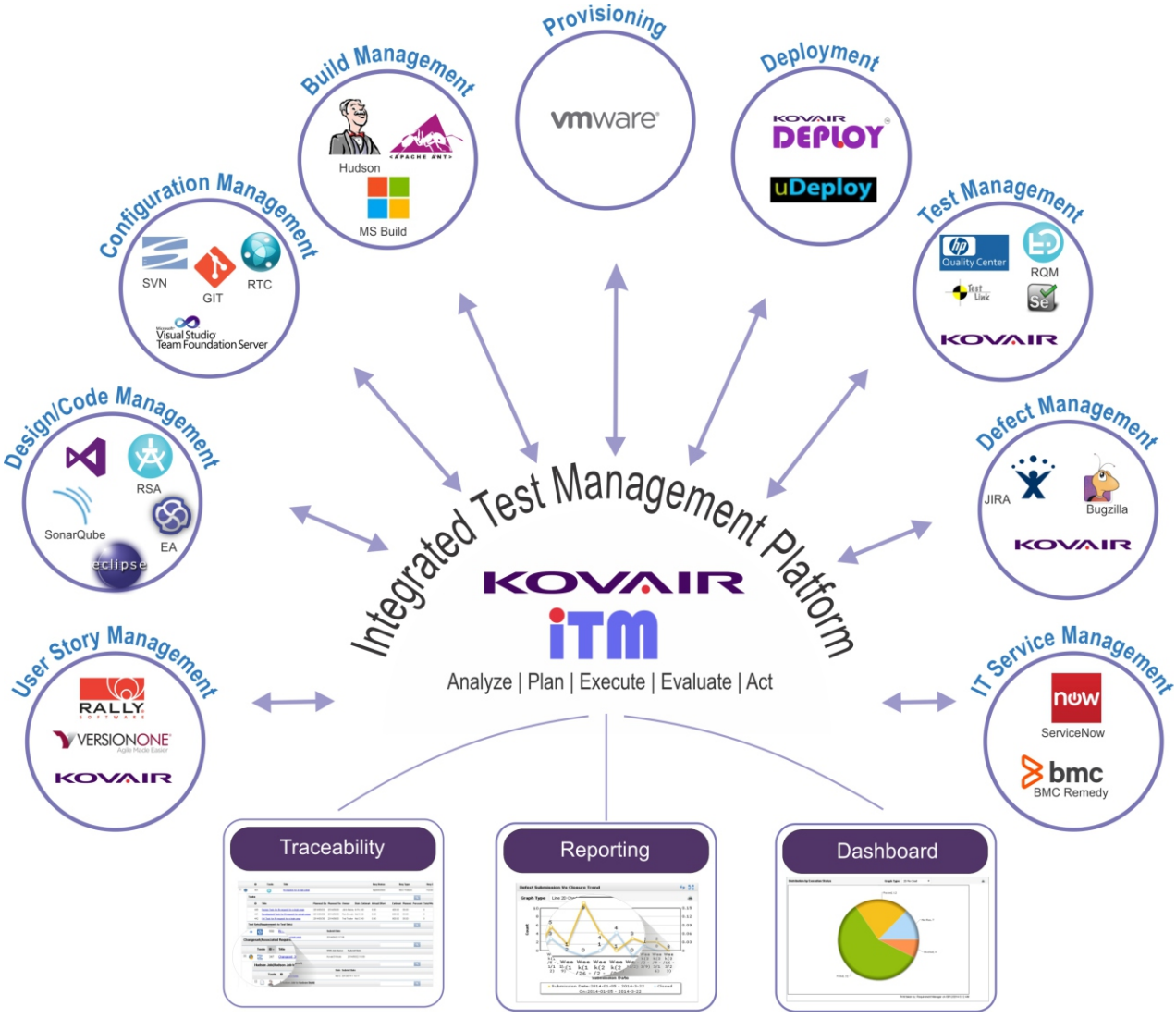
KOVAIR

Kovair Integrated Test Management (iTM)

An Overview

Enabling Web Based Test Management to Support DevOps for Global Organizations



HIGHLIGHTS

- Multiple Test Case capturing methods: Direct Entry, MS Excel, CSV File, and 3rd party tools
- Proprietary Kovair Omnibus Integration engine connecting to multi-vendor or open source ALM tools
- Integrated tools enable inclusion of Testing early in the lifecycle
- DevOps enabled with existing tools through integration
- Support for both manual and automated testing
- Support for realizing efficiency & effectiveness through comprehensive metrics
- Independent verification and validation ensuring predictability, efficiency and cost-effective delivery
- End-to-end traceability of test artifacts with other ALM artifacts
- Task Based Process Engine with graphical drag and drop designer to support any workflow
- Automates test scheduling, running of test cases and defect capturing from failed test cases
- Collaborative review process for joint reviews and detecting early errors
- Triggers automation test scripts from the iTM platform

Kovair Integrated Test Management (iTM)

Ensuring Quality with a Comprehensive Test Management Solution

Great products are the result of persistent development and rigorous testing. Today, testing is critical for enterprises to gain leadership, profitability and end-user satisfaction. They demand a strategic approach and an early involvement of testing for quality, automation, predictability and cost reduction. Most importantly, customers want testing to deliver tangible results.

Some of the major concerns with regard to testing are:

- What is the test coverage involving emerging and legacy tools?
- How to manage test scenarios involving multiple vendors or open source tools?
- How to select and prioritize test automation strategy and align it to your business requirements?
- How to track the appropriate metrics without much manual intervention to ensure quality?

Kovair's Test Management Solution

Kovair's Test Management solution provides a flexible and comprehensive test management platform for manual and automated testing. Kovair iTM in conjunction with Kovair's ESB architected integration engine Omnibus, allows organizations to implement DevOps by integrating the existing tools from different vendors. Some of the key features of Kovair Test Management Solution are:

- Tight integration with other modules of ALM, offering an Integrated Test Management solution
- Complete support for test automation through integrations with tools like QTP & Selenium
- Triggers automation test scripts from the iTM platform
- Integration support with most popular manual testing tools like HP QC, IBM Rational Quality Manager and TestLink
- Extensive support for multiple Test & Quality Metrics; gauging the progress, quality and health of software testing effort
- Ability to maintain multiple versions of test artifacts like Test Plan, Test Case, Test Scenario
- Capability of re-using test cases as a part of another test case

Managing Test Artifacts

Import from Office Documents

In most cases, Organizations maintain their test cases in Microsoft Excel documents. Test cases, when maintained offline such as in excel are difficult to review. Using the import feature of Kovair, users can import all the test cases along with the steps into the application.

Direct Entry

Users can enter records of different test artifacts directly into the application. Using the form builder of Kovair, users can design the form as per business needs of the organization. Kovair allows users to refer to a test case within a step of another test case by which dependency of test cases can be achieved as well as test cases can be reused.

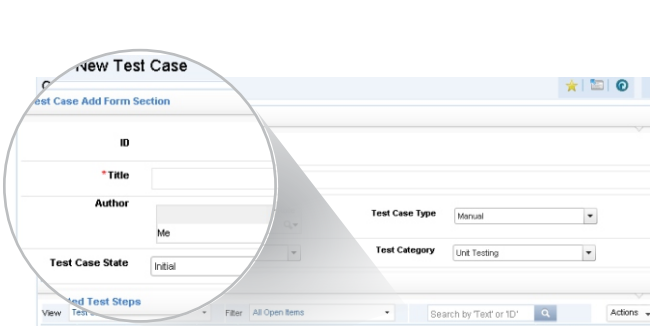


Fig: Record Entry Form

Maintaining Test Plan and Scenarios

In Kovair, users can maintain their test plans and scenarios corresponding to the business requirements in an integrated manner. Kovair allows users to track and manage the implementation progress of the requirements, along with their corresponding test plans. Users can group the test cases using different scenarios, manage and track them with the help of metrics defined in Kovair.

Test Execution

In Kovair, users can execute manual as well as automated test cases multiple times and test run gets created for each of these iterations. Kovair Test Management allows users to change parametric values during execution. This is very useful and ensures that the code handles not just the happy path, but also the edge cases. For supporting automated test cases Kovair integrates with QTP & Selenium. Results of Test scripts executed in those tools can be brought and updated in Kovair. Automatic defects can be raised against failed test cases.

Comprehensive Metrics

Test metrics are always an important indicator of the efficiency and effectiveness of a software testing process. Analysis of defined metrics helps identify areas for improvement and devise subsequent actions. Kovair allows users to track these metrics at different levels like Product, Process and Project, thus helping to evaluate the progress, quality and health of software products.

In Kovair users can view different metrics like -

- Defect Submission vs Fixing vs Closure trend
- Average Defect Turnaround Time
- Average Defect Response Time
- Test Coverage
- Defect Removal Efficiency (DRE)
- Cost of Quality
- Cost of Testing
- Productivity trends
- Requirements Volatility Index

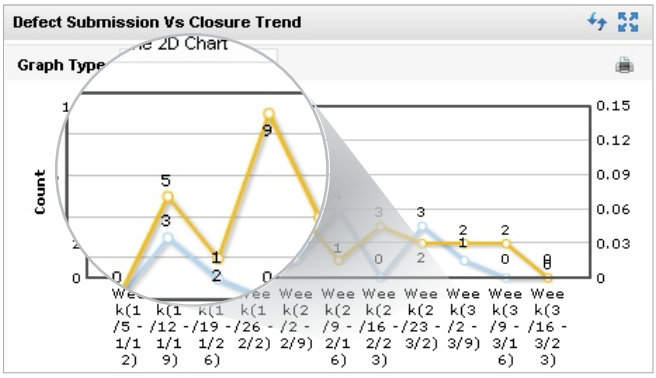


Fig: Trend Report

Apart from these, using the reporting engine of Kovair, users can define their own test related metrics as per their business needs. All these reports can be plotted in dashboards, defined and designed by the users as per their business needs.

Traceability & Impact

Kovair Requirements Management offering has the most comprehensive traceability relation features compared to its competitors.

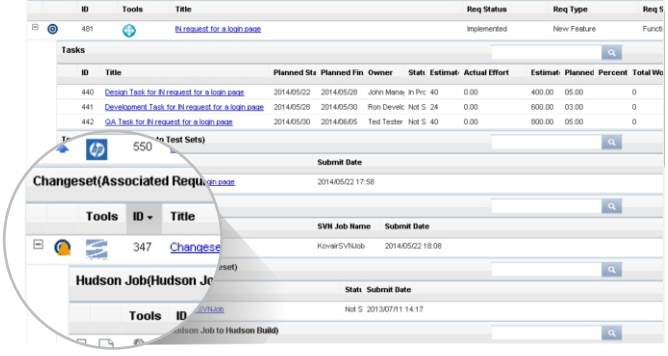


Fig: Traceability Review

Some key capabilities are:

- Define relationship between artifacts in your own way
- Bi-directional traceability between artifact records
- Define attributes specific to relations
- Track different coverage types to ensure quality
- Extensive impact handling

With the help of this extensive traceability and impact support, testers get automatically informed through email as and when the development completes or bugs get fixed. Similarly when a business requirement changes, impacts get raised and the authors of the related test cases are notified about the change.

Task Based Workflow

A well-defined workflow can only lead to a quality outcome in the least amount of time and cost, if the process itself is efficient and effective. That is the primary reason why organizations around the world have focused their efforts on gauging and enhancing process performance and maturity. Kovair, through its built-in Omniprocess Workflow Engine facilitates complete automation of the Test Management workflow - the way you want to implement in your organization.

Some major advantages of Omniprocess Workflow Engine are:

- Task based workflow in contrast to State based workflow
- Multiple Independent processes at different levels
- Web based visual drag & drop designer
- Conditional Branching
- Provision for defining Process Variables

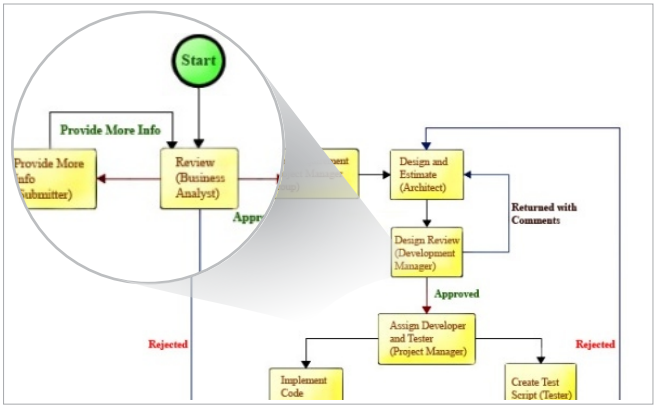


Fig: Sample Workflow

Kovair Test Management Automation Framework

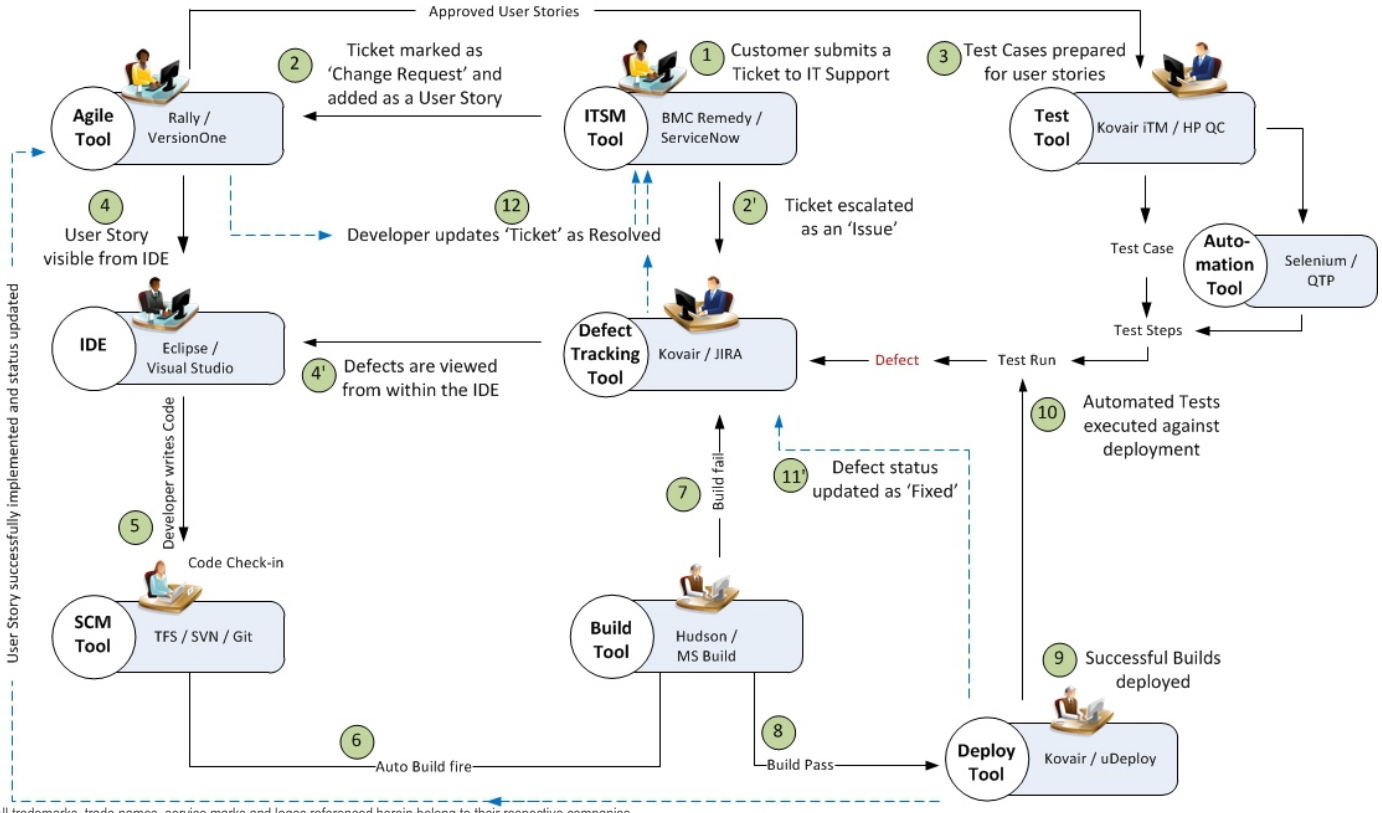
Over time, software products and hence software projects have become extremely complicated and extensive due to the comprehensive product functionalities, advanced level architectures and mammoth supported configurations. Today, various factors like increasing pressure to develop high-quality software products, limited resources, shrinking development and deployment schedules, geographically distributed teams, and different tools across teams have become the greatest challenge for delivery of a quality product. This has also led to the need of enhancing the operational capabilities of the team. The integrated test management platform from Kovair not only helps organizations to involve testing early into the development process but also ensures quality at every stage of the development process. The 100% web based test framework brings in the following major advantages to the entire development process of the organization.

- Removing barriers for globally distributed teams and enabling them to work on a single source of information
- Elimination of manual hand-offs between teams
- Generation of different cross tool metrics
- Ability to view cross tool end-to-end traceability
- Managing impacts across tools
- Ability to support automated testing through tools like Selenium & QTP
- Workflow based automatic triggering of both manual and automated test cases
- Capability of implementing DevOps with the existing tools as shown by a typical process workflow shown here.

Example Integration Scenario

An organization uses Remedy or ServiceNow for ITSM or Helpdesk management. When any ticket or a Change Request comes in they get automatically passed to Rally or VersionOne or JIRA as User Stories or Defects. Once they are allotted to any sprint, developers and testers view them from their own environments like Eclipse, TFS, HP QC, Kovair iTM. Once coding is complete and codes get checked in at SVN for Source Code management an automatic build gets triggered using Hudson or MS Build. Upon successful completion of build it can be automatically deployed using Kovair deployment tool and automated tests can be executed through selenium or QTP. Test results can be captured and linked to the test cases. Defects get raised for those failed test cases in Kovair defect management or Rally or JIRA. When hooked to Kovair Omnibus Platform, each of these tool users gets a complete visibility of test records such as test cases, test steps, test runs, defects and their interrelationships from within their own tools. Through this integrated platform, continuous integration and continuous deployment can be achieved.

Sample DevOps Scenario with Kovair Omnibus



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