

What's new in Teamcenter 11.2.3

Benefits

- Increased productivity with Active Workspace embedded in MCAD tools
- Improved cross-domain visibility with tighter PLM-ALM interoperability
- Greater flexibility in the management of LMS Amesim models
- Increased user productivity with workflow and background rendering of document watermarks and stamps
- Greater visibility to CAE analysis status and easier deployment to production
- Enable more users to leverage configurator capabilities
- Simplified exchange of configurator data with ERP and other applications
- Simplified effectivity management
- Optimize design authoring with NX
- Improved re-use of 4GD data
- Ensure alignment between your parts and CAD designs
- Readily understand complete workflow history to make better decisions
- Leverage schedules to easily manage work where it lives

Summary

The Teamcenter® software product lifecycle management (PLM) solution suite from Siemens PLM Software delivers a flexible portfolio of focused applications that enable you to strategically grow your PLM maturity in a way that makes sense for you.

Teamcenter 11.2.3 combined with Active Workspace 3.2 delivers enhanced applications throughout the portfolio that can help you improve productivity and efficiency. For example, with new application program interfaces (APIs) for Product Configurator, you can more easily exchange variability information with enterprise resource planning (ERP), sales systems, and other third-party applications. New analysis and extraction tools help customers currently using classic variants move to the new configurator capabilities. You can easily access the history of both active and completed workflows for an item in Teamcenter.

Enhancements to design management focus on empowering non-NX CAD users to interact more productively with Teamcenter through the embedded Active Workspace interface, making it easier and faster to search for data and participate in collaboration processes. Support for PLM-ALM interoperability expands through a number of enhancements designed to provide product

development teams with greater visibility to cross-domain data and processes. This release also includes improved capability for managing LMS Imagine. Lab Amesim™ models and repositories, as well as their associated relationships and dependencies, thus providing greater flexibility and visibility as part of the model management process.

CAE analysts now have greater visibility to the status of their analysis and have a more streamlined process for deploying their test configurations to the development environment. Improved visibility and usability of system models and model/relationship navigation allows simplification of diagram presentation to promote understanding. You now have support for a variety of 1D behavior modeling capabilities through expanded and improved visibility/usability of system models and model/relationship navigation. Attributes and analysis requests have been upgraded to include reporting, comparison, and usability improvements making, it easier to get the information you need without getting overwhelmed with data.

In the Teamcenter platform, you will see many customer-focused productivity improvements in overall usability. To reduce information overload, Teamcenter delivers enhanced search and filtering capabilities to help you find what you need faster, and adds support for classification and enhanced security. You can easily tailor Teamcenter to fit your needs with a declarative UI framework and re-usable widgets to define role-based

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Benefits continued

- Improved Excel-Teamcenter interaction for shortened learning curves
- Easier identification of requirements changes
- Improved relation visibility between diagrams and visualization for faster understanding of impacts
- Improved usability of rebase allows establishing new baselines for physical product configurations, faster and more accurately
- Efficient capture of supplier material data supports holistic product views and reduces risk of noncompliance
- Meet compliance objectives and reduce rework and errors with an intuitive user interface tailored to compliance tasks
- Enhanced materials data management with support for materials inheritance
- Improved integration capability from Teamcenter to NX and other solutions to keep materials assignments and other material data in sync between systems
- Improved usability, collaboration and efficiency with Active Workspace navigation and workflow enhancements
- Improved visualization usability through expanded multi-select capability
- Reduced information overload with query builder-based advanced searching
- Easily tailor Active Workspace to your needs without writing custom code
- Simpler deployment of Active Workspace, Teamcenter environments and custom software

environments. Enhancements to Linked Data Framework simplify the creation and navigation of links to external data. Finally, the first release of Deployment Center provides you with a centralized web-based application that you can use to deploy Teamcenter and manage your deployments.

Start with PLM

Mechanical design and data management

New capabilities in this release enable mechanical design teams to take full advantage of Active Workspace embedded in their MCAD applications. Supported with NX™, Solid Edge®, CATIA®, Creo® (Pro/ENGINEER®), SolidWorks®, Inventor® and AutoCAD®, Active Workspace provides a streamlined and intuitive user experience that makes design teams more productive by enabling them to execute product data management (PDM) and PLM functions from within their native MCAD tools. Leveraging Active Workspace, designers can search, find and re-use information stored in Teamcenter and establish the appropriate design contexts for themselves and others across the design chain. In addition, Active Workspace provides them easier access to workflows, change management processes, requirements and more, all from within their familiar MCAD authoring environment, thus helping to ensure product quality and data integrity.

Software management

The Teamcenter 11.2.3 release also provides greater cross-domain visibility by enhancing support for interoperability of PLM and application lifecycle management (ALM) solutions.

Polarion ALM™ and Teamcenter items are automatically mapped across the requirements and change management workflows for better bi-directional traceability. To provide a more intuitive web-based user experience in Polarion and Teamcenter, all traceability

information and data is accessible using Active Workspace. The visibility of the information helps design teams get a clearer, more familiar view of cross-domain data. Since hardware and software teams are more productive when working in their native environments, users will be able to initiate change and requirement engineering workflows in either Teamcenter or Polarion.

Model management

Because the ability to model and simulate the product early are core functions of any design process, Teamcenter 11.2.3 supports greater flexibility in the management of LMS Imagine.Lab Amesim™ models. First, the model structure can be stored as a block, subsystem, model and function across multiple libraries or repositories, thus making it easier to manage, find and re-use models. In addition, there is improved capability for managing the models and all their associated dependencies to other design and requirements objects, as well as to other models. Lastly, management of LMS Amesim models can be performed directly in Teamcenter, eliminating the need for LMS Imagine.Lab™ Sysdm software or other tools for model management.

Simulation process management

The 11.2.3 release of Teamcenter delivers several enhancements to Simulation Process Management that focus on providing greater visibility to the analysis, making analysis easier, increasing user productivity and streamlining the path to deployment. Users can create and configure analysis dashboards that provide a clearer, more concise, real-time view of the status of the analyses executed at the program, milestone, group or individual user level, which helps positively influence the decision-making process. To increase analysts' productivity, this release also includes a simplified user

interface for viewing and managing all the files that belong to one or more item revision, as well as a new customizable navigation pane that provides users with quick access to the commands they use most frequently in their simulation processes and analysis environments. Lastly, both the analysis dashboards and the CAE file upload rule sets are stored in Teamcenter and can be searched, exported and imported so that users can test the configurations in a development environment and then easily deploy them to production.

Content and document management

Teamcenter 11.2.3 with Active Workspace 3.2 delivers new rendering of watermarks and stamps processes to increase user productivity. Authors can now initiate rendering as a background task and be notified at completion, or take advantage of the ability to have rendering done automatically as a step in a workflow.

BOM management

Teamcenter 11.2.3 delivers several enhancements to Teamcenter Product Configurator capabilities. With new APIs, you can feed configurator data to (ERP) systems, sales systems and other third-party applications. New analysis and extraction tools help customers currently using classic options and variants to assess their data to move forward with new configurator capabilities. Additional enhancements to Product Configurator provide the ability to manage status, revision, effectivity and release of configurator data. Item effectivity is now easier to manage and understand. You can cut back an item's effectivity to make it easier to accommodate and incorporate change. You can more easily understand the net effectivity for an item with feed-down effectivity reporting.

With this release of Teamcenter, several enhancements were made to our fourth-generation design (4GD)

capabilities. Optimized design authoring using NX™ software makes it easier to manage mechanical route data and geometric dependencies. You can now clone data from one product design to another. With a link between the original data and the cloned information, changes made to the original can be automatically incorporated into the cloned data. Improved analysis capabilities make it easier to know which drawings need to be updated for a given change. In addition, in-context change capabilities automatically track all the changes being made and automatically add the necessary information to the change item. You can also easily compare different configurations with new compare and accountability tools.

Teamcenter 11.2.3 introduces an integrated engineering bill of materials (eBOM) solution for design and release. You can define and manage eBOM elements, including parts, part breakdowns and usages. In addition, you can ensure alignment between your eBOM and your design parts, breakdowns and usages.

With enhancements to smart discovery in Teamcenter, it's easier to define a working context in Active Workspace based on only the items of interest. You can leverage a spatial search to locate items of interest, and easily define and modify a working context to have all pertinent information.

PLM process execution

Process execution enhancements in Teamcenter 11.2.3 include an enhanced workflow viewer that enables you to see the active workflow as well as any completed workflows. Additional enhancements provide more complete workflow execution in Active Workspace. You can now complete forms required for tasks, participate in multi-user review tasks, easily navigate and interact with an improved graphical workflow viewer, view background processes and errors from your inbox,

and localize workflow task names for non-English languages.

You can now author and edit schedules in Active Workspace, leveraging an interactive Gantt chart. You can add and remove tasks, create dependencies and more. In addition, you can now define, elaborate on and track changes in Active Workspace.

Extend the value

Requirements management

Teamcenter 11.2.3 makes it easier to create, link, compare, and modify requirements. Single-click create, start link/end link, and improved Microsoft® Excel® integration enable users to rapidly create requirement traceability networks with minimal input.

Service Lifecycle Management

With Teamcenter 11.2.3, users tasked with establishing new/updated baselines for physical products (assets) have an improved process to quickly generate new baselines for them based on the as-designed, approved engineering configuration in a process called rebase. Teamcenter 11.2.3 improves the rebase capability by allowing it to occur at multiple levels and ensures alignment of part numbers and occurrences to reduce the effort required to establish new baseline configurations correctly.

Transform your business

Environmental compliance and sustainability

In the substance compliance solution, you can efficiently address compliance tasks with an easy-to-use interface tailored to support sustainability and product compliance initiatives. Reduce your risk of noncompliance by ensuring that you have a complete view of your product, including accurate supplier data, with an integration to the BOMcheck substance declaration database.

Systems-driven product development

Teamcenter 11.2.3 system modeling performance and usability improvements include intuitive relationship navigation, easier viewing of diagrams through relationship filtering and rollover connections, and cross-probing with Teamcenter visualization for rapid impact understanding.

Teamcenter 11.2.3 also adds enhancements for analysis requests, including better display and control of the attribute values associated with the request, as well as personnel who are contributing/consuming the request. Improvements also include a robust library of comparison operators, consistency checks, and out-of-the-box (OOTB) reports.

Explore the PLM platform

Integrated material management

Keep data in sync and streamline your engineering processes with materials data management in Teamcenter. Material assignments can be made directly from NX or other systems, leveraging materials data managed with Teamcenter integrated material management. With materials inheritance enhancements, material sub-classing can now support multiple material import use cases.

Platform usability

Teamcenter 11.2.3 with Active Workspace 3.2 continues to deliver customer-focused productivity improvements in various areas, including improved usability with folder navigation; better handling of command overflow in smaller mobile devices and more editing capabilities in various display modes; and better collaboration with direct URL links to any Active Workspace objects. Easily identify

objects that include a release status and quickly determine that release status. More efficient flow in document creation supports attachments and continuous creation of multiple objects with similar properties. Expanded multi-select capability improves visualization usability, providing a familiar breadcrumb mechanism. Teamcenter 11.2.3 also delivers significant massive model visualization performance, scalability improvements and more efficient structure navigation through support for filtering and Product Configurator-based variability. Cross-selection is now supported for Active Workspace hosted in Teamcenter visualization to enable interoperability and cross-probing.

Continued improvements to search and filter, classification and security help you reduce information overload. You can readily tailor Active Workspace to fit your needs with expanded adoption of the declarative user interface (UI) framework and many re-usable widgets. Improved support for creation and navigation of linked data simplifies management of data associations.

Platform deployability

The first release of Deployment Center provides you with a centralized web-based application that you can use to deploy Teamcenter and monitor your deployments. You can easily deploy Active Workspace 3.1 or 3.2 in your existing Teamcenter platform, upgrade Active Workspace and deploy Active Workspace applications. Create demonstration or testing environments by deploying a single-box environment or more complex environments distributed across multiple machines. Deployment Center also makes it easier for you to consistently deploy any custom software that you've built to one or more of your Teamcenter installations.

Teamcenter 11.2.3 solution summary

- Active Workspace embedded in MCAD tools
- Tighter PLM-ALM cross-domain traceability
- Teamcenter management of LMS Amesim models
- Flexible CAE analysis dashboards and navigation pane for greater productivity
- Managed CAE configuration environment data for smoother deployment
- Background and workflow-driven rendering of watermarks and stamps on documents
- New APIs for integrating configurator data with third-party applications
- Tools to help move from classic options and variants to the new configurator
- New capabilities to manage the lifecycle of configurator data
- Streamlined effectivity cutback and feed-down reporting
- Improved management of mechanical route data and geometric dependencies from NX
- New capabilities for in-context change
- New eBOM solution for design and release
- Simplified creation and management of working contexts
- Improved workflow history displays current and completed workflows
- Schedule authoring on Active Workspace, including interactive Gantt chart
- Improved change management on Active Workspace

- Improved requirements usability; faster creation, linking, modification, and reporting
- Usability improvements for rebase of physical product configurations
- Cleaner system models with intuitive relationship navigation, including integration with 3D visualization product model navigation
- Analysis request display, comparison operators, consistency enforcement with OOTB reports and dashboards
- API for material assignments to support robust integrations
- Material inheritance enhancements to support material import use cases
- BOMcheck integration to efficiently gather supplier material declarations
- Support of substance compliance on Active Workspace to tailor the user interface to sustainability and compliance initiatives for ease of use
- Core usability improvements
- Document management, visualization and structure management productivity improvements
- Search and filter enhancements
- Classification enhancements
- Security improvements
- Declarative UI with re-usable widgets
- Linked Data Framework enhancements
- Simplified Active Workspace deployment
- Environment and custom software installs

Teamcenter solution	New features and enhancements	Customer value
START		
<p>Design management Teamcenter enables you to manage and share cross-domain design information, including mechanical, electronics, software and simulation in a single environment.</p>	<p>Mechanical design and data management</p> <ul style="list-style-type: none"> • Active Workspace embedded in MCAD tools: <ul style="list-style-type: none"> - NX, Solid Edge, CATIA, SolidWorks, Creo (Pro/E), Inventor and AutoCAD • Search and browse items, revisions, datasets • Execute workflows and change processes <p>Software management</p> <ul style="list-style-type: none"> • Improved cross-domain traceability for requirements and change management processes • Active Workspace support for PLM-ALM interoperability • Launch workflows from either Teamcenter or Polarion 	<ul style="list-style-type: none"> • Easily manage, find re-use and share MCAD design data • Tighter integration of software development into the design process for better cross-domain visibility

Teamcenter solution	New features and enhancements	Customer value
<p>Design management <i>(continued)</i></p>	<p>Model management</p> <ul style="list-style-type: none"> • Integrated LMS Amesim model management • Manage model libraries and model dependencies • Maintain model structure across model repositories <p>Simulation Process Management</p> <ul style="list-style-type: none"> • Analysis dashboard • Desktop analysis user interface • Customizable navigation pane • CAE configuration deployment 	<ul style="list-style-type: none"> • Models managed in a centralized source for enterprise-wide access that maximizes re-use • Greater visibility to CAE analysis data and increased productivity by streamlining deployment
<p>Content and document management Teamcenter advanced document and content management capabilities enable you to fully integrate authoring and publishing of structured documents and XML content within your PLM environment.</p>	<ul style="list-style-type: none"> • Background rendering of watermarks and stamps on documents • Workflow-initiated rendering of watermarks and stamps on documents 	<ul style="list-style-type: none"> • Increased productivity with workflow automation or background rendering of watermarks and stamps
<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"> • Product configurator enhancements <ul style="list-style-type: none"> - APIs to integrate with third-party applications - Analysis and extraction tools to evaluate existing options and variants data - Manage configurator data using status, revision, effectivity and change processes • Integrated Product Definition Platform enhancements <ul style="list-style-type: none"> - Effectivity cutback - Feed-down effectivity reporting • 4GD design enhancements <ul style="list-style-type: none"> - Manage mechanical routes at a component level - Manage geometric dependencies in a product context - Re-use data with cloning - View and modify attribute groups and managed attribute groups directly from the context explorer - In-context change - New compare and accountability tools - Export data in PLM XML format 	<ul style="list-style-type: none"> • Simplify the exchange of information with ERP, sales systems and other third-party applications • Enable more users to leverage configurator capabilities • Simplified organization and management of configurator data • Simplify change management with in-context change, effectivity cutback and improved NX integrations • Improve data re-use

Teamcenter solution	New features and enhancements	Customer value
BOM management <i>(continued)</i>	<ul style="list-style-type: none"> • eBOM solution <ul style="list-style-type: none"> - Manage eBOM elements including parts, part breakdowns and part usages • Discovery and digital mockup <ul style="list-style-type: none"> - Easily create and modify working contexts 	<ul style="list-style-type: none"> • Ensure alignment between design and eBOM • Leverage contexts to focus only on pertinent information
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.	<ul style="list-style-type: none"> • Improved workflow management <ul style="list-style-type: none"> - Enhanced workflow viewer displays active workflow as well as all completed workflows - Active Workspace enhancements to support forms for tasks, simplified graphical workflow viewer, localized tasks for non-English languages, and more • Schedule manager in Active Workspace <ul style="list-style-type: none"> - Create and manage schedules from Active Workspace - Leverage Gantt chart UI within Active Workspace • Change management <ul style="list-style-type: none"> - Exposure of more change management capabilities in Active Workspace - Improved integration between change manager and schedule manager 	<ul style="list-style-type: none"> • Clearer overall view of workflow history • Simplified user experience • Create and maintain schedules using a simplified user interface • Simplified change management makes it easier to manage and account for change
EXTEND		
Requirements management Teamcenter capabilities for requirements management ensure the delivery of products that reflect the voice of your customer.	<ul style="list-style-type: none"> • Improved Excel live editing that applies to all structures including runtime property editing and background processing • Simplified, rule-driven requirement/trace link creation via streamlined create with start link/end link; supporting one-to-one, one-to-many, and many-to-one linking • Drag-and-drop OLE object embedding in requirements • HTML-based compare/contrast to highlight differences between requirements, versions or specifications 	<ul style="list-style-type: none"> • User-intuitive editing of Teamcenter information via Excel • Rapid, simplified traceability creation for better impact understanding • Easy requirement documentation/reference creation by including OLE-like files with requirements • Easier identification of content changes and differences

Teamcenter solution	New features and enhancements	Customer value
<p>Service lifecycle management Teamcenter unifies your service life-cycle management strategy with your PLM vision by providing a single source of service and product knowledge for your logistics, maintenance and engineering communities.</p>	<ul style="list-style-type: none"> Improved usability of rebase of physical product configurations Validates user rebase through part numbers and occurrences alignment 	<ul style="list-style-type: none"> Faster, more accurate establishment of new/updated baseline configurations for physical products (assets)
TRANSFORM		
<p>Environmental compliance and product sustainability 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"> Integration to BOMcheck database from Teamcenter to collect supplier declarations Support for substance compliance on Active Workspace 	<ul style="list-style-type: none"> Provide customers with another avenue to capture the right supplier material data where flexibility in interacting with suppliers is critical User experience is tailored to the data and task at hand to efficiently achieve sustainability and compliance goals
<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>	<p>Analysis requests (AR)</p> <ul style="list-style-type: none"> Improved/simplified attribute table presentation Expanded min/max operator support including +/-, %, and more (includes operator consistency checking) Attribute "where used" including multi-site OOTB AR reports including rollups, dashboards, and compare/contrast <p>Multi-domain architecture modeling</p> <ul style="list-style-type: none"> Scalable diagram rendering via streaming Simplified/de-cluttered diagram (rollup connections) with selection highlighting Intuitive diagram navigation – expansion in direction of travel, filtered display during navigation, etc. PDF diagram output Diagram-3D visualization part cross-probing with highlighting 	<ul style="list-style-type: none"> Greater visibility of attributes and values associated with analysis requests Highlight deviations Better impact understanding Improved collaboration between designers and simulation engineers Greater visibility on AR progress and deviation Improved display rendering and navigation speed Complex information delivered in a simplified way; easy to grasp by users Intuitive user interface makes it easy to use/learn Complete cross-domain impact understanding delivered graphically

Teamcenter solution	New features and enhancements	Customer value
PLATFORM		
<p>Integrated material management Teamcenter provides holistic, integrated materials management to help your company create innovative, sustainable products.</p>	<ul style="list-style-type: none"> • API for material assignment supports robust integration to NX and other systems • Inheritance model for sub-classing materials supports various import use cases 	<ul style="list-style-type: none"> • Increased productivity and reduced errors with streamlined materials data management capabilities and robust integrations
<p>Platform usability – customer-focused user productivity improvements Core usability improvements to increase your productivity and continued improvements in document management, visualization and structure management.</p>	<p>Core usability improvements</p> <ul style="list-style-type: none"> • Folder navigation via breadcrumb and column configuration • Better handling of command overflow in mobile devices • Share links to any Active Workspace objects • Edit in table with summary and hierarchical display • Release status indicator icon <p>Document, visualization and structure management productivity</p> <ul style="list-style-type: none"> • Render watermarks and print stamps in the background • Attach files during creation of a document under Item Revision Definition Configuration (IRDC) control • Continuous creation of multiple objects • Multi-select and breadcrumb navigation enhancements • Massive model visualization performance and scalability improvements • Configure structures with Product Configurator-based variability • Filter content in structure • Share and control edit access to saved working contexts • Cross-selection support for Active Workspace hosted in Teamcenter visualization to enable interoperability and cross-probing 	<ul style="list-style-type: none"> • Increased user productivity in various use cases from simpler folder navigation to advanced structure navigation with Product Configurator-based variability

Teamcenter solution	New features and enhancements	Customer value
<p>Platform usability – reducing information overload Continued improvements in search and filtering as well as classification and security to help you better find what you need faster</p>	<p>Search and filter enhancements</p> <ul style="list-style-type: none"> • Query builder advanced searching • Search and filter on referenced objects' properties • Filter by categorization for object types • Search by alternate ID <p>Classification enhancements</p> <ul style="list-style-type: none"> • Show classification properties while comparing objects • Index and search for objects with multiple classifications <p>Security improvements</p> <ul style="list-style-type: none"> • Assign project security at create • Assign authorized data access (ADA/ITAR) licenses 	<ul style="list-style-type: none"> • Find the data you need to do your work faster than ever before
<p>Platform usability – configurable and extensible framework Continued adoption of declarative framework with re-usable widgets and linked data framework enhancements to make it easy for you to tailor Teamcenter to fit your needs without writing custom code.</p>	<p>Declarative UI framework with re-usable widgets</p> <ul style="list-style-type: none"> • Declaratively define the content and behavior of command panels • Re-usable widgets for additional property types • Re-usable widgets for declarative page controls <p>Linked Data Framework enhancements</p> <ul style="list-style-type: none"> • Simplified creation and ability to navigate in relations browser • Support for name-value pair properties and conditional LOV (list of values) 	<ul style="list-style-type: none"> • Easily tailor Active Workspace declaratively through stylesheets without writing any custom code

Teamcenter solution	New features and enhancements	Customer value
<p>Platform deployability – Deployment Center</p> <p>Deployment Center provides a single, centralized, web-based application to deploy and monitor your Teamcenter environment.</p>	<p>Simplified Active Workspace deployment</p> <ul style="list-style-type: none"> • Deploy Active Workspace 3.1 and 3.2 • Upgrade Active Workspace • Deploy Active Workspace applications <p>Environment and custom software installs</p> <ul style="list-style-type: none"> • Single-box or distributed environment installs • Install custom software 	<ul style="list-style-type: none"> • Faster and easier deployment of Active Workspace, environment and custom software

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