

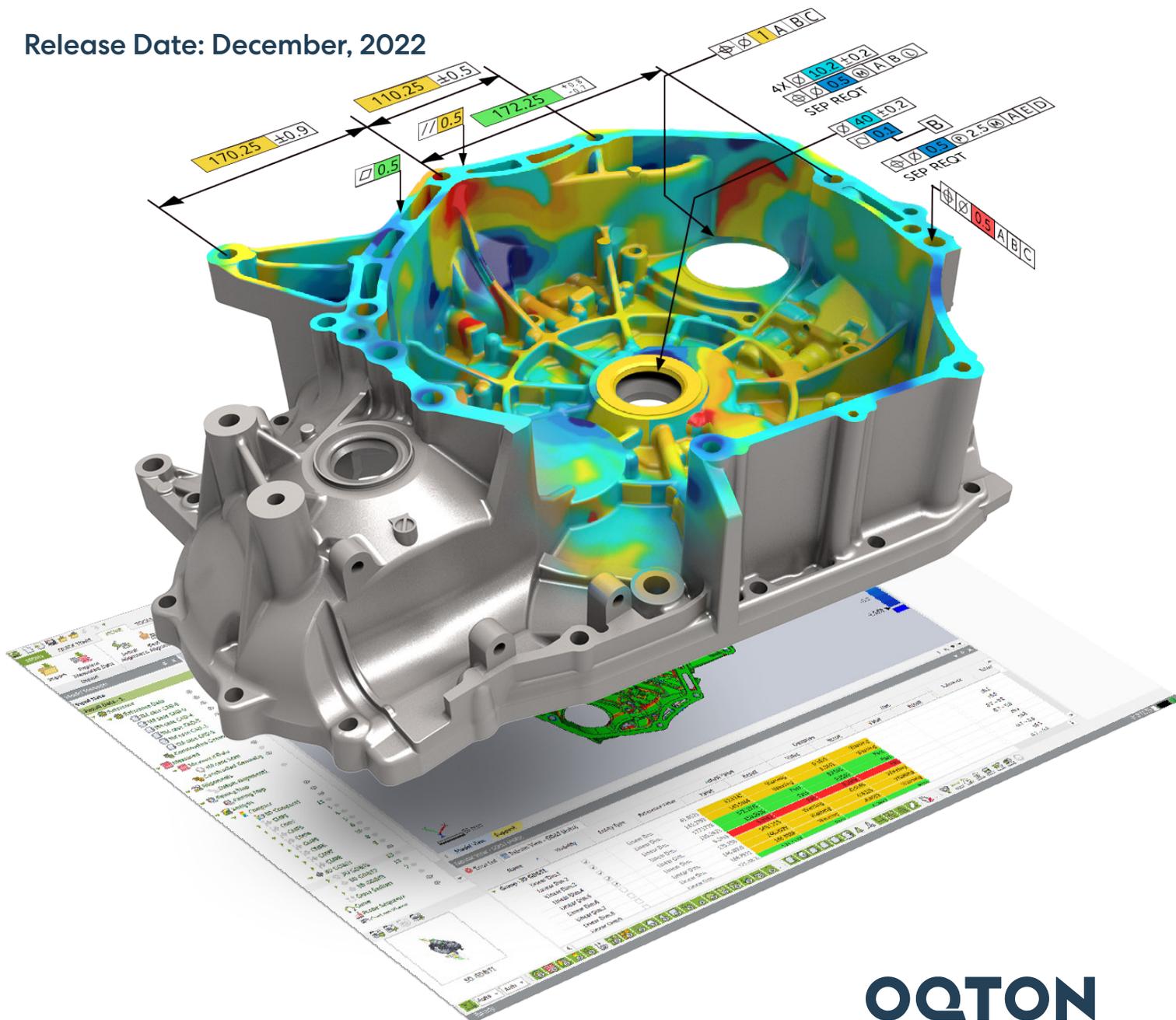


# Geomagic Control X

## Release Note

Version: 2023.0.0

Release Date: December, 2022



**OQTON**

Note: The **CX-E** / **CX-EC** labels indicate features that are also available in Geomagic Control X Essentials and Geomagic Control X Essentials Connect software packages.

# TABLE OF CONTENTS

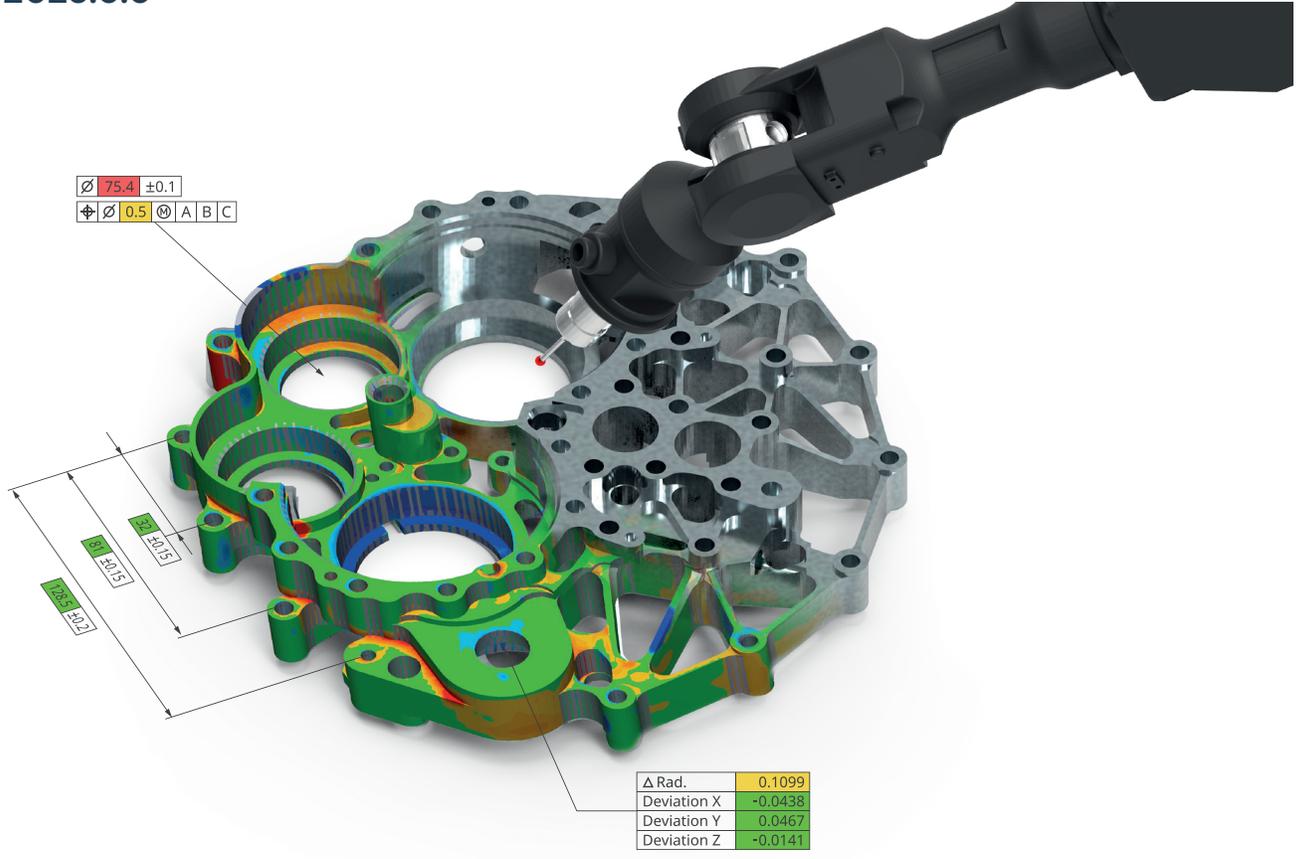
1. INTRODUCTION	1
2. INSTALLATION	2
<b>System Requirements</b>	2
<b>Download and Install software</b>	2
<b>Activate License</b>	2
3. NEW FEATURES AND ENHANCEMENTS	3
<b>Connection Between Visual Script and Automation Server</b>	3
<b>Visual Scripting Tool Improvements</b>	4
New Actions	4
Constructed Geometry - Cone	4
Measured - Fix Normal	4
Properties - Numeric Array Properties	5
Utility - Pass/Fail Result	5
Utility - Environmental Variables	5
Edit - Rename	6
Updated Actions	6
More Creations Methods in Constructed Geometry Actions	6
Plane	6
Point	6
Vector	7
Circle	7
Cylinder	7
Selecting Files While Script Is Running	8
Additional Parameters in File (Import ASCII Geometry) Action	9
Measuring Direction for Simulated CMM Point	9
Configurations of Aliases for Other Action's Outputs	10
Option to Turn Off Automatic Report Pop-Ups	10
Output Result Name and Result Status	10
Adding Description to Script	11
Exception Message in Visual Script	11
Preserved Input Field Sizes for Expressions	11
Required Parameters	11

<b>Automation Server / Client Improvements</b> .....	<b>12</b>
Result Window.....	12
Automatic Old File Deletion.....	12
Communicate Inspection Results from The Automation Server to A Paired Application.....	12
Network Drive for Automation Server.....	13
Deleting a Timed-Out Task in Automation Server.....	13
Other Improvements.....	13
Automatic Retry.....	13
Automatic Removing Empty Folders.....	13
Automation Client and Server on Different PCs.....	13
Increased Robustness and Stability.....	13
<b>User Interface Improvements</b> .....	<b>14</b>
Reconstructed Ribbon Bar.....	14
New Automation Tab.....	14
<b>Improvements to Hexagon Structured Light Scanner Plug-in</b> <b>CX-EC</b> .....	<b>15</b>
Manual N-Point Alignment.....	15
Additional Alignment Method.....	15
<b>New 2D Line Profile</b> <b>CX-E</b> <b>CX-EC</b> .....	<b>15</b>
<b>Remove Outlier for Surface Profile</b> <b>CX-E</b> <b>CX-EC</b> .....	<b>16</b>
<b>Export 2D Compare Geometry and Deviation Data</b> <b>CX-E</b> <b>CX-EC</b> .....	<b>16</b>
<b>Convert to Mesh in Result Data</b> <b>CX-E</b> <b>CX-EC</b> .....	<b>17</b>
<b>Auto-Save &amp; Recovery</b> <b>CX-E</b> <b>CX-EC</b> .....	<b>17</b>
<b>CAD File Import</b> .....	<b>17</b>
<b>Miscellaneous Enhancements</b> .....	<b>18</b>
<b>Common</b> <b>CX-E</b> <b>CX-EC</b> .....	<b>18</b>
Custom rotation center.....	18
3D Mouse.....	18
Continue Scanning / Probing in LiveCapture <b>CX-EC</b> .....	19
Scan Process in Scanner Direct Control.....	19
File I/O <b>CX-E</b> <b>CX-EC</b> .....	19
Exporting All Deviation Data.....	19
e57 File Import.....	19
<b>4. FIXED BUGS</b> .....	<b>20</b>
<b>5. KNOWN ISSUES</b> .....	<b>24</b>

# 1 INTRODUCTION

## INTRODUCING GEOMAGIC® CONTROL X™

Version: 2023.0.0



### Ensure Quality Everywhere

Bring the power of 3D scan-based inspection to more people in more places with industry-leading 3D metrology software that makes it easy to capture and interpret scan data.

Geomagic® Control X™ is a comprehensive metrology software platform that delivers the industry's most powerful tools within straightforward workflows. With Geomagic Control X quality managers are enabled with revolutionary ease-of-use, intuitive, comprehensive controls and traceable, repeatable workflows for the quality measurement process. Its fast, precise, information-rich reporting and analysis enable significant productivity and quality gains in any manufacturing workflow.

### What Can You Do with Geomagic Control X?

Geomagic Control X includes features to help you ensure quality for each stage of your manufacturing workflow including designing, manufacturing, inspecting, and maintaining.

#### Design

- Design for manufacturability
- Find and fix problems

#### Manufacture

- Identify and resolve manufacturing and assembly issues
- Eliminate costly scrap and rework

#### Inspect

- Solve your toughest measurement problems
- Improve quality documentation
- Reduce quality control bottlenecks

#### Maintain

- Assess damage, deformation, or wear accurately and consistently
- Predict part failure before it happens

## 2 INSTALLATION

### System Requirements

For the latest system requirements information and to learn about specific qualified system configurations, go to the [System Requirements](#) page in the Geomagic Support Center. Some users have had success running system configurations that deviate from the supported listed on our website. In such cases, these configurations are not officially supported by Oqton. Additionally, we test a variety of hardware platforms in combination with the graphics subsystems. While we make every attempt to be as thorough as possible, hardware manufacturers change their products frequently and may be shipping newer products or have discontinued active support for others. Check the support section of the website for the latest system requirement information and specific qualified systems.

### Download and Install software

You can download and install the software from <https://softwaresupport.oqton.com/s/article/Geomagic-Control-X>. In addition, automatic software updates are available if you set the **Update Product Automatically** option to **True** in Preferences and a valid maintenance code is activated, and your computer is connected to the Internet. The application will check if a newer version is available and will download it automatically for installation. You can also manually check if a newer version is available by going to **Help > Check For Update**.

### Activate License

Geomagic Control X requires license activation to run the application on your PC. After you start your application, the License Manager window opens. The License Manager allows you to activate and use the Geomagic Control X software.

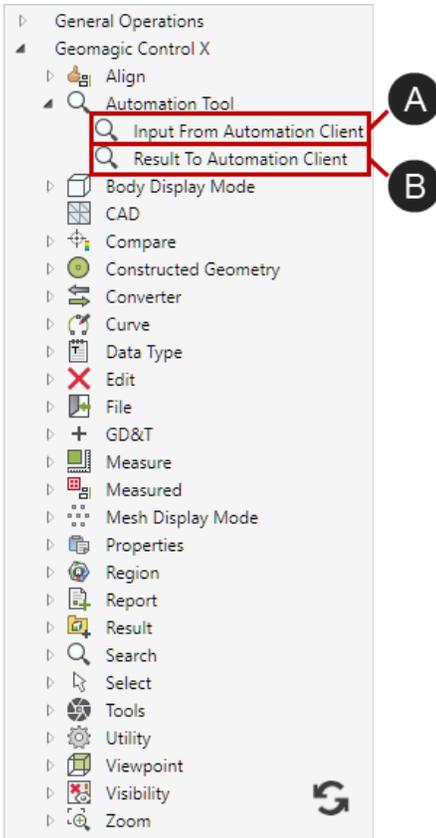
**NOTE: When you launch the License Manager, you can click the **Help ?** button found at the top right corner of the window to read the [CimLM Licensing Guide](#).**

# 3 NEW FEATURES AND ENHANCEMENTS

Note: The **CX-E** / **CX-EC** labels indicate features that are also available in Geomagic Control X Essentials and Geomagic Control X Essentials Connect software packages.

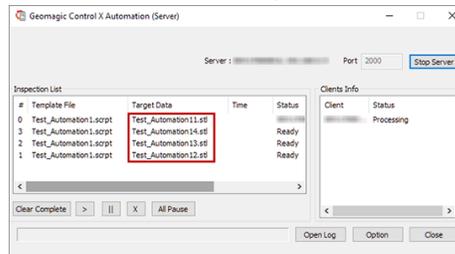
## Connection Between Visual Script and Automation Server

Newly added following two **Automation Tool** actions allow communication between the script and the Automation Server / Client.

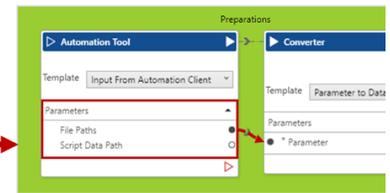


New Automation Tools

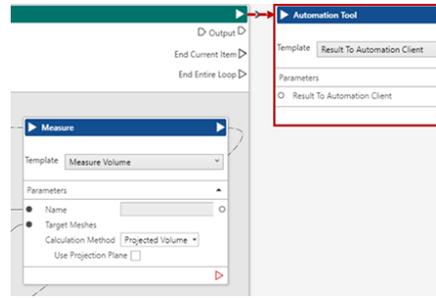
**A** **Input From Automation Client** - The new “**Input From Automation Client**” action has been added to the **Automation Tool**. This action is placed in front of a script and receives the information of scan data that is passed from the **Automation Client** for inspection.



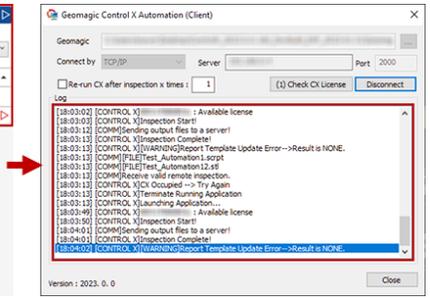
The input data is passed as a parameter via the **Input From Automation Client** action



**B** **Result To Automation Client** - The new “**Result To Automation Client**” action has been added to the **Automation Tool**. This action is placed at the end of a script and returns inspection results to the **Automation Client**.



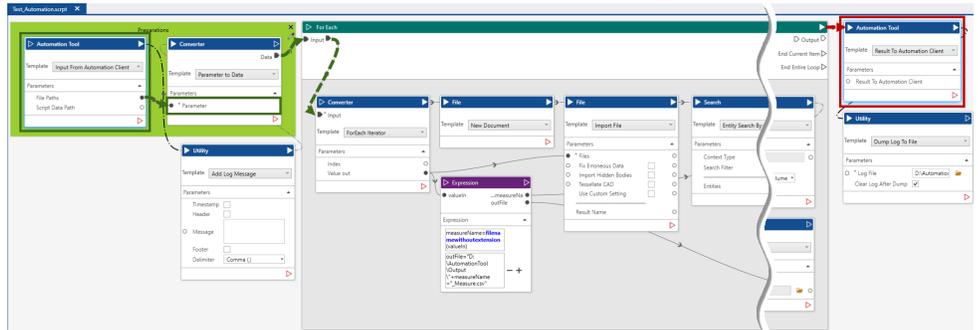
Results are returned to Automation Client via **Result To Automation Client** action



To use script files in automation, the script files need to be defined in the identification list (like the .cxproj usage). Automation process will be initiated according to the identification rules when the scan data file is detected in the monitoring folder.

A	B	C	D	
1	Template File Name(*.CXProj)	Scan File Name(Available Wildcard)	Target Result Name	With Related Result(true/false)
2	Test_Automation.cxproj	Test_Automation1.*	Result Data -1	FALSE
3	Test_Simple.cxproj	Test_Simple.*	Result Data -1	FALSE
4	Test_AutomationSimple.cxproj	Test_AutomationSimple.*	Result Data -1	FALSE
5	Test_leadingparam.cxproj	Test_leadingparam.*	Result Data -1	FALSE
6	Test_Automation.CXProj	Test_Automation.*	Result Data -1	FALSE

Identification Rule



Automation Workflow using Automation Tools (Green: Input Data-Flow / Red: Output Data-Flow)

# Visual Scripting Tool Improvements

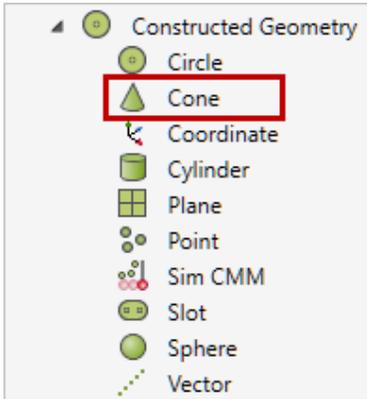
The following new actions and improvements were made to support more automation workflows and allow flexible and easy utilization of the Visual Script.

## New Actions

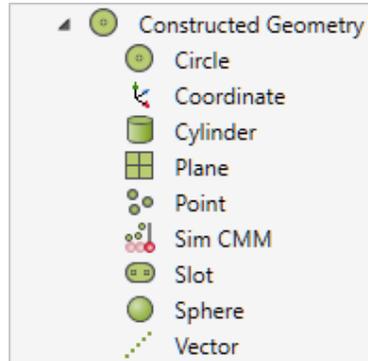
### Constructed Geometry - Cone

The new **“Cone”** action has been added, allowing you to create a constructed cone. An apex position, top/bottom positions, axis, half-angle, top/bottom radii, and height values can be defined for a cone in the Constructed Geometry (Cone) action.

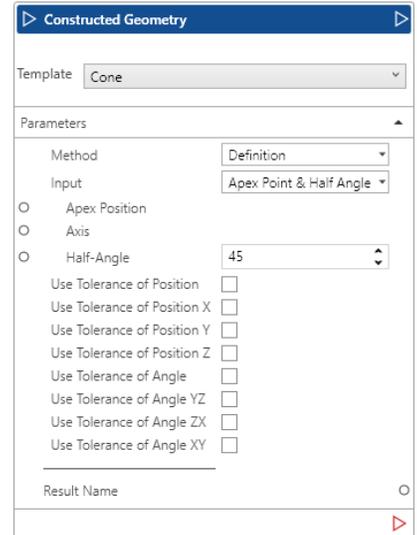
The new **Cone** action is located under **Constructed Geometry**.



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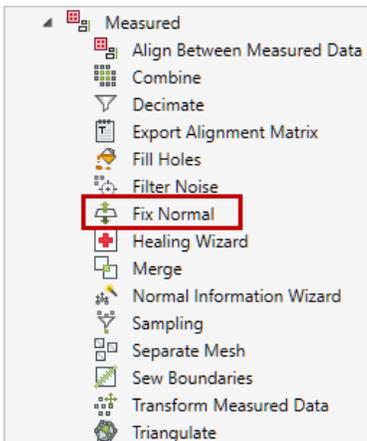
Geomagic Control X 2022.1.0



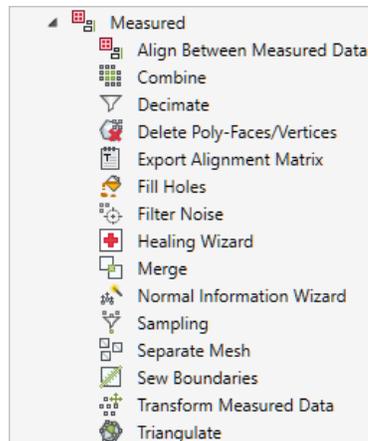
### Measured - Fix Normal

The new **“Fix Normal”** action has been added, allowing you to fix the normal information of a mesh or a point cloud.

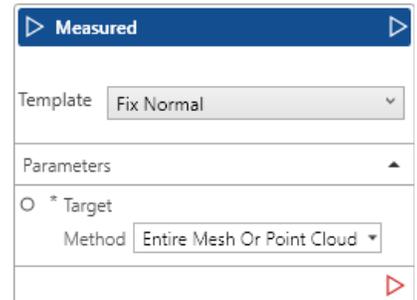
The new **Fix Normal** action is located under **Measured**.



Geomagic Control X 2023.0.0



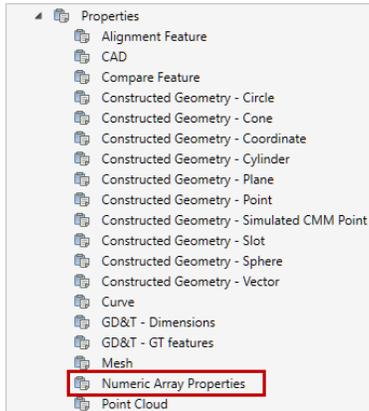
Geomagic Control X 2022.1.0



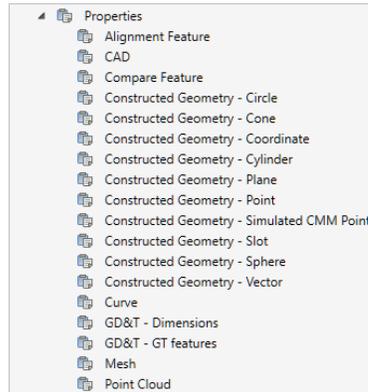
## Properties - Numeric Array Properties

The new **“Numeric Array Properties”** action has been added, allowing you to retrieve and query statistical values from an array. This is useful when finding out the minimum or maximum value from statistical data recorded in an array.

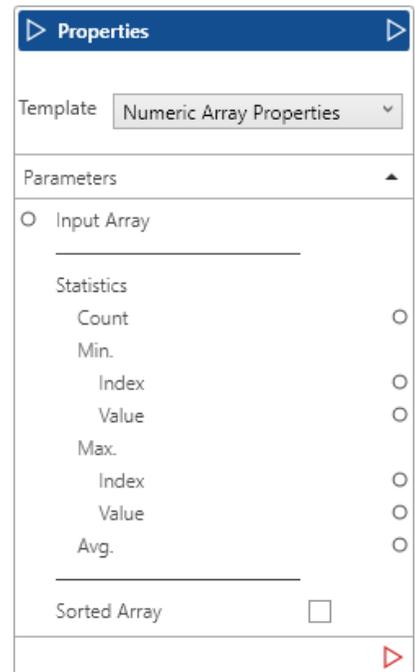
The new **Numeric Array Properties** action is located under **Properties**.



Geomagic Control X 2023.0.0

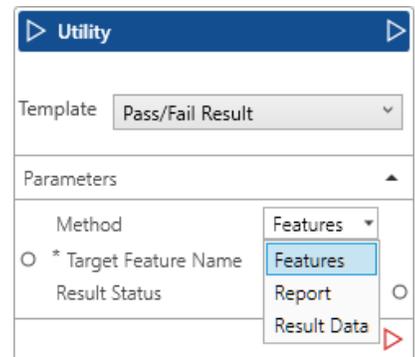


Geomagic Control X 2022.1.0



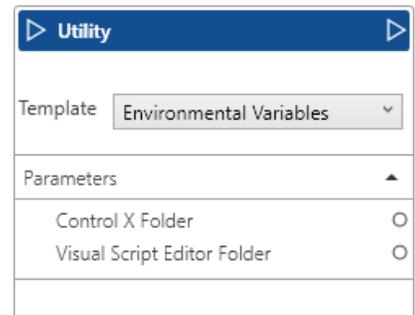
## Utility - Pass/Fail Result

The new **“Pass/Fail Result”** action has been added, allowing you to know the pass or fail results of a feature, report, or result data.

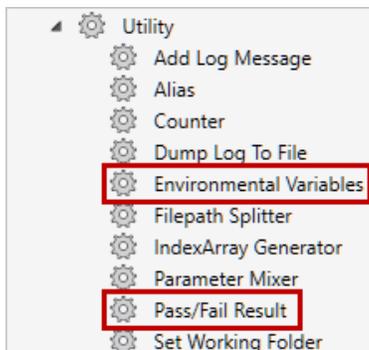


## Utility - Environmental Variables

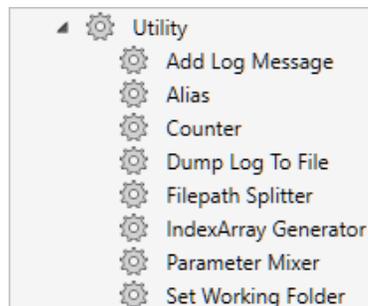
The new **“Environmental Variables”** action has been added, allowing you to determine the location of Geomagic Control X application and Visual Scripting Editor.



The new **Pass/Fail Result** and **Environmental Variables** actions are located under **Utility**.



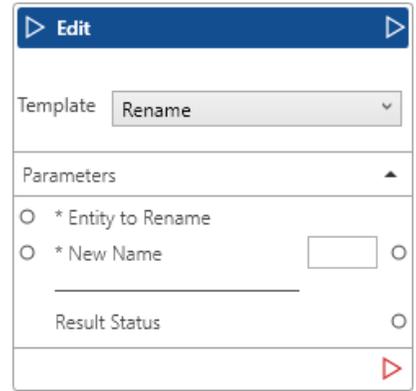
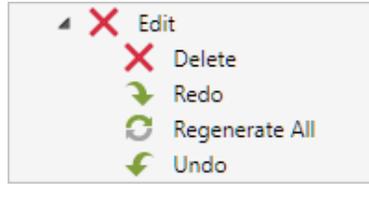
Geomagic Control X 2023.0.0



Geomagic Control X 2022.1.0

## Edit - Rename

The new **"Rename"** action has been added, allowing you to rename entities. The new **Rename** action is located under **Edit**.

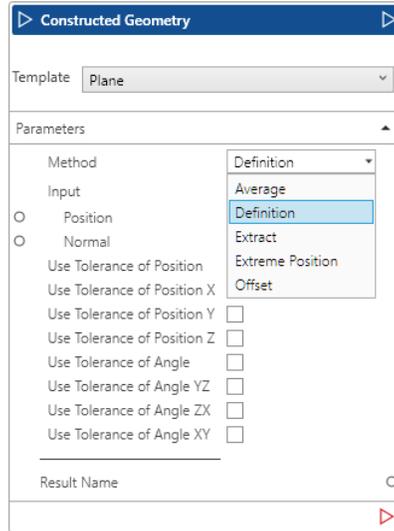
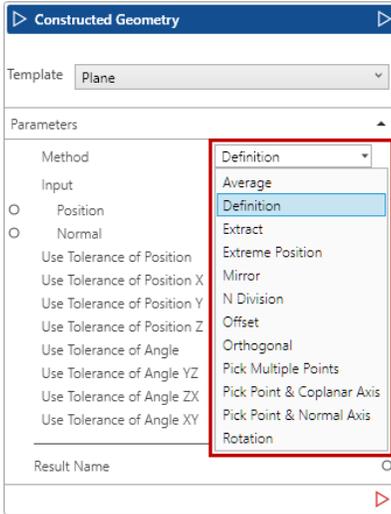


## Updated Actions

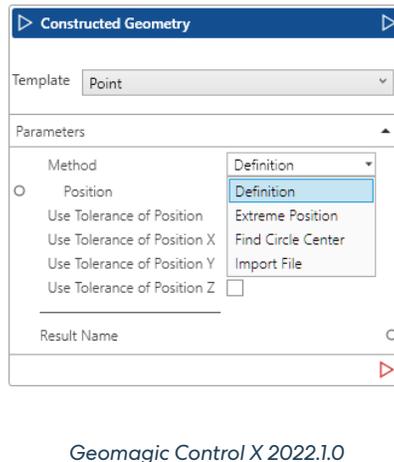
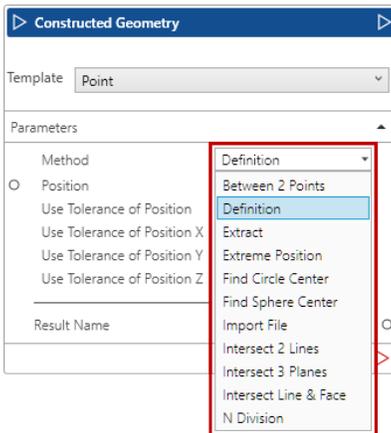
### More Creations Methods in Constructed Geometry Actions

The following **Constructed Geometry** actions now provide more methods to create constructed geometries.

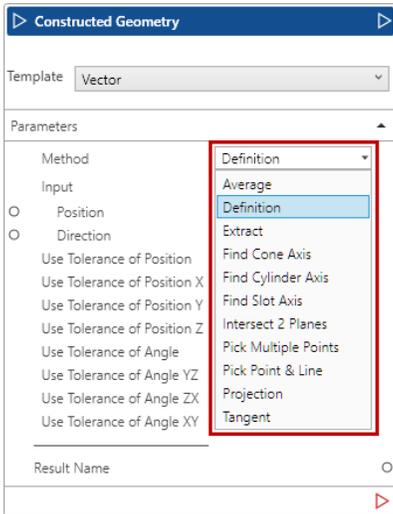
#### Plane



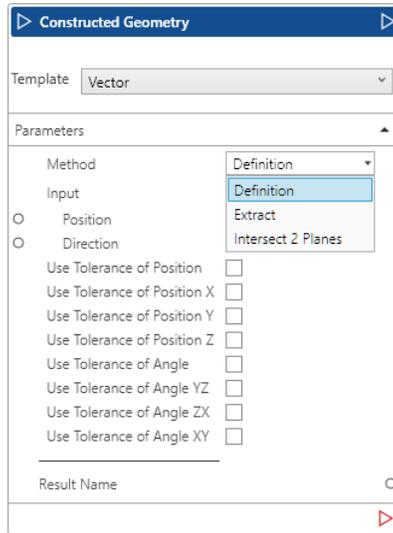
#### Point



# Vector

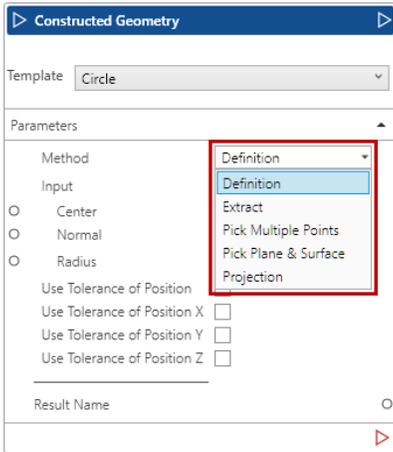


Geomagic Control X 2023.0.0

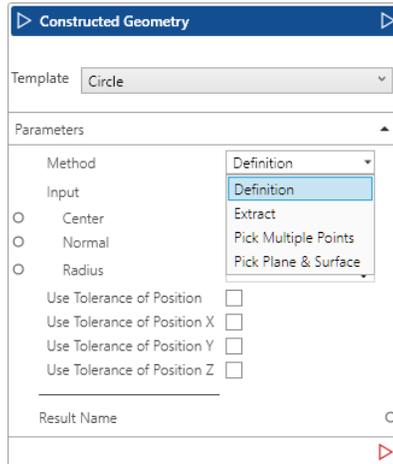


Geomagic Control X 2022.1.0

# Circle

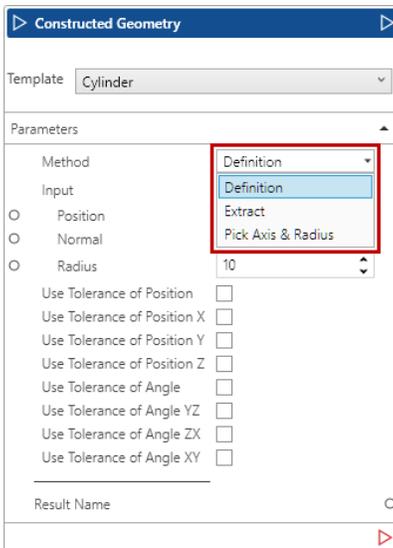


Geomagic Control X 2023.0.0

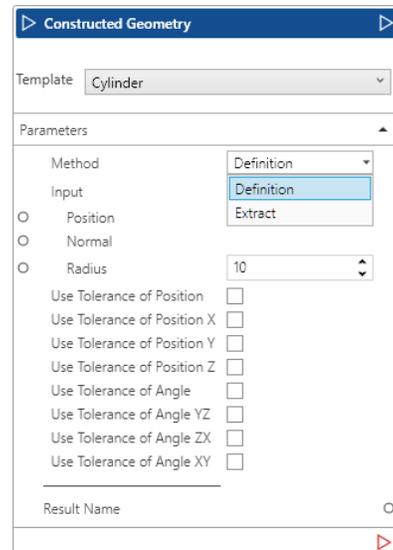


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# Cylinder



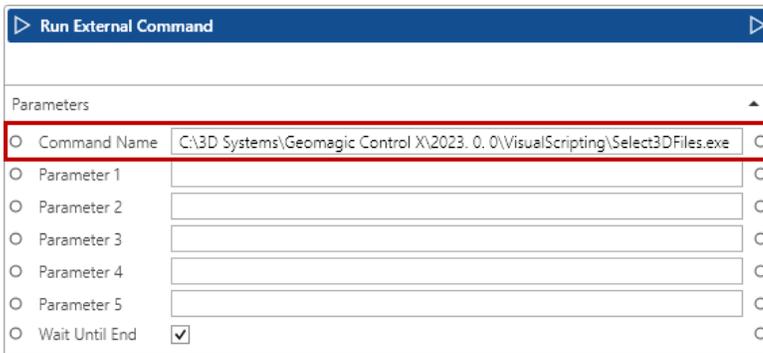
Geomagic Control X 2023.0.0



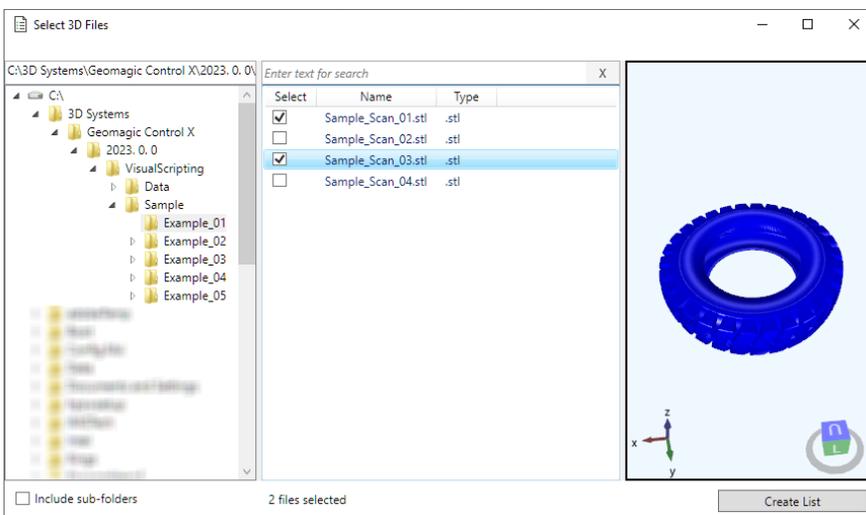
Geomagic Control X 2022.1.0

## Selecting Files While Script Is Running

You can now select files while a script is running using the “**Select3DFiles.exe**” file via the **Run External Command** action, which is provided with test sample script files.



The **File Selector (Select3DFile.exe)** allows selecting multiple files for the script using a new file selector. It includes a 3D Viewer for STL files. It creates a list of the files that were selected, which can then be used inside the script.



**Note:** The “**Select3DFiles.exe**” file is located in the VisualScripting directory. By Default, the location is:  
C:\3D Systems\Geomagic Control X\2023. 0. 0\VisualScripting

The following file formats can be selected using the “**Select3DFiles.exe**” file.

File Extension	Application
.stp, .step	STEP
.sat, .sab	ACIS Text/Binary
.igs, .iges	IGES
.vda	VDA-FS
.prt	Creo(Pro/E)
.prt	NX
.CATPart, .CATProduct	CATIA V5 Part/Assembly
.sldprt, .sldasm	SOLIDWORKS
.x_t, .x_b, .xmt_bin, .xmt_txt	Parasolid Text/Binary
.ipt, .iam	Inventor
.jt	JT
.ply	CyberWare
.obj	OBJ
.asc	ASCII Points
.3ds	3D Studio

## Additional Parameters in File (Import ASCII Geometry) Action

More parameters can now be used when importing ASCII-encoded geometry files into the inspection workflow.

File

Template: Import ASCII Geometry

Parameters

- \* File
- Geometry Type: Point
- Custom Identifier
- Template Name
- Unit: mm
- Separator
  - Whitespace (space, tab):
  - Other Character: ,
  - Comma(.) For Decimal Point:
- Encoding: Afrikaans (South Africa)

Result Name

Geomagic Control X 2023.0.0

File

Template: Import ASCII Geometry

Parameters

- \* File
- Geometry Type: Point
- Custom Identifier
- Template Name

Result Name

Geomagic Control X 2022.1.0

## Measuring Direction for Simulated CMM Point

Measuring direction can now be defined when creating simulated CMM points.

Constructed Geometry

Template: Sim CMM

Parameters

Method: Disk Contact

Position

Search Reference Position By Contacting:

Search Radius: 0.5

Search Depth: 5

Measuring Direction: Auto

- Auto
- Reference Normal
- Reference Tangent
- Manual

Use Tolerance of Position

Use Tolerance of Position X

Use Tolerance of Position Y

Use Tolerance of Position Z

Result Name

## Configurations of Aliases for Other Action's Outputs

Alias configuration for the outputs of other actions has become more intuitive and easier. The updated **Utility (Alias)** action allows you to customize aliases by typing expressions in the input box, as well as by specifying keys and their values.

Utility

Template: Alias

Parameters

Number of Inputs: 2

Alias Key 1: PrtName

Alias Value 1: Test Part

Alias Key 2: PrtNo

Alias Value 2: Prt123

Additional Aliases:

Aliases: Face1 = "Face<123>@ReferenceData1"  
Region1 = "Region<45>@ReferenceData2"

Geomagic Control X 2023.0.0

Utility

Template: Alias

Parameters

Aliases: PrtName = "Test Part"  
PrtNo = "Prt123"  
Face1 = "Face<123>@ReferenceData1"  
Region1 = "Region<45>@ReferenceData2"

Geomagic Control X 2022.1.0

## Option to Turn Off Automatic Report Pop-Ups

A new **"Don't Pop-up Report"** option has been added to the **Report (Report Manager)** action. This option prevents from the report from popping up after it is generated and allows you to continue your works without interruption.

Report

Template: Report Manager

Parameters

Method: Export Excel

\* Target Report Name: [ ]

\* Report File: [ ]

Don't Pop-up Report:

**Note:** The **"Don't Pop-up Report"** option is available for Excel, PDF, and PPT formats.

## Output Result Name and Result Status

Output Result Name and result status can now be added to the report.

Report

Template: Generate Report

Parameters

\* Template: [ ]

\* Result: [ ]

Reference Data: [ ]

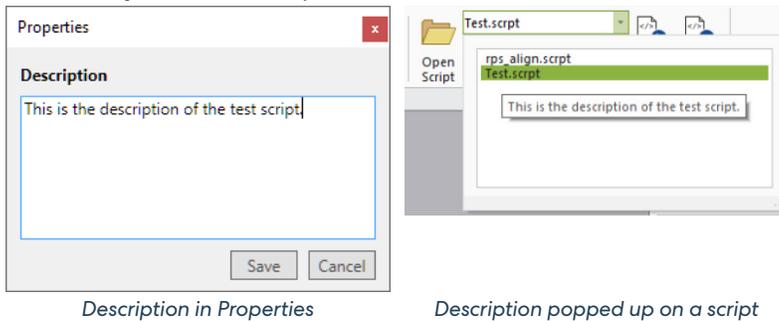
Custom Fields: [ ]

Result Name: [ ]

Result Status: [ ]

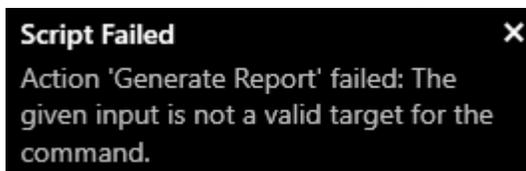
## Adding Description to Script

A description added to a script in **File > Properties** now displays in the script for quick reference when hovering the mouse cursor over it in the **Script List** of the Script Toolbar.



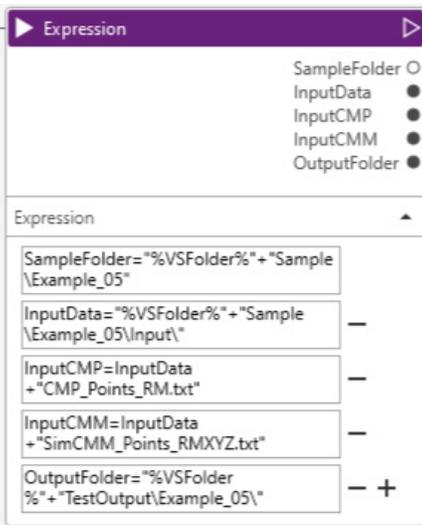
## Exception Message in Visual Script

Displayed a detailed exception message for invalid **Result Data** mode.



## Preserved Input Field Sizes for Expressions

In addition to supporting text-wrap for a long line of text, the input fields in the **Expression** also preserve the width and height of the input field as resized when you reopen the script.



## Required Parameters

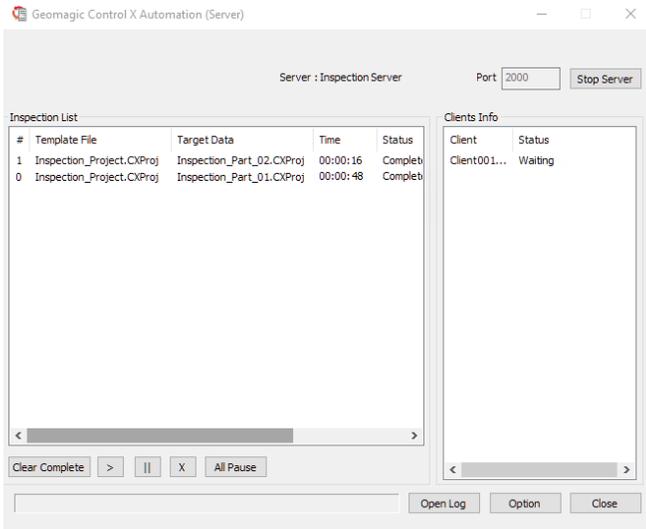
Reviewed and re-indicated required parameters in the actions.

# Automation Server / Client Improvements

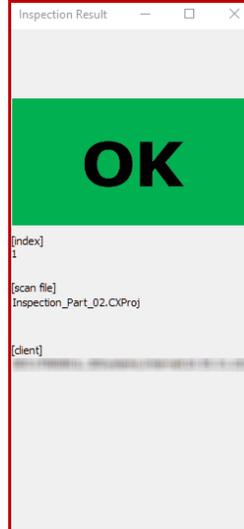
The following improvements were made to allow flexible and easy utilization of the Automation Server / Client.

## Result Window

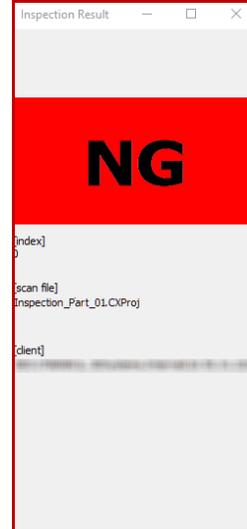
Improvements were made to the **Result** window. The network address of the server is also displayed in the Result window.



*Monitoring results of inspection items  
in Geomagic Control X Automation Server*



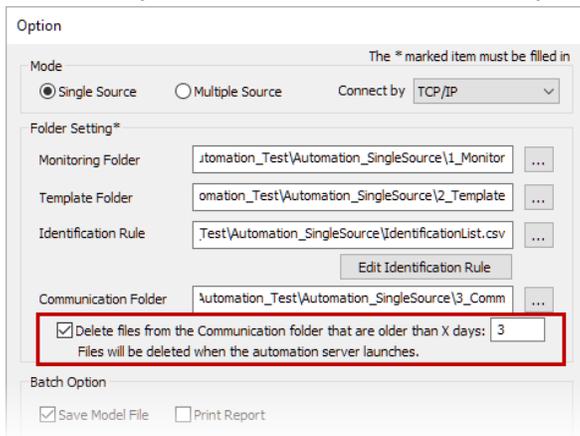
*OK - If all inspection  
results are passed.*



*No Go (NG) - If any of  
inspection results are  
failed.*

## Automatic Old File Deletion

Added ability to delete files older than certain days from the **Communications** folder.



## Communicate Inspection Results from The Automation Server to A Paired Application

The automation server can now send signals to communicate the inspection result to a paired application, e.g. scanner application. Please contact the [Support team](#) for additional details.

# Network Drive for Automation Server

Allowed use of mapped network drive.

# Deleting a Timed-Out Task in Automation Server

Allowed to delete a timed-out task affected the status of the next item in the inspection list.

# Other Improvements

## Automatic Retry

The automated inspection by the Automation Client retries automatically and logs an exception when the scan process stops unintentionally. Retries continue until the timeout is exceeded.

## Automatic Removing Empty Folders

Any empty sub-folders in the Monitoring Folder are removed automatically after the inspection is completed and when any scan file no longer exists in that folder.

## Automation Client and Server on Different PCs

The Automation Server and Clients can now be set up on different PCs.

## Increased Robustness and Stability

The robustness and reliability of the Automation Server and Client have been significantly improved. Please refer to the list of bugs fixed for the automation server [here](#).

# User Interface Improvements

The following improvements were made to UI / UX for intuitive and easy command access.

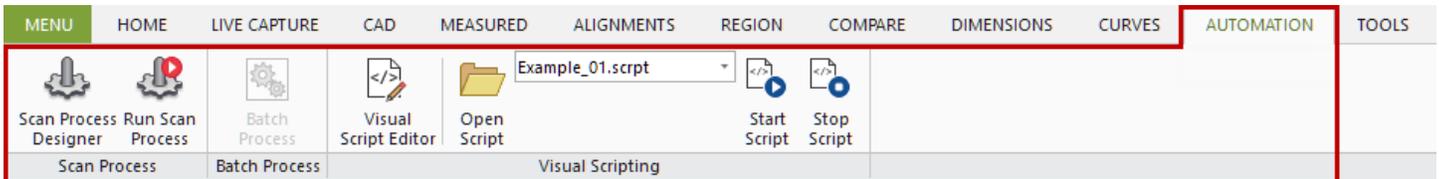
## Reconstructed Ribbon Bar

The commands in the **Ribbon Bar** have been relocated and restructured for easier access. The following commands are now accessible in the **Ribbon Bar**.

- **CAD Tools**
  - ◆ Healing Wizard
  - ◆ Find Defect
  - ◆ Convert To Mesh
- **Measured Tools**
  - ◆ Sew Boundaries
  - ◆ Edit Boundaries
  - ◆ Export Matrix
- **GD&T Tools**
  - ◆ Bore Depth
  - ◆ Counterbore
  - ◆ Countersink
  - ◆ Thickness
- **Curve Tools**
  - ◆ Spline By Fitting
  - ◆ Contour Curve From 3D Compare

## New Automation Tab

The commands for automated inspection have been regrouped and relocated in the new **Automation** tab. The following commands have been moved and reorganized in the **Automation** tab.

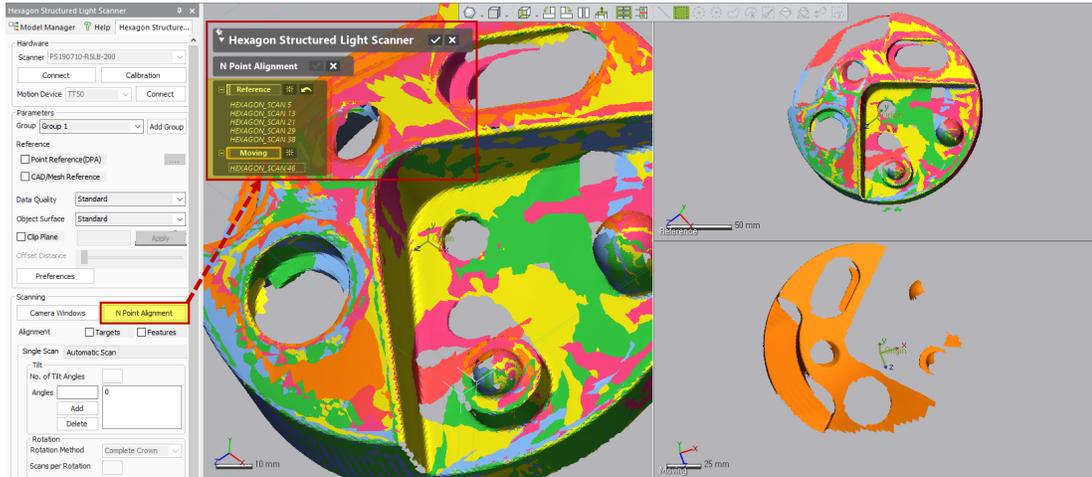


- **Scan Process**
  - ◆ Scan Process Designer
  - ◆ Run Scan Process
- **Batch Process**
  - ◆ Batch Process
- **Script Tools**
  - ◆ Visual Script Editor
  - ◆ Open Script
  - ◆ Start Script
  - ◆ Stop Script

# Improvements to Hexagon Structured Light Scanner Plug-in **CX-EC**

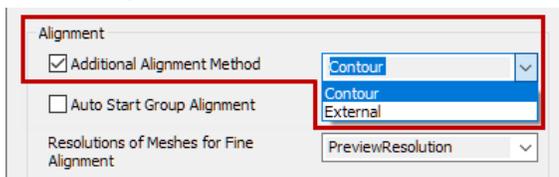
## Manual N-Point Alignment

The **N-Point Alignment** is now available for obtained scans in the **Hexagon Structured Light Scanner** command. This option allows you to align obtained scans by specifying corresponding points between scans. The **N-Point Alignment** can be used for scans even when the scanning process is done.



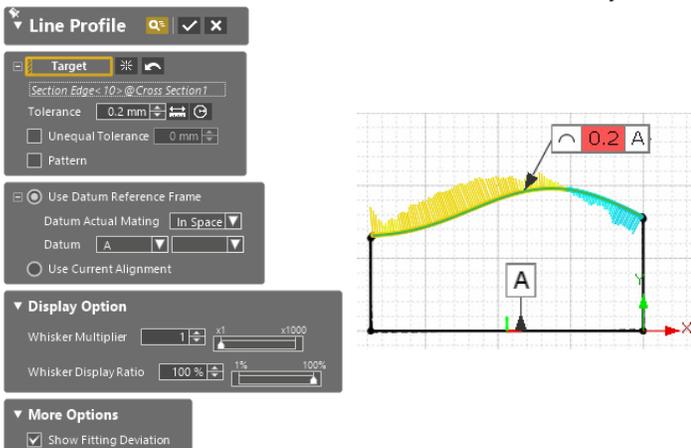
## Additional Alignment Method

You can now select the **Contour** or **External** methods as an additional alignment method that can be applied when the **Target** or **Feature** alignment is failed.



## New 2D Line Profile **CX-E** **CX-EC**

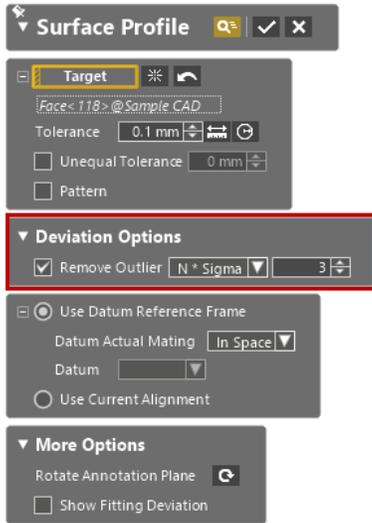
The new **2D Line Profile** has been introduced that allows you to measure **2D Line Profile** in a specific cross section.



New Line Profile for Cross Section

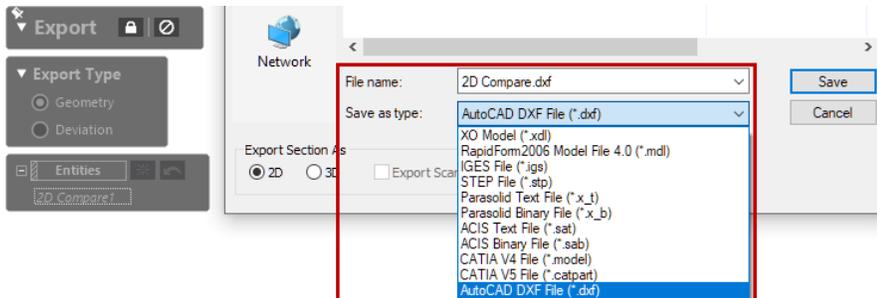
# Remove Outlier for Surface Profile CX-E CX-EC

The **Remove Outlier** option is now available for **Surface Profile**. This option allows you to remove outlier points that are out of specified criteria when fitting reference geometry based on Reference Data to achieve more accurate fitting results.



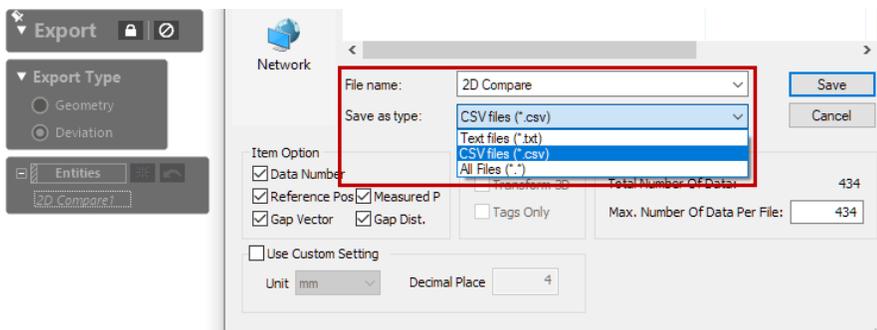
# Export 2D Compare Geometry and Deviation Data CX-E CX-EC

Geometries used for measuring **2D Compare**, and its deviation results can now be exported to the following formats.



## Supported File Formats for Geometry Export

- XO Model (.xdl)
- RapidForm 2006 Model File (.mdl)
- IGES File (.igs)
- STEP File (.stp)
- Parasolid Text File (.x\_t)
- Parasolid Binary File (.x\_b)
- ACIS Text File (.sat)
- ACIS Binary File (.sab)
- CATIA V4 File (.model)
- CATIA V5 File (.catpart)
- AutoCAD DXF File (.dxf)

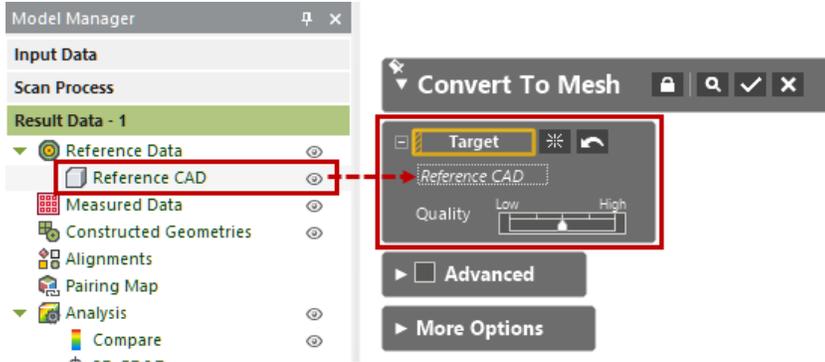


## Supported File Formats for Deviation Export

- Text File (.txt)
- CSV File (.csv)

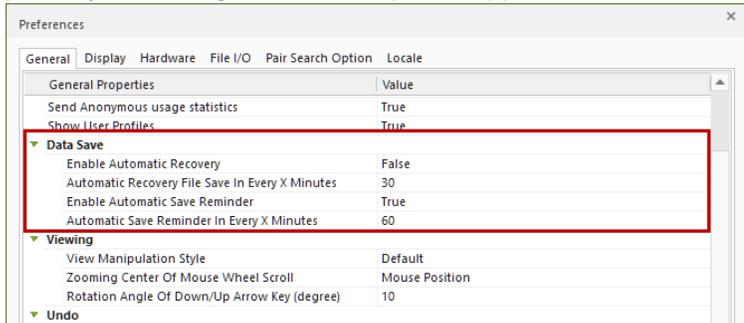
# Convert to Mesh in Result Data CX-E CX-EC

The **Convert to Mesh** command is now available directly in the **Result Data**.



# Auto-Save & Recovery CX-E CX-EC

The new options for supporting auto-save and recovery working files have newly been added. These options allow you to more safely protect your working files from unexpected application crashes.



**Note: In case of application crash, you will receive a notification and can decide the following operations:**

Geomag Control X

Some auto-recovery files from previous sessions were found. Do you want to review and open?

Yes: Review and Open  
No: Discard files  
Cancel: Keep files

Yes No Cancel

**A** **Yes:** Browse to the location of the auto-saved files.

**B** **No:** Discard reviewing the auto-saved files.

**C** **Cancel:** Keep them to review at the next launch.

# CAD File Import

Native CAD File Import has been updated to support the following versions:

CAD Application	File Extension	Version Supported	Comments
CATIA V5	.catpart, .catproduct	R8 - V5-6 R2022	Geometry and PMI
CATIA V6	.catpart, .catproduct	Up to V6 R2022x	Geometry and PMI
Creo (Pro/E)	.prt, .prt.*, .asm, .asm.*	Pro/E 16 – Creo 9.0	Geometry and PMI
Inventor	.ipt, .iam	V6 – 2023	Geometry Only
SIEMENS NX	.prt	11 – NX2206	Geometry and PMI
SOLIDWORKS	.sldprt, sldasm	98-2022	Geometry and PMI (2014-2022)
STEP	.stp, .step	AP203, AP214, AP242	Geometry Only <sup>1)</sup>

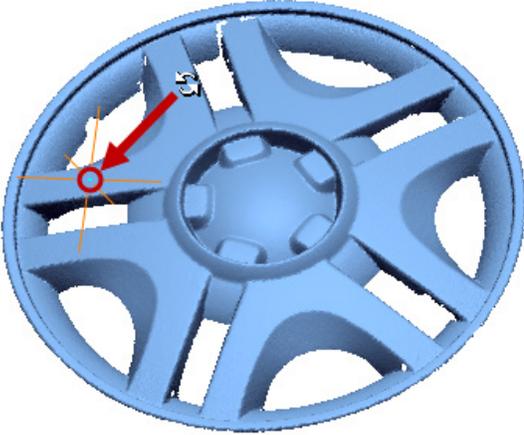
**1) STEP AP242 PMI is limitedly supported and available as a 'Preview' feature found under the Add-Ins menu.**

# Miscellaneous Enhancements

Common **CX-E** **CX-EC**

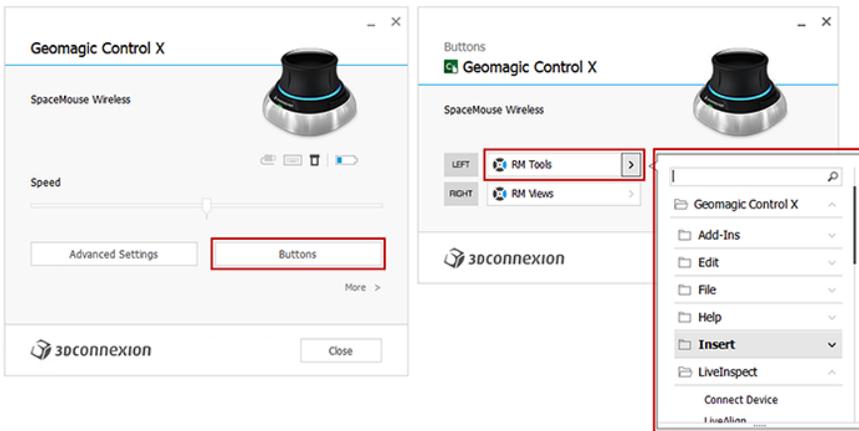
## Custom rotation center

You can easily set the rotation center of the view by middle-clicking on any point on the **Model View**.



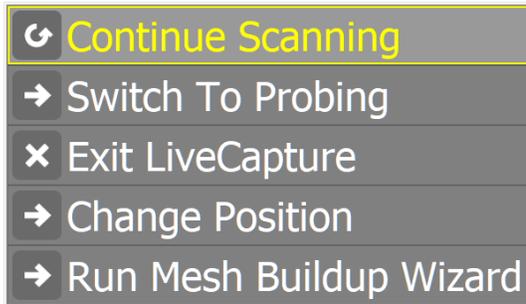
## 3D Mouse

In the **3DConnexion** application, you can configure **3D mouse** settings for Geomagic Control X.

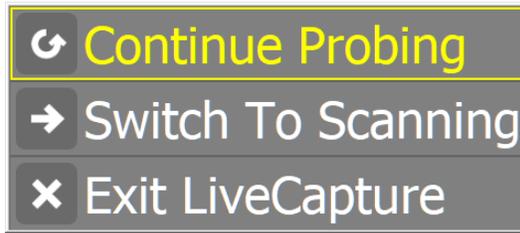


## Continue Scanning / Probing in LiveCapture CX-EC

When clicking the 'B' button on a measuring device to stop scanning or probing, you can now decide whether to continue with the current operation, or to stop and proceed to the next operations.



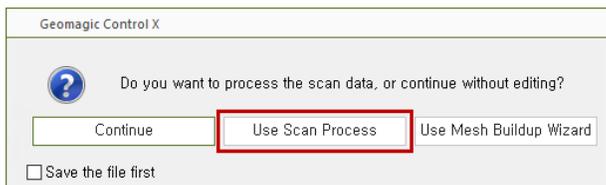
Continue Scanning



Continue Probing

## Scan Process in Scanner Direct Control

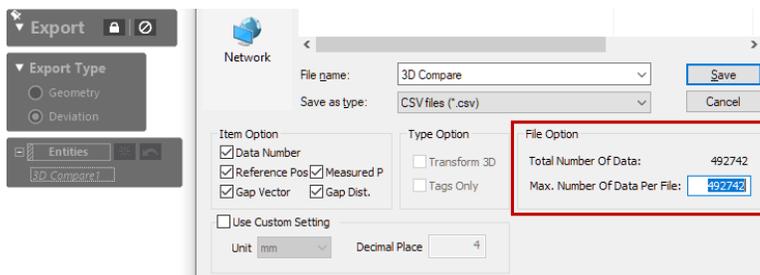
UI improvements to run the **Scan Process** directly after exiting **Scanner Interface** commands.



## File I/O CX-E CX-EC

### Exporting All Deviation Data

All deviation data can be exported without any data limitations.



### e57 File Import

Allowed sampling of e57 file on import.

## 4 FIXED BUGS

Note: The **CX-E** / **CX-EC** labels indicate features that are also available in Geomagic Control X Essentials and Geomagic Control X Essentials Connect software packages.

### Common **CX-E** **CX-EC**

- **GV-23485:** A group of measured GD&Ts was not added when generating an inspection report.
- **GV-23247, GV-22145:** Using the “Select Poly-Vertices/Poly-Faces Around Selected Faces/Edges” command in the Context Menu caused the application to crash.
- **GV-23206:** Failed Airfoil calculation in certain cases.
- **GV-22854:** 3D GD&T and Cross-sections were unavailable for all results when creating a report.
- **GV-22796:** Unnecessary option was displayed under the “Method” option in the Constructed Geometry (Point) action.
- **GV-22702:** In some cases, GeomagicControlX.exe execution file always needed to run twice to get it to open.
- **GV-22086:** “ResetOption.exe” in the License folder used to clean up the registry and Geomagic folder in the My Documents folder didn’t work.
- **GV-21637, GV-21578, GV-22264:** 3DConnexion’s 3D mouse didn’t rotate properly.
- **GV-21170:** When custom viewpoint was applied, measured data of an inactive result data was hidden.
- **GV-20784:** Zooming didn’t work correctly when zooming to the mouse position.
- **GV-20428:** Extracting circle geometry from edge of tessellated reference mesh didn’t work.
- **GV-18741:** The application would crash when changing the view direction in the result navigator if the result data contained alignments and 3D Compare.
- **GV-18342:** Default tolerance was incorrect for Angular dimensions if the unit was set to anything other than MM.
- **GV-17927:** Previous back-face still showed up when rotating the measured data after running the “Fix Normal > Interactive” command.
- **GV-17855:** The application would crash when creating multiple 2D Compares.
- **GV-16878:** Geomagic Control X file with lowercase extension (.cxproj) was imported rather than opened when using the command line argument.
- **GV-16808:** When creating annotations by selecting geometries created on a cross section, annotations were created with no tolerance property for position.
- **GV-16225:** The application would crash when adding a sub-command in a group to a new group in the “Customize Ribbon” Window.
- **GV-8894:** The ‘Show’ status of Measured Data was turned on unconditionally with the report option checked during automation.
- **GV-3607:** When canceling the “Measure Area” command with the “Don’t Quit Command With OK” button, the existing measurement areas were also been removed.

### Visual Script

- **GV-23414:** The visual script sometimes lost connection to the Geomagic Control X application.
- **GV-23021:** If the log message delivered through the Add Log Message action was too long (greater than 150k characters), the message was not displayed in the Console window of the Geomagic Control X application.
- **GV-22595:** When running a script from the Scripting Editor after running it from the Geomagic Control X application, another Editor appeared and the script didn’t run.
- **GV-22566:** Values were entered in the Setup Parameters action incorrectly and it caused unexpected errors in a certain scenario.

- **GV-22498:** Even though exporting the Report (e.g. PDF, Excel, etc.) failed, the failure message didn't show up in the "Notifications" window.
- **GV-22491, GV-19440:** Geomagic Control X application would crash when running the actions that didn't have a connection to the required option.
- **GV-22424:** A script became unresponsive when using the "Select Subfolders" option in the "Select Files" action.
- **GV-22382:** Script errors occurred in a certain file due to a connection issue to the Condition action.
- **GV-22367:** When importing a file by using the File (Import File) action, a failure error occurred even if the file import succeeded.
- **GV-22319:** The results of a polygonal mesh generated by the "Measured (Triangulate - 3D Triangulation)" action in Visual Script were different from those generated in Geomagic Control X.
- **GV-22238:** The bounding box depth was incorrect in some cases.
- **GV-22131:** Invalid input was created when copying and pasting the expressions described in the Tutorial.
- **GV-21999:** A script got stuck and unresponsive when searching for entities by type.
- **GV-21237:** The path was not found in the "Run External Command" action if it contained spaces.
- **GV-20890:** The wrong messages were displayed in the Notifications pane. For example, a "Script Completed" message was displayed when a failure occurred in the script, or error messages were shown even when the script was completed successfully.
- **GV-20482:** If the alignment failed by the given options specified in the Align action, it created alignment features with an unknown error mark in the Geomagic Control X application.
- **GV-20226:** The "Search Reference Position by Contacting" option didn't work when creating Simulated CMM points.
- **GV-18922:** The breakpoint didn't stop the script from running.

## Selection CX-E CX-EC

- **GV-20778:** The Selection of visible only was incorrect when there was an alignment while using the Decimate, Offset, and Normal Information Wizard commands.

## File I/O CX-E CX-EC

- **GV-22946:** The "Total number of data" value of data was displayed incorrectly when exporting.
- **GV-22806:** Failed to import reference data file when importing Control X file (.cxproj) saved in Geomagic Control X 2022.0.0.
- **GV-22069:** The application became unresponsive when loading a large XRL file.
- **GV-21884:** Failed to import XRL file in some cases.
- **GV-21258:** The application would crash when opening Geomagic Control X files (.CXProj) while there was no permission to access the Cache Folder for uploading and backup.
- **GV-21131:** Failed to import the OBJ file with the MTL file which has no name for the texture.
- **GV-20905, GV-4562:** An error occurred when loading a sample file from Tutorial for inspection using the PMI Wizard.
- **GV-16157:** Failed to import PLY files without including vertex normal data.
- **GV-10847:** Failed to import IGES file due to model size and position.

## GD&T CX-E CX-EC

- **GV-22934:** Number of pair points of a Surface / Line profile was increased after regeneration.
- **GV-16174:** The measured value and statistics didn't match when using the "Add Section Of Peak Position" option for Line Profile.

## Comparison Point CX-E CX-EC

- **GV-14383:** The CMP statistics didn't update after deleting one CMP until another CMP was created.
- **GV-7969, GV-4232:** Failed to create CMP points by using a pattern when the Lock option is used.

## Simulated CMM CX-E CX-EC

- **GV-22197,**  
**GV-14154,** Preview display issues when creating SIM-CMM Points  
**GV-14175:**
- **GV-17919:** The calculation of simulated CMM points contained invalid pair points.

## Scanner Interface

- **GV-23383,**  
**GV-23382,**  
**GV-22413,** Updated SDK to address bug issues in the Hexagon SLS plugin.  
**GV-22412:**  
CX-EC
- **GV-23084:** When using the VXEelements 9.1.0 version, the Creaform plug-in was not launched in the application.
- **GV-21899:** The application would crash when closing the VXEelements plugin during a point measurement.
- **GV-21855:** Calibration optimization issues in the plugin for the Creaform HandySCAN Black Elite scanner.
- **GV-21773:** Integration issues with launching Shining 3D Einscan from Geomagic Control X.
- **GV-7967:** Touch Trigger Probe issues for Kreon arms

## LiveInspect CX-EC

- **GV-22457:** The location of the options in the Live Inspect Settings window was incorrect.
- **GV-20979:** When selecting a planar face to create a circle, the appropriate TTS voice was not played.
- **GV-16664:** GD&T symbol was displayed behind DRO for non-English language.
- **GV-14568:** Unable to select created geometry as base geometry using the probe in a specific scenario.

## Automation

- **GV-23401:** The Automation Server shut down when the client was connected to the server from a different PC.
- **GV-23093:** If the scan file name or report name contained multilingual characters, the automation process didn't proceed.
- **GV-22965:** The Automation Server became unresponsive when changing the Communication Type while the Communication folder was specified on the network PC.
- **GV-22959,**  
**GV-22633:** In some cases, the connection from the client to the server was kept even though the server was stopped.
- **GV-22782:** TCP/IP connection issues.
- **GV-22697:** Deleting a timed-out task affected the status of the next item in the Inspection List.
- **GV-22632:** The Geomagic Control X application and Automation Client that was connected to the Automation Server via TCP/IP shut down suddenly while progressing inspection.
- **GV-22631:** The result was always displayed as 'None' if no report template was defined in the inspection template.
- **GV-22618,**  
**GV-22419:** The Inspection template was not identified correctly in some circumstances.
- **GV-21311:** The timeout limit didn't work in the Multiple Source mode.
- **GV-18073:** Result features were lost when the client/server output file name was duplicated.
- **GV-16009,**  
**GV-16270:** Invalid trigger type sent to the Automation Client.
- **GV-15145,**  
**GV-15144:** The Automation Client didn't start with settings as defined in the INI file when launched using the command line.
- **GV-14488:** Incorrect tolerance was used for 3D Compare in the report generated by the Automation Server if the template had multiple 3D Compare entities.

- **GV-23815:** When restarting the Automation Server with the changed identification rule file, the changed identification rule was not applied.
- **GV-13552:** Invalid values were allowed to be input for the Trigger option.

## 5 KNOWN ISSUES

Note: The **CX-E** / **CX-EC** labels indicate features that are also available in Geomagic Control X Essentials and Geomagic Control X Essentials Connect software packages.

### File I/O **CX-E** **CX-EC**

- **GV-24080:** The coordinates of the 2D compare tag are not exported.
- **GV-24100:** When setting the center of rotation with the middle button, the rotation center does not remain constant.

### Visual Script

- **GV-23540:** Planes are created sometimes when running the script.
- **GV-24009:** There are the Constructed Geometry actions that use the Fitting option where the default sampling ratio is not set to zero (0).

### Automation

- **GV-23873:** If there are a sub-folder that contains measured data, and measured data with the same name as the sub-folder in the Monitoring folder, only one result is generated after running an automated inspection in the Automation Client.
- **GV-23902:** The “Invalid template file name...” message box is popped-up two or more times when new folders that contain measured data are added to the Monitoring folder while the Automation Server is running in the Multiple Source mode.
- **GV-23903:** If a folder that contains measured data is added to a monitoring folder on the network while the Automation Server communicating by the “Shared file Comm.” method is running in the Multiple Source mode, the added data may not be recognized properly.



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