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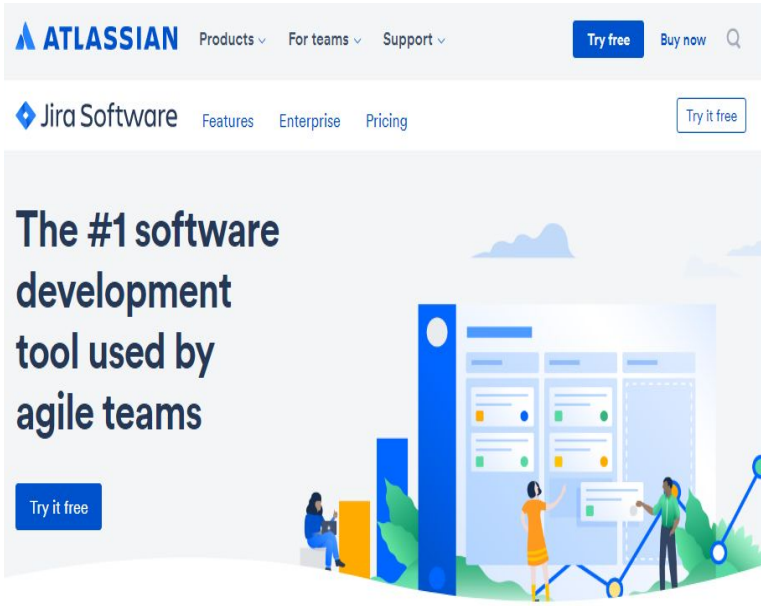
JIRA

Literature and sources



Some pointers

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- This is a hands-on seminar
  - Exercises deepen the imparted content
  - Supplementary discussion and demonstrations
- Conventions
  - Commands are shown in `Courier font`
  - File names are shown in *`italic Courier font`*
  - Links are shown in `underlined Courier font`
- Time schedule
  - 2 lessons, 90 minutes each

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1

BASICS

1.1

INTRODUCTION

What is Jira?

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- Originally error management system (bug tracker) in software development
- Today mainly process management
- Features
- Organization of
  - Projects
  - Issues
  - ...
- Authentication and authorization
  - LDAP integration
- Web-based client
- Modularization with add-ons
  - You can also write your own add-ons in your company
- Integration with other systems
  - Confluence as a wiki
  - Source Code Management, Bitbucket

Atlassian Community and Documentation

- documentation
  - https://confluence.atlassian.com/display/JIRA/JIRA+Documentation
- Knowledge base and FAQ
  - https://confluence.atlassian.com/display/JIRAKB/JIRA+Knowledge+Base+Home
- Forum
  - http://answers.atlassian.com/
- Blogs / News
  - http://blogs.atlassian.com/news/jira/
  - https://university.atlassian.com/uac/2.0/courses/end-user/jira/v60
    - Atlassian University

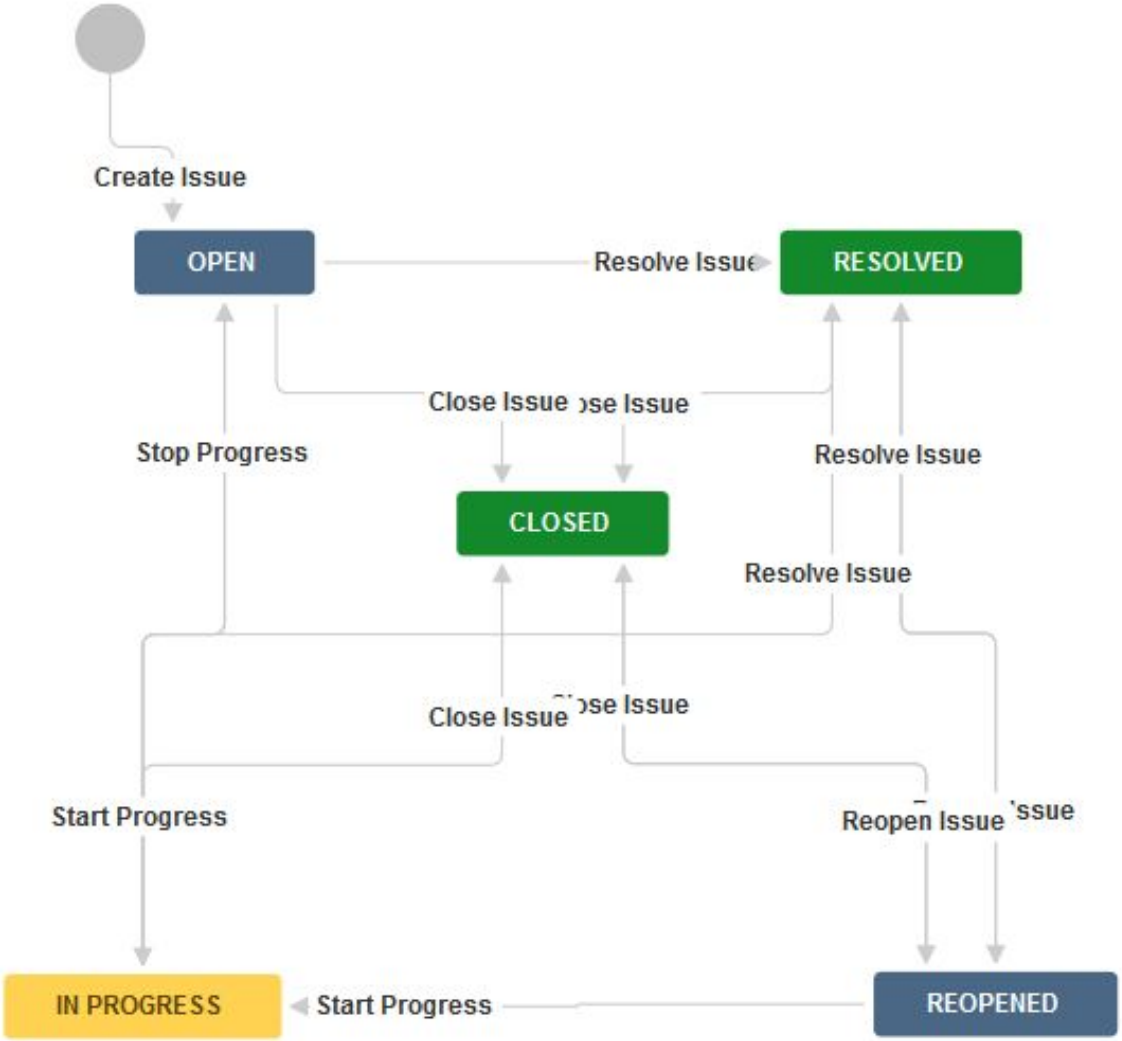
1.2

WORKING WITH JIRA

Usages

- Software development
  - Development of new features
  - Change requests
  - Maintenance and troubleshooting
  - Testing
- Managers
  - Project management
  - Requirements
  - Risk
- Technical teams
  - Product development
  - Incidents / errors

workflow


Create Issue
OPEN
Resolve Issue
RESOLVED
Close Issue
Stop Progress
Resolve Issue
CLOSED
Resolve Issue
Close Issue
Start Progress
Reopen Issue
IN PROGRESS
Start Progress
REOPENED

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2

CONCEPTS

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2.1

ISSUES

Issues

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- An issue contains information that is necessary to map a process step
  - Technically speaking, a issue is a record in the JIRA internal database
- issues consist of
  - Any content as free text
  - Meta information that categorizes the issue
    - Also called "attributes" or "fields" of a issue
- Hints:
  - The meta-information gives structure to the issues
  - and are therefore more important than free text!
  - Searching and filtering issues are related to the fields
    - A free text search is possible, but in practice it often delivers unspecific hit sets
  - Workflows change the status of a issue, not necessarily the free text

Basic properties of issues

- Key
  - Unique ID of the issue
- Type
  - Characterization / type of issues
- status
  - Status of the issue within the workflow
- Priority
  - issue priority
- Summary
  - Brief description

History of issues

- Change history
  - History of changes
- Created date
  - Creation date
- Updated date
  - Date of the last change

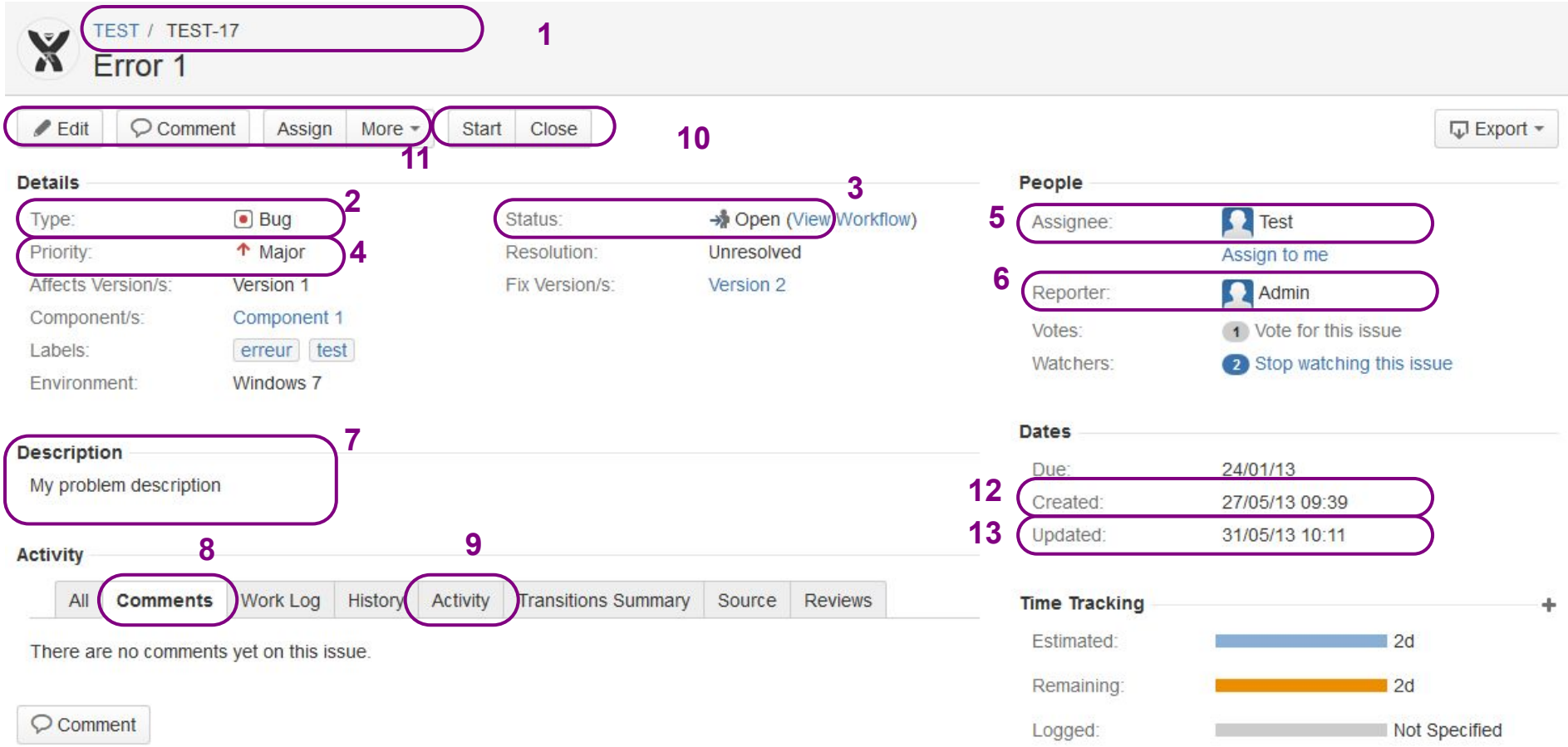
issue processor

- assignee
  - The user assigned to the issue
- reporter
  - The user who created the issue
- Comments
  - Issue comments
  - Can be added by anyone

Issue workflow

- Actions
  - State Transitions defined by a workflow
- Operations
  - Available operations

Issues


TEST / TEST-17
Error 1
1
Edit
Comment
Assign
More
Start
Close
10
11
Export
Details
Type: Bug
2
Priority: Major
4
Affects Version/s: Version 1
Component/s: Component 1
Labels: erreur test
Environment: Windows 7
Status: Open (View Workflow)
3
Resolution: Unresolved
Fix Version/s: Version 2
People
5
Assignee: Test
Assign to me
6
Reporter: Admin
Votes: 1 Vote for this issue
Watchers: 2 Stop watching this issue
Description
7
My problem description
Dates
Due: 24/01/13
12
Created: 27/05/13 09:39
13
Updated: 31/05/13 10:11
Activity
8
9
All
Comments
Work Log
History
Activity
Transitions Summary
Source
Reviews
There are no comments yet on this issue.
Comment
Time Tracking
Estimated: 2d
Remaining: 2d
Logged: Not Specified

2.2

PROJECTS

What are Jira projects?

- A Jira project is a container of issues
- Examples:
  - a business process
  - a marketing team
  - a product
  - a software application
  - a project of the company
  - a service desk
  - Or any system whose status is to be monitored

Project attributes

- Project name
- Unique key that is used for identification as a prefix for issues
- Project manager
- Users who are assigned to project roles

Project configuration

- The project administrator has access to an information page to manage project configuration
  - Menu "Project Settings"
- included informations are:
  - Issue types
  - Permissions
  - Notifications
  - Workflow
  - User administration
  - ...

2.3

ROLES AND PERMISSIONS

overview

- Administrator
  - Manages the Jira server
- Jira administrator
  - Full access to the Jira configuration
  - Extensions and adjustments
- Project administrator
  - Management of the users assigned to the project
  - Can be entrusted with further issues by the Jira administrator
- Users with different rights, for example to manage issues
  - "Power User"
  - "User"
  - ...

Administration tasks

- Create projects
  - and thus defines the project manager
- Is the direct contact person when designing a new project
  - Required issue types
  - Customized workflows
  - Installation of add-ons that are required by projects
  - An add-on extends the Jira core component with additional functions
  - Company-specific add-ons can also be created

Permission Management

- Users, groups and roles
- Global Permissions
- Project Permissions
- issues Permissions
- Limitation: Field Security
- Visibility of comments

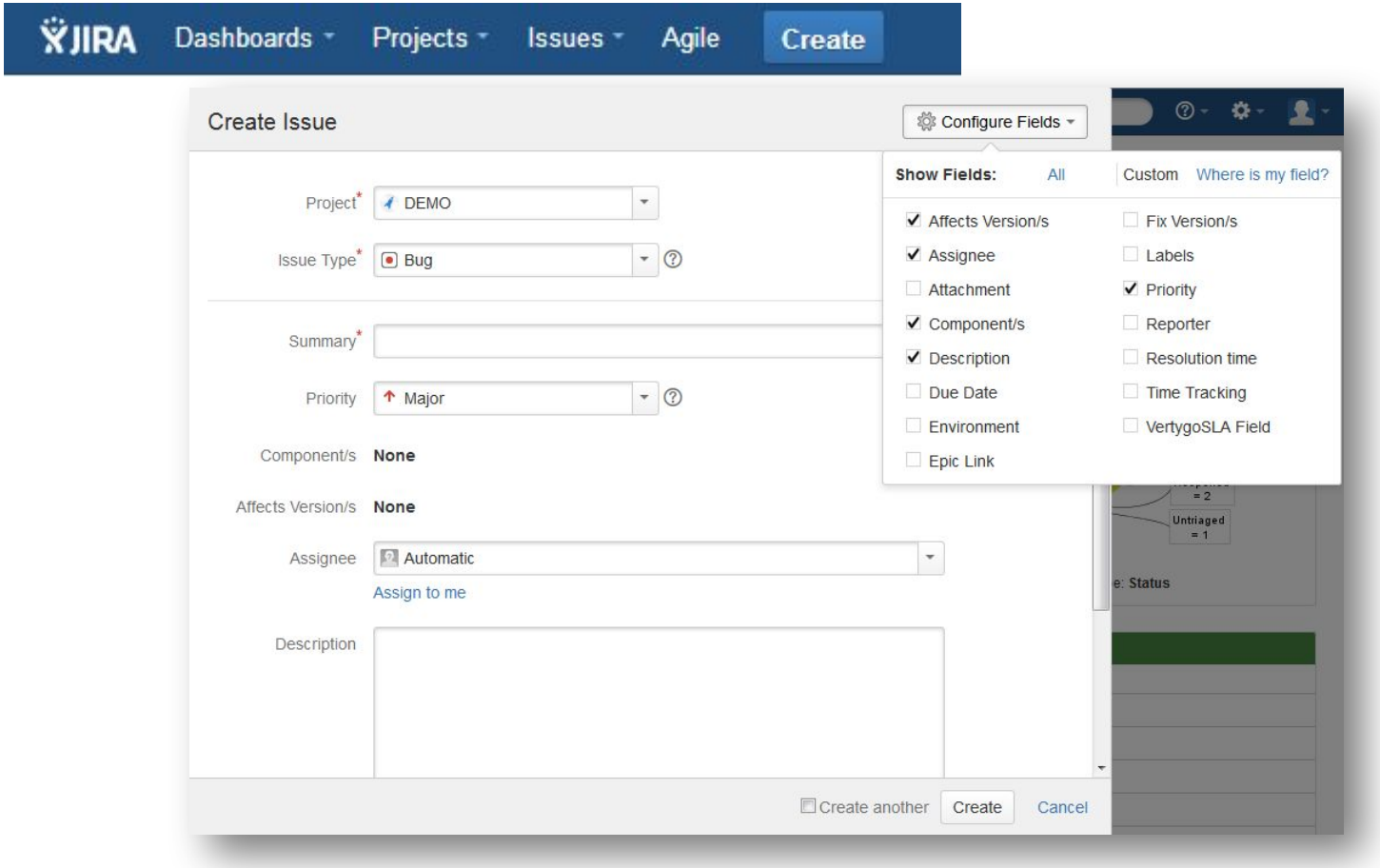
3

WORKING WITH JIRA

3.1

ISSUES

Invest


JIRA
Dashboards
Projects
Issues
Agile
Create
Create Issue
Configure Fields
Show Fields:
All
Custom
Where is my field?
Affects Version/s
Assignee
Attachment
Component/s
Description
Due Date
Environment
Epic Link
Fix Version/s
Labels
Priority
Reporter
Resolution time
Time Tracking
VertygoSLA Field
Project*
DEMO
Issue Type*
Bug
Summary*
Priority
Major
Component/s
None
Affects Version/s
None
Assignee
Automatic
Assign to me
Description
Create another
Create
Cancel
Untriaged
= 1
Status

Alternative options for creating issues

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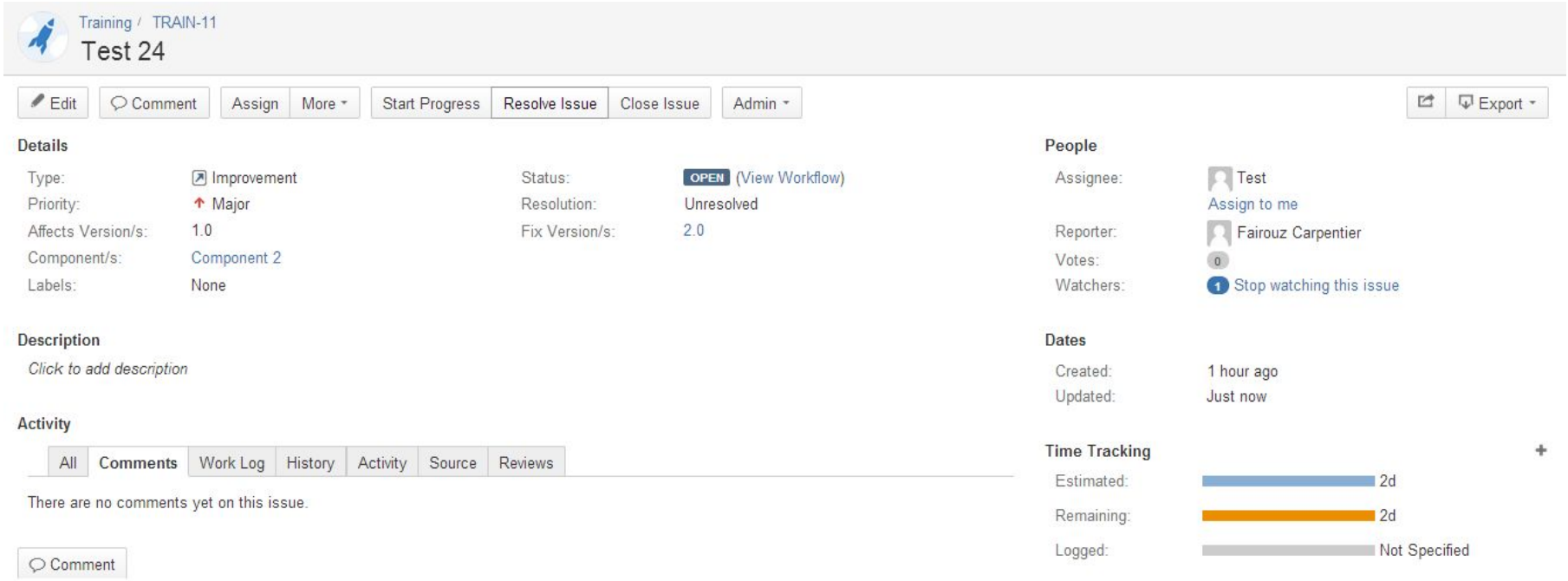
- Use of emails
- From a web application
  - JIRA issue Collector
  - A fragment that can be included in any web page
- From other applications
  - JIRA (REST) API

View issues


Training / TRAIN-11
Test 24
Edit
Comment
Assign
More
Start Progress
Resolve Issue
Close Issue
Admin
Export
Details
Type: Improvement
Priority: Major
Affects Version/s: 1.0
Component/s: Component 2
Labels: None
Status: OPEN (View Workflow)
Resolution: Unresolved
Fix Version/s: 2.0
People
Assignee: Test
Assign to me
Reporter: Fairouz Carpentier
Votes: 0
Watchers: 1 Stop watching this issue
Description
Click to add description
Dates
Created: 1 hour ago
Updated: Just now
Activity
All
Comments
Work Log
History
Activity
Source
Reviews
There are no comments yet on this issue.
Time Tracking
Estimated: 2d
Remaining: 2d
Logged: Not Specified
Comment

edit issues

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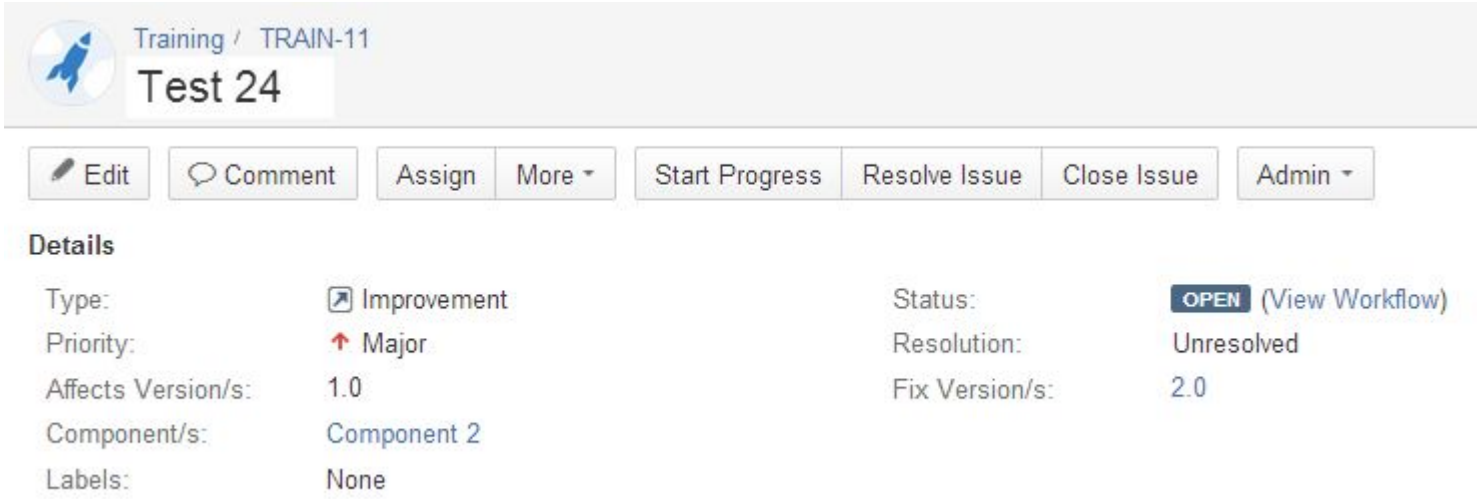
Change of fields

No change of workflow status!



delete

Often an administrative process

Deletion is permanent

Sub-issues

- creation
  - Sub-issue issues can be created from a normal issue
  - Only one hierarchy level is possible
- Conversion
  - Sub-issue to issue
  - issue to sub-issue

Components

every JIRA project can contain components

- They group issues within a project into smaller parts
- each issue can be assigned to one, several or none of the components

a component can be functional:

- HR, billing, claims

Or also technically:

- Web interface, reports, library

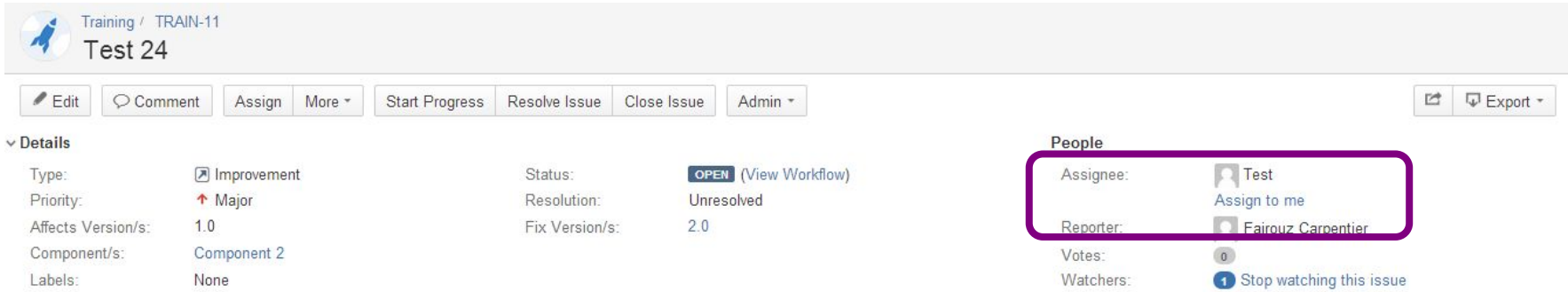
Attachments

- Two actions:
  - file
    - Maximum size in the standard configuration 10 Mb
  - Screenshot
- configuration
  - name
  - comments
  - visibility

Comments

- Adding a comment:
  - Writing the text
    - HTML can be used
  - Setting the visibility
- Operations:
  - Change
  - Delete
  - Permalinks for email / intranet
  - Confluence Wiki markup

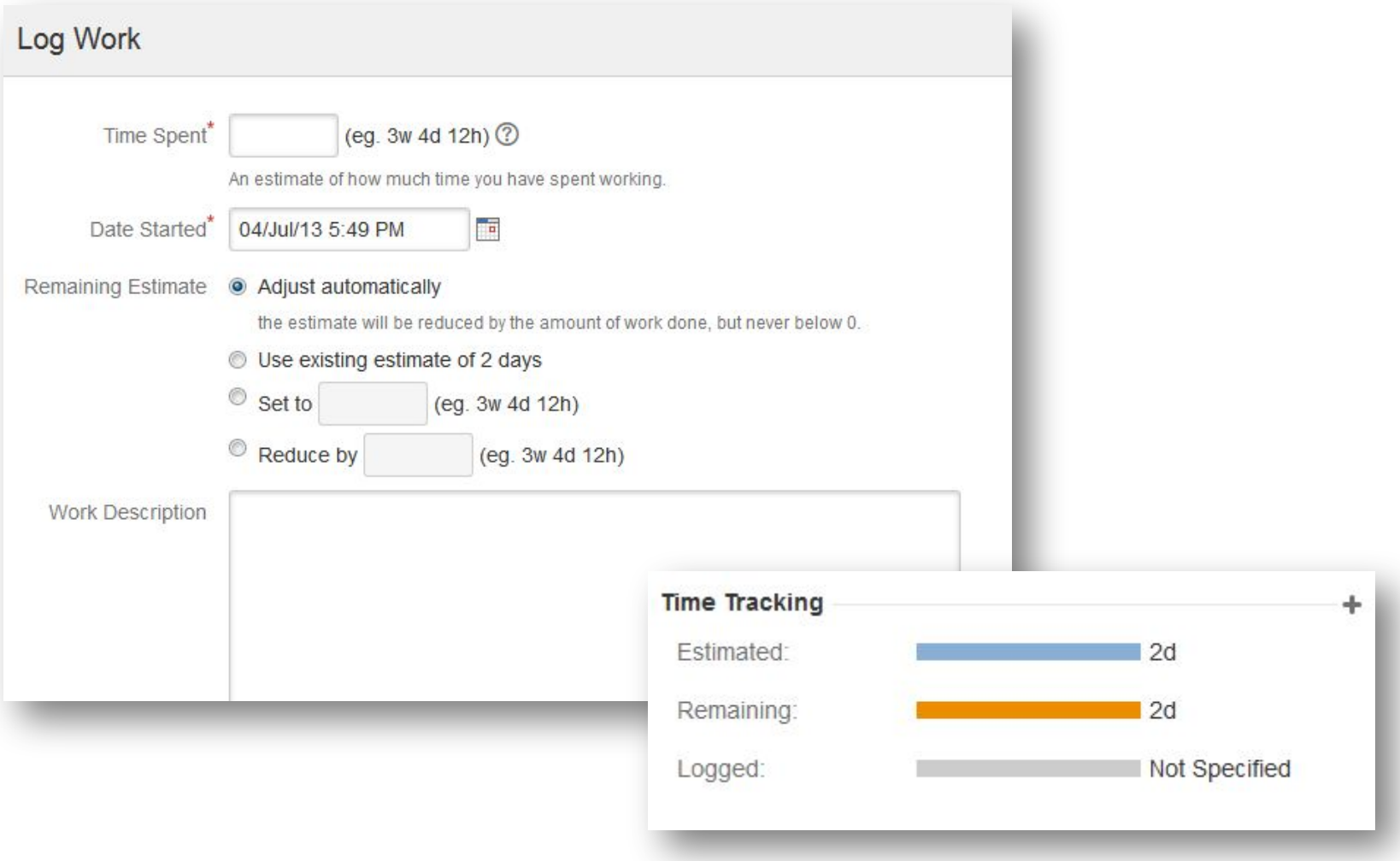
issue assignement



Time tracking

- Keeping a record of the time spent on a issue
  - Original estimate
  - Remaining estimate
  - Spent time
-

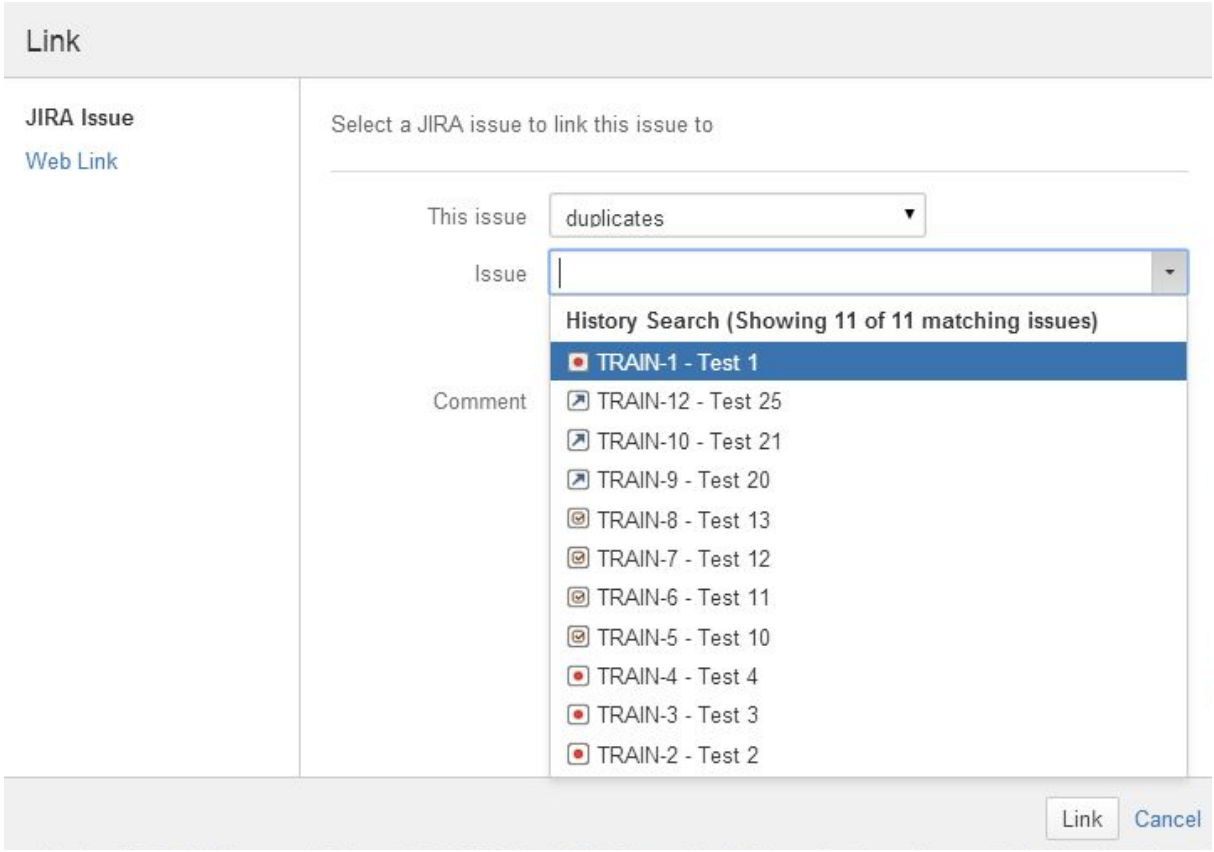
Example: time tracking



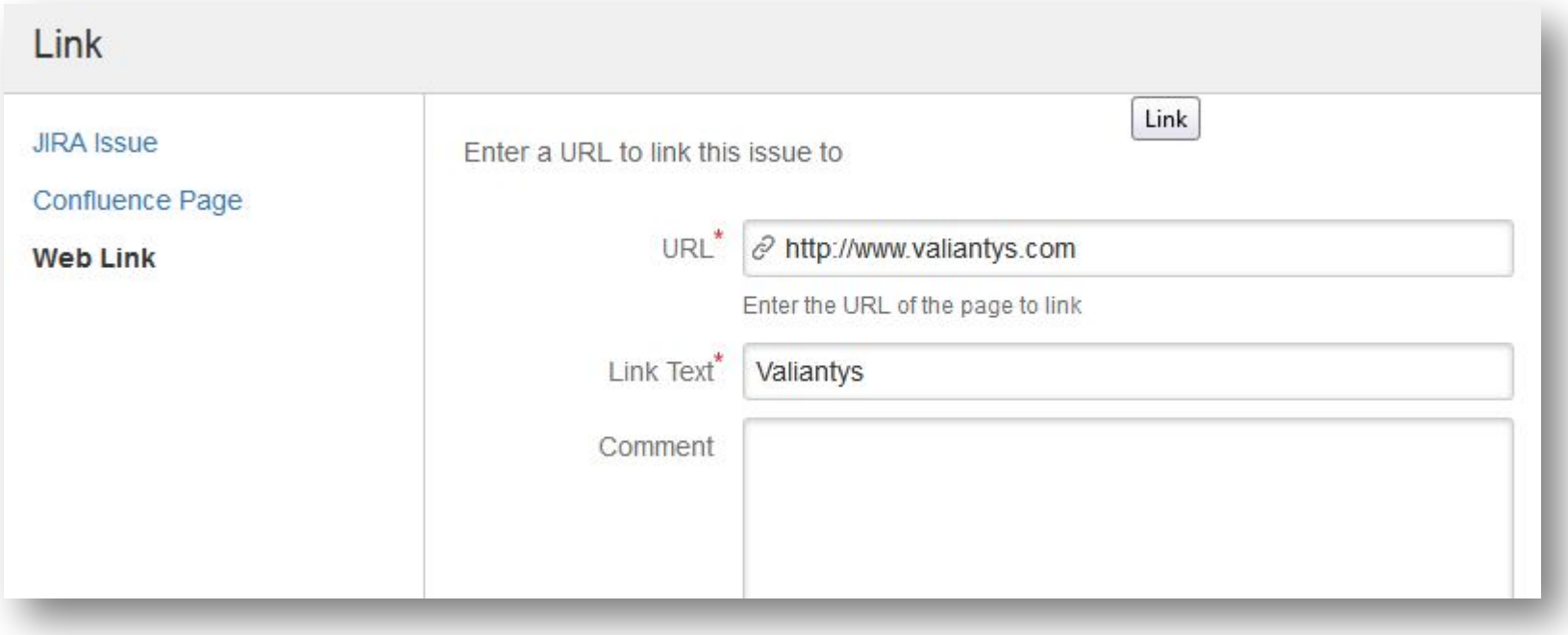
Linking issues

- issues can have relationships with one another
  - Links to another issue
  - Relationships to any URL are also possible
  - Especially to Confluence

Linking


Link
JIRA Issue
Web Link
Select a JIRA issue to link this issue to
This issue
duplicates
Issue
Comment
History Search (Showing 11 of 11 matching issues)
TRAIN-1 - Test 1
TRAIN-12 - Test 25
TRAIN-10 - Test 21
TRAIN-9 - Test 20
TRAIN-8 - Test 13
TRAIN-7 - Test 12
TRAIN-6 - Test 11
TRAIN-5 - Test 10
TRAIN-4 - Test 4
TRAIN-3 - Test 3
TRAIN-2 - Test 2
Link
Cancel

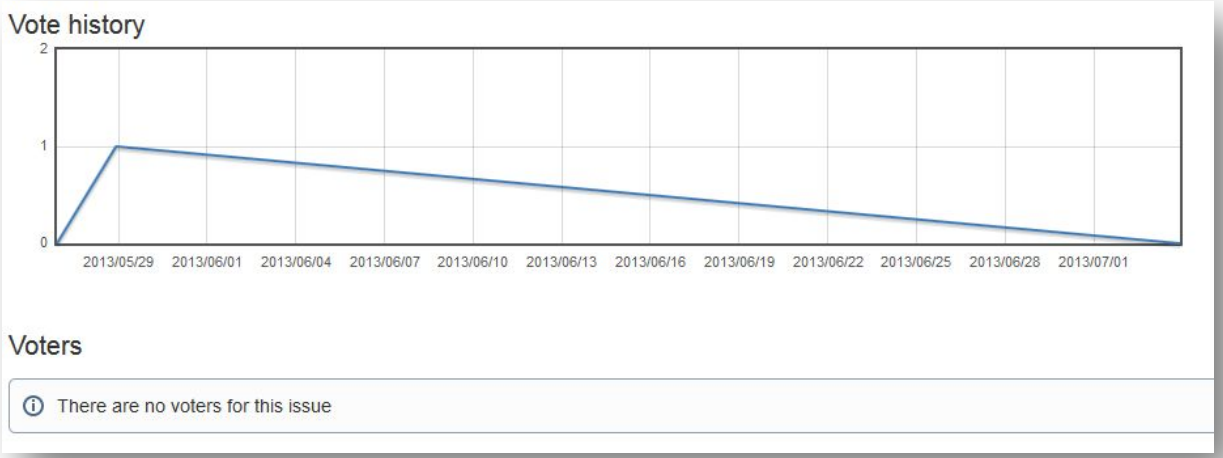
Link to a web page

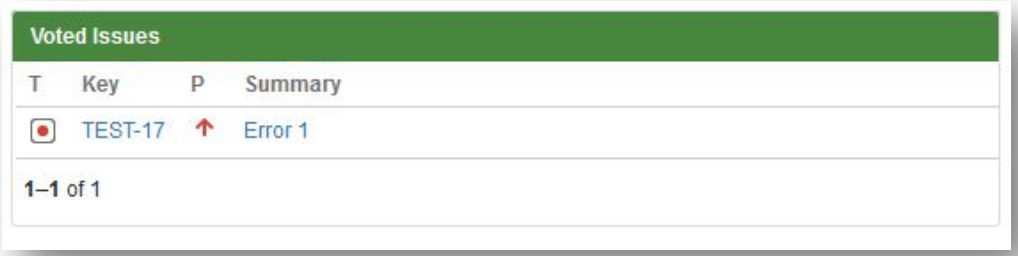


Voting

- issues can receive votes
  - for example, to be able to prioritize the implementation of a issue
- Operations
  - Up-vote
  - Analysis of the voting behavior of the users

Voting tools





Observing issues

- Observers receive a notification every time the issue changes
- The person responsible for the issue manages the list of watchers

Sharing a issue

- Sending a issue to a JIRA user

Change history

Change History Tab

Contains any changes made to the issue

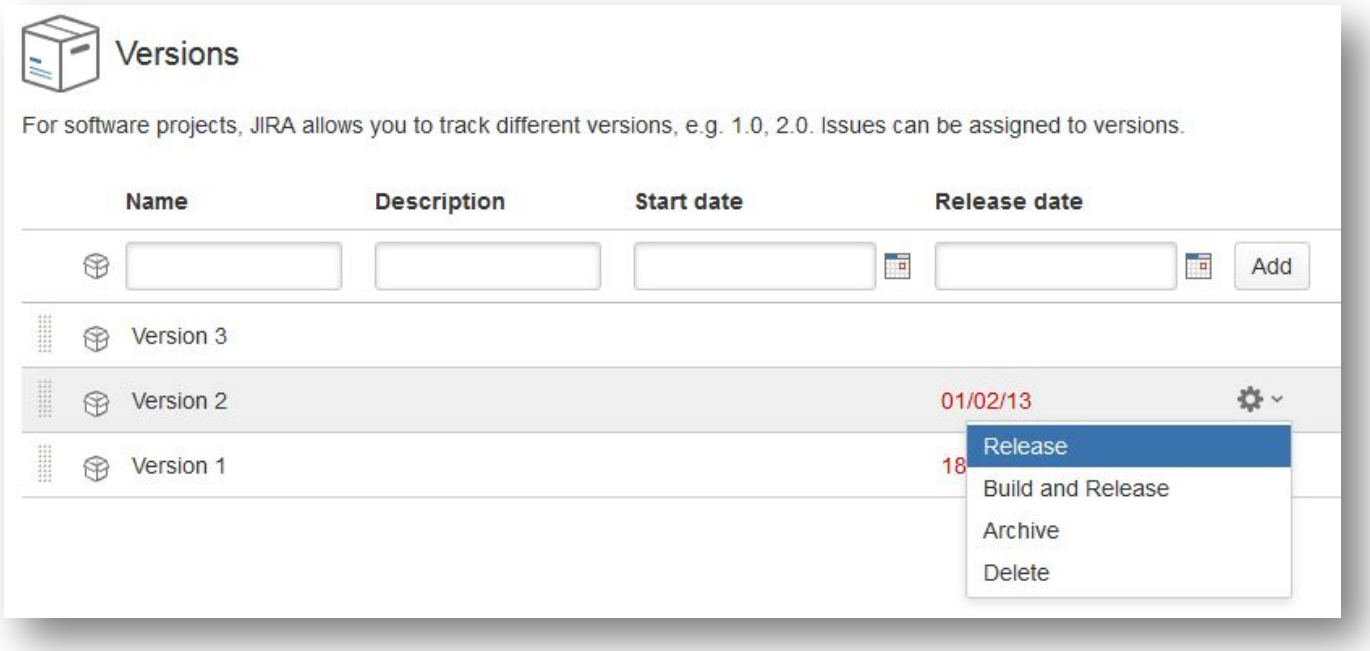
3.2

VERSIONS

Version management

- A version can have 3 statuses
  - Unreleased
  - Released
  - Archived

Version management



Using versions

- Versions are used for:
  - Track releases
  - Builds
  - Roadmaps
  - Deployments

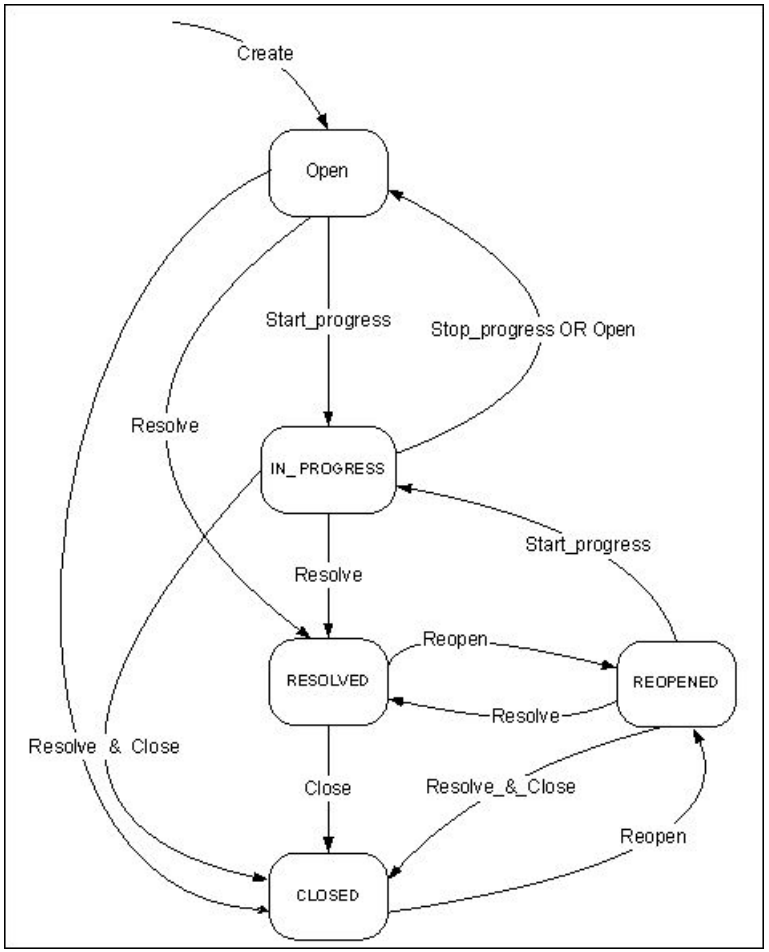
3.3

WORKFLOW

Workflow

- a workflow represents the lifecycle of a issue through steps and transitions
- It represents the process that the issue will go through

Example: workflow



4

SEARCH AND FILTER

4.1

SEARCH

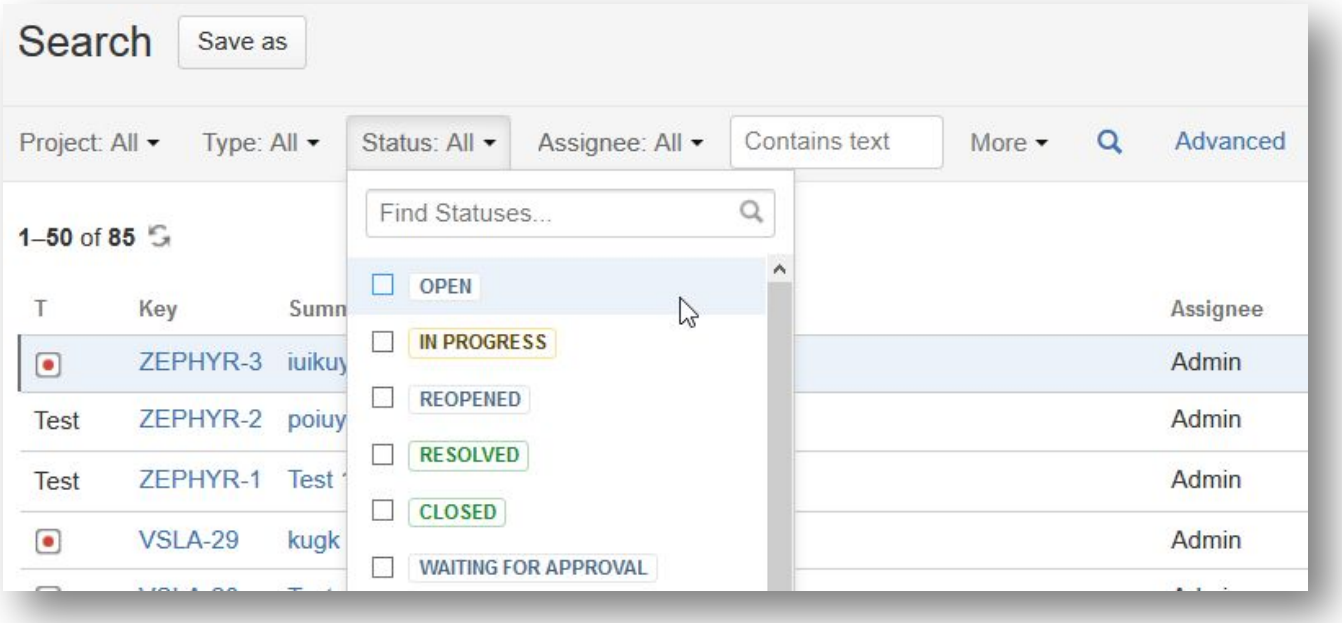
Quick Search

- Search for key, e.g. ‘ABC-123’
- Search within text fields:
  - Summary
  - Description
  - Comments
- Search by keywords:
  - ‘My’: all issues that are assigned to me
  - ‘TST’: all issues of the ‘TST’ project
  - 'Bug': all issues of the 'bug' type

Basic search

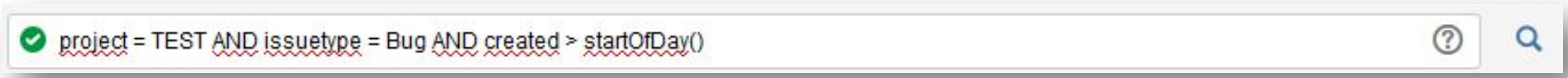
Search of issues with range of search criteria

Several fields are linked with "AND"



Advanced search

- Logical keywords:
  - AND, ORr, IN, NOT, EMPTY, WAS, CHANGED ...
- Some fields are only available in the Advanced Search:
  - Category, sprint, linked issues, sub-issues ...
- Date functions:
  - endOfDay (), endOfMonth (), endOfWeek (), endOfYear ()
- Functions for roles, users and groups:
  - membersOf (), projectsLeadByUser (), currentUser ()



Character string search

- Search for specific sequences with ""
- Wildcards:
  - '?': Single character
  - '*': Any sequence of characters
- Logical operators
  - AND, OR
- Required terms
  - '+' or excluded '-'
- Search terms weight '^'
-

4.2

FILTER

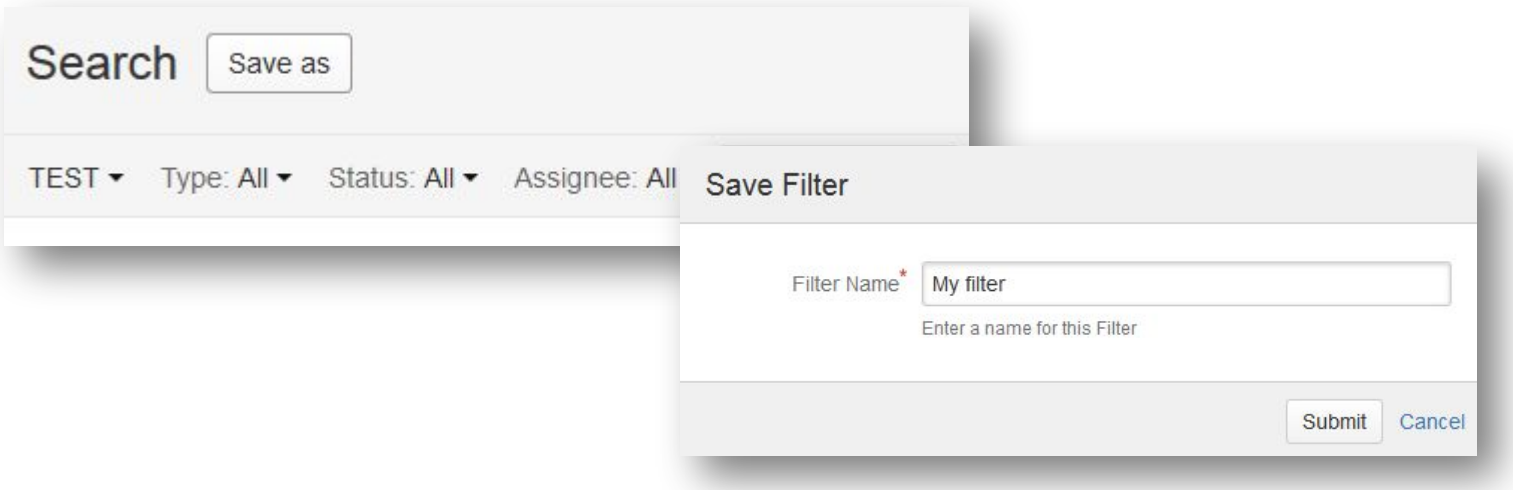
overview

- A filter is a saved search
- They are used:
  - In the issue navigator
  - Some dashboard gadgets
  - Some project reports
- Subscriptions can be defined for filter results
- Filters can be shared
- Filters can be saved as favorites
-
-

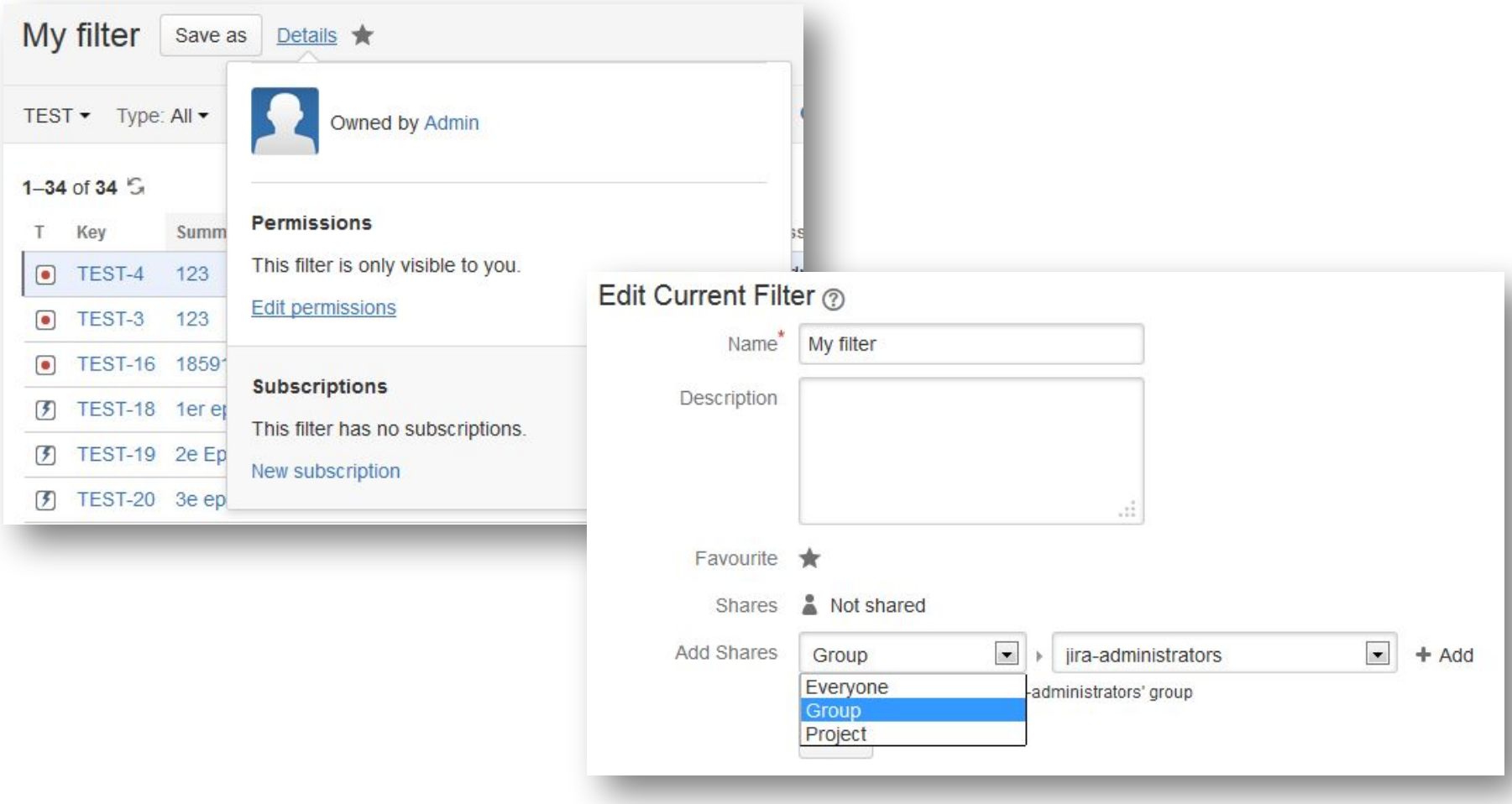
Predefined filters

- My open issues
- Reported by me
- Recently viewed
- All issues

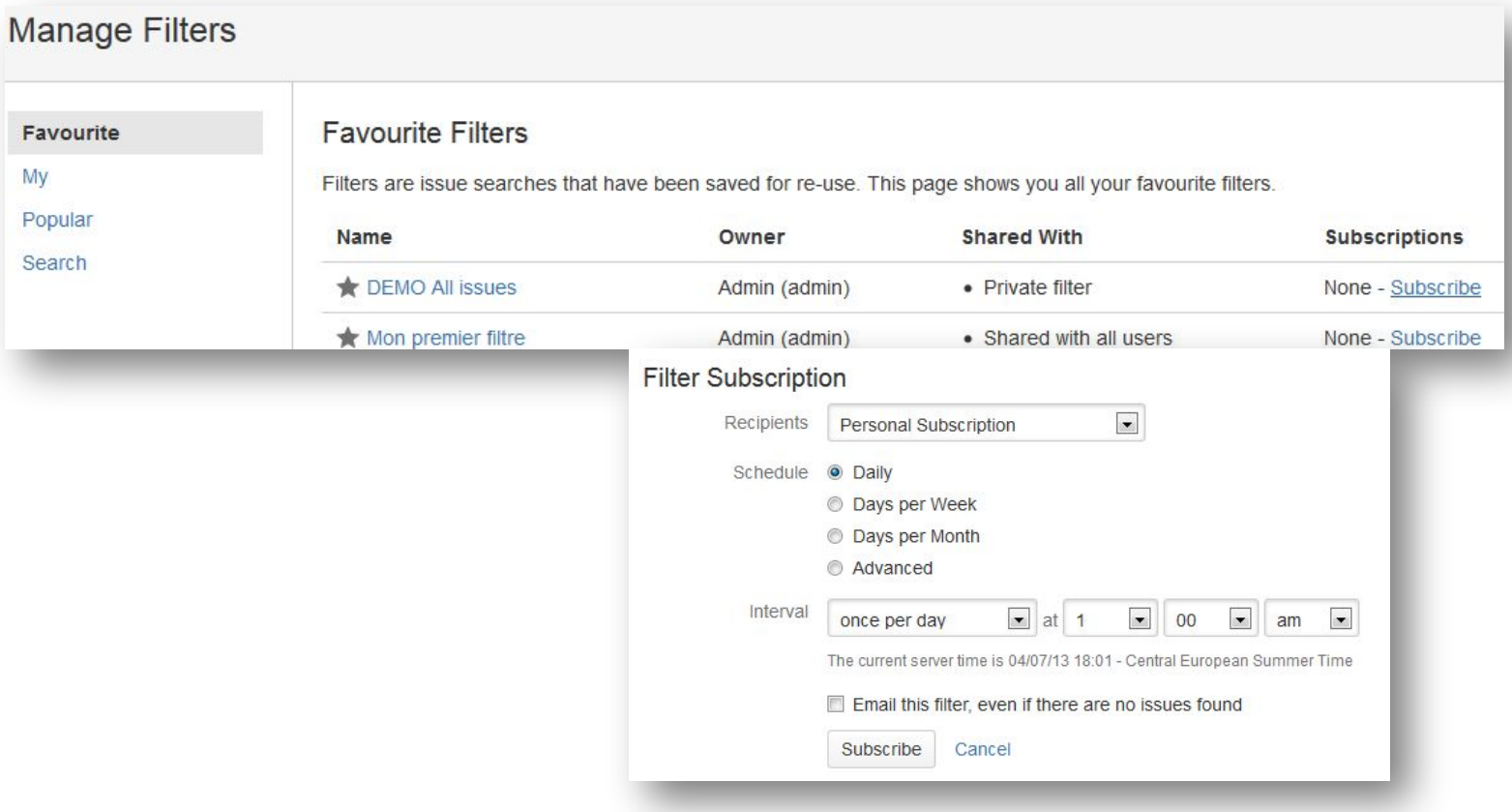
Creation of filters



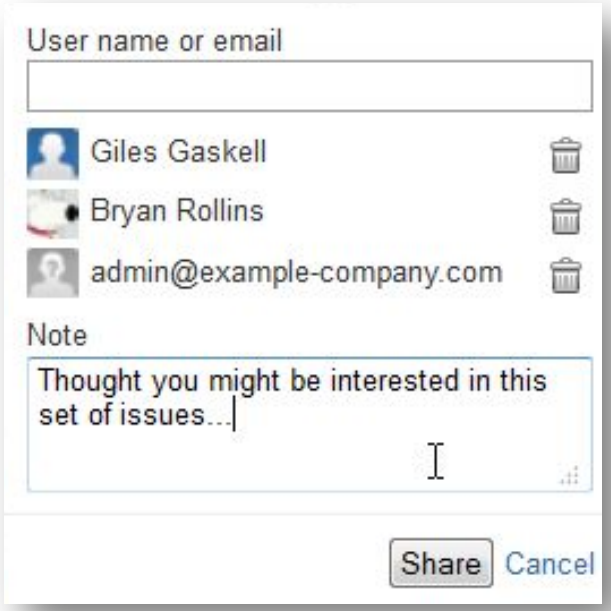
Share filter n



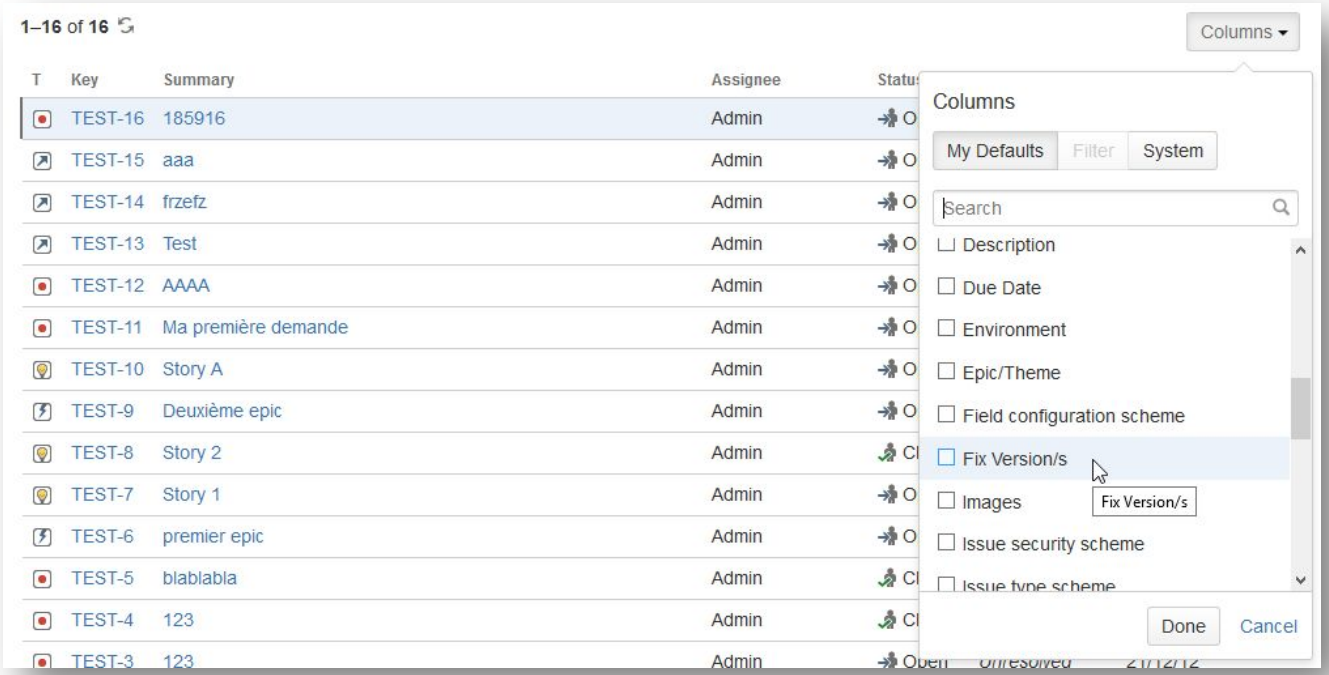
Subscription



Share of search results



Adjusting the columns of a filter



4.3

ADVANCED SEARCH

JQL

- JQL = JIRA Query Language
  - SQL ist similar, however...
  - Complete reference:
    - https://confluence.atlassian.com/display/JIRA/Advanced+Searching

syntax

- Fields
  - properties
- Operators
  - Comparison, logic, ...
- Values
  - values
- keywords
  - AND, OR, NOT, EMPTY, NULL, ORDER BY.

First examples

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- What tasks does the user "testuser" have in the test project?
  - reporter = testuser AND project = 'Test Project'
- Which tasks are blocking or critical in projects A, B, and C?
  - priority IN (Blocker, Critical) and project IN (ProjA, ProjB, ProjC)
- Which tasks are unassigned and not updated since yesterday?
  - assignee is EMPTY and updated <-1d

JQL functions

- Which tasks are assigned to a member of the ICS Division group?
  - assignee IN membersof ('ICS Division')
- Which tasks of project P are resolved or closed?
  - Project = P and status IN (resolved, closed) and fixversion = earliestUnreleasedVersion ()

Changed operator

- elements
  - AFTER "date"
  - BEFORE "date"
  - BY "username"
  - DURING ("date1", "date2")
  - ON "date"
  - FROM "oldvalue"
  - TO "newvalue"
- Examples
  - Which tasks
    - status CHANGED FROM "In Progress" TO "Resolved" BY currentUser ()
  - Which tasks were resolved this year?
    - Resolution CHANGED TO "Fixed" BY currentUser () DURING (startOfYear (), endOfYear ())

Sort with ORDER BY

- Open issues sorted by priority and assignee:
  - status = open ORDER BY priority, assignee
- Issues with blocker or critical priority that were created in the last two weeks, sorted from newest to oldest:
  - priority IN (blocker, critical) and created> -2w ORDER BY created DESC

4.4

REPORTING

Reporting

- Standard reporting
  - A set of predefined reports available in Jira
- JIRA Advanced Report
  - Any reports
  - BIRT designer
  - Will not be dealt with in the course

Example: Time Tracking

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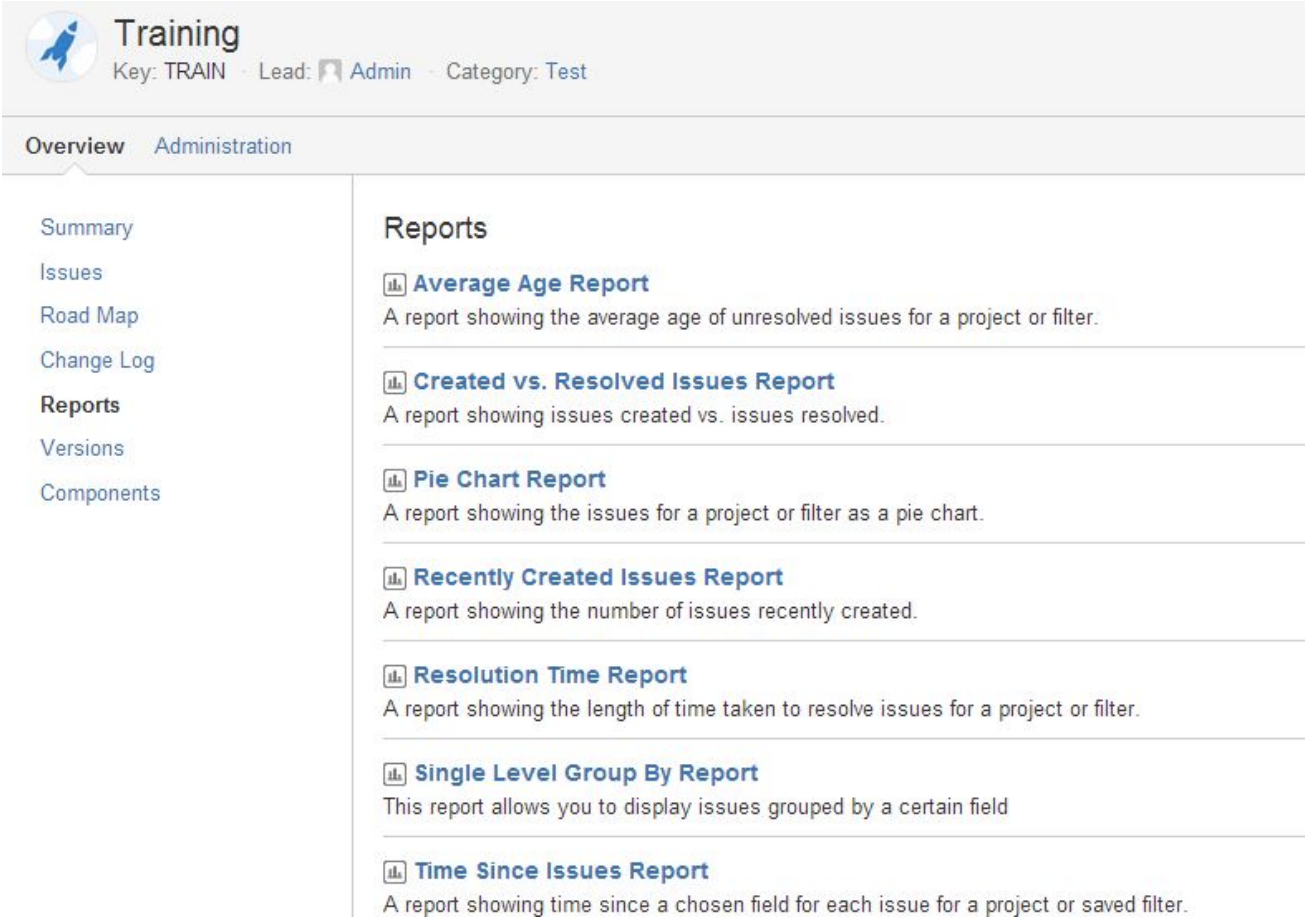

Example: Time Tracking

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Report: Time Tracking Report

Description:
This report shows the time tracking details for a specific project.

Fix Version: - Version 2
Select the version on which to make the Time Tracking report

Sorting: Least completed issues first
Select order in which the issues will be displayed

Issues: All
Select which issues to include in the report

Sub-task Inclusion: Only including sub-tasks with the selected version
Select which sub-tasks are included in the report

Time Tracking Report for TEST (Version 2)

Only including sub-tasks with the selected version

Progress: 16% — **4h** completed from current total estimate of **3d**

Accuracy: 25% — Issues in this version are ahead of the original estimate of **4d** by **1 jour**.

Key	Summary	Original Estimate	Σ	Est. Time Remaining	Σ	Time Spent	Σ	Accuracy	Σ
TEST-17	Error 1	2d	2d	2d	2d	-	-	on track	on track
TEST-1	Error 1	2d	2d	4h	4h	4h	4h	1d	1d
	Total		**4d**		**2d 4h**		**4h**		**1d**

4.5

EXPORT

export

- Tasks can be processed further in various data formats
  - Plain text
  - Word document
  - PDF
  - Excel
  - JSON
    - A data exchange format to external systems

4.6

SHORTCUTS

Keyboard shortcuts

- selection
  - ‘C’ creates a task
  - 'E' edit a task
  - ‘M’ to comment
  - ‘J’ and ‘k’ navigate through search results
- View all shortcuts with ‘?’

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4.7

PROFILE

The user profile

- Number of displayed tasks per page
- Format of notifications
- language
- Email notifications
- Default Navigator Columns
- Time zone
- Automatic watching

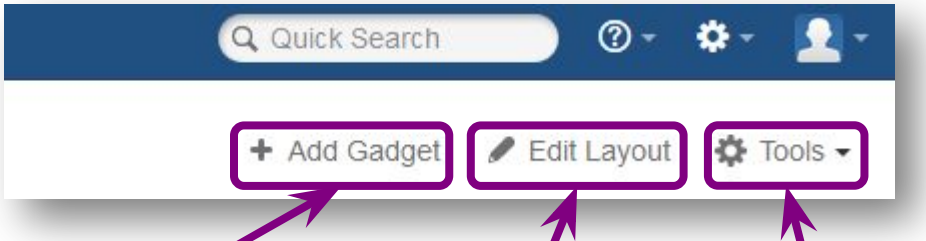
4.8

DASHBOARD

Definition of your own pages

- Dashboard
- Boards
  - Part of the Agile add-on

Configuring dashboards



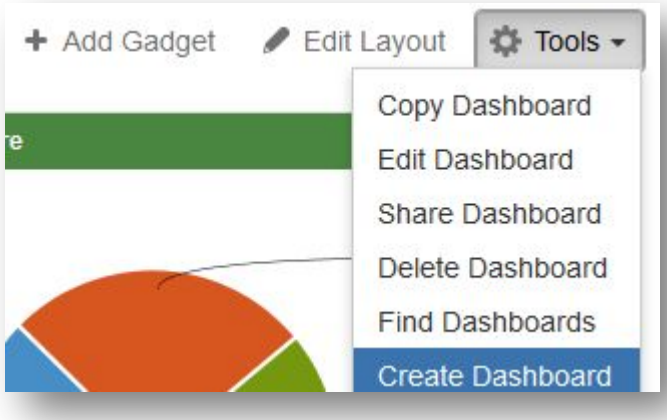
Add a gadget to your dashboard

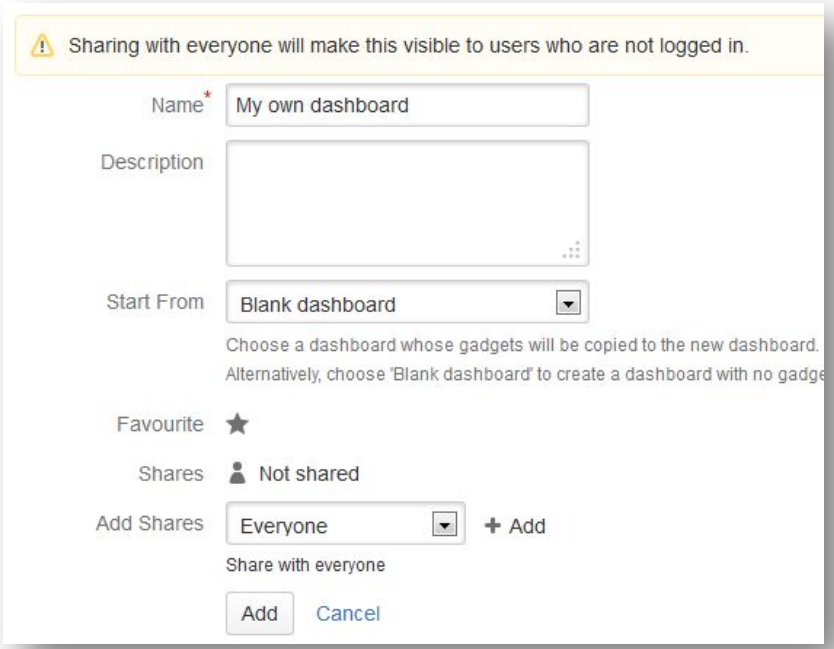
Change visual display

Manage dashboards

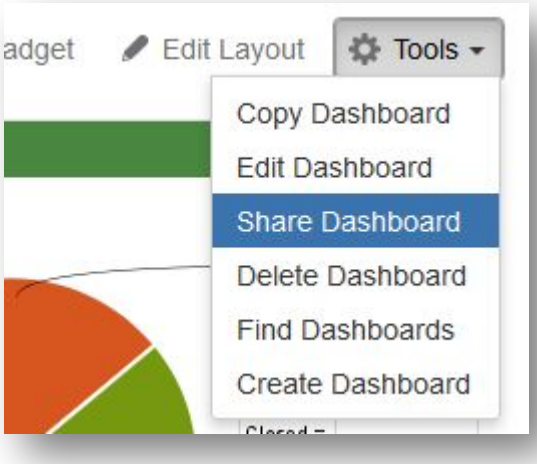
Create dashboarda

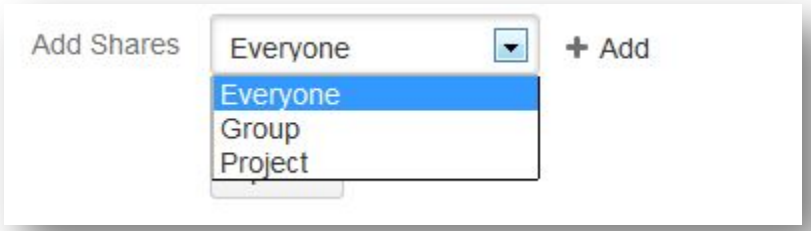
- new
- clone





Share dashboards

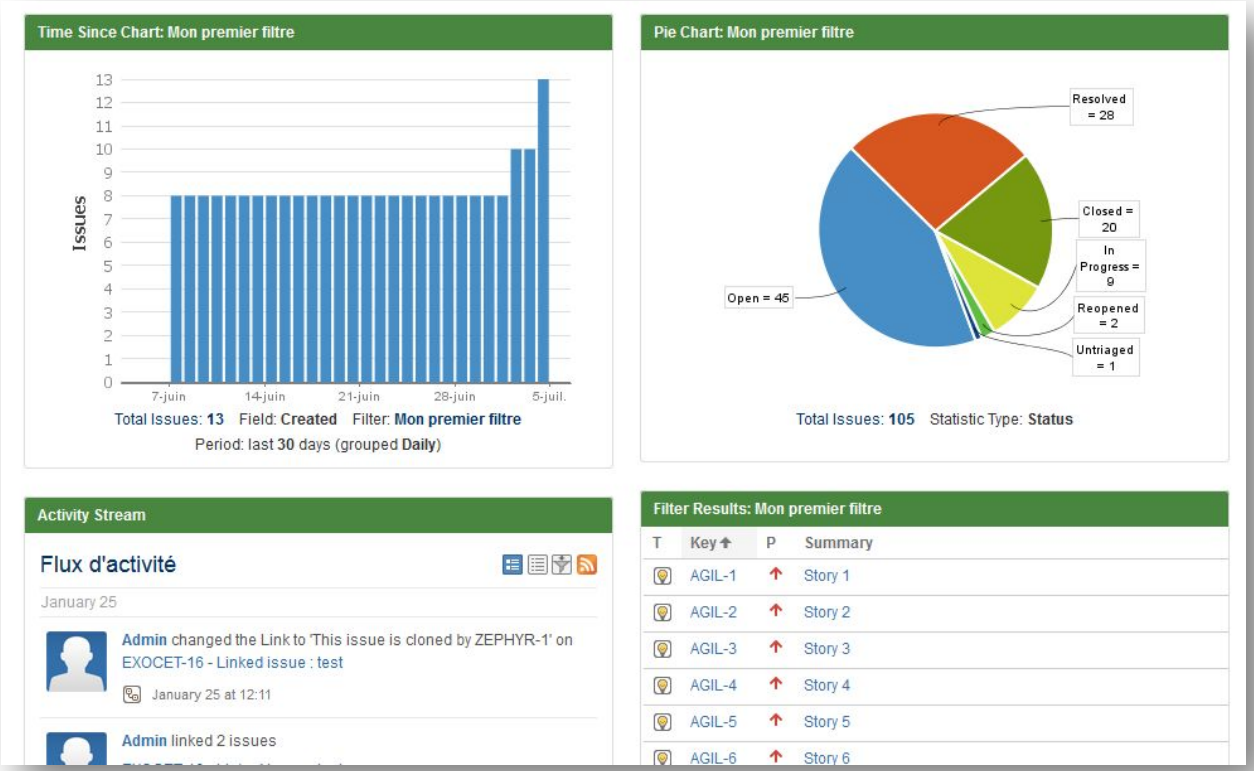




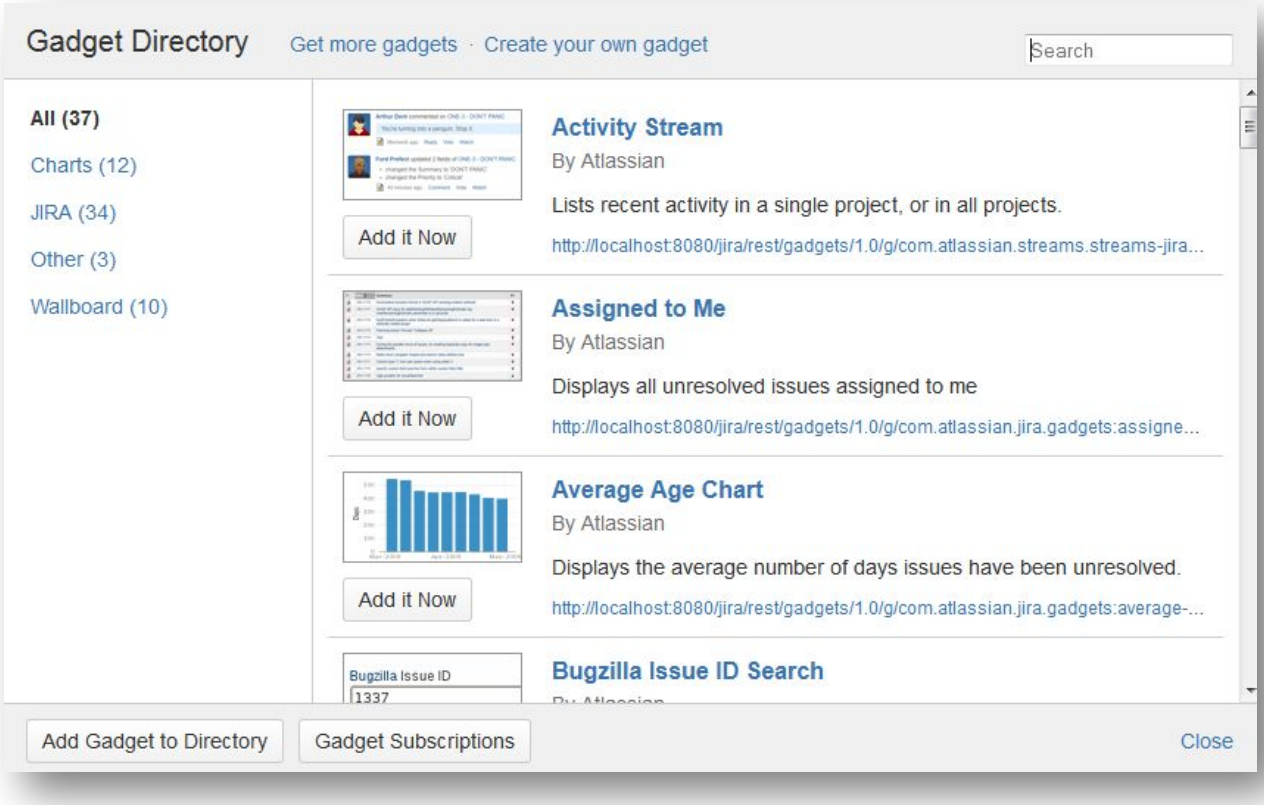
Customization of a dashboard

integrata cegos

A dashboard consists of ‘gadgets’

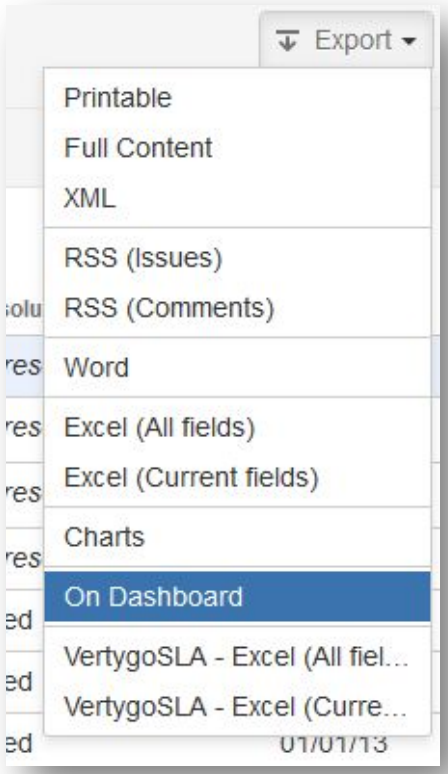


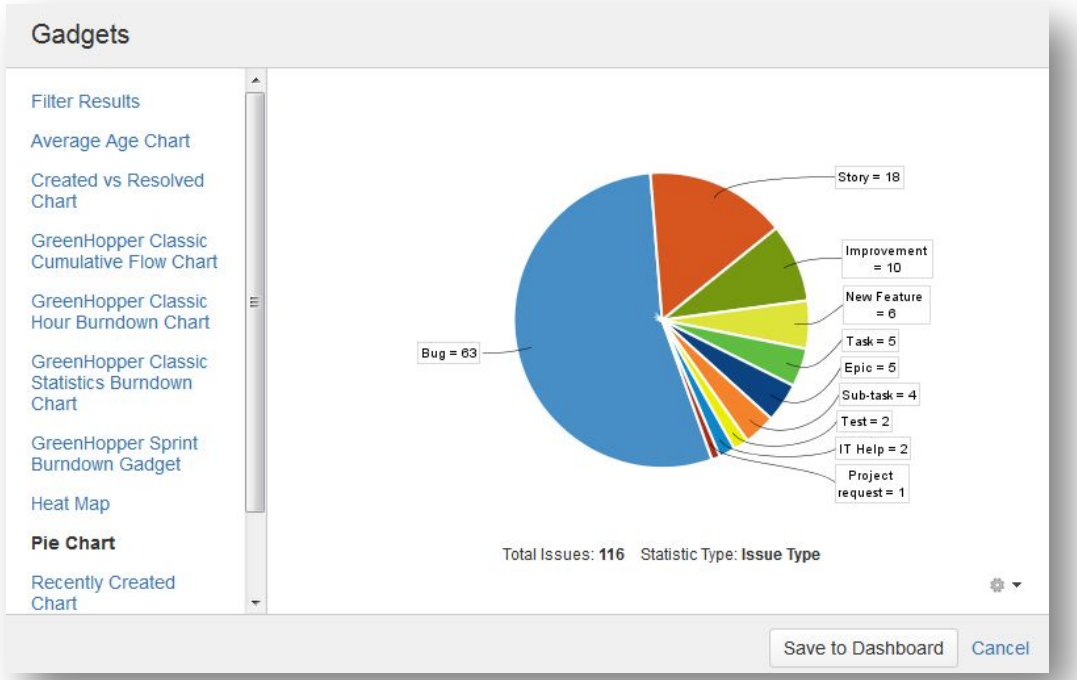
Add a gadgets



Hinzufügen eines Gadgets

- Direkt aus dem Aufgabe Navigator





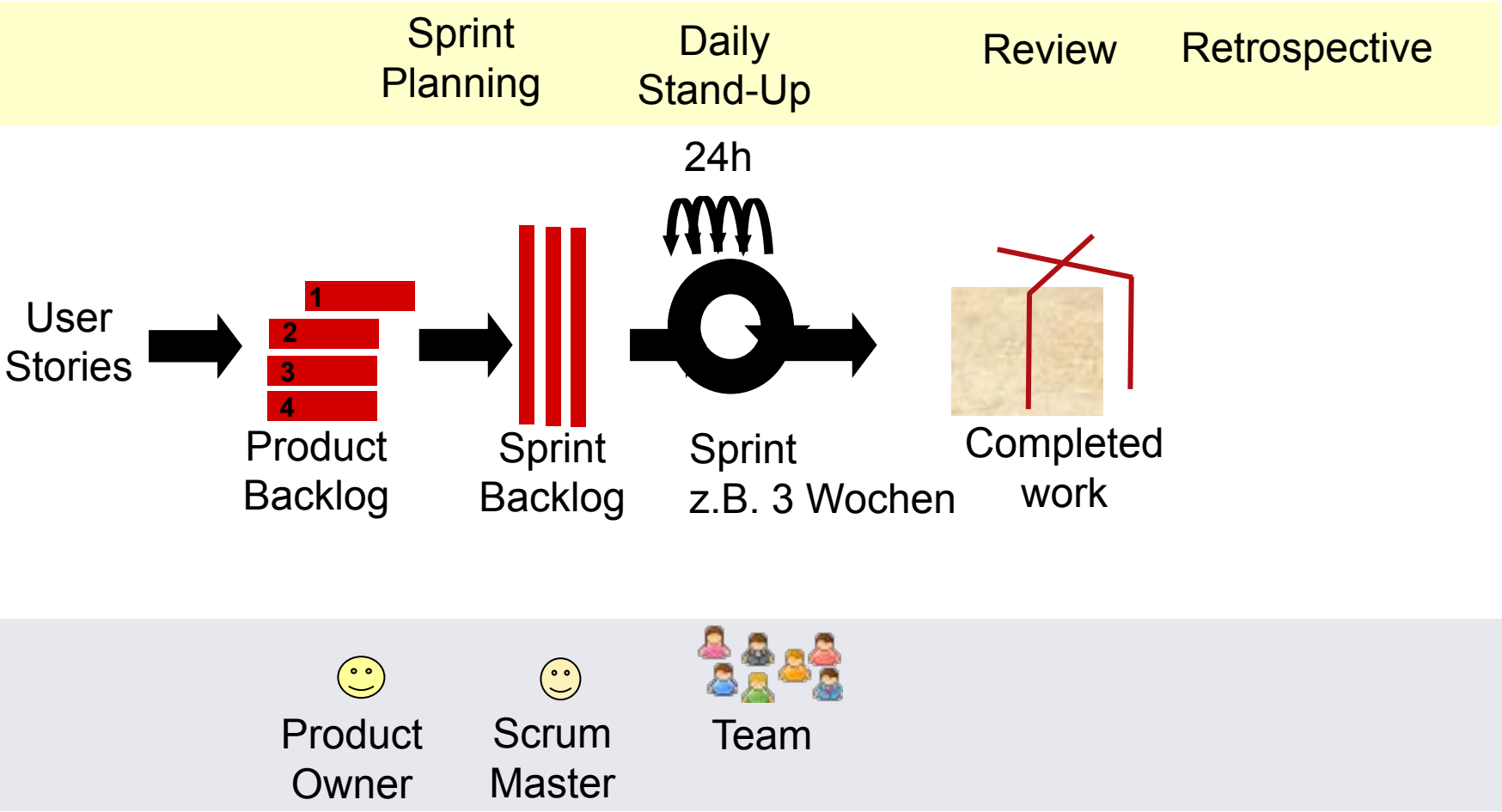
5

AGILE

5.1

SCRUM

Scrum process



Scrum projects

- Planning board, create user story
- issueboard, my processes, move stories, mark obstacles, views
- Product, sprint and impediment backlog
- Sprint burndown chart
- Agile gadgets & wallboards

5.2

KANBAN

Overview of Kanban

integrata cegos

- Visualization of the status transitions through vertical columns on a Kanban board
- Each column is assigned a minimum and, in particular, a maximum capacity
- This makes bottlenecks visible
- Quick filters filter relevant processes
- Swimlanes define horizontal groups
- Example: prioritization of processes
- Tasks may not leave their respective swim lane