Visual Components 4.7 Release Notes – 31/05/2023

New Features
A short overview of what is new.

Doosan Robot Connectivity
A new connectivity plugin to be used with Doosan robots. Supports validating simulation with Doosan DART-Studio. Simulation can be driven with a virtual or physical controller.

Improved Product Filtering and Matching*
New ways of filtering and matching products in process modeling. Filters include product type filter (available previously), product property filter, expression filter, specific product filter. Improved UI for filter selection.

FBX Animation Exporter
Support for exporting animations in FBX format. Applications that support FBX animation include Blender, Autodesk FBX review, Unity and Maya. Powerpoint is not supported.

Multi-Program Editor
Functionality to pin multiple program editor windows in program tab. Supports viewing the execution and programming of multiple robot programs simultaneously. Improved .NET API for OEMs to customize program editors.

Other improvements

ID	Description
18957	Digitally sign all executables in installation folder
18991	Digitally sign licensing executable used during installation
17568	Resolve layout format not recognized issues
8327	Replace behavior property "__HIDE__" functionality with a visibility property
21271	Update the input validation and MessageBox error icons
17651	Extend ComboBoxEx with advanced mode
18956	Fix high vulnerability risk: Apache Log4Net
18532	Update PositionerWizard script in 4.7
19219	Improvements to Chinese localization (Render mode)
21069	HOOPS Exchange 2023 U1 Update

Bug Fixes

A recap of bug fixes including those reported to Visual Components support.

ID	Description
23152	New PM filters don't work in pythonProcessHandler statement with Product Type and Expression filters
23129	New PM filters product type filter UI not shown correctly in pythonProcessHandler statements
23085	New PM filters access violation with old pythonProcessHandler scripts
22184	UI distance indicator always shown when calling TestMinimumDistance in .NET API
21985	vcVolumeDetector crash when resetting simulation
21680	Exception when deleting a joint from a Scara robot
21619	Fixed crash when assigning components to a List<Ref<TransportNode>> property
21439	Interfaces are left in connected state when connection is cancelled using connecting event in .NET API
21438	Exception when setting e.Handled to true in Disconnecting method .NET API
21344	CTRL + A in 3d Scene leads to exception when KUKA OLP is enabled
21157	Rendering: Exception when setting Node Material Inheritance in Modelling tab
20927	Construct statement exception if AssemblyTime >0
19702	Error message gets eaten silently if error occurs only once per simulation round in same place
18548	Rendering artifacts with combination of Win11 and NVIDIA graphics cards
575	Error importing 3DXML file
2829	Fix default property values for TwoWayPath
18263	Product instance flickering at high simulation speeds
18095	Products are created and temporarily shown at world origin
18352	Property not found while trying to set ProductIn.Component.Name
18449	Exception after duplicating FlowGroup
18529	Right-clicking on the created Process Step throws exception
18541	Can't re-select config object in Flow Editor when the owning item is still selected
19123	GetProducts statement doesn't work with empty MaxCount expression
19381	Assembly Editor not working when using remote desktop
19424	Unhandled exception when printing from GetProducts list
19666	Construct statement not working
19907	Fix vcProcessFlowGroup.ProductTypes to return proper wrappers
19996	TransportIn statement gets stuck (multiple sensors in one conveyor), resetting simulation causes the statement to get stuck at different time
20164	Product creator PartPooling property value not copied with component
20267	Process modelling: When layout is dynamically generated - backtransported item is not drawn
20329	Unable to edit product component properties in python
20342	Component creator PartPooling property value not copied with component

20354	Product Creator table feed throws exception for .xls file
20585	Expression field can't handle certain input
13428	Unsupported OPC UA 3D datatypes from Codesys prevent pairing any variables and no feedback is given to the user
16584	Unhandled exception when re-creating sequence from python
16742	Fix German translation for Block-Feature
16757	Two-dimensional arrays in OPC UA server causes browsing to fail
18649	Typos in various UI Elements
19828	Print Preview is not shown in drawing tab
18893	FBX: Errors are printed twice
18953	FBX export missing materials and shows hidden components
16744	Evaluation key was deactivated from server
15094	Connectivity - Unexpected error when performing async write
19113	Unhandled exception occurred when ReadFromServer fails to read all connected variables
20287	Teach Overlay button gets stuck when creating a statement for servo track
20288	Teach Overlay menu doesn't appear for the second executor
11988	Vector property value not updated when magnitude changed
17450	KUKA OLP: RCS skips one interpolation cycle
18125	Interactive VR Assembly Demo layout doesn't simulate the part assembly
17533	Geometries missing in VC Experience when Boolean feature is used
19082	Text annotation is positioned incorrectly when TransformationInWorld property is set

*Compatibility Break and Deprecated Features in PM Warehousing Components and API

Note that there is a compatibility break that affects existing layouts utilizing one of the following PM Warehousing components from the eCatalog: Floorspace Buffer, Floorspace Stack, Flowthrough rack, Pushback Rack, Warehouse Process Shelf, Warehouse Shelf, Capacity Pull Process. If your layout is using one of these components or any custom components where Python is used to set a "need" in process modeling, please exchange it to an updated version from the 4.7 eCatalog.

For advanced API users: The process modeling properties related to Configurable ProductType Filters ("AcceptAllProductTypes", "AcceptedFlowGroups", "AcceptedProductTypes") are deprecated. Finding these properties from property containers (e.g., "vcStatement.getProperty("AcceptedFlowGroups")") will fail. Accessing these properties using statement's API (e.g., "vcStatement.AcceptedFlowGroups") is deprecated but will continue to work. Moving to the new PM filter API is recommended (e.g., "vcStatement.Filter.AcceptedFlowGroups").