

WIND RIVER

Wind River Test Management

Today's device software applications contain millions of lines of code. Within the next couple years that number will double. Software quality assurance (SQA) has never been more important—or more difficult. To realize the potential of the burgeoning device market and to mitigate its risks, manufacturers need device testing tools that help them manage, monitor, and optimize the QA process.

Wind River Test Management is a scalable, distributed testing framework that links device software development and QA teams in an intelligent, collaborative workflow. It enables teams to efficiently deploy tests, perform fact-based analysis, and rapidly resolve issues encountered throughout the testing phase. This streamlines the software-testing process so more defects can be identified and quickly resolved.

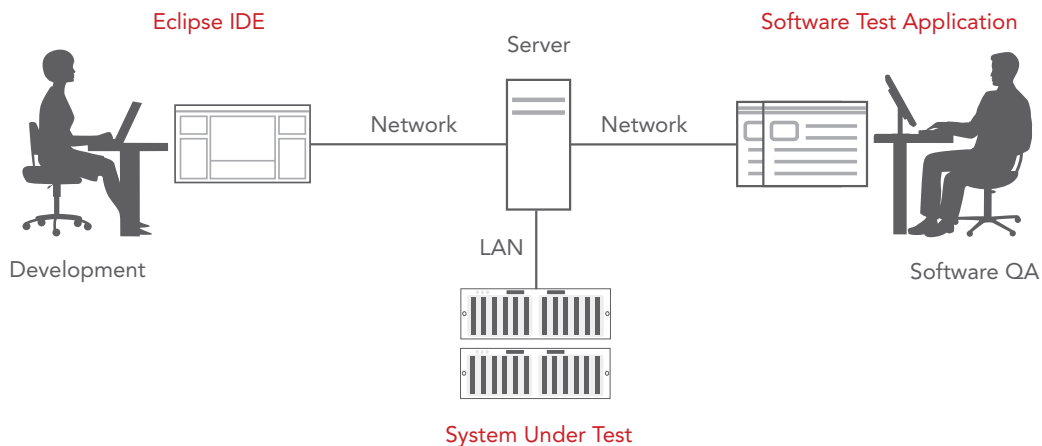
When teams adopt Test Management, they create a repeatable process for rigorously testing running software, detecting bugs, and correcting faults. This ability to share tests and data between teams breaks down the wall and fosters strong collaboration among developers and QA staff. For instance, when the QA team finds a defect, developers can immediately access detailed logs and fault data in order to quickly reproduce the defect in their own environment.

Workflow is streamlined across four major testing tasks:

- **Test:** Efficiently develop tests for functionality, performance, and code coverage.
- **Automate:** Load embedded software and deploy test suites automatically.
- **Diagnose:** Analyze diagnostic data to isolate the root cause of intermittent bugs, lockups, and crashes.
- **Resolve:** Apply patches to devices instantly without rebuilding, saving valuable time for the QA team.

Test More Software and Detect More Defects

The more tests a tester can write, execute, and simultaneously manage, the more defects that tester will find. Test Management provides testers with a framework to more easily create, access, and deploy tests. It takes the hassle out of connecting with remote devices and reporting the results. The software also organizes the workload for the testers so they can balance many testing efforts at once.



Wind River Test Management contains an Eclipse-based development suite for development engineers and a browser-based interface for SQA engineers.

Further, Test Management helps QA engineers write tests that have higher yields in finding defects. Many QA teams perform system testing that only treats the product as a “black box” because this saves the QA team from understanding every facet of the code base. By using Test Management, these QA teams can additionally perform higher yield “white-box” tests, which access internal code structures with only a minimal knowledge of the code base. For instance, testers can view code coverage metrics to identify functions that have not yet been tested and then utilize fault injection techniques to exercise those functions with new test cases.

Faster Time-to-Resolution

Test Management provides tools to speed both the diagnosis of a defect and the resolution of the fix. When defects are reported it helps developers quickly reproduce the issue locally through access to detailed logs and data recorded for every test. Developers can inspect a defect further by dynamically placing instrumentation code in problematic applications without rebuilding or restarting the device. With the problem isolated, patchpoint technology enables patching the problem immediately without rebuilding the code base. This is important because it prevents the testers from remaining idle while waiting for the next build.

Track Progress and Manage Resources Effectively

QA managers using Test Management have access to an array of reports that track progress of the testing effort. At the project level, managers can see the aggregate results of tests and the rate that tests are being written and executed. The reports allow tracking and comparing progress of individual testers so managers can stay in touch with each team member’s efforts. The software also tracks and reports device utilization data. This prevents inefficiencies resulting from overutilized hardware while saving money by avoiding underutilized hardware.

Test Management Follows Your Product into the Field

The test and instrumentation libraries created while using Test Management can easily be reapplied to streamline the support environment to increase uptime. Wind River Field Diagnostics is a companion product to Wind River Test Management, which enables device users and original equipment manufacturers (OEMs) to collaborate on software faults experienced in deployed devices. Both Test Management and Field Diagnostics extend Device Software Optimization (DSO) across the entire life of your products. See the Field Diagnostics Product overview for more details.

Why Wind River?

Partner Ecosystem

Our extensive network of partners extends the capabilities of Wind River products by offering out-of-the-box integration and support for key technologies. Our customer support team is trained to troubleshoot partner technologies in use with Wind River products, making ours the most comprehensive and best supported partner ecosystem in the DSO industry.

Professional Services and Support

Wind River Professional Services, a CMMI Level 3–certified organization, can configure Test Management to adapt to your processor, architecture, and operating system needs. Our world-class support organization, posting better than 80% customer satisfaction, stands ready to resolve your technical issues.

Experience, Reputation, and Expertise

With our solutions in more than 350 million deployed devices, Wind River has a 25-year track record of innovation and reliability. We can afford to develop and support the next-generation technologies that enable you to grow your product line. A vibrant, publicly traded company, Wind River is positioned to stay the course with established device manufacturers and new companies alike.