

Testing management tools & JIRA

Testing management tools & JIRA



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matrix company

Objectives

- By the end of this session
 - You'll understand the structure of testing management tools
 - You'll get familiar with JIRA

Testing management tools



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Testing management tools

The structure

Requirement

Test Plan

Test Lab

Defects



Requirements

- Identifies the “WHAT” of testing
 - What needs to be tested, AND
 - What are you going to validate about it
- Includes both normal and error conditions
- Covers business rules, functionality, non-functional standards
- Do NOT have case specific data values assigned to them yet (data appears in test cases, the “How” of testing) examples...



Test cases

- A set of conditions under which a tester will determine whether an application, software system or one of its features is working as it was originally established for it to do.
- Test cases functionality should cover the tested system requirements
- Test plan tree is one of the most critical definition at the testing area



The structure

Test cases - sample

Pre-Conditions	Test Case	Test Steps	Test Results
<some Pre-condition>	Verify Login functionality with correct credentials	1. Navigate to <Enter URL Here>. 2. Enter Username : <Username>. 3. Enter Password: <Password> 4. Click on Submit button.	1. User navigates to Login Page. 2. User can enter username. 3. User can enter Password. 4. Home Page Opens.
<some Pre-condition>	Verify Login Functionality with incorrect username.	1. Navigate to <Enter URL Here>. 2. Enter Username : <Username>. 3. Enter Password: <Password> 4. Click on Submit button.	1. User navigates to Login Page. 2. User can enter username. 3. User can enter Password. 4. Error Message <Error Message Here> displayed.
<some Pre-condition>	Verify Login Functionality with correct username and incorrect password.	1. Navigate to <Enter URL Here>. 2. Enter Username : <Username> 3. Enter Password: <Password> 4. Click on Submit button.	1. User navigates to Login Page. 2. User can enter username. 3. User can enter Password. 4. Error Message <Error Message Here> displayed.

The structure

Test execution

The screenshot displays the Gallio Icarus test runner interface. The main window is titled "D:\Dev\NZFS\SMS\Development\OSMPhase2\UnitTests\SMS.UnitTests.gallio - Gallio Icarus". The interface is divided into several panes:

- Test Explorer:** Shows a tree view of the test structure. The root is "Root", followed by "MSTest v9.0.0.0", "SMS.OSM.UnitTests", and "CertificationTests". Under "CertificationTests", there are several sub-items, each with a green checkmark indicating a passed test. These include "ExpiryDateIsAchievementDatePlusLapsePeriod", "PercentageElapsedIsZeroAtAchievementDate", "PercentageElapsedIsOneHundredAtExpiryDate", "StatusIsCurrentBeforeAchievementDate", "StatusIsCurrentAtAchievementDate", "StatusIsExpiredAtExpiryDate", "StatusIsExpiredAfterExpiryDate", "StatusIsCurrentBeforeFourMonthsIntoASixMonthLapsePeriod", "StatusIsCurrentFourMonthsIntoASixMonthLapsePeriod", "StatusIsMaintenanceRequiredAfterFourAndAHalfMonthsIntoASixMonthLapsePeriod", "AmnestyCertificationTests", "AmnestyLapsePeriodIsSixMonths", "StatusIsUnknownBeforeOsmEnabledDate", "StatusIsUnknownAtOsmEnabledDate", "StatusIsExpiredAtExpiryDate", "StatusIsExpiredAfterExpiryDate", "StatusIsUnknownBeforeFourMonthsIntoASixMonthLapsePeriod", "StatusIsUnknownFourMonthsIntoASixMonthLapsePeriod", "StatusIsMaintenanceRequiredAfterFourAndAHalfMonthsIntoASixMonthLapsePeriod", "LapsePeriodTests", "AddingASingleWeekAddsSevenDays", "AddingMultipleWeeksAddsMultipleWeeks", "AddingZeroWeeksAddsNothing", "AddingZeroMonthsAddsNothing", "AddingASingleMonthAddsOneCalendarMonth", and "AddingMultipleMonthsAddsMultipleCalendarMonths".
- Test results:** A summary bar at the top indicates "32 tests - 32 passed - 0 failed - 0 inconclusive - 0 skipped - 0.0s". Below this, a list of test steps is shown, each with a green checkmark and a description of the test.
- Execution log:** A pane for viewing the execution log.
- Annotations:** A pane for viewing annotations.

The structure

Test execution

The screenshot displays the Allure test results interface in a web browser. The browser's address bar shows the URL: `ci.qatools.ru/job/allure-core_master-deploy/lastSuccessfulBuild/Allure_report/`. The page features a dark sidebar on the left with navigation links: Overview, Defects, xUnit, Behaviors, Graph, and Timeline. The main content area is divided into two panels. The left panel, titled 'DEFECTS 12 defects total', lists several test failures, including 'AssertionError: Expected 8 less than 8' and 'AssertionError: Text on current page should be correct'. The right panel, titled 'ENVIRONMENT', provides details about the test environment, such as the browser (Firefox) and various URLs. The bottom of the page shows the browser's address bar with the full URL: `ci.qatools.ru/job/allure-core_master-deploy/lastSuccessfulBuild/Allure_report/index.html#defects/2b01d9c63714453a`.

DEFECTS 12 defects total

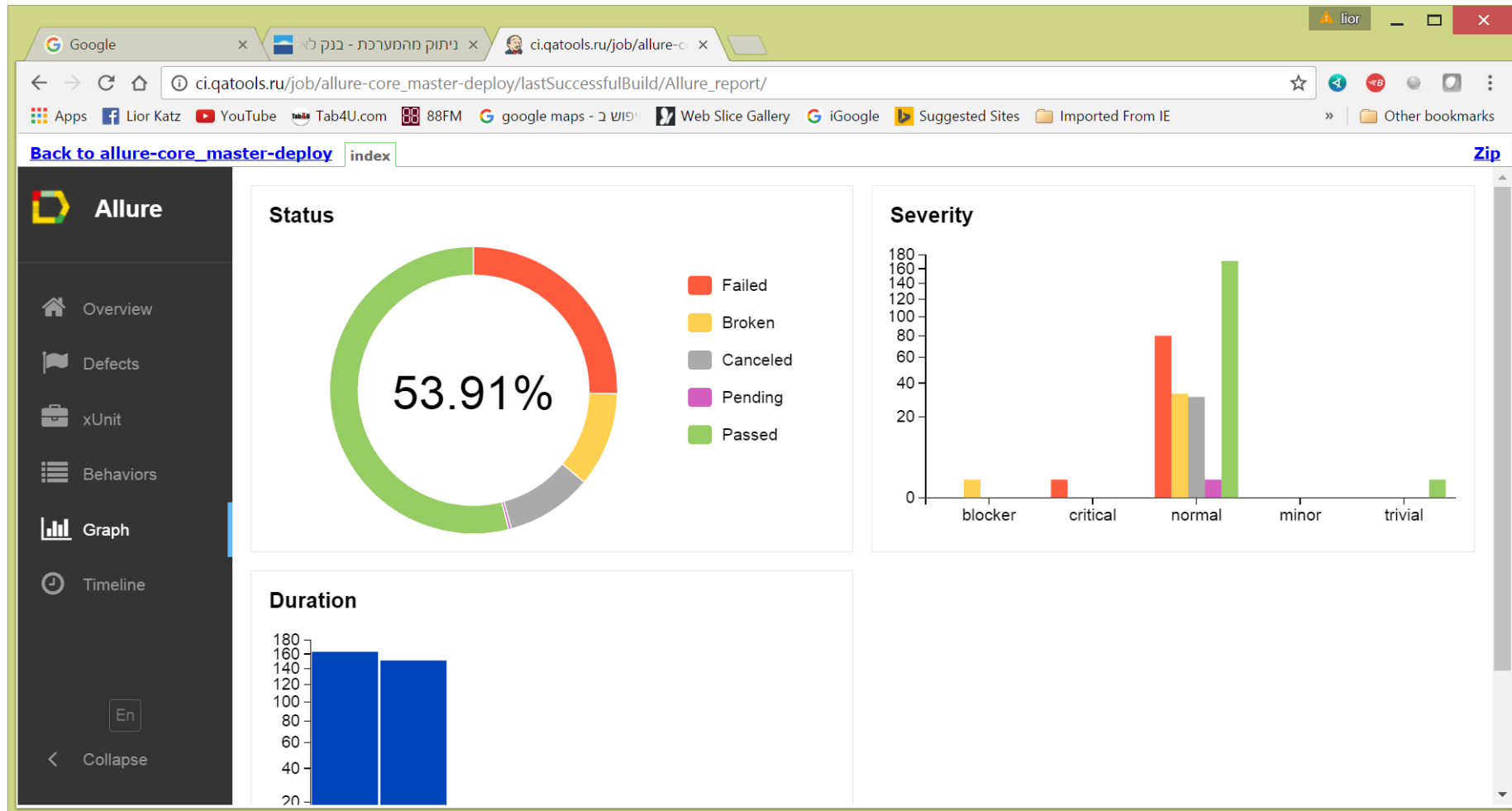
- 34 AssertionError: Expected 8 less than 8
- 24 AssertionError: Expected 9 less than 8
- 19 AssertionError: Expected 10 less than 8
- 1 AssertionError: Text on current page should be correct Expected: element text is "Yandex" but: <[[PhantomJSDriver: phantomjs on MAC (9e679b20-5085-11e4-ad6d-87edf8da84a7)] -> css selector: title]> text is ""
- 1 AssertionError: 5 is not 2 + 2 Expected: is <4> but: was <5>
- 1 AssertionError: Expected: "{\n\"name\": \"test\", \n\"value\": \"ok value\"\n}" but: was "{\n\"name\": \"test\", \n\"value\": \"bad value\"\n}"
- 1 AssertionError: This test should be failed
- 30 Exception: Unexpected value
- Exception: Unexpected value

ENVIRONMENT

allure.home.page	http://allure.qatools.ru
help.us	https://github.com/allure-framework/allure-core/blob/master/CONTRIBUTING.md
more.projects	http://github.com/qatools
my.first.url	http://ya.ru
my.properties.browser	Firefox
my.second.url	http://yandex.ru
qatools.home.page	http://qatools.ru
x.more.properties1	some-value1
x.more.properties2	some-value2
x.more.properties3	some-value3

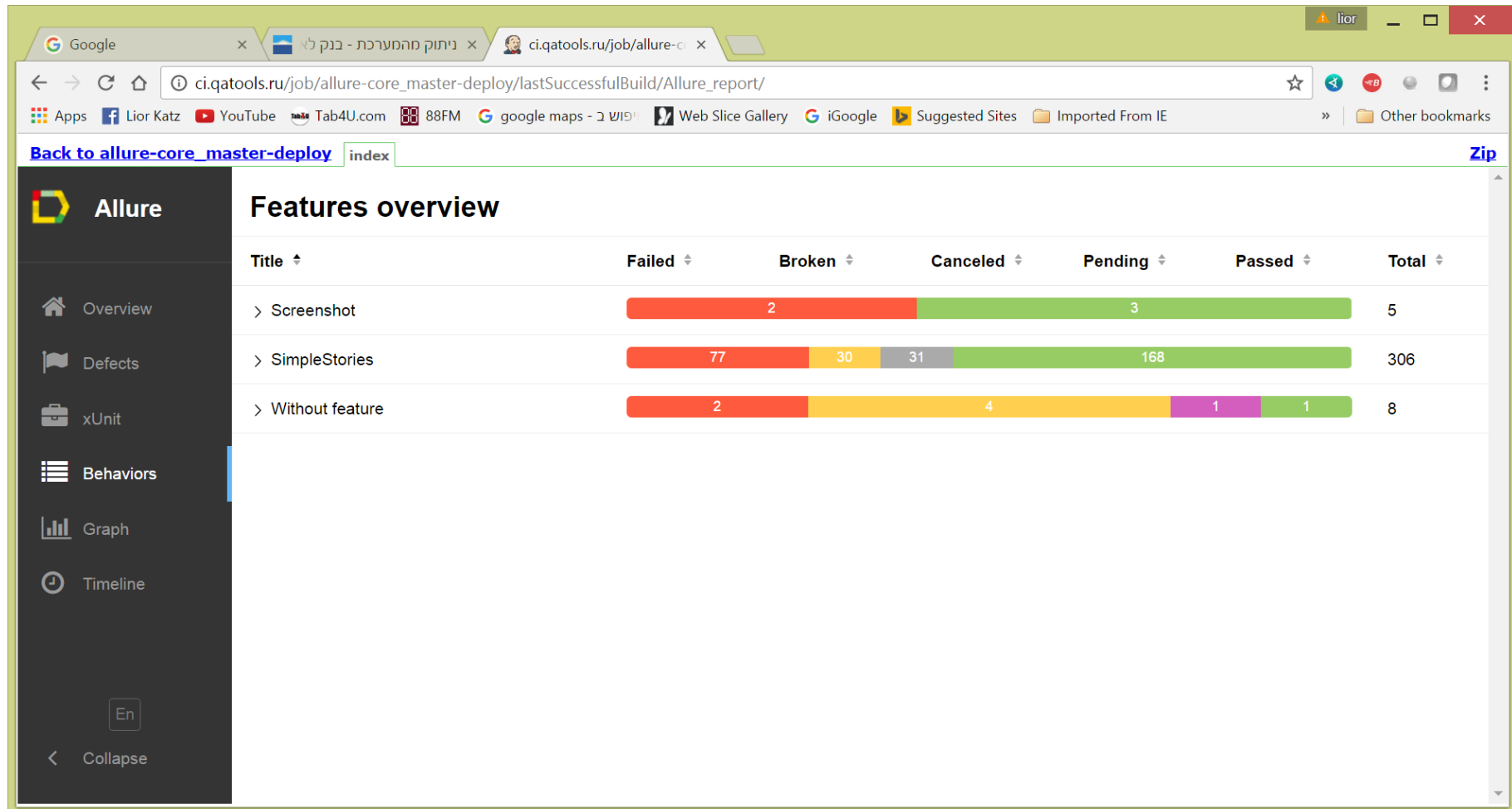
The structure

Test execution – Reports



The structure

Test execution – Reports



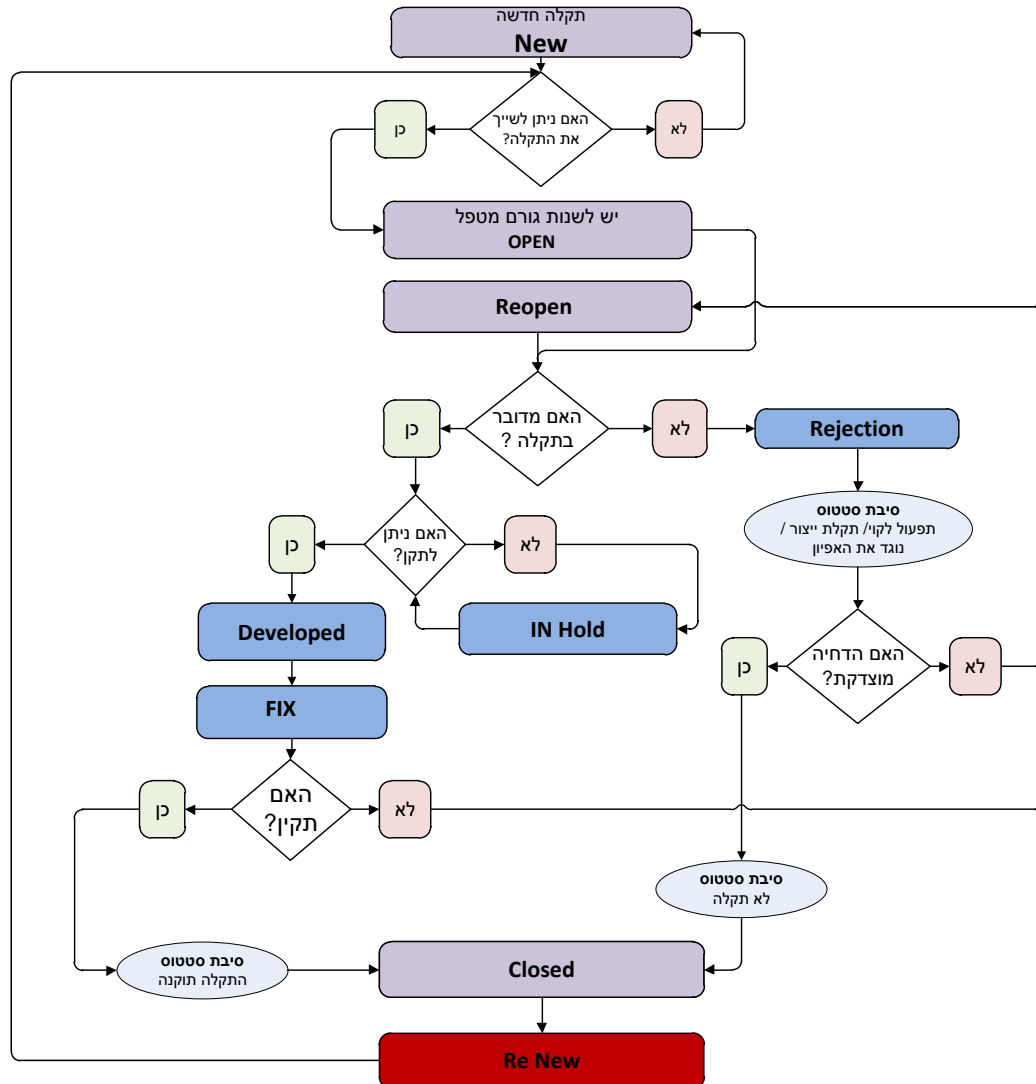
Defects description

- A defect is an error or a bug, in the application which is created. A programmer while designing and building the software can make mistakes or error. These mistakes or errors mean that there are flaws in the software. These are called defects.
- When actual result deviates from the expected result while testing a software application or product then it results into a defect. Hence, any deviation from the specification mentioned in the product functional specification document is a defect. In different organizations it's called differently like bug, issue, incidents or problem.
- When the result of the software application or product does not meet with the end user expectations or the software requirements then it results into a Bug or Defect. These defects or bugs occur because of an error in logic or in coding which results into the failure or unpredicted or unanticipated results.



The structure

defects work flow



ALM & Testing management tools





Jira

next testing tool management generation



Basic questions

- What is JIRA?
- Is it web based?
- Is it open source?
- Is it a licensed product?
- Whose product is JIRA?

In simple terms:

“JIRA is an issue tracker”

Yes

Yes

Yes

www.atlassian.com

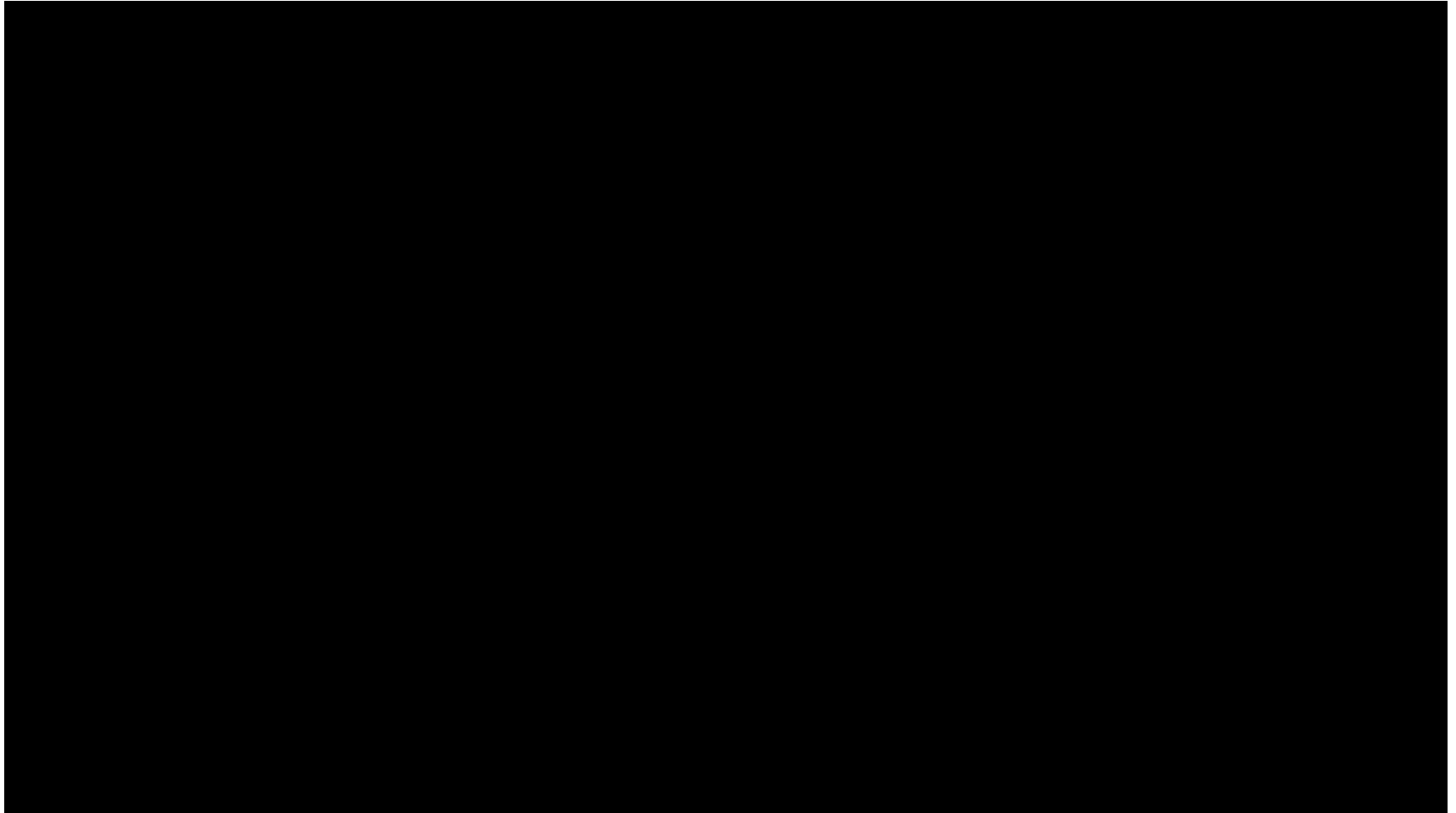
Before we jump into JIRA

we MUST understand what is Agile/scrum/issues



**TO FIGHT
THE BUG
WE MUST FIRST
UNDERSTAND
THE BUG**

Agile the ability to deliver customer satisfaction



The Agile Manifesto – a statement of values

Individuals and
interactions

over

Process and tools

Working software

over

Comprehensive
documentation

Customer
collaboration

over

Contract negotiation

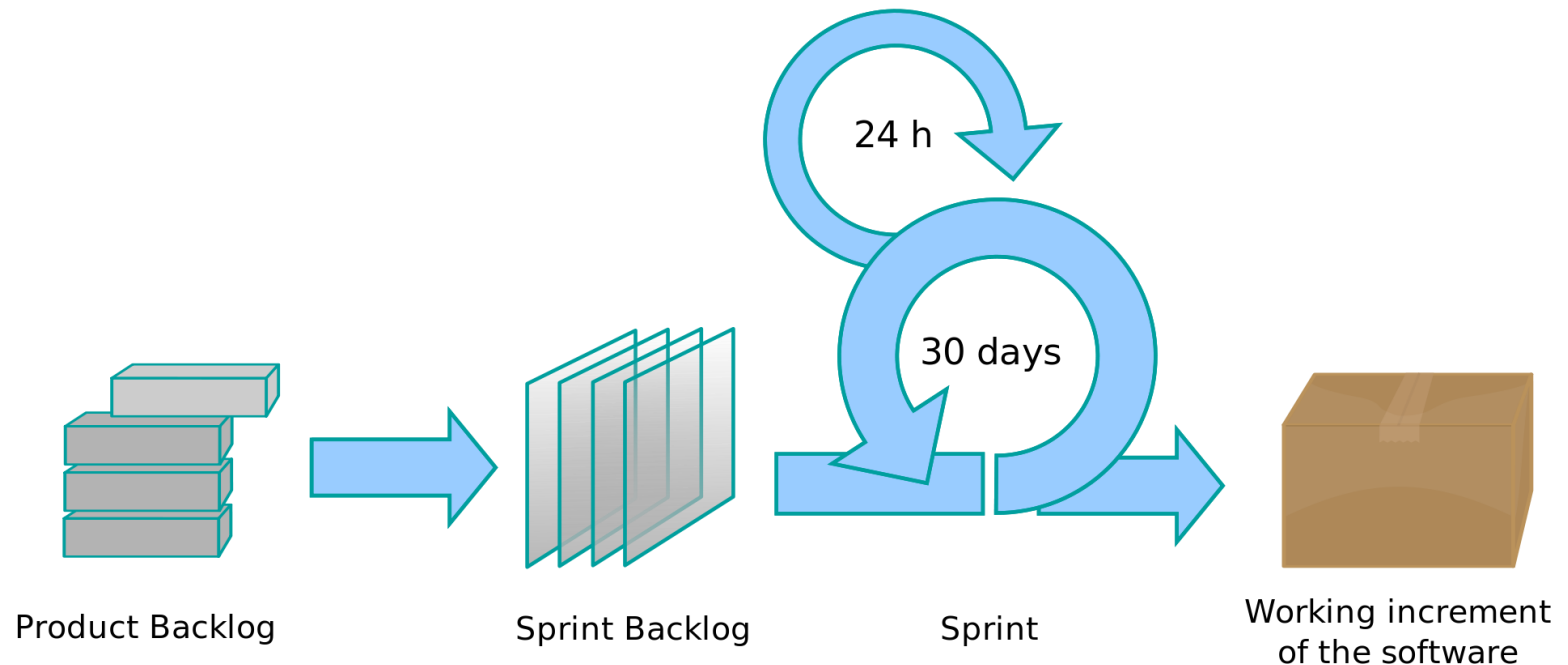
Responding to
change

over

Following a plan

Scrum definition

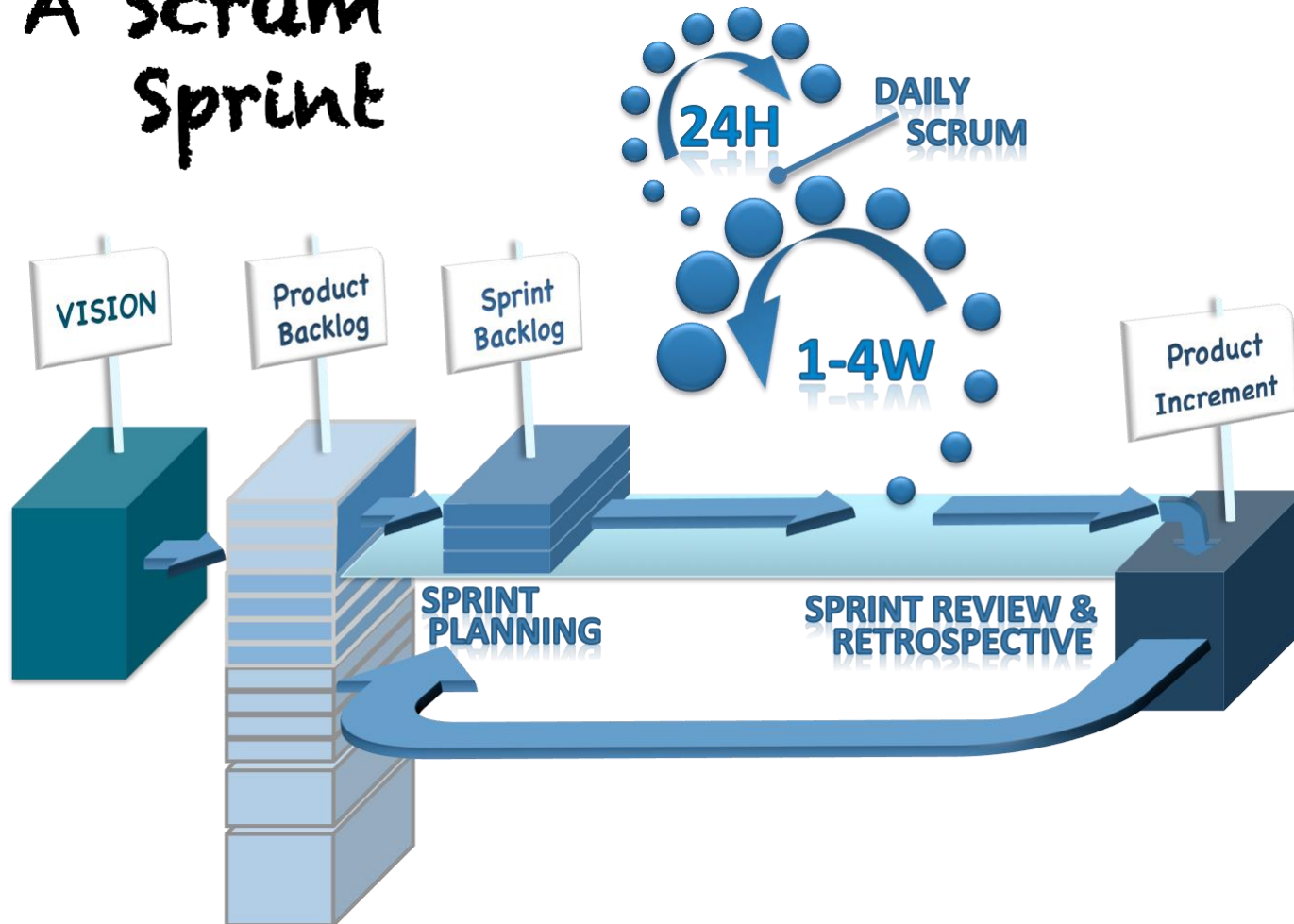
- **Scrum** is an iterative and incremental agile software development framework for managing product development.



What is a sprint/backlog/burn down and we can move forward chart

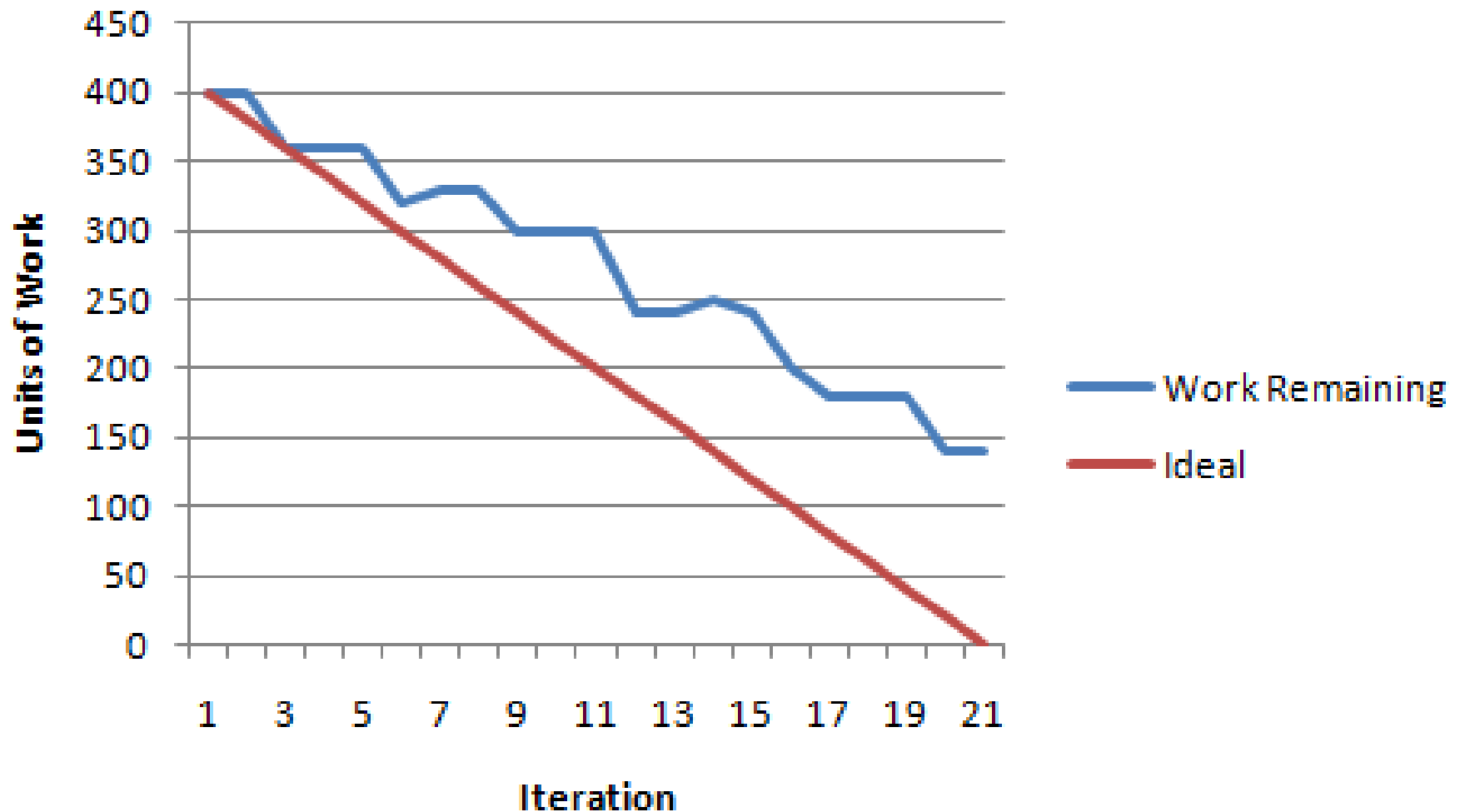
- Sprint – a short period of time to deliver the customer his requirements, include the development & the testing capacity
- Product backlog - a list of requirements that is maintained for a product developed using the Scrum methodology
- burn down chart - is a graphical representation of work left to do versus time

A Scrum Sprint



	Item #	Description	Est	By
Very High				
	1	Finish database versioning	16	KH
	2	Get rid of unneeded shared Java in database	8	KH
		- Add licensing	-	-
	3	Concurrent user licensing	16	TG
	4	Demo / Eval licensing	16	TG
		Analysis Manager		
	5	File formats we support are out of date	160	TG
	6	Round-trip Analyses	250	MC
High				
		- Enforce unique names	-	-
	7	In main application	24	KH
	8	In import	24	AM
		- Admin Program	-	-
	9	Delete users	4	JM
		- Analysis Manager	-	-
	10	When items are removed from an analysis, they should show up again in the pick list in lower 1/2 of the analysis tab	8	TG
		- Query	-	-
	11	Support for wildcards when searching	16	T&A
	12	Sorting of number attributes to handle negative numbers	16	T&A
	13	Horizontal scrolling	12	T&A
		- Population Genetics	-	-
	14	Frequency Manager	400	T&M
	15	Query Tool	400	T&M
	16	Additional Editors (which ones)	240	T&M
	17	Study Variable Manager	240	T&M
	18	Haplotypes	320	T&M
	19	Add icons for v1.1 or 2.0	-	-
		- Pedigree Manager	-	-
	20	Validate Derived kindred	4	KH
Medium				
		- Explorer	-	-
		Launch tab synchronization (only show queries/analyses for logged in users)	8	T&A
	22	Delete settings (?)	4	T&A

Burn Down chart



Features (from the creators of JIRA)

- Because you've got issues

JIRA lets you prioritise, assign, track, report and audit your 'issues,' whatever they may be — from software bugs and help-desk tickets to project tasks and change requests.

- Reporting and statistics

Customisable reporting allows you to monitor the progress of your issues with detailed graphs and charts.

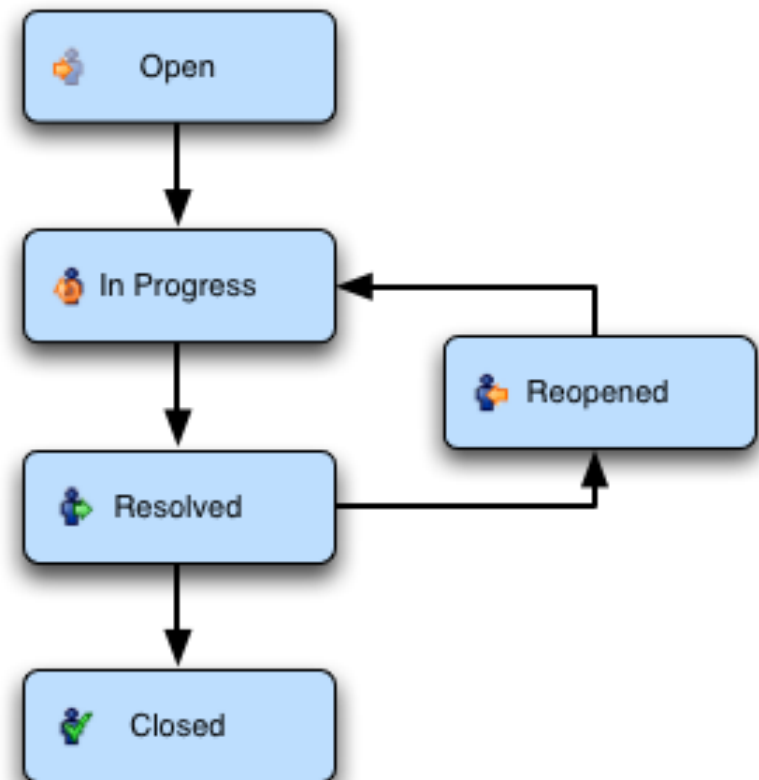
- Workflow your way

Map your business process with a custom workflow.

- An extensible platform

Integrate JIRA into your systems with our open API and 100+ free plugins.

- What is an “Issue”?
 - Any task that requires an action from a person
- What is “Workflow”?
- What are fields?
 - The attributes of an issue (Standard & Custom)



The screenshot shows a JIRA issue page for 'Printer on Level Three is out of toner'. The page is annotated with red numbers 1 through 12 pointing to various elements. The left sidebar contains 'Issue Details' and 'Operations'. The main content area shows the issue key, type, status, resolution, priority, assignee, reporter, votes, watchers, component, affects, version, fix version, environment, description, and comments. The 'Helpdesk' label is annotated with 8, the issue title with 9, the 'Printers' component with 8a, 'None' for affects with 8b, 'None' for fix version with 8c, the 'Environment' field with 10, the description with 11, and the first comment with 12.

JIRA User: Sally Jones History | Filters | Profile | Log Out

HOME BROWSE PROJECT FIND ISSUES CREATE NEW ISSUE QUICK SEARCH:

Issue Details (XML | Word | Printable)

Key: [HLP-1](#) **1**

Type: Task **2**

Status: Resolved **3**

Resolution: Fixed **4**

Priority: Major **5**

Assignee: [Mary Smith](#) **6**

Reporter: [Sally Jones](#) **7**

Votes: 0

Watchers: 0

Operations

- ☐ [Assign](#) this issue (**to me**)
- ☐ [Attach file](#) to this issue
- ☐ [Attach screenshot](#) to this issue
- ☐ [Clone](#) this issue
- ☐ [Comment](#) on this issue
- ☐ **Voting:**
You cannot vote or change your vote on resolved issues.
- ☐ **Watching:**
You are not watching this issue.
[Watch it](#) to be notified of changes

Helpdesk **8**

Printer on Level Three is out of toner **9**

Created: Today 09:25 AM Updated: Today 01:39 PM

Component/s: [Printers](#) **8a**

Affects Version/s: None **8b**

Fix Version/s: None **8c**

Environment: Model number HP98765 **10**

Description [Hide](#)

Black-and-white cartridge needs to be replaced. **11**

All **Comments** [Change History](#) Sort Order:








[Mary Smith](#) [18/Dec/06 01:39 PM] [Permalink](#) [Hide](#)

New toner cartridge has been installed. **12**

Sample Issue

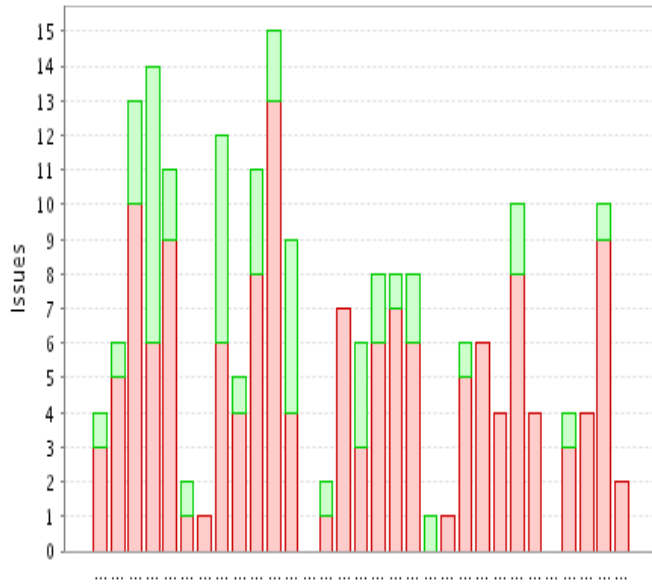
Sample Reports - II

Statistics: JIRA (Issue Type)

 Bug	4539	<div style="width: 45%;"></div>	45%
 Improvement	2711	<div style="width: 27%;"></div>	27%
 New Feature	1351	<div style="width: 13%;"></div>	13%
 Sub-task	183	<div style="width: 2%;"></div>	2%
 Support Request	766	<div style="width: 8%;"></div>	8%
 Task	485	<div style="width: 5%;"></div>	5%
 Third-party issue	31		

Recently Created Issues: Confluence





[more detail >>](#)



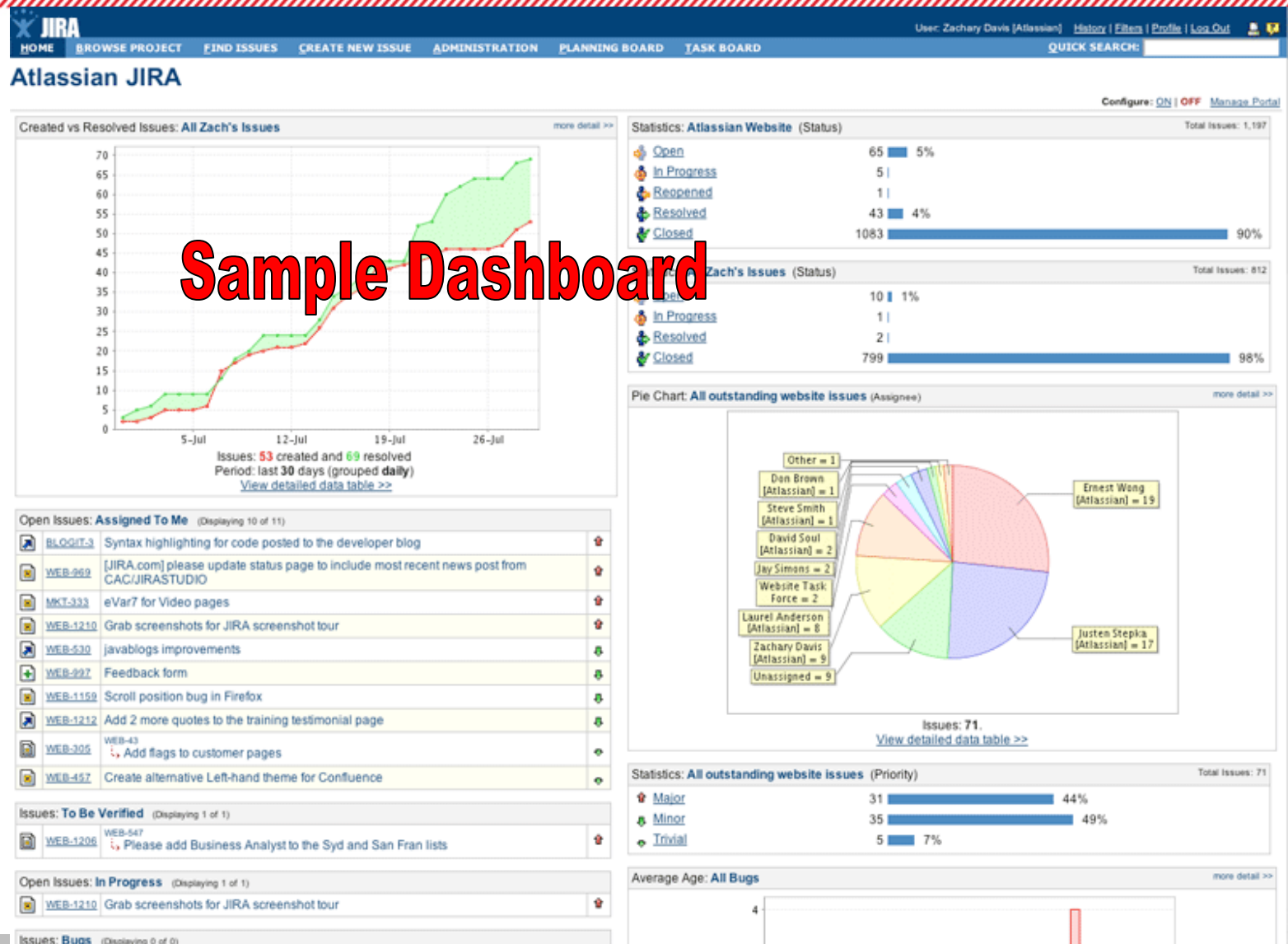
194 issues created in last 30 days.

[View detailed data table >>](#)

Statistics Table: JIRA's Last 30 Days Resolved Issues

Assignee	Priority	 Critical	 Major	 Minor	 Trivial	T:
Anton Mazkovi		0	2	0	0	2
Chris Mountford		0	4	1	0	5
Daniel Hurst		0	8	8	2	18
Dushan Hanuska		0	3	0	0	3
Dylan Etkin		2	8	0	0	10
Jed Wesley-Smith		0	2	0	0	2
Jeff Turner		0	1	0	0	1
Justin Koke		2	5	0	2	9
Keith Brophy		1	0	0	0	1
Mark Chaimungkalanont		1	0	0	0	1
Total Unique Issues:		15	92	28	8	143

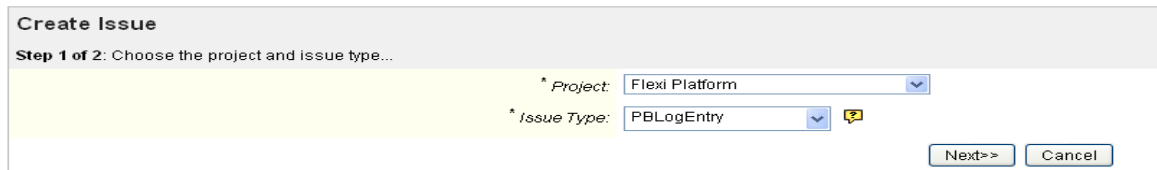
Dashboard



JIRA for Scrum

User Stories and Sprint Items

- User stories created as PBLogEntry (Product Backlog Entry)



Create Issue

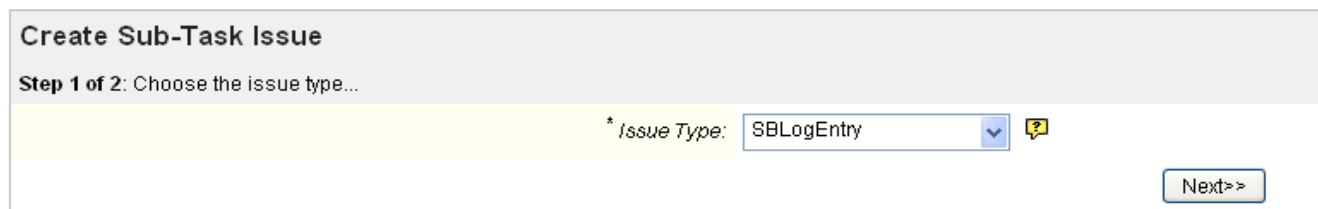
Step 1 of 2: Choose the project and issue type...

* Project: Flexi Platform

* Issue Type: PBLogEntry

Next>> Cancel

- Sprint items created as SBLogEntry (Sprint Backlog Entry)



Create Sub-Task Issue

Step 1 of 2: Choose the issue type...

* Issue Type: SBLogEntry

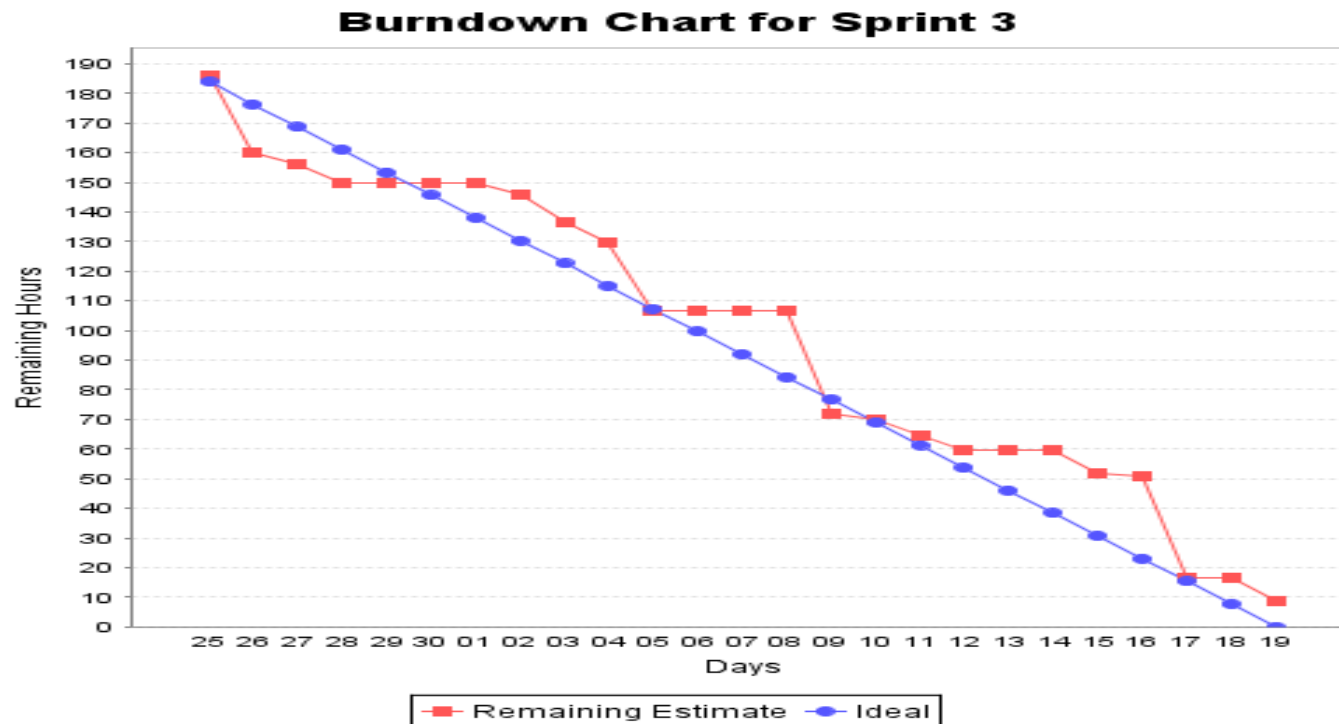
Next>>

Sprint Id: 2

Sprint Identifier

Burn-down Charts

- Original Estimate filled during Spring Planning
- Remaining Estimate updated daily by developers
- Burn down generated using the data in confluence page



- Prioritize the Backlog.
- Estimate the stories
- Create the sprints
- Story points are available only for Epics and Stories
- Estimations in terms of Hours also possible by configuring the board
- Sub tasks can be created
- The stories can be grouped under each sprint
- The number of issues and the story points / hours are automatically displayed to make plan easier
- At one point of time only one sprint is active



Dashboards ▾ Projects ▾ Issues ▾ Agile ▾ Tempo ▾ [Create issue](#)

Quick Search

Store

Plan Work Report ▾

Q QUICK FILTERS: [Only My Issues](#) [Recently Updated](#)

VERSIONS

All Issues

Store R1

Product Backlog for Release 1

Start Date: None

Release Date: None

Issues **41**

Completed **3**

Unestimated **2**

Estimate **172**

Store R2

Release backlog for Release 2

Start Date: None

Release Date: None

Issues **2**

Completed **0**

Unestimated **0**

Estimate **29**

EPICS

All Issues

Inventory Details

ADP-8 adding, editing, and deleting details of the inventory

Issues **5**

Completed **2**

Unestimated **0**

Estimate **14**

Create issue in epic

Category Information

User Administration

Reporting

User Registration

Search

Shopping Cart

Sprint 1 **3/4** [Clear all filters](#)

15/Jul/13 2:52 PM • 19/Jul/13 2:52 PM

ADP-23 Add perfume details

Perfume Store R1 Inventory Details **3**

ADP-24 Edit perfume details

Perfume Store R1 Inventory Details **2**

ADP-91 BUG: Unable to add address with "#" symbol

Perfume Store R1 Inventory Details

Backlog **2/31** [Clear all filters](#)

Create Sprint

ADP-25 Delete details :

Store R1 Inventory Details **1**

ADP-86 Add Deals

Store R1 Inventory Details **8**

Perfume Store / ADP-91

BUG: Unable to add address with "#" symbol

Remaining: 3h ▾

Details

Status: Resolved

Component/s: None

Labels: None

Affects Version/s: None

Fix Version/s: Perfume Store R1

Epic: Inventory Details x

People

Reporter:

Assignee:

Dates

Created: 17/Jul/13 10:39 AM

Updated: 18/Jul/13 11:06 AM

34

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Work Mode - Scrum

JIRA Dashboards ▾ Projects ▾ Issues ▾ Agile ▾ Tempo ▾ **Create issue** Quick Search

Perfume Store Plan Work Report

SPRINT: Sprint 1 ▾ QUICK FILTERS: Only My Issues Recently Updated

Not Started	Impeded	In Progress	Done
ADP-23 6 Add perfume details			
		<div>ADP-32 Create PerfumeDetails Class 0m</div> <div>ADP-33 Write and Run Unit Test cases for Adding 0m</div> <div>ADP-36 Refactor PerfumeDetails class 0m</div> <div>ADP-37 Create and review acceptance test 0m</div> <div>ADP-38 Run acceptance test cases 0m</div> <div>ADP-39 Code review and check-in 0m</div>	
ADP-24 4 Edit perfume details			
<div>ADP-41 Code review and check-in 1h</div>	<div>ADP-40 Run acceptance Test cases 2h</div>	<div>ADP-35 Refactor PerfumeDetails class 30m</div>	<div>ADP-34 Write and run unit test cases to test 0m</div>

Perfume Store / ADP-23

Add perfume details

Estimate: 3

Remaining: 0m ▾

[Log Work](#)

Dates

Created: 11/Jul/13 10:24 AM

Updated: 18/Jul/13 12:01 PM

Issue Links

6

relates with

ADP-91 BUG: Unable to add a... ▾ ↗

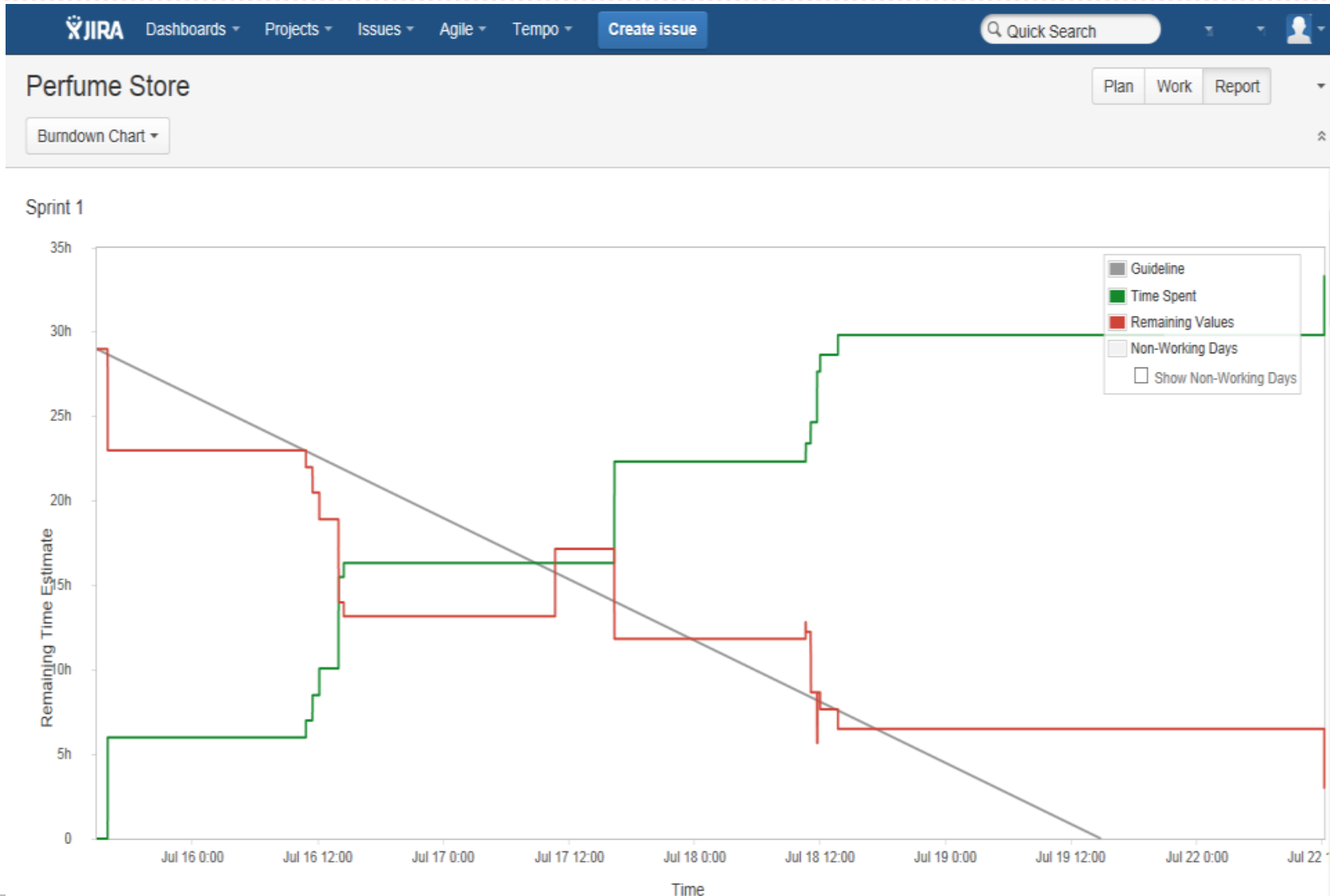
Description

As an administrator, I would like to add details to the perfume so that stock and category are up-to-date

Comments

[Comment](#)

Report Mode - Scrum



JIRA for Software Testing and to file Bugs

Creating a JIRA issue

Create Issue

Configure Fields

Project

TestSTH

Issue Type

Bug

Summary

Priority

Major

Due Date

Component/s

Start typing to get a list of possible matches or press down to select.

Affects Version/s

Start typing to get a list of possible matches or press down to select.

Fix Version/s

Start typing to get a list of possible matches or press down to select.

Assignee

Automatic

Create another

Create

Cancel

Project Name & Issue Type

TestSTH

Recent Projects

- STH
- Test

All Projects

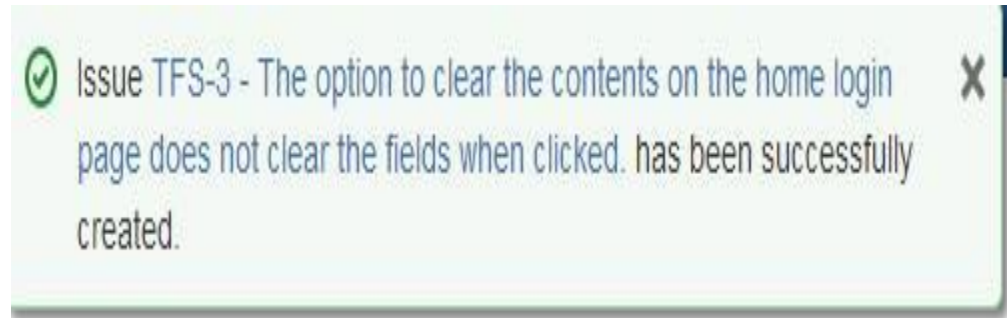
- STH
- Test

Bug

New Feature

- Task
- Improvement
- Epic
- Story

Priority of the Bug & additional attachments



Comparison of JIRA - Top 5 Reasons GitHub Users GO JIRA

Agile at Scale	Scrum and Kanban improve project success and deliver value iteratively. JIRA and JIRA Agile scale Agile across your organization. JIRA also integrates with GitHub to link issues to commits.
Industry Leading Workflow Engine	Don't let your issue tracking software dictate your process. With JIRA's workflow engine you can easily build the process that fits your team.
Powerful Searching and Reporting	Use JIRA's Query Language (JQL) with simple autocomplete to build advanced queries. Create a personalized view of JIRA and share dashboards to track project status, create custom reports, and monitor team progress with wallboards.
Deployment Options	Simple Windows and Linux installers are available for an OnPremise solution, or you can get started hassle-free with JIRA OnDemand. Easily switch between OnPremise or OnDemand as your organization evolves.
Integrate with Everything	Get more from JIRA with flexible REST and Java APIs – plus over 600 plugins and add-ons in the Atlassian Marketplace– to connect with the applications and tools you use every day.

- Atlassian provides JIRA for free to [open source](#) projects meeting certain criteria, and to organizations that are non-profit, non-government, non-academic, non-commercial, non-political, and secular. For academic and commercial customers, the full source code is available under a developer source license



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Live DEMO

- Tesing management tools
 - Structure
- Jira
 - Agile
 - Scrum
 - sprint/backlog/burn down



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