

**SIEMENS***Ingenuity for life*

Polarion ALM and Teamcenter: ALM-PLM Integration

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

Benefits

- Improves development productivity with cross-discipline lifecycle management
- Accelerates development by managing and sharing hardware and software 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. The interoperability of Teamcenter and Polarion enables 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.

Leveraging our linked data framework, the interoperability of Teamcenter and Polarion ALM presents the user with a single, cohesive ecosystem that supports the bi-directional linking of ALM and PLM data and processes. This interoperability delivers 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 the integration of Polarion ALM and Teamcenter, product development organizations can more easily develop mechanical and electronic systems that fulfill both software and product requirements, with cross-discipline traceability. The integrated solution enables teams to have a clearer definition of how software is related to product functions, enabling engineers to derive software requirements from product requirements, and to validate that the software matches and fulfills both the software and product requirements. These capabilities reduce rework and “feature creep” by confirming that requirements have software test cases and processes.

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Features

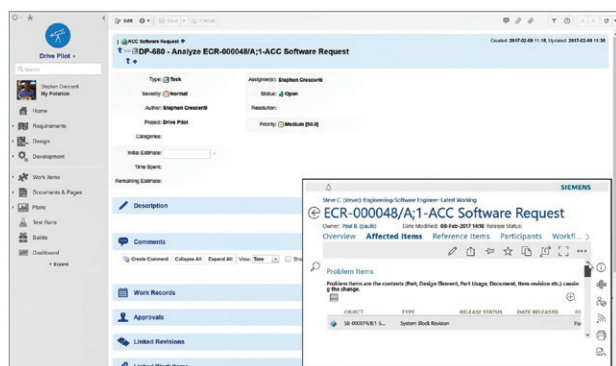
- Integrated product and software requirements management
- Integrated product and software change management
- Integrated product and software accountability and traceability
- Access product and software data and processes from within your Teamcenter and Polarion ALM environment
- Manage hardware and software dependencies
- Link BOM and ECU with software artifacts

Integrated software change management

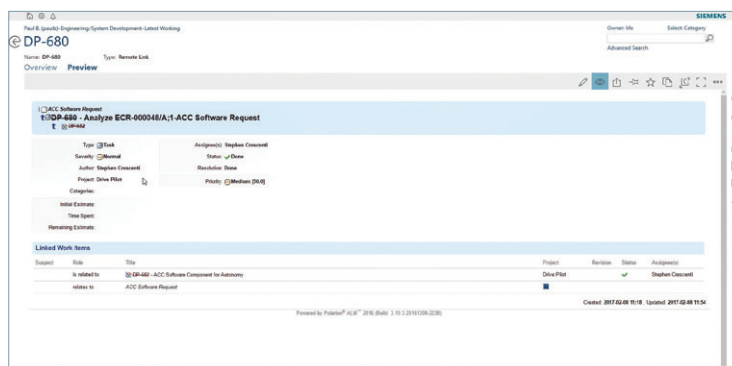
Using the Teamcenter-Polarion ALM integration, multi-disciplinary development teams can more quickly and easily assess the cross-domain impact of product changes. Teams can also initiate monitor and control product and the associated software changes and change processes from within Teamcenter or Polarion ALM. All software and product changes have traceability through 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

Teamcenter and Polarion ALM interoperability enables engineers to access traceability information from their native working environments. With the Polarion user interface embedded in Teamcenter 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.



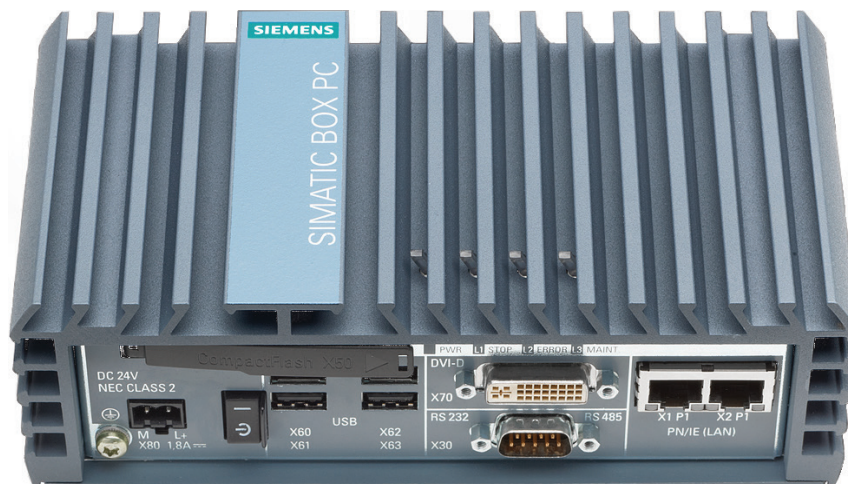
Software engineers can access Teamcenter related product information and artifacts from within Polarion ALM.



Product engineers can access Polarion ALM software related information and artifacts from within Teamcenter.

Closed-loop embedded system and software

By exposing product data in the Teamcenter PLM environment and PLM data in the Polarion ALM environment, the integrated solution integrates and links product and software engineering data and processes to support model-based systems engineering. In Teamcenter cross-domain development teams can manage the software binaries and incorporate them into the product bill of material (BOM), as well as link the associated software artifacts with the electronic control units (ECUs) and manage all the hardware and software dependencies. By managing software as part of the product BOM, companies can accelerate development, improve product quality and reduce warranty costs.



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

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