

# Integrity for Test Management

The only test management solution available today within a complete application lifecycle management system. Traceability through every stage of the software development process ensures complete test coverage and facilitates collaboration between business users, quality assurance and software development.

## Challenges

Effective test management ensures the delivery of quality projects. All requirements must receive complete test coverage — and issues discovered during testing must be accurately tracked, evaluated and resolved. Doing so ensures the end-product meets the stated requirements, as well as acceptable functional and performance criteria.

Typically, test management products are delivered as stand-alone solutions, creating an island that's within Quality Assurance, disconnected from the rest of the team.

Collaboration between analysts who write requirements and developers who resolve defects may not be provided, resulting in the need for integration with external requirements management and defect management solutions. Project Managers looking for complete information on the status of their project have no single system available that provides the comprehensive picture required.

## The Solution

You are seeking the most robust, integrated test management solution — one that ensures complete test coverage of all requirements, stimulates collaboration between developers, quality assurance and business users, and maximizes efficiency, collaboration and traceability.

PTC Integrity Test offers a completely integrated approach, in which test management is an integral part of a continuous process connecting design, development, testing and deployment phases of the application lifecycle.

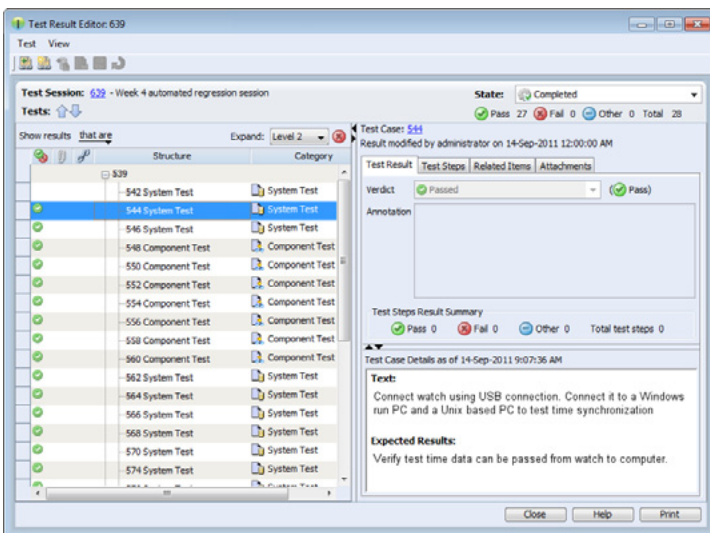
PTC's solution is built on the foundation of PTC Integrity's highly flexible and powerful process and workflow engine.

- Quality Assurance Managers must ensure complete test coverage of all requirements within a project. With PTC Integrity Test, they plan testing, monitor test coverage and evaluate the level of maturity of the software through defect management and other key test-related metrics. At all times the ongoing status of the QA effort can be clearly evaluated against the stated test plan to ensure objectives are being met.
- Test Executors record test results and create defects that are assigned to developers for resolution.
- Test Authors can prepare detailed manual test cases or link to external automated test execution scripts.
- CIOs and CTOs are confident the applications being delivered meet stated business goals. Metrics on the costs and effort expended during the QA process are rolled up to their management dashboards.
- Business Analysts use the same system, whereby they define requirements to provide their input into test case specifications. They can clearly determine that test plans are in place, ensuring requirements will be adequately tested.
- Developers receive real-time notification of tasks assigned to them to resolve defects in the same system where they are created. All development changes made to resolve the problem are directly linked to the defect, thus providing complete traceability back to the test case and the requirement.

## Features and Benefits

- Traceability between requirements, test cases, defects and the related development activities ensures the project receives complete test coverage, while enabling teams to easily determine the status of an entire project and to assess the impact on testing work by changing requirements.
- Powerful querying, charting, reporting and dashboards via integrated portfolio management capabilities providemanagement visibility into test planning and execution coverage and overall project status.
- Test Case Results Editor provides a focused environment where Test Executors work. Results of manual testing can be entered, querying for existing defects on a test case can be performed, new defects can be raised and linked to the workflow, and attachments can be added. Furthermore, test results captured via automation can also be displayed and reviewed within this editor.

- Automated Test Execution Framework integrates PTC Integrity Test with external automated test execution tools. The execution of automated tests and subsequent results can be recorded in PTC Integrity Test for review by testing personnel.
- Historical reporting enables project managers, business users and QA Managers to assess how the project, requirements and test cases have changed over time — thereby facilitating team collaboration and communication.
- Suspect link flagging and reporting captures changes to requirements and notifies appropriate personnel — including business users, test authors and QA Managers — of possible impacts to the testing process reports and dashboards.
- Deep integrations into Eclipse and .NET environments and Open API provides easy integration into other existing tool and technology environments.



Test Case Results Editor provides a focused environment where Test Executors work.

Requirements Test Coverage

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Test Coverage for Requirement Document : 162

ID	Category	Description	Tests	% Passed										
164	Heading	Introduction												
166	Comment	This document is in response to the related Marketing Requirements Document and outlines system level requirements for the product release in the voice of the manufacturer.												
174	Heading	Waterproof Requirements												
176	Business Requirement	In order to adhere to safety regulations and match the water depth resistance of competitors, the watch must be waterproof to a depth of 100m. The following table outlines the products of our competitors in the same price range:	1	0%										
		<table border="1"> <thead> <tr> <th>Company</th> <th>Waterproof to... (m)</th> </tr> </thead> <tbody> <tr> <td>abc</td> <td>80</td> </tr> <tr> <td>xyz</td> <td>100</td> </tr> <tr> <td>ddd</td> <td>100</td> </tr> <tr> <td>zzz</td> <td>115</td> </tr> </tbody> </table>	Company	Waterproof to... (m)	abc	80	xyz	100	ddd	100	zzz	115		
Company	Waterproof to... (m)													
abc	80													
xyz	100													
ddd	100													
zzz	115													
178	System Requirement	Because of base waterproof protection, Watch face diameter must be at least 1" wide with a thickness of 0.2" to withstand water pressure at 100m. Watch face will be made out of glass	1	0%										
180	System Requirement	Must be accurate to within 1 second over a month of continuous operation	1	100%										
182	System Requirement	Must have a mechanism for connecting to a computer for automatic timing synchronization. This connection must be universal so that the user can synchronize the watch being anywhere in the world.	2	100%										

An example of test coverage in Integrity.

## PTC Integrity Business Unit Locations

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