

# Teamcenter 12 lifecycle visualization

## Installation

02022143



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# Chapter 1: Introduction

This installation guide contains instructions for installing Teamcenter lifecycle visualization, a suite of product visualization software for Windows, Mac, and Linux platforms.



## Chapter 2: System requirements

### Supported platforms

For information about the platforms on which you can run Teamcenter lifecycle visualization, see the Hardware and Software Certifications page on GTAC:  
[https://www.plm.automation.siemens.com/en\\_us/support/gtac/certifications.shtml](https://www.plm.automation.siemens.com/en_us/support/gtac/certifications.shtml).

### 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

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

These are only recommendations. For information on officially supported workstations, video cards, and drivers, see the Hardware and Software Certifications page on GTAC:  
[https://www.plm.automation.siemens.com/en\\_us/support/gtac/certifications.shtml](https://www.plm.automation.siemens.com/en_us/support/gtac/certifications.shtml).

### License server requirements

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

For information about Siemens PLM Software that supports Teamcenter 12 lifecycle visualization, see the Hardware and Software Certifications page on GTAC:  
[https://www.plm.automation.siemens.com/en\\_us/support/gtac/certifications.shtml](https://www.plm.automation.siemens.com/en_us/support/gtac/certifications.shtml).

## 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

For full confidence that all of the advanced features of Teamcenter lifecycle visualization are displayed, including effects such as high-quality transparency, shadows, mirrors, CAE analysis results, intersection volumes, and other features requiring advanced graphics capabilities, use a certified system. 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 Hardware and Software Certifications page on GTAC (<http://www.plm.automation.siemens.com/locale/support/gtac/certifications.shtml>) 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.

## Installation size

The numbers below show the installation footprint in *megabytes* for the English version of the Lifecycle Visualization release. Each additional locale installed adds approximately 22 MB to the footprint.

### Note

- The numbers are for the product with all options selected.
- Help is not installed automatically. It requires a separate installation to a help server.

Product	Windows	MacOS	Linux
Base	530	750	1.1G
Standard	700	800	1.5G
Professional	1.4G	1.1G	1.6G
Mockup	1.5 G	1.2G	1.7G
Help	600	530	530
VVCP	190	400	480

## Help requirements

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

- Windows:
  - o Internet Explorer – 8 or higher
  - o Firefox – 16 or higher
  - o Chrome – latest release
- Linux:
  - o Firefox latest release
- Mac OS X:
  - o Safari – latest version

- o 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 lifecycle visualization installer. To **install the help locally**, you must install the Siemens PLM Documentation Server and the Teamcenter lifecycle visualization help, which are installations separate from the installation of Teamcenter 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. Alternatively, you may access the help from the **Siemens PLM Software Doc Center site**, which you are directed to when you select the **Help** commands in the software after you choose not to install help during the software installation.

### 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>lapp_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

To install Visualization Illustration, when you install Teamcenter lifecycle visualization by right-clicking the **setup.exe**, you must select **Run as an Administrator**. This is necessary to register **VisVisioHostApp** in Windows.

Visualization Illustration is supported on Windows only (Windows 7 or Windows 10), and requires one of the following:

- Visio 2010 with Service Pack 2, either the 32-bit or 64-bit version
- Visio 2013 or 2016 with the latest patch, either the 32-bit or 64-bit version

Authoring Visio-based work instructions in Teamcenter Manufacturing is supported only with 64-bit Visio 2010.

Standard, Professional and Premium editions of Visio are supported.

## Convert and Print requirements

- The Convert and Print Office Automation feature requires Microsoft .NET Framework. Version 4.5.x is recommended.

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

- To view, convert, and print Microsoft Office files, you must have Microsoft Office installed.

## ClearanceDB requirements

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

## Interoperability with other software

For information about Siemens PLM Software that supports Teamcenter 12 lifecycle visualization, see the Hardware and Software Certifications page on GTAC: [https://www.plm.automation.siemens.com/en\\_us/support/gtac/certifications.shtml](https://www.plm.automation.siemens.com/en_us/support/gtac/certifications.shtml).

## 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 download and **install TCCS** from the GTAC site.

**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.

## Supported locales

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 3: Licensing Lifecycle Visualization

### Served licenses

Lifecycle Visualization products use the Siemens PLM Software Common Licensing Server for served licenses. Customers with multiple Siemens PLM Software applications benefit from consistent licensing and a common license file. The technology also helps you operate within emerging virtual environments.

For information about Siemens PLM Software that supports Teamcenter 12 lifecycle visualization, see the Hardware and Software Certifications page on GTAC:

[https://www.plm.automation.siemens.com/en\\_us/support/gtac/certifications.shtml](https://www.plm.automation.siemens.com/en_us/support/gtac/certifications.shtml).

You can download the latest licensing server documentation and software from the download page on GTAC: <https://download.industrysoftware.automation.siemens.com>.

#### Note

Siemens PLM Software Common Licensing Server uses FlexNet Licensing. For more information, see the licensing guides.

### Stand-alone licenses

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.

### License files

Product licenses are sent to you by e-mail. If you do not receive your licenses, contact your Customer Service Representative (CSR) directly, or call the Global Technical Access Center (GTAC):

- USA and Canada: (800) 955-0000 or (714) 952-5444, enter options 1, 1.
- Outside the United States and Canada: Contact your local support office.

## Download licensing server documentation

1. Connect to the GTAC site at <https://download.industrysoftware.automation.siemens.com>.
2. Log in using your **WebKey** username and password.
3. On the **Siemens PLM Download Server** page, click **Siemens PLM Licensing**.
4. Click **Product updates**, and then click **Documentation**.
5. Click the appropriate licensing .pdf file.

6. (Optional) Save the file on your local system.

## Download licensing server software

1. Connect to the GTAC site at <https://download.industrysoftware.automation.siemens.com>.
2. Log in using your **WebKey** username and password.
3. On the **Siemens PLM Download Server** page, click **Siemens PLM Licensing**.
4. Click **Product Updates**, and then click **Installs**.
5. Click the link for your platform.
6. Save the compressed file to your system.

## Borrowing licenses (Windows only)

License borrowing is available to site installations with a license server. Users can borrow licenses for products and optional modules and continue to work when they disconnect their laptop from the server. The License Borrow Utility provides a list of installed products, as well as license status and expiration dates. If a license is available, a user can borrow any or all installed products and options, and specify when the license will expire. Licenses can be returned before the borrowing period ends, or allowed to expire and return automatically to the free license pool.

### Note

- License Borrowing Utility is an installation option under Help and Miscellaneous Features.
- License Borrowing must be properly licensed and configured for users to borrow licenses.
- Documentation on using the License Borrow Utility is in *Getting Started* in the Teamcenter lifecycle visualization help.



## Chapter 4: Installing Lifecycle Visualization

The following sections provide instructions for installing Lifecycle Visualization.

### Note

For instructions for installing Lifecycle Visualization (stand-alone and embedded) with Teamcenter, search for "Lifecycle Visualization installation" in the following sections of the Teamcenter help:

- *Windows Servers Installation*
- *UNIX and Linux Servers Installation*

## Installation notes

### General

- Some virus protection programs prevent modification of all initialization files. Siemens PLM Software recommends that you disable your virus protection programs until after the installation is complete.
- You must have administrative rights to install Lifecycle Visualization.

### Windows specific

- Lifecycle Visualization uses the Microsoft Windows Installer 3.1 (or later) technology. If it is not on your system, it is installed automatically during the Lifecycle Visualization install, and a reboot may be required at the end of the install.
- Lifecycle Visualization requires runtime components of Microsoft Visual C++ Libraries. If you install Lifecycle Visualization using setup.exe the installer checks for the libraries and installs them if necessary.

If you bypass setup.exe and install using the .msi file (as is common when using a .bat script), the required Microsoft Visual C++ Libraries are not automatically installed. If the required libraries are not already on your system, the following warning appears, "A required Prerequisite could not be located. Please ensure the prerequisite is installed and then try this install again." You then have three options:

- o Install Lifecycle Visualization using setup.exe.
- o Manually install Microsoft Visual C++ Redistributable Packages from the Lifecycle Visualization installation image.

Run:

...ISSetupPrerequisites\VS2012U1\vc\_redist\_x64.exe

...ISSetupPrerequisites\VS2013\vc\_redist\_x64.exe

...ISSetupPrerequisites\VS2015\vc\_redist.x64.exe

- o Download and install Microsoft Visual C++ Redistributable for Visual Studio 2012 (x64), for Visual Studio 2013 (x64), and for Visual Studio 2015 (x64) from [www.microsoft.com/downloads](http://www.microsoft.com/downloads).
- Teamcenter Visualization Startup Accelerator is a small Windows startup application that pre-loads key visualization dynamic link libraries (DLLs) to speed up the initial start of Lifecycle Visualization and Teamcenter viewers. Installing Startup Accelerator is an option under **Help and Miscellaneous Features**. If installed, Startup Accelerator runs each time you start your computer. There is an option at the end of the installation process to run Startup Accelerator immediately instead of waiting until the next time you restart the computer.
- Internet Explorer must be on your system before you install Lifecycle Visualization, especially if you are installing Visual Cache. The libraries that need to load the data require WinINet, which is only available by installing Internet Explorer.
- Installation of the Windows PostScript Printer driver is no longer an automatic installation. For installation instructions, see [Installing the Windows PostScript Printer](#).

### Linux, and Mac specific

You must have 64-bit Motif libraries installed to install and run Lifecycle Visualization on Linux and MacOS platforms.

### Red Hat 6 Linux specific

Certain software libraries are required to run Lifecycle Visualization on Red Hat 6. Because of the nature of Linux, it is possible that the required software libraries are not installed on your system. If you get an error message that includes `error while loading shared libraries`, you must install the missing libraries.

The following lists of required RPM packages are for reference purposes. The version numbers reflect the versions the packages found on a working system. Since RPM packages are continuously updated, slightly older or slightly newer may also work. The first part of the version number (before the last "-") is the most significant. The files in the list are video drivers for specific video cards.

You can run `rpm -qa` to get a list of packages on your system. If you are missing a required package, you may be able to install it from your installation source. If not, you can search for and download RPM packages.

### Required 64-bit packages

```
expat-2.1.0-8.el7.x86_64
expat-devel-2.1.0-8.el7.x86_64
fontconfig-2.10.95-7.el7.x86_64
freetype-2.4.11-11.el7.x86_64
glibc-2.17-105.el7.i686
glibc-2.17-105.el7.x86_64
libICE-1.0.9-2.el7.x86_64
```

```

libSM-1.2.2-2.el7.x86_64
libX11-1.6.3-2.el7.x86_64
libXau-1.0.8-2.1.el7.x86_64
libXext-1.3.3-3.el7.x86_64
libXft-2.3.2-2.el7.x86_64
libXi-1.7.4-2.el7.x86_64
libXmu-1.1.2-2.el7.x86_64
libXp-1.0.2-2.1.el7.x86_64
libXrender-0.9.8-2.1.el7.x86_64
libXt-1.1.4-6.1.el7.x86_64
libgcc-4.8.5-4.el7.x86_64
libjpeg-turbo-1.2.90-5.el7.x86_64
libpng-1.5.13-5.el7.x86_64
libstdc++-4.8.5-4.el7.x86_64
libuuid-2.23.2-26.el7.x86_64
libxcb-1.11-4.el7.x86_64
mesa-libGL-10.6.5-3.20150824.el7.x86_64
mesa-libGLU-9.0.0-4.el7.x86_64
motif-2.3.4-7.el7.x86_64
zlib-1.2.7-15.el7.x86_64

```

### Note

The list above was generated by changing directory to the installation directory (containing bin, common, Linux\_x86\_64\_redhat, Linux\_x86\_64\_SuSE, and other subdirectories) and typing the following:

```

/bin/tcsh

env LD_LIBRARY_PATH=Linux_x86_64_redhat/bin_64 rpm -qf `ldd
Linux_x86_64_redhat/bin_64/* | & egrep '/lib/|/lib64/' | awk '{print
$3}' | sort -u` | sort -u

exit.

```

## SUSE 11 Linux specific

Certain software libraries are required to run Lifecycle Visualization on SUSE 11. Because of the nature of Linux, it is possible that the required software libraries are not installed on your system. If you get an error message that includes `error while loading shared libraries`, you must install the missing libraries.

The following lists of required RPM packages are for reference purposes. The version numbers reflect the versions the packages found on a working system. Since RPM packages are continuously updated, slightly older or slightly newer versions may also work. The first part of the version number (before the last “-”) is the most significant. The files in the list are video drivers for specific video cards.

You can run `rpm -qa` to get a list of packages on your system. If you are missing a required package, you may be able to install it from your installation source. If not, you can search for and download RPM packages.

## Required 64-bit packages

```

Mesa-libGL1-10.0.2-90.17.x86_64
fontconfig-2.11.0-4.19.x86_64
glibc-2.19-31.9.x86_64
glibc-32bit-2.19-31.9.x86_64
libGLU1-9.0.0-12.1.x86_64
libICE6-1.0.8-8.65.x86_64
libSM6-1.2.2-3.59.x86_64
libX11-6-1.6.2-4.12.x86_64
libXau6-1.0.8-4.58.x86_64
libXext6-1.3.2-3.61.x86_64
libXft2-2.3.1-9.32.x86_64
libXi6-1.7.4-9.2.x86_64
libXm4-2.3.4-4.15.x86_64
libXmu6-1.1.2-3.60.x86_64
libXp6-1.0.2-3.58.x86_64
libXpm-devel-3.5.11-3.60.x86_64
libXrender1-0.9.8-3.56.x86_64
libXt6-1.1.4-3.59.x86_64
libbz2-1-1.0.6-27.1129.x86_64
libexpat-devel-2.1.0-13.232.x86_64
libexpat1-2.1.0-13.232.x86_64
libfontconfig-devel-2.11.0-4.19.x86_64
libfontconfig1-2.11.0-4.19.x86_64
libfreetype6-2.5.5-7.5.1.x86_64
libgcc_s1-5.2.1+r226025-4.1.x86_64
libjpeg8-8.0.2-30.3.x86_64
libpng16-16-1.6.8-5.1.x86_64
libstdc++6-5.2.1+r226025-4.1.x86_64
libuuid1-2.25-30.1.x86_64
libxcb1-1.10-1.21.x86_64
libz1-1.2.8-5.1.x86_64

```

### Note

The list above was generated by changing directory to the installation directory (containing bin, common, Linux\_x86\_64\_redhat, Linux\_x86\_64\_SuSE, and other subdirectories) and typing the following:

- `/bin/tcsh`
- `env LD_LIBRARY_PATH=Linux_x86_64_SuSE/bin_64 rpm -qf `ldd  
Linux_x86_64_redhat/bin_64/* | & egrep '/lib/|/lib64/' | awk '{print  
$3}' | sort -u` | sort -u`
- `exit.`

## Install the products on Windows

### Note

4.x, 5.x, 6.x (2005), 7.x (2007), 8.x, 9.x, 10.x, and 11.x versions of the application can remain installed along with Lifecycle Visualization 12.x, as long as they are all installed to separate locations. Different 12.x versions may also be installed if they are in separate locations.

1. Verify that the system requirements are met.
2. Browse to the directory containing the software distribution image.
3. Double-click **setup.exe**.
4. In the **Teamcenter Visualization - InstallShield Wizard** dialog box, click **Next**.
5. In **Custom Setup** dialog box, click the icons next to the program features to choose which features and subfeatures to install. For each, you can choose the following:
  - **This feature will be installed on local hard drive**
  - **This feature, and all subfeatures, will be installed on local hard drive**
  - **This feature will not be available**

### Tip

Click the “+” to expand and view subfeatures.

The following information for the selected feature appears in the **Feature Description** section on the right:

- Hard drive space required for the feature alone
- Number of subfeatures selected
- Additional hard drive space required for the selected subfeatures

**Note**

- The help files are no longer packaged with the Teamcenter lifecycle visualization installer. To **install the help locally**, you must install the Siemens PLM Documentation Server and the Teamcenter lifecycle visualization help, which are installations separate from the installation of Teamcenter lifecycle visualization. You must set the port and server for help access for clients during the product installation or **when modifying the product installation**. Alternatively, you may access the help from the **Siemens PLM Software Doc Center site**, which you are directed to when you select the **Help** commands in the software after you choose not to install help during the software installation.

During the product installation, to display the dialog box to set the port and server, you must expand **Help and Miscellaneous Features** and select **Help files** from the list of subfeatures.

A separate installer is available for each language version of the help.

- Example files are not automatically installed. To install them, expand **Help and Miscellaneous Features** and select **Example Files** from the list of subfeatures.
- To install the License Borrowing Utility, expand **Help and Miscellaneous Features** and select **License Borrowing Utility** from the list of subfeatures.
- To install the Startup Accelerator application, expand **Help and Miscellaneous Features** and select **Startup Accelerator** from the list of subfeatures.
- The Mockup Analysis Option installs the client-side clearance analysis tools.
- Be sure to select the correct installation option for Quality Producer or DPV Reporting & Analysis, depending on your license. The help you receive may depend on the product you choose to install.
- To use the Variation Analysis and Quality Producer/DPV tutorials in the help, you must install the Quality example files under **Help and Miscellaneous Features**→**Example Files**→**Quality Example Files**.

6. (Optional) To change the destination, click **Change**, browse to a new location, and then click **OK**.
7. Click **Next**.
8. In **Language Selection**, choose additional product language versions to install along with the English version.

**Note**

If you choose Chinese, Japanese, Korean, or Russian you must have the appropriate character set support installed on your machine for the program to be displayed properly.

9. Click **Next**.
10. In **License Type**, choose one of the following:

Choose	Then do this
<b>Install a node-locked license from this file</b>	Enter the file path, or click <b>Browse</b> to locate the appropriate file and then click <b>Open</b> .
<b>Obtain a license from a license server machine</b> <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p><b>Note</b></p> <p>This option is also used when the same machine acts as the License Server. It is for a 1 license SERVER type of license.</p> </div>	Do one of the following: <ul style="list-style-type: none"> <li>• If you are setting up a single license server, enter the Server Name and Server Port.  The <b>license.dat</b> files in the <b>license</b> folder of the client will be updated.</li> <li>• If you are setting up a redundant license server:               <ol style="list-style-type: none"> <li>a. Enter the server names and port numbers in the <b>Server Name</b> box:  <b>port@host1,port@host2,port@host3</b></li> <li>b. Leave <b>Server Port</b> blank.  The registry keys will be updated. The <b>license.dat</b> files in the <b>license</b> folder for the client will <i>not</i> be updated (the client will have no server information listed).</li> </ol> </li> </ul> <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p><b>Note</b></p> <p>For more information on license servers and redundant servers, see the <b>Siemens PLM Licensing</b> documentation at: <a href="https://download.industrysoftware.automation.siemens.com/">https://download.industrysoftware.automation.siemens.com/</a>.</p> </div>
<b>Do not modify the existing license file(s)</b>	No further action is necessary. This option is intended for maintenance mode operations and is not used for the initial installation.

11. Click **Next**.
12. If you chose **Help files** in the **Custom Setup**, do one of the following in the **Help Server Location** dialog box.

Choose	Then do this
<b>Access Help files from the Siemens PLM Software Doc Center site</b>	No further action is necessary.

Choose	Then do this
Access Help files from a local or network Siemens PLM Documentation Server	Enter the <b>Help Server</b> and <b>Sever Port</b> . This must be the location where you <b>install the PLM Documentation Server</b> and the <b>help</b> .

13. Click **Next**.

**Ready to Install the Program** appears.

14. Click **Install**.

The selected program installs. This may take several minutes.

15. (Optional if you installed Startup Accelerator) Select the **Start the Startup Accelerator Program** check box to run Startup Accelerator immediately instead of waiting until you restart your computer.

16. (Optional) Select the **View the Install Notes file** check box to read installation notes.

17. Click **Finish**.



## Install the products on Linux and Mac

1. Verify that all system requirements are met.
2. Browse to the directory containing the software distribution image.
3. Type `./setup`.
4. Click **Install Software**.
5. In the **Teamcenter lifecycle visualization Setup** window, click **Next**.
6. In the **Choose Location** window, specify the installation location and click **Next**.
7. In the **Select Platforms** window, select the platform(s) on which to install the software and click **Next**.
8. In the **Language Selection** window, select the language(s) to install and click **Next**.
9. In the **Select Components** window, select the products and components to install and click **Next**.

### Note

- The help files are no longer packaged with the Teamcenter lifecycle visualization installer. To **install the help locally**, you must install the Siemens PLM Documentation Server and the Teamcenter lifecycle visualization help, which are installations separate from the installation of Teamcenter lifecycle visualization. Separate installers are available for each language version of the help. Also, you must set the port and server for help access for clients after the product installation. To set the port and server, run the `bin/update_help_path usage script`, and specify the two arguments: `docServerName` and `docServerPort`. Alternatively, you may access the help from the **Siemens PLM Software Doc Center site**, which you are directed to when you select the **Help** commands in the software after you choose not to install help.
- Example files are not automatically installed. To install them, select **Help and Miscellaneous Product Features** and select the example files from the **Components** list.

10. In the **License Type** window, choose one of the following:

Choose	Then do this
<b>Do not modify the existing license file(s)</b>	No further action is necessary.
<b>Obtain a license from a license server machine</b>	Enter the Server Name and Server Port.

11. Click **Next**.
12. In the **Ready to Install** window, review the current settings (click **Back** to make any changes) and when ready to continue, click **Next**.

The installation process begins and a window displays the progress and lists the files being installed.

Depending on the components you selected, the **Warning** dialog box may appear instructing you to install other required applications.

13. (Optional) In the **Installation Complete** window, click **View Log** to look at the log file created during the installation process and review the files that have been installed.
14. In the **Installation Complete** window, click **Finish**.
15. Click **Exit**.

## Installing help

Siemens PLM Software provides two sources of help for Teamcenter lifecycle visualization:

- **Siemens PLM Software Doc Center site**

Web site that hosts help for Teamcenter lifecycle visualization.

- **Siemens PLM Documentation Server**

Web application installed on your local host or intranet. The PLM Documentation Server can host help for multiple languages and multiple Siemens PLM Software products.

### About the Siemens PLM Documentation Server

The Siemens PLM Documentation Server contains a dedicated Jetty web server and Solr search engine. Help is installed on the PLM Documentation Server, where you can add localized help and also help for other Siemens PLM Software products you use.

Installing Teamcenter help on your local network requires three steps:

1. **Install the Siemens PLM Documentation Server.**
2. **Install the Teamcenter lifecycle visualization help.**
3. Set the port and server for help access for clients **during the product installation or after the product installation** of Teamcenter lifecycle visualization. Clients can then access help through the client **Help** menus.

#### Note

- Help cannot be accessed through a drive letter or UNC path (*\\host-name*). It is viewed only in a web browser using HTTP or HTTPS protocol.

If you use Teamcenter lifecycle visualization help in multiple languages, you can install all languages on the same PLM Documentation Server. The PLM Documentation Server displays the appropriate language according to each user's web browser language settings.

Before you install the help, make sure your host meets **PLM Documentation Server requirements**.

## Install the Siemens PLM Documentation Server

### Note

For Windows, during the **installation** of Teamcenter lifecycle visualization, you must set the port and server for help access. To set the port and server, expand **Help and Miscellaneous Features** and select **Help files** from the list of subfeatures. When you do this, a dialog box later in the installation prompts you for the port and server.

For Linux, to set the port and server, run the **bin/update\_help\_path usage script**, and specify the two arguments: **docServerName** and **docServerPort**.

For additional information about installing the PLM Documentation Server, see the documentation available on the GTAC **Siemens PLM Documentation Server** page. This includes the **splmdocserver\_0301\_install\_wnt.pdf** and **splmdocserver\_0301\_install\_unix.pdf** documents for advanced installation options and the **webserver\_0301\_install\_wnt.pdf** and **webserver\_0301\_install\_unix.pdf** documents for installing on an existing web server.

### Download the install files

1. Connect to the GTAC site at <https://download.industrysoftware.automation.siemens.com/>.
2. Log on using your **WebKey** username and password.
3. On the **Siemens PLM Download Server** page, from the list on the left, click **Siemens PLM Documentation Server**.
4. Expand **Full products**.
5. Under your platform folder, expand **3.0.1**.

### Caution

You must use **Siemens PLM Documentation Server** version **3.0.1** with Teamcenter 12 lifecycle visualization. Older versions of **Siemens PLM Documentation Server** are not compatible.

6. Download and unzip the **splmdocserver** files.

### Windows systems:

1. On your system, browse to the **splmdocserver** directory and double-click the **setup.exe** program icon.

This launches the Siemens PLM Documentation Server installation wizard.

2. Select a language for the installation user interface, and then click **OK**.

The wizard displays the welcome dialog box.

- Proceed to the **Custom Setup** dialog box. Accept the default destination folder (**C:\Program Files\Siemens\PLM Documentation Server\**), or click **Change** to enter a different folder.
- Proceed to the **Ready to Install the Program** dialog box. Accept the default values for the PLM Documentation Server ports or click **Change Ports** to change these values:

#### Note

The **Documentation Server Port** value must match the value you select when you install Teamcenter lifecycle visualization.

Name	Description	Default Value
<b>Solr Port</b>	Port used by the Siemens PLM Solr Server for online help search.	<b>8283</b>
<b>Documentation Server Port</b>	Port used by the Siemens PLM Documentation Server for serving help content.	<b>8282</b>

- Click **Install** to begin installing the PLM Documentation Server.
- In the **InstallShield Wizard Completed** dialog box, click **Finish** to exit the wizard.

#### Linux and Mac systems:

- Log on as **root**.
- Type the following command to extract PLM Documentation Server files to your host, replacing *path* with the path to the **splmdocserver.tar.gz** file.

```
tar xvzf path/splmdocserver.tar.gz
```

- In the **splmdocservernnn** directory, launch the installation script:

```
./splmdocserver_install -v
```

- Answer the following prompts:

a. Enter SOURCE directory for Siemens PLM Documentation Server:

Enter the path to the **splmdocservernnn** directory.

b. Enter DESTINATION directory for Siemens PLM Documentation Server:

Enter the destination path for the Siemens PLM Documentation server. The default path is **/usr/Siemens/splmdocserver** for Linux and **/Applications/Siemens/splmdocserver** for Mac.

c. Install the Documentation Web server?

Enter **Yes**.

**Note**

If you deploy the PLM help server architecture to an existing web server, answer **No** to this prompt and skip to step e.

The PLM Solr Server provides online help search functionality and is required whether you install the documentation web server or you deploy the help server architecture to an existing web server.

- d. Enter the TCP port number to use for the Documentation Web server:

Enter the port you want the PLM Documentation Server to use. The default port is **8282**.

- e. Enter the TCP port number to use for the Solr Web server:

Enter the port you want the PLM Solr Server to use. The default port is **8283**.

The installation script installs the PLM Documentation Server and then starts the server. The daemon may take a few minutes to initialize. When the installation and startup are complete, the script displays a message indicating the installation is completed.

**Stopping and starting the Siemens PLM Documentation Server****Windows systems:**

The PLM Documentation Server starts automatically when installation is complete and whenever you restart Windows. If help is not displaying correctly, try stopping and then restarting the **Siemens PLM Documentation Server** service in the **Services** dialog box in the Windows Control Panel.

**Linux systems:**

After installation is complete, you can change the ownership of the PLM Documentation Server. The daemons do not need to run as **root**. To change ownership of the server, change the file ownership of the `/init.d/splmdocserver` script.

To stop and start the PLM Documentation Server, enter the following commands in your `PLM-Doc-Server-root/jetty/bin` directory:

```
splmdocserver.sh stop
splmdocserver.sh start
```

**Install the Teamcenter lifecycle visualization help**

A separate installer is available for each language version of the help. If you install the help in multiple languages, to set which language is displayed, set the language preference in your web browser.

**Note**

You must **install the PLM Documentation Server** before you install the help, and you must install the help in the same location as the PLM Documentation Server.

1. Connect to the GTAC site at <https://download.industrysoftware.automation.siemens.com/>.

2. Log on using your **WebKey** username and password.
3. On the **Siemens PLM Download Server** page, from the list on the left, click **Teamcenter Visualization/ JT Translators/ PLM Vis.**
4. Choose **Full products**→**Teamcenter Visualization**→**12.0**→**Documentation.**
5. Download the file for the appropriate platform and the help language you want to install.
6. Launch the help installation wizard:
  - On Windows, navigate to **splmdoc\_install.exe**, and double-click it.
  - On Linux and Mac, navigate to **splmdoc\_install.bin**, and launch the file.

#### Note

You must have **root** privileges.

7. Select a language for the installation user interface, and then proceed to the **Introduction** dialog box.
8. In the **Introduction** dialog box, click **Next**.
9. In the **Choose Install Set** dialog box, select an option:
  - **Typical** installs both the Teamcenter lifecycle visualization help and the Teamcenter convert and print (VVCP) help.
  - **Custom** enables you to select which of the two help systems you want to install, the Teamcenter lifecycle visualization help or the Teamcenter convert and print (VVCP) help, or both.
10. If you chose the **Custom** option, proceed to the next **Choose Install Set** dialog box and select the help you want to install:
  - **Help** (Teamcenter lifecycle visualization help)
  - **VVCP Help** (Teamcenter convert and print help)
11. In the **JRE Path** dialog box, verify the path to the Java JRE. A supported JRE is required to install help.
12. In the **Pre-Installation Summary** dialog box, verify your selections, and then click **Install** to begin installing the help.
 

The documentation installer installs the help into the PLM Documentation Server and updates the help search database.
13. When the installation is complete, the documentation installer displays the **Product documentation location(s)** dialog box.
14. Click **Next**, and then click **Done** to exit the installer.

## Modify, repair, and uninstall the product (Windows only)

You can launch Maintenance Mode to add features, remove features, or uninstall the entire product.

1. Open the Maintenance Mode window in one of these ways:

To	Do this
Open from the <b>Start</b> menu	<ol style="list-style-type: none"> <li>a. From the <b>Start</b> menu, choose <b>Control Panel</b>.</li> <li>b. In the Control Panel window, do one of the following: <ul style="list-style-type: none"> <li>• (XP) Choose <b>Add or Remove Programs</b>.</li> <li>• (Win7) Choose <b>Uninstall a program</b> or <b>Programs and Features</b>.</li> </ul> </li> <li>c. Select <b>Teamcenter Visualization 12.0 64-bit</b> from the list.</li> <li>d. Click <b>Change</b>.</li> </ol>
Open from the Setup file	Run <b>setup.exe</b> .

2. In the **Teamcenter Visualization 12.0 - InstallShield Wizard**, click **Next**.
3. In **Program Maintenance**, choose one of the following:

Choose	Then do this
<b>Modify</b>	<ol style="list-style-type: none"> <li>a. Click <b>Next</b>.</li> <li>b. In <b>Custom Setup</b>, choose the components to add or remove.</li> <li>c. Click <b>Next</b> and follow the prompts to continue installation/removal.</li> </ol>
<b>Repair</b>	<p>Click <b>Next</b>.</p> <p>No further action is needed.</p>
<b>Remove</b>	<ol style="list-style-type: none"> <li>a. Click <b>Next</b>.</li> <li>b. Click <b>Remove</b>.</li> </ol> <p>The product is removed from your machine.</p>

## Customizing the installation (Windows only)

On Windows platforms, you can use scripts to perform silent installations or large scale deployments. Examples of the ways you can customize an installation include:

- Pre-selecting the features to be installed
- Automatically filling required fields, such as licensing
- Running the install in silent mode

### Note

- For a template script that you can use to customize your installation, see **CustomInstall.bat** in the **scripts** directory of the software distribution image.
- The Windows installer provides many customization options. For the complete Windows installer command line reference, see:

<http://msdn2.microsoft.com/en-us/library/aa372024.aspx>

## Public properties and command line invocation parameters

This section gives some examples of how to run the install program and control the installation via the command line.

Public properties are the global variables of a Windows Installer setup that can be set on the command line.

The following table lists the properties that have been specially created for the Teamcenter lifecycle visualization installation.

Property	Values	Description
INSTALL_CZECH	1	Sets appropriate value(s) to select language localizations that should be installed. If you do not want any additional languages to be installed, then do not set these values.
INSTALL_FRENCH		
INSTALL_GERMAN		
INSTALL_ITALIAN		
INSTALL_JAPANESE		
INSTALL_KOREAN		
INSTALL_POLISH		
INSTALL_PORTUGUESE		
INSTALL_SCHINESE		
INSTALL_TCHINESE		
INSTALL_SPANISH		
INSTALL_RUSSIAN		



Property	Values	Description
HELP_SERVER_SIEMENS	1: Access help from the Siemens PLM Software Doc Center site. 0: Access help from a local or network Siemens PLM Documentation Server.	Sets the value for how the help is accessed.
HELP_SERVER_NAME	[machine_name]	Provides the help server name. Required if HELP_SERVER_SIEMENS is 0.
HELP_SERVER_PORT	[port_number]	Provides the help server port. Required if HELP_SERVER_SIEMENS is 0.
LICENSE_TYPE	1: Node locked 2: Use license server 3: Don't touch license file (useful for maintenance mode)	Sets license type. The default value is 3.
LICENSE_INFO_FILE	[full path to file]	Provides the license information file. Only required if license type is 1. Set the path to license file information sent to the customer by SPD or GTAC. No default value. This is used for installing a node-locked license.
SERVER_NAME	[machine_name]	Provides the license server machine name. Required if license type is 2. No default value.
SERVER_PORT	[port_number]	Provides license server port. Required if license type is 2. No default value.
REMOVE_OLD_PRODUCTS	0: Leave old products 1: Remove old products	Signals to the installer to automatically try to remove all older (pre-5.x) versions of Lifecycle Visualization. You must remove 5.0 and later versions separately. Default is 0.
DEFAULTREG_VVBASE DEFAULTREG_VVSTD DEFAULTREG_VVPRO DEFAULTREG_VMU	Value is a registry file that contains the default registry settings ([HKCU]) for the appropriate product. Can either be a full path to a file or just the name of the file if the file is saved in the installation image (next to <b>setup.exe</b> ). The registry file(s) must be in REGEDIT4 format.	Allows for site-specific default layout customization.  The file(s) must be in the older Win9x/NT4 (Version 4) registry file format. You can do the following to create a registry file in the correct format:  <ol style="list-style-type: none"> <li>1. Install Lifecycle Visualization and modify the layout.</li> <li>2. Run <i>regedit.exe</i>.</li> <li>3. Navigate to <b>HKEY_CURRENT_USER/Software/Siemens/VisView/version#</b>.</li> <li>4. Right-click the appropriate product name and choose <b>Export</b>.</li> <li>5. In the <b>Export Registry File</b> dialog box, from the <b>Save as type</b> list, choose <b>Win9x/NT4 Registration Files (.reg)</b>.</li> <li>6. Enter a file name and click <b>Save</b>.</li> <li>7. Repeat steps 4 through 6 to export <b>HKEY_CURRENT_USER/Software/Siemens/VisView_Retained/version#</b>.</li> <li>8. In a text editor, combine the two exported files into a single .reg file.</li> </ol>
ASSOC2NUKE	Semicolon delimited list of file types.  Example:  .bmp;.cgm;.dwf;.dxf;.gif;.jpeg;.jpg;.png;.tif;.tiff;	Instructs the installer to delete the associations for these file types during installation. This is useful for cases where the file types are already associated with another program, and you want to have these associated with Lifecycle Visualization. For file types already associated with another program, Lifecycle Visualization will not take over the association. However, if they are not associated with another program, Lifecycle Visualization will take them.

There are many other standard public properties that can additionally be set. The most commonly used ones are in the table below. A good reference for these can be found in the [Microsoft Windows Installer SDK](#).

Property	Description
INSTALLDIR	Set the directory in which to install.
ADDLOCAL	Stores a list of features, separated by commas, that are to be installed locally.
TRANSFORMS	Stores a list of transforms to be applied to an MSI database and are used to set the language in which the installer runs. These transforms can be set only in Installation and Advertisement mode. Language transforms are the only transforms available as standard with the install.  TRANSFORMS=1029.mst (Czech) TRANSFORMS=1036.mst (French) TRANSFORMS=1031.mst (German) TRANSFORMS=1040.mst (Italian) TRANSFORMS=1041.mst (Japanese) TRANSFORMS=1042.mst (Korean) TRANSFORMS=2052.mst (Chinese (Simplified)) TRANSFORMS=1028.mst (Chinese (Traditional)) TRANSFORMS=1045.mst (Polish) TRANSFORMS=1046.mst (Portuguese) TRANSFORMS=1034.mst (Spanish) TRANSFORMS=1049.mst (Russian)

## Automate deployment

This section describes options for deploying the same configuration to a large number of users, or pre-filling choices to be made by the user during the installation.

There are three methods of automating a deployment:

- Launch Windows Installer (or **setup.exe**) through the command line or from a batch file.

You can use a command processor, such as a .bat file or a .vbs file. This is useful for having users install from a choice of possible configurations. For example, the administrator can create the following files, and then users can launch whichever install they need to run:

- o **install\_vmu.bat**
- o **install\_vvpro.bat**
- o **install\_vvstd.bat**

An example script **CustomInstall.bat** shows how to use the various command line parameters. Use it to create your own script to do anything that was accomplished with the .ini file supported in prior releases. **CustomInstall.bat** is in the **scripts** directory of the installation image. The file includes all necessary information and is relatively self-explanatory. Use it as a template for customizing and launching the Lifecycle Visualization installer. Uncomment the appropriate lines and enter your information. When you run the script, your attributes are passed to the installer.

**Note**

As described in the Windows specific installation notes above, runtime components of Microsoft Visual C++ Libraries must be installed before installing Lifecycle Visualization. **CustomInstall.bat** contains instructions on detecting if they are installed and installing them if necessary.

- Create a Web-based version of the installer for deployment from a Web server.

The Lifecycle Visualization installer can be configured for deployment from a Web server. You can create an executable that users will download from your server, and run from their location. When the user downloads and runs the executable, the setup files are served from the Web server.

Utilities that you can use to create a Web-based installer are in the **WebDeployUtils** directory in the installation image.

## Installing and uninstalling the Windows cluster service

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.

For more information about using clusters, see *Using Concept* in the Teamcenter lifecycle visualization help.

### Install the Windows cluster service on client nodes

#### Note

Make sure you have already installed Teamcenter lifecycle visualization on the client nodes.

1. From the **Start** menu, choose **Run** and type `cmd` to open the command shell.
2. Switch to the Teamcenter installation directory. By default, it is in **C:\Program Files\Siemens\Teamcenter12.0\Visualization\Program**.
3. Type `TeamcenterVisClusterLaunch -Install`.

#### Note

The default port is 9090. To specify a different port, enter the following, where `xxx` is the port number:

**TeamcenterVisClusterLanch.exe -Install -Port xxx**

4. From the **Start** menu, choose **Control Panel**→**Administrative Tools**→**Services** to open the **Windows services** dialog box.
5. Verify that there is an entry named **Teamcenter VisCluster Service**, and that the status is **Started**.
6. Reboot the machine.

### Uninstall the Windows cluster service

#### Note

If you need to uninstall the application, make sure to uninstall the Windows service first.

1. From the **Start** menu, choose **Run** and type `cmd` to open the command shell.
2. Switch to the Teamcenter installation directory. By default, it is in **C:\Program Files\Siemens\Teamcenter12.0\Visualization\Program**.
3. Type `TeamcenterVisClusterLaunch -Uninstall` to uninstall the Windows service.

4. Reboot the machine.

**Tip**

If you forget to uninstall the Windows service before uninstalling the application first, go to the Windows registry, switch to `\\HKEY_LOCAL_MACHINE\\SYSTEM\\CurrentControlSet\\Services`, delete the entry **TeamcenterVisClusterLaunch**, and reboot the machine.

## Installing the Windows PostScript Printer

### Note

You use the Windows PostScript Printer to process (that is convert, print, and view) external documents such as MS Word, Excel, Powerpoint, and so forth.

You must have administrative permission to install the Windows PostScript Printer.

After installing Teamcenter lifecycle visualization, check for the existence of the PostScript Printer in the **Devices and Printers** section of the Control Panel. If the PostScript Printer does not exist, run the **InstallPrinter.bat** file located in the following location:

```
<install path>\Visualization\VVCP\Driver
```

This batch file assumes the **c:\temp** directory exists. If this directory does not exist, create the directory before running the batch file, or modify the `PORTNAME` value near the top of the batch file to place the **psout.ps** file in a directory writable by all potential users of the Lifecycle Visualization installation.

If the **Windows can't verify the publisher of this driver software** message is displayed, click **Install this driver software anyway**.

For pre-Teamcenter 12 lifecycle visualization installations that still exist on your computer, make sure to set the **PSFile vvcp.ini** setting to the `PORTNAME` value used in the **InstallPrinter.bat** file. Typically, this setting is `PSFILE= c:/temp/psout.ps`.

If you did not install the PostScript Printer before using Teamcenter 12 lifecycle visualization or later, the application attempts to install it at runtime.

### Note

Since you must have administrative privileges when the application attempts the runtime installation, it is recommended that you install the Windows PostScript Printer during the initial installation.

## Install the PostScript printer on Windows 8 and Windows server 2012

### Note

- The driver used by the PostScript Printer is unsigned, and the following steps must be taken to install the unsigned driver.
- The following steps must be completed at the physical computer; not from a remote desktop instance.

1. Save all your work and close open applications.
2. Press Win + L to open the charm bar.

3. Choose **Change PC Settings**.
4. In the **PC Settings** menu, click **General**.
5. In the **Advance startup** section, click **Restart now**.  
The computer will reboot.
6. After rebooting, in the **Choose an option** menu, click **Troubleshoot**.
7. In the **Troubleshoot** menu, click **Advanced options**.
8. In the **Advanced options** menu, click **Startup Settings**.
9. In the **Startup Settings** menu, click **Restart**.  
The computer reboots a second time.
10. After rebooting, in the **Startup Settings** dialog box, press **7** or the arrow down key to select the **Disable driver signature enforcement** option.
11. Open your Windows file manager and navigate to:  
*<install path>\Visualization\VVCP\Driver*, and run the **InstallPrinter.bat** file.

**Note**

Make sure you right-click **InstallPrinter.bat** and choose **Run as administrator**.

12. When prompted, press **y** to install the PostScript printer on local port **C:\temp\psout.ps**.

This batch file assumes the **c:\temp** directory exists. If this directory does not exist, create the directory before running the batch file, or modify the `PORTNAME` value near the top of the batch file to place the **psout.ps** file in a directory writable by all potential users of the Lifecycle Visualization installation.

If you see the **Windows can't verify the publisher of this driver software** message, click **Install this driver software anyway**.





## Chapter 5: Configuring Lifecycle Visualization

After installing selected applications, you may need to configure some applications to meet your specific needs.

### Windows security settings

Windows includes a firewall that is enabled by default. To ensure that the Viewer functions correctly, you must give it the appropriate permissions within the Windows security settings. You may need to adjust your security settings if you:

- Run a FLEXlm™ license server (default port: 28000).
- Use conferencing (default port: 8888).
- Work with the clearance database option for Oracle (default port: 1521).
- Use a help server (default port: 8282)

To ensure that the Viewer functions correctly, you may need to configure your firewall to allow the application to communicate through the firewall by adding the application to the list of programs allowed to open the port. This is called *unblocking*.

For more information on configuring your firewall, contact your system administrator.

### External converters and printers for Convert and Print (UNIX)

Convert and Print can use other applications to convert native files into a supported file format. You also can write your own TCL scripts to call a native application.

For details about configuring the application to support external applications, see *Using custom code* located in the Convert and Print help.

For additional details about working with and configuring UNIX printers, see the topic *Selecting Windows printers and configuring UNIX, and OCE printers* located in the Convert and Print help.

### Install TCCS and an FCC

The Teamcenter client communication system (TCCS) manages communication and file transfers between Teamcenter clients and servers. TCCS includes 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 FMS client cache (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 need to transfer volume data between Teamcenter and the viewer, refer to the instructions for installing TCCS in the Teamcenter help.

#### Note

The TCCS installer requires Java Runtime Environment (JRE) and prompts you for the path to a valid JRE. For information about required versions of JRE for Teamcenter, see the Teamcenter Software Certification information here:

[http://www.plm.automation.siemens.com/en\\_us/support/gtac/certifications.shtml](http://www.plm.automation.siemens.com/en_us/support/gtac/certifications.shtml)

1. Contact your Teamcenter administrator to obtain the following information about the parent FMS server cache (FSC) that your local FCC connects to.
  - Communication protocol (HTTP or HTTPS)
  - Host name
  - Port number
  - Path to the FSC on the host
2. If you use forward or reverse proxy with TCCS, or if you want to specify connection information for TCCS environments you want to connect to, you also must obtain the following from your Teamcenter administrator:
  - Connection information for the forward proxy.
  - Names and URLs of the TCCS environments your client host connects to. If you use Security Services with TCCS, obtain the ID and URL of the Security Services application too.
  - Connection information for the reverse proxy such as WebSEAL or SiteMinder.
3. Download the TCCS installation files from GTAC:
  - a. From <http://www.siemens.com/plm/support>, click **Download & Upload Files**→**Download files**.
  - b. Log on using your **WebKey** username and password.
  - c. On the **Siemens PLM Download Server** page, in the **Product Updates** section, select **Teamcenter Visualization** from the list.
  - d. Drill down to **teamcenter\_visualization** →**patch**→**general**.
  - e. Click the link for the appropriate release.
  - f. Click the **TCCS** link.
  - g. Download the TCCS install files for your operating system.

4. Depending on your operating system, do one of the following:
  - (Windows) Double-click the **tccsinst.exe** application.
  - (Mac) Copy the .zip files to a local directory, expand **tccsinst.zip** file into a local directory named **tccs**, and then double-click the **tccsinst.app** application.
  - (Linux) From the command prompt, type **tccsinst.bin**.

**Note**

If your home directory does not have sufficient temporary space for the installation process, the installer prompts you to specify a different temporary directory. Restart the installation specifying a temporary directory on the **tccsinst.bin** command:

```
tccsinst.bin -is:tempdir /mnt/path
```

5. In the **Teamcenter client communication system setup** application, on the **Introduction** page, click **Next**.
6. On the **License Agreement** page, click **I accept the terms of the License Agreement**, and then click **Next**.
7. On the **JRE Path** page, specify the path, and click **Next**.
8. On the **Choose Install Folder** page, specify the installation location, and click **Next**.
9. On the **FCC Parent Settings** page, do the following to specify information about the FMS server caches (FSCs) your host connects to:

To specify	Do this
Protocol	Double-click the <b>Protocol</b> cell and type <b>HTTP</b> or <b>HTTPS</b> .
Host	Double-click the <b>Host</b> cell and type the host name of the parent FSC.
Port	Double-click the <b>Port</b> cell and type number of the port used by the parent FSC.
Path	Double-click the <b>Path</b> cell and type the path to the FSC on the parent FSC host.

The FCC can connect to multiple FSCs. To add an additional FSC, click **Add** and type the values for the FSC. To remove an FSC from the list, select the row in the table and click **Remove**.

If you use multiple FSCs, specify a connection priority for each in the **Priority** column.

10. Click **Next**.
11. On the **Choose Installation Type** page, do one of the following:

To	Do this
Continue without configuring forward proxy, reverse proxy, or the TCCS environment	Clear the <b>Advanced Configuration</b> check box and click <b>Next</b> .
Configure forward proxy, reverse proxy, or the TCCS environment	<ol style="list-style-type: none"> <li>a. Select the <b>Advanced Configuration</b> check box and click <b>Next</b>.</li> <li>b. On the <b>Configuration Selection</b> page, click <b>Shared</b> or <b>Private</b>, and then click <b>Next</b>.</li> <li>c. On the <b>Forward Proxy Settings</b> page, specify forward proxy information, and click <b>Next</b>.</li> <li>d. On the <b>Environment Settings</b> page, specify middle-tier application server information, and click <b>Next</b>.</li> <li>e. On the <b>Reverse Proxy Settings</b> page, specify reverse proxy information, and click <b>Next</b>.</li> <li>f. (Windows) On the <b>Kerberos Support</b> page, specify Kerberos settings, and click <b>Next</b>.</li> <li>g. (Windows and Linux) On the <b>Secure socket layer (SSL) settings</b> page, enter SSL setting, and click <b>Next</b>.</li> </ol>

12. On the **Pre-Installation Summary** page, review your selection. If you want to make changes, click **Previous**. Otherwise, click **Install**.

The client cache is installed.

13. When installation is complete, click **Done** to close the installer.
14. Restart the system.

## Resolve possible issue with text missing in UI on Linux

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 'iso8859-13' 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.

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

Note that 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 Red Hat 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.

## Interoperation with the Teamcenter rich client on UNIX

A configuration file is required on UNIX platforms to enable interoperation between the Teamcenter rich client, Lifecycle Visualization, and other Siemens PLM Software products. During installation, the **installed\_programs.dat** file is created (or updated) in the **/ugs** directory. The file lists installed external applications that interoperate with the Teamcenter rich client.

The file must have the following format:

```
[HKEY_LOCAL_MACHINE\Software\Unigraphics Solutions\Installed Applications]
```

```
"<application_name>""<path/executable>"
```

```
"<application_name>""<path/executable>"
```

There should be an entry for each instance of Mockup and Professional installed. (Standard and Base do not support interoperation.) The following is an example of the file:

```
[HKEY_LOCAL_MACHINE\Software\Unigraphics Solutions\Installed Applications]
```

```
"Teamcenter Visualization Professional 9""<install path>/bin/visviewpro"
```

```
"Teamcenter Visualization Mockup 9""<install path>/bin/vismockup"
```

**Note**

- You must be logged in as *root* during installation to create the **/ugs** directory. If you already have a **/ugs** directory, you do not need to be *root* to create or update the **installed\_programs.dat** file.
- By default, Teamcenter looks for the **installed\_programs.dat** file in **/ugs** directory, but you can set an **UGII\_INTEROP\_PROGRAMS** environment variable to use a different file.
- Teamcenter uses the last entry in the **installed\_programs.dat** file with “Vis” in the name. If you have multiple versions of Teamcenter Visualization installed, make sure the one you want to use is the last entry in the file.

## Enabling File Management Services (FMS)

File Management Services (FMS) is a Teamcenter feature that facilitates the direct delivery of data between the client (in this context, Lifecycle Visualization) and the server (Engineering Process Management or Teamcenter Enterprise).

Lifecycle Visualization uses FMS by default in conjunction with an integration with Engineering Process Management or Teamcenter Enterprise if the client workstation has been configured for FMS, and the Teamcenter server version supports this. This requires installation and configuration of the FMS Client Cache (FCC) on the client workstation, and appropriate server configuration.

To disable the use of FMS, you must set the following environment variable:

```
TCVIS_USE_FMS False
```

**Note**

The stand-alone viewer uses the FCC segment cache to store portions of files interoperated from Teamcenter. Because of this, .jt files are added to the segment cache file (.seg) in your FCC cache and do not appear individually within the cache directory. For information on setting the size of the segment cache file, see *FMS client configuration file* within the Teamcenter *System Administration* guide.

## Enabling Security Services Preferences

Teamcenter Security Services Preferences can be set in the registry or through the Lifecycle Visualization user interface. Administrators can suppress access to Security Services Preferences through the user interface for sites that want to hide these settings from end users.

**Note**

Teamcenter Security Services are not supported on the Mac platform.

All of the following Teamcenter Security Services related registry keys are set in the HLML\APP\_REG\_ROOT\SSOService section of the registry:

Key Name	KeyType	Value	Meaning
AllowSSOUI	REG_DWORD	0, 1, key not set	<ul style="list-style-type: none"> <li>0 disallows Teamcenter Security Services Preferences UI in the viewer.</li> <li>1 allows Teamcenter Security Services Preferences UI in the viewer.</li> <li>Not set allows Teamcenter Security Services Preferences UI in the viewer.</li> </ul> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p><b>Note</b></p> <p>If AllowSSOUI is set to 0 (disallowed), administrators need to set the following registry keys to allow, disallow, or configure Teamcenter Security Services for users: UseSSO, SsoURL.</p> </div>
UseSSO	REG_DWORD	0, 1	<ul style="list-style-type: none"> <li>0 Teamcenter Security Services authentication is disabled in the viewer.</li> <li>1 Teamcenter Security Services authentication is enabled in the viewer.</li> </ul>
SsoURL	String	Teamcenter Security Services Login URL	<ul style="list-style-type: none"> <li>When set and not empty and the UseSSO value is 1, this value is used as the Teamcenter Security Services login service URL to be loaded by the browser to access Teamcenter Security Services authentication services.</li> <li>When not set, Teamcenter Security Services Authentication is not performed (equivalent to UseSSO = 0).</li> </ul>

## Configuring Lifecycle Visualization for SSL

Teamcenter lifecycle visualization includes many well known Certifying Authorities (CA) certificates. You can include new or updated certificates by copying them to the **<Teamcenter lifecycle visualization install location>/etc/certs** folder. Note that Teamcenter lifecycle visualization supports CA certificates in the PEM format only.

## Map enterprise paths to mounted file servers for conferencing

### Note

When searching for files, the local path set from the user interface is searched first, and global paths are searched second (CollabRootGlobal0, CollabRootGlobal1, etc.).

- Run regedit in one of the following ways:
  - (UNIX) Type `<install path>/bin/regedit`.
  - (Windows) Click **Start**, point to **Run**, and enter **regedit**.

2. Browse to HKEY\_LOCAL\_MACHINE\SOFTWARE\Siemens\VisView\12.0\Vis Mockup\C.
3. Create a new key called **VSFileServer**.
4. Inside **VSFileServer**, create a new string and rename **CollabRootGlobal0**.
5. Double-click **CollabRootGlobal0** and for the **Value Data**, enter your network path.
6. Exit Regedit.

#### Note

- (UNIX) This must be done once per installation as root or user with the write permissions to the installation.
- (Windows) This must be done once per machine.
- The registry key can be exported out and pushed to other machines on the network.

## Defining root directory sets

Directory Sets are collections of rules that produce locations where files can be located. Root directory sets specify locations for your entire organization. They take precedence over user-defined and automatic directory sets.

When you define root directory sets, a **Root** tab appears in the **Auto File Locate Search** dialog box. Users cannot modify these directories but they can change the order in which they are searched and can disable them.

Defining a root directory set includes:

- **Creating a root directory set**
- **Making root directory accessible to users.**

## Creating a root directory set

Creating a root directory set is the same as creating a user-defined location:

- **Managing document locations**
- **Saving and loading AutoFile Search preferences.**

## Manage document locations

When you use the **File Usage Confirmation** dialog box to accept and load documents identified by AutoFile Search, the file locations are added to the **Automatic Directory Set**. If you want to include a location in future searches, you can add it to the User-defined Directory Set.



**Tip**

As more file locations are added to the **Automatic Directory Set**, you can manually remove them from the list. Older locations are automatically removed if the list becomes too long.

1. Choose **File** tab→**Preferences**→**File Locate**.
2. In the **AutoFile Search Preferences** dialog box, on the **Document Search Order** tab, select **Automatic Directory Set** and click **Edit**.
3. In the **Extensions** section of the **Automatic Directory Set** dialog box, select a file type.

The **Directories for Selected Extension** section displays the directories where files of the selected type were found.

4. Do any of the following:

To	Do this
Add a location to the <b>User-defined Directory Set</b>	Select a location, and click <b>Move to User Set</b> . In the <b>User-defined Directory Set</b> , the location is added to the list of directories to search.
Delete a directory from the list	In the <b>Directories for Selected Extension</b> section, select a location, and click <b>Delete</b> .
Delete the file type and all associated directories	In the <b>Extensions</b> section, click <b>Delete</b> .
Delete all displayed extensions and directories	In the <b>Extensions</b> section, click <b>Clear All</b> .

### Saving and loading AutoFile Search preferences

You can save your AutoFile Search preferences as a .vfp file, which you can distribute for use with other installations.

**Tip**

You also can save AutoFile Search preferences as an .xml file to review your current settings. However, the application loads .vfp files only.

1. Choose **File** tab→**Preferences**→**File Locate**.
2. In the **AutoFile Search Preferences** dialog box, on the **General** tab, do one of the following:

To	Do this
Save AutoFile Search preferences	a. Click <b>Save Preferences</b> . b. In the <b>Select file to save to</b> dialog box, save the file.

To	Do this
Load AutoFile Search preferences	<ol style="list-style-type: none"> <li>a. Click <b>Load Preferences</b>.</li> <li>b. In the <b>Select preference file to open</b> dialog box, open a .vfp file.</li> </ol> <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p><b>Note</b></p> <p>Loading a preferences file overwrites the current preferences.</p> </div>

## Make root directory accessible to users

1. Place the **preferences file** you created in a location that users can access. For example, place it on a server or on each user's workstation.
2. On each user workstation, set the following user environment variable with the location of the preferences file:

**EAI\_ROOT\_LOCCACHE** <path/filename>

### Note

You may need to close the application to view the effect of the environment variable. You should see the **Root** tab in the **Auto File Locate Search** dialog box.

## Chapter 6: Running Lifecycle Visualization

This section contains instructions for starting Teamcenter lifecycle visualization.

### Note

If you are using a remote machine as a license server for your product, make sure the license server is set up before you run your product. See the [Licensing](#) section for more information.

### Run the products on Windows

Do one of the following:

- Double-click the Lifecycle Visualization icon on your desktop.
- Choose **Start** → **All Programs** → **Teamcenter 12.0** → **Lifecycle Visualization** and choose one of the Lifecycle Visualization products.

### Note

To run Convert and Print, you must use the **Start** menu.

### Run the products on Linux and Mac

1. Before running Lifecycle Visualization products, add the following to your path: **<installation location>/Siemens/Teamcenter12.0/Visualization/bin/**
2. Run a licensed version of a Lifecycle Visualization product in one of these ways:

To run this product	Type this
Base	visviewbase
Standard	visviewstd
Professional	visviewpro
Mockup	vismockup
Convert	prepare
Print	pvprint



## Chapter 7: 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

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