What is JIRA?

- software development tool
- planning and tracking the projects progress and supporting the team collaboration
- supports both Agile (Scrum & Kanban) and waterfall methodologies
What is JIRA?

- Initial release, 2002
- Most popular issue management tool
- Developer: Atlassian, Inc.
  - JIRA, Confluence, Bitbucket, HipChat
- First idea: bugtracker
- Competitors: Bugzilla
What is JIRA?

- Web application
- Pricing: number of users
- Cloud or Self-hosted

- Three packages:
  - JIRA Core
  - JIRA Software
    - JIRA Software Cloud
    - JIRA Software Server
    - JIRA Software Data Center
  - JIRA Service Desk

<table>
<thead>
<tr>
<th>Users</th>
<th>Annual Pricing</th>
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<tbody>
<tr>
<td>1 - 10</td>
<td>$100</td>
</tr>
<tr>
<td>11 - 15</td>
<td>$1,050</td>
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<tr>
<td>16 - 25</td>
<td>$1,750</td>
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<tr>
<td>26 - 50</td>
<td>$3,500</td>
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<td>51 - 100</td>
<td>$7,000</td>
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<tr>
<td>101 - 200</td>
<td>$11,000</td>
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<tr>
<td>201 - 300</td>
<td>$13,500</td>
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<tr>
<td>301 - 400</td>
<td>$14,500</td>
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<tr>
<td>401 - 500</td>
<td>$15,500</td>
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<tr>
<td>501 - 600</td>
<td>$16,500</td>
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<tr>
<td>601 - 800</td>
<td>$18,500</td>
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<tr>
<td>801 - 1,000</td>
<td>$20,500</td>
</tr>
<tr>
<td>1,001 - 1,200</td>
<td>$22,500</td>
</tr>
<tr>
<td>1,201 - 1,400</td>
<td>$24,500</td>
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<tr>
<td>1,401 - 1,600</td>
<td>$26,500</td>
</tr>
<tr>
<td>1,601 - 1,800</td>
<td>$28,500</td>
</tr>
<tr>
<td>1,801 - 2,000</td>
<td>$30,500</td>
</tr>
</tbody>
</table>
Cloud

Active sprints

TO DO 5
- Measure ROI for summer color your world campaign
- Prepare assets for next Summer’s campaign
- Evaluate broken tests when sidebar is removed
- Create issue navigator build that tests against master

IN PROGRESS 4
- Design a new newsletter for summer campaign
- Send out email campaign for second sign up
- Measure ROI for summer color your world campaign
- Evaluate broken tests when sidebar is removed

IN REVIEW 5
- Create issue navigator build that tests against master
- Create issue navigator build that tests against master
- Evaluate broken tests when sidebar is removed

DONE 8
- Design a new experience for the homepage
- Design a new experience for the homepage
- Prevent attacks with tracking event attribute values
- Design a new experience for search in homepage
Scrum: Teams in Space

Sprint 6 24 issues

24/Nov/14 11:05 PM • 08/Dec/14 11:05 PM

Linked pages

Teams in Space / TIS-56

Add pointer to main css file to instruct users to create child themes

Details

Status: CLOSED
Component/s: Web Site
Labels: None
Affects Version/s: 2.0
Fix Version/s: 2.0
Epic: Large Team Support

People

Reported: Jennifer Evans
Assignee: Jennifer Evans

Epics

SeeSpaceEZ Plus
Space Travel Partners
Summer Saturn Sale
Afterburner Plus
Large Team Support
Local Mars Office
Hyper-speed shuttles
New launch platforms

Version

All issues

TIS-46 Update LocalTransportController
TIS-42 Extend booking experience in
TIS-43 Extend booking experience in
TIS-40 Update FlightController to hard
TIS-44 Reward Customers an extra
TIS-41 Update LodgingController to
TIS-39 Update UI controls on travel
TIS-45 Email non registered users to
TIS-49 Draft network plan for Mars O
TIS-68 Homepage footer uses an inline - should use a class
Issues

• generic task, unit of work:
  • project task
  • bug
  • change request
  • service request

• fields with values

• modifiable

• different (default) issue types in JIRA
Projects

• issues belongs to projects

• project templates

• projects for agile software development methodologies
  • Scrum
  • Kanban

• normal business projects
Scrum

• deadlines
• iterations ~ sprints
• one sprint = 2-4 weeks

• sprint planning meeting
• stand-ups during sprints
• sprint review
Scrum project

- backlog with epics
- active sprints
- backlog -> sprint
Story points

- measurement instead of hours
- agile concept

- 30 mins = 1 pts
- 1 hour = 2 pts
- 2 hours = 4 pts
- 4 hours = 8 pts
- day = 16 pts
- 2 days = 32 pts
- 3 days = 48 pts
Reports

Project lifecycle

NEW PROJECT → BACKLOG → NEW VERSION → WORK → RELEASE → REPORTING
Workflow (board columns)
Kanban

- no target date
- support priorities
- no plan mode
Kanban

Examples:

• Support tickets

• Example: Support Queue project
  • users create tickets
  • In Progress (someone from support team is assignee)
  • In Review (reporter is assignee)
  • Done (reporter closes the ticket)
Fields, Screens, Schemas

- Each project - different issue types
  - same issue type in 2 projects can have different fields

- Each workflow transition
  - different screens (displayed fields) for issue type in transition
    - (To Do – Progress) etc...
Search

• quick/text search
• basic/simple search
• advanced search
  • JIRA Query Language (JQL)
Issue navigator

- primary search interface
- operations on search results
- filters
Quick search

• my
• r:<user>
• <project name>,<project key>
• overdue
• created: today(yesterday,-1w); same updated:, due:
• <priority>
• <issue type>
• v:
  • v:3.2*
Basic search

• simple-to-use interface
JQL & advanced search

- basic search provides only inclusive logic
- similar syntax to SQL

- basic query:
  - field, operator, value
  - Status = Resolved

- linked queries by AND, OR

- used in boards, APIs
- most of queries can be converted into basic search
  - learning purposes
Bulk update

• Easy way to modify all search results
  • useful for typos, modification
  • moving multiple issues from backlog to sprint
Working with search results

- Detail View
- List View
  - Customizing the column layout
  - Can only pick some fields for export
- Export in Excel, Word, XML, JSON
- REST API JQL

```python
jira_jql ={"jql": "project = DOSTACK and component = " + str(service).upper() + " and type = REQUIREMENT"}

request = requests.post(url=jira_url_api,
                        data=json.dumps(jira_jql),
                        headers={"Content-type": 'application/json'},
                        auth=credentials)
```
Using Filters

• ability to save searches as templates

• filters on agile boards
  • relevant project, access permissions

• gadgets on dashboards
Bitbucket integration

- 'Smart Commits'
- JIRA 'create branch'
- Workflow triggers
  - pull request -> In Review

<table>
<thead>
<tr>
<th>Development</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 branches</td>
<td>Updated 04/Nov/15 12:17 PM</td>
</tr>
<tr>
<td>9 commits</td>
<td>Latest 04/Nov/15 7:43 AM</td>
</tr>
<tr>
<td>1 pull request</td>
<td>MERGED</td>
</tr>
<tr>
<td>3 builds</td>
<td>Updated 04/Nov/15 7:43 AM</td>
</tr>
</tbody>
</table>

Deployed to Staging and Production

Create branch

Diagram:
- Issue
- Sprint
- Build
- Branch
- Pull Request
Smart Commits

• Basic syntax
  • <ignored text> <ISSUE_KEY> <ignored text> #<COMMAND> <optional COMMAND_ARGUMENTS>

• Comment
  • <ignored text> ISSUE_KEY <ignored text> #comment <comment_string>
Create branch for CIS-21

Repository: Teams in S... / Mobile TIS

Branch type: Feature

Branch from: master

Branch name: feature/CIS-21-a-user-wants-to-sign-up-via-fs

Is the branch green?

Branch name pre-populated

Create branch  Cancel
Automatic Issue Transitions

- coding is more important than JIRA
- no time for JIRA updates -> less statistics or results in JIRA

- example: add pull trigger in transition

- workflow triggers
  - ’Open’ -> ’In Progress’ (branch created)
  - ’In Progress’ -> ’In Review’ (pull request)
  - ’In Review’ -> ‘Done’ (merged)
Exporting, importing data to JIRA as issues

- JIM = JIRA Importers Plugin
- Easy to use import wizards
- CSV
- Bugzilla
- Mantis
Example: Adding new Issue type

- For Test Automation project, add new type:
  - Test Suite

- import Issues from CSV (add set Issue Type later from search)
  - link Summary field
  - create Created (date) and Component field
  - link those fields with exported fields
Example: Import issues from CSV

- Custom_field readability problem
- Smart wizards supports creating missing fields from CSV
  - otherwise fields must be defined already
• team collaboration software
• issues can be displayed in Confluence pages
• issues can be created from Confluence pages
• reports, gadgets can be inserted to Confluence page
Plugins

- Over 1600 plugins
- ScriptRunner (most useful)
- Automation for JIRA
  - those two overlap
Emails & notifications

• possible to communicate with JIRA through emails
  • adding comments, etc...
• notification on issue status changes
JIRA Software Mobile

- Cloud only
- May 2017

- JIRA desktop interface
  - other possibility

James Smith mentioned you in “Bug found in the desktop login low” (BUG-24): Great catch! Jeff Lyon is working to reproduce...

Press for more

Jeff Lyons assigned “No activity spinner in web login” (BUG-31) to you.
Administration & user permission groups

• global groups x project roles
• JIRA administration x project administration
• permission schemes
• workflow permissions
Example:
Transitions in Support Queue

• for different steps change assignee
• let reporter to decide what to do with Issue
• different permission levels provided:
  • SQ Administrator - Group
  • Developer - Role
  • ‘user’ as reporter
Example:
ScriptRunner plugin & transitions

- Assign issue to last ‘Developer’ assignee
How to remove tickets from board - resolution

Filter Query
project = SQ AND resolution is EMPTY ORDER BY Rank ASC

Settings for SQ board

Resolution

Resolve Issues
Ability to resolve and reopen issues. This includes the ability to set a fix version.
Example:
Reporter should mark issue as resolved if ‘DONE’

• Board should be clean
  • Issue is commented in ‘DONE’ -> should be marked as resolved
  • Can be later also marked as resolved by ScriptRunner
JIRA

• written in Java
  • ... plugins also

• data storage
  • relational database
  • MySQL, PostgreSQL, Microsoft SQL Server, Oracle