VTScada version 12.0.44 - Released October 13, 2021

New Features

ID	Description
F1584	Workstation specific Twilio settings can now be configured from the Alarm tab of Edit Properties.
F1428	VTScada now performs Twilio Signature Validation.

Incidents Cleared

ID	Description
I21167	When the "Shelve all shown alarms" tool is used, all the alarms that are shelved would end up showing the same description.
I21164	An application that was in process of repairing the Network Values at start was showing a dialog with missing labels.
I21160	When adding an Analog Bar or Analog Indicator widget to a custom tag widget, there wasn't an option to link the widget to a Linked Tag property.
I21156	Oil and Gas Solutions page navigation widgets were not working for meter pages.
I21153	The MQTT Client Driver could have failed to connect to brokers that required a specific ClientID or had limited namespaces that were allowed to be accessed.
I21145	The text on buttons and droplists on iOS/iPadOS 15 had changed to blue in many cases.
I21128	Use of an ampersand character in a folder name for a report tag's destination would result in the folder name getting truncated.
I21104	When a Phrase was copied into an Application Layer it maintained its category number, causing difficulty when filtering of phrases by category.
I21082	An improperly configured SQLLoggerGroup, or an unreachable SQL database, might have resulted in a memory overflow and crash.
I21080	The sites page could have had multiple of the same entry in the breadcrumb control.
I21075	Concat would allow the sum of string lengths to be greater than the VTScada maximum string length, which could result in a potential crash.
I21072	Users were not able to add a new hidden list to the Application Manager.
I21044	There were some tag types which were in the incorrect groups, and some obsolete modules in the Oil and Gas Solutions Layer.
I21038	When setting the movement of a graphic to a Parameter value the VGE does not show the correct scaling values when Use tag scaling is true.
I21001	Incorrect text labels could be displayed on the Unico and SAM overview pages, and some child tags of the meter run tag had incorrect units.

| I20881 | GetPhrase was failing to get the translation for application or OEM layer PhraseIDs if it was being called outside of the application scope with a ParmPhrase structure as the parameter. |

VTScada version 12.0.43 - Released September 29, 2021

New Features

ID	Description
F1587	New settings, AlarmPageBackgroundColor and AlarmPageTextColor, can now be set to override the colors of the Alarm Page.
F1578	VTScada now supports tag exporting to MariaDB and MySQL ODBC data sources.

Incidents Cleared

ID	Description
I21110	When calling into a VTScada application's alarm dialer using Twilio, digits pressed on the phone could be missed.
I21107	The phrase VTScada appeared unnecessarily in a few places in the Application Manager window, and labels for custom branding were not up-to-date.
I21106	Reports could miss data for up to one minute before being triggered.
I21105	PhraseEdit field doesn't clear the display value after deleting the content
I21099	The labels for the checkboxes that mark a context tag property or custom type parameter as translatable value were unclear.
I21098	If incoming email was configured to use OAuth, it wouldn't work for acknowledging alarms unless a bogus username and password was configured in application settings.
I21074	A customer Config dialog drew the undocumented TimeEntry widget which had expanded in width and couldn't be changed so as not to overlap other items.
I21055	Opening a page where we have not specified the parameter values should open the Edit Parameters dialog, but opening a subordinate page from a master app in this situation did not.
I21049	Renaming a type derived child tag in a Config Folder could bring up an error that the tag no longer exists and the window must be closed.
I21033	Users were not always being blocked from creating a tag called "Name" which is a reserved name.
I21032	CharCount could crash if bad parameters were supplied.
I21005	Sparkline could plot things incorrectly if the time span was changing while being viewed.
I20935	Expressions containing more than 65535 characters would get truncated down to 32767 characters.

VTScada version 12.0.42 - Released September 14, 2021

New Features

ID	Description
F1569	VTScada now displays trace information for Motorola ACE RTUs in Trace Viewer.
F1567	VTScada now displays alarm popup status on the configured list of the alarm page.
F1561	VTScada now supports more detailed tracing for the OPC Client Driver.

Incidents Cleared

ID	Description
I21048	If the alarm caller was trying to make a call via Twilio, and the call attempt was unsuccessful (perhaps due to a network outage) the only indication in the internal log was the "Self Destruct" entry.
I20953	The Bristol History Info widget could not be configured to use the client's time zone.
I21045	If you pasted a tag with the same name as a variable in the parent tag you would have gotten an error, but you could still perform the action.
I21002	If VTScada was launched from the desktop shortcut, a hardware key can fail to be detected.
I20999	Printing a page with a hidden child window would show the child window in the printout.
I20996	A page change hotbox on a popup page in a subordinate app that links to a popup page would not open in a new window when clicked in a master application.
I20979	There was a small window where scroll bar would cease to function if programmatically changing the number of steps and then setting the scroll position parameter shortly after.
I20179	Historian uptime history would not work when a machine specific StorageName parameter was configured.
I16315	Certain PLC Tag configuration changes would not take affect till an application re-start (or individual tag disable/enable).

VTScada version 12.0.41 - Released August 18, 2021

New Features

ID	Description
F1568	We now allow for the use of map tile providers that require the URL to be constructed with the X, Y, and Z parameters in non-standard order.

Incidents Cleared

ID	Description

I21043	If packed binary inputs were the last objects in a response the DNP3 driver would only read the first index.
I21041	Twilio calls and SMS was failing after the system recovered from an isolated server scenario.
I21040	If an isolated client disabled alarms based on an expression, after the client resynchronized with the server, the alarms wouldn't become enabled again.
I21039	Under very rare circumstances, VTScada could crash on shutdown.
I21031	Poll Driver tag's site details page would not show all of the related tags, in particular tags that were linked to the driver but were not descendants of it.
I21030	When Operating a tag there was a small chance the new value might not get set to the output if the user did not tab or hit enter before closing the dialog.
I21029	When referencing a tag that has spaces in the name, the Use Tag Scaling checkbox getting set could cause a graphic to disappear due to a compile error. This would have been noticed from the Graphic Properties dialog when editing as Parameter or Tag Property value.
I21023	The wording for a few of the tag name conflict dialogs has been altered to be less technical in nature.
I21006	When configured to output text, such as a tag's description, the PVR report can output the language key rather than the correct language text string.
I21000	It was not possible to temporarily set a scaling range minimum higher than a maximum in the IO tag config folder.
I20998	Some pages with many color change widgets could cause a significant slowdown when using a thin client.

VTScada version 12.0.40 - Released August 10, 2021

Incidents Cleared

ID	Description
I21012	Selector switch's value could be out of sync with the Position Feedback value after network partition.
I21008	A file path, which was a non-translatable string, was in the language manifest (PhraseID: SecMgrOAuthBadURLPathMsg2).
I20986	Meter Run Daily Report (and hourly) after upgrade
I20966	There were various interface improvements to be made in the OAuth2.0 dialog including: the dialog window properties, progress bar, misconfiguration reporting, and gridlist highlight display.
I20950	Pressing the Print button on the sites page would print the map, even when an embedded page was displayed.
I20948	If you set a setting in the System or Labels sections of a settings file to an integer outside the range that can fit within a 32-bit long integer, the setting would get loaded as a different number.

I20942	On a thin client in a different timezone from the server's, adding a note in HDV grid view showed the icon in the wrong cell. Data editing suffered from the same problem.
I20506	There were a number of phrases with unfriendly IDs, missing categories, and redundant or not found phrases/IDs in the OGS en.csv file.
I19449	The HDV TagSelector's window size and column widths were not retained when it was closed and re-opened.

VTScada version 12.0.39 - Released July 22, 2021

New Features

ID	Description
F1564	We now allow for different languages to use different Twilio voices via the #TwilioVoice setting in the language (CSV) files.

Incidents Cleared

ID	Description
I20991	Some pages with many Color Blink widgets would cause a significant slowdown when using a thin client.
I20976	Hidden Page Parameters were being shown in the panels of the Page Change Widgets.
I20974	When loading the Anywhere Client sign-in page, the title would show "VTScada Anywhere" for a moment before switching to the custom branded title.
I20972	The default values of MQTT's Keep Alive and the TCP port's Disconnect Delay could have caused the MQTT client driver to disconnect unnecessarily.
I20958	On the Internet Client setup dialog, the listbox showing the applications in a Realm was being drawn a little too small and the selection highlight was being drawn incorrectly.
I20925	The ACEIPGatewayAutomation.exe process used to crash if its InitAPI method was invoked and either specified files did not exist.
I20917	An email alarm notification using an AlarmEmailTemplate that specified the value as part of the template would not display the value if the notification was the result of the alarm re-arming.
I20902	DNP3 Octet String writes were always right aligned and padded with spaces to the width specified by the Variation.
I20793	The AB, Omron and DNP3 drivers could update their stats with a false success if a port failed mid-communication.
I20792	Nomenclature for the VTScada Thin Client was inconsistent across pricing, product, and documentation.
I20624	MDS Diagnostic Driver failed to record write errors when writes were not supported.

VTScada version 12.0.38 - Released July 07, 2021

Incidents Cleared

ID	Description
I20959	Roster list wasn't starting back at the beginning of the list after finishing the list if the last call went to voicemail or otherwise wasn't logged into.
I20947	The input box highlight for thin client login pages did not use the color defined by htmlThemeColor.
I20944	The CSVDataDriver would attempt to change servers if Soft Driver Failover was enabled.
I20941	The AutoLogon functionality offered a means of configuring an insecure access to VTScada.
I20940	Resource files located at the root install directory would not be available to thin clients if containing certain Unicode characters.
I20936	The Profiler's Settings and Save dialogs always opened on the primary monitor rather than the monitor displaying the profiler.
I20930	A PhraseID was displayed in the title bar of site pages when viewed on a Thin Client.
I20921	Some ROC Plus error messages did not display correctly.
I20913	Contrary to the help file contents, RmDir was returning 0 on failure instead of a negative number and 1 on success instead of 0.
I20900	When RPC services or connections changed, the Trace Viewer did not always refresh.
I20864	SQL query of tag records could return lots of invalid records before tag creation.
I20859	Dynacards failed to download when RPC service was distributed across multiple servers
I20801	VTScada could fail to run applications in directories containing non-ASCII characters when Windows was configured for some locales.
I20776	In the Oil and Gas Layer, some of the child tags under the "Flow Computer" Tag Type had an empty description.
I20729	There were formatting and spelling issues with several comments for English language phrases.

VTScada version 12.0.37 - Released June 23, 2021

Incidents Cleared

ID	Description
I20931	Child tags evaluating *[Parent Tag Type] will fail for several Oil and Gas Layer tag types
I20926	The Pulse Input tag's IO Device would not default to any parent driver tag.
I20922	VTScada could crash on start.

I20914	Export in Historical Data Viewer from a thin client was not converting the time stamps to local time.
I20911	Alarm description could go missing after VTScada update.
I20901	A Droplist using equipment type labels would not always show the correct value if the equipment type list changed.
I20893	ShowStats and ShowComms do not work for CATM5X Driver
I20885	The entries in the PLC alarm tag configuration folder were still editable even if a restart was required.
I20872	The Idea Studio export dialog title was "Open" instead of "Export".
I20852	Outputting a report to Access MDB File or Plain Excel XLS would fail if the application directory contained a character that did not exist in the current machine's system code page.
I20851	A window could unexpectedly become the active window if an unoptimized expression for a tag parameter changed value.
I20790	There were several windows whose titles were not translating if the application language was changed while the window was open.
I20605	It is now possible to use static variable references in debugger breakpoint conditions.

VTScada version 12.0.36 - Released June 08, 2021

New Features

| ID | Description |
| F1535 | A Start up variable can now be specified to auto select Smartcard certificates which match avoiding the certificate chooser dialogue. |

Incidents Cleared

ID	Description
I20895	String Droplist using equipment type labels could have changed the selection on a user language change.
I20880	Zoom 3095 modems used as voice modems were getting into a hung state periodically.
I20879	The IO tag mode, pulse duration, and pen properties could be changed by a user who did not have the "Tag Modify" privilege.
I20873	When generating reports, any row that contained an apostrophe would not transfer correctly through ODBC.
I20871	It was possible to attempt to draw tags which have no associated widgets.
I20870	The 'no tags message' in the tag browser did not always show.
I20866	Sign in window would sometimes close when trying to sign in from a "logged off VIC session".
I20862	The String Droplist widget would only store the phrase ID for the last edited Label.
I20861	The Scope of a Page Note is not displayed consistently in the settings dialog.

I20856	The capitalization was inconsistent in some controls and tooltips in the Reports Page.
I20845	Importing equipment type labels from a UTF-8 csv file would put values in the wrong order and/or not overwrite some existing value-label pairs, causing some labels to display incorrectly. Imported labels were also not translatable and would replace translatable labels.
I20844	The phrase comments for some Anywhere Client and Mobile Client error messages were inaccurate.
I20791	There was unclear language in the Application Configuration dialog on the Information tab.
I20768	The tag browser was taking a very long time to update the tree after disabling tags under a parent tag when that parent had many children.
I20749	An application with an existing email configuration would fail to retain or properly display OAuth 2.0 configuration information when selecting the grant.
I20711	Context tag properties representing large integer values were not handled correctly when referenced.
I20655	RPC connections could be unreliable when an IP address and name for the same machine was configured in a server list.
I20622	Selector Switch tags could write out old retained values on server restart.
I20575	GetTagHistory change statistic would return 0 when the end value was Invalid even if the value had changed during the time span.
I20322	Keyboard input could simultaneously control the scrolling position of Gridlists and other graphical controls, such as Droplists, if these were drawn in the same window.
I17174	After a historian server had been restarted, Historical Data Viewer trend could display unexpected gap even though the tag currently had a value.

VTScada version 12.0.35 - Released May 28, 2021

New Features

ID	Description
F1556	Support for popup alarms from PLC alarm tags has been added.
F1554	The Site Map page and widget now have a tool for opening the legend.

Incidents Cleared

ID	Description
I20863	TBox RTUs could disconnect when the Modbus Driver issued commands to read history from it for some firmware revisions.

I20853	A BitString Command could not be configured either manually or using the address assist for the IEC Driver. It was not possible to read or write to ASDUs without TimeStamps using the IEC Driver. ASDU M_BO_NA_1 (Bitstring input no time) was returning no data for the IEC Driver. The response for ASDU C_DC_TA_1 (Double Command with Time) was incorrectly formatted for the IEC Driver in Slave mode.
I20835	Keyboard up and down arrows were moving the tree and list simultaneously in the File Manifest config panel and File Diff view window from the Version Control.
I20831	Alarm records with timestamps too far in the future could appear in the alarm list.
I20828	Spider Plot did not allow relative tag references via parameters or linked tag properties.
I20825	External changes to a Droplist or WinComboCtrl's currently selected item did not get properly set on the Anywhere Client.
I20817	Frame Tabs and Frame Buttons would lose their custom frame configuration when opening the properties editor. The frame directory browse dialog would not open with the previously selected folder and cancelling it would set the folder to zero.
I20816	The Poll Driver Backup Alarm could not be notified by a Roster.
I20804	If an unoptimized tag parameter expression changed while a tag's config folder was open, then any changes made were discarded.
I20794	If an additional column is ever added to our language CSV files, older versions of VTScada would reject all phrases with the extra column and produce an error message.
I20789	An analysis in the Memory Tracer utility could show a different amount of memory usage than expected.
I20788	The JSON/XML Driver could stop receiving data if too many requests are made in a short time due to the host's enforcement of request rate limits.
I20786	SDS Driver trace log messages were not translateable.
I20783	Opening the ConfigFolder of a type-derrived Child tag after upgrading form pre 11.5 would create overrides for PhraseID parameters.
I20777	The DSN droplist in the ODBC Statistics dialog would not show the configured DSN, and the provided SQL query examples would not log data from tags with names exceeding 64 characters.
I20775	Rapidly writing values to a PLC could slow down VTScada.
I20774	Could not edit the security privileges of a role if the last user selected was a domain (WSI) user.
I20773	The Tag Links, Multi Image Widgets and Layers panels in the Idea Studio had graphical inconsistencies and would not adjust their size properly when the scroll bar appeared.
I20760	Deleting a graphic with an expression for its visibility that uses the Now function, or any other function that updates based on the time, could cause VTScada to crash.

I20736	Reading from a stream in rare circumstances could cause VTS to crash.
I20697	On the Anywhere Client, a GUIText with its VCenter parameter configured for bottom justification always clipped the text at the top regardless of the clipping setting.
I20685	There was a potential for an If-1 condition when using specific configurations for OilGasLibrary.GetTriggerTime around the change to DST.
I20661	Child tags of pump-off controller tag types were not correctly setting their security privileges to match the security privilege set in their parent tag. Also, the Lufkin SAM tag type allowed setting of a polling schedule for the Shutdown2 dynacard, even though a matching Shutdown2 dynacard tag isn't created.
I20623	Oil and Gas Solutions applications were doing redundant work to manage tag alarm stats, affecting performance.
I20588	At a certain width the Row selection highlight in the Legend of an HDV had a gap of about 1 pixel on the left side of the Name column.
I20410	Several GUI functions (GUIArc, GUIChord, GUIEllipse, GUIPolygon, GUIRectangle) did not draw focus boxes on Thin Clients.
I20368	It was possible for PLC Alarm tag alarms to show an incorrect Acked or Shelved alarm state.
I20253	If the System Alarm DB tag was disabled and then enabled again, some alarms may have been removed from the Configured list until the application was restarted.
I20227	The focus highlight was displayed incorrectly for Radio Buttons with no labels.
I20043	In the Idea Studio, pages and side panels would not scroll with the mouse wheel if a Tag List widget was drawn on them.

VTScada version 12.0.34 - Released May 11, 2021

New Features

ID	Description
F1514	The VTScada Excel add-in's tag browser is now capable of showing more than one level of tags at a time in order to make it easier to find the tags you are looking for when filtering.

Incidents Cleared

ID	Description
I20808	The IEC Slave would set the SQ Flag TRUE when sending a response to the IEC Master indicating multiple Object Responses when there was only one.
I20806	Multiple Historical Data Viewer pen groups could be created that appear to have the same name.
I20800	Pulse Input tags could be configured with incompatible drivers by default.

I20799	Using the arrow keys to scroll a GridList that did not have scrollbars visible was causing it to jump to the wrong position for a brief moment.
I20787	The styling applied to Droplists on certain thin clients was causing the Droplist selection text to get cut off.
I20782	Some communication errors would cause the VIC to changeover without a retry.
I20766	There were duplicate time format entries in Application Configuration droplists for French applications.
I20755	SortArray could return an incorrect result when using LINGUISTIC sorting.
I20754	The Tag Links panel in the IDEA Studio would not scroll vertically. Horizontal scrolling in the Tag List widget would not work.
I20730	Thin client sessions using a temporary language would revert back to the default language when a phrase was changed.
I20728	The Note Style names in the Page Note Properties dialog were incorrectly displayed as Note1 and Beveled1 and did not immediately update when switching languages.
I20703	SQL queries that sorted results by the Timestamp column could be unexpectedly slow.
I20618	The Historical Data Viewer was inconsistently displaying comma and non-comma formatted numbers.
I20582	The default title drawing in a GridList was drawing the title row 1 pixel taller than it should and was causing it to overlap the 1st row of pixels in the top row of data.
I20401	A reference to a missing tag in an expression in a Parameter Editor would prevent the expression from being used.
I20359	Moving a tag, with a very long friendly name, around the tags tree could cause the trends displayed in VTScada to be different from the values retrieved via a direct SQL query to ODBC historian.

VTScada version 12.0.33 - Released April 29, 2021

Incidents Cleared

ID	Description
I20767	Thin clients may fail to play spoken alarms, or may clip them.
I20765	VTScada can cause a memory leak that does not show up in VTScada's memory statistic, but does show up in Task Manager.
I20762	The clock in VTScada was not showing the correct time from 12:59pm to 11:59pm when the application was in French.
I20757	When data changed on a VTScada system, the changes were not sent to the master IEC device as they should have been when using the IEC driver as a slave device if the Information Object Address was greater than 255.

I20756	The VTScada Excel add-in's Tag Browser columns didn't sort properly if there was a mix of string, number and/or blank values in the sorted column.
I20753	A child window that closed while its parent was still present forced the parent window to be active.
I20745	Some entries in the alarm notification logs were not translated properly into French.
I20737	The tag browser in the VTScada add-in for Excel was slow to display large lists of tags.
I20735	Page changes were affecting the wrong popped-up page window if you had more than one of the same pages opened with different parameter values.
I20726	A driver that uses UDP could stop receiving data.
I20722	In the Tag Browser, Flow Computer tags would not update the displayed address if their port was changed.
I20716	The Oil and Gas Solutions Well Test Table widget did not display the retrieving data message while waiting for data.
I20713	Some of the DropLists on the HDV would have text cut off when viewed on an Internet Client.
I20709	Sparkplug B incoming historical data was disregarded except for a single data point.
I20694	Anywhere Client could be slow to load a page with lots of images in Edge and Chrome.
I20653	There were legacy label references in the product which were not compatible with multi-lingual functionality.
I20642	Several Oil and Gas Solutions tags would count towards the licensed tag count despite not performing any I/O.
I20600	Re-ordering applications was not working when using the Anywhere Client to view the Application Manager.
I20583	Some source files were distributed with the VTScada installer that are no longer required.
I20563	VTScada could crash when a module was being unloaded or a variable deleted.

VTScada version 12.0.32 - Released April 14, 2021

New Features

ID	Description
F1545	A new optional parameter has been added to ProtobufDecode. When set to true, optional values not present in the encoded message will not be set to the relevant default value and are instead set to invalid.

Incidents Cleared

ID	Description
I20724	Warning, information, and error dialogs could sometimes show the incorrect message.

I20718	SNMP communication using AES encryption leaked memory because of a flaw in the SetByte function.
I20717	Importing Tag History would fail if the TagMapping.CSV file was created using Excel.
I20707	An error dialog reported a user name as being in use when the name collision was actually with a role name.
I20701	Adding an entry with a blank label in a DropList widget did not work.
I20677	VTScada could crash when a large number of Destructors were called on the same thread.
I20674	When deleting many tags via the tag browser, it took too long to display the confirmation dialog.
I20672	The Enron Modbus driver could have reported an error code that was not documented in the help files.
I20670	When re-opening the tag browser in the Excel add-in to select additional tags, the detailed list of tags on the right may not have been displayed.
I20666	ABB TotalFlow flow computer did not have pre-configured process data points.
I20630	Tags values read via SparkPlugB drivers could fail to be logged.
I20625	HDV was slow to load if there were a large number of groups.
I20621	The descriptions for Multismart Station Max Continuous Fault tags were misleading.
I20616	GUIText would not draw its focus box on VTScada Internet Client or Anywhere Client when the text was invisible.
I20606	The watch expression, find module and in-place variable editing tools were erroneously enabled in the Source Debugger when viewing a dump file. They are now properly disabled.
I20555	Account credentials now must be provided when installing VTScada Service during the standard installation.
I20537	Alarms that clear quickly after activating could fail to be notified if "Notify when alarm clears" is selected and "Cancel notification when alarm clears" is not selected.
I20498	Flow Computer Device config folders did not grey out clock syncing parameters when clock syncing was not supported for their device type.
I20475	Using a Normalize Expression to control graphic opacity could result in an invisible, unselectable graphic.
I20443	Synchronized calculation IO tags would not update their values on server changeover.
I20408	WinComboCtrl would become blank and unresponsive on the Anywhere Client when it was changed from editable to non-editable or vice versa.
I20137	VTScada could export an incomplete Access Tag database which resulted in tags being deleted on import if tag parameters were excessively long.

I20029	A PLC alarm tag with an analog alarm value and setpoint was displayed using digital labels on the alarm page. This also applied to the PLC Alarm Control Widget's confirmation dialog for analog values.

VTScada version 12.0.31 - Released March 31, 2021

New Features

ID	Description
F1543	A SOAP service can now perform authentication on behalf of HTTPServer.

Incidents Cleared

ID	Description
I20691	Multiline Text would fail to draw on a page if the area available was less than the required height for a line of text.
I20680	There were several Operator and Configurer level English phrases which were missing French translations.
I20660	Adding a page note from parameter less page to a parameterized page (e.g. a popup), caused the note to be added to all pages of that type, not just the single pop-up page.
I20656	Numbers in scientific notation could have been treated as translatable phrases.
I20654	It was not possible to import tags in the tag browser for a newly pasted tag.
I20647	The notation "OAuth2" was displayed throughout VTScada, rather than the standard notation of "OAuth 2.0".
I20646	There were some overlapping GUI elements in Oil and Gas config folders.
I20641	If you changed the area of a tag in a subordinate application to an area that hadn't been used before, the new area would not show up in the master application until either the master or the subordinate application was restarted.
I20635	There were a number of duplicate phrase labels in VTScada related to OPCUA security.
I20632	Source Debugger and Test Framework windows did not always keep their last screen position when reopened.
I20612	When exporting VTScada tags to Excel, the sheets for some tag types are named Sheet[X] rather than the tag type label.
I20609	A GUIRectangle with an invisible pen would draw offset from the intended coordinates.
I20604	There was a small window during DST change where a machine could fail to check the next remote IP address for an hour.
I20598	There were some minor spelling errors throughout VTScada.

I20597	The Memory Tracer was not reporting all memory allocated on the VTScada heap.
I20556	The Excel add-in was unable to expand tags in tag tree of the tag browser when the name contained a hash symbol.
I20542	Closing a window in one application could move the active window to another running application.
I20533	I/O and Calculations tags were allowing writes to queue without limit, which could negatively affect performance.
I20530	The I/O and Calculations tag could attempt to write to the PLC before it was ready.
I20521	The Source Debugger's Modules and Structures Refresh buttons did not work when the sections where closed.
I20486	Importing a change to an OEM layer could stop/restart a secured running child app without asking for privilege.
I20446	An MQTT payload made of a JSON array could not be decoded and indexed by simple methods.
I20421	The tag browser could be slow to load when User or Realm Area Filtering is in effect.
I20324	WinButton would leak a small amount of memory when it was unloaded.
I20223	The bottoms of some characters were cut off in page titles, site page widgets, and the VTScada version number on the Anywhere client.

VTScada version 12.0.30 - Released March 18, 2021

New Features

ID	Description
F1534	The IEC Driver running in both Master and Slave mode supports Reading Bit-strings using ASDUs #7 & #8 and writing using ASDU #33.
F1529	The OPC UA client driver configuration folder, and communication statistics widget now has a "Show Details" button which displays the last endpoints response from the OPC UA server.

Incidents Cleared

ID	Description
I20634	OilAndGasVersion and DriverPackVersion application properties were not indicating the use of the built-in versions of these layers.
I20633	A poll driver that was polling SDS drivers may have stopped all polling after a soft driver failure.
I20619	A processed data read from an un-configured SDS Cloud Flow Computer could have triggered an infinite loop.
I20617	After encountering a protocol error, the SDS Driver would never return data.

I20615	The IEC Driver's Address Assist was translating portions of the address which should always be in English, and was using the incorrect spelling for the normalized addresses.
I20613	Flow Computer Devices using SDS Cloud were unable to read processed data.
I20610	An SDS Cloud Flow Computer parameter was not hidden for other Flow Computer types.
I20603	When starting or stopping a test in the Test Framework, the tree control was collapsing. While tests were running, tests listed in the tree control could be checked or unchecked.
I20601	On the VTScada Internet Client, re-opening the expression editor after closing it would result in a smaller window.
I20590	If a thin client changed servers while viewing the Page Menu page, the client was reloaded at the root of the page menu rather than the former position.
I20585	The Save Profile dialog read "Save as .Profiler file" when the extension of the saved file is .Profile.
I20578	The IEC 60870-5 driver would not respect the Response Timeout when initiating a session to send a command.
I20564	Having illegal characters in the VTScada Internet Client server name caused Anywhere Client to fail to connect and could cause VTScada to crash.
I20562	Selected graphics handles could be drawn over the top of an Idea Studio panel.
I20552	The live alarm setpoints and values were not copied to the clipboard from alarm lists using Ctrl+C.
I20495	The Pakbus driver could read a portion of a multi-packet table record and treat it as the complete record.
I20350	Setting a page that was already open to Always scale resulted in the text not scaling the first time it was set.
I19738	A connection between a pure client and a server could periodically drop and reconnect.

VTScada version 12.0.29 - Released March 04, 2021

New Features

ID	Description
F1525	VTScada now supports copying Phrase Keys from the Language Panel of the Application Properties dialog.
F1521	The MQTT driver in Sparkplug B mode now creates tags under the top level parent Driver Multiplexer for redundant broker applications.

Incidents Cleared

ID	Description

I20581	Pump off controller tags could ignore configured dynacard schedules, preventing them from being downloaded.
I20576	The table in the Virtual IO Config tab in the IEC 60870-5 Driver's configuration folder was inserting blank lines between addresses.
I20574	The Discrete Valve (Dynamic) widget in Oil and Gas Solutions could not be linked to an I/O and Calculations tag
I20571	If you had a multi-monitor VIC configuration using three or more monitors, then when a VIC changed to a different server, some of the VIC's pages may have opened as pop-ups instead of or in addition to being opened in the main windows.
I20570	It was not possible to access a subordinate application tag's config folder by using the right-click menu on tag fields within a config folder.
I20558	When using the VTScada Internet Client with the multi-monitor feature, and displaying parameterized pages, failed over to the backup, the page on the second monitor was displayed without the original parameters.
I20551	The value of a Text Widget with numeric text was not shown in its panel, and after attempting to edit the value the Panel would not close when clicking OK.
I20549	If VTScada had no applications in the Application Manager, it would not stop.
I20545	The alarm shelve and mute expiry dialogs did not display well in French.
I20527	Red Lion PLCs using Sparkplug B did not accept some Sparkplug B messages.
I20524	The Accounts button in the User Options Dialog in the title bar was not displaying correctly when the application required restarting.
I20522	Using the JSON/XML driver with hold turned off would not invalidate the data when the remote server was unreachable.
I20520	The Shelve selected alarm dialog's date picker would allow selection of a date beyond the maximum shelve duration or a date in the past.
I20519	Many Drivers did not display properly when drawn as an Indicator Light widget.
I20518	The IEC Driver did not properly interpret IOA Addresses above 65535.
I20517	An Alarm List widget linked to a specific tag did not filter the Reports dialog to the children of the linked tag.
I20516	The IEC 60870-5 Driver was sending timestamps in UTC as opposed to the configured PLC time zone.
I20515	Polling driver showed text Off instead of 0 for value in tag browser.
I20514	Some pop-up dialogs were not centered by default, and they did not get re-centered when their previous position was slightly off screen.
I20513	It was possible to configure realm-filtered tags which should not have been available to the user through the tag selector GUI tools.
I20505	A realm user could no longer call up the trend for realm-filtered tags which were drawn on an accessible page.

I20504	The Source Debugger would not expand some elements properly when viewing Variable Metadata.
I20492	Deleting the logged in account would not update the session's current account
I20485	Obsolete settings OEMPath and OEMHelp have been removed.
I20451	After creating a new tag in the tag browser, it would not be selected.
I20448	The Idea Studio could fail to close following a user clicking within a page while an operation is underway.
I20441	Oil and Gas Widgets: WeatherfordOveriew, SAMOverview, and UnicoOverview were not able to be drawn from the IDEA studio and their properties dialogues were not allowing parameter editing.
I20438	When starting the import of tags into a Recipe Book, the progress dialog would appear over top of the import dialog.
I20429	Vector type bitmaps on pages could get clipped.
I20424	Dynamic widgets used style tags for labels but not for colors.
I20392	In rare circumstances, a tag's UniqueID was being displayed instead of its Name.
I20380	Network communication packet transmission could coalesce packets when not desired and vice-versa.
I20379	The Excel add-in would fail to display any content in a panel if it was opened while a cell was in editing mode.
I20364	Creating more than one UDP port with the same local/remote addressing was permitted, causing received datagrams to route only to the last created UDP stream.
I20321	Actions which appear on the Alarm page or on an alarm list widget are now decorated with the source application user name if they were initiated by a user from a different application even if that application is unavailable.
I20273	Multiple address errors were being displayed when changing the device type of a Flow Computer
I20255	Thin client sessions could use the server display metrics and configuration instead of the display metrics and configuration of the client workstation.
I20069	Scrolling in the Tag Browser would sometimes not show the complete list of tags.
I19904	If an IP address of a thick client changed VTScada could use high CPU until restarted.
I19815	A delay of the order of a minute or more in re-establishing an RPC connection between multi-homes machines could occur.
I19232	When a client or backup workstation became isolated from the primary server, and recorded an alarm clearing, the alarm was not being re-evaluated when the isolation ended.
I18731	Alarm acknowledgements sent as email attachments could sometimes be truncated by one character resulting in alarm acknowledgements being missed.

VTScada version 12.0.28 - Released February 18, 2021

New Features

ID	Description
F1531	Sparkplug B Node Control metrics are now published by name instead of alias.
F1492	The PLC alarm tag in the Oil & Gas Solutions is now deprecated. A manual process by which to upgrade deprecated PLC alarm tags to the one included in core VTScada can be found in the help documentation.

Incidents Cleared

ID	Description
I20509	Post 12.0.26, a VIC connected to a VTScada server of a different version or the AnywhereClient using 12.0.0 or later would not correctly permit keyboard navigation around some controls in a dialog.
I20502	32-bit VTScada could crash when processing network connection or disconnection (rare).
I20496	When attempting to start an app from the VAM that had Smartcards enabled and Windows Smartcard services were not running due to absence of a card reader, VTScada could crash.
I20491	The OPC UA driver would report an "Incorrect endpoints supplied by server" error if the server returned null for the Application Name or Server Certificate in the create session response.
I20478	The Sign in dialog would appear at the right edge of the calling window and vertical center of the monitor when exiting an application.
I20477	After restarting an application Trigger tags could fail to trigger after the first trigger has occurred.
I20473	Structures initialized with more elements than defined were displayed with some empty elements by the Source Debugger.
I20470	If you declined to override or copy an OEM layer's Overview page when opening the Idea Studio in an application layer, you could immediately get prompted a second time to override or copy the same page.
I20465	If a tag's label was modified, the widget folder for that tag would have the old name.
I20464	If the DrawLabel of a tag type was changed, when that tag was drawn in the Idea Studio, the pre-configured set of widgets for that type in the Tag Widget Reference folder wouldn't be used.
I20462	When signing in the current page would not be added to the user's page history.
I20455	The text widget would convert text consisting of numbers and the letter "e" to a pure number.
I20454	Several SDS Driver/SDS Flow Computer reads not working as expected and E-Tube meter type was not supported

I20445	A disabled Phrase Edit or Phrase Droplist control would show the phrase editor dialog for homographs when the control was disabled.
I20436	VTScada would retry downloads of map tiles continuously if it encountered TLS errors.
I20416	In cases where there was some delay between Twilio and VTScada, keypresses might not be detected properly on voice calls from the Alarm Notification System.
I20414	The rounded rectangle wasn't drawing correctly when drawn on a scaled page.
I20403	Create Report Section and Include Description checkboxes in Filtered Tag List tag were not used and had no effect.
I20400	Trigger tags starting during what would be an ON time had a value of OFF
I20399	After selecting a language in the User Options dialog, removing the language from those supported in the application would continue to display the language.
I20395	When a driver gets deleted, it could fail in deregistering with the consecutive errors watch dog.
I20385	Deadband Control tags had unexpected behavior if the expression for the Inhibit parameter evaluated to Invalid.
I20363	When loading VTScada data into Excel via the Power Query Editor, null values would appear as zeros, and null timestamps would appear as '01/01/0001 00:00:00'.
I20360	An alarm could fail to activate after being enabled.
I20356	If a WinButton disappeared while it was being clicked, the Anywhere Client could produce an exception and may have required a page reload to function correctly.
I20345	The Allen Bradley DF1 Driver could continue connection attempts longer than required on a communication failure.
I20332	Oil and Gas Solutions settings ROCSharedRPC and BSAPSharedRPC were unused and had no effect.
I20304	Dynacard Input and Dynacard Reference tags in the Oil and Gas Solutions Layer were improperly marked as containers.
I19591	The DataFlow driver poll cycle could get stuck on a single site when group polling and the port disconnected mid-poll.

VTScada version 12.0.27 - Released February 07, 2021

New Features

ID	Description
F1519	The VIC can now use Smartcards for signing in and out within the same session.
F1509	VTScada now supports specifying a thin client disclaimer in an application or an OEM layer.

F1505	VTScada now gives users the option to copy and rename, override, or do neither when they try to open an OEM page in a derived application's Idea Studio.

Incidents Cleared

ID	Description
I20449	When a Page Change widget was set to open the same page that it is drawn on but with different parameters, and that page was a popup, a new popup page would always be opened rather than simply updating the page with the new parameters.
I20442	The Recipe Book's Start widget couldn't select a specific recipe and could only start the "current" recipe.
I20440	Adding/Modifying/Deleting an alarm contributor would result in changes to other parameters being thrown away.
I20439	Grundfos controller widgets were missing from the widget list of Alphabetical List of All list for Tag Types.
I20435	Adding a new RecipeTrigger tag would cause the RecipeBook to start the current recipe before the configuration of the tag was even complete.
I20431	ABB Totalflow driver did not return history data and displayed the error message "Communication Request Denied".
I20423	When using multi monitor configuration in conjunction with smartcards, the pin prompt showed up on a random monitor each time.
I20422	Multi-Write tags would only allow selecting Numeric type tags as a value tag, even when the output tag was a String type tag.
I20415	If a monitor is added to a VIC client workstation while a VIC client is running, windows on that monitor may start up on the primary monitor.
I20402	Copy and pasting a text linked to a Tag Property that is "translatable" would result in a phrase ID being displayed.
I20387	The Excel add-in, or REST CORS pre-flight requests, would fail to connect to a VTScada application if the URL used was an alias for a machine on the VIC Server list e.g. "www.example.com" was used when the VIC server list had "example.com"
I20378	Tag list widgets showed no tags if the root tag was filtered by the realm.
I20373	A small memory leak could occur after network communication disturbances.
I20369	Getting an application from a changeset with the application name containing an non-ascii code page character would not properly convert the character(s) to UTF-8.
I20351	Scrolling vertically in the tag browser was slower than necessary, especially when displaying many IO tags.
I20347	The HDV pen properties dialogs had inconsistent graphical spacing.

I20343	After making a change to OEM layer that required a restart, the applications could not be restarted when the "Restart" button was pushed.
I20305	Multiple widgets in the Oil and Gas Layer were not displaying the proper Help topic when F1 was pressed
I20294	Typing a phrase which has been redefined in an application would cause the text to change.
I20152	When opening a HDV exported CSV file in Excel the columns were off by 1.

VTScada version 12.0.26 - Released January 25, 2021

New Features

ID	Description
F1526	The Droplist control widget now supports displaying the linked tag's Equipment type labels. The Equipment type values in the StyleSetting tag can now be text values.
F1520	VTScada now offers configuration options in the panels for Alarm Priority Icon and Alarm Priority Box to disable showing the Shelved or Disabled alarm status.
F1517	Provide the ability to set the horizontal alignment of text in Numeric Entry, System.Edit(), and WinEditCtrl.

Incidents Cleared

ID	Description
I20376	When communications to OPCUA servers were lost, the attached tag values were not invalidated.
I20370	The Excel add-in was unable to connect to VTScada when a realm and application were specified in the URL when using older versions of Excel which use Internet Explorer to display add-ins.
I20366	Third party app connection via Web Services would fail after upgrade to 12.0.24.
I20355	The phrase "Upgrade Period Ends" has been updated to "SupportPlus Expires" in the Application Manager to address inconsistent terminology.
I20342	The Idea Studio widget palette contained the deprecated Gradient Color widget.
I20341	PlotData and DrawHDV widgets inverted plot's y-axis when the window size became very small
I20339	It was possible to output non-integer values from widgets linked to discrete and digital IO tags.
I20337	The SDS Driver was not able to read all addresses available to it. Additionally, the "SDS Cloud" Flow Computer type had an issue reading/writing two flow settings to history and behaved unexpectedly on initial config.

I20317	Copy and pasting a drawn tag widget could clear the tag it was linked to.
I20314	The spacing between a bevel and the first element inside that bevel was sometimes too large.
I20295	Dataflow driver NIM setup process would be delayed when there are many drivers.
I20194	Editing page parameters for a page that contained a child window could incorrectly display the child window without the enclosing page. Closing that window from the task bar caused all application windows to disappear, yet it would remain running.
I20117	It was not possible to navigate toolbar droplists in the Historical Data Viewer or alarm page using the mouse scroll wheel.

VTScada version 12.0.25 - Released January 08, 2021

New Features

ID	Description
F1518	VTScada now supports map tiles in .jpg format.
F1508	Exporting tags to Excel now uses translated tag type's label as the worksheet name.

Incidents Cleared

ID	Description
I20362	Some Oil and Gas Solutions tags were not properly setting their time zones (Well Test, Dynacard Upload Driver and ABB Totalflow Driver).
I20344	The AB driver hung if its IP connection was lost immediately after opening.
I20340	The SuperUser role in new applications did not have the Global Tag and Area Filter privilege.
I20327	Changing the default language for an application would not reflect the change for the current user.
I20320	The OPC UA Client driver would fail to address some nodes for certain brands of OPC UA server.
I20316	The Source Debugger would not show the contents of an array if it had MetaData attached to it.
I20308	Weatherford POC dynacards were not displaying properly, and Process tag values had incorrect values and unit
I20303	The MQTT Client Driver missed certain opportunities to acquire a BIRTH message from Sparkplug B devices.
I20298	The Numeric Value Widget could disallow using an IO tag's specified digits after decimal.
I20262	Dataflow driver was unable to configure more than one NIM/FIM.

I20261	The axis lines for the Spider Graph widget were not displaying in their proper orientation.
I20244	An obsolete service in the Legacy VTScada layer for importing old Dataflow systems into VTScada has been removed.
I20242	IO tags configured with the Publish to OPC checkbox unchecked were still visible to OPC clients and their value could be retrieved.
I20097	In the HDV, Discrete IO tags were not being plotted step-wise by default.
I19478	The report tag was able to run multiple simultaneous reports.
I18889	Tag groups exclusive to the IO tag did not show in the Report Types droplist.

VTScada version 12.0.24 - Released December 10, 2020

New Features
ID	Description
F1510	The drivers for the hardware key (dongle) have been updated to the latest version.
F1507	Well Test tags have a new parameter that will allow the Well LSD field to be editable.
F1496	Support for the document/literal style of SOAP messages and handling of SOAP headers have been added.

Incidents Cleared
ID	Description
I20318	Clearing the field of a Numeric Entry widget and then pressing Enter would clear the field, but take no action and the field would remain blank. The same was true of the String Entry widget.
I20309	When reading history using a ROC Plus device, the entire history was being read from the device with each poll cycle.
I20302	The Oil and Gas Solutions layer PVR Entity tag could be drawn with widgets when it should not be drawn.
I20301	Setting a parameter expression on Latest or Update Rate Data Periods in a History Statistics tag would result in the Droplist not displaying the correct units.
I20291	Double-clicking a module-type variable in the Source Debugger would change the currently displayed information to the double-clicked module, and a popup window would also be opened displaying that module's information.
I20289	Drivers could fail to display data on a version 12 client that was configured as a client to a version 11 client.
I20288	The panels for Sites and Site Map widgets would not allow selecting a color page parameter for the text color.

I20280	If using Multi-Monitor mode and a monitor cable was disconnected or a monitor otherwise removed, VTScada didn't recover when the removed monitor was restored.
I20274	The FlowComputer Page in the Oil and Gas Layer displayed too small, and the MeterRun Configuration tab compressed to the point that text started overlapping.
I20272	The Tag Name conflict resolution dialog was popping up repeatedly when attempting to overwrite multiple disabled tags.
I20270	There were still a few ParameterEdit calls where we could not select a String tag for use as a color value.
I20266	The Move Up and Down buttons in the Roster removed parameter expressions from the entries being moved.
I20265	Some tag types listed under the PVRSources group in Oil and Gas Applications failed to create a new tag when picked.
I20264	Applications built with the Oil and Gas Solutions layer could not edit the overview page.
I20263	OPCUA Address Assist could fail to display all tags on some PLCs.
I20260	Exporting binary tag parameters that had SQL_VARCHAR or similar types could have resulted in not syncing the correct values.
I20243	The OPCUA client driver would fail to connect to a OPCUA server when the endpoint URL was an IPv6 address.
I20234	HTTPServer responds to excessively large paths or protocols instead of closing the connection.
I20222	Selector switch widget Off option was named "OFF" instead of "Off".
I20221	DriverMUX could have switched (back) to its preferred subordinate without getting data from that subordinate.
I20220	Source Debugger popup windows, when opened from another popup window, would open on the monitor with the main Source Debugger window rather than the window with the invoking popup window.
I20208	GeneratePhraseID had a high chance of creating duplicate IDs for phrases.
I20204	IO tags attached to a DriverMUX may have received different values on a Client machine than on the Server.
I20193	Once a dump file was loaded into the Source Debugger, you could not load a second dump file without restarting VTScada.
I20141	The Confirmation Dialog was missing context, making it hard to determine what tag the user was changing the value for.
I20124	Binary tag parameter changed unexpectedly when exported to and imported from Excel.
I20112	If the scrollbar thumb was quickly moved and released, it would sometimes jump back to a previous position.
I20105	VTScada was unable to export and import an Excel tag database if a tag had a parameter that was more than 8192 characters long.

VTScada version 12.0.23 - Released November 27, 2020

New Features

ID	Description
F1506	The Active Directory Query application has been added to the VTScada installer.
F1504	Support for SCADA Data Solutions' Smart Alek service has been added to the Oil & Gas flow computer.

Incidents Cleared

ID	Description
I20254	Users could not select an IO String Tag for use as a Color Value for lines, fill, etc.
I20251	It was not possible to select IO tags without address as Multi-Write output tags.
I20249	The Alarm tab of the IO config folder defaulted to Basic, when it had a configured AlarmDB.
I20248	The Source Debugger had a few minor graphical inconsistencies.
I20247	The PLC alarm control widget disabled controls indefinitely if there had been a comms error on a client.
I20235	The polling driver could get stuck in a perpetual fast poll state
I20231	IO tag parameters were cleared in the properties panel even after cancelling the operation to change the IO data type.
I20226	"Draw Methods" Label was used in MenuItem ConfigFolder and TagList Panel
I20224	The internal Twilio logs weren't written to disk when the application was shut down.
I20210	When switching a flow computer tag's device type from ABB Totalflow to Bristol, the Local Address parameter remained defaulted to TOTALFLOW.
I20202	Changing the page that was being displayed by a popup window sometimes caused that popup window to jump to a different monitor.
I20201	Removed the UWI Lookup feature in the Oil & Gas Layer.
I20188	The OPCUA Client driver would erroneously throw an "Incorrect endpoints error" with some OPCUA servers and the driver would fail to validate certificates with an IP Address in the certificate's SAN.
I20180	There was no means to disable the timeline tab when using the dyncacard widget in the Oil and Gas Layer.
I20168	The Excel Add-in would only connect to the top application in the realm as listed in the VTScada Internet Client/Server setup. It can now connect to any application in the realm.
I20162	Widget Select labels did not translate live.
I20156	It was possible to attempt an unsupported Get/Clone from changeset when using the Application Manager via the Anywhere Client.
I20142	Discrete IO tags did not allow state alarm setpoints as expressions.
I20138	A Historical Data Viewer window which was opened when a user was signed in would remain open after signing out.

I20132	The lower edge border of text edit fields could disappear when using the Anywhere Client in Chrome and newer versions of Edge that are based on Chromium.
I20098	Getting or Cloning an app from a local changeset was not possible using the Application Manager on a client machine's VIC session.
I19882	Widgets and text scaled differently when ScaleDisplayContent was set within the Sites page.

VTScada version 12.0.22 - Released November 12, 2020

New Features

ID	Description
F1476	IO and Alarm tags can now specify which Alarm Database tag to use rather than needing to inherit the database via its ancestry.
F1471	The Source Debugger now shows the name and instance count of structures in the summary page.
F1310	Soft-failover for Modicon driver is now more efficient.

Incidents Cleared

ID	Description
I20219	The TI505 Driver's writes could be excessively delayed during period of high read activity.
I20215	VTScada could crash when processing large numbers of network connections.
I20203	Pure output IO tags where shown as both inputs and outputs on the sites page.
I20191	TI505 driver incorrectly wrote floating points and long integers to the PLC.
I20183	On the VIC landing page there were non-HTTPS links to www.trihedral.com.
I20174	Updates to Realm lists for Thin Clients could result in Realm lists being lost and the inability to re-add systems to the lists.
I20173	An Invalid GUIButton ImageSet or ClickSound parameter would result in the button not displaying. A constant GUIButton ImageSet or ClickSound parameter would result in the button displaying when it should not.
I20147	It was not possible to modify the selector switch position labels in the several pump control widgets.
I20122	Choosing to plot a logger tag from the context menu would only show the notes.
I20109	The historian could leak memory when encountering errors.
I20100	Typing a large number into an integer-limited edit field could cause a different number to be entered.
I20093	Editable dropdowns on the Anywhere Client would show a limited subset of the available options when the free-form text field was not empty.

| I20057 | When adding local machine alternatives, "localhost", "127.0.0.1" and "::1" to the VIC server list it makes the server list ambiguous on other machines. |
| I19532 | RPCManager would ignore the set of excluded IP addresses when making outbound connections, resulting in using excluded IP addresses to connect to remote systems. |

VTScada version 12.0.21 - Released October 29, 2020

New Features

ID	Description
F1502	Support for customizing the output when printing alarms has been added and printing has been updated to have a separate column for the name instead of combining it into the description column.
F1499	The TI505 driver now supports SIEMENS bit-numbering convention and writing individual bits to 16-bit registers.
F1494	An ABB TotalFlow Driver has been added to VTScada.
F1483	The MQTT Client Driver now supports being a SCADA Host for devices that use the Sparkplug B protocol.

Incidents Cleared

ID	Description
I20170	The OPCUA client driver failed to connect to some OPCUA servers and reported a "Decoding halted because of invalid Data" error.
I20161	There was a rare situation where a Notebook could fail to display all notes that were present.
I20159	The OPC UA Client Driver could crash VTScada in some situations.
I20149	After selecting a database, the alarm list widget was not showing All databases when switching pages and coming back.
I20129	Bristol History Info Widget drew its "Reset" buttons out of the bounds of the cells.
I20119	Tags plotted in an unnamed group with language-dependent areas/descriptions would disappear when changing languages.
I20111	The AB Driver was unnecessarily generating 774 and 772 errors when closing CIP communication sessions.
I20110	Selecting a widget linked to tag with a large hierarchy underneath it caused a significant pause to occur.
I19898	The Excel Add-In would not connect to VTScada when the Internet Client setup was configured to use SSL port numbers other than 443.
I19673	The Excel Add-in tag browser can now differentiate different types of IO tag's and filtering them based on the group filter.
I19499	"Access Denied" message showed when using widgets connected to some custom tags, when privileges were not needed.
I18630	Notebooks could fail to write to Historians given network issues, resulting in a loss of notes.

| I16891 | VTScada could hang and crash with an out-of-memory error if the historian data had become corrupted. |

VTScada version 12.0.20 - Released October 14, 2020

New Features

ID	Description
F1493	A Bristol BSAP/IBP Driver has been added to VTScada.
F1482	All data types of the IO tag can now be treated as calculations, not just analogs and strings.
F1451	VTScada now supports OAuth 2.0 as an authentication method for SMTP and POP3.

Incidents Cleared

ID	Description
I20128	CPU usage could spike while viewing a site details page with a digital output.
I20126	The TI505 driver was generating PLC Memory and Bad Word Count errors.
I20103	The Alarm Database Droplist in the Alarm List widget's properties panel would not translate in real-time when the language changed.
I20099	VStatus mode 29 returned TRUE for a maximized window running on the server, but FALSE for a maximized window running on the VIC.
I20096	Selecting the Description parameter of a tag parameter to a widget would result in a PhraseID being displayed.
I20094	The chosen starting list for the DrawAlarmList widget was getting reset to History every time you opened the widget's properties.
I20091	The IO tag's config folder could have had GUI elements squished when a second config folder was opened to a specific tab, such as the alarms tab.
I20088	Pressing the Stop button in the Test Framework while an application test was starting could leave a lingering application startup dialog, and you would be unable to stop VTScada normally.
I20073	Under certain circumstances, the CIP driver would fail with error code 7 and not recover.
I20058	A Tag Browser which was last minimized on the VTScada Internet Client, could be very small when the Tag Browser was later opened again.
I20050	Windows such as the Tag Browser or Application Configuration, when maximized on the VIC, would return to their normal dimensions if invoked again, by, for example, clicking on the Application Configuration icon on the application title bar on the VIC.
I20041	Some elements in the Excel add-in did not get padding in Office Online, which caused them to be squished against the sides of the panel.

I20023	PatternMatch didn't match strings when there were multiple trailing asterisks.
I20021	TCPIPPort and UDPIPPort listeners would be incorrectly created when the address and port fields were left unconfigured, consuming unnecessary resources.
I20020	Creating a Client Certificate in the OPC UA Client Driver failed to set the friendly name for the new certificate in the certificate store.
I19980	Control widgets drawn by calculation IO tags were not disabled.
I19212	Dynamically modified shapes such as a GUIPolygon, would leave artefacts on the screen when their size changed. Particularly noticeable with large outline widths.
I17446	Historian servers that were isolated by network partitions would write invalid IO values that would appear as unexpected gaps on HDV trends.

VTScada version 12.0.19 - Released September 17, 2020

New Features

ID	Description
F1484	The IO tag now has the ability to pulse digital outputs.
F1472	A new script interface, HTTPClient.HTTPSend(), has been created for sending HTTP requests ("GET", "POST", etc) to external web servers
F1462	There is now script-level support for encoding and decoding Google Protocol buffers (Protobufs).
F1455	The MQTT driver can now write data (publish) to edge-of-network devices.
F1452	It is now possible to stop a starting application before it has finished loading all of the tags.

Incidents Cleared

ID	Description
I20060	Widgets linked to tags with invalid values didn't show the Invalid color from the StyleSettings tag.
I20056	Could not ungroup a simple grouped object on a page with an Alarm List widget.
I20052	The Idea Studio was unresponsive after trying to export page with unnamed group.
I20049	Motorola IP Gateway Statistics Error history showed the oldest error before newer errors.
I20047	Import File Changes panel in Application Configuration had some text that did not translate live, and its buttons had squished text when in French.
I20042	The workstation column in the advanced application properties was not translated live and could result in an "Illegal Workstation" error.

I19992	Trip alarms and events weren't being raised in the alarm system unless a previous valid value had occurred.
I19987	VTScada would crash if any of the optional parameters to the WKSPath function were not specified.
I19963	Could not add new tags when using AreaExclude and Tag Area Filtering
I19476	It was possible to perform control and configuration actions on realm-filtered tags using drawn widgets.

VTScada version 12.0.18 - Released September 02, 2020

New Features

Incident ID	Description
F1475	Alarm Databases will now log the events of the tags under them.

Incidents Cleared

ID	Description
I20053	Digital widgets linked to legacy Calculation and Numeric Calculation IO tags, whose expressions return boolean values, didn't show the digital colors that were configured in the Style Settings tag.
I20051	The VTScada Internet Client could crash when the Idea Studio was closed.
I20048	Plain Excel XLS reports would generate an error for a new logged in user.
I20033	Changes made in the Languages Panel in the Application Configuration auto-deployed when auto-deploy was turned off.
I20031	String IO tags were not showing their values in the Standard Report.
I20030	IO tags which are imported via a Sync action could have received incorrect Mode entries.
I20027	When getting an application from workstation failed, the Help button was missing from the Error Report dialog.
I19997	Loading a page with an alarm list widget could take a long time.
I19988	Dragging the map and releasing at the bottom could open the copyright hyperlink.
I19985	It was not always possible to abort an ongoing tag import from a CIP driver.
I19983	VTScada would fail to find a certificate by name when the certificate had a "friendly" name.
I19973	The tag browser's filter enabled color may have flashed when changing languages.
I19948	Setting the Opacity of a rectangle to a Parameter value wouldn't show the correct scaling values. It showed the values it is going to be scaled to.
I19888	RPC service status would rapidly change when server list was changed.

I19884	Some widgets (those that contain a child window with dynamic contents) may not update their graphics dynamically when drawn in the VTScada Internet Client's Idea Studio.
I19777	Several drivers could have consumed more\high CPU when connected to the TCPIP and UDPIP Ports in listener mode.
I19752	Configuring the Historian tag to log to a 3rd-party ODBC database could cause memory leak.
I18835	The ROC driver could miss reading Daily or Hourly history from a ROCPlus compatible device if too many address were configured.
I18225	The clock widget's second hand was misaligned.

VTScada version 12.0.17 - Released August 21, 2020

New Features

Incident ID	Description
F1470	It is now possible to provide custom addresses for the PLC alarm tag, control its digital alarm condition, and set delay units based on the PLC type.

Incidents Cleared

ID	Description
I20039	Internet Client Versions between 12.0.09 and 12.0.11 would crash VTScada server versions 12.0.12 and up.
I20036	Totalizers and Counters would reset on UTC times instead of local for log intervals of daily or less.
I20035	The Alarm List widget's Starting List parameter was defaulted to "History" when the language was changed to English.
I20034	Long PSelectObject titles would extend past the boundaries of the transform.
I20032	Some scrollbars on the VTScada Internet Client would have over-size thumbs and would not scroll.
I20026	Some tags that were not plotted in the HDV were missing from the HDV Tag selector preview when the user language was changed.
I20012	It was not possible to properly set the IO tag mode using a parameter expression.
I19966	The grid lists of the HDV's tag selector and its preview did not re-sort when the language changed.
I19962	Grouping would fail when a graphic referenced a user defined variable.
I19961	OpenID would fail to load if the configured VTScada Server and Realm had different http ports in the Internet Client/Server Setup.
I19930	Digital tags didn't fall back on labels from the StyleSettings tag when OnText and OffText weren't defined.
I19900	Clicking overlapping site icons could open both Site Details pages and the site selector.

| I19822 | The Sparklines widget wouldn't plot digital or discrete values as steps when the "Stepwise" option was enabled. |
| I19384 | Addresses that were missing from the RTU were not being properly flagged. |

VTScada version 12.0.16 - Released August 13, 2020

New Features

Incident ID	Description
F1473	A warning dialog now pops up when creating a changeset while there are undeployed changes.
F1424	Dataflow driver now supports server redundancy when using Dataflow NIM/FIM hardware.
F1418	Optimized text operations in VTScada, reducing application startup time and improving performance of some text-related operations by approximately 5%, and reducing application memory use by 3.5%.

Incidents Cleared

ID	Description
I20019	Having many alarm subscriptions degraded an application's performance when those subscriptions were reinitialized.
I20018	Having many Alarm Status tags degraded an application's performance.
I20015	A bad Realm Area Filtering setup which didn't match any areas in the application would let a user see all tags in the system.
I20013	The Ack All Button widget remained greyed out when there was unacked alarms that used custom alarm priorities, preventing the alarms from being acked.
I20011	It was possible to select an incompatible tag type from a secondary tag browser's tree.
I20009	VTScada would leak a small amount of memory each time a network socket was closed.
I20007	Legacy tag types with Enable Output were not considered to be part of the outputs group.
I20006	Setting a parameterized popup page as the startup page could result in High CPU usage.
I20002	Tag widgets using the Number widget for tags under a custom tag type were not displaying values.
I20000	In some versions of Excel, the VTScada add-in did not open links in a separate browser.
I19975	VTScada took a long time to draw some widgets.
I19945	Tag List widget could flicker when tags were changed in the system.
I19923	AlarmCaller might not have called out unnotified alarms orphaned when all roster tags were moved out of the alarm's area.

I19813	The StyleSettings tag fell back on the default digital set for non-digital tags.
I19734	The widget page canvas could fail to paint properly on VTScada Internet Client when a graphic was dragged outside of the existing canvas.
I19731	Using the Idea Studio on the VTScada Internet Client, a selected graphic's selection handles were left on display when all the page tabs were closed.
I19707	Widgets with Opacity set to zero not visible in VIC Idea Studio
I19655	On the VTScada Internet client, widgets with a child window (e.g. a Site Map) could be incorrectly placed in the Idea Studio.
I19557	IO and Calculation tags were duplicated in the default reports page and any other Loggers-filtered tag list.
I19495	Force Re-load Table Definitions in the Packbus Driver Info widget button did not work as expected.
I18988	Many places in the source code were using GetPhrase() in a loop and it was found that this can be quite slow.

VTScada version 12.0.15 - Released July 23, 2020

New Features

Incident ID	Description
F1466	A new API has been created to obtain any given tag's mode and equipment type.
F1457	The Excel add-in can now be installed in older versions of Office 2016 that only support Excel API 1.1.

Incidents Cleared

ID	Description
I19978	When vertically scrolling in the Alarm Page's Bad Actors report, the CPU would go to 100%.
I19972	When the Sparklines widget had its border enabled, the plot had a few pixels of padding around its circumference making it look misleading when the plot line was at its maximum or minimum value because the plot line didn't touch the top/bottom of the plot area.
I19971	The values for the equipment labels in the Style Settings tags were sorted alphabetically instead of numerically.
I19960	In the Accounts dialog, the filter for filtering usernames was case sensitive.
I19958	Users can now set a flag in settings.dynamic to enable the use of AD user auto-add, in combination with Realms.
I19954	The GE Series 90 Driver would not properly identify short reads for digital inputs.
I19952	Bar Items dialog in the Idea Studio had squished text when the user language was French.

I19946	The Enron driver would not properly invalidate data when encountering an internal error.
I19943	The Logged Off user would fail to get its rules reevaluated upon a change to the ReadOnlyStation setting.
I19938	IO tags were categorized as "Outputs" in the Tag Browser when they didn't have a write address.
I19928	After adding new divider in app privileges without a description, some privileges may become hidden.
I19925	It was not possible to toggle the visibility of the Global Tag and Area Filters button in custom pages.
I19922	It was taking a long time to open widget panels that had a lot of parameter reference values.
I19912	Report tag's config folder didn't filter tags for report types "Pump Activity Report" and "Pump Discrepancy Report".
I19891	At times, the version log would fail to display correct translations.
I19883	VStatus mode 35 or 36 calls would re-trigger every 20ms if the structure they returned was not assigned to a variable.
I19881	VTScada could become completely unresponsive for 10-15 seconds at a time.
I19853	Alarms that were still active when they were automatically unshelved would appear on the Active/Unacked lists with a timestamp of when they became unshelved rather than when they became active.
I19808	When VTScada is running as a service a "Get from workstation" operation hangs after pressing finish where the username/password prompt would typically be presented.
I19772	In Idea Studio on the VTScada Internet Client, a wrong graphic could be highlighted for alignment tools resulting to incorrect alignment.

VTScada version 12.0.14 - Released July 9, 2020

New Features

ID	Description
F1469	The time span for the Sparklines widget can now be set via a parameter, linked tag property or expression.
F1467	When using the DispMgrHoriz and DispMgrVert settings to put individual Display Manager instances on individual monitors, it is possible to do so with multiple monitors configured for Windows Extended Desktop.

Incidents Cleared

ID	Description
I19944	Application Privilege with specific Tag Scope wouldn't allow writes
I19942	Program Spawn button label would change to the last assigned label when dragged off of the palette.

I19936	The word "tags" was used instead of "tag" in the version log comments when enabling/disabling a single tag.
I19935	The ungroup button in the Idea Studio could be erroneously enabled and clicking it in this state caused the idea studio to freeze.
I19929	Upgrade to version 12 could miss wrapping some translatable tag parameters with GetPhrase calls.
I19927	Station Masks were not being applied to user accounts if they logged in via the application properties without the application running.
I19921	Making changes to realm filtering while the application was running could have been overly CPU intensive.
I19918	VTScada crash in Idea Studio after adding a widget to itself via Paste or "Draw" option from the tag browser.
I19916	Protection has been added to the ReadOnlyStation to prevent inadvertent changes other than by configuration in a setting file.
I19914	The names of the images in the multi-image widgets palette were not being translated correctly.
I19911	Station List title bar Tooltip said "Open as Popup" for a page which could not be opened as a popup.
I19910	When selecting from a Parameter drop tree in the VGE, it was showing the tag type's module name and not the translated DrawLabel.
I19907	DigitalStatus built-in alarm could have an invalid setpoint
I19894	Using Ctrl-C to copy the history from the alarm page didn't copy the description.
I19849	VTScada's HTTP Client connections would fail when multiple transport encodings where used by the responding server.
I19640	When reconfiguring a server list for an RPC service, it was possible for the service to assert it was in-sync when it was not.

VTScada version 12.0.13 - Released June 25, 2020

New Features

ID	Description
F1468	The JSON/XML Driver can now be given a custom data processor for handling complex data sets including timestamped data and historical data.
F1465	The VTScada installer now returns a specific exit code when the installation is cancelled from the progress dialog.
F1463	A new Override Detection tool has been added to determine if an application is using overridden code and/or properties.
F1408	Two new style flags are available for Window() statements. Flag bit 25 disables the horizontal scrollbar, and bit 26 disables the vertical scrollbar.
F1369	Sort, SortArray and TextSearch now support multilingual locale-based sorting. An example would be how accents on characters are treated in different Latin languages or sorting Chinese characters based on phonetic or stroke order.

Incidents Cleared

ID	Description
I19908	Logged off user had access to secured pages via the embedded station page view
I19901	While importing changes to the language database using our standard GUI, several duplicate phrase ID errors were reported
I19899	The Variable to log field in the SQL Logger tag's property dialog and the Source Variable field in the History Statistics tag's property dialog was always grayed out.
I19897	The VTSCada OPC UA Client Driver would fail to connect to OPC servers when set to Username authentication, and the username was left blank.
I19890	The widget parameter editing tool "Parameters" was plural, while other parameter editing tools were singular.
I19877	When the default page was a popup, the page would remain open after the application was closed.
I19876	I/O MultiText widget did not allow the text color to be set from the Idea Studio Text Tools.
I19873	Security check dialogs could appear on the wrong monitor.
I19862	If the machine where VTScada is running is stopped prematurely, audit log files may not have been written out correctly, leading to repository corruption errors.
I19856	On the VTScada Internet Client, when moving a window to another monitor with the mouse, the result of a VStatus(Self, 35) in that window would not update until the move was completed by releasing the mouse button.
I19855	Application Configuration window does not outlive the popup window it is opened from.
I19850	Initial write of value 0 would fail for I/O and Calculations tags in the Numeric Calculation mode.
I19847	Dragging a duplicate image file name to a page in the Idea Studio gave a warning dialog missing its text.
I19840	VTScada had a rare chance to crash when encountering multiple recoverable errors simultaneously.
I19816	The VTScada installer flashed a small window on the screen before the progress bar slide show started.
I19811	Importing an image by dragging it in from windows and then using the Apply button would cause the image to not work on other machines.
I19803	When selecting a site on the Sites page, the map would zoom into that individual site. If the tiles for that zoom level had not already been loaded, the map would show a very crude map, until the zoom level was changed.
I19790	If the OPC UA Server does not supply a security profile URI with the UserPolicyToken response to a GetEndpoints request the client failed to connect.

I19789	The ReadOnlyStation would prevent writes, but there was no way to easily revoke a set of privileges on a given workstation.
I19780	Random characters could be displayed on buttons when displayed for the first time on the VTScada Internet Client.
I19759	IO and Calculation Tag could show incorrect values when operating in synchronized calculation modes.
I19693	Redundant historian data could get logged after configuring a tag for logging.
I19058	The new Manage Privileges dialogue was hard to use at display resolution of 1366x768
I19019	VTScada Internet Client counts could be inconsistent between different servers.
I18564	The system could hang while starting up if a computer on the server list has excluded IP address(es).

VTScada version 12.0.12 - Released June 12, 2020

New Features

ID	Description
F1443	The PLC Alarm tag's config folder has been reorganized to improve usability.

Incidents Cleared

ID	Description
I19874	After adjusting an image's color using an expression and closing the Adjust Image dialog, the Properties dialog would go blank.
I19867	It was possible to try to create a Tag Widget without selecting a tag type.
I19865	The tool tip for the expression editor dialog button didn't translate.
I19863	On version 12, VTScada could crash if the site tag was deleted when viewing the Site Map page on VTScada Internet Client.
I19861	It was possible for the password in the JSON/XML driver to not be properly encrypted.
I19860	When moving between subordinate application pages, after modifying the security database, master application pages could fail to display and use excessive CPU.
I19854	Some widget panels had unnecessary padding around their controls. The OK button in the graphic's Properties dialog didn't work when a parameter was an expression and errors were detected.
I19852	The numbers on an Antique Meter's scale were not centered in relation to the meter's tick marks.
I19851	When opening the Panel for a DrawHDV, the Time Selection droplist was blank.
I19848	HDV GridView could display future time when paused.

I19846	Removed phrases AddWiz_CSCreatedUnderEval and UI_MapZoomLevelLabel which were duplicates of CSCreatedUsingEvalWarning and 2Far18NearLabel.
I19845	Popup windows would open centered on the monitor instead of over the appropriate application window when using multi-monitor configurations.
I19844	The Analog Bar and Indicator widget would allow any number at all in the Value Range, Trend Direction, and Reference Value fields.
I19842	PopupCloseOnPageClose would not work for parameterized page changes
I19837	When the name of an application was changed in the Application Configuration dialog, the Application Configuration dialog's window title did not update.
I19836	A page menu sub-menu would close unexpectedly if the mouse moved over a different main menu item on the way to selecting an item in the sub-menu.
I19835	Subordinate sites didn't open in master application's sites page if opened from site pin on the sites map. If a subordinate tag was filtered out but not the subordinate sites, the sites would fail to open from the masters application's sites page.
I19834	An OEM layer that was created from a RUN-only ChangeSet could get corrupted through synchronizing with another machine that has the OEM layer source files.
I19832	Some columns in the Alarm Page were not vertically centered when in double-height mode.
I19830	The Upgrade Phrase References process would hang if an OEM layer had the DoNotStart setting set to TRUE.
I19829	Filtering tags using a full parameter search was slower than necessary.
I19824	When an IO digital tag had a write address specified, its value wouldn't display in OPC clients.
I19810	User or realm filtering could cause some tags to incorrectly disappear from the browser tree.
I19805	When page content is placed over a stretched background image the content would appear in the wrong place with respect to the background image.
I19798	When the map was zoomed all the way out, duplicate tiles were displayed horizontally. Site pins were drawn on the leftmost edge instead of the more centered proper coordinates.
I19788	Digital alarms did not initially show the appended state message when the setpoint changed.
I19779	The Sparklines widget's value, alarm, and reference lines could be obscured by the widget's border.
I19768	The setpoint and value labels were sometimes inconsistent on the alarm page.

I19742	The VTScada Internet Client might not display properly the first time if the monitor on the server was smaller than the monitor on the client workstation.
I19725	Viewing the Reports page of a subordinate application via the master application showed tags from the master application.
I19589	The SchemaLookup table could be lost when the Historian tag was logging to a 3rd-party ODBC database.
I19534	The VTScada OPC Server reported unscaled range values as the IO tag's instrument range, and scaled values as it's EU range. It now reports the Expected range as the EU range, and the Display range as the Instrument range.
I19479	Trending a tag without logging configured would cause data to be logged every second, resulting in abnormally fast SystemHistorian storage space growth.

VTScada version 12.0.11 - Released May 28, 2020

New Features

| ID | Description |
| F1311 | The performance of Modicon and DNP3 drivers have been slightly improved. |

Incidents Cleared

ID	Description
I19843	HTTP client connections could fail in some circumstances.
I19838	The area search text was not retained properly in tag browser.
I19814	The Slippy Map failed to load when one or more sites had latitudes out of the legal range.
I19809	Menus for multi-line entry fields in tag configuration folders could only be opened by right-clicking on the title or the first line of the entry field.
I19807	When a site was added or removed the Sites page's sites list didn't always update.
I19806	Working in an application that's open on the secondary monitor, the Page Note Properties dialog would always open on the primary monitor.
I19801	When using the PLC Alarm Control compact view, right click context menus were not generated where expected.
I19792	If a master application is started after a subordinate application, alarms from the subordinate application might not have appeared in the master application.
I19773	When configuring a DNP3 driver tag, the "Station Address" field got green highlighted when "Master Address" was edited.

I19771	An ActiveX object would display oddly when drawn in a stretched window, e.g. the tiled page display. ActiveX objects are no longer displayed in a stretched window. Com objects would cause VTScada to hang if the EventSearchScope parameter was a variable that was invalid, this has been corrected.
I19770	If an Open/Save file dialogue (e.g. saving or opening a dump from Source Debugger) was open, Attempting to log a modem trace could save in the location navigated to by the dialogue or potentially crash VTScada.
I19766	The DNP3 driver forced the Message Fail Time floating-point parameter to an integer resulting in values between 0 and 1 being set to 0.
I19765	Automatic AD user import on login (AutoAddADusers) is now disabled when "Use Realm Delimiter" is configured. This would be the case when realms are used for login. AD accounts can still be used but must be manually imported and assigned a realm in the Security Manager dialogs.
I19747	The Sparklines widget wouldn't plot with the proper time span when the user's language was different from the language used when the widget was configured.
I19744	WinComboCtrl's changed their selection when the mouse was over them and user scrolled even when the control did not have the focus. This made it easy to inadvertently change settings, now WinComboCtrl's must be focused for the scroll wheel to take effect.
I19678	Page bitmap shows different size on live page and idea studio when it is stretched and maintains aspect ratio.
I19631	VTScada tag types that are configured to do periodic actions, such as Report, Totalizer, and Counter tags, could misbehave at daylight savings time changes.
I19547	Having multiple property dialogs open, updating override or parameter expression in one does not update the others unless the value changes.
I19537	The Sparklines widget could not use colors specified in a Style Settings tag. The Analog Bar & Indicator and Spider Graph widgets would only use Style Settings colors and could not be given custom colors.
I19354	A VTScada server would fail to reconnect and transmit data if the network failed during the transmission of a large RPC message. A session failure now cause the large RPC message control structure to be correctly reset and RPC communication will proceed as expected.
I19069	Rate-Of-Change Tag alarms would not trigger under certain server configurations.

VTScada version 12.0.10 - Released May 14, 2020

New Features

ID	Description
F1445	VTSIO drivers are no longer installed automatically, although VTSIOUpdate.exe is still included in the VTScada installation to allow manual installation of the drivers.
F1440	Users should be able to see the associated tag's info in the alarm lists for PLC alarm tags.
F1412	Sometimes an alarm notification voice call recipient will press a key on their phone which is not detected by the voice modem. This feature provides audible feedback indicating that the tone has been detected to make it easier to enter the correct digits.
F1375	VTScada now supports smart card based authentication using cards holding Active Directory certificates with Windows Security Integration mode to comply with 2 factor security requirements for both thick client and VIC users. Removing the card used to authenticate logs the user out.

Incidents Cleared

ID	Description
I19802	Numeric Calculation IO tag with IODevice set to PollDriver and no write address would trigger Polling each time the calculation value would change.
I19796	Password age didn't update for users without the Manager privilege when their passwords changed.
I19782	Checking "Show All Sites" on the sites page would sometimes show an incorrect zoom level which did not show all the sites.
I19778	In the tag browser when linking a tag to a widget, some tags would not show in the filtered list based on the widget tag types.
I19774	Modem EventLog widget could show incorrect event sequences if multiple logging events occured in rapid succession.
I19767	Alarms from subordinate applications didn't play a sound in master applications when the master application was viewed in a thin client.
I19757	The Source Debugger's Confirm Workspace Load dialog always opened on the primary monitor, even if the Source Debugger window was running on another monitor.
I19756	Auto Rewrite didn't work for several tag types
I19754	Redefining tag type could break widget links if VTScada was upgraded to version 12.
I19750	If a tag was named "History" and was a child of Analog Status, Digital Status, Calculation, History Statistics, Pump Status, or String IO tags, collision errors occurred when the tag was started.
I19723	Map tiles could fail to download after network restoration.
I19722	Driver Error Details reports for Transaction Logger did not translate error codes to error messages.
I19700	The name of the data table storing history of notebook reply reference links was not user friendly in a 3rd party database.

I19685	When a site is using Site Icon or Site Summary as the custom icon, clicking the icon on the map wouldn't open the site's details page.
I19681	Having no area defined in the alarm tag caused speech alarm to not play anything.
I19679	Change to Reference Line Value lost after switching tabs in Sparklines Properties dialog.
I19671	Tag Browser and Historical Data Viewer would fail to show labels for Digital Status tags and I/O and Calculations tags in 2-Bit Digital and Discrete mode.
I19652	When you entered an invalid expression into the Edit Text dialog, the compilation warning icon would overlap another control.
I19630	Description field of new alarm record logged to 3rd party DB was NULL in a post v12 app.
I19563	In the Idea Studio, the Tag Property and Parameter trees did not give access to the tags in a subordinate application from a Subordinate Application tag.
I19480	Some cell modems didn't work well with our SMSAppliance.
I19441	The Tag Browser was not able to search tag hierarchies using queries with backslash characters.
I19433	The tag browser was slower than necessary when Show disabled and Show children were checked and no filtering was applied.
I19388	The Idea Studio canvas for a resizable application had a black strip down the side if the Idea Studio was on a larger monitor and the Display Manager was on a smaller primary monitor.
I19318	VTScada could potentially crash on startup when certain Historian files were missing.
I19306	If a new alarms occurred while the roster was being notified of existing active alarms, the roster would restart and notify the roster, starting with the first contact, with both existing alarms (to contacts who had already been notified) and new alarms.
I19213	First attempt to draw a widget from the Tag Browser could fail on VTScada Internet Client.

VTScada version 12.0.09 - Released April 29, 2020

New Features

ID	Description
F1454	Site pages can now always be opened as in their own window by setting the "OpenSitesAsPopup" application setting to TRUE (1).
F1453	Default page, configuration, and activation translations have been added to the core product for the French language.
F1446	Enron Driver now supports 6-byte time/datestamps in history reads
F1444	Users have better feedback from the PLC Alarm Control widget, showing mismatches, confirmation dialogs, and security privileges.

Incidents Cleared

ID	Description
I19761	It could take a long time to load the alarm history on a MIC when realm filtering is enabled.
I19753	The english language file en.csv was out of case-sensitive alphabetical order in some spots.
I19745	When an application started, all digital and discrete IO tags logged alarm "Modify" events in the alarm history.
I19743	JSON driver now supports GZip and Deflate (ZLib) encoded data.
I19736	The IO tag's HighHighAlarmActive property was showing 1 when active even though the HighHighAlarmPriority was 2.
I19733	Map tiles could be improperly cropped when changing zoom level on the VTScada Internet Client and Anywhere Client when Map Area Limiting was enabled.
I19732	When using a language with incomplete translations, the Internet Client/Server Setup dialog could end up needing two rows which obstructed parts of the dialog.
I19726	Set Parameters for some menu item tags (widget mode) produced a squished runaway dialog.
I19720	Driver Error Detail Reports could indicate incorrect error messages.
I19719	If an alarm was acknowledged after alarm notification had begun, alarm notification would continue, even though the alarm had been acknowledged.
I19716	Alarm tags with an invalid Description parameter would not show up well in alarm notifications or speech. The tag's short name will now be used if the description is invalid.
I19715	When zooming in on a map in the Anywhere client, the browser would sometimes freeze up.
I19714	The Tool Tip widget did not allow complex text selection for the Title or contents of the tool tip.
I19708	Creation of an IO tag when an EquipmentType filter is specified caused a duplicate entry in the Equipment Type droplist in the IO tag ConfigFolder.
I19705	Enabling or Disabling a tag, could cause other tags in the tag browser to not be select-able by right clicking on them.
I19703	Printing alarms from the alarm page in the Anywhere client or VIC, would use the server's timezone rather than the Anywhere/VIC's timezone.
I19701	An alarm name filter in the Alarm Page or the Alarm Status tag could sometimes match incorrect alarms.
I19695	If a tag name was too long, the tool tip would be missing it's name from the widget tool tip.
I19689	In the Excel add-in's Connection panel, while editing an existing connection that had the "remember me" checkbox unchecked, toggling that checkbox during the edit process caused the username and password fields to disappear.

I19683	In the Excel Add-in, after running a query for the first time, the output location would still show the selected cell rather than the cell that the query is tied to.
I19665	When the system was busy, navigating around the tag tree in the Tag Browser would show an odd but partially correct list of names for a moment on transition.
I19656	Idea Studio canvas was not large enough to show the lowest 25 pixels of the page if its size was larger than the monitor.
I19639	On the VTScada Internet Client, hovering over some graphical elements changed the mouse cursor and moving the mouse at the same time caused the cursor to flicker.
I19608	Tags copied and pasted could not be named the same name as already existing disabled tags, and there was no tooltip message explaining the conflict error status.
I19587	The SiteDraw widget sometimes would not display external alarms correctly for the IO and Calculations tags. The Derived Flow Report wouldn't report data from the IO and Calculations tag whose EquipmentType was configured to Pump.
I19460	The Sites Page had navigational and visual issues. The UI didn't navigate to subordinate sites when the subordinate tag was filtered out or it was selected from a map pin. The Breadcrumb would become incorrect when a parent tag of the site or folder was updated e.g. a new help ID. The "Up Button" didn't update when tags where enabled/disabled or filtered out.
I19408	VTScada could crash when a subordinate application had legacy child tags started by StartTag.
I19397	The GE Series 90 driver could improperly interpret data for a small set of data.
I19383	There was no 1 pixel margin in the application manager's list at the top.
I19379	Phrases in VTScada Application Manager didn't fall back to the default language when the configured language didn't have a translation.
I19295	Failed to write strings to ROC devices.
I19286	The Time Span droplist on the HDV could go blank after selecting a new Time Per Record on the Grid View.
I19194	DNP3 driver could use excessive CPU if the MsgFailTime parameter was set to 0.
I19162	Transaction Logger tag communication statistics information would not be logged and could not be plotted properly.

VTScada version 12.0.08 - Released April 14, 2020

New Features

ID	Description

F1450	VTScada now handles most conflicting files changes on a file-by-file basis. For example, when two machines are merging conflicting changes to a page file, then the conflict resolution will only result in discarding one machine's changes to that one page, rather than discarding all changes made by that machine. The only times that all changes from one machine will be thrown out is when the merge produces a compilation error, or when there is a conflict in an application that was created without source files.
F1442	Users can now disable PLC alarm tag alarms via the right-click context menu.
F1436	An automatically unshelved active alarm always transitions to the unacknowledged alarm state. A manually unshelved active alarm transitions to the acknowledged alarm state unless configured not to. An unshelved normal alarm always transitions to the acknowledged alarm state.
F1433	SystemStyle tag now has default settings for Pump equipment values 1 and 0 (Running and Stopped).
F1425	Operator-level translations have been added to the core product for the French language.
F1421	We now allow the viewing of configuration folders for tags from subordinate applications via a master application.

Incidents Cleared

ID	Description
I19706	Rearmed alarms were not being notified.
I19698	The CIP driver would lose its configured port when converting a version 9 or earlier application.
I19692	VTScada could become slow and some Rosters stop reporting if an alarm tag is deleted while that alarm was being notified.
I19686	If you put a page note into text editing mode, but didn't actually change the text, then the note's Save button had no effect.
I19682	The I/O Multi-Text widget appeared in the wrong place in the widget palette
I19676	Selecting a font tag from the ribbon gallery resulted in a complicated Font() expression being applied to the graphic instead of a simple Font Tag reference.
I19672	When the tag browser in the Excel add-in was opened on a screen with lower resolution, a horizontal scrollbar would appear.
I19670	An alarm disable/enable event would sometimes be attributed to a user who did not perform the disable/enable action.
I19666	Some dialogs with radio buttons would cause a spike in CPU usage.
I19662	A user with Tag-specific write privilege but without the Application Control privilege (Control outputs) would appear to succeed in writing but the write would silently fail.
I19659	Tag Browser didn't show OnText and OffText for I/O and Calculations tags in 2-Bit Digital mode.

I19658	Pressing F1 didn't link to the expected help topic when pressed while configuring a droplist widget with its Add, Edit, or Copy dialog opened.
I19654	When editing the server lists tree in advanced mode, junction icon still exited after all the children of a node were deleted.
I19642	When analyzing a dump file in the Source Debugger, the titlebar showed a misleading title "Debug System Library" rather than showing the name of the selected application.
I19632	When "Weekly on" was selected on the Report tag's configuration trigger tab, the Day of the week selection box showed no text until it was clicked.
I19629	The analog bar widget was displaying a visual glitch for the low low alarm area, when the low alarm was disabled.
I19624	Style settings tag selection would read as "--Missing--" or "No tag selected" when, in-fact, it was defaulting to the SystemStyle tag.
I19621	Could not switch tabs in History Statistics config folder after editing the values in Data Period.
I19614	Trying to clone a ChangeSet made on a demo license on a machine with a development or run time license would not populate the application name or allow hitting next.
I19613	Stations's Configuration dialogue highlighted Map Icon widget selection when changes were made to latitude or longitude.
I19612	Pressing Enter while editing a page note on the VTScada Internet Client did not add a new line, but instead committed the edited text and halted text editing.
I19585	When primary and backup alarm servers fail over then resume normal operation, the Twilio URL could get stuck on the backup URL.
I19538	A black area could be seen when editing a page with the Idea Studio on VTScada Internet Client when either side panel was resized smaller.
I19513	The clear tag button in a tag widget's "Tag" section of the properties panel would clear the field, but would not unlink the widget from the tag.
I19488	Tag tree in Tag Browser didn't update properly after removing a node that wasn't shown in the tree.
I19481	The tag tree in Tag Browser didn't update properly after tags being enabled if the current level wasn't the parent tag.
I19380	A zoomed page or widget being edited in the Idea Studio running on the VTScada Internet Client might not be rendered on the canvas at the bottom.
I19376	Starting an application after changing the primary monitor with VTS running would use the size of the previous primary monitor for the application.
I19372	Various symptoms including PollingDriver hang and inappropriate failover.
I18432	The Config Folder for the Siemens S7 driver had graphical issues including misaligned controls

I16804	One of Data Scavenger's Tbox RTUs was returning exception code 0x84. The Modicon Driver showed the error code but did not display any error message.

VTScada version 12.0.07 - Released March 27, 2020

New Features

ID	Description
F1448	The Sparklines widget can now plot any number of alarm setpoints.
F1447	VTScada now has a new function, MarshalCredential(), to marshal credentials for use with WindowsLogon.
F1438	It is now possible to define custom alarm priority scaling in the PLC alarm tag.
F1437	Users can now integrate a PLC Alarm tag with the IO tag for high performance graphics.
F1435	Alarms can now be configured to automatically remove themselves from the Unacked list when they clear.
F1431	Performance of historian has been improved when reading records with text fields.
F1430	Users can now find the Selector Switch tag more easily in the Analogs or Digitals type groups.
F1429	New training simulator added to VTScada examples.
F1426	The NoSoftDriverFailure setting now defaults to 1 in new applications so that, when driver communication fails, it will not try to connect from the backup server, since in most configurations the backup server will encounter the same problem as the primary server. Switching to the backup in this case often just makes debugging the problem more difficult.
F1419	Performance of historian has been improved when writing records with text fields.
F1397	IO and Calculations Tags in string modes now can pad string with spaces before output.

Incidents Cleared

ID	Description
I19649	Grid View in Historical Data Viewer showed PhraseIDs for digital tags.
I19641	The Advanced Edit Properties Dialog's highlight bar was undersized.
I19636	String Droplist could not be used for IO tags in Analog mode. Renamed String Droplist as Droplist due to being updated to handle text and numeric values.
I19633	A folder widget would appear blank if the previously selected tab was deleted.
I19628	Selecting the standard Site Icon widget caused map icon to not display on the map.

I19627	A graphical artifact was present in the top left corner of the tag browser.
I19616	Transaction Logger tag would not log if the only children were I/O and Calculations tags.
I19609	Page notes may not have saved edited text when clicking on the Save button
I19607	A misleading warning about removing the Configure privilege appeared when changing the password of a logged in user who never had the privilege.
I19605	A window would briefly appear in the Windows status bar whenever a tag was modified with Idea Studio open.
I19604	When a Draw HDV widget is loaded, the contents of the legend where not displayed until some user action is taken, such as switching tags or choosing pens.
I19600	Pinned pages titles did not update when the language changed on the fly.
I19595	Analog bar and indicator widgets used a different method of setting style tags than other widgets.
I19594	Sparkline reference line did not allow using linked tag properties or page parameters.
I19593	The configuration dialog title didn't update after changing the tag name and hitting the Apply button.
I19590	Setpoint in Analog Bar and Indicator widgets could not use linked tag properties, page parameters, expressions, or numeric values.
I19588	Setpoint and Priority pointer contributor arrays may not have been updated properly when deleting contributors.
I19584	The Excel Add-in "Flip rows & columns" setting did not work or load data.
I19583	Output widgets would fail to display user output values in Mobile Internet Client.
I19582	Editing a menu item tag caused High CPU usage while the editing window was open.
I19581	A corrupt Historian schema file could cause VTScada to crash when the user tried to plot a tag in the HDV, look at PlotData, or open the Operators Notes page.
I19580	No alarms would show up in the Alarm Page if the System Alarm DB was filtered out by the Global Tag and Area Filtering dialog.
I19578	New widget's module name could be identical to a tag's short name.
I19576	The High Performance widgets folder was missing the Alarm Priority widgets.
I19573	The thumbnail palette opened and closed quickly when Go To Page or Go To Page (Popup) in the tag shortcut menu was clicked when the tag was drawn on only one page.
I19572	Tags in an HDV group would still display when filtered by "Global Tag & Area Filtering"

I19569	Messages sent to a VTScada Internet Client from the server's Internet Client Monitor, when the server and client are running on the same computer, would appear behind the client window in Windows 10.
I19568	Tag Browser was locking up after applying changes to pre-existing tags with illegal characters in the tag name.
I19566	The CIP driver import tags tool was not importing program specific tags.
I19564	Graphical elements on the ConfigFolder shift around when Apply is pressed.
I19562	Some changes to the IO tag alarms were not written to the events log.
I19559	POverride's optional output variable HighlightColor wasn't optional and would cause the high light to not show if not passed in.
I19556	VIC before version 12.0.03 displayed %R in window titles when connecting to a server with version 12.0.03 or higher.
I19553	The Excel add-in would have an empty tag browser when the user did not have the 'Parameter View' privilege.
I19551	Tag Browser grid could fail to display properly when the window was maximized before close.
I19542	Description of some child tags of the Grundfos MPC station displayed as a PhraseID in the Tag Browser.
I19527	Re-arranged Okay, Cancel and Apply button to match Microsoft Windows UI.
I19525	Resizing columns in Trace Viewer data source selection dialogue caused a scroll bar visual glitch if a scroll bar was present.
I19518	The SMS Appliance config folder might not show the modem list unless the workstation was selected and the config folder was closed and re-opened.
I19516	The alarm list for a Subordinate Application tag did not appear properly via View Alarms from the navigator menu, either on native pages of the subordinate application or if the tag was drawn on a page as part of the master application.
I19507	Some locales may prefer to use 24-hour time instead of 12-hour time when entering time range values.
I19506	VTScada's speech engine pronounced VTScada differently than the company's official pronunciation.
I19483	The Display Manager task bar would appear momentarily in the middle of a page when a user logged in or out.
I19482	Creating tags with names matching VTScada reserved words caused associated parts of VTScada to function incorrectly.
I19469	If a PhraseID appeared twice in a language CSV file, the phrase would fail to display in the application.
I19453	Tag name could be empty on tag export warning dialog making it hard to locate the tag in the tag files.
I19438	Queries to get tag lists required a case sensitive tag type parameter in some cases.

I19434	Filtering by tag group would take a long time with many subordinate applications.
I19431	In the Tag Browser, changing a filter caused the selected item in the side bar to be expanded.
I19430	The Map could load a 0-byte tile file from disk, which caused VTScada to crash.
I19422	Some VTScada tags and tools, such as SNMPAgent, Error Report, and HistorianViewer, reported the application time zone in the language that Windows was configured with.
I19405	The Anywhere Client could return incorrect time zone name when it was running on a different machine.
I19400	If you installed VTScada to multiple locations with the same final relative path (e.g. D:\Bob\VTScada vs C:\Sue\VTScada) it would always run from the first location installed.
I19393	Some Drivers error codes were missing from the documentation.
I19381	The Idea Studio on the VTScada Internet Client did not draw any text near the bottom of the screen.
I19368	When typing in a blank alarm search filter on the alarm page, hitting the clear button (X) wouldn't clear the input field.
I19365	The VTScada Internet Client could crash when communicating with an older server.
I19337	Redefining a tag type declared in an OEM layer could result in some invalid tag parameters being specified in the application's definition of the type, even though no changes had been made in the application.
I19335	Various tag-related actions like deleting and moving tags may have erroneously used the Realm Area Filtering of the logged-in user.
I19331	Parallel changes to accounts or settings on multiple machines could lead to duplicated records.
I19315	If an unsecured VIC server had a port number that didn't match the port number of any of the realms, and the realms were a mix of secured and unsecured, sometimes the VIC would hang attempting to establish a connection.
I19268	The Idea Studio could clip the edges of a page if they were slightly too big for the canvas area.
I19226	Alarm notification voice call couldn't return or control the status of IO tags. IO tags could select addresses from the Veeder Root driver as its output address, although the Veeder Root driver didn't accept writes.
I19207	Added placeholder text to SecurityManager Sign in dialog and various search fields.
I19057	Browsing to a tag's value was difficult in some OPC clients, so we have added a separate leaf node under each tag called Value.
I16461	Historian records written to the native storage type (FileDB) could fail to write string fields leading to corruption that would go undetected until later.

VTScada version 12.0.06 - Released February 26, 2020

New Features

ID	Description
F1423	Users can now configure alarms and read/write alarm status information from Allen Bradley PLCs using PLC alarm tags.
F1410	Users can now apply application-wide tag and area filters that affect lists of tags, alarms, sites, etc.

Incidents Cleared

ID	Description
I19544	Automated driver writes would fail if logged in user did not have Control Outputs privilege.
I19543	Tag properties (ConfigFolder) launched from the context menu of a widget did not display the same window title as when launched from within the tag browser.
I19533	The VTScada Excel add-in did not show the IO tag in the Tag Browser.
I19522	I/O Multi-Text widget panel wouldn't show the Vertical Alignment value after setting it with the ribbon in Idea Studio.
I19521	The I/O Multi-Text widget panel had vertical alignment control linked to horizontal alignment.
I19520	IO tag was not showing equipment labels in the Station Details widget
I19519	The Line Style and Draw as Step Plot parameters in the IO & Calculations tag's properties dialog indicated a parameter override if the IO tag was a child tag of a custom tag type when there was no parameter override.
I19500	Users were incorrectly able to configure a logging deadband in the properties dialog for IO and Calculations tags in digital and string modes.
I19498	The tag tree was sized incorrectly after minimizing the tag import selector.
I19491	In Source Debugger, hovering over a missing variable could lead to the wrong data showing in the tooltip.
I19490	When making HTTP connections, VTScada sometimes wouldn't identify itself properly with the User-Agent header.
I19467	When the ReadAddress and WriteAddress were different, the IO tag was automatically writing the value read.
I19458	Some ODBC SQL queries could fail after upgrade to 12 when not using standard timestamp filtering.
I19450	Rotary Control widgets in the I/O and Calculations folder failed to display when they were unlinked.
I19446	Under certain unusual circumstances, an alarm indicator for a site tag might not have indicated the correct alarm state.
I19443	The Tag Browser would remain open after signing out if the logged out user had access to it.

I19440	In Tag Browser, the text "There are no tags that match the current selection" could be oddly placed after the window was maximized.
I19436	The Tag Browser was doing unnecessary extra work at startup and that caused the intended selected tag to be cleared as well.
I19428	Site Details Page was displaying the tag's short name instead of the page title in the toolbar.
I19417	It was not possible to remove parameter overrides in Analog Status, Digital Status, or Pump Status tags.
I19413	When syncing a tag type to add children, the number of descendants didn't update upon completion.
I19399	Map on the Mobile Internet Client was using the old map source OpenStreetMaps rather than the new Carto maps.
I19390	Minimizing a pop up trend on the VIC would cause the splitter bar to close and the legend would not be showing after restoring the window.
I19385	Site Details pages configured as Always Popup would open as embedded rather than as a popup when the site was clicked in the Sites page.
I19382	Shelved alarms still indicated on widgets.
I19361	The confirmation message displayed when changing the value of an I/O and Calculation tag did not display defined labels in Style Settings tag.
I19357	New widget's module name could be identical to a tag's short name.
I19271	Alarm notifications for a cleared alarm could be resent multiple times.
I19243	The Shortcut and Navigator menus could open at a wrong place on the secondary monitor.
I18992	Adjusting settings using the basic application properties panel would wipe out workstation specific settings.
I17923	Human readable Phrase IDs caused translation problems in MultiLingual apps.

VTScada version 12.0.05 - Released February 6, 2020

New Features

ID	Description
F1420	Users can now modify multiple tags at the same time and an Apply button has been added so they can continue editing after applying changes.
F1417	TimeZone(2) and TimeZone(3) now report TimeZone names in English regardless of the language that Windows has been configured to use. This lets you use the output of these functions as input to ConvertTimeStamp.
F1416	The ability to select parameters and variables under Page parameters when editing with the VTScada Graphics Editor has been added.
F1415	Page and Widget Export/Import as well as Copy/Paste are now language aware.

| F1414 | Application Developers can now specify a tag parameter to be Binary in order to prevent the data from getting converted to a UTF8 byte string when moving to VTScada 12+. |
| F1354 | The WinEditCtrl function now supports placeholder text, which is gray text displayed in the edit control when it is empty. |

Incidents Cleared

ID	Description
I19485	Source debugger shrunk to size zero upon re-opening after minimizing its window.
I19484	Derived Flow Reports were not reporting flow data from station tags.
I19477	OPC driver failures caused other drivers to freeze.
I19464	Properties dialog could show OkLabel instead of OK
I19461	Reading an AB5Float from a Modbus Driver did not work while writing an AB5Float did work.
I19459	Unable to select descendant tags of Linked tag or tag parameters if they were defined at the root tag level.
I19457	You could not enter the single letter W in a text box widget.
I19452	External Historians could result in disk usage higher than required.
I19448	The tag tree in Tag Browser didn't update after deleting a root level tag or its child tag when Realm Area Filtering applied.
I19447	Digital Status read via Campbell Datalogger did not provide the correct value.
I19427	It was possible for the language export to miss the category field for some phrases.
I19425	Opening a trend window from a tag drawn on a popup page would result in the trend window staying in front of the original popup page even after plotting a tag drawn on a different page, and re-selecting the popup window.
I19424	The Map page failed to display if it was using the OpenStreetMap source.
I19421	IO tags could not be added to the FriendlyTagNameLookup table which is necessary when executing queries against an ODBC Historian.
I19420	IO tags from subordinate applications could not be plotted in the master app.
I19419	Alarm Status would fail to count alarms in tags with blank areas.
I19414	Phrase ID could be displayed when the "Show default language and ID when phrase lookup fails" option was unchecked.
I19411	VTScada could in rare circumstances crash when starting an app.
I19403	Work Station Status driver wouldn't show some values on non-English user locales or Windows installs.
I19401	Copyright was missing on the map.
I19334	An RPC service under application control could remain in an indeterminate state.

| I19316 | When moving a resizable window to a new monitor, the clear maximization box could be smaller than the available space. |
| I19234 | IO tag could refresh twice at startup if another thread changed its parameter. |

VTScada version 12.0.04 - Released January 16, 2020

Incidents Cleared

ID	Description
I19410	Cannot store or access historical data at the root level of a drive.
I19391	Multiwrite tag did not work with new IO tag for strings.
I19386	VTScada could fail to write through a driver tag on another server if the tag's Unique ID starts with a period.
I19377	When you opened a custom tag's Properties dialog by right clicking on a widget linked to that tag and selecting Properties, the resulting Properties window had no title.
I19373	IO and Calculations tags were not able to be linked to the opacity of a widget when Parameter was selected in the ParameterEdit menu.
I19370	A master application may not be able to see all subordinate tags when filtering based on type.
I19369	The Tool Group Button on the ExpressionTool editor window was not positioned correctly.
I19367	pDropList was case sensitive.
I19366	VTScada could crash when importing an image into a Menu Item tag.
I19363	A plot in an embedded site details page would not show time cursor or value windows properly
I19360	Title of String Droplist controls were displayed as a PhraseIDs
I19359	The start/stop icons in the Application Manager were being squished vertically by 1 pixel.
I19356	When using the tag picker in our expression editor, the tag browser always appeared in English even when we were set to use another language.
I19355	A user without "Manage Tag Types" but with "Modify Tags" privileges could redefine a custom tag type by renaming one of the child tags.
I19353	The IO tag with a write address would do two writes to the same address, within seconds of one another.
I19350	WetWell Pump MenuItem tags existed but those images have been deleted.
I19348	The Display Manager setting DispMgrTitleBorder was not in Settings.Dynamic.
I19333	The tools in an application's titlebar and taskbar could not be configured dynamically and required a restart.

I19330	VTScada permitted the creation of tag types with very long names that could not be used as Excel sheet names, making Excel exports of tags of those types harder to deal with.
I19328	Sparklines Widget would show some alarm setpoints but not all for the attached tag. Only constant values were displayed properly.
I19327	The top line of the Sign in dropdown would not line up with the button width after changing languages
I19323	When you added a page note to a windowed page, the Scope selection in the Page Note Properties dialog could be ignored.
I19321	When creating a group from the Historical Data Viewer's tag selector, if you hit OK on the Save Group dialog without having entered a name, then the Save Group button would become disabled.
I19304	Calling PrtScrn in the Anywhere Client would hang the Anywhere Client.
I19303	App may remain signed in when running VTScada as Windows service after signing in to the application configuration dialog.
I19302	Automated parameter changes made by tag properties dialogs may not have been stored for type-derived tags.
I19291	The ROC driver did not invalidate tag data on communication errors when the Hold setting was disabled.
I19284	If you switched Data Modes on the Grid view when the HDV was paused, it would not refresh correctly and appear to be using the wrong Time Per Record.
I19246	Non 'Double' ASDU Types values were being incorrectly incremented by the IEC Driver.
I19230	Newly created IO tags would not default to the filtering applied in the tag browser.
I19201	Using the NetworkValues\Update calls could update variables that weren't declared as NetworkValues.
I19094	A VTScada Internet Client shortcut used with an application with a fixed window size always opened the client with the size it used at the time the shortcut was created, rather than the fixed size according to the application's current configuration.
I19085	The "Included" label in the List Manager appeared compressed because the column width was too small.
I18824	UseServerTimeZoneLabel included a false "(No DST)" indication
I18050	Closing a maximized Source Debugger window would cause the next instance to be opened non-maximized, and with undesirable position and sizing.
I17605	If you configured a folder widget to draw a Tag Widget, select a tag, then switched to drawing a non-tag Widget, and then back to Tag Widget again, the tag would still appear in the selector but the Select Widget button would be grayed out.
I17259	Diff viewer splitter bar would move with window resizing and column widths were not retained after closing the diff viewer window.

VTScada version 12.0.03 - Released December 06, 2019

Incidents Cleared

ID	Description
I19345	BACnet drivers could not communicate in an application based off an OEM layer or the Legacy VTScada Layer.
I19326	Unable to select a tag for tag parameters if the user was not viewing VTScada in English.
I19309	A master application could fail to see all subordinate tags if Realm Area Filtering was enabled on the subordinate application at the time the master application was started or the subordinate application was added to the master application.
I19300	Custom tag types with type names longer than 31 characters exported to Excel, failed to be imported causing existing tags of that type to be deleted.
I19299	Some map download settings were missing in the setup.new file.
I19298	It is difficult to download the whole map region defined by an area limit.
I19296	If Use tag scaling was set in Sparkline Properties this would be cleared by reopening the widget properties to the scaling tab.
I19293	Removed all SHA1 code signing artefacts from the build and install process
I19290	The Manage Privileges dialog wouldn't show a title when creating a new user or a role without specifying a name.
I19289	The Restart Required dialog title was not translatable.
I19288	The Source Debugger's execution history would show <UNKNOWN> as the module name for any script statements in a state-transitioning script.
I19285	Alarm Priority Filter has "or higher" label applied in the filter bar when the "Or higher priority" option was not checked. It went away when this option was checked.
I19283	Value attribute markers and data note icons could display in wrong cells in the Historical Data Viewer's Grid view.
I19282	If you specified the start time and end time in a SQL query using TPP, and the data was not available at the start time, the VTScada ODBC Driver would return data from the first timestamp when the data was available rather than the start time you provided.
I19277	VStatus option 36 returned random values for a VTScada Internet Client.
I19276	A roster tag event appeared in the event log when Twilio was unable to provision, that had an empty description.
I19275	The linear legend does not display properly when switching pages
I19272	User was unable to go back and correct a mistyped username or realm during the new sign-in process.

I19270	If an un-optimized tag expression was initially valid then immediately became invalid, the tag parameter could remain with the initial, out-of-date valid value.
I19269	If the source debugger was last open on monitor with a greater horizontal size than the current monitor, the bottom pane with variables and break points, would be missing.
I19265	Windows running on a thin client didn't reflect their titles, making it hard to differentiate from the one running on the local machine.
I19263	CommLine widget did not display error color when the error code was negative.
I19260	Historical Data Viewer failed to display empty notes in grid view.
I19259	The Languages panel in Application Configuration dialog ignored changes without asking when you leave the panel.
I19245	You had to wait for an import to finish before you could queue up an application for starting.
I19239	Passing VStatus() as a width or height parameter to SizeWindow would cause SizeWindow to continuously execute.
I19235	It was not possible to invalidate a valid calculation value of an IO tag.
I19214	In certain modes the VTScada add-in for Excel would return data from beyond the requested time range.
I19202	If you had a VTScada Internet Client window maximized on one monitor and dragged it to another monitor, it would flicker to a larger size as it crossed from one monitor to the next.
I19192	The slides displayed by the installer progress dialog were distorted.
I19190	The Save and Settings dialogs in the Profiler, the Profiler toolbar on the Source Debugger summary page, and the Filter Options bevel in the Execution History section of the Source Debugger were not aware of day/night mode.
I19164	Tag Parameters configurable using a Checkbox could end up creating unintended child tag parameter overrides.
I19137	The sites page could be resized causing the displayed station's graphics to be squished and illegible.
I19126	No error was generated if you synchronized a tag type from the Manage Types panel but selected a different type database.
I19121	Manual Test dialogs would always be on top and cause graphical anomalies in some situations.
I19117	The Application List in the VTScada Application Manager did not scroll all the way to the bottom after adding a new application.
I19093	The Well details in the station details page would never show a RED pump to indicate a fault.
I19066	VTScada could crash when debugging an object running on a VTScada Internet Client that uses an ActiveX control.
I19047	On the VTScada Internet Client, when you resized a window containing any number of DropLists, all of them could become highlighted.

I18794	If you imported the Accounts.dynamic from one application into another, then the application became unsecured until you restarted the VTScada Application Manager, at which point the application was secured using the accounts in the imported file.
I18767	The selected item bar in the Tree control on the tag browser was being greyed out when most things were selected.
I18166	VTScada was slow to generate large lists of tags in the tag selector.
I11262	Passing a malformed/corrupt stream to UnPack could cause severe memory spikes and potentially crash VTScada.

VTScada version 12.0.02 - Released November 15, 2019

New Features

| ID | Description |
| F1402 | The List Manager can now sort the app list alphabetically. |

Incidents Cleared

ID	Description
I19264	The Pump Control widget was showing the tag module name instead of units for MultiSmart Pump current.
I19254	The "Sign in" button on the Anywhere Client and VIC landing page initially displayed "Login" before changing to "Sign in".
I19252	The "Current Value" column on the Alarm Page would sometimes show the wrong value for Alarm tags that use an expression rather than a tag for their trigger value.
I19242	After exporting tags to Excel and changing their descriptions in one language, the links to the descriptions were lost in the other language.
I19237	Renaming a list in the VAM would cause the list to be re-ordered and placed last of all lists.
I19236	When a list in the VAM's List Manager was renamed, you couldn't rename it a subsequent time without closing the List Manager first.
I19228	The style settings tag was not properly assigning style settings to IO tags with equipment types.
I19218	The VAM List Manager didn't move, delete, or cancel new lists properly.
I19211	When drawing a Selector Switch, the available widgets at the top level of the pallet did not include the Selector Switch widget.
I19178	Alarm History List printout was missing the Workstation column.
I19163	When you open a config folder for a child tag that has a parameter overridden to an expression, that expression does not show up in the parameter's tooltip.
I19147	Navigator menu and tooltip were not showing for the CIPENIPControl widget.
I19123	The selected property wasn't selected after a filter was applied in the Edit Properties panel in Application Configuration dialog.

I19116	DriverMUX does not set its Ready flag properly which may have caused some writes to fail.
I19112	Loading workspace did not always open to correct source file in Source Debugger.
I19111	Double-clicking an entry in execution history did not select the correct line for dump files.
I19110	The Drivers list in Trace Viewer failed to show the driver module name when the DrawLabel was missing.
I19091	The Sites Page splitter bar could have disappeared behind the map when leaving "Compact mode"
I19089	Preforming an AckAll from Firefox mobile would freeze the anywhere client and cause high CPU usage on the server.
I19076	New applications had the obsolete setting, DriverRPCOptimization.
I19037	The idea Studio's zoom slider control did not work when clicking the slider bar to jump to a zoom level.
I18944	A fixed sized window could become permanently dynamically resizable if its virtual width/height parameters are set to zero after it's been displayed.
I18013	Filtering on alarm history was slower when there were a lot of historical records

VTScada version 12.0.01 - Released November 03, 2019

New Features

ID	Description
F1407	The installer should show whether a key includes the license for the Idea Studio on the VIC.
F1405	Now the legacy I/O and Calculation tag types can be found in the "Legacy I/O and Calculations" group.
F1401	The sign in dialog in the VTScada Application Manager now reappears after the sign in attempt fails.

Incidents Cleared

ID	Description
I19224	A pre-12.0 VTScada Internet Client connected to a 12.0 server can hang when a window is maximized, and can cause high CPU on the server under that circumstance.
I19197	A malformed VIC/Anywhere Client URL could cause a large memory spike after a successful login, possibly leading to a crash.
I19196	Attempting to draw a widget from the Tag Browser can appear not to work if the Idea Studio wasn't already open when Draw was selected in the Tag Browser.
I19195	New IO tag did not have a means in its configuration folder to generate alarms on state change (i.e. alarm whenever there is a value change of any sort).

I19189	Graphics in the Idea Studio on the VTScada Internet Client could be out-of-alignment if the Idea Studio was opened maximized.
I19187	A progress bar would appear on top of text in the Security Manager Admin Settings window when disabling WSI.
I19184	When a new client connected, the Page Name and Page Info of existing clients in the Internet Client Monitor went blank.
I19182	High Performance Analog bar could cause high CPU usage in some situations.
I19174	IO tags were not supported by the Transaction Logger tag.
I19172	The 11.5.05 version of the VTScada Internet Client could not connect to a version 12.0 VTScada server.
I19157	In the Excel add-in, when using a Previous Week time range that starts any day other than Sunday, illegitimate future data may have been reported.
I19153	Page notes could miss modification messages in the tooltip.
I19146	Some Widgets were not defaulting their DisableNavigation and DisableTooltip Parameters to FALSE as expected
I19144	When resizing the Test Framework with failing results displayed, some lines may have been missing in the grid.
I19138	The Internet Client Monitor didn't show anything under the "Client Name" and "Username" columns for thin client connections to script applications.
I19130	The license summary page of the installer no longer shows "ODBC Server" as a component.
I19120	Tag Browser draw button would not launch PickObject dialog unless the IdeaStudio is open
I19118	Title caption was not displayed in the Import New Files dialog.
I19114	Applications created before VTScada 11.2 could not create custom tag types in the tag browser.
I19109	Some Source Debugger dialogs had black text when in "Night Mode".
I19107	Connecting to VTScada 12.0.0.0 from the Anywhere Client would show a white screen.
I19104	GetPageInfo fails to get BGImage information for non-instances
I19100	The Application Manager was showing the VTScada version as "12.0." instead of "12.0.00".
I19099	ParameterEdit modules were not setting up correctly and often displayed the incorrect editing module for the current parameter value type.
I19097	When upgrading from VTScada 11.3.22 to 11.3.28, TCP Ports continuously attempt to open connections.
I19090	Compiling an application while connected via the VIC or Internet client did not work
I19075	The Idea Studio on the VTScada Internet Client would not display the page or widget being edited if the client's main window was minimized.

I19071	Once you had chosen a color for an IO tag you could not invalidate it and go back to allowing the HDV, PlotData, and Sparklines to auto-choose colors.
I19053	When logging into the app from the Edit Security panel of the Application Configuration dialog, the OK button was out of alignment.
I19051	After drawing an image from the palette in the Idea Studio, some Idea Studio image configuration dialogs would modify the image as soon as the dialog was opened, such as the custom Brightness dialog.
I19046	The button to test the VIC URL didn't work when the Application Manager was accessed via the VIC.
I18723	Several phrases on the VAM were not translating as expected.
I18682	Totalizer tag could cause high load on some systems where many were in use.
I18643	Some DriverMUX-related RPC services were not being unregistered when subordinate tags were removed.
I18511	The Reports Page and Report Tag List Widget were slow to load in apps with many tags.
I18473	On the Operator Notes page, notes that have comments would show a "whole thread" link but should have shown a link that says how many comments there were.
I18047	When expanding profile results displayed in the Flip Tree mode, the tree wouldn't show all callers of the expanded statements.

VTScada version 12.0.00 - Released October 19, 2019

New Features

ID	Description
F1396	Ensure the version number is correct throughout VTS as well as the Copyright date range.
F1395	Add ability to add settings for Default Equipment Types.
F1394	New VTScada development licenses now have usage of the Idea Studio on the VTScada Internet Client enabled by default.
F1392	Implemented the DigsAfterDecimal parameter of the IO tag in the tag browser and all widgets with a configurable number of digits after the decimal.
F1391	Enhanced tag filtering and sorting have been added to the TagList widget to handle the universal IO tag.
F1390	Now legacy I/O tag types are only visible from the All Tag Types list when adding a new tag.
F1388	Enhanced RPCManager Send to deliver a message to the remote service object using ModContext of "." rather than the full scope path.
F1387	Miscellaneous follow-on features and bug fixes to the Universal IO tag.

F1385	This feature adds a setting, NotificationErrorDelay, which specifies the number of seconds to delay after an alarm notification failure or error has occurred for the current contact in a roster before attempting to notify the next contact in the roster.
F1384	The Grundfos CU36X Controller is now labelled as Grundfos Dedicated Controls.
F1383	Added error message when applying wrong type of snapshot/changeset to an application.
F1382	Added support for OEM logos on the Well Details page for manufacturer custom tags in VTS.
F1380	The Tag Browser now can easily manage tags when Realm Area Filtering applies.
F1366	The VTScada ODBC driver now supports the REST style interface.
F1362	Added High Performance Analog widgets: Analog Bar & Indicator and Spider Graph
F1361	BACnet driver integrated into VTScada.
F1359	It will be possible to import tags from PLCs directly. Currently supported is the Allen Bradley CIP driver.
F1355	Improved the look of the UI for editing page notes
F1350	A simple line plot that displays the live data trend of a tag's value over a specified time interval. Alarm setpoints and the tag's expected value range can optionally be displayed. Compatible with high performance HMI.
F1348	Added support for redundant Motorola IP Gateways to the Motorola IP Gateway driver.
F1345	Updated OPC Core Components installed by VTScada to the latest release from the OPC Foundation
F1339	Pop-ups and dialogs now open on the same monitor as the window that invoked them.
F1332	Performance enhancements for the VTScada driver system.
F1328	Added a new tag for Grundfos Booster Pump Controllers.
F1323	Added a driver to allow access to data on OPC UA Servers
F1321	Veeder Root Driver added with command i201 implemented.
F1319	VTScada provides an MQTT Subscribing Client Driver.
F1307	Users now can choose to exclude from tag exports all automatically-generated tags that have not been changed.
F1292	Replaced numerous types of I/O tags with one universal I/O tag.
F1274	This feature defaults the VTScada DDE Server functionality to "off". The DDE server can be turned back on with a command line switch.
F1261	Added ability to get memory address of a variable from the Source Debugger.
F1153	A VTScada add-in is now available for Excel.
F1082	The VTScada Internet Client (VIC) now supports configuration using the Idea Studio.

F1054	Adding a new system privilege, Control Outputs, to allow output (write/control) actions for tags without requiring security to be added on a tag-by-tag basis.

Incidents Cleared

ID	Description
I19082	An inaccurate term "Deleted User" has been relabelled "Unknown user" in the event log.
I19081	The terms "logged on" and "logged out" have been replaced with "signed in" and "signed out".
I19068	If you signed into VTScada from the Sign In button in the titlebar and entered an incorrect password, no record of that failed login was added to the alarm and event history.
I19062	VAM window title didn't show run time restriction for OEM licenses.
I19055	The realm field couldn't be edited unless an incorrect username/password was entered on VIC.
I19052	When switching realms via a logged-off thin client session, if you enter a username using the user realm delimiter, then this new username is presented prepended with the last realm name.
I19050	The Grundfos Dedicated Controls and MPE SC config folders became unresponsive the first time you selected a line in the Auxiliary DI tab.
I19032	The deprecated AlarmManager\Event() API didn't put the Message value from the alarm object into the Description field except when the object was registered.
I19030	Meter 1 and Meter 2 did not display a needle when viewed in the Anywhere client.
I19023	Selector Switch tag was syncing by the ValueSyncService, which could be improved to use the NetworkValues service.
I19022	In the Operator Notes it was difficult to identify which notebook belonged to a master app vs a subordinate app for notebooks of the same name such as system notebooks.
I19021	The embedded Sign in dialog was always on top of all other windows. Non-VTScada windows could come between it and the title bar.
I19018	DotMatrixNumeric and LEDNumeric backgrounds may not have matched up with lit segments
I19016	Sometimes modifying or copying an account, removing all its roles then adding new roles or privileges before applying results in a bad parameter error message and discarding of the changes.
I19015	If the top GUITransform in a call tree was an identity transform, i.e. resulted in no change to the graphical elements being transformed, then a GUIText called with option 2 under that GUITransform would not be transformed (i.e. the identity transform would be applied).
I19014	When viewing a subordinate application page from a master application, the background image in the subordinate application was not displayed.

I19011	Alarm lists on the Alarm Page were displaying the machine ID, a hexadecimal number, instead of the workstation name in the "Workstation" column for some workstations, when viewed from a master application, if the workstation in question was one on which a subordinate application ran but the master application did not.
I19010	Casting a minus symbol to numeric type would return zero.
I19006	Exporting of custom tag types would show PhraseIDs for the Descriptions in the excel sheet.
I19005	The Idea Studio ribbon button for modifying a widget's title was labelled "Page Title".
I18999	The AlarmWidgetsShowUnackedNormalAlarm setting was difficult to discover and use, resulting in calls to technical support.
I18995	Deleting a secured application via the Internet Client or VIC didn't show a logon dialog when it should have.
I18993	Folder Widgets wouldn't display tab when there was only one.
I18990	The Operator Log was recording an invalid "from" value when The "Set Value Button" widget was clicked. It shouldn't have been recording a "from" value at all.
I18989	The checkbox graphics used in the TraceViewer driver selection tree did not match those used elsewhere in the product.
I18986	Tabbing did not work on the logon dialog in VIC sessions.
I18984	A SQL query that tries to order by a column that isn't being requested in SELECT, used to result in an error.
I18978	VTS.template and Script.template had the wrong ChangeSet type. They should have type 2 (template) but were created as type 1 (snapshot).
I18973	VAM did not show Tags Used with comma separating the thousands
I18968	The new VAM script application showed up as "VTSApplicationManager" rather which was not on-brand and had no spacing.
I18963	A REST query would fail when using a URL that was not in the VIC server list, even if that URL pointed at the VIC server.
I18962	An I/O tag detached from the DataRadioDriver would still receive new data from the driver.
I18961	Descriptions displayed for the Security Roles were only ever displayed in English.
I18958	In rare cases it was possible for a service to have no server.
I18957	If you have only one Test in your application manager running said test might make the "Tests" list reappear after having hidden it.
I18955	Double clicking an application in the VAM too far to the right-of-centre activated one of the hidden buttons.
I18953	In the Tag Browser, tags that were disabled or deleted weren't removed from the clipboard.
I18951	Modem Status Properties Panel did not fully translate when user switched to another language.

I18945	Adding privileges to a user for a script application didn't show all privileges available or possibly showed none of them.
I18942	The last dots of the ellipsis of the error dialog could be cut off.
I18940	Trigger tags would cause high CPU load.
I18938	Some IdeaStudio dialogs were not updating properly on language changes.
I18936	Unnecessary VLX files appeared in an Application's Retained files folder when Source Debugger Watch Expressions where used, which caused temporary folders to fail to be deleted.
I18935	Exiting VTScada, after securing the VTSApplicationManager application, required a valid login or the exit process would fail to complete properly and would not allow subsequent attempts.
I18934	The LED Numeric widget didn't flash a calculation tag alarm was unacked.
I18926	Error dialogs would take a long time to display very long text.
I18923	Opening more than one Parameter Edit/Add dialog would prevent the others from closing.
I18921	The SMS Appliance tag didn't reset when a response was missing.
I18919	Entering text longer than 1024 characters in VTScada would produce an error message. The resulting error dialog was very slow to display.
I18918	VTScada crashed on shutdown after examining a socket stream in the Source Debugger.
I18916	The phrase droplist would not automatically refresh its entries if the data array changed.
I18915	For long phrases, some labels in the TagList Widget Filter/Sort and TableLayout panels would overlap.
I18914	Tag Address Error didn't have a help topic.
I18908	When opening a popup page for a Grundfos Dedicated Controls system, the WriteLock widget on the station summary would not scale properly.
I18904	VTScada actions and errors were logged using different timestamp format.
I18903	Using different addresses to access data in subordinates of a DriverMUX was not working for Analog Status and Digital Status tags.
I18899	Some tag descriptions were showing a Phrase ID after importing.
I18898	Attempting to multi-select tag types for a page parameter in the "Manage" dialog for managing page and widget parameters from the "Page Properties" tab in the Idea Studio did not function correctly.
I18897	Some drivers were not failing over.
I18894	When a PhraseDroplist is shown, its entries were ordered unexpectedly
I18891	Several Idea Studio dialogs did not sort lists of tag types or update tag selections when the language changed.
I18890	Water Graphic was not displaying in AnywhereClient on Edge.

I18885	The SQL tag parameter tables returned a dictionary of phrase parameters rather than the translated string when retrieving DisplayAddress.
I18883	Folder widget's "Unique Key" field was being converted to a Phrase ID
I18881	When starting up a new Context or GE tag, the config folders would behave as if certain parameters have new values without the user making any changes.
I18880	Device driver ByteOrder subroutine could be called with DTypeSpec suffix still present on the address.
I18878	When a JSON/XML Driver tag was part of a custom type, changing the password field wouldn't trigger a refresh, thus keeping the parameter still unchanged.
I18877	Multismart Pump Energy kWh MP tag wasn't loading from the XML file
I18876	VTScada could crash when stopping an application with an active thin client connection.
I18873	The Tesco Address Assist error dialog would show a PhraseID rather than error message.
I18872	PPhraseDroplist elements disappeared when the language is changed.
I18871	Tag type module names, rather than their labels, were shown in tag browsers with specified groups/types.
I18865	After incorrect password entry the sign-in dialog would not advance from the username to the password when Enter was pressed.
I18856	Some driver's Address Assist button labels were non-translatable.
I18851	Float switches did not properly scale on the well details page.
I18850	When you expanded a node in the Diff Viewer a line could extend from the bottom of the box that you just clicked, leading nowhere.
I18845	When no theme is defined, the Sign In button would not work.
I18840	Text type parameters may fail to upgrade when moving to 11.5
I18839	The Edit Text dialog could only be shrunk, causing it to get stuck at the smallest size.
I18827	The description for the Well High Level Alarm tag in the station tags had the parent's description too
I18822	IdeaStudio would freeze when setting the drawing context of a custom widget to a tag in a subordinate application.
I18821	A Menu Item config folder in a master application would show a PhraseID for a subordinate Page title.
I18820	GetPhrase and similar functions, when given a ParmPhrase structure with an Invalid parameter, would return the ParmPhrase structure itself rather than Invalid, which was inconsistent with GetParmPhrase.
I18819	RefreshReady flag for a device driver could get stuck at FALSE when every read was removed on a client that later became the server.
I18816	Removed subordinate pages from Realm Display Setup and First page at start up.
I18812	Deleting a subordinate application's page menu tag under the master application's page menu tag tree caused an error dialog to appear.

I18807	Drawing a Gridlist without a title, and without a callback module for drawing, would cause the Gridlist to be blank.
I18804	If a customer pressed F1 while viewing the CIP/ENIP address assist dialog, the wrong topic would open.
I18797	Widgets displaying alarm ranges for analogs were not handling alarm setpoints correctly when set as an expression
I18782	Retrieving the list of tags at the root level via the SQL interface was slower than expected and could return wrong results when multiple ParentTag values were specified in query.
I18780	In order to allow a particular user account to remain signed-in indefinitely, the sign out period had to be set to 0 minutes. There is now a checkbox to set this.
I18777	You could pass a master application's tag into a subordinate application's page as a parameter, producing unpredictable behavior.
I18766	When no tags were visible in the tag browser, it was not showing the intended message.
I18730	Config folders could freeze when setting an expression in the Area/Server List drop lists.
I18686	UDP ports showed the local port instead of the remote port in the Tag Browser.
I18683	Linked widgets could be unlinked when their linked tags were moved between types.
I18662	Windows could get a strip of black pixels towards the bottom of their left edge after being maximized.
I18649	Improved performance loading some user displays.
I18639	From the HDV page an empty note could appear to have been added.
I18513	Attempts to get the IP address of a client making an RPC subroutine call could fail in some circumstances.
I18479	The VTScada ODBC driver was unable to connect when using an IPv6 address.
I18455	When the default language in an application was different from the language in VAM, the logon dialog launched by Import File Changes showed VAM's language, rather than the application's language.
I18311	The DNP3 profile document we ship with VTScada in VTScada\Examples\VTS-DNP3-DeviceProfile.pdf is based on an old template and is missing some of the current features of our DNP3 driver.
I18180	The Source Debugger did case-sensitive sorting of the modules list.
I18156	Tags using ValueSyncService like History Statistics tag and Totalizer tag might have had different values on backup server.
I17832	Application window size in application configuration could be set to illegal values resulting in application not displaying.
I17263	The String Droplist widget's properties dialog had some alignment issues.
I16245	An input tag could briefly receive data from prior driver after changing driver.

| I15998 | Tags with mistakenly configured with the same read address twice could remove both just one was removed. |
| I15051 | Drivers on a client machine could fail to map onto server data due to differences in VTSGetAddr results. |

VTScada version 11.5.05 - Released October 18, 2019

Incidents Cleared

ID	Description
I19029	You could be unable to logon to applications remotely from a thin client.
I19009	Several UI elements were unusable on the Anywhere client viewed with Chrome, after Chrome update 77.0.3865.90.
I19000	In Historical Data Viewer's Plot view, data value labels failed to display valid values.
I18970	Subordinate applications could lose their custom tags when a common OEM layer to the master application had a custom tag type updated.
I18929	VTScada, when running as a service, didn't auto start any applications.
I18913	When browsing subordinate application pages from a master application's Page Menu in a thin client, the menu items would appear blank and the server's VTScada CPU usage would consume a full logical processor.
I18833	CSV Import didn't work if the tag whose history was being imported specified a historian tag under a context that wasn't the root context.

VTScada version 11.5.04 - Released July 25, 2019

New Features

ID	Description
F1379	The Parms_* SQL tables now have a HasGrandchildren field which is true if the tag has any grandchildren and false otherwise.
F1377	When a master application is viewing a subordinate application page, it will now see notes created in the subordinate application, and can now add notes that will be visible on the subordinate application.
F1374	Now it's possible to query historical data from an ODBC table logged in ODBCSingleTable mode using a single SQL query.
F1372	The "Custom Installation" license flag is now displayed in both the About box and the platform information.
F1358	Adds the capability of shelving and unshelving multiple alarms in an alarm list.
F1349	Now there is a new historian ODBC database option supporting using a single table to store data for all tags that have same schema.
F1338	VTScada now has a REST interface for SQL queries.
F1336	A new function, JSONEncode, has been added to encode a VTScada value to JSON format.

F1320	Overall improvements to the SecurityManager Look and Feel
F1313	The graphics on the Application manager have been updated.
F1301	A new station tag for Grundfos CU36X series controllers was added.

Incidents Cleared

ID	Description
I18817	Linking a page button in a master application to a page in a subordinate application showed the page name in the selection dialog without being decorated with the subordinate application name.
I18806	SNMP driver could get stuck in an infinite loop continuously requesting the UDP port to connect even when the port is in Error.
I18803	A pop-up page from a subordinate application would be blank on the master application when "Stretch contents of page to fit available area" was configured on the master application
I18799	When given an Invalid value PPhraseDroplist would always add multiple empty entries to the displayed list.
I18796	The checkbox graphics used in the test framework tree did not match those used elsewhere in the product.
I18791	Config folders would freeze after cancelling Tesco AddressAssist dialog
I18790	SMS text message could miss whitespaces when there were multiple subscribers.
I18779	Accessing a subordinate application trend group from an HDV Button or HDV Hotbox widget drawn on a subordinate application's page did not work from the master application.
I18771	The language selector would show up in some security dialogs in unilingual apps.
I18769	If an Alarm Database tag was started or stopped while the Alarm Database droplist on the Alarms page was open, the droplist would not update.
I18762	VTS Internet Client Monitor was displaying the PhraseIDs for the page names.
I18751	Alarm Database Groups from a subordinate application were not shown on the Alarm Database droplist on the alarm page for a master application.
I18750	Systems with a large number of drivers could be slow to synchronize.
I18746	Overridden (branded) splash images were being cropped by 1 pixel on the right and bottom
I18745	Pinned subordinate page taskbar shortcuts could become stacked when the subordinate app was stopped.
I18743	Domain accounts weren't cleaned up when the WSI mode was disabled. The Dual Accounts Warning dialog appeared multiple times unnecessarily.
I18739	When starting the Anywhere Client, entering a URL with a non-default port number caused the Anywhere Client to fail to start.

I18733	Context tags set with Site List Display set to Automatic behaved differently after upgrade to 11.5
I18726	If a PageMenu Page had Hide Recent Pages, Hide Labels, or Hide Folder Path, enabled, opening that page in a popup caused the main window to have those setting(s) enabled. Additionally, clicking on blank space on that page caused the settings to be ignored on that page.
I18725	Creating a page that has a title containing a number followed by -E for the second time caused the app to freeze
I18722	Some phrases on ICM page should be level 1 phrases
I18721	It was possible to make subordinate-driver circular references between Transaction and DriverMUX/PollDriver Tags.
I18720	Page notes initially opened with default string "Sample note text" regardless of the user's language
I18701	Sites and Site Map page parameters could be Invalidated causing a parameter dialog to pop up every time they're opened from the page menu.
I18696	Unable to retrieve menu item tags via the SQL interface except for the root "Menus" tag.
I18693	Upgrading the Accounts.Dynamic file during an upgrade could cause the primary and backup server to continually modify the file.
I18684	The failover count setting was not discoverable for several drivers.
I18650	Page notes posted on Folder Pages disappeared when switching to any other page or stopping the App.

VTScada version 11.5.03 - Released June 13, 2019

New Features

ID	Description
F1364	The Fischer ROC Driver now supports minute history reads for ROC Plus devices.
F1353	Added support for the Long data type for MicroLogix series controllers in the Allen Bradley DF1 Compatible driver.
F1352	Page notes can now be configured to be acknowledged by operators. Page note acknowledgement is recorded in the alarm and event history.
F1351	Modicon Driver: Added support for 32-bit registers in the RTU Serial and Open TCP Modbus protocols.
F1344	RmDir function will now retry file deletion 10 times upon initial failure.
F1337	The value of a SubordinateApplication tag is TRUE when the subordinate application is running and synchronized with the master application, and FALSE when it is not.
F1335	Added the ability to define named server lists for individual drivers.
F1331	The preview of graphics in the Multi Image Widgets panel and Layers panel now can be scaled dynamically.
F1329	VTScada's built-in web server now supports the OPTIONS method.

F1289	Small performance improvements to tag list retrieval.
F1271	The Return and SetReturnValue functions each now have a new optional Boolean parameter called Resettable, which defaults to true when unspecified. When true, it means that any steady-state object called from an If will have its return value reset to Invalid when the If's script executes unless it currently is in a state with a steady-state Return call, in which case the return value is not reset even if the Resettable parameter is TRUE. When the return value is set with the Resettable parameter set to FALSE, the return value of the steady-state object is never reset.
F1262	Added TI505 Device tag

Incidents Cleared

ID	Description
I18710	Deleting a page in the Idea Studio when the page was open in main window, with a pop up page open to a different page, changed the pop up page.
I18707	Deleting a page causes the page in the main window to change and all popup windows to close, even if they are displaying different pages.
I18703	Acknowledging an alarm via an email from an IPhone could fail to acknowledge the alarm.
I18700	Disabling or deleting a tag type with an embedded widget while an app is running could cause VTScada to crash when the app is stopped.
I18689	Communications between VTScada and the ICCP system drop periodically
I18675	Custom multi-state alarms using the ReactivateOnValueChange flag would reactivate when the primary server was stopped or started.
I18671	MPE SC and MPE Duplex station tag fault codes were not being translated.
I18670	The label HasVFDSupportLabel had a typo where VFD was typed as VDF.
I18657	Tag Browser could hang after creating a new disabled tag.
I18648	Text in certain widget dialogs was not updating after clicking OK.
I18642	Poll Drivers using the CIP driver sometimes did not resume communication following a PLC tag upload by the CIP Driver.
I18636	When a Site Map widget was drawn very small, the style selection would display as a short empty white window.
I18634	The IEC 60870-5 driver was removed from the license tag count.
I18632	ArrayOp1 mode 33 did not function correctly when Scalar was Invalid.
I18629	Potential hang or crash when using the Linked Tag Property tree with a large number of descendant tags.
I18624	Some tag configuration dialogs could get stuck on one of their tabs and be unable save when creating a new tag.
I18619	Illegal Tag Type message dialog's buttons had no text.
I18615	The tooltip for a value in the Source Debugger may have shown out-of-date information, or information for a different variable.

I18614	If a pen was removed from the HDV "Plot" via the "X" in the legend when viewing a saved group, no pens would show up in the HDV "Grid" if selected.
I18612	When adding an application from a directory containing multiple applications, the applications were displayed using a case-sensitive lexical sort rather than a case-sensitive sort. Hence, applications starting with lower-case letters were appearing at the bottom of the list.
I18611	Some of the ROC driver properties were missing from the application properties list, and an unused property was listed.
I18607	Alarms now consume less memory.
I18604	The alarm panel AckAll button was causing alarm queries in the IDEA Studio.
I18601	After upgrading to a new version of VTScada, you could get "Failure to export changes to the User Copy" errors when starting applications.
I18598	The application loading dialog used the last selected display language instead of application default language.
I18596	When viewing communication driver stats in the HDV, a note appeared for ErrorAddress and when clicked on was empty.
I18595	The CIP driver could send a message that exceeded the byte limit to the PLC, leading to no response from the PLC.
I18594	The alarm tooltip in the name column showed the PhraseID instead of text when truncated.
I18591	Occasionally, upgrading VTScada would result in transitory "Layer has been prematurely activated" and "Layer state inconsistent" error messages.
I18585	The Anywhere Client would not load on Apple devices running iOS 9.3, including the third-generation iPad, iPad Mini, and iPhone 4S.
I18584	NMEA Driver folder was not showing complete set of widgets available for drawing the driver tag.
I18582	If the Logged Off User didn't have privileges for the starting page in a multi-monitor application, all the Display Manager instances except the first one would be blank, and attempts to select pages from the menu in other instances would display the selected pages in the first instance of the Display Manager instead.
I18576	Phrase Editor dialog became unresponsive if trying to add new homograph while typing in a phrase or comment cell.
I18574	Pasting clipboard contents may rarely fail.
I18573	The settings, ApplyMuteSilencePerComputer and ApplyMuteSilencePerUser were not discoverable in Application Properties.
I18571	Pressing F1 or selecting help would not load the correct help file for the IEC Driver, IEC Driver Address Assist, and IEC Driver Draw Methods.
I18566	The Code ID column in the profiler was sorted lexicographically such that larger code IDs would be before smaller ones.

I18563	A master application may not display the correct site page for a site in a subordinate application.
I18562	Closing the SubordinateApplication tag config folder too quickly after selecting the subordinate application could prevent the subordinate application from being set for the tag.
I18556	On the Sites page, Alarm Database tags that were automatically categorized previously as folders were being categorized as sites.
I18555	The ConvertTimeStamp() function had the time overlap at the end of Daylight Savings time an hour later than it should have been.
I18552	An error dialog alerted the user regarding incorrect username and or password before the user had actually entered both the username and password in VTScada Twilio configuration.
I18509	Advanced Widget Properties buttons were disabled for initialization of tag widgets tabs in the idea studio.
I18506	SQL retrieval of historical data may have resulted in older data rather than the newest data when sorting by timestamp descending.
I18504	A thin client server could stop responding to mouse input when a user account is deleted while that user is logged into a thin client session.
I18494	In the tag browser if a tag was copied and pasted which was declared in an OEM layer, future cut and paste operations were prevented until the tag browser was restarted.
I18462	Saving a bookmark to a script application using the VIC's System menu would crash the VIC.
I18442	Source Debugger dump creation dialog was missing ok button on Anywhere client and VIC.
I18373	Resizing a profiler column would accidentally trigger a re-sort based on that column.
I18169	Maximizing by double clicking on the title bar of a desktop browser displaying the Anywhere Client's Page Menu page would often browse to a page in the page menu automatically.
I17327	Compressed text in Source Debugger and Trace Viewer was illegible.
I17120	Attempting to use PostgreSQL as a Historian ODBC target failed as the historian couldn't connect.

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New Features

ID	Description
F1308	A Layer Selector tool has been added to the Idea Studio to help when modifying several (potentially overlapping) graphics.
F1306	Users now can choose to hide empty sheets when export tags to Microsoft Excel.

F1305	SQL queries can now obtain a list of tag types and their labels, plus the names of the trend able fields each type supports. SQL queries can now obtain a list of tag groups and their labels, plus the names of each tag type in the group.
F1295	Reduced VTScada memory usage after large BuffStream operations.
F1288	SQL queries can now obtain a list of tags of any type using filter criteria.
F1280	Reduced memory use when the same image is displayed in multiple applications and/or thin client sessions.
F1270	Two new memory related addresses have been added to the Workstation Status Driver, PrivateBytes and PageFileBytes. PrivateBytes is roughly the total memory actually in use by the process, both physically and in the page file. PageFileBytes is the total number of bytes that have been committed to the process, whether in physical memory or not.
F1244	The amount of memory used by VTScada for larger applications has been reduced, allowing application size to increase by 15% - 25% within the same memory constraints.
F1239	Embedded Station Pages are now able to provide their own navigation toolbar.
F1165	A scaled page can now be displayed at a non-native aspect ratio.
F1157	The page selection control now opens a dialog for selecting a page, and provides additional filtering capabilities.
F1155	The Sites page can now show Site Detail pages embedded instead of the map
F1146	Added the Display Order parameter to String I/O tags. Changed the PulseInput tag's "Order" tab name to "Display" and repositioned the SpinBox.
F1119	VTScada now provides additional map styles from CARTO.
F1118	The site map can now be restricted to a certain geographic area and to within certain zoom levels in order to prevent users from wasting time and drive space.
F1116	There is now a map tile RPC service that allows an application to have a map tile server from which clients will obtain map tiles via RPC.
F1113	Applications with SubordinateApplication tags should be able to view pages from subordinate applications.
F1107	There is now a utility for bulk downloading a set of map tiles within a certain geographic area down to a certain zoom level. For example, all the map tiles for a certain city could be downloaded in one batch in order to make browsing the city faster, or to make it work without an Internet connection.
F1102	There is now a way to select a map style on the Site Map and Sites page.
F1101	The map page now prevents multiple overlapping dialogs from opening when a group of overlapping pins are clicked.

F1093	Two new modes have been added to the HistorianGetData function, bitwise logical OR and AND functionality. These correspond to TPP Mode values of 12 for OR, and 13 for AND.
F1092	Access older history when historian schema fields are appended.
F1091	Add support for per user languages.
F1085	Manual editing of historical data is now supported.
F1035	VTScada windows now react to changes in the resolution reported by Windows. The Anywhere client now regards the browser window's size as the screen size. This prevents context menus and other positioned windows from displaying outside the browser window.

Incidents Cleared

ID	Description
I18470	When a parameterized call was passed into the first parameter of a call (the parameter that specifies the module to call), then both of those calls could fail to notice changes to their parameters.
I18302	The Editor function could cause VTScada to crash when the EditorValue parameter was Invalid.
I18034	Some phrases still referenced VTS rather than VTScada.
I17340	The Trigger tag properties dialogue was not tall enough to display all of the contents on the "Off Conditions" tab with appropriate spacing.
I18104	Linking an alarm to an unrelated AlarmDatabase via the Commission() module's AlarmDB parameter didn't work.
I17636	If a thin client (Anywhere client or VIC) is obliged to changeover to a server that is pending a restart, it appears to succeed but does not display anything.
I17232	Loading a map with many pins was slow.
I17224	The map page lost its position when scrolling or double-clicking to zoom on the place near the international date line.
I17212	Infinite loop could happen in module RadioButtons.
I17142	WorkStation Driver returned BatteryLifetime in minutes, which was inconsistent with the help file.
I17071	Certain functions with output parameters used to fail to create the dictionary item when a dictionary reference is passed into an output parameter. Also, some steady-state functions used to fail to detect double-sets on their output parameter(s).