KEYSIGHT

Automated PLM Testing for Siemens Teamcenter

Modern PLM environments are deeply interconnected systems, bridging web and desktop platforms, CAD tools such as Siemens NX, and enterprise applications like ERP and CRM. Because every link in that chain is constantly shifting—through customizations, monthly patches, and major releases—they require a testing strategy that can flex with change and validate entire end-to-end journeys, not just isolated components. Without such adaptable, holistic testing, even a minor oversight can corrupt data and ripple downstream, halting manufacturing, procurement, or service operations.

Keysight Eggplant delivers full end-to-end automation through UI-level testing that mirrors real user behavior across PLM, CAD, and enterprise systems, without needing access to Application source code. Powered by computer vision and AI, it eliminates the fragility of traditional automation tools—delivering a single, flexible testing approach that spans PLM, CAD, ERP, and CRM, while still guaranteeing accurate validation as interfaces and workflows evolve.

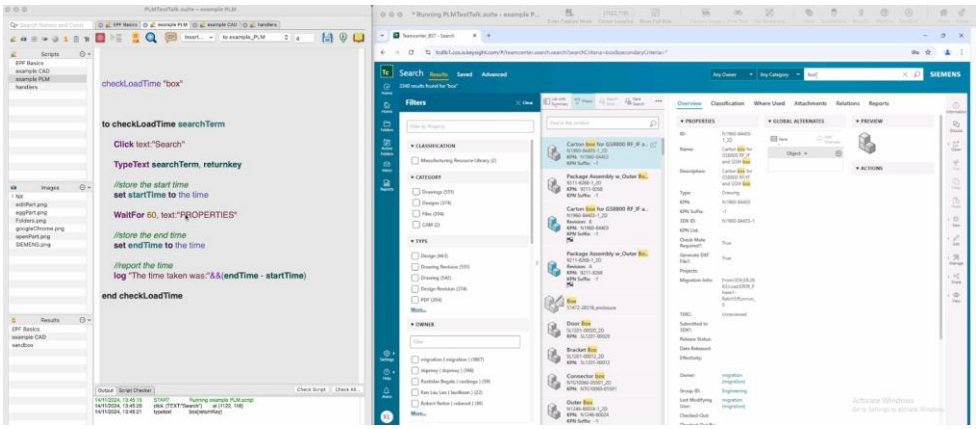

Figure 1. Eggplant testing Siemens TeamCenter

Why Keysight Eggplant is the best tool for PLM Automation

Unified Automation Across PLM, CAD, ERP, CRM

From design to compliance to execution, integrated systems must work in harmony. With Eggplant, you can automate the complete workflow: load a 3D part in NX, zoom, rotate, and extract measurement data; validate those specs against design rules stored in your PLM system; then push the approved results into ERP, all without breaking the flow or switching tools.

UI-Level Automation Like a Real User

Teamcenter's rapid release cycles (monthly patches, biannual upgrades) make object-based test tools brittle and costly to maintain—especially as they are packaged applications that are highly customized, leaving teams with limited control over the underlying technology stack. Traditional test tools often struggle with these constraints and fall short when automating highly complex user interactions. In contrast, Eggplant's visual testing approach remains resilient.

Eggplant interacts with screens like a human would—clicking, typing, dragging, hovering—using visual commands (`Click`, `WaitFor`, `TypeText`, etc.). Object-based tools like Selenium struggle with highly complex, cross-tool user interactions and are vulnerable to version-breaking changes in the DOM or page-object model, whereas Eggplant's image-driven approach is immune to those issues, making it a strong fit for both web and desktop PLM environments.

User Performance Monitoring (UPM)

Instead of waiting for complaints, Eggplant keeps your environments, deployments, and applications delivering seamlessly by watching performance at every stage:

- **Validate stability up-front:** Lightweight smoke tests confirm that your test environments are ready before full suites run.
- **Soak & Endurance testing:** Continuous soak testing exercises the application for hours or days, uncovering issues long before release.
- **Track every release:** Full test suite run metrics captured around each build make it easy to spot regressions the moment a new version lands.
- **Shift-right into production:** Always-on monitoring from multiple global locations measures real user response times over peak periods, raising instant alerts when thresholds are breached.

Eggplant gives you a single degree of freedom to extend existing use cases while providing true visibility into the end-user experience. By continuously timing every search, render, and key PLM task, Eggplant surfaces issues before users feel them—vital for teams using complex tools like Teamcenter and NX, where even minor slowdowns can erode engineering productivity.

Scalability and Maintenance

Eggplant supports full system lifecycle testing with a single approach, where the same test can be re-used for Monitoring or Regression testing. These include:

- **Smoke tests** validate critical paths after deployments.
- **Regression packs** ensure stability through configuration changes or updates.
- **Digital twin modeling** via graphical test modeling tools lets you define complete test scenarios identifying all test conditions and transitions.

Reporting, Traceability & Orchestration

Keysight Eggplant brings enterprise-grade testing to PLM with:

- Visual dashboards for test runs, results, and KPIs.
- Integrated scheduling and orchestration for regression packs and smoke tests.
- Pipeline integration and version-aware test sets for rapid rollouts.
- Data-driven testing and defect traceability across the lifecycle.

Whether you're validating a Teamcenter upgrade, testing CAD integration, or running quality checks post-deployment, Eggplant ensures every step is auditable, repeatable, and fast.

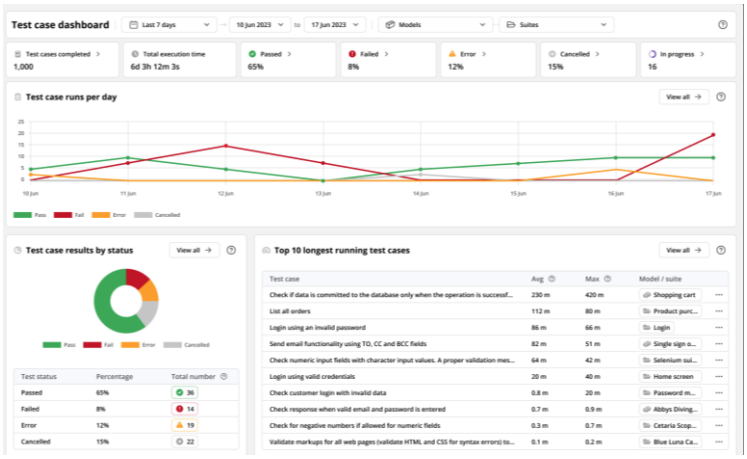

Figure 2. Eggplant's Test Case Dashboard

Beyond PLM

Eggplant Test extends its capabilities beyond the primary PLM system to ancillary digital systems:

- Validate content and format of PDFs, Word documents, Excel sheets, and even database entries.
- Automate quality checks for report outputs or system-generated documents.

The Only Tool You Need To Test Your PLM

Keysight Eggplant simplifies and unifies testing for the entire PLM landscape, from desktop to web to CAD with resilient, AI-powered automation. With end-to-end coverage, minimal maintenance, real-user simulation, and deep performance insight, it enables PLM teams to test smarter, release faster, and maintain quality with confidence.