

Jira as Test Management Tool



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We share 99% of our
DNA with chimps



Monkey testing is past...

Is “chimp testing” the
future?

Today's needs

- Release anytime
- Avoid regressions
- Multiple target environments
- Limited resources
- All sorts of testing

What is the relation to SW?

On average 15...50 errors per 1000 LOC

Code Complete, Steve McConnell, 2004

“The product that’s twice as large is likely to have more than twice as many errors”

Internal factors



External factors



Buggy Software



Dormant
(useless -> customer lost)



Die
(no new leads)



Divide endlessly
(viral bad reputation,
lawsuits)

Errors are there

Consequences

*They can mitigated or
even avoided*

Frequent and better software
releases

—

Enemies?

Not really.

Let these help you out:

- ✓ Agile
- ✓ DevOps
- ✓ Continuous Integration
- ✓ Automated Testing
- ✓ Continuous Testing
- ✓ Continuous Delivery



Why is Test Management so important?

Software is everywhere, including in critical systems from health, finance, transports, space, IoT, just to name a few...

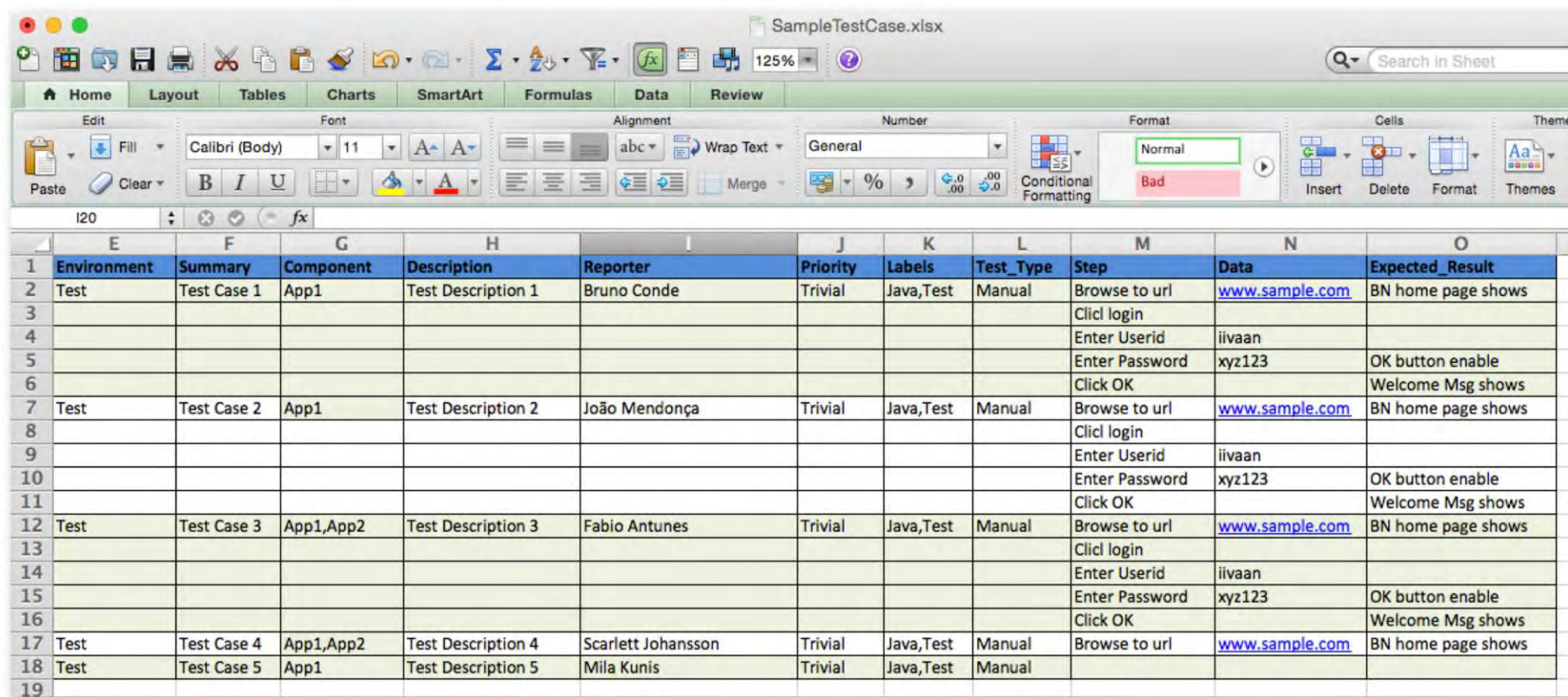


Why Jira for Quality Assurance?

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In the "dark ages"....

... there was Excel... or even other "legacy Test Management tools" ☺



The screenshot shows an Excel spreadsheet titled "SampleTestCase.xlsx" with a ribbon at the top containing tabs for Home, Layout, Tables, Charts, SmartArt, Formulas, Data, and Review. The ribbon is currently set to the "Formulas" tab. The spreadsheet contains a table with 12 columns: Environment, Summary, Component, Description, Reporter, Priority, Labels, Test_Type, Step, Data, and Expected_Result. The table lists five test cases, each with a unique ID (1-5) and a reporter (Bruno Conde, João Mendonça, Fabio Antunes, Scarlett Johansson, Mila Kunis). The steps for each test case are: Browse to url, Click login, Enter Userid, Enter Password, and Click OK. The expected results are: BN home page shows, OK button enable, and Welcome Msg shows.

	E	F	G	H	I	J	K	L	M	N	O
	Environment	Summary	Component	Description	Reporter	Priority	Labels	Test_Type	Step	Data	Expected_Result
1	Test	Test Case 1	App1	Test Description 1	Bruno Conde	Trivial	Java,Test	Manual	Browse to url	www.sample.com	BN home page shows
2									Click login		
3									Enter Userid	iivaan	
4									Enter Password	xyz123	OK button enable
5									Click OK		Welcome Msg shows
6	Test	Test Case 2	App1	Test Description 2	João Mendonça	Trivial	Java,Test	Manual	Browse to url	www.sample.com	BN home page shows
7									Click login		
8									Enter Userid	iivaan	
9									Enter Password	xyz123	OK button enable
10									Click OK		Welcome Msg shows
11	Test	Test Case 3	App1,App2	Test Description 3	Fabio Antunes	Trivial	Java,Test	Manual	Browse to url	www.sample.com	BN home page shows
12									Click login		
13									Enter Userid	iivaan	
14									Enter Password	xyz123	OK button enable
15									Click OK		Welcome Msg shows
16	Test	Test Case 4	App1,App2	Test Description 4	Scarlett Johansson	Trivial	Java,Test	Manual	Browse to url	www.sample.com	BN home page shows
17	Test	Test Case 5	App1	Test Description 5	Mila Kunis	Trivial	Java,Test	Manual			
18											
19											

Welcome to “modern ages” with Jira

Built-in features

- Focus on teams
- Collaboration / Comments
- Agile project management & waterfall
- Workflow control
- Customizable and adaptable
- Searching
- Assignment
- Track changes
- Linking between issues
- Importing issues from CSV



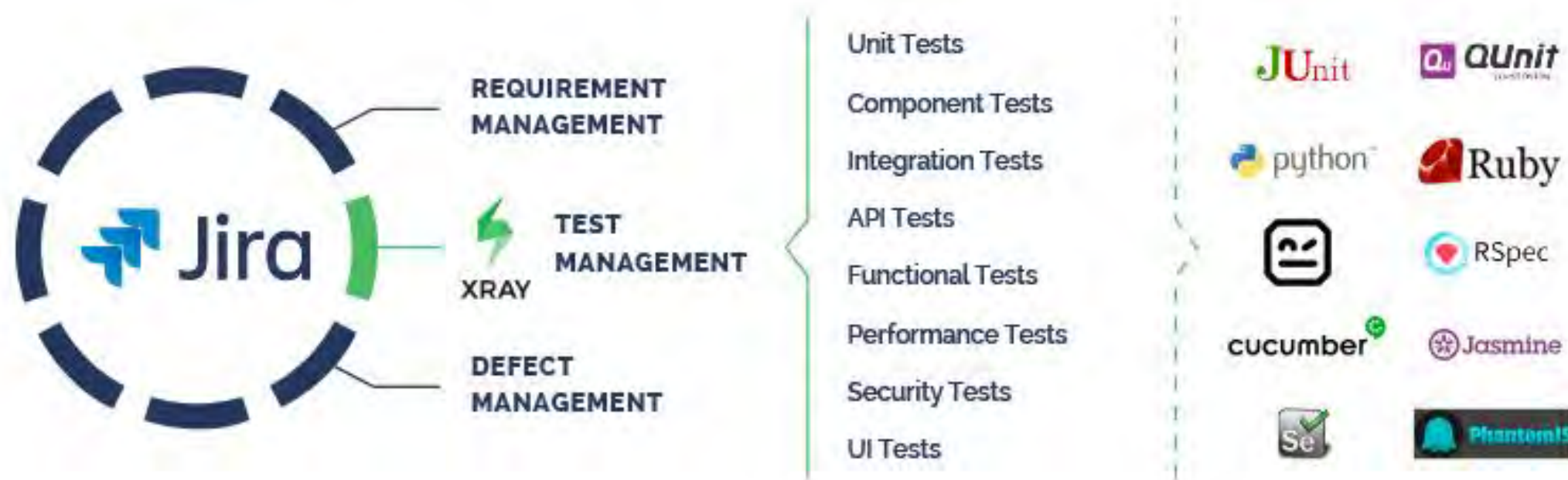
Jira as a Test Management tool

What is missing?

1. Test related artifacts (tests, executions, plans)
2. Visibility of testing results and progress in Agile boards
3. In-context information about tests for requirements
4. Advanced reporting for generating documents and drill-down on data



Using Jira for software development

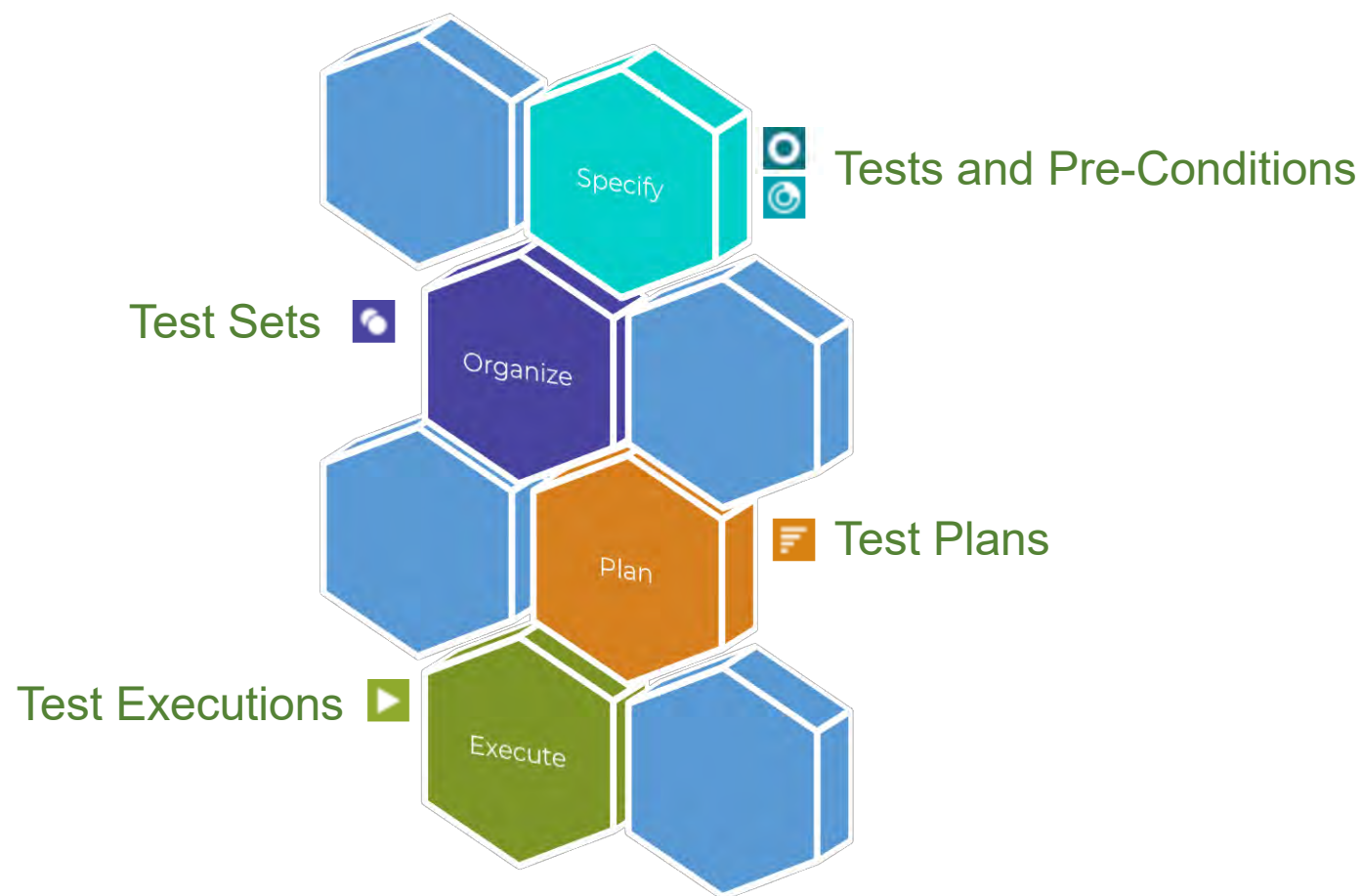


Manual and Automated

3. Leverage Jira for testing with XRAY

—

Issue types for different testing phases



The benefits of using Jira issue types

1. Leverages Jira's built-in features
2. Permission control
3. Implementation of Workflows
4. Custom fields
5. Screens customization
6. Assignment, Changes tracking
7. Collaboration
8. And much more...

The screenshot displays the Jira Test Execution interface for Test Plan CALC-1093. The interface is divided into several sections:

- Details:** Shows the issue type as 'Test Execution', status as 'RESOLVED', and resolution as 'Fixed'. It also lists affected versions, components, labels, test environments, and the test plan.
- Description:** A section for adding a description.
- Tests:** A section for adding tests.
- Overall Execution Status:** A progress bar showing 1 PASS and 1 FAIL.
- Attachments:** A section for attaching files, with a file named 'BambooTasks (1).PNG' attached.
- Activity:** A section for viewing activity, including comments and work log.

The 'Create Issue' form is also visible, showing the project 'Calculator (CALC)', issue type 'Test', and test type 'Manual'. It includes a table for test steps:

Step	Data	Expected Result
1	press 1	1
2	press key	+

Sneak Peak



Hands On:
<http://bit.ly/celixxray>

Recap

Tests

1. Manual or Automated
2. May use reusable Pre-Conditions
3. Facilitate BDD with built-in Cucumber tests
4. Export specification and execute it during CI/CD

Calculator / CALC-2804
Cucumber Test As a user, I can calculate the sum of two numbers

Test Details

Type: Cucumber Scenario Type: Scenario Outline

Scenario:

```
1 Given I have entered <input_1> into the calculator
2 And I have entered <input_2> into the calculator
3 When I press the "Calculate" button
4 Then the result should be displayed in the screen, on the right of the "=" sign.
5 Examples:
6 | input_1 | input_2 | button | output |
7 | 20      | 30      | add    | 50      |
8 | 2       | 5       | add    | 7       |
9 | 0       | 40      | add    | 40      |
10 | 4       | 50      | add    | 54      |
11 | 5       | 50      | add    | 55      |
```

Autocompletes based on labels... Filter Labels

Press **Ctrl** + **Space** to get step suggestions.

cucumber

Save Cancel

Step	Data	Expected Result	Attachments
1 I choose the operation of the calculator "Subtraction"		The operation must appear selected.	+ [icon] [icon]
2 I enter the input into the calculator	I1: 5 I2: 2		+ 371642.jpg [icon] [icon]
3 I press the "Calculate" button		The result "3" should be displayed in the screen, on the right of the "=" sign.	+ [icon] [icon]

#3 - Expected Result
The result "3" should be displayed in the screen, on the right of the "=" sign.

#4 - step

Style B I U A A [icon] [icon] [icon] [icon] [icon] [icon] [icon] [icon] [icon] [icon] [icon] [icon]

press symbol key

Visual Text Done

Organization

Create flat lists (Test Sets) or organize them hierarchically in folders (Test Repository).

The image illustrates two organizational structures for test cases in a software testing tool. A blue arrow points from the text 'Create flat lists (Test Sets)' to a screenshot of a flat list view. Another blue arrow points from the text 'or organize them hierarchically in folders (Test Repository)' to a screenshot of a hierarchical view.

Flat List View (Test Sets): This view shows a single list of test cases. The header is 'all my arithmetic related tests'. Below the header, there are buttons for 'Edit', 'Comment', 'Assign', 'More', 'Start Progress', 'Resolve Issue', 'Close Issue', and 'Admin'. The main area displays a table of test cases with columns 'Key' and 'Summary'. The table contains three entries:

Key	Summary
1	CALC-1612 Cucumber Test As a user, I can calculate the sum of two numbers
2	CALC-1613 Generic Test As a user, I can calculate the sum of two numbers
3	CALC-1609 Manual Test As a user, I can calculate the sum of two numbers

Hierarchical View (Test Repository): This view shows a tree structure of test cases. The header is 'Test Repository / arithmetic related tests'. The tree structure is as follows:

- All (797)
 - Orphans (134)
 - Test Repository (663)
 - components (7 (32))
 - UI (12 (12))
 - web (0 (0))
 - core (3 (3))
 - compA (2 (2))
 - compX (8 (8))
 - arithmetic related tests (3 (3))
 - backoffice (0 (0))

The 'arithmetic related tests' folder is selected, showing a list of three test cases:

- CALC-1709 Cucumber Test As a user, I can calculate the sum of two numbers (CUCUMBER)
- CALC-1710 Generic Test As a user, I can calculate the sum of two numbers (GENERIC)
- CALC-1707 Manual Test As a user, I can calculate the sum of two numbers (MANUAL)

A context menu is open over the first test case, showing options: 'Move to Orphans', 'View Issues', 'Create Test Set', 'Add to Test Set', 'Create Test Plan', 'Add to Test Plan', 'Create Test Execution', and 'Add to Test Execution'.

Plan, Schedule and Execute

1. Create a Test Plan per version or per Sprint, or more as needed
2. Schedule Test Executions for running Tests
3. Execute, leave comments, create defects

The screenshot displays a test management interface. On the left, a detailed view of a test execution shows four steps. Steps 1, 2, and 3 are marked as 'PASS', while Step 4 is marked as 'FAIL'. Each step includes fields for 'Step', 'Data', and 'Expected Result', along with icons for comments, defects, and evidences.

On the right, a summary table lists the test executions. The table has columns for Key, Summary, Test Type, #Req, #Def, Test Sets, Assignee, and Status. It shows three entries: two 'PASS' and one 'FAIL'.

Below the table, a dropdown menu is open, showing options: EXEC, Execution Details, TODO, EXECUTING, FAIL, ABORTED, BLOCKED, and PENDING.

Key	Summary	Test Type	#Req	#Def	Test Sets	Assignee	Status
1	CALC-738 Generic Test As a user, I can calculate the sum of 2 numbers	Generic	1	0	CALC-739	Administrator	PASS
2	CALC-737 Cucumber Test As a user, I can calculate the sum of 2 numbers	Cucumber	1	0	CALC-739	Administrator	PASS
3	CALC-736 Manual Test As a user, I can calculate the sum of 2 numbers	Manual	1	1	CALC-739	André Rodrigues	FAIL

Showing 1 to 3 of 3 entries

First Previous 1 Next

In-context information

Calculator / CALC-1178

As a user, I can calculate the sum of 2 numbers

Comment Agile Board More Reopen Issue export Admin

Details

Type: Story Status: **CLOSED** (View Workflow)
Priority: Major Resolution: Fixed
Affects Version/s: None Fix Version/s: v3.0
Component/s: None
Labels: None
Sprint: Sprint 1
Requirement Status: **v3.0 - OK**

Test Coverage

Create new Test Create new Sub Test Execution

Version: v3.0 All Environments OK

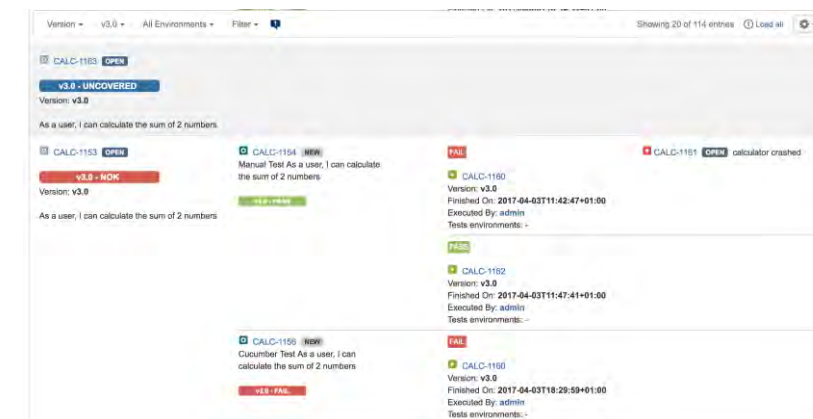
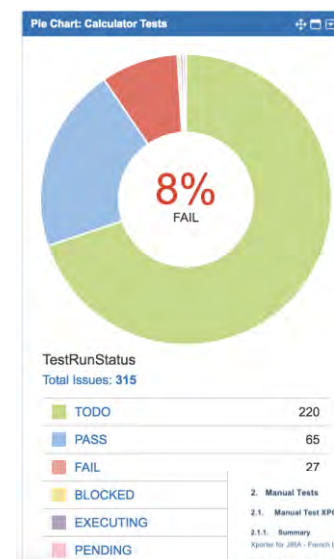
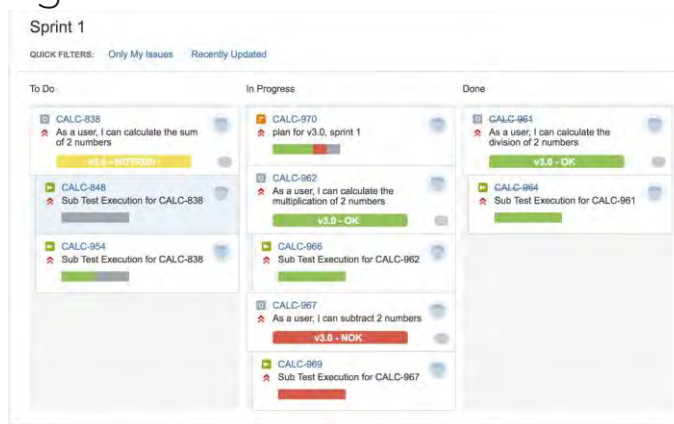
OPEN	Unresolved	CALC-1240	Test As a user, I can calculate the sum of 2 numbers	PASS
OPEN	Unresolved	CALC-1180	Cucumber Test As a user, I can calculate the sum of 2 numbers	PASS
OPEN	Unresolved	CALC-1181	Generic Test As a user, I can calculate the sum of 2 numbers	PASS
OPEN	Unresolved	CALC-1179	Manual Test As a user, I can calculate the sum of 2 numbers	PASS
OPEN	Unresolved	CALC-1202	CanAddNumbers	PASS

Xray provides

- Real-time information about the coverage status of the requirement for a given version
- Real-time information about the associated test results, for a given version
- A "requirement" may be any issue type you may have; test coverage can be made in any issue type

Multiple ways of reporting, the Jira way

1. Built-in reports
2. Jira gadgets in Jira dashboards
3. Agile boards



4. Through other top-notch



2. Manual Tests

2.1. Manual Test XPORTER-229

2.1.1. Summary
Report for JIRA - French Language translation (simplified version)

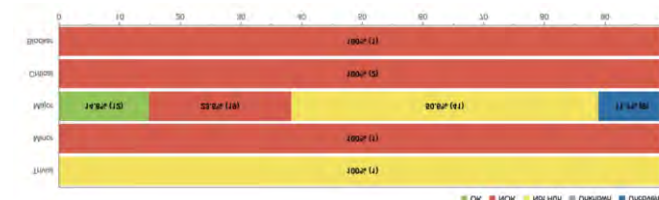
2.1.2. Status of the Last Execution
PASSED

2.1.3. Pre Conditions

2.1.4. Description
This test purpose is to check if this feature is working as expected

2.1.5. Test Procedure

Step Number	Step	Expected Result
1	On JIRA Navigation bar, select the user menu and click Profile	The View profile summary screen will be loaded
2	Click the edit icon right next to the Preferences label.	The Update User Preferences dialog will be prompted
3	Click the selector right next to the "Language" label, choose Français (France), and click Update	The View profile summary screen will reload, and the contents language will be displayed in French
4	Go to the Administration	The contents under Xporter pour JIRA



Reports as deliverable assets



XPORTER

Use Xporter to generate fully customizable Word, Excel or PDF files with your testing reports to give to your management, colleagues or to your customers (e.g. Test specification, Test Execution progress and respective results, Test Plan details).

1. Introduction

1.1. Document Overview

This Test Report provides a summary of a test execution. This document has been generated automatically from the test management platform.

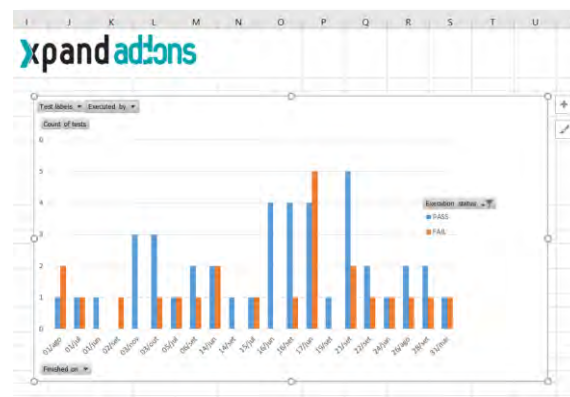
1.2. Test Execution XPORTER-198 Details

Description: This Test Execution purpose is to check if all the Xporter for JIRA features supported on the 3.1.0 release are working as expected on Internet Explorer
 Begin Date:
 End Date:
 Revision:

1.3. Overall Execution Status

Of the 12 Test Runs contained on XPORTER-198:

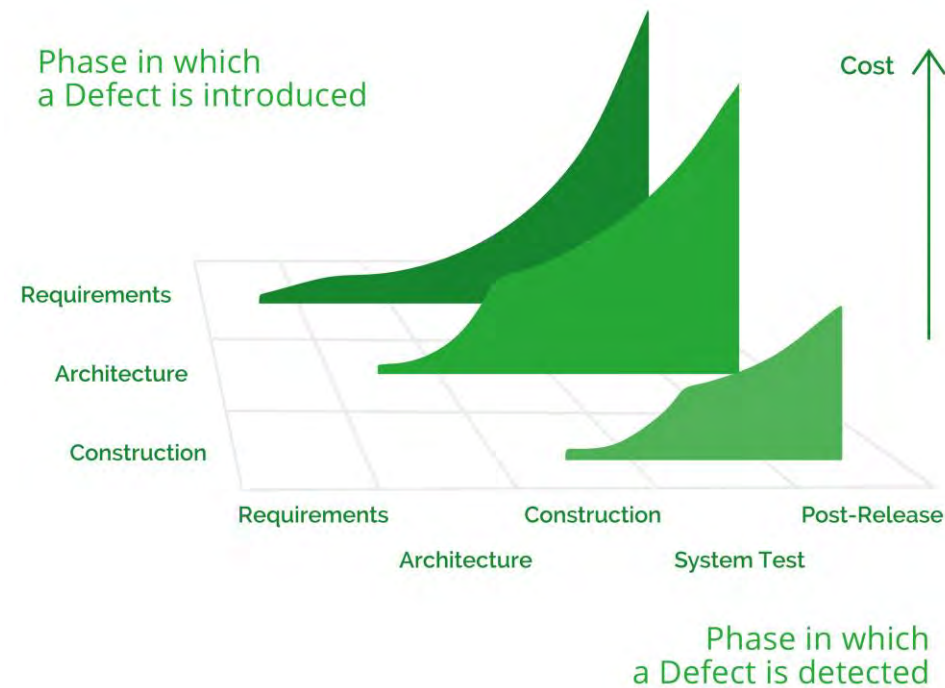
TODO: 75.01 %
 EXECUTING: 8.33 %
 PASS: 0.0 %
 FAIL: 8.33 %
 ABORTED: 8.33 %



Test Automation

The cost of bugs

- The cost of fixing bugs grows exponentially depending on the phase in which they are detected
- The fix cost also depends on the stage where bugs are initially introduced



=> Automated testing to the rescue!

Automation ready



REST API



Jenkins



Maven™



cucumber

JUnit



TestNG



SoapUI

C/C++



Ruby



python™



Selenium

Perl



JavaScript

C#



Java



Supported formats

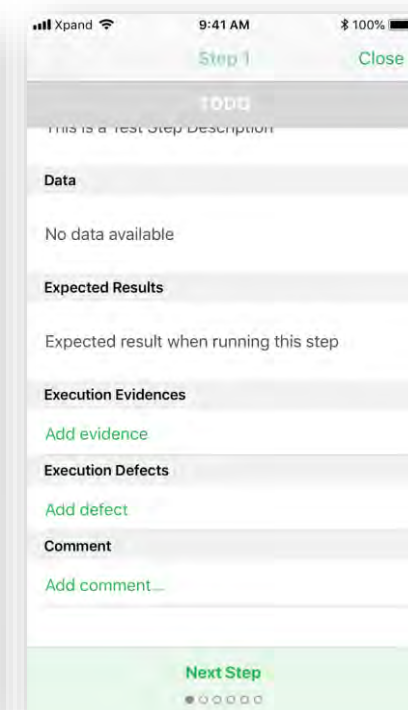
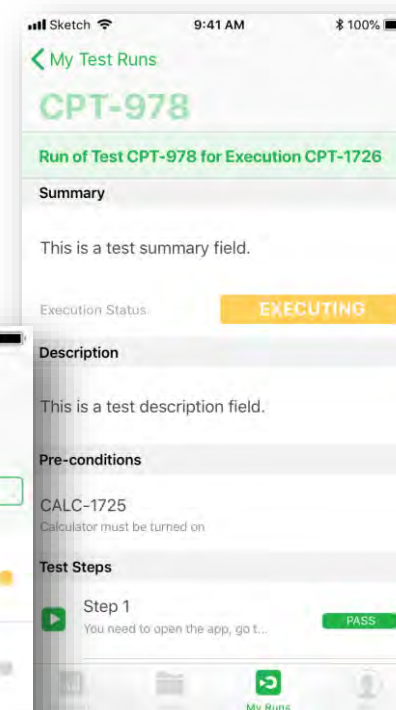
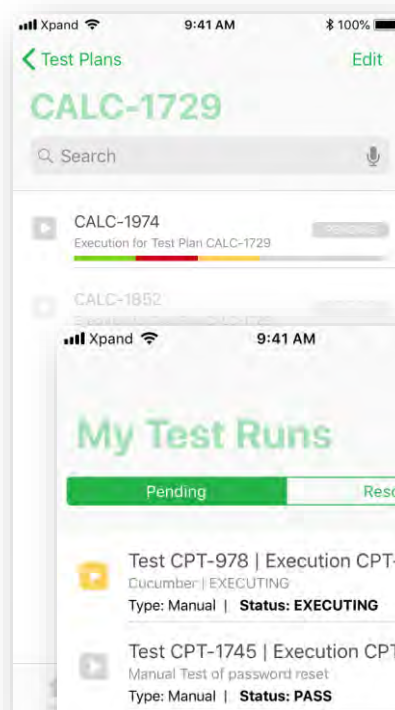
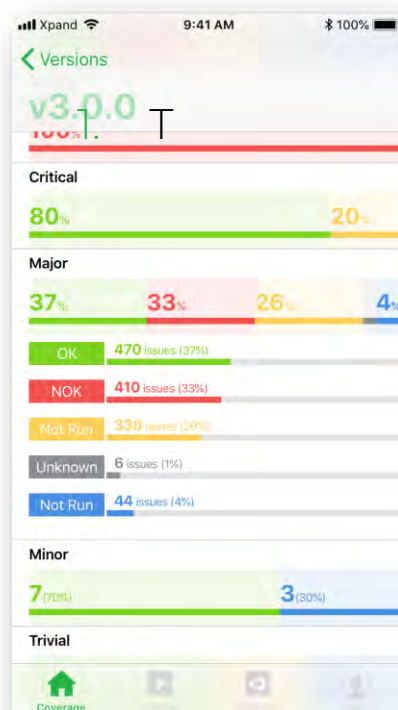
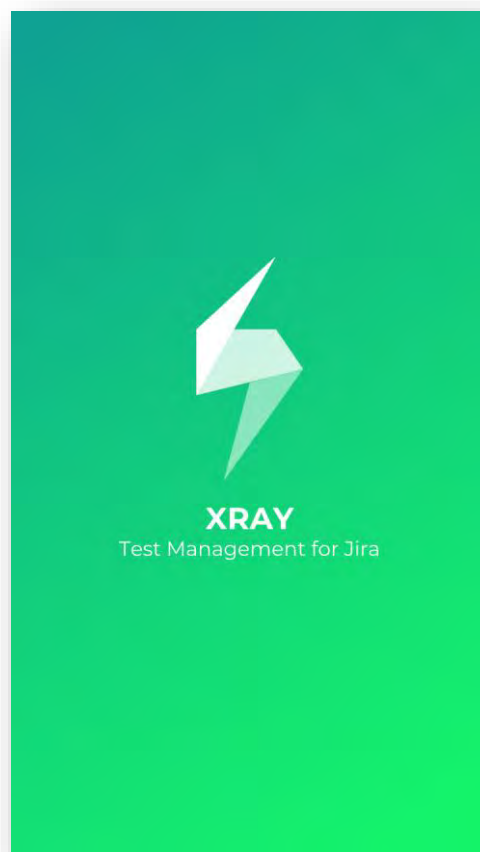
- Xray JSON
- Cucumber
- Behave
- JUnit
- Nunit
- TestNG
- Robot framework
- Calabash
- HP LeanFT (UFT Pro)*
- ... more to come

Xray Mobile App

Meet the “Xray Mobile app” (available for iOS and Android, Dec 2018)

Out now for iOS / Android will be out very soon

1. Track progress
2. Track your work
3. Execute Manual Tests



Using Jira for testing,
today!

—

Migrating tests to Jira

Xray provides:

1. A built-in Test Case Importer, that is able to import tests (including attachments and additional fields) from a friendly CSV
2. A built-in HP ALM 12.5x importer
3. An open REST API, that can be used to import Tests and also results

	A	B	C	D	E	F	G	H	I
1	TCID	Test Summary	Test Priority	Component	Component	Step	Data	Result	
2	1	Test 1 for user story WEB-1	high	User Interface	Business Layer	Go to login page			
3	1					Enter username	peter		
4	1					Enter password	pwr123		
5	1					Click login button		User successfully logged in	
6	2	Test 2 for user story WEB-1	very high	User Interface	Business Layer	Go to login page			
7	2					Enter username	peter		
8	2					Enter wrong password	abc123		
9	2					Click login button		User logged in fails with message	
10									

Principles of XRAY

A solid green horizontal bar.

We build XRAY so that it...

1. Gives you the tool, and don't dictate how you should do it
2. Gives you freedom, so you can adapt the tool to your team and your processes
3. Gives you the power, so you can have greater control over your process
4. Gives you possibilities, so you can leverage the power of other tools

Some techniques for improving SW quality

What you can do about it?

1. Clear quality goals and visibility
2. Well-defined testing strategy
3. Working as a team
4. Unit tests
5. Peer reviews / Pair programming / Pair testing
6. Static and dynamic code analysis
7. Much more...

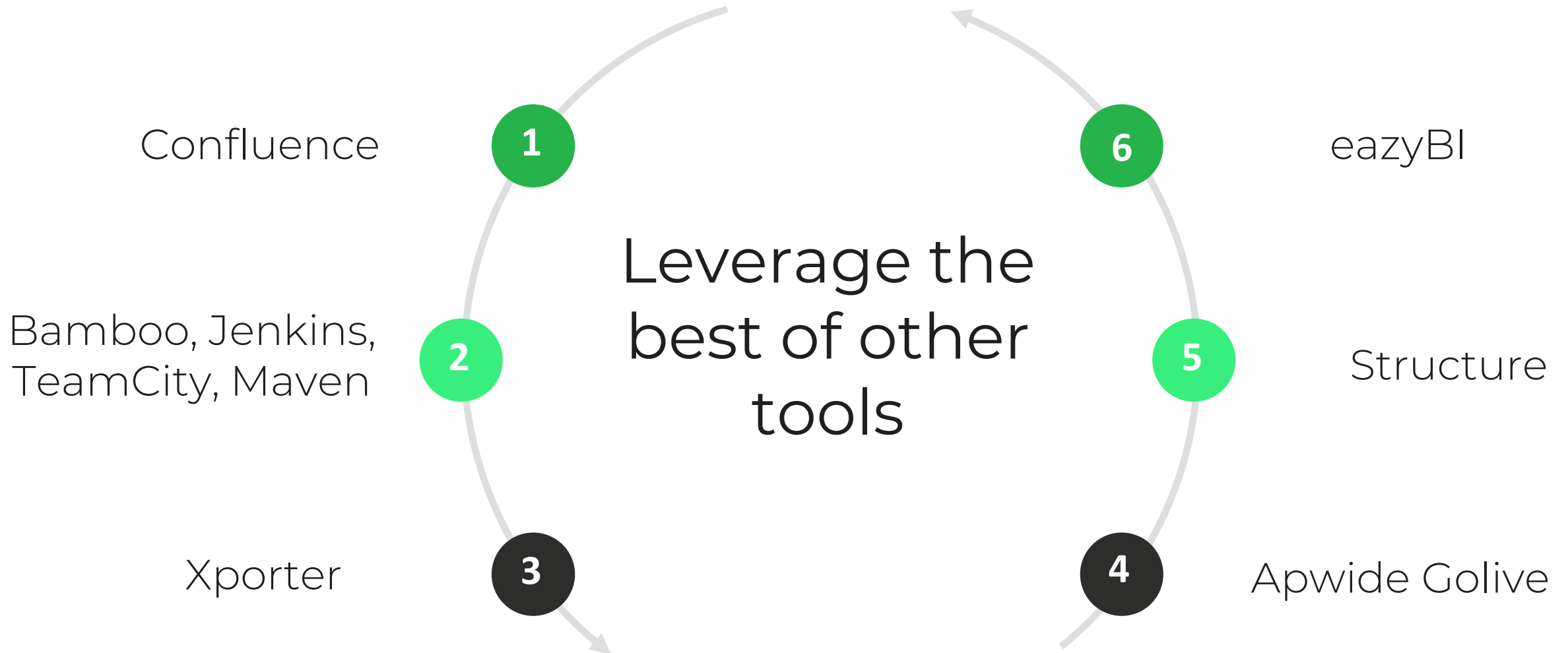
XRAY and your teams

A solid green horizontal bar.

We let you...

1. Focus on the work, while XRAY does the boring stuff
2. Improve collaboration, as developers and testers have more time
3. Get things done right the first time, so you deploy with confidence

Integrations







Happy Testing!

Thank you!

6. Xray vs competition?

Xray vs Zephyr for Jira

	 XRAY	
	Xray	Zephyr
Native support for BDD with Cucumber	✓	-
Jira issues for all testing phases	✓	-
Data consistency	✓	-
JUnit, NUnit, Robot, Behave, TestNG	✓	-
Hierarchical, multi-level folder Tests organization at project level	✓	-
Hierarchical, multi-level folder Tests organization per each Test Plan	✓	-
REST API built-in	✓	-
Integration with Xporter for fully customized reports in Word, PDF, XLS	✓	-