

## What's New in Wind River Test Management 4.0

Wind River Test Management 4.0 provides valuable new features, enhancements, and bug fixes to new customers and current users of Wind River Test Management 3.4. It supersedes all previous releases, update packs, and patches. Release 4.0 is available from your local Wind River representative worldwide via DVD under a Wind River subscription license or support agreement. This upgrade should be installed with all eligible existing and new installations of Wind River Test Management.

### New Features and Enhancements

**New preconfigured test suite generators:** The following new test suite generation methods are available:

- **Create a test suite based on coverage and execution time:** Selects test case instances that will generate the maximum coverage given a fixed time constraint
- **Create a test suite based on execution results:** Selects test case instances that have run with specific final status values
- **Create a test suite based on requirements:** Selects test case instances that are associated with specific requirement records to ensure that all requirements have a test associated with them and are thoroughly tested (available with license for integration with an external requirements management system such as IBM Rational DOORS)
- **Create a test suite based on defect status:** Selects test case instances that are associated with defect records having specific status and priority values to easily assemble a test suite that will validate the status of all defects recently fixed (available with license for integration with an external defect tracking system such as IBM Rational ClearQuest)
- **Recreate a test suite from a test run record:** Identifies and recreates a test suite that points to the exact test case versions executed in a particular run

**Block-level test coverage:** Device instrumentation has been enhanced to support the optional collection of test coverage data at code-block level. Test run results summarize block-level coverage over all instrumented functions. Currently, block-level coverage is only available on Pentium processors.

**Versioning of test cases and scripted test components:** The server application now stores multiple versions of test cases and scripted test components (STCs) and applies a simple

form of versioning to them to preserve change history and to enable the use of "latest version" pointers. In addition, since test cases can be members of test suites and STCs can be attached to test case steps, such configurable associations also take versioning into account.

**Integration with external requirements management system:** Integration with a requirements system, for example, with IBM Rational DOORS, enables you to associate one or more existing DOORS requirement records with a test case. A configurable synchronization process keeps the server application up to date with the external system. This integration enables traceability between requirements and tests, as required by development standards such as IEC 62304.

**Integration with external defect tracking system:** Integration with a defect system, for example, with IBM Rational ClearQuest, enables you to create a new ClearQuest defect record and associate it with a failed test run, or alternatively to associate an existing defect record with the run. A configurable synchronization process keeps the server application up to date with the external system. In conjunction with the integration with requirements management systems this provides complete end-to-end traceability between requirements, tests, code, and defects.

**Open framework for custom integrations:** Integrate with any third-party test management, defect tracking, and requirement management application as well as specific integration add-ons for IBM Rational Quality Manager, IBM DOORS, IBM ClearQuest, and HP Quality Center.

**Platform validation package:** Much of testing is to ensure that a new board passes a basic set of reliability and compatibility requirements for its underlying Linux operating system. In a typical workflow, board designers choose reference boards and customize them for their own devices. Once they port the board support package (BSP), available from a board vendor

or Wind River, they need to test it to ensure that the customized BSP is of the same quality as the reference board BSP. Wind River Test Management Platform Validation Test Package is comprised of more than 3,000 test scripts. Running the Test Management Platform Validation Test Package also provides test coverage metrics, which indicate the extent of test coverage completion and allow for user enhancement to improve coverage.

**New user role for virtual lab access:** The new virtual lab manager (VLM) user role is intended for developers who want to reserve virtual lab devices for their own use, that is, not for Test Management use. In the web interface, this type of user sees only the Virtual Lab tab. On the Virtual Lab tab, only the Available Devices, My Reserved Devices, and Search tabs appear.

**Future device reservations in virtual lab:** The hardware reservation function has been enhanced to display all existing reservation periods for a device and to enable the addition of further reservation periods in the future.

**Enhanced migration tool:** The migration tool now offers the option to change the database type. For example, if the database type is currently HSQLDB, the tool can modify the database connection file `dsm-ds.xml` to point to a MySQL database instead.

**New TMCLI commands:** Test Management command-line interface (TMCLI) commands have been added for the following operations:

- Add a requirement to the external system; attach a requirement to a test case run; detect a requirement from a test case run; list all requirements; get details of a requirement; remove a requirement from the external system.
- Add a defect to the external system; attach a defect to a test case run; detach a defect from a test case run; list all defects; get details of a defect; remove a defect from the external system.
- Generate test suites using the new preconfigured test suite generators; merge available test coverage data for all builds (for the creation of test suites based on coverage and execution time).
- Return details of custom field values used in a test case run.

**Additional platform support:** Wind River Test Management 4.0 has been ported to support the following operating systems and processors:

- Target device operating systems
  - VxWorks 6.3–6.9.1 platforms
  - Wind River Linux 2.0.3, 3.0, 4.0–4.2 based platforms
  - VxWorks 5.5.1
  - Wind River Hypervisor 1.3.1
  - Other Linux, UNIX, and real-time operating systems
- Target device processors
  - ARM/XScale
  - IA-32
  - x86\_64
  - MIPS
  - PowerPC
  - Wind River Simics
  - VxWorks Simulator

*Note: VxWorks 5.5.1 is currently supported only on PowerPC and IA-32 with Windows hosts; x86\_64 supports Wind River Linux and VxWorks.*

### Where to Get It

Wind River Test Management 4.0 is available from your local Wind River representative worldwide. Install the two release 4.0 files (one for Wind River Test Management/Wind River Test Diagnostics 4.0 server, one for the Wind River Workbench Diagnostics 4.0 developer plug-ins) from the DVD set provided. Note that you will have to migrate your existing test data to release 4.0. Back up your current data and thoroughly read the included release notes about database migration before installing any software.

Users should check the Wind River Online Support page periodically for the latest updates, service packs, and patches. For more product information see [www.windriver.com/products/test\\_management](http://www.windriver.com/products/test_management).