

Windchill Modeler 10.0 Release Notes

Thank you for choosing Windchill Modeler. Please read these release notes fully before installing Windchill Modeler 10.0.

Introducing Windchill Modeler 10.0

SysML 2.0

Windchill Modeler 10.0 delivers innovative system modelling capabilities in accordance with the new systems modelling standard, SysML 2.0, as defined by the Object Management Group (OMG). SysML 2.0 is the next-generation language for modeling systems and is intended to facilitate a model-based systems engineering (MBSE) approach to complex product development. Windchill Modeler 10.0 and SysML 2.0 provide the capabilities to create and visualize models that represent many different aspects of a system, including requirements, structure, behavior and verification.

SysML 2.0 capabilities will be released incrementally over multiple versions of Windchill Modeler, beginning with version 10.0. The main functional areas that are available in this release include Package Management, Requirements, Use Case and Structural Modeling.

The existing Package Browser has been extended to allow viewing and creation of SysML 2 packages, elements, and relationships, showing the containment hierarchy and ownership of those elements. The existing Parts Browser has also been extended to show SysML 2 elements, and shows the full hierarchy of elements, including owned elements, and elements inherited through model relationships such as feature typing or subclassification. New model elements can be created with both browsers by using the context (right-click) menu and selecting the appropriate element type, such as requirement, use case, part, port, or interface.

To provide a streamlined experience when working with the Package Browser you can utilize Package Filters, which allow you to choose the element types that are displayed or hidden when viewing the contents of a specific package. Filters can be saved for future use making it easy to control which model elements are displayed.

A new diagram type called System Structure Diagram has been introduced in Windchill Modeler 10.0, which is used to create SysML 2.0 elements and relationships graphically via the diagram toolbar. You can also drag existing elements from the browsers and drop them onto the canvas for efficient, intuitive modelling. Diagramming aids such as populate, alignment guides, link auto-routing and diagram filtering are available when using System Structure Diagrams.

Many modelling functions have been optimized for efficiency, for example drag and drop is used extensively to create model relationships such as feature typing. Drag and drop also allows you to create new elements in context “on the fly”, for example, new usage or new redefinition elements. The Creator utility can also be used to create multiple SysML 2.0 elements and diagrams in a single, efficient operation.

SysML 2.0 includes a set of Model Library files that can be utilized in Windchill Modeler models to provide standard definitions of engineering constructs such as quantities and units. These are provided via the [Reference Document](#) tool on PTC’s Support website and can be brought into Windchill Modeler models using the Component Sharing Wizard.

Windchill Modeler 10.0 continues to offer market-leading product line engineering (PLE) capabilities based on Orthogonal Variability Modelling (OVM) and these can now be applied to SysML 2.0 models. This means that you can incorporate variability elements and optionality into SysML 2.0 designs from the start of your project.

To enable design traceability with other engineering tools, SysML 2.0 models can utilize the standard OSLC integrations in Windchill Modeler for creating OSLC Links and Surrogates. This means Windchill Modeler users can create OSLC Links to external data in systems such as Windchill PLM, RV&S, Codebeamer and 3rd party tools such as IBM DOORS Next and Siemens Polarion. In addition, Windchill Modeler 10.0 provides an OSLC Server that exposes SysML 2.0 models, so other systems will be able to access and create OSLC Links to SysML 2.0 elements.

You can also create standard packages within SysML 2.0 models meaning you can use other profiles and create other types of designs, such as software modelling with UML for example. This allows you to use UML for integrated systems and software development with SysML 2.0.

Model management for SysML 2.0 models uses the same concepts and software features as the rest of Windchill Modeler, so versioning, private sandboxes, access permissions, export/import etc., all function in a consistent manner, meaning they are familiar to existing users. Windchill Modeler 10.0 will continue to support all existing capabilities and profiles such as UML and SysML V1, UAF, Code Generation etc. You can continue to work on your existing models, which can be automatically upgraded to work with Windchill Modeler 10.0 and future versions.

Web Interface

Windchill Modeler Web Interface has been updated to match the PTC visual style, aligning with other PTC software. You are also able to view SysML 2.0 models and diagrams using Windchill Modeler Web Interface.

Java

Windchill Modeler 10.0 now supports Amazon Corretto, in addition to Oracle JRE. This provides you with a no cost Java option for enabling Windchill Modeler's XMI features.

In summary, Windchill Modeler 10.0 delivers ground-breaking new capabilities for systems modelling in accordance with OMG's new standard, SysML 2.0. Windchill Modeler Web Interface has been updated visually to match PTC's standard design system. Also, Windchill Modeler deployment options have been widened with support for Amazon Corretto for Java.

Installation of Windchill Modeler 10.0

Refer to the Windchill Modeler 10.0 Installation Guide PDF or Help mentioned above for guidance on deployment of Windchill Modeler and more detailed instructions.

All software updates (including Windows updates) must be applied to computers that are hosting Windchill Modeler software to ensure optimum security. Beta releases are not supported.

Chinese and Japanese Windows

If you are installing on Chinese or Japanese Windows, choose an installation path which uses only single-byte (for example, English) characters in the folder names.

Deprecated Features

All existing Windchill Modeler 9.6 models may be upgraded to Windchill Modeler 10.0. However, the following features have been deprecated or withdrawn in 10.0 or earlier releases:

- External Classes – improved facilities available through package sharing, component sharing wizard (i.e. the ability to share more than just classes) and OSLC links. Existing External Classes will still be visible in the model, so these should be deleted and replaced. They may not be updated, or new ones added.
- Custom Properties – Tag Definitions provide a UML-based alternative. The Custom Properties Editor has been removed, but existing custom properties will still be available in the model and may be modified by editing the Template.txt file directly. They should be replaced by Tag Definitions.
- OCS Forward Generation and Synchronization – no longer supported. All languages have been replaced by ACS Generators. OCS Reversing will continue to be supported for legacy code.
- Document Generator - no longer supported. Replaced by Publisher.
- Web Publisher - no longer supported. Replaced by Publisher browsable HTML generation.
- DoDAF Profile - no longer supported. Replaced by UPDM for DoDAF.
- SCC integrations with IBM Rational ClearCase®, Serena® PVCS® Version Manager™,
- Telelogic® CM Synergy®, Serena® ChangeMan® Dimensions™ and Microsoft SourceSafe® are deprecated.
- Microsoft Windows XP, Windows Vista, Windows Server 2003, Windows Server 2008 (including R2), Windows 7, 8 and 8.1, 32bit Windows, Visual Studio 2013 or earlier, Internet Explorer, Office 2003 and 2007 – no longer supported. Windchill Modeler is fully supported on Microsoft products in 'mainstream support' (see <https://support.microsoft.com/lifecycle>).
- C++ VxWorks generation schemes are not included with 8.3 or later. VxWorks and PikeOS Apex ARINC generators are deprecated. If you are using these generators, please contact Support regarding future plans for them.
- Enabler database engine – no longer supported, other than for migration to SQL Server.
- Enabler Administration - no longer supported, basic features are included in Model Explorer.
- User Manager - no longer supported, features still required have been included in Model Explorer.

- Model Editor RTF Templates - deprecated and UI removed.
- Model Editor Report Writer – not included in 9.4 or later.
- Publisher HTML - deprecated and replaced by the Web Interface.
- Connector for IBM Rational® Rose® - no longer supported.
- Matrix/Table generation to Excel - deprecated and replaced by generation to HTML.
- PE-SE Manage Traces application - not included in 9.0 or later, replaced by OSLC integrations.

Planned Future Changes

We are planning to withdraw/migrate the following support and features in future releases:

- Object Animator
- System Architecture Diagram Migration
- Storage Mapper
- Support for Microsoft Office 2010 and 2013
- System Architecture Diagrams – replaced by composite structure diagrams or SysML Internal Block Diagrams.
- Concurrency Diagrams – replaced by communication diagrams optionally using the MARTE profile.
- DOORS and ILM Synchronizers – these capabilities will be superseded by our longer-term solution based on OSLC

If you are currently using features or platforms that we intend to withdraw, please consider the alternatives and, if necessary, discuss the options with Product Management or Support.

Notes on the use of Windchill Modeler 10.0

Known Issues

The file “Known Issues” is available for download from <https://support.ptc.com/>. This document provides a list of known issues in this release and how to work around them.

Chinese and Japanese Windows

When using SqlImport to migrate data use the -R option to import Japanese or Chinese data.

Release description

Product software identification

The release is identified as “Windchill Modeler 10.0”. Individual tools within Windchill Modeler have the following version numbers as identified in the component version resource, “Help About” box or the equivalent.

Windchill Modeler component	Version
Windchill Modeler® Model Editor	10.0
Object Animator	9.0.0.6
OCS Reversers	9.0.0.6
Storage Mapper	9.0.0.0
Integration for Integrity Lifecycle Manager	9.4.0.4
Integration for IBM Rational DOORS	9.4.0.15
XMI Import/Export	9.3.0.8
License Manager	9.3.0.2
Component Sharing Wizard	9.5.0.0
Automatic Code Synchronization	9.3.0.0
SysML profile	9.2.0.10
UPDM profile	9.2.0.6
UAF profile	9.2.0.6
Integration for MATLAB Simulink	9.3.0.2
Publisher	9.2.0.10
Variant Selector	9.3.0.5
SySim	9.6
Windchill Modeler Installer Package	9.6
TellMe	9.2.0.9
Web Interface	10.0.0.3
Windchill Exporter	9.4.0.7
Model Manager	9.4.0.15
Microsoft .Net Framework	4.8
Flexera FlexNet Publisher	11.19.3
Microsoft SQL Server Express 2019	15.0.2000.5
Reviewer	9.4.0.13

Supported platforms

Operating System	Tested Versions	Supported Versions
Microsoft Terminal Server		Windows Server 2019® Windows Server 2022®
Citrix VDA version 1912 LTSR	Citrix VDA version 1912 LTSR (Tested against Windchill Modeler 9.6 and 10.0)	Citrix VDA version 1912 LTSR
Windows 10® and 11®	10, 11	10, 11
Windows Server 2019® and Windows Server 2022®	2019, 2022	2019, 2022

Notes:

1. The latest Service Pack and any relevant critical and high-priority updates must be applied to all supported Microsoft products regularly. Beta releases are not supported.
2. Windows 98, ME, NT 4.0, 2000, XP, Server 2003, Server 2008 (including R2), Server 2012 and 2016, Vista and Windows 7, 8 and 8.1 are not supported.

Support for PTC and third-party products

Product Name	Tested Versions	Supported Versions
Microsoft SQL Server	2017, 2019 Express and Standard	2017, 2019 Express, Standard or Enterprise Edition
Microsoft .Net Framework	4.8	4.8
Microsoft Word® and Excel®	16 (2019) (See Note 1)	14 (2010) - 16 (2019)
Microsoft Visual Studio®	Visual Studio 2015, 2017, 2019	Visual Studio 2015, 2017, 2019
Microsoft Windows® Platform SDK	8.1	8.1
Microsoft Office	360, 2019 (32 and 64-bit)	360, 2019 (32 and 64-bit)
GNU Compiler Collection	3.4.4	3.4.4 or later
MATLAB Simulink	2017a	2016a to 2017a
Mozilla Firefox	113.x	113.x or later
Google Chrome	114.x	114.x or later
Microsoft Edge	108.0.1462.46	108.0.1462.46 or later
Windchill Asset Library	4.3	4.3
PTC Integrity Lifecycle Manager / Windchill RV&S (Synchronizer)	13.1, 13.2	11.2, 12.2, 12.2.1, 12.3, 12.3.1, 12.4, 12.5, 13.0, 13.1, 13.2
PTC Integrity Lifecycle Manager / Windchill RV&S (OSLC)	13.1, 13.2	12.1 CPS 01, 12.2, 12.3, 12.3.1, 12.4, 12.5, 13.0, 13.1, 13.2 with REST and OSLC services
PingFederate (SSO with Windchill RV&S and Windchill Modeler)	11.0.1.1	11.0.1.1
PTC ThingWorx	9.3, 9.4	9.0, 9.3, 9.4

PTC Windchill PLM (Exporter)	12.1.2.4, 13.0	11.1 M010, 12.0.0.0, 12.1, 12.1.2.0, 12.1.2.2, 12.1.2.3, 12.1.2.4, 13.0
PTC Windchill PLM (OSLC)	12.1.2.4, 13.0	11.1 M020 CPS 08 or later, 11.2.1.0, 12.0.0.0, 12.0.1.0, 12.1.1.0, 12.1.2.0, 12.1.2.2, 12.1.2.3, 12.1.2.4, 13.0
PTC Windchill Modeler (OSLC)	9.6, 10.0	9.4, 9.5, 9.6, 10.0
PTC Codebeamer (OSLC)	22.10 SP7, 2.0	22.10 SP2, 2.0
IBM Rational DOORS® (Synchronizer)	9.6, 9.7	9.6, 9.7 (thick client)
IBM Rational DOORS® Web Access (OSLC)	9.7	9.6.1.4, 9.7 (thin client)
IBM Rational DOORS® Next Generation (OSLC)	7.0.1	6.0.6, 7.0.1
IBM DOORS® Next and Global Configuration Management (IBM Engineering Lifecycle Management) (OSLC)	7.0.1, 7.0.2	7.0.1, 7.0.2
Siemens Polarion	Polarion 22 R1	Polarion 22 R1
Phoenix Integration ModelCenter	v13 - v14.2 MBSE v2.0	v13 - v14.2 MBSE v2.0
Amazon Corretto	8.372.07.1	8.372.07.1
Oracle Java Runtime Environment (XMI)	32bit 1.8 update 351	32bit 1.8 update 241 or later

Notes:

1. Microsoft Office versions are alternatively known as follows: Office 16 covers Office 2016, 365 and 2019. Current Service Packs and Microsoft Updates may be required by Windchill Modeler.
2. Compatibility with web browsers (current version is recommended):
 - The Windchill Modeler Web Interface and Model Manager are compatible with the versions of Edge, Firefox and Chrome listed above. Internet Explorer is no longer supported.

Disk space requirements

The following minimum space requirements are based on installations on a Windows 10 computer, and include all installation components, including SQL Server Express, Runtimes for .Net and Java. Additional space will be required for creation of models on Standalone and Server installations.

Installation type	Size
Client	1GB
Server	3GB
Standalone	4GB

Note: The installation process may require additional working space.