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Polarion and Teamcenter: ALM-PLM Integration

Engineering end-to-end quality across electrical, mechanical and software systems

Benefits

- Improves development productivity with crossdiscipline lifecycle management
- Accelerates development by managing and sharing data across domains, products and platforms
- Improves product quality and reliability with interchange of application and product data
- Enables effective collaboration with traceability of assets
- Improves cross-discipline visibility of change impact
- Streamlines validation of software and product requirements

Summary

The demarcation between product development and software development is becoming increasingly blurred as software becomes a larger component of product delivery. One of the issues that has arisen as a result of this blurring is the disconnect between product lifecycle management (PLM) tools and application lifecycle management (ALM) tools. Polarion Connector for Teamcenter is an integrated ALM-PLM solution that effectively merges the advanced software application development capabilities of Polarion® ALM™ with the leading product lifecycle management capabilities of the Teamcenter® portfolio of applications.

Polarion Connector for Teamcenter leverages the latest in integration technology to deliver a single, cohesive product ecosystem, with multi-directional linking of ALM and PLM data and processes. It provides data federation and interoperability to deliver end-to-end traceability for complex, multi-system product development. The seamless interchange of application and product lifecycle data unlocks cross-system and cross-team synergies to reduce design and development errors and improve product quality.

Integrated requirements management

With Polarion Connector for Teamcenter, product development organizations can more easily develop mechanical and electronic systems that fulfill both software and product requirements, with cross-discipline traceability. The connector enables teams to have a clearer definition of how software is related to product functions, enabling software engineers to derive software requirements from product requirements, and to validate that the software matches and fulfills those requirements. These capabilities reduce rework and "feature creep" by confirming that requirements have software test cases and processes.

Integrated software change management

Using Polarion Connector for Teamcenter, multidisciplinary development teams can more quickly and easily assess the crossdomain impact of product changes and monitor and control software and hardware change processes. Teams can initiate product changes and their resulting software changes using Teamcenter, analyzing impacts to guide more accurate change decisions. Software and product changes have traceability through

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Features

- Integrated product and software requirements management
- Integrated product and software change management
- Integrated product and software accountability and traceability
- Exposes product data into the ALM environment and ALM data into the PLM environment
- Manages hardware and software dependencies
- Links BOM and ECU with software artifacts

Teamcenter problem report, change request and change notice tasks. The change management tools reduce errors and warranty costs by identifying and tracking specific changes in hardware and software.

Accountability and traceability

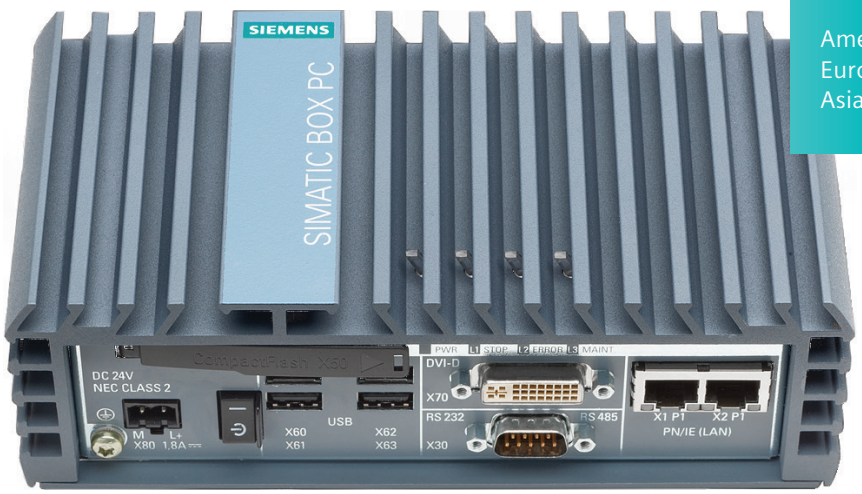
Polarion Connector for Teamcenter enables engineers to access traceability information from their native working environments. With the Polarion user interface embedded in the Teamcenter Rich Client and Teamcenter Active Workspace embedded in Polarion, engineers in all disciplines can trace their work from requirements to delivery using either system. Using these capabilities, development teams can collaborate more effectively, reduce wasted time and avoid errors by accurately linking firmware with hardware. The accountability and traceability also improve audit readiness, and support maintenance and repair processes by enabling companies to quickly locate parts and manage defect fixes.

Closed-loop embedded system and software

By exposing product data in the PLM environment and PLM data in the ALM environment, PLM Connector for Teamcenter integrates and traces software engineering data and processes to support model-based systems engineering. With the hardware and software dependencies and Bill of Materials (BOM) managed in Teamcenter, companies can link BOMs and electronic control units (ECUs) with software artifacts, and manually upload software binaries into BOM items. By managing software as part of the product BOM, companies can accelerate development, improve product quality and reduce warranty costs.

System requirements

Polarion 2014, 2015, 2016
Teamcenter 10.1.4 (Windows Client)
Active Workspace 2.4



By linking and tracing design objects across the hardware and software domains in today's smart products, the integration of Teamcenter and Polarion ALM provides the ability to intelligently assess and quickly respond to change.

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