

What's new in Teamcenter Service Pack 10.1.4

Benefits

- Streamlined collaboration between mechanical and electronic design teams
- Improved software management, development and delivery with integration to application lifecycle management (ALM) tools
- Greater productivity for simulation analysts with faster execution and filtering
- Clearer communication between engineering and CAD designers
- Improved ease of use for workflow and change
- Greater flexibility in requirements capture, display and management
- Increased productivity for service technicians with Active Workspace
- More efficient manufacturing BOM preparation
- Improved supplier collaboration with reference items now attached to datasets for suppliers to view and download

Summary

The Teamcenter® portfolio of product lifecycle management (PLM) solutions from Siemens PLM Software brings together all of your product information and processes in a single system that helps you maximize productivity and streamline operations. Service Pack 10.1.4 delivers multi-domain product design and management in a single environment, including new tools that streamline and integrate mechanical and electronic design, software development and simulation processes. You can extend the value of your PLM solutions to related domains with new functions for BOM management, process execution, requirements management, service lifecycle management, manufacturing process management and supplier integration.

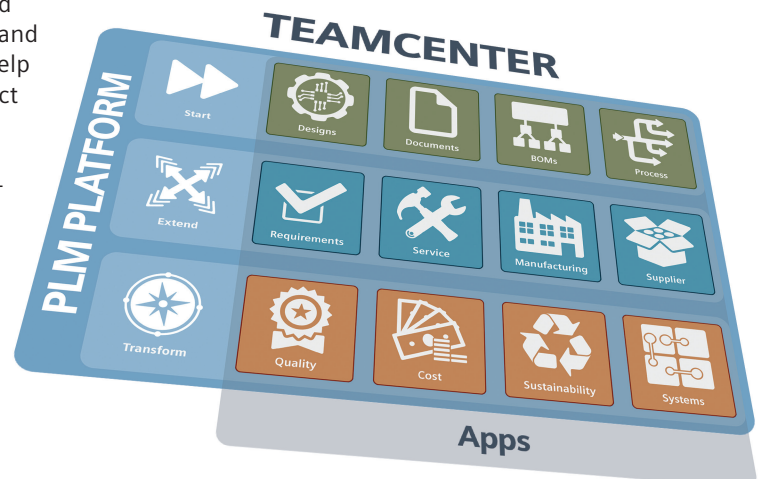
Teamcenter 10.1.4 can help you transform your business with new systems engineering tools for system and architecture modeling and new capabilities that help you comply with conflict minerals regulations. The service pack also enhances the PLM platform that supports

every Teamcenter solution with expanded tools for Active Workspace and Teamcenter Rapid Start configurations and a new framework for connecting Teamcenter with other applications.

Let's take a detailed look at the enhancements throughout the portfolio.

Start with PLM

The design and simulation management capabilities of Teamcenter have been enhanced in this service pack to help you increase productivity and improve product quality by expanding our software integration coverage and enhancing our approach to managing mechanical, electronic, software, behavioral models and simulation design processes and data in a single environment.



What's new in Teamcenter Service Pack 10.1.4

Benefits *continued*

- Model system architectures and verify performance targets
- Efficient methods to address conflict minerals reporting compliance
- Greater ease of use and mobility with Active Workspace
- Simpler integration with other applications
- More flexibility for preconfigured Teamcenter Rapid Start deployments

Electronics design and data management

New capabilities significantly extend Teamcenter functions for integrating electronic computer-aided design (ECAD) and mechanical computer-aided design (MCAD) data and processes. ECAD and MCAD designers can collaborate during the design process using the Intermediate Data Format (IDF) and Incremental Data eXchange (IDX) standard format for sharing data between mechanical design and printed circuit board (PCB) layout systems. Managed in Teamcenter, the shared data becomes a permanent part of the design history.

In addition, Teamcenter enables ECAD/MCAD collaboration and smoother transition into manufacturing through establishment of a common parts library and a common bill of materials (BOM). The parts library enables a single item that includes all representations, including the ECAD footprint and symbol, the MCAD 3D view, and common or specific ECAD and MCAD attributes. ECAD and MCAD tools can read and write to the common bill of materials, which helps keep mechanical and electrical design in sync, avoids manual reconciliation processes that can introduce errors, and enables better 3D visualization of product assemblies for interference analysis.

Service Pack 10.1.4 extends the ECAD integration capabilities to Teamcenter Rapid Start customers who choose preconfigured PDM to reduce deployment time and cost.

Software management

In the software domain, Teamcenter now delivers an Integration Framework for linking software data into the design process. Integration with the Polarion application lifecycle management (ALM) solution provides an integrated ALM-PLM solution that brings software engineers more closely into the product development process. The integrated approach supports bi-directional requirements management and multi-domain change management. Requirements can be viewed, linked and shared from within the tool and design context with which you are most familiar.

Supporting a full multi-domain change management process, you can accurately assess the impact of cross-domain design changes and ensure software change processes are consistent with your corporate change management structure. The Teamcenter integration with Electric Cloud provides development and automation for the entire build, test and delivery process for embedded software.

Mechanical design and data management

For Solid Edge customers, the enhanced integration between Teamcenter and Solid Edge (Solid Edge Embedded Client) enables users to more easily find information, start or open Teamcenter objects in Solid Edge, browse and search for items, revisions and datasets and browse Teamcenter classification.

Simulation process management

Service Pack 10.1.4 delivers new capabilities for computer-aided engineering (CAE), simulation and process management. For simulation data management, improved performance for target references and composite commands dramatically reduces the time required to check for later revisions of the product and to see all simulation data associated with the product or model structure in context. Enhanced CAE BOM filtering and structure searching assist analysts when dealing with thousands of files and objects associated with large product or model structures. Extended and integrated structure mapping automates the process of marking a CAE structure as precise or imprecise, and enables the authoring of structure maps in context within the CAE Manager.

BOM management

With Teamcenter 10.1.4, engineers can now assign target properties to worksets. Target properties can include partitions (for example, systems, functions, zones and others) and target effectivity information. This helps clearly communicate information to CAD designers later in the process. They no longer have to guess or track down target information for any new content.

PLM process execution

Teamcenter 10.1.4 provides more user-friendly interaction for work processes with enhancements to Active Workspace. You can route items, acknowledge tasks and assign work to any user or group from the easy-to-use web user interface. With the in-workflow viewer, you can easily see if an item is currently in a workflow. The enhanced workflow viewer helps you easily understand workflow ownership, progress and status at a glance through the use of colors and the availability of more information. You can now select multiple items to submit to a workflow or for sign-off at one time. Behind the scenes, due dates are now based on task duration by work week, and workflows start based on target properties.

Extend the value

Requirements management

You can now leverage Active Workspace to more quickly and easily capture, manage, share and verify requirements – anywhere and at any time. With Service Pack 10.1.4, you can capture and view requirements in formats that are easier to understand and manipulate – you can take advantage of table-based viewing of requirements, or export them to Microsoft Word or Excel to work in a more familiar context.

Service lifecycle management (SLM)

With Teamcenter 10.1.4, technicians using Active Workspace become more productive with new capabilities. SLM now enables the installer and inspector to manage the physical structure, record the usage, and update the installed parts to improve the accuracy of asset configurations where service might be accomplished by outside service organizations. The new deviation process in Active Workspace also ensures that only authorized parts are installed on the asset.

Manufacturing process management

For manufacturing process management, Teamcenter 10.1.4 enhances the engineering BOM to manufacturing BOM (EBOM-MBOM) solution with support for re-usable manufacturing assemblies – you can build once from EBOM to MBOM and define as a template.

The service pack also enhances electronic work instructions (EWI) capabilities on Active Workspace, with detailed activity information to guide users for specific operations including descriptions, types and times. The EWI view of instructions, drawings and other information is now available on the manufacturing BOM, and you can include Cortona3D animations to demonstrate the process or operation.

Supplier integration

Many types of documents, such as manuals and specifications, reside in datasets that are not directly related to parts, but to reference items. New capabilities in Teamcenter 10.1.4 make the datasets related to reference items available to suppliers as attachments for viewing and downloading.

Transform your business

Systems engineering

Teamcenter 10.1.4 includes new tools that improve the productivity of systems engineering teams, enabling them to better set, manage and verify product attribute and performance targets.

The architecture modeler enables users of Active Workspace to graphically define and edit system models, creating a single systems architecture definition – including all subsystems, domains and interfaces – that can be shared with all downstream stakeholders. Systems engineers can also specify, manage, validate and verify the product performance targets, system attributes, model parameters and metrics that determine product and model viability. The new analysis request capability enables engineers to identify configured system models and measurement criteria to provide consistent cross-domain communication and collaboration.

Environmental compliance and product sustainability

With Service Pack 10.1.4, Teamcenter can help you achieve your compliance goals addressing conflict minerals reporting. You can easily identify supplier parts containing conflict minerals, send notification requests to suppliers to gather material declaration data, and manage and check smelter information in the context of supplier and part data. For compliance reporting, Teamcenter exports data to preferred formats, including the IPC-1755 Conflict Minerals Data Exchange Standard and the EICC-GeSI Conflict Minerals Reporting Template (CMRT) format.

Explore the PLM platform

Platform extensibility

Teamcenter Integration Framework in Service Pack 10.1.4 makes it easy for customers to create and maintain custom integrations to third-party and legacy applications. Linked Data Framework provides fast access to Teamcenter data and capabilities from within an external system without the need to create and maintain custom integrations. With common messaging, data communication and transformation, orchestration and mediation and support of standard frameworks, you can readily integrate other applications

with Teamcenter and reduce your cost of ownership and maintenance.

Teamcenter Rapid Start

With the 10.1.4 Service Pack release of Teamcenter Rapid Start, all the standard electronic CAD (ECAD) integrations of Teamcenter are available for Rapid Start customers, along with support for ECAD part libraries, gateways, viewer technology and interfaces and the design for assembly/test tools. Teamcenter Rapid Start customers can now collaborate more closely within and across domains and organizational functions.

Platform support for Teamcenter Rapid Start has been extended to include the same web browsers, web servers, over-the-web deployment and languages as standard Teamcenter. Teamcenter Rapid Start customers can also add on Active Workspace, which provides a simple web interface tailored to the specific needs of PDM users beyond design engineering. Active Workspace delivers exactly what the user needs, and nothing more, so they can use Teamcenter Rapid Start easily and efficiently.

Teamcenter solution	New features and enhancements	Customer value
START		
<p>Design management</p> <p>Teamcenter enables you to manage and share cross-domain design information, including mechanical, electronics, software and simulation in a single environment.</p>	<p>Electronics design and data management</p> <ul style="list-style-type: none"> • Data exchange using IDF and IDX formats • Common ECAD/MCAD parts library • Common ECD/MCAD BOM • Rapid Start support <p>Mechanical design and data management</p> <ul style="list-style-type: none"> • Enhanced embedded client for Solid Edge <ul style="list-style-type: none"> - Start and open Teamcenter objects - Browse and search for items, revisions, datasets - Browse classification - Open item revisions <p>Software management</p> <ul style="list-style-type: none"> • Integration with Polarion ALM for embedded software development • Integration with Electric Cloud for continuous multi-domain delivery • OSLC support for IBM Team Concert Change Management <p>Simulation process management</p> <ul style="list-style-type: none"> • Improved performance for target reference and composite views • Enhanced BOM filtering and structure search • Extended and integrated structure mapping 	<ul style="list-style-type: none"> • Improved ECAD-MCAD collaboration • Improved productivity for Solid Edge integration • Improved, automated software delivery process • Improved simulation productivity

Teamcenter solution	New features and enhancements	Customer value
<p>BOM management Teamcenter helps you effectively manage the bill of materials (BOM) as a critical part of design and manufacturing by providing clear, current and accurate product definitions, specific to the needs of teams and users.</p>	<ul style="list-style-type: none"> • Workset definitions with target properties, partitions, effectivity 	<ul style="list-style-type: none"> • Improved communication
<p>PLM process execution Teamcenter can help you manage and execute the many processes required to get the right products to market at the right time.</p>	<ul style="list-style-type: none"> • Improved resource pool assignments • Enhanced workflow viewer • Select multiple items for workflow submittal or approval • Set due dates based on task duration by work week • Start workflow based on target properties 	<ul style="list-style-type: none"> • Improved ease of use • Improved efficiency and productivity
EXTEND		
<p>Requirements management Teamcenter capabilities for requirements management ensure the delivery of products that reflect the voice of your customer.</p>	<ul style="list-style-type: none"> • Requirements management in Active Workspace • Table-based viewing of requirements • Export requirements to office automation and other tools 	<ul style="list-style-type: none"> • Easy capture, sharing, management and verification of requirements
<p>Service lifecycle management Teamcenter provides a single source of service and product knowledge for your logistics, maintenance and engineering communities.</p>	<p>Using Active Workspace 2.4:</p> <ul style="list-style-type: none"> • Manage physical structure and update installed parts • Deviation process to ensure only authorized parts are installed • Record utilization • Table editing to allow capture of physical part data 	<ul style="list-style-type: none"> • Improved usability and efficiency

Teamcenter solution	New features and enhancements	Customer value
<p>Manufacturing process management Teamcenter, combined with Tecnomatix, gives you a single, scalable and secure source of manufacturing data that supports lifecycle processes from engineering through production</p>	<ul style="list-style-type: none"> • Re-use manufacturing assemblies from engineering BOM to manufacturing BOM, so you can build one time and define as template • Create End Items in EBOM/Plant to efficiently work with large data • Present detailed activities in EWIs • Provides the EWI view of drawings and instructions on the manufacturing BOM • Includes Cortona3D animations to demonstrate processes and operations • Shows the content of a URL embedded in EWI so no click-through required 	<ul style="list-style-type: none"> • More thorough and accurate communication between engineering and manufacturing • Improved productivity and efficiency for manufacturing teams
<p>Supplier integration Teamcenter offers supplier integration solutions that allow you to more effectively engage suppliers, engineering and procurement in the sourcing and supplier management process.</p>	<ul style="list-style-type: none"> • Seamless sharing of reference documents related to product data and designs 	<ul style="list-style-type: none"> • More comprehensive data sharing with suppliers
TRANSFORM		
<p>Systems engineering With Teamcenter capabilities for systems engineering, you can construct a systems-level behavioral, functional and logical definition to help ensure products perform as intended.</p>	<ul style="list-style-type: none"> • Systems engineering modeling in Active Workspace <ul style="list-style-type: none"> - Graphical system model definition - Create, edit, save system models, architectures and interface definitions • Set targets and track key system attributes that determine model viability • Establish consistent collaboration and communication for cross-domain analysis 	<ul style="list-style-type: none"> • Faster, easier definition of product function • Faster validation of product/system objectives
<p>Sustainability and environmental compliance Teamcenter can help you establish a framework for sustainability and design for environment (DfE) initiatives with a substance compliance solution to support the development of green, environmentally friendly products.</p>	<ul style="list-style-type: none"> • Conflict minerals compliance <ul style="list-style-type: none"> - Easily identify parts containing conflict minerals - Notification requests to suppliers for material declarations - Smelter information management 	<ul style="list-style-type: none"> • Reduce risk of non-compliance with better product and material knowledge

Teamcenter solution	New features and enhancements	Customer value
PLATFORM		
<p>Platform extensibility The extensible Teamcenter platform provides you with a comprehensive set of configuration, connection and customization services so you can realize value from your Teamcenter investment quickly and cost effectively.</p>	<p>Teamcenter Integration Framework</p> <ul style="list-style-type: none"> • Integrate multiple third-party or legacy applications • Common messaging, data communication and transformation capabilities • Uses standard frameworks <p>Linked Data Framework</p> <ul style="list-style-type: none"> • Web-based data federation • Access information from external systems without duplicating data or re-creating user interface 	<ul style="list-style-type: none"> • Reduces cost of ownership and maintenance
<p>Teamcenter Rapid Start Teamcenter Rapid Start is a preconfigured environment, designed for companies that want to deploy PDM as quickly as possible with minimal customization and lower cost of ownership</p>	<ul style="list-style-type: none"> • All standard ECAD integrations available • ECAD part library management, viewer, design for assembly/test • Same web browsers, web servers, over-the-web deployment, languages as standard Teamcenter • Add-on capabilities include Active Workspace 	<ul style="list-style-type: none"> • Focused PDM deployment delivers best practices for improved productivity • Faster, more cost-effective implementation of PDM solution

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