SIEMENS

Teamcenter 11.2 lifecycle visualization

Release Notes

010221540

Contents

Chapter 1: Release Notes introduction

These Release Notes summarize the changes made for Teamcenter 11.2 lifecycle visualization, encompassing all of the stand-alone Lifecycle Visualization products.

Chapter 2: Lifecycle Visualization products

Teamcenter lifecycle visualization is available in multiple product configurations, some of which also support optional software modules.

> **Note**
>
> For the latest information on optional modules, licensing requirements, and pricing, see your Siemens PLM sales representative.

Base

Base is the entry-level viewer product configuration in the Lifecycle Visualization family of products. Providing powerful 2D viewing and markup capabilities along with basic 3D viewing functionality, Base is an ideal solution for the visualization of the many 2D and 3D file formats supported.

Features provided by Base include:

- Access to more than 40 2D file types
- A rich set of 2D navigation tools (pan, zoom, page changing, etc.)
- 2D adjust
- 2D markups and 2D GD&T markups
- 2D measurements
- 2D comparisons
- 2D printing
- 2D image capture
- 2D Snapshots
- Option to save and load session files containing 2D and 3D content
- Option to open and save .plmxml files
- .jt file support
- Visualize 4GD worksets
- 3D viewing
- 3D navigation tools (pan, zoom, rotate, fit all, zoom area, and seek)
- Standard views (view only)

- Basic support for product structure
- Basic 3D properties viewing
- Product and Manufacturing Information (PMI) viewing
- Basic 3D cross section functionality
- Basic 3D markup and 3D GD&T markup functionality (view only)
- Basic 3D measurement functionality (single and double only)
- Quick Pick, Smart Pick, and selection preview when selecting part features
- Basic 3D printing
- 3D Snapshots
- Ability to export images to popular formats (.jpg, .png, .bmp, .tiff, .hpgl, and more)
- Peer-to-Peer conferencing
- PDM integration

Base supports the following optional features:

- ECAD Viewer (PCB and Schematic file viewing, markup, measurement, DFx, and printing)

Standard

Standard provides an integrated environment for viewing data from multiple sources, including CAD, ERP, PDM, and legacy systems. An easy-to-learn user interface encourages collaboration among users without requiring complex training.

Features provided by Standard include:

- All the functionality provided by Base
- Direct read of 3D VRML, STL, Solid Edge, and NX formats
- Advanced 3D viewing
- Enhanced navigation features
- Ability to view and interact with product structure
- Selecting parts by area or volume
- Ability to control visibility by layers defined in the CAD environment
- Advanced 3D measurements
- 3D markups and 3D GD&T markups
- 3D image capture

- Enhanced .plmxml file support
- Vis Issues Manager

Standard supports the following optional features:

- ECAD Viewer

Standard supports the following optional file converters:

- IGES
- STEP
- DXF

Professional

Professional provides access to several add-on modules that further extend the analysis capability of Lifecycle Visualization while also enabling users to author content.

Features provided by Professional include:

- All the functionality provided by Standard
- Advanced navigation features
- Ability to create and save alternate hierarchies
- 3D transformation, manipulators, and part manipulation mode
- Honor constraints in session files or PLM XML
- Advanced cross section functionality
- Comparing similar 3D models
- User-defined 3D coordinate systems
- Quick Color tool
- True Shading
- Advanced appearance tools
- Outline capture
- Creating and managing callouts and symbols
- Creating and editing thrustlines
- Generating exploded views
- Creating and playing motion (.vfm) files

- Capturing movies
- CAE results viewing
- Viewing Visualization Illustration documents
- Report generation
- Stereo viewing
- Virtual Reality device support
- Ability to export JT, Nastran, Robface, and VRML files
- Ability to export .plmxml files

Professional supports the following optional modules:

- Visualization Illustration
- Concept Desktop
- Concept Showroom
- Variation Analysis
- Quality Producer (Windows only)
- ECAD Viewer
- Visual Reports
- Animation authoring
- .vfz collaboration file authoring
- ADAMS conversion (Windows only)
- STEP file export
- MetaVPDM

Professional supports the following optional file converters:

- IGES
- STEP
- DXF

Mockup

A real-time digital prototyping solution, Mockup combines a wide range of features with a robust set of dynamic analysis tools to help engineers identify defects in digital products at a much earlier stage of the product design cycle.

Features provided by Mockup include:

- All the functionality provided by Professional
- Dynamic interference checking to find and display interference quickly during motion playback
- Matrix clearance analysis to perform complete analysis on large, 3D product databases
- Create and manage part constraints
- 3D grouping
- Filter queries
- Area and mass properties reports
- 3D alignment
- Volume clipping
- Hide obscuring geometry
- Color application
- Part editing
    - o B-Rep face reversing
    - o Re-tessellation
    - o Decimation
    - o Visibility simplification
    - o JtOptimize

Mockup supports the following optional modules:

- Visualization Illustration
- Concept Desktop
- Concept Showroom
- Variation Analysis
- Quality Producer (Windows only)
- Jack

- ECAD Viewer
- Visual Reports
- .vfz collaboration file authoring
- ADAMS conversion (Windows only)
- STEP file export
- MetaVPDM
- Analysis
- Animation authoring
- Path planning
- ClearanceDB

Mockup supports the following optional file converters:

- IGES
- STEP
- DXF

Convert and Print

Convert and Print are flexible command-line conversion and print software utilities that augment the power of the Lifecycle Visualization products. Both applications provide you with tools to convert and print many file formats, resulting in consistency and efficiency.

The key advantage to Convert and Print is their capacity to integrate effectively both native and external file format converters. By integrating the converters, you can convert original files directly into a supported file format. You can also print these files directly into the format required by your printer.

External converters supported include:

- Excel (Office 2007, Office 2010, and Office 2013)
- PowerPoint (Office 2007, Office 2010, and Office 2013)
- Word (Office 2007, Office 2010, and Office 2013)
- Visio (Office 2007, Office 2010, and Office 2013)
- Microsoft Project (Office 2007, Office 2010, and Office 2013)

Chapter 3: Deprecated platform announcement

Siemens PLM Software will discontinue support for Teamcenter lifecycle visualization ClearanceDB (client and proxy tiers) on all Sun platforms, starting with Teamcenter 12.x. This includes Clearance Calculator (ClearanceExe), ClearanceDB Client (ClearanceDbClient), and ClearanceDB Proxy (ClearanceDbProxyServer and ClearanceDbProxyClient). ClearanceDB Server tier support on Sun will remain consistent with Teamcenter Server platforms.

Chapter 4: What's new

What's new overview

This Teamcenter lifecycle visualization release includes the following new features and enhancements. The descriptions below are categorized by product level and optional module.

New features for Base

License server version

Lifecycle Visualization products use the Siemens PLM Software Common Licensing Server for served licenses. If you use served licenses, the Siemens PLM Software Common Licensing Server software must be version 6.4.5 or later.

> **Note**
>
> You can also license Lifecycle Visualization products using a stand-alone license, a single user license tied to a specific computer. No license server service is required with a stand-alone license.

Mac platform version

Lifecycle Visualization is supported on version 10.10.x of the Mac OS platform.

Additional locales supported

The Lifecycle Visualization application and help are now localized for the following additional languages:

- Czech
- Polish
- Portuguese (Brazil)

Display contents of PDF sticky notes

When you choose **View** (2D) tab→**Orientation** group→**Browse**, you can move the mouse pointer over a PDF note to display the contents. While the note is displayed, you can double-click it to copy the contents to the Windows clipboard.

Ribbon bar interface

Siemens PLM Software is adopting a consistent look for many of its products. This look is now available for the Teamcenter lifecycle visualization user interface.

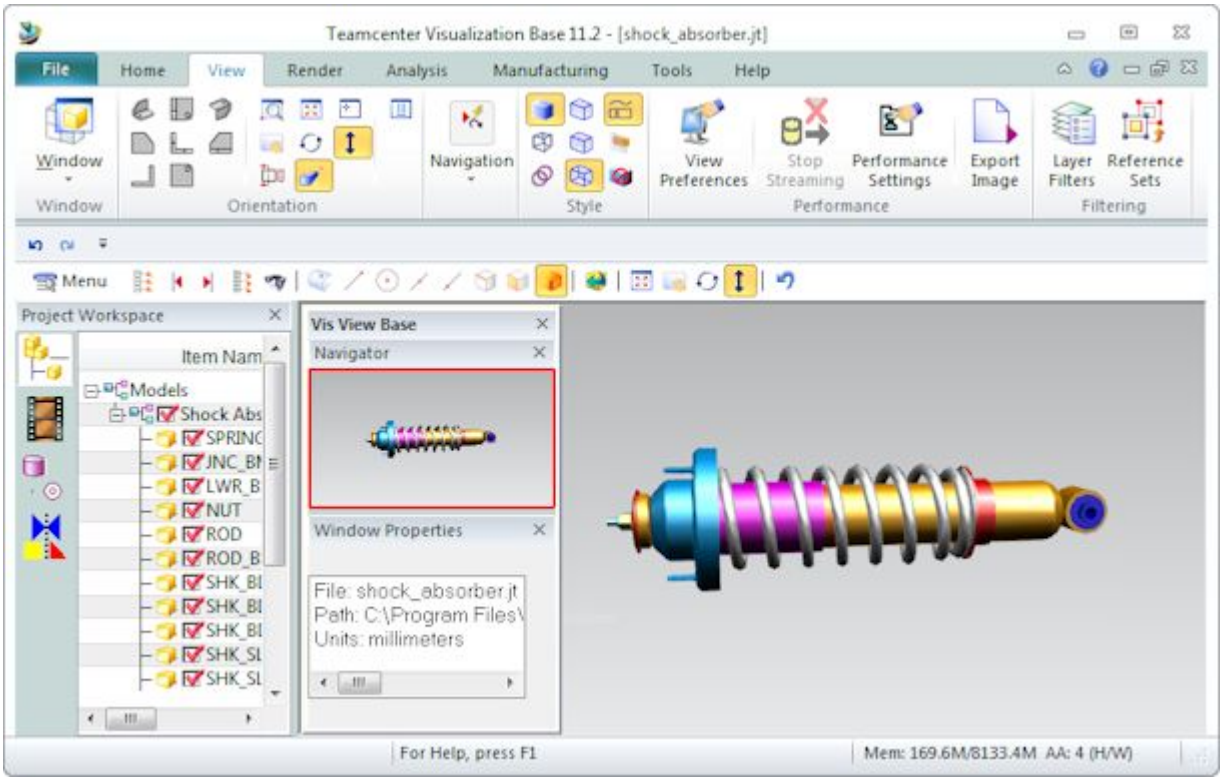
A Ribbon bar, which replaces toolbars and menus, provides access to frequently used commands with a minimum number of mouse clicks while maintaining a maximum graphics window area.

The Ribbon bar organizes commands in groups on tabs. The groups that appear by default depend on the type of document you are viewing. You can show and hide groups on the Ribbon bar to suit your workflow. You can also add groups, rename groups, and create new tabs and groups.

A quick access toolbar provides a place for your to store commands from the Ribbon bar that you use most often.

An application toolbar, under the Ribbon bar, provides commands specific to the type of document open in the Viewing window, 2D or 3D.

To enable the new interface, add the Windows environment variable **TCVIS_ENABLE_RIBBONS**, and set it to **true**.



CAE viewing enhancements

In the Base and Standard service levels of Teamcenter lifecycle visualization, you can now view Computer Aided Engineering (CAE) Finite Element Analysis (FEA) results exported as a .jt file from a supported CAE application.

Currently supported CAE applications include NX, I-deas, and FEMAP.

Note

- You can only view the first CAE result in v10 JT (or later) files created in NX 10 (or later).
- You cannot probe or annotate in v10 JT (or later) files created in NX10 (or later).
- You have limited viewing capabilities with CAE results in v9.x JT (or earlier) files created in NX, I-deas, or FEMAP.
- A graphics card supporting OpenGL 3.2 or greater is required to visualize CAE data created in NX10 (or later) in Teamcenter lifecycle visualization.

New features for Professional

Option to embed images in JT files

When you specify JT export options, the option **Embed images in Jt files** enables you to specify how to save images used in texture maps and light maps. You can choose one of the following:

- Embed the images in the JT file.
- Save images as separate files in the same location as the JT file.

New features for Mockup

Mockup support on Mac platform

The Lifecycle Visualization mockup service level can now be installed on the Mac OS platform.

Jack enhancements

- A new figure style has been introduced for the human, offering more realistic shape representation. This figure can be loaded with casual or basic clothing options and uses a new scaling approach to ensure smooth transitions between body regions.
- Additional anthropometric databases can be used to scale the Jack and Jill figures. This includes the ability to represent individuals from the following populations: Asian Indian, Canadian Land Forces, Chinese, German, North American Automotive, and NHANES II. The previous segmented human models are compatible with the new databases.

Documentation enhancements

Help enhancements

The Teamcenter lifecycle visualization help is provided as a web application that allows you to more easily serve a single copy of the help to mulitple users and also includes an improved web-based search.

Benefits include:

- The help search no longer requires Java applets and no longer breaks due to Java security updates.
- The search is faster.
- Filtering is more intuitive.
    - The search results are sorted by content area.
    - The **Filter by** pane displays the number of results found in each content area. Select one or more content areas to filter the results.
    - The **Selected** pane lists the filters you select. In this pane, you may deselect one or more filters or clear all your filters.
- One copy of the help can be served to multiple users.
- The same web server can serve Teamcenter lifecycle visualization, NX, and Teamcenter help. It can also serve multiple versions and locales.

Installing the help on a local or network server requires these steps:

1. Install the Siemens PLM Documentation Server on a local or network computer.
2. Install the Teamcenter 11.2 lifecycle visualization help on the Siemens PLM Documentation Server.
3. Set the port and server for help access for clients during the Teamcenter 11.2 lifecycle visualization installation or installation modification. Clients can then access help through the client **Help** menus.

Chapter 5: Supported platforms and locales

Supported platforms

You can run Teamcenter lifecycle visualization on the platforms listed below. For more information about system hardware and software requirements, see the hardware and software certifications page on GTAC.

http://www.plm.automation.siemens.com/locale/support/gtac/certifications.shtml

Stand-alone Lifecycle Visualization

Stand-alone Lifecycle Visualization is supported on these platforms:

Platform	Version	Chipset
Mac OS	10.10.x	x86-64
Red Hat Enterprise Linux Desktop	6.x	x86-64
SUSE Linux Enterprise Desktop	11 SP2	x86-64
Windows Desktop x64	• Windows 7 SP1 Professional, Enterprise, and Business • Windows 8 (desktop app only)	x86-64 (both Intel and AMD)
Windows Server 64-bit	• Windows Server 2008 R2 SP1 Standard and Enterprise **Note** Convert and Print only (all tiers) • Windows Server 2012 R2 Standard and Enterprise **Note** Convert and Print only (all tiers)	x86-64 (both Intel and AMD)

For information about supported platforms for ClearanceDB, see *ClearanceDB Administration* in the Teamcenter 11.2 lifecycle visualization help.

Stand-alone Lifecycle Visualization notes

<table>
<tr><th>Platform</th><th>Notes</th></tr>
<tr><td>Mac OS</td><td>

You can install the Base, Standard, Professional, and Mockup service levels.
For the software to function correctly under Leopard, X11 for Mac OS X must be installed. X11 is included on the Leopard DVD installation disc.
On Mac OS X, Motif version 2.1.32 is also required and may be downloaded from the following location.
www.ist-inc.com/DOWNLOADS/motif_download.html
Follow the instructions at the OpenMotif download site. In the table in Step 1, click the latest Mac OS X version, which is shown below:

<table>
<tr><td>Mac OS X 10.5 Universal (Leopard)</td><td>compat-2.1.32</td><td>openmotif-compat-2.1.32_IST.macosx10.5.dmg</td><td>MD5</td></tr>
</table>
Update the Mac OS X11 to the latest release. The download of Open Motif may include a specific version of X11 in its software prerequisites. The version of Mac OS X was 10.5.5 when the X11 v2.1.5 update was released.
</td></tr>
<tr><td>SUSE Linux</td><td>

You must configure X Server with 24-bit visuals as the default.
Motif 2.3 libraries are required to install and run Lifecycle Visualization.
To check which versions of Motif are installed, type:
<code>rpm -a -q | grep -i motif</code>
If the required Motif 2.3 libraries are present, the report includes lines similar to this:
<code>openmotif-libs-2.3.1-3.13</code>

</td></tr>
<tr><td>Red Hat Linux</td><td>

You must configure X Server with 24-bit visuals as the default.
Motif 2.3 libraries are required to install and run Lifecycle Visualization.
To check which versions of Motif are installed, type:
<code>rpm -a -q | grep -i motif</code>
If the required Motif 2.3 libraries are present, the report includes lines similar to this:
<code>openmotif-2.3.3-1.el6.x86_64</code>

</td></tr>
<tr><td>Miscellaneous</td><td>

PDM and PLM XML are now installed by default in all service levels on the following platforms:

Windows
Linux and Mac (PLM XML only)

</td></tr>
</table>

Supported locales

All localized versions of the user interface and documentation have been updated for Teamcenter 11.2 lifecycle visualization.

The Lifecycle Visualization application and help are localized for the following languages:

- Chinese (Simplified and Traditional)
- Czech
- French
- German
- Italian
- Japanese
- Korean
- Polish
- Portuguese (Brazil)
- Spanish
- Russian

Some optional modules are available in English versions only, including:

- ClearanceDB
- Convert and Print
- Jack
- Quality Producer
- Variation Analysis

Note

- A separate installer is required for each language version of the help.
- Because of operating system limitations, Teamcenter lifecycle visualization does not support non-ASCII characters, including 8-bit accented Western European and multi-byte characters, in file names.

Chapter 6: System requirements

General system requirements

Performance is directly related to system processor speed, RAM, and your video card. Although Lifecycle Visualization will run if your system meets the minimum requirements described in this section, your machine should be considerably more powerful for you to get the full benefit of the visualization features.

Minimum required system

For 3D models, 2D images, and ECAD images, your system should have a 1 GHz or better processor, 1 GB RAM, 2 GB of virtual memory, and a supported graphics card with 128 MB of dedicated video RAM and support for OpenGL 2.1 or greater.

Minimum recommended system

For 3D models, 2D images, and ECAD images, your system should have a 2 GHz or better 64-bit processor, 4 GB RAM, 6 GB virtual memory, and a supported graphics card with 256 MB of dedicated video RAM and support for OpenGL 3.2 or greater. For more information on which graphics adapters are supported, see *Graphics hardware requirements*.

> **Note**
>
> These are only recommendations. For information on officially supported workstations, video cards, and drivers, see the hardware and software certifications page on GTAC.
>
> http://www.plm.automation.siemens.com/locale/support/gtac/certifications.shtml

License server requirements

Lifecycle Visualization products use the Siemens PLM Software Common Licensing Server for served licenses.

The Siemens PLM Software Common Licensing Server software must be version 6.4.5 or later.

Teamcenter community collaboration visual conferencing requirements

To use Teamcenter 11.1 lifecycle visualization with Teamcenter community collaboration visual conferencing you must have Teamcenter community collaboration conference server 11.1 or higher

Teamcenter community collaboration visual conferencing is not supported on older conferencing servers.

Graphics hardware requirements

Supported graphics adapters for use with Teamcenter lifecycle visualization include the following professional 3D graphics adapters with their professional drivers:

Manufacturer	Models
NVIDIA	Quadro, QuadroFX, Grid
AMD	FireGL, FirePro
Intel	HD 4600 and newer

You can have confidence that certified systems are capable of correctly displaying all of the advanced features of Teamcenter lifecycle visualization, including effects such as high-quality transparency, shadows, mirrors, CAE analysis results, intersection volumes, and other features requiring advanced graphics capabilities. Siemens PLM Software and our OEM partners rigorously test specific graphics adapters and drivers on a select set of workstations. Graphic adapters and drivers that pass are certified for use with a particular version of Teamcenter lifecycle visualization.

For information about certified systems, see the GTAC hardware and software certifications page and follow the link to *Hardware (Graphics Card) Certifications*.

> **Note**
>
> Starting with Lifecycle Visualization version 10.1, if your graphics card supports OpenGL 3.2 or later, Lifecycle Visualization uses advanced OpenGL features to improve 3D rendering performance, including making use of memory on the graphics card. If you work with large models, we recommend graphics cards with 2GB or 4GB of GPU memory, or more. While exact memory requirements are highly situation specific, a rough guideline for required graphics card memory is 1 GB of graphics memory for every 2 GB of loaded geometry data.

Consumer line and 2D graphics adapters

We do not recommend consumer lines of graphics adapters. These adapters and drivers are designed for playing games and emphasize frame rate over correctness. Drivers for consumer graphics are serviced by driver development and ISV partner teams separate from those for professional 3D adapters.

However, even these video adapters, if you have the most current graphics driver, usually work at a reduced effects level with Lifecycle Visualization. It may be necessary to reduce the performance settings.

> **Note**
>
> When the OpenGL level of a graphics adapter is not capable of rendering an advanced visualization effect, the visual effect is silently omitted.
>
> Some graphics adapters, especially those manufactured before 2008, contain issues that prevent Lifecycle Visualization from displaying certain specific features properly, regardless of their OpenGL support level claims.

Resolving graphics adapter issues

You are encouraged to report graphics display problems found on recommended and certified hardware to http://www.siemens.com/gtac. We attempt to reproduce the problem. If a reproducible problem is determined to lie within Lifecycle Visualization software, we fix it directly; if a problem is found with the graphics driver, we work with the graphics vendor to isolate the issue and assist them as necessary to produce a driver patch.

We do not attempt to resolve problems that cannot be reproduced on recommended or certified hardware; we advise you to take such issues directly to the graphics adapter manufacturer.

Help requirements

To run the Teamcenter 11.2 lifecycle visualization help, the following requirements must be met:

- Windows:
  - Internet Explorer – 8 or higher
  - Firefox – 16 or higher
  - Chrome – latest release
- Linux:
  - Firefox latest release
- Mac OS X:
  - Safari – latest version
  - Chrome – latest version
- The Siemens PLM Documentation Server requires a supported 64-bit Java Runtime Environment (JRE) on the PLM Documentation Server host. The PLM Documentation Server does not support 32-bit Java.

  Make sure a supported 64-bit JRE is installed on your PLM Documentation Server host.
- To watch videos and simulations, the Adobe Flash Player version 10 or later is required. You can download the latest version of the player from this location:

  http://get.adobe.com/flashplayer/
- Some portions of the help are in the PDF format, which requires Adobe Acrobat Reader (any version). You can download the reader from this location:

  http://get.adobe.com/reader/

> **Note**
>
> The help files are no longer packaged with the Teamcenter 11.2 lifecycle visualization installer. To install the help, you must install the Siemens PLM Documentation Server and the Teamcenter 11.2 lifecycle visualization help, which are installations separate from the installation of Teamcenter 11.2 lifecycle visualization. You must also set the port and server for help access for clients during the product installation or after the product installation. A separate installer is available for each language version of the help.

Firefox caveats

Firefox recommends that users update to the latest version for security issues surrounding Java. They do not recommend using older versions of Firefox due to these issues. See the following for more information:

http://support.mozilla.org/en-US/kb/latest-firefox-issues

Chrome caveats

By default, Chrome does not launch local files (e.g. file:///). To enable this, users have to start Chrome from the command line with the –allow-file-access-from-files switch. One source for how to do this is: http://www.askyb.com/chrome/open-local-file-in-google-chrome/

PDF requirements

To view, mark up, and print PDF and Postscript files on Mac and Linux systems, you must install and use Ghostscript.

1. You can navigate to the following Web site to download and install the Ghostscript software:

   https://download.industrysoftware.automation.siemens.com/open-source/ghostscript

2. After installing Ghostscript on Mac or Linux systems, add the following to your **vvcp.darwin.cfg** or **vvcp.linux.cfg** file in the *<installation_directory>***/app_defaults/** directory:

   ***PSPath:** *<path to the 'gs' executable>*

   For example, add ***PSPath: /usr/apps/gs864/bin/gs**.

Ghostscript is also required to work with Postscript files on Windows systems. You can download the Windows version from the site shown above.

> **Tip**
>
> To configure Ghostscript to use system fonts on Windows, install Ghostscript before you install Lifecycle Visualization.

IDW requirements

To work with Autodesk Inventor .idw 2D files, you must have one of the following:

- Autodesk Inventor
- Autodesk Inventor View, a freely distributed application available from Autodesk
- Design Tracking, a freely distributed utility available from Autodesk

Note

- Support for Autodesk Inventor .idw files depends on the version of the Autodesk Inventor, Autodesk Inventor View, or Design Tracking that you have installed. For example, if you have Design Tracking 7, then Inventor 5.3 through 7 files are supported. If you have Autodesk Inventor View 11, then Inventor 5.3 through 11 files are supported.
- Autodesk Inventor .idw files prior to version 5.3 are not supported.

ADAMS conversion requirements

The ADAMS conversion feature, which converts RES files to the VFM motion file format, requires the Professional or Mockup product configuration, as well as an additional license. It is supported on Windows only.

Visualization Illustration requirements

Visualization Illustration is supported on Windows only, and requires the 64-bit version of Visio 2010 with Service Pack 2 or 2013 with Service Pack 1. Visio 2013 SP1 requires *Update 2878322 for Visio 2013* (http://support.microsoft.com/kb/2878322). Standard, Professional and Premium editions of Visio are supported.

DPV Reporting and Analysis and Creating Work Instructions in Teamcenter require Visualization Illustration.

Convert and Print requirements

The Convert and Print Office Automation feature requires Microsoft .NET Framework.

You can download the latest Microsoft .NET Framework for your version of Windows from http://www.microsoft.com/en-us/download/

ClearanceDB requirements

For information about the requirements for ClearanceDB, see *ClearanceDB Administration* in the Teamcenter 11.2 lifecycle visualization help.

Interoperability with other software

Teamcenter 11.2 lifecycle visualization is supported with the following Siemens PLM Software:

- NX 8.x, 9.x, 10.x
- Product Master Management 10.1
- Teamcenter (Unified) 9.x, 10.x, 11.x
- Teamcenter community collaboration 9.1 and 10.1
- Teamcenter community collaboration 10.1.2 (if on an IPv6 network)
- Teamcenter community collaboration conferencing server 11.1
- Teamcenter Enterprise 8.1 and 9.0

Teamcenter client communication system (TCCS) requirements

The Teamcenter client communication system (TCCS) manages communication and file transfers between Teamcenter clients and servers. TCCS contains the Teamcenter Server Proxy (TSP) application which manages HTTP/S communication with a Teamcenter server and provides support for forward proxy, reverse proxy, and Kerberos authentication. TCCS also contains the FMS client cache (FCC), which uploads files from your workstation to a Teamcenter volume and also downloads requested files from the volume to your workstation. The Teamcenter lifecycle visualization integration with Teamcenter requires an FCC to transfer volume data between Teamcenter and the viewer.

TCCS is normally installed with the Teamcenter rich client. If the Teamcenter rich client is installed on your machine, most likely no additional installation steps are necessary. If you do not have the Teamcenter rich client installed, but you need to transfer volume data between Teamcenter and the viewer, you can you can download the TCCS installer from the GTAC site http://www.siemens.com/plm/support. For more information, see the *Lifecycle Visualization Installation* guide.

> **Note**
>
> An FCC is required for Teamcenter 8 onwards. Although an FCC is not required for Teamcenter 2007, it is recommended.

For information on installing TCCS with the Teamcenter rich client, refer to *Windows Clients Installation*, *Linux Clients Installation*, or *Macintosh Clients Installation* within the Teamcenter documentation.

Chapter 7: Resolved Problem Reports

Customer problem reports (PRs) resolved for Teamcenter 11.2 lifecycle visualization include:

PR	Product	Category	Summary
7521957	VISVIEW	APPEARANCES	Textures are missing after exporting a file.
2205693	VISVIEW	2D_FILE_PDF	The display in the embedded viewer is different from Acrobat.
7120176	VISVIEW	2D_FILE_PDF	Misaligned text when exporting DWF images to PDF.
7450668	VISVIEW	2D_FILE_PDF	1) Too much RAM used by VisView.exe. 2) Graphics disappear when zooming PDF.
7472225	VISVIEW	2D_FILE_PDF	Crash when printing a PDF as monocolor.
7502591	VISVIEW	2D_FILE_PNG	.png file is incorrectly displayed.
7487439	VISVIEW	2D_MARKUP	The raster quality of the PDF is too low.
7535694	VISVIEW	2D_SNAPSHOTS	Issues reading JT files and saving snapshots in Teamcenter.
1975135	VISVIEW	3D_FIL_PRC_XFDF	Problems creating 3D PDF in Russian locale.
2225851	VISVIEW	3D_FIL_PRC_XFDF	Can't generate 3D PDF report in TC- MPP installed for Chinese environment.
7531351	VISVIEW	3D_FILE_STEP	Step export crashes.
7495700	VISVIEW	3D_CAE	Visualization with CAE layers works in My Teamcenter but not in MPP.
1973139	VISVIEW	3D_COMPARE	Incomplete transparency in 3D comparison result.
8255103	VISVIEW	3D_FILE_IGES	When using characters "ä,ü,ö" in a folder name, igestojt.exe fails.
1927316	VISVIEW	3D_FILE_JT	exportFile API doesn't change metadata values of the root node.
1948636	VISVIEW	3D_FILE_JT	Export of JT writes Monolithic although Standard is selected.
7238716	VISVIEW	3D_FILE_JT	Export of a JT model causes an immediate viewer exit without an error message.
7250900	VISVIEW	3D_FILE_JT	When exporting a JT, the warning dialog box appears twice, in German and English.
8251928	VISVIEW	3D_FILE_JT	When exporting a JT, the file structure is not maintained.
7226998	VISVIEW	3D_FILE_PRT	NX part file causes crash.
7247250	VISVIEW	3D_FILE_STEP	When using characters "ä,ü,ö" in a folder name, iges, step, and dxf files fail to open.
1128298	VISVIEW	3D_FILE_VRML	Exported section as WRL cannot be displayed using custom settings.
1985820	VISVIEW	3D_FILE_VRML	Issue with rendering of VRML extrusion nodes in Visview.
2221123	VISVIEW	3D_MARKUP	Undo/redo function in Lifecycle viewer is not working correctly for 3D markup.
7545079	VISVIEW	3D_MARKUP	TCVis stopped working after using Enable 3D Markup.

PR	Product	Category	Summary
1997123	VISVIEW	3D_MEASUREMENT	Show Leaf Structure preference affects measurement results.
1997242	VISVIEW	3D_MEASUREMENT	Inconsistency between measurement label and highlighting using Show Leaf Structure.
7340195	VISVIEW	3D_MEASUREMENT	Measurement display preferences are not fully restored.
7400732	VISVIEW	3D_MEASUREMENT	Performance issue with more than 65 chain measurements in scene.
8252027	VISVIEW	3D_MEASUREMENT	Crash when deleting associative measurement.
7234535	VISVIEW	3D_NAVIGATION	Very slow positioning using space mouse.
7245731	VISVIEW	3D_NAVIGATION	Using two fingers to rotate, the model snaps out of place.
7426002	VISVIEW	3D_NAVIGATION	CAD1 (NX) Navigation style does not deselect the Rotate icon.
7478182	VISVIEW	3D_NAVIGATION	Sensor Navigation Properties not available after section plane creation.
7376789	VISVIEW	3D_PROPERTIES	JT attributes with names longer than 58 characters do not display.
8264338	VISVIEW	3D_RENDERING	PMI geometry is slipping through from one view to another.
1963511	VISVIEW	3D_SELECTION	Measuring with the selection filter set to part highlights/measures sub-parts.
7294634	VISVIEW	3D_SELECTION	Rotating a specific model and then hovering with mouse pointer causes crash.
7427288	VISVIEW	3D_SELECTION	Selection preview of points not updated when creating a double measurement.
7458831	VISVIEW	3D_SELECTION	Selection preview of point just finds facet edges for selection in main views.
7459626	VISVIEW	3D_SELECTION	Limiting selection feature with Ctrl key exits point calculation mode.
7514991	VISVIEW	3D_SELECTION	Selection filter Point is misleading (means point on surface).
7474973	VISVIEW	3D_SNAPSHOTS	Message that unsaved markup data will be lost when loading snapshot.
7433754	VISVIEW	3D_SNAPSHOTS	Product view issue.
7463983	VISVIEW	ANIMATION	Captured walk does not save.
7405945	VISVIEW	ANIMATION	Animation playback is played twice.
7486554	VISVIEW	ANIMATION	Changing animation text action properties in 3D window do not save.
7491538	VISVIEW	ANIMATION	Cannot save animation file after reopen.
7274629	VISVIEW	APPEARANCES	Saving an appearance palette may not save all images.
7311092	VISVIEW	APPEARANCES	Suppressed JT materials are not displayed in the Project Workspace window.
7314485	VISVIEW	APPEARANCES	In PLMVis Load Palette does not load appearance palettes persistently.
7340653	VISVIEW	APPEARANCES	3D Appearance: Texture mappings get scaled when loaded through PLMXML.
7531489	VISVIEW	APPEARANCES	Specular highlights on top of base texture is not handled correctly.

PR	Product	Category	Summary
7300647	VISVIEW	ASSEMBLY_TREE	The preference Show end item structure does not work on exported JT.
7309906	VISVIEW	ASSEMBLY_TREE	The state for the alternate hierarchy will not be updated after using All Off.
7479370	VISVIEW	ASSEMBLY_TREE	Find No. sort is strange.
2237707	VISVIEW	CLEARANCE	Penetration location in customer data is incorrect.
7247627	VISVIEW	CLEARANCE	Flipping view of clearance result will show wrong measurement value.
7416671	VISVIEW	CLEARANCE	Need to stop calculation when no matching product in database.
7483271	VISVIEW	CLEARANCE	Some contacts are reported as penetrations when performing the NURBS clearance analysis.
8260016	VISVIEW	CLEARANCE	Documentation incomplete: limitation for multi-threading for clearance analysis.
7435994	VISVIEW	CLEARANCE	Customized clearance issue status is not working.
7471932	VISVIEW	CLEARANCE	Crash when analyzing part pairs with 3D manipulator and pen. region is less than 1.
1902665	VISVIEW	CLEARANCE_DB	User dispositions on several CLDB product configurations do not work.
7402247	VISVIEW	CLEARANCE_DB	Crash when e-loading global.dbc for a second product in the same session.
7428873	VISVIEW	CLEARANCE_DB	Disposition comment does not honor semicolon and colon.
8276673	VISVIEW	CLEARANCE_DB	Oracle Instant Client Version for CLDB Proxy.
7457220	VISVIEW	CLEARANCE_DB	Clearance DB report doesn't correctly apply changed server-side filter.
7458327	VISVIEW	CLEARANCE_DB	Uploading same results file many times may destroy Clearance DB integrity.
7486017	VISVIEW	CLEARANCE_DB	Analyze_product.pl sometimes can't reconnect to Clearance DB but ends normally.
7534680	VISVIEW	CLEARANCE_DB	Clearance DB blocked by upload of Rules.csvcldb file containing an syntax error.
1994154	VISVIEW	CROSS_SECTION3D	3D compare result loses tricolor mapping after section clip.
7247293	VISVIEW	CROSS_SECTION3D	In PLMVis, there is a lag while navigating a scene with clipped section using space mouse.
7247722	VISVIEW	CROSS_SECTION3D	Section not restored if session created in 10.1.x and loaded in 11.1.
7261872	VISVIEW	CROSS_SECTION3D	Section keeps moving after holding down then releasing arrow key.
7280452	VISVIEW	CROSS_SECTION3D	Translation issues introduced with patch.
7282155	VISVIEW	CROSS_SECTION3D	Fast cross section loses capping on context menu open.
7445975	VISVIEW	CROSS_SECTION3D	Cross section manipulator does not reappear after hide/show.
8252355	VISVIEW	CROSS_SECTION3D	Enter and Delete keys stop working in Position Plane dialog box if closed once.
7512270	VISVIEW	CROSS_SECTION3D	Organization of Cross Section Preferences dialog is misleading.

PR	Product	Category	Summary
1964869	VISVIEW	CROSS_SECTION3D	Picking does not work in Clip Both mode in PLMVis when SF=point.
7512173	VISVIEW	CROSS_SECTION3D	Non-selective section restored from PLMXML as selective.
7282522	VISVIEW	DIRECTMODEL	New memory consumption of display lists or VBOs are not documented.
7319110	VISVIEW	DIRECTMODEL	The conversion of a JT to ULP format creates a corrupted JT.
7172802	VISVIEW	DIRECTMODEL	Geometry disappears in Clearance when Show Intersection Volume is on.
7339555	VISVIEW	DIRECTMODEL	Section caps are lost when feature lines with silhouettes are enabled.
7402030	VISVIEW	DIRECTMODEL	No section capping, hatching or intersection regions on solid body.
8274443	VISVIEW	DIRECTMODEL	Measure distance on JT causes memory overflow.
7189387	VISVIEW	DIRECTMODEL	Show Edges during Clearance using Section causes graphics problem.
7497646	VISVIEW	DIRECTMODEL	Very high impact on Oracle CPU by harvest_mmv_index utility.
7207975	VISVIEW	DIRECTMODEL	Using Cross Section Flip View causes end caps to disappear.
7509784	VISVIEW	DIRECTMODEL	MMV is not recognized with additional revision rule.
7258846	VISVIEW	FILTERS	Compound filter consisting of volume filters cannot be restored completely.
7452803	VISVIEW	FILTERS	Saved named filters force case sensitive option on.
1989153	VISVIEW	FRAMEWORK_COMMS	Right-click menu on wrong window (dual monitor usage).
7234720	VISVIEW	FRAMEWORK_COMMS	Session fails to open when sent from Teamcenter.
7333976	VISVIEW	FRAMEWORK_COMMS	File Usage Confirmation window appears when opening Product View for single part.
7517810	VISVIEW	FRAMEWORK_PC	Ribbon bar: TcVis crashes on Win 8.1.
7517824	VISVIEW	FRAMEWORK_PC	Text in menu duplicated.
7521878	VISVIEW	FRAMEWORK_PC	The playback function does not work properly.
7524575	VISVIEW	FRAMEWORK_PC	Ribbon bar customizing.
7526071	VISVIEW	FRAMEWORK_PC	The function Customize the Ribbon does not work properly.
7531348	VISVIEW	FRAMEWORK_PC	Issue with help files
7544012	VISVIEW	FRAMEWORK_PC	Selection toolbar does not have any mouse-over tool tips.
7548047	VISVIEW	FRAMEWORK_PC	Ribbon customizations don't take effect after closing window.
2231070	VISVIEW	GDT_MARKUP	KPC symbol is filled with black for 2D GTD markup.
7162999	VISVIEW	GDT_MARKUP	Composite feature control frame is constructed incorrectly.
7533060	VISVIEW	HELP	Unable to open HTML datatset in TcVis standalone via Teamcenter PLM integration.
7524587	VISVIEW	HELP	Help install on server.

PR	Product	Category	Summary
7544651	VISVIEW	HELP	Not able to open the help.
7322174	VISVIEW	IMMERSIVE_DISP	Spaceball transformations are not visible in 3D view.
7431733	VISVIEW	ISSUES	Custom IssueReportRevision type is used only for the first snapshot.
7403539	VISVIEW	LAYER_FILTERS	Layer Filter dialog box with Show PMI checked does not show all associated PMIs.
7264553	VISVIEW	NAVIGATOR	Change in docking window name.
6841023	VISVIEW	OUTLINE_CAPTURE	PMI CSYS trihedron missing from outline capture.
7278235	VISVIEW	PARASOLID_INTEG	Minimum distance performance regression.
7461358	VISVIEW	PARASOLID_INTEG	Incorrect minimum distance measurement using customer data.
7297064	VISVIEW	PART_EDIT	Retessellation of part loses materials.
8265587	VISVIEW	PART_REPORT	Unable to create the specified part report. No leaf component elements can be found.
1991439	VISVIEW	PART_REPORT	Part Report does not find Leaf Comp under CompoundRep mapped as EI.
1129048	VISVIEW	PLMXML_FILE_TYP	Displaying check box in PLMXML Export dialog box not OK on mouse over.
7239740	VISVIEW	PLMXML_FILE_TYP	Broken reference error when sending Product View to TcVis.
7245569	VISVIEW	PLMXML_FILE_TYP	Broken references when loading motion frame file.
8277068	VISVIEW	PLMXML_FILE_TYP	Missing info for supported versions of other Siemens PLM Software file formats.
7443142	VISVIEW	PLMXML_FILE_TYP	PLMXML error document could not be loaded, problem with duplicate ID.
1128472	VISVIEW	PMI	Specific request to show lightweight session.
1982790	VISVIEW	PMI	Clear Properties on PMI does not return to original Appearance Properties.
7270707	VISVIEW	PMI	Subassembly section curves are shadowed at the assembly level section cut.
7273959	VISVIEW	PMI	Toggling PMI Section View at different levels in assembly results in incorrect geometry.
7304061	VISVIEW	PMI	JT2Go does not show WELD PMIs in Model Views menu.
7347161	VISVIEW	PMI	Help is missing scenarios that cause a PMI Missing flag to appear in product.
7403653	VISVIEW	PMI	Strange behavior with PMI from NX Fabrication Label selection and attributes.
7456322	VISVIEW	PMI	Wrong context menu on label of PMI Coordinate system.
8252614	VISVIEW	PMI	PMI Coordinate System not usable/selectable.
8255200	VISVIEW	PMI	PMI Ordinate Dimensions wrong orientation in JT.
8272460	VISVIEW	PMI	Stacked PMI in JT causes issues with multi-selection.
7268441	VISVIEW	REFSETS	JT files missing during NX lightweight save.
7423604	VISVIEW	REFSETS	Opening a JT produced with mergeSheets=false is slow.

PR	Product	Category	Summary
6942361	VISVIEW	SESSION	No warning when losing markup text when saving session file.
7221553	VISVIEW	SESSION	Opening .vfz back into TcVis takes too long.
7279343	VISVIEW	SESSION	Issue with saving a session after deleting a second node.
7474959	VISVIEW	SESSION	Failed to open document message when loading session files.
7517975	VISVIEW	SURFACE_ANALYSIS	TCVis stopped working after using Surface Analysis and closing the window.
1976576	VISVIEW	SWEPT_VOLUME	Creating swept volume ignores layer filter.
2199581	VISVIEW	THRUSTLINE_EDIT	Length of thrustline does not change during drag.
7212049	VISVIEW	VISUAL_REPORT	Visual reports configuration issue.
7235761	VISVIEW	VISUAL_REPORT	JT attribute execute not populating when working with static and configured inserted assemblies.
7249568	VISVIEW	VISUAL_REPORT	Results not complete if assembly inserted.
7261094	VISVIEW	VISUAL_REPORT	Problem with visual report rule containing check on empty string.
2233285	VISVIEW_CONVERT	COMMAND_LINE_OP	Error when using prepare.exe to convert .cgm to .jpg.
7218202	VISVIEW_CONVERT	GENERAL	The Update Links dialog box in Visio file should be suppressed when using Office Automation to convert Visio documents.
7496250	VISVIEW_CONVERT	COMMAND_LINE_OP	Office Automation PDF results have black images.
7405403	VISVIEW_PRINT	COMMAND_LINE_OP	Excel files cannot translate to PDF by rendering if the file name is in Chinese.
1988647	VISVSA	VISVSA	In Variation Analysis, zone shift tolerance is not correctly transferred to export PDO summary.
1989454	VISVSA	VISVSA	In Variation Analysis, the order of assembly constraints is wrong.
1991600	VISVSA	VISVSA	In Variation Analysis, floating operations are missing in the HLM Summary Report.
1993779	VISVSA	VISVSA	Variation Analysis crashes when running simulation.
1994300	VISVSA	VISVSA	In Variation Analysis, the kinematic pin/hole tangency constraint is not working.
2204524	VISVSA	VISVSA	PDO archive doesn't save JT files.
2241948	VISVSA	VISVSA	Crash when Update Point Measurement Data is selected.
2242067	VISVSA	VISVSA	The dimension value is displayed as zero(0.000000).
2242543	VISVSA	VISVSA	Crash when displaying Kinematic operation properties.
2242965	VISVSA	VISVSA	Parallelism orientation doesn't show correct variation range.
2244751	VISVSA	VISVSA	In the Constraint of Tab and Slot, feature does not move at all.
2247631	VISVSA	VISVSA	Mean Shift Contributor report garbled when saved to .txt file.
2247632	VISVSA	VISVSA	Crash issue with Mean Shift Contributor report.

PR	Product	Category	Summary
2248609	VISVSA	VISVSA	PDO text import doesn't get Constraints in Assembly Operation.
2248852	VISVSA	VISVSA	PMI feature extraction failed.
3052412	VISVSA	VISVSA	Feature datum references not cleared during paste.
6320277	VISVSA	VISVSA	General surfaces losing links to the tolerance library.
7125260	VISVSA	VISVSA	One measurement is not showing up in the export PDO summary.
7136833	VISVSA	VISVSA	Crash when exporting a process doc summary.
7145398	VISVSA	VISVSA	Pattern feature closes when there is an issue.
7152979	VISVSA	VISVSA	Part lost during multiple selection and cut, and paste of two parts.
7160080	VISVSA	VISVSA	Crash when plane feature with child points made an associated feature.
7166122	VISVSA	VISVSA	Thickness tolerance from tolerance library does not appear on associated feature.
7178774	VISVSA	VISVSA	Cannot add or update sub-feature points to pins and holes.
7196167	VISVSA	VISVSA	When performing copy/paste operation on a part assembly with embedded Kinematic Assembly Operation, the new part assembly Kinematic Operation Weight Factors are all reset to 100%.
7215837	VISVSA	VISVSA	Crash when running simulations.
7252094	VISVSA	VISVSA	Linefeed created in PDO_Summary text file when using integrated measurement data.
7262842	VISVSA	VISVSA	Rotation not simulated on irregular features of size.
7262846	VISVSA	VISVSA	Features not in PDO summary .txt file when using Pearson distribution.
7262866	VISVSA	VISVSA	Orientation angle cutoff value ignored when the size tolerance is placed below the geometric tolerance in the Project Workspace window.
7268743	VISVSA	VISVSA	Constraint node is removed when updating PDO.
7270991	VISVSA	VISVSA	Changing tolerance scale factor displays VPProcess message.
7287557	VISVSA	VISVSA	Model does not run and provides no validation error.
7304534	VISVSA	VISVSA	When exiting Vis, the close report message box does not allow the user to save the PDO.
7304551	VISVSA	VISVSA	Paste Mating feature is not updating the points.
7309108	VISVSA	VISVSA	Teamcenter crashes when trying to create sub-assemblies for export.
7309155	VISVSA	VISVSA	Orientation refinement on a surface is not taking effect.
7327243	VISVSA	VISVSA	Unexpected contribution to measurement from front side hole tolerance.
7331779	VISVSA	VISVSA	JT from FEA color map model doesn't work in surface analysis.
7334558	VISVSA	VISVSA	Crash when using GetChildElements.

PR	Product	Category	Summary
7346619	VISVSA	VISVSA	Issue with minimum virtual clearance.
7357150	VISVSA	VISVSA	HLM report not displaying multiple surface profile tolerance correctly.
7362100	VISVSA	VISVSA	Tolerance library is missing class in HLM report.
7378497	VISVSA	VISVSA	Closing PDO without saving it first causes Variation Analysis to crash.
7380384	VISVSA	VISVSA	Datum shift calculated incorrectly when datum order of precedence changes.
7380387	VISVSA	VISVSA	Extra float shows up in measurement.
7382810	VISVSA	VISVSA	Datum shift is incorrect in certain cases.
7390366	VISVSA	VISVSA	Teamcenter crash occurs when trying to create a slot pattern.
7402043	VISVSA	VISVSA	Wrong behavior of two-way pin.
7422610	VISVSA	VISVSA	Issue with slot pattern under constrained in Analyze GD&T.
7435218	VISVSA	VISVSA	Model crashes when trying to view direct dimension tolerances properties.
7436897	VISVSA	VISVSA	Process report spec limits are incorrect when set relative to nominal.
7448875	VISVSA	VISVSA	Plane features added to incorrect part.
7452134	VISVSA	VISVSA	Model error issue when running a simulation.
7463725	VISVSA	VISVSA	An axial classic assembly operation causes a crash.
7479533	VISVSA	VISVSA	Primary constraint in assembly operation violated.
7467053	VISVSA	VISVSA	Japanese translation of "Sever Tolerance Library" is wrong.
7404377	VISVSA	VISVSA	Height of Pin Feature Properties is garbled.
7547298	VISVSA	VISVSA	Problems with setting form in Japanese version.
7551427	VISVSA	VISVSA	What is the suitable version of VisualStudio for CVSA?

Chapter 8: Enhancement Requests

Customer enhancement requests (ERs) implemented for Teamcenter 11.2 lifecycle visualization include:

ER	Product	Category	Summary
1942390	VISVIEW	3D_COMPARE	No transparency with equal geometries.
1617581	VISVIEW	3D_FILE_JT	JT export with external texture files doesn't work as labeled.
3049454	VISVIEW	APPEARANCES	Multiple selection via shift-select shaders in Materials palette.
6304558	VISVIEW	APPEARANCES	Scaling problem with texCoords stored in PLMXML and loaded after unit charge.
7120912	VISVIEW	2D_FILE_PDF	Exposing PDF notes in Teamcenter Visualization.
7170680	VISVIEW	PUBLISH	Legacy Publish preferences should be removed.
7199352	VISVIEW	DIRECTMODEL	Intersecting regions color shouldn't override Common Material color in 3D comparison.
7340884	VISVIEW	RELOCATE	Need 4GD data support for solution delivered in ER.
7245254	VISVIEW	APPEARANCES	Texture coordinates in Project Workspace and appearance palette must be linked.
7254952	VISVIEW	APPEARANCES	Selecting just outside of palette squares should not clear previous selections.
7361920	VISVSA	VISVSA	Add additional mid-surface meshing options.

Chapter 9: Issues and workarounds

Product feature help filtering not enabled

Problem	Beginning with Teamcenter 11.2 lifecycle visualization, help is no longer filtered based on installed optional features.

Workaround	1. Copy the following file from the Teamcenter 11.2 lifecycle visualization product installation. This file is updated by the product installation to record the features that are installed on your system.
	`...\Siemens\Teamcenter11.2\Visualization\Help\modules.js`
	2. Paste the file to this location on the help server:
	`...\Siemens\PLM Documentation\Server\Collections\tcv\11.2\help\js`

Animations created with Capture Walk not saved correctly

Problem	Animations created with the Capture Walk option under Tracking Camera action are not saved correctly in Tc Vis 11.1.1. Such animation data will not load correctly in any TcVis versions.
Workaround	This problem is fixed in 11.2. Any Animation data created with the tracking camera action in TcVis 11.1.1 must be recreated in TcVis 11.2 and later versions.

Fast Mode and Manual Update options in 3D Section are disabled

Problem	The **Fast Mode** option in the cross section preferences and the **Manual Update** menu item and toolbar option are disabled.
Workaround	None.

CAE data does not display properly on Linux and OS X

Problem	The CAE data does not display properly on Linux and OS X.
Workaround	None. The CAE visualization functionality introduced in Teamcenter Visualization 11.1 is not fully supported by the graphics card drivers currently available for Linux and OS X.

Missing CAE units in CAE Viewing

Problem	All the CAE units except Millimeters are displayed as Unknown in CAE Viewing.
Workaround	None. The CAE units in CAE Viewing are not supported in Teamcenter Visualization 11.1.

Multiple clipped cross sections with capping do not display correctly

Problem	If you create multiple clipped cross sections with capping enabled, the resulting view may render incorrectly. It may look as if you can see through the capped sections and see the backs of the other capped sections.
Workaround	None

Missing UI text on Linux

Problem

On Linux systems running in one of the UTF-8 locales (en_US.UTF-8), text may be missing from the Teamcenter lifecycle visualization user interface. For example, text may be missing from the assembly tree or the **File Open** dialog box. On systems with this issue, when you start the application, it may display the following error message:

```
Font Creation Failed
```

Also, the X11 log file (**/var/log/Xorg.0.log**) may contain error messages such as the following:

```
FreeType:  couldn't find encoding 'iso8859-15' for '/..../generic.ttf'.
```

This is a result of some Linux distributions failing to generate the **encodings.dir** file during installation. X11 requires the **encodings.dir** file to load fonts in UTF-8 locales.

Workaround

1. Ensure that all X11 Unicode font packages are installed.

2. Navigate to the X11 **fonts/encodings/** directory. On Red Hat Enterprise Linux 6, this directory is located at **/usr/share/X11/fonts/encodings**, but other distributions may put the encodings folder in a different location.

3. If the **encodings.dir** file does not exist in this location, generate the file using the mkfontdir command. On Red Hat 6, type the following at the command prompt:

   ```
   cd /usr/share/X11/fonts/encodings
   as root mkfontdir -e /usr/share/X11/fonts/encodings \
   -e /usr/share/X11/fonts/encodings/large
   ```

   Note

   You must run the mkfontdir command from the directory containing the encodings, and it should have a separate -e flag for each subdirectory that also contains encodings, such as the **encodings/large/** subdirectory on RedHat 6.

4. If the **encodings.dir** file exists and the problem persists, check to make sure that it includes encodings for each of the classes in the **XLC_LOCALE** file for the locale (in **/usr/share/X11/locale/en_US.UTF-8/** on Red Hat 6, for example), or regenerate the **encodings.dir** file using the above directions.

Visualization files are not associated with the viewer on OS X

Problem

When you install Teamcenter lifecycle visualization on a Mac, the installer does not automatically associate supported file types with the viewer. You must manually associate supported file types with the viewer to do the following:

- Double-click a supported file type to open it in the viewer.
- Send visualization files from the Teamcenter Thin Client or Community directly into the viewer.

Workaround

In the Visualization application installation directory, there is a simple native Mac OS X application called ViewerLauncher.app which you can associate with Lifecycle Visualization file types.

When you double-click a visualization file type that has been associated with ViewerLauncher.app, the application launches one of the following scripts:

- bin/vvbaselaunch
- bin/vvstdlaunch
- bin/vvprolaunch

By default, the script launched is vvprolaunch, which corresponds to the Professional license level. You can modify the following file to specify a different license level:

ViewerLauncher.app/Contents/Resources/English.lproj/Settings.txt

Note

If you are using Safari to send visualization files from the Teamcenter Thin Client or Community directly into the viewer, you must also configure the browser to treat .vvi files as safe files.

VVI files are not sent directly into the viewer on OS X

Problem

When using the Teamcenter Thin Client or Community in Safari, .vvi files are not sent directly into the viewer. Instead, the .vvi is saved to your local file system, and you must manually open it in the viewer.

Workaround — You must configure Safari to treat .vvi files as safe files for visualization data to open directly in the viewer. This behavior is controlled with a plist file named “com.apple.DownloadAssessment.plist”. This file is packaged with the ViewerLauncher.app. Copy it to this location:

${Home}/Library/Preferences

The key named “LSRiskCategorySafe” defines file types that are treated as safe and automatically opened in the viewer. The subkey “LSRiskCategoryContentTypes” defines an array of safe file extensions called “LSRiskCategoryExtensions”, which must contain a string named “VVI”. Note that the sample .plist file included with the installation is already configured to treat .vvi files as safe.

Teamcenter Visualization is not installed to the Applications folder on OS X

Problem — On Mac OS X, the Teamcenter lifecycle visualization application and related files are not installed to the Applications folder.

Workaround — If you want ViewerLauncher.app to be in the Applications folder, you must do the following:

1. From the command prompt, move all of the visualization files and folders at the same level as ViewerLauncher.app into the ViewerLauncher.app application bundle (Mac .app files include a hidden folder structure, with the top-level directory having a name that ends with the .app extension).

2. Move ViewerLauncher.app to the Applications folder.

Product views display parts in incorrect positions

Problem — Parts may appear in incorrect positions when product views authored in the Lifecycle Viewer or the stand-alone viewer are restored in certain Teamcenter embedded viewers. This problem occurs when the motion system records part transformations on subassembly nodes, and the transformations are subsequently captured by the product view. These assembly-level transformations generated by the motion system are not applied correctly when the product view is restored in Structure Manager, Multi-Structure Manager, and Manufacturing Process Planner.

Workaround — You can avoid this limitation by keeping 3D part transformations at the part level when working with motion in the Lifecycle Viewer or the stand-alone viewer. Rather than transforming an entire assembly or subassembly, expand the structure and select all of the individual parts and move them instead.

The online Help does not display properly in Internet Explorer 9

Problem — When the Internet Explorer 9 Compatibility View setting is turned off, the online Help does not display properly.

Workaround — To view the online Help in Internet Explorer 9, you must turn on Compatibility View. In IE 9, do the following:

1. Choose **Tools→Compatibility View Settings**.
2. In the **Compatibility View Settings** dialog box, select the **Display all websites in Compatibility View** check box.

An ActiveX warning is displayed each time the online Help is started

Problem — When you launch the online Help, an ActiveX warning is displayed.

Workaround — To get rid of the ActiveX warning, do the following:

1. Choose **Tools→Internet Options→Advanced**.
2. In the **Settings** area, scroll down to the **Security** section, and select the **Allow active content to run in files on My Computer** check box.
3. Click **OK**.
4. Close and reopen the browser.

Rendering artifacts during moving frame navigation

Problem — Lifecycle Visualization includes new technology to greatly increase the interactivity of moving frame navigation for medium and large assemblies on multi-processor workstations. This feature is automatically disabled on single-CPU machines.

When you navigate rapidly about the 3D model, objects near the edge of the Viewing window may be delayed for a few frames before appearing. This is a normal side-effect of the performance enhancement. The severity of the effect is proportional to the size of the assembly being viewed, the number of polygons being rendered, and the speed of the graphics card.

Workaround — To turn this feature off, you must set the environment variable **TCVIS_DISABLE_ASYNCSTRATEGY** to **True**. However, you should disable this feature only if your machine freezes or crashes.

Issue with nVidia G-Sync cards

Problem — If you have an nVidia G-Sync option card, unexpected errors may occur. Graphics adapters that support the nVidia G-Sync option card include the nVidia Quadro FX graphics solutions.

Workaround — The problem has been fixed in nVidia driver version 197.28 and above. To resolve the issue, update your driver.

If you are using an older driver, you can set up the following system environment variable to disable the G-Sync effect in Lifecycle Visualization:

TCVIS_CLUSTER_NOGSYNC=True

Visibility filter and Use Off-Screen Rendering option

Problem — When you turn off **Use Off-Screen Rendering**, the 3D graphics window must be completely clear of other windows. If any windows are covering the 3D graphics window in any way, the visibility check does not work.

Workaround — It is recommended that you do not turn off **Off-Screen Rendering**.

Installing the Windows cluster service

Problem — A cluster is a Windows-based system that contains multiple workstations. Before you can use clusters, you must install an additional Windows service program (`TeamcenterVisClusterLaunch.exe`) on the client nodes.

Workaround — Install the Windows cluster service. For information on installing the service, see *Installing and uninstalling the Windows cluster service* in the stand-alone Lifecycle Visualization *Installation Guide*.

Functionality not supported in PC clusters

Problem — Some functionality where new geometry or other content is generated dynamically during the course of the session will not work with PC clusters, including, but not limited to the following:

- Part edit
- Environment map image captures for advanced materials
- Jack
- Variation Analysis
- Visualization Illustration
- 3D compare
- Surface analysis
- Layer filters
- Animation file loading

Workaround	None

Attempting to interoperate an assembly to a new NX manager fails

Problem	Interoperating an assembly to a new NX manager from Lifecycle Visualization fails if the assembly was originally sent to Lifecycle Visualization from Teamcenter.
Workaround	Start NX from Teamcenter before interoperating an assembly from Lifecycle Visualization. From the **File→Interoperate** menu in Lifecycle Visualization, choose the running NX manager instead of a new NX manager.

Assembly names are different when sent from NX and Teamcenter

Problem	If an assembly is sent to Lifecycle Visualization directly from Teamcenter, the name in the assembly tree view has the Item ID, ItemRev, and ItemName. The Item ID, ItemRev, and ItemName are not present if the assembly is sent from NX.
Workaround	A solution where the Item ID, ItemRev, and ItemName are sent to Lifecycle Visualization as user data in the PLM XML is in NX 5.0.2 and later releases. This solution allows a Lifecycle Visualization user to add these as columns in the Assembly Tree. A longer term solution also is under investigation.

Session files lose association to animation files

Problem	On Linux, you will encounter issues when you have a session file that references an animation primary document. When a 3D view from the session file is associated with the animation, that relationship should be preserved and re-established when you open the session. However, on Linux the relationship between the 3D view and the animation does not get re-established. Therefore, if you run the animation, it attempts to create a new 3D view instead of using the one that is present as part of the session.
Workaround	Perform the following steps: 1. Load the session (this loads the 3D view and the animation document). 2. Select the 3D view to be the animation target. 3. Select a part in the Viewing window. 4. Choose **Animation→Associate 3D View with Animation**.

Cannot save PLM XML motion file formats to Teamcenter

Problem	When you try to save motion data to Teamcenter using the PLM XML Motion Frame or PLM XML Motion Keyframe file formats, an error message is displayed.
Workaround	You must use the VFM file format when saving motion data to Teamcenter. The PLM XML motion file formats are not supported.

Visualization Illustration crashes while saving Stencil or selection Transparency button

Problem	Visualization Illustration 11.1 with Visio 2013 SP1 crashes while saving Stencil or selection Transparency button due to issues in Visio.
Workaround	Microsoft will likely provide fixes through an Office 2013 cumulative update for November 2014.

Support for localized user interface in Visualization Illustration

Problem	The language shown on the user interface may be inconsistent when using Visualization Illustration.
Workaround	To provide a consistent user interface with respect to the user interface language presented by the viewer and the user interface language presented by the Visio Drawing Control, you must install one of the following: • An English Visio 2010 or Visio 2013 product install and a MUI pack supporting the language of choice • A localized Visio 2010 or Visio 2013 product install for the language of choice Only when the Microsoft Office 2010 or Visio 2013 Language Settings tool has the user interface language set to the same language as specified for the default system locale will the user interface language be consistent throughout the entire Visualization Illustration application.

In non-English versions of Visualization Illustration, opening an SVG file containing Assets displays a blank screen.

Problem	Opening an SVG file containing Assets displays a blank screen when Windows is configured to use a comma as the decimal symbol.
Workaround	Configure Windows to use a period as the decimal symbol. 1. Open Windows **Control Panel**. 2. Choose **Region and Language**. 3. In the **Region and Language** dialog box, on the **Formats** tab, click **Additional setting**. 4. In the **Customize Format** dialog box, on the **Numbers** tab, change **Decimal symbol** from "," to ".".

Visualization Illustration asset capturing may stop working after uninstalling Lifecycle Visualization

Problem

After uninstalling Lifecycle Visualization when a previous version of Lifecycle Visualization is still installed, you may need to repair the previous installation to restore the proper functioning of the previous version of Asset Capture. This problem results in the following error message: `Failed to create the session data container.`

Workaround

1. From the **Common Files** installation folder (for example, **C:\Program Files\Common Files\Siemens Shared\TcVis\9.1**), remove the module **VP3DGeomAssetData.dll**.

2. Run the repair option of the installation of the earlier version of Lifecycle Visualization.

Visualization Illustration enablement

Problem

Visualization Illustration users may notice that even though they have installed Visualization Illustration, they are not seeing certain functionality exposed. In particular, the following:

- The Asset Clipboard does not appear when a 3D view is opened.

- You cannot capture a 3D geometry asset.

Workaround

The first and most obvious reason for this may be a lack of a new Visualization Illustration license.

The second reason for this may be the absence of a Visio 2010 or Visio 2013 installation. If either of these is not available, Visualization Illustration and all related functionality will be disabled.

Microsoft installer launches on start of Visio

Problem

The Lifecycle Visualization installer does not associate the Visio .vsd file type with the Viewer. As a result, double-clicking a .vsd file causes the Visio application to launch and load the document. However, because Visualization Illustration Technical Illustrations are built using Visio as a drawing engine, Technical Illustrations are Visio documents with a .vsd extension. As a result, there are some users that elect to associate the Viewer with the .vsd file type. By doing so, double-clicking a .vsd file causes the Viewer to launch and load the document. Regardless of which application is associated with the .vsd file type, .vsd files can always be opened in the Viewer through **File→Open**.

If Microsoft detects during the startup of Visio that the .vsd file is not associated with the Visio application, the Microsoft Installer runs as a means to automatically repair what Microsoft views as a broken association. A description of this behavior can be found at http://support.microsoft.com/?id=290997. At the bottom of this article is a link that describes how to disable this behavior. However, this approach completely disables the Microsoft Installer.

Workaround — A workaround for this problem is to not associate the .vsd file type with the Viewer. Rather than double-clicking the .vsd file type to launch the application, right-click the .vsd file and use the Microsoft Explorer **Open With** shortcut menu to open the file.

Variation Analysis issues

Problem — The following issues apply to Variation Analysis.

- When extracting NX PMI data from a JT file, slot and tab patterns are not supported.
- When extracting NX PMI data from a JT file, the following tolerances do not flow down to Variation Analysis.
  - PMI shown in multiple NX views are duplicated in JT PMI and subsequently in the Variation Analysis.
  - Unilateral and unequal bilateral profile tolerances indicated by the Ⓤ modifier are not recognized.
- Reference dimension and angular plus-minus tolerances are not recognized.
- The flowdown of linear plus-minus tolerances (directed dimensions in NX PMI) require NX 10 or later.
- Rename/Remap does not work when the object being moved is the assembly node that is being duplicated.
- FCFs (Feature Control Frames) show a non-existing datum reference when a feature is linked to the tolerance library.

Workaround — None

Chapter 10: Supported file formats

Teamcenter lifecycle visualization supports the following file formats:

- 2D file formats
- 3D file formats
- ECAD file formats
- 2D/3D file formats
- Lifecycle Visualization authored file formats
- Motion file formats supported for conversion to VFM
- Visualization Illustration supported file formats
- Lifecycle Visualization file formats
- Supported versions of the JT file format
- Supported versions of other Siemens PLM Software file formats

> **Note**
>
> Some file types may need an optional translator. Consult your system administrator for assistance.

2D file formats

You can open the following 2D file formats:

Abbreviation	Extension	Description	Type	Prerequisites
Raster and Document				
BMP	.bmp	Microsoft Windows or OS/2 bitmap file	Raster	None
C4	.C4	JEDMICS C4 tiled raster format	Raster	None
CG4	.CG4	CALS Group IV format	Raster	None
DOC	.doc	Microsoft Word	Document	Install MS Word
DOC	.docx	Microsoft Word	Document	Install MS Word

Abbreviation	Extension	Description	Type	Prerequisites
DFT (Windows only)	.dft	Solid Edge draft files **Note** For details on supported versions, see *Supported versions of other Siemens PLM Software file formats*.	Raster	None
EMF (Windows only)	.emf	Microsoft Enhanced Metafile	Raster	None
GIF	.gif	CompuServe color raster format	Raster	None
HDR	.hdr	High Dynamic Range images **Note** High Dynamic Range (HDR) images are supported for 3D light maps only. Light maps can use OpenEXR or Radiance RGBE Encoding HDR images.	Raster	None
JPEG	.dept, .jpeg, .jiff, .jpe, .jpg	JPEG file	Raster	None
JPEG 2000	.j2k, .jp2, .jpc	JPEG 2000 file **Note** Using Teamcenter Visualization 2005 and later, you can display and save JPEG 2000 files.	Raster	None
MLR	.mlr, .mil, .milr, .CAL	MIL-R-28002 Type 1 Raster	Raster	None
MPP	.mpp	Microsoft Project	Document	Install MS Project

Abbreviation	Extension	Description	Type	Prerequisites
MPC	.mpc	Multi-page CALS file	Raster	None
PBM	.pbm	Portable BitMap image file **Note** The application only supports viewing this file type.	Raster	None
PCX	.pcx	Windows Paintbrush image file	Raster	None
PGM	.pgm	Portable GrayMap image file **Note** The application only supports viewing this file type.	Raster	None
PNG	.png	PNG file format	Raster	None
PNM	.pnm	Portable AnyMap image file **Note** The application only supports viewing this file type.	Raster	None
PPM	.ppm	Portable PixMap image file **Note** The application only supports viewing this file type.	Raster	None
PPT	.ppt	Windows PowerPoint	Document	Install MS PowerPoint
PPT	.pptx	Windows PowerPoint	Document	Install MS PowerPoint
PS	.ps, .eps	PostScript (Level 1, Level 2, EPS)	Raster	Install Ghostscript
RAS	.ras, .sun	Bi-level Sun raster	Raster	None

Abbreviation	Extension	Description	Type	Prerequisites
RGB	.rgb .rgba, .sgi .bw	SGI RGB file	Raster	None
RVF	.rvf	Raster Viewing Format	Raster	None
TG4	.tg4	CCITT Group 4 Type II tiled image format	Raster	None
TGA	.tga	Truevision Targa	Raster	None
TIFF	.tif, .tiff	Tagged Image File Format	Raster	None
TLC	.tlc	TLC file format	Raster	None
TRIFF	.fsx, .ovx., .fs, .ov	Monochrome, single and multi-page tiled raster file format	Raster	None
WBMP	.wbmp	Wireless Bitmap	Raster	None
WMF (Windows only)	.wmf	Windows Metafile	Raster	None
XLS	.xls, .cvs	Microsoft Excel	Document	Install MS Excel
XLS	.xlsx, .cvs	Microsoft Excel	Document	Install MS Excel
Vector				
907	.906, .907, .CAL	Calcomp 906, 907	Vector	None
CGM	.cgm	Binary Computer Graphics Metafile MIL-D-28003 ANSI X3.122 **Note** Teamcenter Visualization 2005 and later supports CGM Version 4, while maintaining support for CGM Versions 1 through 3. Teamcenter Visualization 2005 also supports WebCGM files.	Vector	None
DGN (Windows only)	.dgn	Microstation DGN file format (available on Windows)	Vector	None

Abbreviation	Extension	Description	Type	Prerequisites
DWF	.dwf	Autodesk Drawing Web Format files **Note** The application supports DWF version 6 formatted files, including the new .w2d file extension. Embedded raster data is supported only on Windows.	Vector	None
DWG (up to AutoCAD 2013)	.dwg	AutoCAD Internal file format **Note** The following types of embedded raster data are supported: BMP, JPG, GIF, MLR, TIFF, and PNG.	Vector	None
GERBER	.gbr, .gbx, .gvl	Gerber RS274D and RS274X formats **Note** Use .gvl files to open a list of Gerber files as one document with layers for each file in the list.	Vector	None

Abbreviation	Extension	Description	Type	Prerequisites
HPGL	.hgl, .hpg, .hpgl, .hp2, .plt	HP Graphics Language (HPGL and HPGL/2) **Note** The application recognizes additional files as HPGL if you set the EAI_HPGL_EXTENSIONS environment variable. The setting should be a comma separated list of file extensions. **Example** "hpgl2,hpgl3"	Vector	None
IDW (Windows only)	.idw	Autodesk Inventor drawing file format	Vector	To work with the Autodesk Inventor files, you must have Autodesk Inventor, Autodesk Inventor View, or Design Tracking. Autodesk Inventor View and Design Tracking are freely distributed and available from Autodesk. Autodesk Inventor .idw files prior to version 5.3 are not supported.
IGES	.igs, .iges	Initial Graphics Exchange Input File Specification, MIL-D-28000	Vector	None
MDL	.mdl	Model file	Vector	None
W2D	.w2d	Autodesk toolkit	Vector	None
Miscellaneous				

Abbreviation	Extension	Description	Type	Prerequisites
AI	.ai	Adobe Illustrator	Vector or Raster	For Linux, and Mac, install Ghostscript
MDS	.mds	MetaData Stamp	Vector or Raster	None
PDF	.pdf	Portable Document Format **Note** On Windows, you can directly create and work with PDF documents.	Raster	For Linux, and Mac, install Ghostscript
TXT	.txt	ASCII text file format	Document	None
WebCGM	.cgm	CGM file management through Web browsers, hyperlinks, and other supported WebCGM file features.	None	None
ZIP	.zip	ZIP files containing one or more files of a supported 2D format **Note** The 2D files contained within the ZIP are displayed in a single multipage 2D image window. You can navigate through the pages (files) using any of the available 2D multipage navigation options.	None	None

3D file formats

You can open the following 3D file formats:

Abbreviation	Extension	Description
ASM (Windows only)	.asm	Assembly file for Solid Edge that can reference .par, .psm, .pwd, and other .asm files. **Note** For details on supported versions, see *Supported versions of other Siemens PLM Software file formats*.
BLK	.blk	NASTRAN bulk format
IGES 5.3	.igs, .iges	Initial Graphics Exchange Input File Specification, MIL-D-28000 **Note** To work with IGES files, the IGES optional translator must be properly installed and licensed.
JT	.jt	DirectModel file format
PAR (Windows only)	.par	Solid Edge single part file **Note** For details on supported versions, see *Supported versions of other Siemens PLM Software file formats*.
PLM XML	.plmxml	XML format that supports product view and product structure data
PSM (Windows only)	.psm	Solid Edge sheet metal file **Note** For details on supported versions, see *Supported versions of other Siemens PLM Software file formats*.
PWD (Windows only)	.pwd	Solid Edge weldment file **Note** For details on supported versions, see *Supported versions of other Siemens PLM Software file formats*.

Abbreviation	Extension	Description
RES	.res	ADAMS results file format **Note** • Lifecycle Visualization supports ADAMS RES 2010 and 2013 files. • The ADAMS conversion feature, which converts RES files to the VFM motion file format, requires the Professional or Mockup product configuration, as well as an additional license. It is supported on Windows only.
STEP AP203, 214	.stp	Standard for Exchange of Product **Note** To work with STEP files, the STEP optional translator must be properly installed and licensed.
VRML 1.0, 2.0	.wrl, .vrml	Virtual Reality Markup Language **Note** VRML support is for geometry and appearance attributes only.
XMO	.xmo	XML-based motion file format
XT	.x_t, .x_b, .xmt_txt, .xmt_bin	Parasolid XT File **Note** For details on supported versions, see *Supported versions of other Siemens PLM Software file formats*.

Note

The CADDS format is no longer supported. You can use the CADDS to JT translator to translate single CADDS files or to perform automated batch translations of multiple CADDS files.

ECAD file formats

You can open the following file formats in ECAD:

Abbreviation	Extension	Description
BCZ	.bcz	Teamcenter Briefcase
XFATF	.xfatf	PCB file

Abbreviation	Extension	Description
XSCH	.xsch	Schematic File
XRUL	.xrul	Contains the ECAD DFx rules.
XRES	.xres	Contains the ECAD DFx results.
CGM	.cgm	ECAD Markup layer.

2D/3D file formats

You can open the following 2D/3D file formats:

Abbreviation	Extension	Description
DXF (up to AutoCAD 2013)	.dxf	AutoCAD drawing interchange format **Note** • To work with 3D DXF files, the DXF optional translator must be properly installed and licensed. • The following types of embedded raster data are supported: BMP, JPG, GIF, MLR, TIFF, and PNG. • Solids are not supported.
DWG (up to AutoCAD 2013)	.dwg	AutoCAD Internal file format **Note** The following types of embedded raster data are supported: BMP, JPG, GIF, MLR, TIFF, and PNG.
IGES	.igs, .iges	Initial Graphics Exchange Input File Specification, MIL-D-28000 **Note** To work with IGES files, the IGES optional translator must be properly installed and licensed.
PRT	.prt	NX part file **Note** Lifecycle Visualization supports direct viewing of NX .prt files. For details on supported versions, see *Supported versions of other Siemens PLM Software file formats*.

Lifecycle Visualization authored file formats

You can save data as the following file formats:

Abbreviation	Extension	Description
907	.907	Calcomp 907
951	.951	Calcomp 951
AVI	.avi	Video (Windows)
BCZ	.bcz	Teamcenter Briefcase
BMP	.bmp	Microsoft Windows or OS/2 bitmap file
CGM	.cgm	2D Markup layer or ECAD
CSV	.csv	Clearance DB report
DBC	.dbc	Clearance DB Database Connection
ENV	.edv	Jack Environment (session)
FIG	.fig	Jack Figure (session)
GIF	.gif	Graphics Interchange Format **Note** You must have a license to work with Visualization Illustration.
HPGL	.hpg	HP Graphics Language (HPGL and HPGL/2)
J2K	.j2k, .jp2, .jpc	JPEG 2000
JPEG	.jpg	JPEG file **Note** You must have a license to work with Visualization Illustration.
JT	.jt	DirectModel Format
MLR	.mlr, .mil, .milr	MIL-R-28002 Type 1 Raster
MPEG	.mpg	Video (Mac and Linux)
P-SURF	.pss	Jack P-Surface (Part)
PCX	.pcx	Windows Paintbrush image file
PDO	.pdo	Process documents
PFC	.pfc	Vehicle Integrated Process Flow Charts
PLMXML	.plmxml	Product Structure
PNG	.png	PNG file format **Note** You must have a license to work with Visualization Illustration.
PS	.ps	PostScript (EPS)

Abbreviation	Extension	Description
PVL	.pvl	2D Image View List
ROBFACE	.asy	Robface format
RVF	.rvf	Raster Viewing Format
SCD	.scd	Sensor Configuration Definition
STEP AP203	.stp	Standard for Exchange of Product **Note** To work with STEP files, the STEP optional translator must be properly installed and licensed.
SVG	.svg	Scalable Vector Graphics **Note** You must have a license to work with Visualization Illustration.
TIFF	.tif	Tagged Image File Format
TXT	.txt	3D Measurement Report, 3D PMI Point Report, Clearance Results
V3G	.v3g	3D Geometry Asset
VAN	.van	Animation
VCD	.vcd	Video Configuration Definition
VF	.vf	Work sessions
VFM	.vfm	Motion
VFZ	.vfz	Work Session Package
VML	.vml	Vector Markup Language **Note** You must have a license to work with Visualization Illustration.
VPL	.vpl	3D markup layers
VRML 1.0, 2.0	.wrl	Virtual Reality Markup Language **Note** VRML only supports geometry.
VSD	.vsd	Technical Illustration
VTP	.vtp	Technical Portfolio
VVS	.vvs	Viewer State Script
XML	.xml	Attribute Color, Search Trace Results file, SPC measurement data file, XML point import and export file, exported Flowchart file, ECAD markup metadata file

Abbreviation	Extension	Description
XRUL	.xrul	Contains the ECAD DFx rules.
XRES	.xres	Contains the ECAD DFx results.
ZN	.zn	Clearance Zone

Motion file formats supported for conversion to VFM

You can convert the following file types to the VFM motion file format:

Abbreviation	Extension	Description
XMO	.xmo	Motion
RES	.res	ADAMS Results Files **Note** • Lifecycle Visualization supports ADAMS RES 2010 and 2013 files. • The ADAMS conversion feature, which converts RES files to the VFM motion file format, requires the Professional or Mockup product configuration, as well as an additional license. It is supported on Windows only.

Visualization Illustration supported file formats

Note

You must have a license to work with Visualization Illustration.

You can work with the following file formats in Visualization Illustration:

Abbreviation	Extension	Description
BMP, DIB	.bmp, .dib	Windows Bitmap
EMZ	.emz	Compressed Enhanced Metafile
EMF (Windows only)	.emf	Enhanced Metafile
GIF	.gif	Graphics Interchange Format
JPEG	.jpg	JPEG Interchange Format
PNG	.png	Portable Network Graphics
SVG, SVGZ	.svg, .svgz	Scalable Vector Graphics
TIF, TIFF	.tif, .tiff	Tag Image File Format
VML	.vml	Vector Markup Language

Lifecycle Visualization file formats

Lifecycle Visualization features utilize the following file formats:

Abbreviation	Extension	Description
CSV	.csv	ClearanceDB report
DBC	.dbc	ClearanceDB Database Connection file
ENV	.edv	Jack Environment (session)
FIG	.fig	Jack Figure (session)
eXT	.ext	ASCII XML format developed by Parasolid **Note** The application no longer saves data in the .eXT format. You can read .eXT files, but you can save product view data only in the .plmxml format.
JT	.jt	DirectModel Format
PDO	.pdo	Process documents
PFC	.pfc	Vehicle Integrated Process Flow Charts
P-SURF	.pss	Jack P-Surface (Part)
PLMXML	.plmxml	Product Structure
VAN	.van	Animation
VBK	.vbk	Illustration Book
VF	.vf	Work sessions
VFM	.vfm	Motion
VFP	.vfp	Autofile Locate preferences file.
VFZ	.vfz	Work Session Package
VPL	.vpl	3D markup layers
XML	.xml	Attribute Color, Search Trace Results file, SPC measurement data file, XML point import and export file, exported Flowchart file
XMO	.xmo	Motion
ZN	.zn	Clearance Zone

Supported versions of the JT file format

You can open and, depending upon your licensing configuration, save the following versions of the JT file format:

Teamcenter lifecycle visualization version	JT version	JT and XT B-Rep support	ULP support
5.x	8.1 and earlier	Yes	No
6.x	8.1 and earlier	Yes	No
2007 (PLM1)	8.3 and earlier	Yes	Preliminary
2007.1	9.1 and earlier	Yes	Yes
2007.1.1	9.2 and earlier	Yes	Yes
8.0	9.3 and earlier	Yes	Yes
8.1	9.4 and earlier	Yes	Yes

Teamcenter lifecycle visualization version	JT version	JT and XT B-Rep support	ULP support
8.2	9.5 and earlier	Yes	Yes
8.3	9.5 and earlier	Yes	Yes
9.x	9.5 and earlier	Yes	Yes
10	9.5 and earlier	Yes	Yes
10.1	10.0 and earlier	Yes	Yes
11.1	10.0 and earlier	Yes	Yes

Supported versions of other Siemens PLM Software file formats

Depending upon your licensing configuration, you can open the following versions of other Siemens PLM Software file formats:

Teamcenter lifecycle visualization version	NX .prt file format	Solid Edge .dft, .asm, .par, .psm, and .pwd file formats	Parasolid .x_t, .x_b, .xmt_txt, and .xmt_bin file formats
Prior to 5.0	Not supported	Not supported	Not supported
5.0	NX 1	Not supported	14.0
5.1	NX 2	Not supported	15.0
5.1.0.4	NX 3	Not supported	15.0
6.0 (including MP1)	NX 3	Not supported	16.1
6.0 MP1 with TcVis_2005MP1_PubEnhance patch	NX 4	Not supported	16.1
6.0 SR1	NX 4	Not supported	17.0
6.0 SR1 with TcVis_2005SR1_RDVSupport patch	NX 4	Not supported	17.0
6.0 SR1 MP1 (2005 SR1)	NX 4	v18	17.0
2007 (PLM1)	NX 4	v18	18.1
2007.1	NX 5	v20	18.1
2007.1 (MP1 – MP3)	NX 5	v20	18.1
2007.1 (MP4 – MP8)	NX 5	v100	18.1
2007.2	NX 6	v100	19.1
8.0	NX 6	v100	19.1
8.1	NX 7 (Windows) NX 6 (Mac OS, Linux)	v100	19.1
8.2	NX 7	v102	22.0
8.3	NX 7.5	v103	22.0
9.0	NX 7.5	v103	23.0
9.1	NX 8.0	v104	24.0
9.1.1.1	NX 8.0 Patch 1 (8.0.0.27)	v104	24.0

Teamcenter lifecycle visualization version	NX .prt file format	Solid Edge .dft, .asm, .par, .psm, and .pwd file formats	Parasolid .x_t, .x_b, .xmt_txt, and .xmt_bin file formats
10	NX 8.0 Patch 1 (8.0.0.27)	v105 (ST5)	25.0.146
10.1.1	NX 8.5 (8.5.0.23)	V106 (ST6)	25.1.139
10.1.2	NX9 (9.0.0.20 vs2010)	V106 (ST6)	26.1.169
10.1.3	NX9 (9.0.0.21 vs2010)	V106 (ST6)	26.1.169
10.1.5 32-bit	NX9 (9.0.0.21 vs2010)	V106 (ST6)	26.1.169
10.1.5 64-bit	NX10 (10.0.0.25 vs2010)	V108 (ST8)	26.1.169
11.1	NX9 (9.0.0.21 vs2012)	V107 (ST7)	26.1.169
11.1.2	NX10 (10.0.0.25 vs2012)	V108 (ST8) vs2012	26.1.169
11.2	NX10 (10.0.0.25 vs2013)	V108 (ST8) vs2012	27.0.205

Note

- To avoid seeing construction geometry in Lifecycle Visualization, clean up your construction geometry in NX before opening the file in the viewer.
- Non-geometry data, such as PMI, is not supported.
- Wireframe data is not supported.
- 2D .prt files must contain embedded CGM data.

Chapter 11: Global Technical Access Center (GTAC)

To report any serious problems about Lifecycle Visualization, please contact the Global Technical Access Center.

Phone:

- USA and Canada: (800) 955-0000 or (714) 952-5444
- Outside the United States and Canada: Contact your local support office.

Website:

You can also log and view any existing resolutions for incident reports on the Web at http://www.siemens.com/gtac.

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About Siemens PLM Software

Siemens PLM Software, a business unit of the Siemens Industry Automation Division, is a leading global provider of product lifecycle management (PLM) software and services with 7 million licensed seats and 71,000 customers worldwide. Headquartered in Plano, Texas, Siemens PLM Software works collaboratively with companies to deliver open solutions that help them turn more ideas into successful products. For more information on Siemens PLM Software products and services, visit www.siemens.com/plm.