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File Format Support Matrix and Known Restrictions

Content

1 **Supported File Formats. 3**

1 Supported File Formats

This document contains the total list of all formats supported by the Visualization cloud service for SAP Enterprise Product Development, grouped by category.

Native 3D CAD Formats

Table 1

File Format	Extensions	Version Support	Cloud Viewing	Support	Capabilities, Known Restrictions, and Comments
CATIA V5	CATPART, CAT-PRODUCT, CATSHAPE	R10 to R33 (V5-6R2023)	Y (No PMI, Views, and Polylines)	High	<ol style="list-style-type: none">1. Piping support is limited.2. No electric features and reservations support; the exception is electric splice points.3. Not all Extended Workbench features are supported; contact us if you're using Extended Workbench features.
NX Assembly and Part	PRT	UG V10 to NX 2212 series (upto 2212.7000)	Y (No PMI, Views, and Polylines)	High	<ol style="list-style-type: none">1. Assembly-level defined views don't work together with exploded views (Configurations)2. Viewset from NX file not supported3. NX feature 'Reset Orientation' isn't supported4. NX feature View-set is represented as flat view list in Visual Enterprise scene5. No support of tabular part list from model views if part list isn't stored as part of CAD file6. NX Arrangement contains an exploded modelview view if it was created in that arrangement

File Format	Extensions	Version Support	Cloud Viewing	Support	Capabilities, Known Restrictions, and Comments
SolidWorks Assembly and Part	SLDASM, ASM, SLDPRT, PRT	1999–2023	Y (No PMI, Views, and Polylines)	High	<ol style="list-style-type: none"> 1. Import of Construction geometry like Points, Coordinate Axis, Surfaces/Curves, Wireframes planes 2. Missing geometry if no Parasolid data is present in the file 3. Only Dimension Annotation created by the DimXpert tool in SolidWorks is supported 4. Annotation Views, Default, and User-defined views not supported 5. Multiple configurations: Only resolved (activated) configurations are loaded 6. Exploded views within configuration aren't supported 7. Embedded piping not supported (assembly-level geometry)
Solid Edge Assembly and Part	ASM, PAR, PWD, PSM	ST1 to ST10, and up to 2023 (first release)	Y (No polylines)	Medium	<ol style="list-style-type: none"> 1. PMI not supported 2. Section View not supported 3. Alternate Assembly not supported

File Format	Extensions	Version Support	Cloud Viewing	Support	Capabilities, Known Restrictions, and Comments
Inventor Assembly and Part	IAM, IPT	Inventor 9–2024	Y (No polylines)	Medium	<ol style="list-style-type: none"> 1. PMI isn't supported 2. Import of construction geometry; for example, surfaces, points, planes, and wireframes aren't supported 3. Not all assembly level features are supported 4. No support of Persistence Identifiers and CAD Identifiers 5. Positional Representations not supported 6. Flexible Assemblies not supported 7. Cross-section views not supported 8. Billboarded PMI not supported 9. Assembly Modelviews don't support component visibility, all components will be visible 10. Inventor Modelviews publish feature will be ignored
CATIA V4	MODEL	4.15–4.25	Y (No polylines)	Medium	PMI not supported
Creo Parametric (Pro/ENGINEER) Assembly and Part	ASM, PRT	Pro/E 2000i to Creo Parametric 10	Y (No PMI, Views, and Polyines)	Low	<ol style="list-style-type: none"> 1. Not all assembly level features are supported 2. No family table instance support 3. No support for connection points type 4. No support for cross-section views 5. No support of simplified representation

Interchange and DCC (Digital Content Creation) Formats

Table 2

File Format	Extensions	Version Support	Cloud Viewing	Support Level	Capabilities, Known Restrictions, and Comments
Parasolid	X_T	V7 to V32	Y (No polylines)	High	Configurations not supported
PLMXML (Schema 6.0 referencing JT)	PLMXML	4 and 6	Y	High	<ol style="list-style-type: none"> 2D drawing files not supported Materials (diffuse, opacity etc.) applied from assembly to parts aren't supported.
JT Assembly and Part	JT	6.4 up to 10.7	Y (No PMI, Views, and Polylines)	High	<ol style="list-style-type: none"> Import of LIBRA entities not supported Import Cross section and exploded views not supported Only the first section plane is imported To export multiple levels of details and XTBREP with referenced JT files, source data must contain solids
Creo Parametric Neutral (Pro/ENGINEER) Assembly and Part	NEU	2000i to Creo 10	Y (No PMI, Views, and Polylines)	Medium	No support for connection points type
IGES	IGES, IGS	Up to 5.3	Y (No polylines)	High	<ol style="list-style-type: none"> Linked IGES files as assembly isn't supported (only monolithic files supported) Line style for polylines not supported 2D vector data is not supported 2D vector data is not supported

File Format	Extensions	Version Support	Cloud Viewing	Support Level	Capabilities, Known Restrictions, and Comments
STEP	STEP, STP, STEPZ, STPZ	STEP protocols supported: AP203 (Edition 1, Edition 2), AP214 (up to Edition 3), AP242 (Edition 1 IS), AP242 BO XML	Y (No PMI, Views, and Polylines)	High	
CATIA Graphical Representation	CGR	CGR files from R10 version to R32 (V5-6R2022)	Y (No polylines)	High	<ol style="list-style-type: none"> 1. CGR: Import of Construction geometry like points, coordinate axis, curves planes not supported 2. CGR: 2D drawing files not supported 3. CGR: Embedded geometry XVL type not supported
CATIA V6 (3DXML)	3DXML	CATIA V6 R2010x to R2013x, 3DExperience up to R2023	Y (No polylines)	Medium	<ol style="list-style-type: none"> 1. No Kinematics/animation support 2. No texture support 3. PMI not supported 4. Metadata in scene tree is sorted in alphabetical order so original order isn't preserved. 5. Initial view isn't respected when loaded 6. Import of Construction geometry like points, coordinate axis, curves planes not supported 7. 2D drawing files not supported 8. Embedded geometry as type XVL not supported 9. Embedded geometry as type Exact not supported 10. Embedded geometry as type Dynamic tessellation not supported.

File Format	Extensions	Version Support	Cloud Viewing	Support Level	Capabilities, Known Restrictions, and Comments
ACIS Assembly and Part	SAT	Versions 14 up to 21, and up to 2019 1.0	Y	Medium	2D vector data not supported
Industry Foundation Classes (IFC) Format	IFC, IFCXML	2x3, 2x4, and IFC4, IFCZIP.	Y	Medium	<ol style="list-style-type: none"> 1. Scene tree hierarchy doesn't group similar entities 2. Only geometrical representations are imported. No project, process, and operation-related information is imported. 3. Global ID from IFC used as persistence identifier 4. IFC format 2x2 isn't supported
Collada	DAE		Y	High	
STL	STL		Y	High	
Wavefront	OBJ		Y	Medium	No polyline import and export support
Scaleable Vector Graphic	SVG		Y	High	No <pattern> support
Point Cloud Format	E57, LAS, LAZ		Y	High	

Note

See Appendices for limitation details.

Drawing Formats

Table 3

File Format	Extensions	Version Support	Cloud Viewing	Support Level	Capabilities, Known Restrictions, and Comments
CATIA V5 Drawings	CATDRAWING	R10 to R33 (V5-6R2023)	Yes	High	

File Format	Extensions	Version Support	Cloud Viewing	Support Level	Capabilities, Known Restrictions, and Comments
NX Drawing	PRT	UG V10 to NX 2212 series (up to 2212.7000)	Yes	High	
SolidWorks Drawing	SLDDRW	1999–2023	Yes	Medium	<ol style="list-style-type: none"> Imports cached tessellated geometry Shaded geometry in a drawing is loaded as wireframes
Creo Parametric Drawing	DRW	2000i to Creo 10	Yes	Medium	<ol style="list-style-type: none"> No support for connection points type 3D projected geometry is not supported. Frame geometry require .frm files to be uploaded along with the drawing files Snap line and section lines are not supported
Solid Edge Drawing	DFT	ST1 to ST10, and up to 2023	Yes	Medium	<ol style="list-style-type: none"> Limited support of table for part list, hole table and user table Chamfer dimension, angular coordinate dimension, and coordinate dimension are not supported Symmetric diameter and welds have limited support Blocks : All grouped entities are stored in the main view of the drawing
AutoCAD Sheet Set	DST	Up to version 7	Yes	Medium	Refer to AutoCAD DWG Drawing Publishing Limitations_FP9 document for on-premise.
AutoCAD Drawing Object	DWG	R11/ R12 up to R32 (2014- 2020)	Yes	Medium	Refer to AutoCAD DWG Drawing Publishing Limitations_FP9 document for on-premise.

File Format	Extensions	Version Support	Cloud Viewing	Support Level	Capabilities, Known Restrictions, and Comments
AutoCAD Drawing Interchange	DXF	R11/ R12 up to R32 (2014- 2020)	Yes	Medium	<p>Refer to AutoCAD DWG Drawing Publishing Limitations_FP9 document for on-premise.</p> <ol style="list-style-type: none"> 1. Semantic PMI not supported - Text is imported as geometry 2. Parametric object import is limited to the following types: circles, circular arcs, ellipses, elliptical arcs, text. 3. Per-face normal 4. Per-face transparency

Raster Image Formats

Table 4

File Format	Extensions	Version Support	Capabilities, Known Restrictions, and Comments
JPEG raster images	JPG, JPEG	All	
PNG raster images	PNG	All	

Visual Enterprise File Formats

Table 5

File Format	Extensions	Version Support	Capabilities, Known Restrictions, and Comments
SAP VE VDS Files	VDS	4	Only VDS files generated by SAP Visual Enterprise version 9 and above

Appendix: SVG Element Support Matrix

Table 6

Supported	Partially Supported	Not Supported
<ul style="list-style-type: none"> • svg • g • defs • style • circle • ellipse • line • path • polygon • polyline • rect • text • tspan • textPath • linearGradient • radialGradient • stop 	<ul style="list-style-type: none"> • switch <ul style="list-style-type: none"> • Behaves like <g> (no conditions evaluated) • image <ul style="list-style-type: none"> • Yes, for PNG and JPG (via file or data) 	<ul style="list-style-type: none"> • desc • title • metadata • use • symbol • tref • altGlyph • altGlyphDef • altGlyphItem • glyphRef • marker • color-profile • pattern • clipPath • mask • feBlend • feColorMatrix • feComponentTransfer • feComposite • feFlood • feGaussianBlur • feImage • feMerge • feOffset • feTile • filter • feConvolveMatrix • feDiffuseLighting • feDisplacementMap • feMergeNode • feMorphology • feSpecularLighting • feTurbulence • feDistantLight • fePointLight • feSpotLight • feFuncR • feFuncG

Supported	Partially Supported	Not Supported
		<ul style="list-style-type: none"> • feFuncB • feFuncA • cursor • a • view • script • animate • set • animateMotion • animateTransform • animateColor (deprecated) • mpath • font (deprecated) • font-face (deprecated) • glyph (deprecated) • missing-glyph (deprecated) • hkern (deprecated) • vkern (deprecated) • font-face-src (deprecated) • font-face-uri (deprecated) • font-face-format (deprecated) • font-face-name (deprecated) • foreignObject

Appendix: SVG Miscellaneous Limitations



- Percentages as size have very limited support
- Limitations apply to:
 - XSL / CSS
 - References
 - Markers
 - Color-profiles
 - Masking / compositing
 - Fonts
 - Animation
 - Scripting
 - Linking
 - Interactivity
 - Filter effects

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