azure AD API Errors Cache read rate Database read rate Dynamics 365 API Calls Dynamics 365 API Errors Number of groups configured

Ref ID	Description
	Internal Schedule Errors Maximo API Calls Maximo API Errors Mobile Updates SalesForce API Calls SalesForce API Errors ServiceNow API Calls ServiceNow API Errors Number of workers configured
80726	Recipients can now respond to a Vonage WhatsApp alert message from CFSWorX to acknowledge the alarm or fault. This works consistent with other acknowledgment support, such as with Twilio WhatsApp or SMS.
80884	CFSWorX sources now support online changes via PowerShell.
80899	Added support for Vonage public sandbox API for WhatsApp, allowing users to test AlertWorX or CFSWorX alerts with Vonage before purchasing a Vonage plan.

CFSWorX Workflows

Ref ID	Description
70658	The NT Event Output block is now allowed in CFSWorX workflows.
75199	"Send Push Notifications" activity added for BridgeWorX64 and CFSWorX workflows. This sends Azure-based push notifications that were introduced in 10.96 for the Universal Windows Platform (UWP) app and in 10.96.1 for iOS and Android apps.
77689	Added a new Alarm Delay activity. This activity can periodically check for new alarm values and end the delay based on those values. (The standard Delay block will not reevaluate alarm values.)
77723 81674	Previously, Workflows, BridgeWorX64 transactions, and CFSWorX workflows could only hibernate on a delay block with a fixed wait period. Now the delay block can hibernate on variable delays. A workflow or transaction that is hibernating will periodically "awaken" to check the wait expression.

Energy AnalytiX

Major Enhancements

Dashboards

Dashboards and Data Model Updates Utilizing Sankey Diagram

(Reference ID: 77438)

The Energy AnalytiX data model and sample dashboards have been updated to utilize the new [Sankey Diagram](#) widget.

The data model has three new views, **EnergyConsTotalsAreaView**, **EnergyConsTotalsEnterpriseView**, and **EnergyConsTotalsSiteView**. These views are used in three new dashboards available in the new **Consumption Flows** folder. The new dashboards are named **Area Level Flows**, **Site Level Flows**, and **Enterprise Level Flows**. They visualize the flow of energy of various levels.

For Further Reference

- Application Note: *Energy AnalytiX – Sample Energy Dashboards*
- Help: [Dashboards and Data Model Utilizing Sankey Diagrams](#)

Additional Enhancements

Ref ID	Description
79169	<p>It is now easier to display data from assets in different time zones. The Energy AnalytiX AnalytiX-BI data models and KPIWorX dashboards can now take advantage of the time zones defined in AssetWorX to ensure that daily data is retrieved using the correct start and end times for the day local to the asset. For example, when displaying a day's worth of data from both Boston and London assets, the Boston data will be retrieved from 12 midnight to 12 midnight Boston time and the London data will be retrieved from 12 midnight to 12 midnight London time, even though 12 midnight is a different UTC time for each asset. When displayed, the data will be aligned according to the asset's local time zone, so the data logged at 8 AM in Boston will display at the same time position as 8 AM data from London.</p> <p>This functionality requires that the relevant assets have a time zone specified on the General tab of the asset or are inheriting a time zone from an ancestor asset. When the time zone is specified the times are aligned in the data model and dashboard automatically. No further configuration is required.</p>
80680	Miscellaneous small enhancements to the data model and example dashboards to provide a better user experience.

Facility AnalytiX & FDDWorX

FDDWorX Server

Ref ID	Description
80786 75874	The FDDWorX server and Fault Viewer now support Add Comment and Acknowledge/Resolve/Deactivate Incidents actions on a grouped view, such as Fault Statistics. Previously these actions were only supported on the Fault Incidents view.

Fault Viewer

Ref ID	Description
54791	<p>The Fault Viewer can now display the estimated lost opportunity cost of incidents. Use the IncidentLostOpp field to see this metric.</p> <p>The lost opportunity is calculated as the normalized fault cost per second for an incident multiplied by the total active duration for the incident over the displayed time period.</p>
80786	The FDDWorX server and Fault Viewer now support Add Comment and Acknowledge/Resolve/Deactivate Incidents actions on a grouped view, such as Fault Statistics. Previously these actions were only supported on the Fault Incidents view.

ReportWorX64 & ReportWorX64 Express

Major Enhancements

ReportWorX64 Excel Add-In

Chart Enhancements for ReportWorX64 Add-In

(Reference ID: 78146)

Version 10.97 adds an additional way to work with charts in ReportWorX64 and ReportWorX64 Express. Now, charts can be created from a particular data source with the aid of a helpful wizard.

Charts created from a data source automatically map to the correct cells in the data source. The user no longer has to remember what cells to select in the blank data source. Charts created from a data source are not visible until data is downloaded, allowing the user to place them over the source data, if desired, without obscuring the configuration of the data source.

This feature can also be used to create a series of charts with the number or charts depending on the data. This allows reports to dynamically add or remove charts as needed when the data changes.

These charts will automatically update when the new [Timer Download](#) feature is used.

To add a chart from a data source:

- 1) Place your cursor in a cell mapped to a data source.
- 2) Open the **Data source chart configuration** dialog by selecting one of the following:
 - a. **ReportWorX64** ribbon > **Edit** > **Chart Settings**
OR
 - b. Context menu > **Edit** > **Chart Settings**
- 3) In the **Chart settings** section, select data source columns for the **X column** and **Y column**.
- 4) In the **Choose chart type** section, select **Specify chart type**, then choose a chart type, such as **2D Line**.
- 5) In **Chart position** section, select the chart's location with one of the following methods:
 - a. Select the desired **Worksheet**. Fill in the **X position** and **Y position** with the location of the chart's upper left corner in pixels.
OR
 - b. Select the **Select position** button, then select a cell where you would like to align the chart's upper left corner. This can be on another sheet, if desired.
- 6) Set the **width** and **height** of the chart. (A suggestion is to increase the **width** to **500** and **height** to **300** to start with.)
- 7) Make other changes, if desired, then select **OK**. Note, no chart will be immediately visible. This is normal.
- 8) On the **ReportWorX64** ribbon, select **Download data**. When the data has finished downloading your chart will appear.
- 9) Select the **Clear Data** button. The chart will disappear.
- 10) Changes can be made to the chart settings by selecting a cell in the data source, then returning to the **Data source chart configuration** dialog using the same steps as above.

- 11) If desired, save this workbook and upload it to the ReportWorX64 Server as a report template. When the report is generated, the charts will be created, just as they are when using the **Download data** option inside Excel.

Note, make your data source is configured and mapped correctly before adding a chart using the **Data source chart configuration**. Users cannot update a data sources columns, headers, or source tags while a chart exists. To remove a chart and allow updating of the data source, select the data source, go to either the ReportWorX64 ribbon or the context menu, then select **Remove > Chart Settings**.

To leverage Excel's extensive chart formatting options, users can create a chart to use as a template. In the **Choose** chart type section, select **Use existing chart as template** and then select the chart to use as a template. All existing formatting will be copied from the template chart. The template chart cannot be deleted, but it can be hidden if desired by placing it on a particular sheet and hiding that sheet.

By default, any existing series data in the template chart will be copied into the new charts. To prevent this, enable the **Clear Series** option.

Optionally, multiple data series can be added to a chart. These series must exist in the same data source, with all of their X and Y data in the same columns, and a third column must exist with the desired name of each series. An example of this is a data source mapped to multiple historical data tags using the Extended data source type.

Here is an example of adding multiple historical pens was multiple series in a chart:

- 1) Place your cursor in a cell.
- 2) Go to the **ReportWorX64** ribbon or the context menu and select **Add > Data source**.
- 3) Select multiple historical tags, then select **OK**.
- 4) Place your cursor in a mapped cell, then edit the data source by going to the **ReportWorX64** ribbon or the context menu and selecting **Edit > Data source**.
- 5) Set **Column Style** to **Extended**.
- 6) Select **Save and close**.
- 7) Place your cursor in a mapped cell, then bring up the chart settings by going to the **ReportWorX64** ribbon or the context menu and selecting **Edit > Chart Settings**.
- 8) For **X column**, choose **Timestamp**.
- 9) For **Y column**, choose **Value**.
- 10) Enable **Use series column**.
- 11) For **Series column**, choose **PointName**.
- 12) For chart type, choose **2D Scatter Line**.

- 13) Select the chart position and size.
- 14) Select **OK**.
- 15) Download the data. Observe that each pen has its own line in the final chart.

When using a series column, instead of putting all series into one chart, each series can have its own chart. Configure the chart as described above but enable **Also generate a variable number of charts grouped by the value of the series column** and choose a direction. When downloading the data, you will see additional charts under the first one, one chart per unique series value (if using the above example, one chart per pen).

Adding charts the traditional way (using Excel's native insert chart feature and connecting it to blank data source cells) is still supported. Users can choose which chart feature suits their reports best, and even use a combination of chart types in their reports.

For Further Reference

- Help: [Chart Support for ReportWorX64 Add-In](#)

Automatic Update of Real-Time Data Sources

(Reference ID: 39649)

Reports with real-time data sources can now be automatically updated in real time. Users can configure a data source with real-time data and use the **Timer Download** button to configure the update rate and begin automatically updating the data.

To stop the updates, select the **Stop Download** button.

Note, the Timer Download button can only be used in a ReportWorX64 Excel sheet mapped to real-time data sources, and only the real-time data sources on a sheet will be updated.

For Further Reference

- Help: [Automatic Update of Real-Time Data Sources](#)

Additional Enhancements

Ref ID	Description
74427 78147	The results of a data source can now optionally be resolved as tags, displaying their real-time values in the final report. To configure this feature, edit the data source and go to the Resolve Header tab. For each column in the data source you would like to resolve, check the Resolve box.
77304	Data types that are not supported by Excel are now converted to string. Previously unsupported data types could cause unexpected behavior, possibly even a crash.
80396	It is now possible to set values for global aliases in the tag name when using the @@Execute tag for a report. For example: rwx:Order Details Report/@@Execute<@param1=ANTON><#alias1=value;#alias2=value>

Ref ID	Description
	Users can browse for the @@Execute (override Global Aliases) tag in the browser to get a tag that already has the appropriate syntax.
80471	Added an "Auto Fit Rows" option to report settings. Unchecking this option allows reports to preserve the row height from the template. Previous versions always fit the row height after generating the report.
	ReportWorX64 and ReportWorX64 Express can now add parameters to a worksheet's header and footer using an expression wrapped in <ico></ico> tags.
80583 79908	<p>The expression can be written manually, but to easily generate an expression for the header or footer, select Parameters from the ReportWorX64 ribbon, select an existing parameter or create a new one, then select the Embedded Expression Editor button. Select one or more attributes (such as Name or Value) to add, then select "Generate". Copy the expression (or use the "Copy to clipboard" button), close the Embedded Expression Generator, then paste the expression into the worksheet's header or footer.</p> <p>The expression in the header or footer will be evaluated when "Download Data" is performed or when the ReportWorX64 Server runs a report using this file as a template.</p> <p>Example expressions: <ico><<param0>>.Value</ico> <ico><<param1>>.Name,<<param1>>.Value</ico></p> <p>Note, when performing a "Download Data" action, make sure the cursor is not in one of the header or footer fields.</p>

ReportWorX64 Excel Add-in

Ref ID	Description
61498	Fixed list and expression parameters can now use other parameters.
71824	Excel's conditional formatting can now work with ReportWorX64 data, with some limitations. There should be a one-to-one relationship between columns and conditional formatting objects (each conditional formatting can only apply to one column and each column can only have one conditional formatting applied) and the data source must use the fill method of "Auto with expand".
71999	Added support for formulas that reference tables and table columns (such as "=[Column 1]*5").
74295	ReportWorX64 Express reports can now be configured to auto-fit only certain columns, rather than the whole workbook. To configure this, use the context menu or the ReportWorX64 ribbon to select Edit > Header, then check the Auto Fit box for the columns you would like to auto fit or use the "Enable Auto Fit for all headers" button.
	Note that these settings are only used when performing a download within the ReportWorX64 Excel add-in. The ReportWorX64 server does not respect these settings when the file is used as a template. Use the "Auto Fit Columns" option in the ReportWorX64 report setting instead.
74305	<p>When a parameter allows multi-selection, multiple values can now be chosen when downloading data in the ReportWorX64 Excel add-on.</p> <p>Note that if another parameter depends on the multi-select parameter, only the first selected value will be used. Example: Param1 allows multi-selection. Param2 is an automatically calculated parameter that adds 1 to Param1. If the user chooses 5 and 10 for Param1, Param2 will equal 6 (the first value of Param1 plus 1).</p> <p>Users can now choose between two schemas for historical data sources using the "Column Style" dropdown. This dropdown can be reached using the Edit Data Source option from the ReportWorX64 ribbon or context menu. The user can choose between simple and extended modes.</p> <p>In simple mode, there is a timestamp column and one column for each historical tag. The historical values for the same timestamp will appear on the same row.</p>
79963	<p>In extended mode, all historical fields are available (including pen name, low and high ranges, description, and engineering units) and there is one column for all values. Each row contains a specific historical sample and its properties. If there are multiple tags subscribed, the table is filled with all the samples of all tags, ordered by source.</p> <p>Some helpful text is displayed below the "Column Style" to help users understand the difference between these two modes.</p>

Ref ID	Description
80465	"Column Style" replaces the "Always keep extended headers" checkbox in previous versions. The Header Configuration window (context menu or ReportWorX64 Ribbon > Edit > Headers) now allows users to reorder the columns. Select a header and use the up and down arrows on the right.

ReportWorX64 Viewer

Ref ID	Description
63741	When downloading reports from the ReportWorX64 Viewer, the default file name now includes random characters. This helps ensure that existing files are not accidentally overwritten.
71160	The ReportWorX64 Viewer can now cancel reports in Viewer view mode. Previously canceling was only possible in Executor view mode.
80467	When executing reports, users can now override the global alias values.

Data Connectivity

BACnet Connector

BACnet Workbench Provider

Ref ID	Description
44070	The results of Network Discovery can now be exported to a CSV file. Select the "Export Results" hyperlink in the Network Results header.
80936	The MAC address is no longer allowed to be blank when configuring a device with static binding.

SNMP Connector

SNMP Server

Ref ID	Description
76592	When exploring a network or device using SNMP v3, the SNMP point manager now displays an error if the username or password was entered incorrectly. (Previous versions only logged these errors to TraceWorX.)

SNMP Workbench Provider

Ref ID	Description
74931	The Explore Network dialog now includes context menu options to select or deselect all devices.
74964	Hex Bytes is now an available syntax for SNMP tags.

Web Services Connector


Major Enhancements


Support for Query Interface and Table Control

(Reference ID: 75109)

The Web Services Connector now supports the query interface. This means that controls that support the query interface (such as the table control, when using a type of "query") can connect to Web Services and display web method data.

To see Web Services data in the table control:

- 1) Configure the **table** control.
- 2) For **Query**, select **type**.
- 3) For **Data Source**, browse under **Data Connectivity > Web Services** and select your desired web method.
- 4) The **Table** field should automatically be populated with the name of the chosen web method.
- 5) Go to the **Fields** page.
- 6) Select the refresh  button.

- 7) Go to the **Columns** page.
- 8) Select the refresh  button.
- 9) Make further updates to **Fields** or **Columns** as desired.
- 10) Select **OK**.
- 11) Go into runtime to see your data.

Future ICONICS products that use the query interface will be able to access web services information in a similar fashion.

Query interface support was added for additional data sources. See [Additional Data Sources for Query Interface](#) for more information.

For Further Reference

- Help: [Support for Query Interface and Table Control](#)

Additional Enhancements

Ref ID	Description
81000	Individual services now expose an @@Refresh writable point that can be used to refresh all web methods belonging to the service.

GENESIS64

Alarms and Notifications

Major Enhancements

Hyper Alarm Server

New Hyper Alarm Server

(Reference ID: 76400)

ICONICS introduces a new alarm server in version 10.97, the Hyper Alarm Server.

The Hyper Alarm Server offers ISA 18.2-compliant and redundant alarming using all new technology, allowing for better performance, more control, native integration with FrameWorX communication, and configuration via AssetWorX. The Hyper Alarm Server is configured in **Workbench** under **Alarms and Notifications > Hyper Alarm Server**.

New in the Hyper Alarm Server, users define **alarm types**, which act as a template or class for alarm tags. The type defines the core logic behind an alarm, its states or conditions, when it is evaluated, and more. The sample Hyper Alarm Server configuration includes several of the most common alarm types.

In the past, the AlarmWorX64 Server had a set of hard-coded alarm types – such as digital or limit – that worked in very specific ways. Users with specific needs could not always get the alarm behavior they needed. Hyper Alarm Server alarm types give users the freedom to customize the way alarms work without having to implement counterintuitive workarounds or request product enhancements.

All Limits

Full Path: MyProject/Alarms and Notifications/Hyper Alarm Server/Types

Name: All Limits

General Settings Inputs Triggers Fields Conditions Values

Description: All Alarm limits type with advanced setting and related values.

State Transition Type: ISA 18.2 Without Latch

Scan Rate: 1200 (milliseconds)

Expression

```
IF {{Data Source}} < {{Critical Lo Value}} THEN -3
ELSE IF {{Data Source}} < {{LoLo Value}} THEN -2
ELSE IF {{Data Source}} < {{Lo Value}} THEN -1
ELSE IF {{Data Source}} > {{HiHi Value}} THEN 2
ELSE IF {{Data Source}} > {{Hi Value}} THEN 1
ELSE 0
```

The screenshot shows the configuration window for an alarm tag named "Ash Content". The full path is "MyProject/Alarms and Notifications/Hyper Alarm Server/Areas/Plant Area". The "Name" field is "Ash Content". The "Type" is set to "All Limits". The "General Settings" section includes:

Data Source	@sim64:Long.Ramp(10,0,0,100,0,0).Value
Default Display	C:\Program Files\ICONICS\GENESIS64\WebSites\PubDispl
Base Text	"Ash Content of Tank1 is"
Help Instructions	"Change Alkaline level in Tank1 to keep solution neutral"

At the bottom, there is a section for "Critical Lo Condition".

Alarm tags are instances of alarm types that provide the actual alarm capability. An alarm tag defines specific values for the fields of its alarm type. These specific values may include the data source, message text, severity, limit values, etc.

Alarm tags are organized by area and configured under **Hyper Alarm Server > Areas**. Areas act as folders for the alarms. They are organized in a tree structure, with tags as the leaves of the

tree. This tree structure with alarms nested directly inside provides a more intuitive way to organize and navigate alarms than the flat list of alarms with a separate structure of areas provided by the AlarmWorX64 Server.

Alarm counters provide a way to count or summarize the activity in an area, exposing the information as a real-time value. They are defined under **Hyper Alarm Server > Product Configuration > Counters**. Users may recognize these counters from the AssetWorX configuration, as they work in the same way. Counters can be browsed under the root of any area under the Hyper Alarm Server. The sample Hyper Alarm Server configuration comes with six preconfigured counters that fill the most common counting needs, such as the number of active or unacknowledged alarms in an area.

Similar to Hyper Historian, the Hyper Alarm Server integrates with AssetWorX. As an alternative to adding alarm tags under **Hyper Alarm Server > Areas**, they can be added using the **Alarms** tab of equipment properties under **Assets > Equipment**. Alarm tags added via AssetWorX use the configured real-time aspect of the equipment property as the data source. The rest of the values can be filled in the same as they would be when adding a tag under the Hyper Alarm Server.

When alarms are configured via AssetWorX, they use the asset tree structure as areas. Alarm clients can subscribe to either **Assets** or to **Hyper Alarm Server > !Assets**. In either case, users can also choose to subscribe to a particular asset to get only child alarms of that asset.

As when using integrated Hyper Historian tags, the alarms can be incorporated into equipment classes, allowing users to easily instantiate many alarms at once using the Bulk Asset Configurator's ClassInstantiation or ClassInstantiationRowsBased sheets. The ClassAlarmDefinitions sheet is not used to instantiate alarm tags in the Hyper Alarm Server.

Because the Hyper Alarm Server was designed from the ground up with FrameWorX in mind, its data path is more direct than AlarmWorX64 Server. There is no more conversion between old and new technologies. This makes the Hyper Alarm Server more robust and better performing than the AlarmWorX64 Server.

There are additional benefits to the Hyper Alarm Server over AlarmWorX64 Server. For instance, the Hyper Alarm Server allows users to access historical reads for a tag, letting users easily configure rate-of-change or similar alarm types – something that has always been challenging for the AlarmWorX64 Server. Also, the Hyper Alarm Server allows unlimited related values, whereas the AlarmWorX64 Server allows only twenty.

The AlarmWorX64 Server is still available for the sake of backwards compatibility, but for new systems users are encouraged to use the new Hyper Alarm Server for forward compatibility, best performance, and the most extensive functionality.

The Hyper Alarm Server uses the AlarmWorX64 Server license, so it can be used with any product that includes AlarmWorX64 Server. Licensing is node-based, so the Hyper Alarm Server and AlarmWorX64 Server can both run on the same machine at the same time even with only one available AlarmWorX64 Server license. The Hyper Alarm Server consumes GENESIS64 tags for alarm inputs.

The Hyper Alarm Server is also available for [IoTWorX edge devices](#).

For Further Reference

- Application Note: *Hyper Alarm Server – Quick Start*
- Help: [About Hyper Alarm Server](#)

Additional Enhancements

AlarmWorX64 Logger

Ref ID	Description
81588	The AlarmWorX64 Logger Point Manager now exposes the .TimeZoneAlign tag in the data browser. Subscribing to this tag will show source local timestamps. This syntax was usable in earlier versions but was not browsable.

AlarmWorX64 Server

Ref ID	Description
54022	The AlarmWorX64 Server previously allowed alarms to be shelved even if they were both acknowledged and normal. This is no longer allowed.
58842	A real-time tag can now be used to enable or disable the Out of Service, Suppress by Design, and Shelve features for an alarm. The tag for each feature can be supplied on the Advanced Settings section of an alarm tag in Workbench. Users who do not wish to use tags can supply a 1 to enable or 0 to disable each feature.
73296	The re-alarm feature, when triggered, now keeps the actor ID and comment of the original alarm.

AlarmWorX64 Multimedia

Ref ID	Description
68757	The phone agent now supports remote configuration databases.

AlertWorX

Ref ID	Description
	Users who do not require acknowledgment functionality or logged status updates now have a more secure option for supplying credentials.
	Users who need acknowledgment or logged status updates still need to supply these credentials: * Main account SID * Account token
75076	Now, users who do not need acknowledgment or logged status updates can supply these more secure credentials instead: * Main account SID * API key SID * API key secret
	See the help documentation for more details on how to obtain these credentials and use them in ICONICS software.
75922	AlertWorX maintains a blacklist of users who have opted out of SMS messages sent via Twilio, AT&T, or Vonage. If alerts are configured to be sent to a user on this blacklist, AlertWorX will not send the message. This behavior has not changed, but previously there was no record in the AlertRest runtime log of the request to message the user. Now, a clear record is added to the AlertRest runtime indicating that the recipient was on the blacklist and the SMS was not sent.

AlertWorX Workbench Provider

Ref ID	Description
65617	Workbench now ensures that there is only one node per type (email and SMS/text) that has "Receive commands on this node" enabled. When a user enables "Receive commands on this node" for one node, all other nodes of that type have "Receive commands" disabled.
80547	AlertWorX now supports online changes.

AssetWorX

Major Enhancements

AssetWorX Point Manager



Support for Query Interface and Table Control

(Reference ID: 74682)

AssetWorX now supports the query interface. This means that controls that support the query interface (such as the table control, when using a type of "query") can connect to AssetWorX and list information about assets.

To see asset data in the table control:

- 1) Configure the **table** control.

- 2) For **Query**, select **type**.
- 3) For **Data Source**, browse under **Assets** and select **.Query**.
- 4) For **Table**, select either **Equipment** or **Equipment Properties**.
- 5) Go to the **Fields** page.
- 6) Select the refresh  button.
- 7) Go to the **Columns** page.
- 8) Select the refresh  button.
- 9) Make further updates to **Fields** or **Columns** as desired.
- 10) Select **OK**.
- 11) Go into runtime to see your data.

Future ICONICS products that use the query interface will be able to access asset information in a similar fashion.

Query interface support was added for additional data sources. See [Additional Data Sources for Query Interface](#) for more information.

For Further Reference

- Help: [Support for Query Interface and Table Control](#)

Additional Enhancements

AssetWorX Point Manager

Ref ID	Description
74707	The Analyzer tab is now available when configuring Hyper Historian Calculated Tags, Simple Events, and Conditions from AssetWorX. Previously, the Analyzer tab was only visible when configuring these tags from Hyper Historian.

AssetWorX Navigator

Ref ID	Description
61370	Added an Asset Icons option on the General page in the Navigator section. It is enabled by default. Disabling it will hide the asset icons.

Controls

Major Enhancements

Table Control

Query Top and Distinct Records

(Reference IDs: 77235, 77236, 78097)

The Table control can now display only the top N records or distinct records.

To return only distinct records, configure the **table** control, go to the **Fields** page, and enable **Distinct**.

To limit the records returned to the top rows, configure the **table** control, go to the **Fields** page, enable **Limit Record Count**, and set the desired limit with **Record Count**.

For Further Reference

- Help: [Query Top and Distinct Records](#)

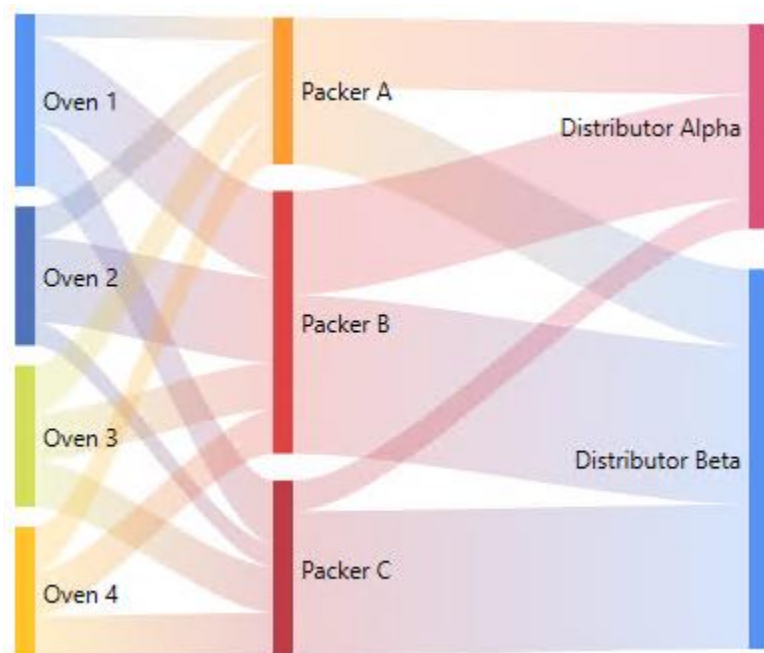
Sankey Diagram

New Control: Sankey Diagram

(Reference ID: 81518)

There is a new control in version 10.97, the Sankey diagram. Sankey diagrams help illustrate flow between different sources and destinations.

Sankey diagrams can be added to GraphWorX64 displays using the Controls ribbon. Sankey is usable in desktop (WPF) and HTML5 displays. Support for Sankey diagrams in the Universal Windows Platform (UWP) app is planned for future versions.



The Sankey diagram expects a dataset with three columns, a source, a destination, and a weight. In runtime, the diagram will intelligently draw the correctly weighted lines between each source and destination. Optionally, gains and losses can be visualized. The colors and shapes of the nodes and links can be extensively customized, if desired. The control supports all of the features of modern ICONICS controls, such as a customizable context menu and commanding support.

There is also a Sankey diagram widget available in [KPIWorX](#).

For Further Reference

- Help: [Sankey Diagram](#)

Additional Enhancements

Data Diagram

Ref ID	Description
74233	The Data Diagram can now have tooltips displaying information such as the sample value. This is configured on the Samples page in the new Tooltip section. This is currently supported in desktop (WPF) and Universal Windows Platform (UWP). Support for tooltips in HTML5 is planned for a future version.

EarthWorX Viewer

Ref ID	Description
42717	Added a "Localize Map" property to map layers. When set to true the map will be localized according to the client's operating system regional settings. This supports Bing and Google maps, but only if map credentials are used.
79587	Improved the experience of selecting a map type when choosing from a large list of types.

Recipe Navigator

Ref ID	Description
56571	Minor user interface enhancements.

Table Control

Ref ID	Description
74590	Columns with a numerical datatype can now have a content type of "Icon". Previously only string columns could use the Icon content type. This allows users to an expression to convert a number into a valid icon path. The @@value context variable is now only available for columns linked to fields. The @@resolvedvalue context variable is now only available for DataSource content types.
75161	Added an option to show row numbers. Use the "Row Header" option in the Table ribbon, or from the table configuration go to the Rows page, to the Row Header section, then enable Row Numbers.

TrendWorX64 Viewer

Ref ID	Description
80772 80940	The Axis Stroke property can now be set in the Create Pen command.
81023	The Edit Trend Chart command can now update the pen buffer size.

GraphWorX64

Ref ID	Description
19493	Added a new property to objects called "MovesOwnerWindow". When set to True, the user can click and drag this item and the ancestor window will follow it. This property can be used to create custom title bars for popup windows. It is only supported in desktop (WPF) displays.
26938	Data entry process points with a keypad now have the option of specifying a custom keypad layout XML file. The URL of the file can be entered into the CustomKeypadLayout property. This property is only visible in Advanced mode. Example keypad XML files can be found under \GENESIS64\Components\Layouts\KeyPad\. Note, the keypads feature is only available in desktop (WPF).
34929	Multi-line data entry keypads now have a scroll bar.
41504	The high and low range numbers that appear in the data entry keypad now match the format of the process point's current value.

Ref ID	Description
44359 44489 44729 46760	<p>The experience of configuring a display in grid mode has been enhanced, including:</p> <ul style="list-style-type: none"> The grid context menu is now available from all borders. Previously it was only available from the top or left borders. Both borders now change color to indicate when pixel or auto length is chosen for that row or column. Previously only the top or left borders changed color in this way. The size of the relevant rows or columns now appears when dragging a dividing line to change the size of a row or column. This makes it easier to resize columns without having to guess at the exact measurements. Double-clicking a grid border now opens the configuration dialog for the rows or columns. Star and pixel lengths now round to a reasonable number of decimal places when the grid dividers are dragged.
45466	<p>Previously, the same message would be shown whether no symbols were found in a completed search and when a user canceled the symbol library search before any symbols were found. Now the symbol library makes it clear whether there were no symbols found because there are none or because the search did not find any before it was stopped.</p>
46181	<p>The symbol library now automatically scrolls to the position of newly pasted symbols.</p>
54550	<p>The Find and Replace dialogs now include a "Wildcards" checkbox. When disabled wildcards are not used and only literal matches are found. This can help users who are searching for text that includes wildcards (for instance, <#aliases#>).</p>
55036	<p>Users can now force a transform to rotate an object 90 degrees or flip it. To force a transform, hold down the Shift key when pressing the ribbon or context menu buttons to rotate or flip.</p> <p>The benefit of using a transform, compared to a default rotate or flip, is that it will allow the "Update Shared" feature to preserve the orientation of the object as desired. Objects that have been rotated or flipped the default way may not have their orientation preserved when using the "Update Shared" feature.</p>
76952	<p>In previous versions, when importing DWG/DFX files, if the file contained font sizes outside of the allowed range it would cause an error and the file would not be imported. Now the importer replaces the font size with either the maximum or minimum allowed font size and allows the file to be imported.</p>
80906 80509 80907 80954	<p>Enhanced the dark theme coloring for various dialogs and elements.</p>

3D Viewport

Ref ID	Description
50399	<p>The size of the selected object is now displayed in the details section of the 3D Viewport in configuration mode.</p>
74448	<p>The IFC import dialog includes a new checkbox called, "Import Space Objects". When checked, the IfcSpace objects will be imported as geometries.</p>
75026	<p>The IFC import dialog now includes a checkbox for "Use Active Database". This is enabled by default. Users can disable it to specify a custom database.</p>

Web Publishing Wizard

Ref ID	Description
37144	<p>Improved the HTTP error messages shown when there is an error in publishing.</p>
46120	<p>When choosing a protocol for publishing there is a new "ftps" option available (implicit FTP over SSL/TLS). This option automatically chooses FTP port 990. It assumes that displays will be accessed via HTTPS, so the generated HTML files will use HTTPS. Publishing to FTPS encrypts passwords and data, and thus is more secure than publishing via FTP.</p>

GridWorX

GridWorX Server

Ref ID	Description
59910	GridWorX connections now expose an @@Refresh writable point that can be used to refresh all data sources belonging to the connection.

GridWorX Viewer

Ref ID	Description
72063	Series now include a property called HideZeroValues. When set to True, all samples in the series with a value of zero are hidden, including their labels and legend entries. This property is supported in desktop (WPF), HTML5, and Universal Windows Platform (UWP).
72064	
72062	

ScheduleWorX64

Schedule Control

Ref ID	Description
71917	The desktop (WPF) Schedule Control (including the BACnet schedule view) now only enables the Apply Schedule button in the runtime ribbon and toolbar when there are changes that need to be applied.
	The HTML5 Schedule Control (including the BACnet schedule view) now only enables the Apply Schedule context menu button if there are changes that need to be applied.

Hyper Historian

Major Enhancements

Data Exporter

Support for Amazon Simple Storage Service (S3) and Azure Data Lake Generation 2

(Reference IDs: 64987, 74407)

The Data Exporter now supports the export of data from Hyper Historian into Amazon Simple Storage Service (also known as Amazon S3) and Azure Data Lake Gen2 storage types.

To configure the new storage types, create a new storage in **Workbench** under **Historical Data > Hyper Historian > Data Exporters > Storage**. Set the **Connection Type** to **Amazon S3** or **Azure Data Lake Gen2**. Configure the rest of the connection properties as required for your connection type.

For Further Reference

- Help: [Support for Amazon Simple Storage Service \(S3\) and Azure Data Lake Generation 2](#)

Additional Enhancements

Hyper Historian Collector

Ref ID	Description
67237	Hyper Historian standalone collector installations can now configure the advanced settings for OPC UA connections in the "OPC UA Servers Configuration" tool.

Hyper Historian Logger

Ref ID	Description
77125	<p>The packaging interval can now be set on collectors (both in-process and out-of-process). The packaging interval is the rate at which updates from the collector are sent to the logger and made available for data replay. In previous versions, the data packaging interval was hard coded at 5 seconds.</p> <p>Note that while speeding up this interval will allow OPC UA and OPC HDA clients faster access to historical data, it can increase CPU usage and network traffic.</p>

Hyper Historian Workbench Provider

Ref ID	Description
55426	Improved some error messages to be more user friendly and clearer about steps needed to resolve the error.
77442	Added Percent Bad and Start Time options to aggregate groups.

IoT WorX & Internet of Things

IoT General

Major Features

Hyper Alarm Server

(Reference ID: 81507)

Alarming support has been added to edge devices with the inclusion of the [Hyper Alarm Server](#). Users can configure alarms for their edge devices in their IoT template under **Alarms and Notifications > Hyper Alarm Server**.

The IoT WorX Hyper Alarm Server is configured the same as the desktop version. As of version 10.97 the alarms configured for an edge Hyper Alarm Server are only available locally to the edge device. They can be viewed in the IoT Visualizer on the device using an Alarm Grid or Alarm List widget.

Support for publishing Hyper Alarm Server alarms is planned for a future version.

For Further Reference

- Help: [Hyper Alarm Server - IoT WorX](#)

Additional Enhancements

Ref ID	Description
71928	In the data browser under Internet of Things > connection > device > All Available Data, the icons and order of items has been updated to be consistent with other areas of ICONICS.
78149	The login of the edge device's Diagnostics and Configuration pages now contains a "Forgot password" link. This link generates a challenge code that the user can provide to ICONICS technical support. Once the proper answer is provided, the passwords for the "admin" and "user" accounts in the IoT WorX Console are reset to the default of "iconics". This allows users to regain entry to a system when the password has been lost without completely resetting all of the provisioning information. Password reset attempts are logged to GenEvents.
81153	Improved the reliability for determining container IP addresses, which are used for inter-container communication.
81409	The trace log can now be downloaded from the TraceViewer page in the edge user interface.

IoT Analyzer

Ref ID	Description
66801	Unchecking the IoT Asset option on an asset under FDDWorX tab > Advanced Settings now removes the asset from the IoT configuration database. (Previously, assets that were configured as IoT Assets remained in the IoT configuration database until being removed directly via SQL queries.)

Internet of Things Workbench Provider

Ref ID	Description
74285	Subscriber connections that do not have compatibility with ICONICS clients enabled can now select "None" as the Default Decoder.
81960	Subscriber connections have a new option called "Convert incoming raw messages into events." Previously, all subscriber connections converted incoming raw messages into events. This option allows users to turn this functionality off. Users planning to use the Information Broker functionality should make sure to keep this option enabled. This option is disabled by default for new subscriber connections, but subscriber connections upgraded from a previous version will have it enabled to remain consistent with the functionality in the previous version.

Workbench IoT Project

Ref ID	Description
80817	The context menu for devices now contains an option to restart all modules. This is in addition to the preexisting option to restart just the core modules.

BACnet Workbench Provider in IoT Projects

Ref ID	Description
78623	When creating a device instance manually (choosing "Add Device" from the context menu, not using Network Discovery), there is a new option for "Scan the object properties when the form is applied." As stated, when this option is selected, applying the form to create the device will automatically scan to discover the properties. Prior to this, only the objects could be discovered automatically.

KPIWorX


Major Enhancements

General


Color Palette Editor

(Reference ID: 57289)

Many charts and widgets use a color palette to define the color of the chart elements. Starting in version 10.97, users can create their own color palettes for use in these widgets.

Color palettes can be edited from the **Theme Manager**. Go to **Settings > Themes**, then select **Palettes** from the theme manager sidebar. Select the **+** button at the bottom to add a new palette. Select a palette color position (a checkmark will appear in the selected box), choose a color from the panel on the right, then select the  **fill** button to add the color to the selected position. Repeat for each desired color position.

Palette color positions can be added or removed using the **+** and **-** buttons on the palette row.

To copy a color from an existing palette, select the desired color from the existing palette, copy the HEXA value, and paste it into the HEXA field of the desired position. Remember to select the  **fill** button.

To remove a custom palette, select the palette, then select the **-** button at the bottom of the theme manager.

Edits to an existing palette will automatically be propagated to any widgets that use the palette.

For Further Reference

- Help: [Color Palette Editor](#)

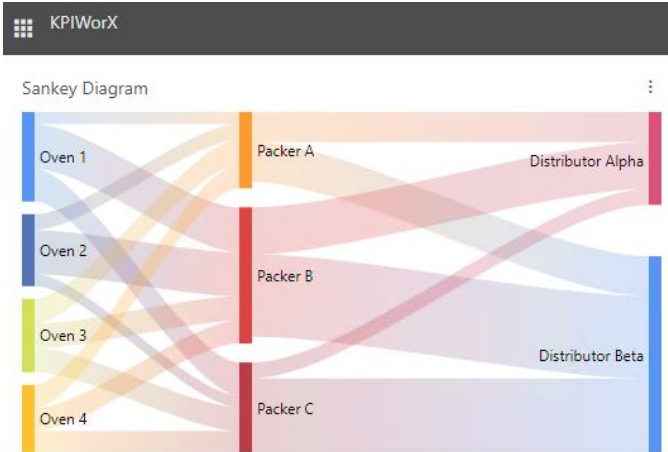
Widgets

New Widget: Sankey Diagram

(Reference ID: 48684)

There is a new widget in version 10.97, the Sankey diagram. Sankey diagrams help illustrate flow between different sources and destinations.

The Sankey diagram can be found in the **Charts** section of the **Component Library**. It expects two datasets. One must have three columns, a source, a destination, and a weight. These are mapped to the **From**, **To**, and **Value** fields of the widget, respectively. The



other dataset must be a list of the possible From and To node names. This is mapped to the **Nodes** field of the widget and must match the values in the From and To columns of the first dataset. Currently the dataset used for the Nodes field only needs a single column, but additional columns may be used in the future to specify properties of the nodes, used in customizing the Sankey diagram.

This separate Nodes dataset must come from the same AnalytiX-BI data model. Using a separate independent dataset (such as two GridWorX datasets) is not supported. Users have the option of using the same column as the From or To fields for the Node field, even if not all possible nodes appear in the column. (For example, if your data source has three columns, FromNode, ToNode, and Weight, you could use FromNode for both the Node and From field.)

There is also a Sankey diagram control available for [GraphWorX64 and MobileHMI displays](#).

For Further Reference

- Help: [Sankey Diagram - KPIWorX](#)

Widget Updates to "Web First" Technology

(Reference ID: 68606)

KPIWorX widgets are being redesigned with a new technology referred to as "web first". The tree control in 10.96.2 was the first widget to use this new technology. Version 10.97 also uses web first technology for the new [Sankey diagram](#) and redesigned the gauge, goal tracker, data diagram, and symbol widgets to leverage web first.

The largest benefit to web first technology is that the rendering is done on the client side. This improves the scalability and performance of the system, especially when running many KPIWorX clients from the same server. It can also make user interactions, such as highlighting, dragging, and animations, seem faster and more natural.

ICONICS is also working on updating the categorical, donut, funnel, pie, and treemap widgets to web first technology. These widgets are still in the beta stage, but they have been included in KPIWorX in version 10.97 for users who would like to give them a try.

Users who are ready to try these experimental beta widgets can edit the **Ico.AnyGlass.KPIWorX.config** file in **\ICONICS\GENESIS64\WebSites\AnyGlass\Bin**. Set **WebFirstExperimentalWidgets** to **true** and save the file. Refresh your browser if KPIWorX was already open. You should now have a **WF Charts** category in your **component library**. These charts should behave exactly like the standard charts, only more responsive.

Remember that the widgets in this category are only in beta. We will appreciate if users can report differences between these web first widgets and their standard counterparts so we can improve them for the next version. Report any issues or differences to technical support, and make sure to mention that you are using the ones in the WF Charts category.

If you are not sure whether a chart in your dashboard is a standard or web first chart, make sure you are in **edit** mode, select the widget, and go to the **component library**. The component type will be selected, and you can observe whether it is in the **Charts** or **WF Charts** category.

Additional Enhancements

Ref ID	Description
61597	Charts configured to highlight sections that match the filter now have a separate tooltip for the filtered segment and the total segment.
64676	The trend widget can now have multiple axes, defined in the Vertical Axes section. Once additional axes are defined, choose an axis for a pen by selecting your series, selecting the pen in the series, then changing the Axis field.

Ref ID	Description
65414	The Share > Image > Download option for widgets and dashboards now downloads a PNG file. In previous versions, choosing Share > Image > Download would download an HTML file. Note that the download button may take a moment to enable as the image is generated.
66577	Minor user interface enhancements and improved error messages.
72884	GraphWorX64-specific tooltips are no longer shown in KPIWorX when a symbol is imported from GraphWorX64.
78341	In version 10.96.2, the day that starts the week was determined by the AnalytiX-BI server that is providing the data. Now, the day that starts the week is determined by the client's regional settings. This determines the sorting order of the DayOfWeek subcolumn.
79433	Widgets and dashboards can now be shared as PDFs. Select the More button for a dashboard or widget, then select Share > PDF. Note that the Email and Download buttons may take a moment to enable as the PDF is generated.
79615	A legend was added to the map widget when the path symbol is in use.
80036	Widget-level filters are now available on the gauge, goal tracker, and symbol widgets.
80980	The string representing the active filter on a dashboard can now be copied. This string can be pasted into the Load KPI Dashboard command's Parameters property. This makes it easy to create commands that open dashboards with filters already applied. Create or open a saved dashboard, apply your desired filter, then in the dashboard header select the More > Share > Filter String > Clipboard. Paste the string into the Parameters property of a Load KPI Dashboard command.

MobileHMI & HTML5 WebHMI

HTML5, iOS, Android Platform

Major Enhancements

Utilize Client Location for Displays and Commands

(Reference IDs: 64630, 64631)

HTML5 displays can now access client location data to set global aliases and automatically execute commands. This works in the MobileHMI app for iOS and Android and in HTML5-compliant browsers.

To enable location access, follow these steps on the desired client device:

- 1) Go to the **App Hub** page.
- 2) Open the context menu.
- 3) Select **Preferences**.
- 4) In the **Location** section, select **Enabled**.
- 5) If desired, enable **Commands** and set the desired **Distance**. The distance tunes the sensitivity (in meters) of checking for nearby commands.

When the location is enabled, the client's location will be written to the `<#AR\ar_longitude#>` and `<#AR\ar_latitude#>` global aliases. These aliases can then be used to show location-specific information in displays.

If location commands are enabled, the user can launch the App Hub to check if there are any geofence commands available. Geofence commands are defined in Workbench under **MobileHMI > Configuration > Augmented Reality**. If the user is inside a geofence a message will appear, asking if the user would like to execute the defined command.

For Further Reference

- Help: [Utilize Client Location for Displays and Commands](#)

Feature Parity Improvements

HTML5 browsers and the MobileHMI apps for iOS and Android can now use the following features and functionality that were previously only available in the desktop GraphWorX64 app (WPF) or the Universal Windows Platform (WPF) MobileHMI app.

General

Ref ID	Description
63653	The HTML5 security logon dialog can now show a list of existing usernames. This can be toggled with the "Provide list of existing users in the login dialog" option in Security's Global Settings and is consistent with the login dialog in desktop (WPF).

AlarmWorX64 Viewer

Ref ID	Description
81261	The HTML5 AlarmWorX64 Viewer now supports the "Show Dialog" sub-command of the "Set Time Range" global command.
81701	The HTML5 AlarmWorX64 Viewer now supports the Time Zone setting on event points.

Asset Navigator

Ref ID	Description
60632	Enhanced the styling of the HTML5 Asset Navigator to be more consistent with the desktop (WPF) styling.

GraphWorX64

Ref ID	Description
75408	All parameters for process point data entry confirmation are now supported. Previously only tag name and new value were supported.
79265	The localsim:property:Owner* syntax is now supported in HTML5.

GridWorX Viewer

Ref ID	Description
77497	GridWorX Viewer tooltips are now consistent with desktop (WPF) formatting, including the new formatting styles introduced for WPF in version 10.96.

TrendWorX64 Viewer

Ref ID	Description
24400	The HTML5 TrendWorX64 Viewer now supports the Export Statistics global command.
46046	The HTML5 TrendWorX64 Viewer now supports the "Show invalid pens" option (Chart > Pens tab).
67887	The HTML5 TrendWorX64 Viewer now supports the filename output parameter for the ExportData command.
68950	Users can now drag in the summary view outside of the selected area to scroll. This allows users to easily move to areas outside of the currently displayed summary view. Previously dragging was not allowed and clicking outside of the selected area would jump the selected range to that area.
79774	When the Show ToolBar option is disabled, the same items that would be shown in the desktop (WPF) TrendWorX64 Viewer's toolbar are now hidden from the HTML5 TrendWorX64 Viewer's context menu. (Show ToolBar is located on the Appearance tab of the top-level item when configuring the control.)
	Note, to completely disable the context menu, also disable Context Menu on the chart object on the Chart tab.

* Note that localsim:property tags are not universally supported in HTML5 due to the difference in structure between desktop (WPF) and HTML5 displays. Where possible, commanding should be used instead of modifying localsim:property tags.

Additional Enhancements

General

Ref ID	Description
72878	Added a new page to troubleshoot MobileHMI/HTML5 communication issues. The troubleshooting page must be enabled by setting <code><UseSignalr enabled="true" /></code> in the <code>ico.anyglass.parsing.config</code> . The page is located at <code>http://hostname/AnyGlass/connection-test.html</code> . Contact technical support for assistance using this page to troubleshoot WebSockets communication issues.
80417	Users may see high load times of HTML5 displays if a large number of clients (around 20 or more - the exact number may vary) attempt to connect at the same time, such as when restarting FrameWorX or IIS. To help improve this behavior, the HTML5 server can be configured to limit the number of clients that can be processed at one time.

Ref ID	Description
	This feature is turned off by default (no limit to parallel client processing). To enable it, edit the ico.anyglass.serviceEngine.config file (located by default in Program Files\ICONICS\GENESIS64\WebSites\AnyGlass\Bin) and change the PerformanceBarrierLimit value to a positive integer. This is the limit of clients that will be processed at one time.
81145	To create a more secure system, the directory browsing feature has been disabled by default for the Project subdirectory of the AnyGlass virtual folder. Users who wish to use this feature can re-enable it in IIS after installation.

App Hub

Ref ID	Description
81176	Enhanced error tracing when encountering a problem with a URL in the App Hub.

GraphWorX64

Ref ID	Description
65234	Enhanced the loading speed of displays in embedded GraphWorX64 Viewers. The local Load Display command has been enhanced in HTML5 displays to allow popups in new browser windows.
80674	To configure, use a pick action with these settings: <ul style="list-style-type: none"> * Command: Load Display (local command) * TargetType: Popup Window (any) * OverrideWindowProperties: True * WindowProperties: Set the Left, Top, Width and Height values of the desired popup display. <p>Note that this functionality is designed for use in desktop browsers. Certain clients, such as mobile phones, will not be able to set the window position due to limitations of the platform.</p> <p>Also note, in this version users need to set the edit mode to "Desktop App" to configure these settings. Support for these properties will be added to "Web Browser" mode in future versions.</p>

GridWorX Viewer

Ref ID	Description
72063	Series now include a property called HideZeroValues. When set to True, all samples in the series with a value of zero are hidden, including their labels and legend entries. This property is supported in desktop (WPF), HTML5, and Universal Windows Platform (UWP).

Schedule Control

Ref ID	Description
71917	The desktop (WPF) Schedule Control (including the BACnet schedule view) now only enables the Apply Schedule button in the runtime ribbon and toolbar when there are changes that need to be applied. The HTML5 Schedule Control (including the BACnet schedule view) now only enables the Apply Schedule context menu button if there are changes that need to be applied.

TrendWorX64 Viewer

Ref ID	Description
81023	The Edit Trend Chart command can now update the pen buffer size.

Universal Windows Platform (UWP)

Major Enhancements

Execute Augmented Reality Commands with Geofences

(Reference ID: 77526)

Users of the MobileHMI Universal Windows Platform (UWP) app can execute commands based on whether they are within geofences.

Create or edit a geofence in **Workbench** under **MobileHMI > Configuration > Augmented Reality**. (A geofence is a location with a type of **Geofence**). Go to the **Actions Settings** tab and configure your desired action.

In the MobileHMI UWP app, enter **Augmented Reality** mode. If you are within a geofence with a configured command a message will appear, asking if you want to execute the command.

For Further Reference

- Help: [Execute Augmented Reality Commands with Geofences](#)

Workbench

Major Enhancements

Project Reporting

New Implementation Using ReportWorX64 Technology

(Reference ID: 77481)

Project Reporting has been reimplemented in version 10.97 to no longer require SQL Server Reporting Services (SSRS).

The configuration of project reports is the same as in previous versions. Select your project in **Project Explorer**, bring up the context menu, then select one of the report options, such as **Configured Tags Report** or **Runtime Use Report**. The report configuration forms should look the same.

Project Reporting templates are now created using the ReportWorX64 Express Excel add-in, not the SSRS configurator. Note, Project Reporting templates must only use tags that start with **cfg**. A ReportWorX64 license is not required to use Project Reporting or create custom templates.

To support the new implementation, many datasets that were previously only available in an SSRS report file are now accessible via the data browser. These datasets can be found under **Diagnostics > Configuration** in the new **Availability**, **Entities**, and **Usage** folders. Many of these datasets can be used outside of Project Reporting, such as in the Table control or GridWorX Viewer.

For Further Reference

- Help: [Using ReportWorX64 Technology in Project Reporting](#)

Additional Enhancements

General

Ref ID	Description
40371	The "Generate relative paths" setting in the import and export dialog is now remembered between uses.
48911	The "Compare packages" dialog now includes a "Show only differences" option. This allows users to quickly see the differences between two projects without having to look through the entire project contents.
71332	When creating a new entity in an empty configuration the user will be prompted to make the new entity the active or default if one is required. (Example: when creating a new configuration entity under Reports > Configurations.)
73121	Various small user interface improvements across Workbench and many providers.
79728	When using the "Export" or "Clipboard" options for the Installation Details page, only visible data is exported or copied. This allows users to filter the data prior to the action and only export or copy the data they are interested in.
79850	Pack and Go's unpack process can now add an application to the target project if it was not already present. This includes creating the databases, if necessary, and starting services.

Ref ID	Description
80949	Previously, if a PowerShell cmdlet parameter needed to be obfuscated or encrypted, such as the password parameter of Set-AlertEmail, the user needed to obfuscate or encrypt the parameter manually before passing it into the cmdlet.
80964	Now, parameters that require obfuscation or encryption do so automatically. They no longer need to be explicitly obfuscated or encrypted before calling the cmdlet.

Project Files

Ref ID	Description
72592	Added a new option to the context menu of archives: "Backup from original path". This option will take a new backup of all of the files in the archive from their original location. This allows users to easily take a "snapshot" of all of their files when they have reached a particular milestone without having to go through the longer process of importing individual files.
80010	The Advanced Import now contains a checkbox for "Retain relative paths under destination". When enabled, the advanced import will attempt to retain the relative paths of the files with respect to the destination.



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

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