



Visual Components 4.2.0 Release Notes – 25/11/2019

With this major release, we've added some exciting new features and made significant improvements to our software infrastructure to deliver improved simulation performance. We're especially excited to introduce Process Modeling, a fast, easy, and visual way to define and manage products, processes, and production flow in your layouts. Here's a detailed list of the updates:

Process Modeling

Ticket	Title
	ProductType Editor for Process Modelling
	Flow Editor for Process Modelling
	Process Editor for Process Modelling
	Product creator behavior
	Transport links on 3D World
	Statements to support customers cases defined in MVP
23425	Interpolating transport controller introduced

General

Ticket	Title
21815	Hidden geometry excluded in the export geometry command
22053	Paste components without offset if selection is cleared
22352	Dimension deletion on drawing tab improved
22552	Interact command improved in orthographic mode
22842	Added support for custom panels in show/hide panels menu
23064	Added icon for minimize and restore ribbon bar
23125	3D PDF recording reliability improved
23279	Improved reliability of 3D PDF recording for layouts with corrupted geometry
23357	Fixed an issue causing imported Inventor files without material appearing as hidden geometry
23497	Fixed Copy/Pasting components selected in the cell graph
23592	Reliability of CAD importing improved
23903	Material coloring issue and missing faces issue fixed in CAD loading

23913	Issue related to Imported CAD geometry referencing not persisting correctly after saving fixed
23953	3D world floor in main product is reflected in VC Experience
23960	3D world background in main product is reflected in VC Experience
24027	3D world floor grid in main product is reflected in VC Experience
24032	3D world floor grid color in main product is reflected in VC Experience
24036	3D world floor grid size in main product is reflected in VC Experience
24275	Polyline curve importing improved
24297	Allowing addition of Select command to the Quick Access Toolbar on the Drawing tab
24310	Fixed crash after attempting to connect robot to the track after deleting the robot controller behavior
24432	Fixed bug causing a crash when deleting dimension in 3D world
24548	Fixed an issue causing interface with processor field getting disconnected on reset
24746	Improved application state handling while operating system (Windows) goes in sleep mode
24925	Fixed open/close state - in End Effector-wizard
25000	Improved the material assignment for imported Igrip models
25803	Improved hidden component rendering handling
25804	Added a support for fill color in 3D Annotation
25910	The position of texts in a text feature are updated when the component with the text feature is exported to 3d pdf
26001	Added checks to tolerate situation where python script deletes the interface being connected in its OnConnect event
26434	Fixed an issue causing the text features appearing at the component origin in the exported 3D PDF
26539	Fixed an issue causing component properties with inch unit displayed in cm
26549	Components excluded from the 3D PDF export now also excluded in the component list
21105	Options for exporting all or selected drawing
21558	Statistics Chart properties localized
21576	ComponentPathSensor manual Distance property change is now saved to component state
21828	General application optimization by better external library usage
22205	Improved launcher to start even if the user registration file is corrupted
22215	Solved an issue causing the Camera animator time changing when toggling between Simulation time and Relative time
22407	Fixed a bug that caused two-way conveyors to flip 180 degrees upon connecting
22416	Solved an issue causing a crash when loading a layout with chained hierarchical interfaces
23120	Fixed a connection issue happening after selected component is changed.
23232	Fixes related to opening two vcmx layout files in one 3D scene
23492	CAD files saved in Solidworks with suppressed state are now shown in VC after CAD importing

23514	Improved styling in the recent documents menu
23583	Plus sign "+" not handled correctly in filenames when using Include Components on layout save
23697	Improvements to CAD Import to minimize the amount of faces lost in mathematical surfaces
23737	Updated the community link in the HELP ribbon
23814	General improvements to CAD importing with mathematical data
23896	Material property does not persist system materials to the component file anymore
23901	Fixed an issue preventing all folders showing in the eCatalog
23971	More recent versions of CAD readers included
24622	Part recycling at component creators to optimize speed
24878	New CAD formats for exporting geometry: *.step, *.JT, *.U3D, *.3MF, *.PRC
25015	Fixed an issue causing unhandled exception when connecting interfaces with names containing non-Latin characters
25040	Improved Camera Animator panel updating when statements are cleared
25326	Fixed an issue causing physics engine trying to update the scene on application closing
25812	Improvements made to restoring the 3D World after locking / go to sleep mode in Windows operating system
25861	Updated OPC UA client library
25862	Improved compatibility with newer versions of TwinCAT in Beckhoff ADS connectivity
25958	Right clicking on input fields does not deselect the text anymore
26124	Added a support for multiple simultaneous Unity VR device connectivity on VC Premium
26145	Added a support for importing Creo 6.0 CAD files
26173	Support for Unity VR device automatic identification on VC Premium.
26176	Fixed an issue causing that saving and re-opening layout resulting in missing geometries
26179	eCat uses HTTPS instead of HTTP
26214	Add Action Script command localized for supported languages
26242	Fixed an issue causing an unhandled exception when clicking move handle with assign material
26260	ActionScript improved for more reliable robot actions
26287	Allow disabling default action for VR controller buttons
26274	Update translations for Select Parent feature
26282	Update Python Wizards translations
26296	Expose animation streaming properties on the VC Premium backstage
26297	Add VR Streaming capability in VC Premium
26298	Property combo box options can now show tooltips if included
26433	Translations for animation streaming settings
26460	Improved material matching between Visual Component main application and VC Experience

26540	Added VR refresh rate setting on backstage in VC Premium
26639	Add localization to VR Refresh Rate setting on backstage
26795	German translation styling
26796	German translation improvements
26814	German translation improvements in Layout > Info menu
	Documentation related to Process Modeling
	Documentation Improvements

Modeling

Ticket	Title
22344	Physics Cable breakage property functionality improved
22458	Loading layouts that delete interfaces in python upon loading improved
23498	Make component unique' command improved
23527	Dragging and dropping geometry from node to node improved
23781	Copy pasting features on modeling tab improved
23793	Improvements of mathematical data loading when importing CAD models
25203	Fixes to vcKinObject JointMaxLimits and JointMinLimits properties
25815	Fixed problem causing a plane couldn't be selected for cutting plane in the slice operation
25960	Behaviors (e.g. Note, Python Script, ...) support underscore ("_") on the note & script editor
26134	Fixed and issue where underscore ("_") in Joint Name causes an error in IO Control Wizard
26436	Fixed an issue causing the visibility of Planes not to be switched with Switch feature
18387	Fixed issue causing the indexing table component not to be able to use to complete the corresponding tutorial
19041	Fixed a problem causing that resulted in a crash when deleting physics joint from a physics cable
21897	Fixed a bug that prevent Real property accept floating point constraints given as a set of values
21941	Fixed a bug that caused ComponentCreator not to delete static template component after changing TemplateComponent property
23128	Fixed an issue that caused a deleted link not to disappear from the feature tree
23367	Fixed a problem causing geometry URIs getting merged when saving a component
23443	Fixed an issue when the root node of a ServoController is other than the owner of the controller
23895	Filesize field excluded from component metadata writing
24619	Motion path "FastScheduling" option for optimizing conveyor path simulation added
24621	Component and Product creator non-polling block case optimization added

24651	Allow using a string as an expression for Switch feature for easier parametrization
24918	Assign material panel functionality improved
25662	Fixes related to the Real type property constraints
25950	Fixed an issue that caused the application to crash if PhysicsJoint parent is set to the same link as it's located in
26013	New command added to the feature tree in component graph context menu: Select parent feature
26016	New wizard "Sensor Wizard" added and "Conveyor wizard" improved and translated to supported languages

Robotics

Ticket	Title
21835	Program Sync and Delay statement support added to python process handler
22420	Subroutine arrangement and ordering improved
22526	Robot tool interactive snapping improved
22550	Better handling of calling interpolate commands on empty scope statements.
22614	Improved support for copy/pasting routines with path statements
23244	Orientation handle reliability improved
23789	Frame highlighting improved for multiselection of program statements
24141	Path curve selection for geometry with mathematical data improved
24158	Allowing Copy/Paste statements from one routine to another
24269	Fixed issue when exchanging robot with connected I/Os caused an unhandled exception
25035	Fixed issue causing joint update when connecting an external joint
25051	Fixed an issue causing Schema loading failing after loading second component
25181	Exchange robot command preserves manual changes to gripper attachment
25350	Fixed a bug causing wrong joint turns when exchanging robot.
25799	Schema frame is not highlighted if schema contains only one position
25807	Update minimum distance to use overlay rendering (always on top)
26102	Improved Collision Detector panel handling world node in its node list
26142	Path statement base and tool data handling improved
26289	Fixed Swept Volume error after exchange robot
26825	Fixed bug causing the Path statement task pane not closing under certain circumstances
26826	Fixed an issue causing a deletion of an empty Pathstatement, causing a deletion of a previous statement
26828	Fixed problem causing a crash when deleting last position in Path statement under certain circumstances

21324	ApproachAxis property on vcRobotController documented on API references
21730	Allow to assign a node to a tool frame that is not defined as the root or flange node for a servo controller
21928	Fixed a bug that prevent restoring simulation state after moving component while it is being grabbed by a robot
22372	Improved styling in Jog panel
22521	Two robot executors in one component is now supported
22522	Fixed an issue when a robot tool which has its own robot executor could not be selected on a Program tab
23229	Fixed an unhandled exception appearing after deleting a robot under certain circumstances
23233	After deleting a subprogram it is now possible to delete the newly selected subprogram
23318	Fixed an issue causing the speed of a PTP statement to affect LIN statement execution following the PTP
23378	Deleting a path statement now closes the select curve panel automatically
24650	Scara robot kinematic solver improved
25039	Fixed an issue causing robot exchange button to be disabled after selection
25557	Fixed an issue related to minimizing a while or if statement in the program editor
25661	Fixed an issue causing path statements referencing to wrong path data
25734	Exchange robot doesn't allow clicking Apply before a robot has been chosen
25736	Fixed an issue causing opening the exchange robot command requiring launching the commands twice under certain circumstances
25826	Fixed an issue that prevented Component Properties panel to be shown when selecting robot on the program tab
26959	Fixed an issue causing select curve command launching resulting in a crash under certain circumstances

Licensing

Ticket	Title
19219	Network License Manager - Improved messages to reflect the status of the licenses
22224	Fixed licensing issues appearing when a client tries to use a floating license and standalone license for an older product
20190	Commuted license info shows original server where the license has been taken from.
22050	Fixed issue causing a standalone license key error message while activating network license key
22090	Fixed issue that caused the launcher to try to renew a standalone license key when the user selects "network license key" for activation

23230	Fixed an issue causing license activation to fail if a key in license data needs renewal but is not the key specified in the config data
23234	It is possible now to change network license from backstage
23287	Fixed an issue causing the Renew button missing in File -> Info -> License
23379	Improvements to automatic license renewal system
24737	Fixed an issue causing deactivating recently renewed active stand-alone key was set as activation expired
25704	Fixed an issue causing an activation loop for evaluation license keys
25965	Fixed an issue related to the displaying of license information end time
25968	Fixed an issue related to the borrowing and returning license twice in a row (within a short renewal period)

API

Ticket	Title
20728	Bugs in loadLayout python command fixed
23402	Visibility control for properties of copied statement improved
23886	TransformationInWorld event added for ISchemaFrame
25321	Bugs fixed related to ray casting
25400	Fixed issue related to inserting a point into an IPathStatement
25802	Added support for filter selection of schema objects in Home context
25805	Added a support for the 'RenderOrder' of Material for rendering
25817	Support for schema frame coloring
25818	Added a pre-save event
26136	Python vcHelpers.Geometry module improved
26553	Support for vcCommand.Checked property added
26739	Allow loadGeometryAsComponent command to import any supported CAD filetype
15314	Added SimComponent CreateProperty method to raise PropertyContainerChanged event initially
18057	Python vcSimInterface disconnect method and event improved
21514	Improved component material rendering after calling rebuild method from Python
21575	Fixed issue causing external joint values missing from newly created motion statements when using python API
22030	Fixed issue causing vcPackFolder not storing subfolder content
22682	Solved an issue causing servo joint targets not cleared on reset when using python API
22807	Fixed an issue causing the ribbon tab order not to be obeyed when adding ribbon tab item dynamically
23578	Improvements in the vcHelpers.Robot2 python module related to MotionTime logic
24008	Provide a simpler way to do coordinate system transformations in Python API
25121	Improvements in the write() method of the vcHelpers.VcmFile module

25352	Python script tracing now automatically disabled when trace is not needed to improve performance
26125	Expose Unity VR events on VC Premium for all Unity VR supported devices for interactive VR applications
26287	Allow enabling default action for VR controller buttons
26487	Include measurement data print outs in app.getMessages() python call