Collaborative
Software
Development
Environment

C.S.D.E.
Setting up a pipeline for continuous delivery

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Jakob Livschitz
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Speaker

- Working in IT sector since 7 years
- Interests in:
  - Improving software quality
  - Designing software interoperability
  - Study last web technologies
- Projects:
  - OSOR.eu (actual Joinup.eu) – DIGIT (EC) - Eurostat
  - Integration.eu – DG HOME (EC)
  - ITSM – DG TAXUD (EC)
  - CSDE (OSSR) - ESA

Agenda

1. Software development life cycle model
2. Building a pipeline for continuous delivery
3. Providing feedback within the team
4. Being efficient with C.I.
5. Sharing knowledge between teams

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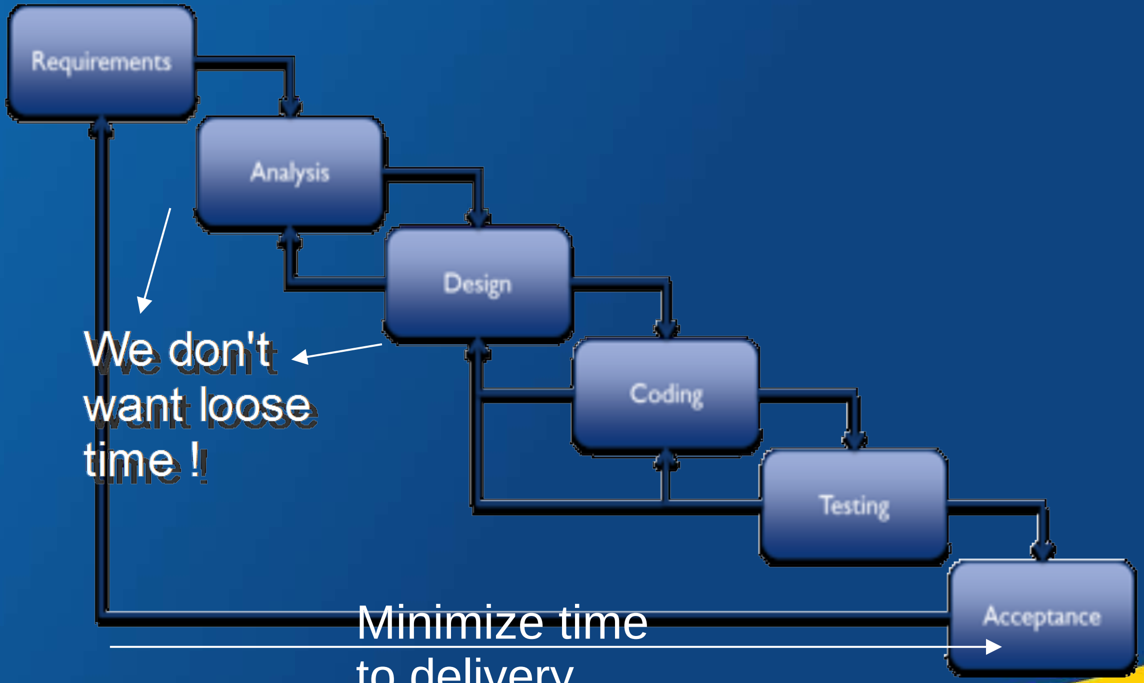
SDLC: software development life cycle

Software development is first of all a **process** which involves people, methodologies and tools.

Minimize timing involves:

- Team functions well defined
- Information flow structured
- Sharing best practices between teams (knowledge, libraries, tools)



We don't want loose time !

Minimize time to delivery

CSDE: Building a pipeline for continuous delivery

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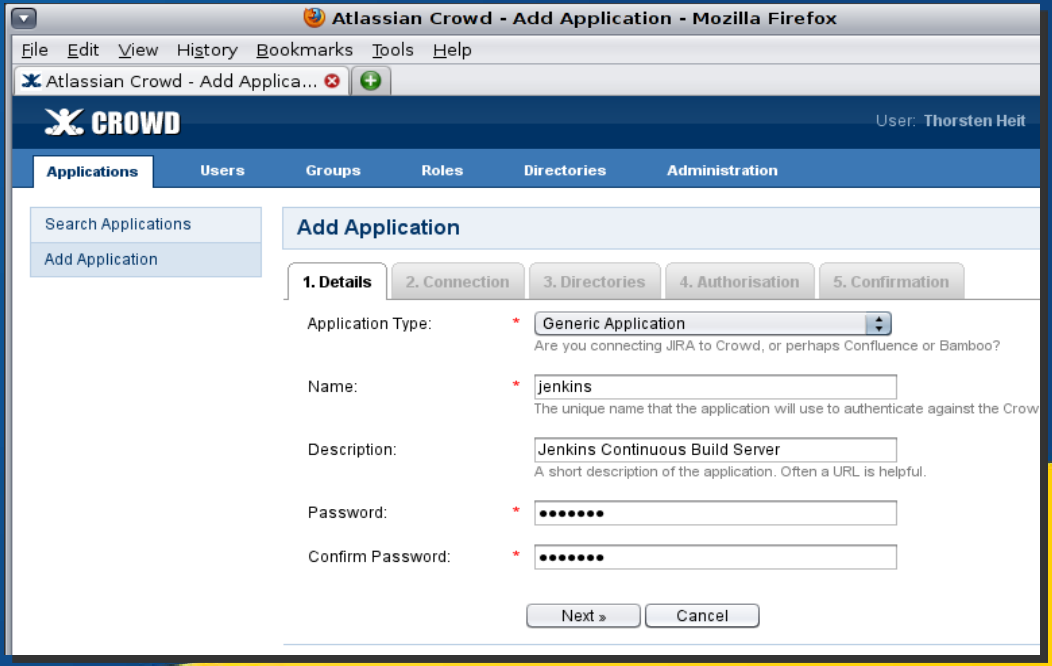
Security:

- Secured connections
- Secure authentication
- Secure authorization

Crowd:

- Authorized users
- Authorized groups
- Authorized applications



Add Application

Application Type: * Generic Application
Are you connecting JIRA to Crowd, or perhaps Confluence or Bamboo?

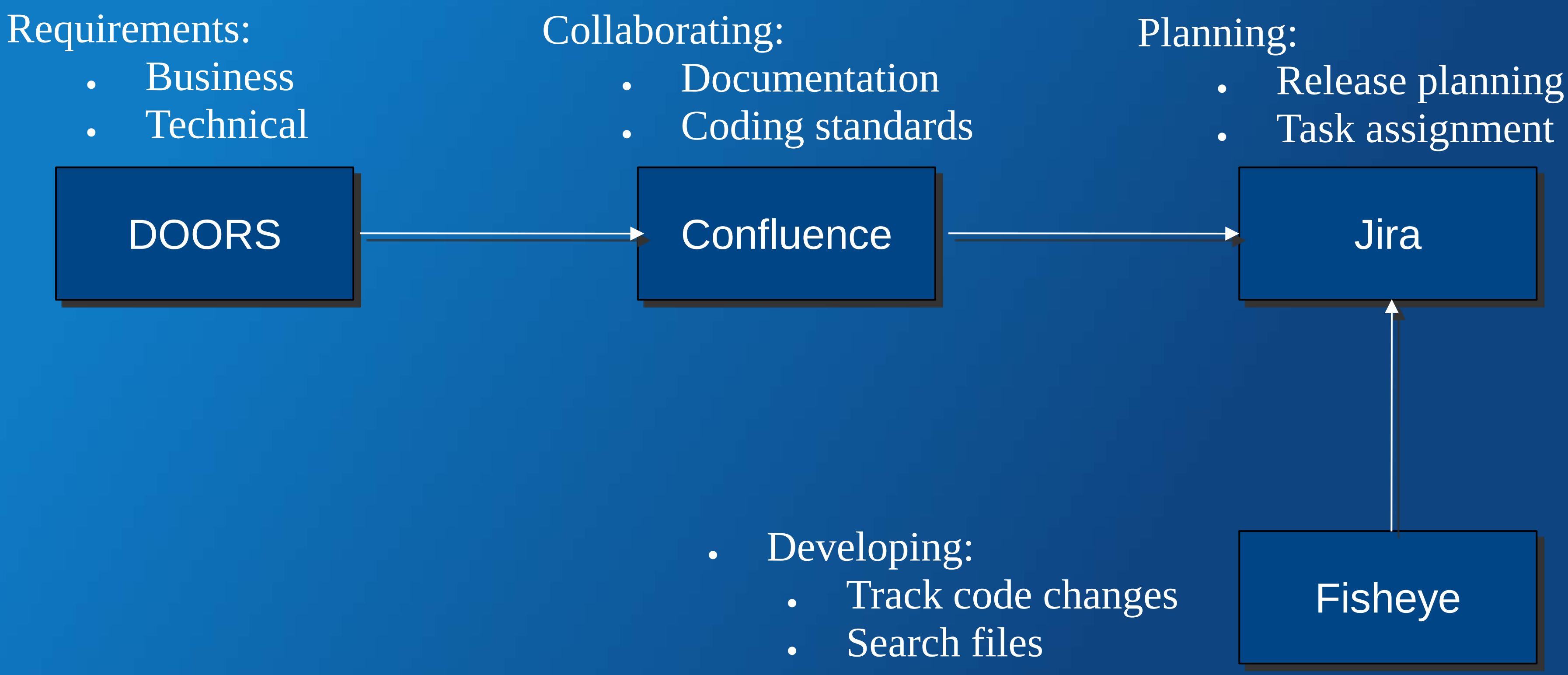
Name: * jenkins
The unique name that the application will use to authenticate against the Crow

Description: Jenkins Continuous Build Server
A short description of the application. Often a URL is helpful.

Password: * •••••••

Confirm Password: * •••••••

Providing feedback within the team



Requirements:
- Business
- Technical

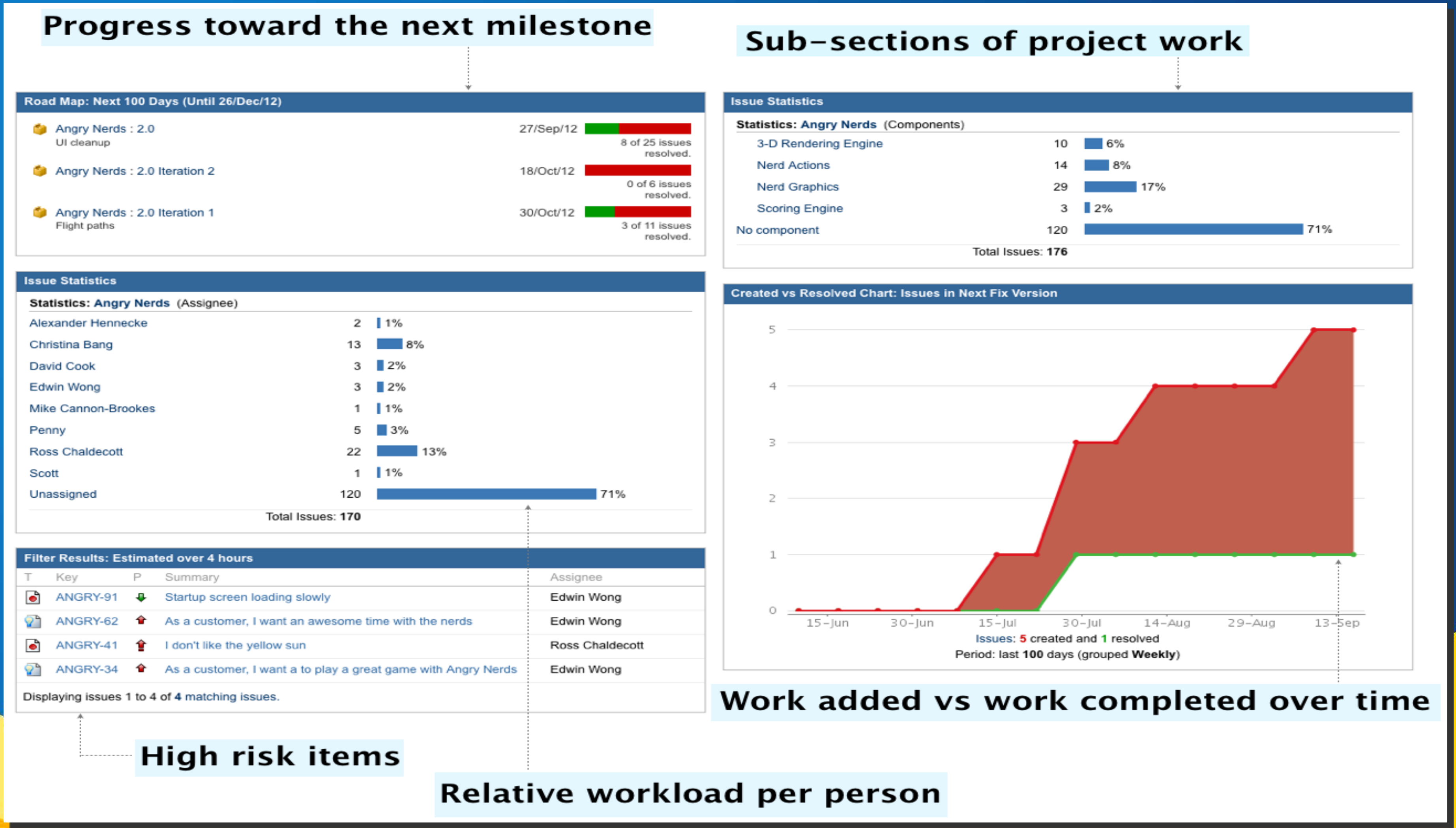
Collaborating:
- Documentation
- Coding standards

Planning:
- Release planning
- Task assignment

- Developing:
    - Track code changes
    - Search files

Providing feedback within the team

JIRA



Progress toward the next milestone

Sub-sections of project work

Road Map: Next 100 Days (Until 26/Dec/12)

Angry Nerds : 2.0 UI cleanup	27/Sep/12	8 of 25 issues resolved.
Angry Nerds : 2.0 Iteration 2	18/Oct/12	0 of 6 issues resolved.
Angry Nerds : 2.0 Iteration 1 Flight paths	30/Oct/12	3 of 11 issues resolved.

Issue Statistics

Statistics: Angry Nerds (Components)

3-D Rendering Engine	10	6%
Nerd Actions	14	8%
Nerd Graphics	29	17%
Scoring Engine	3	2%
No component	120	71%
Total Issues: **176**		

Issue Statistics

Statistics: Angry Nerds (Assignee)

Alexander Hennecke	2	1%
Christina Bang	13	8%
David Cook	3	2%
Edwin Wong	3	2%
Mike Cannon-Brookes	1	1%
Penny	5	3%
Ross Chaldecott	22	13%
Scott	1	1%
Unassigned	120	71%
Total Issues: **170**		

Created vs Resolved Chart: Issues in Next Fix Version

Issues: 5 created and 1 resolved
Period: last **100** days (grouped **Weekly**)

Filter Results: Estimated over 4 hours

T	Key	P	Summary	Assignee
	ANGRY-91	⇩	Startup screen loading slowly	Edwin Wong
	ANGRY-62	⇧	As a customer, I want an awesome time with the nerds	Edwin Wong
	ANGRY-41	⇧	I don't like the yellow sun	Ross Chaldecott
	ANGRY-34	⇧	As a customer, I want a to play a great game with Angry Nerds	Edwin Wong

Displaying issues 1 to 4 of **4** matching issues.

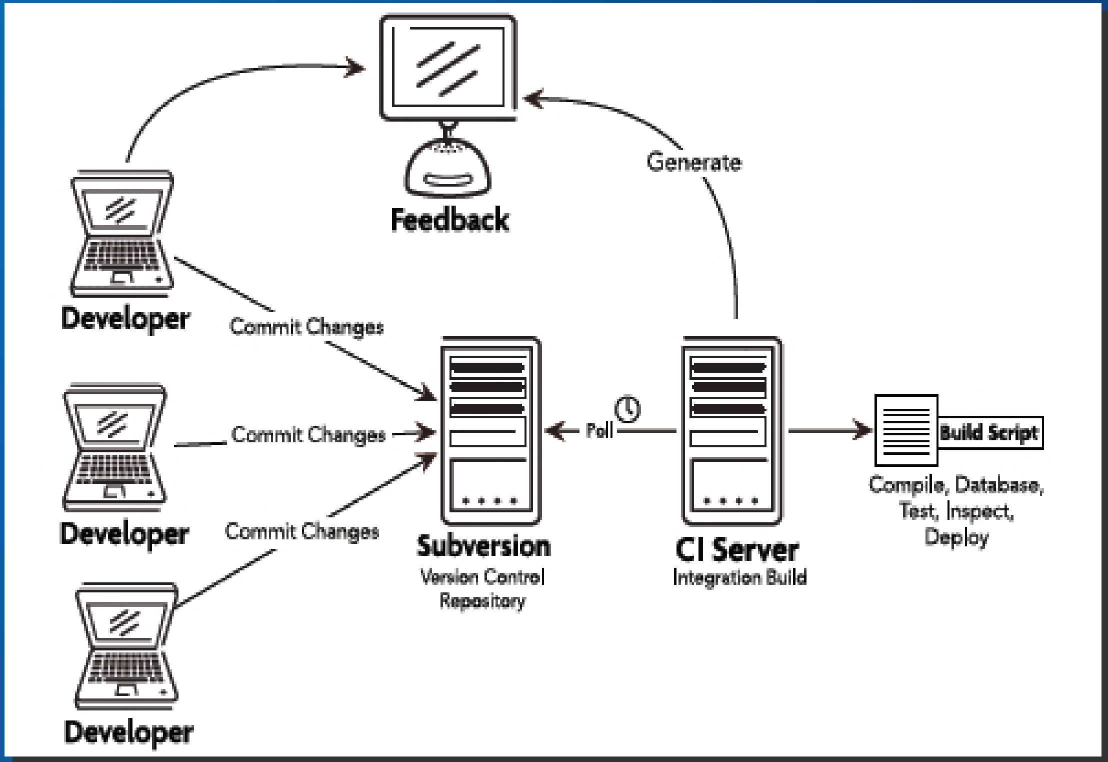
Work added vs work completed over time

High risk items

Relative workload per person

Jenkins: being efficient with C.I.

- Commit frequently in the code version control
- Branches needs to converge to main trunk
- Code and tests must be under the same repository
- Code inspection before and after commit
- Measure code quality



Jenkins: being efficient with C.I.

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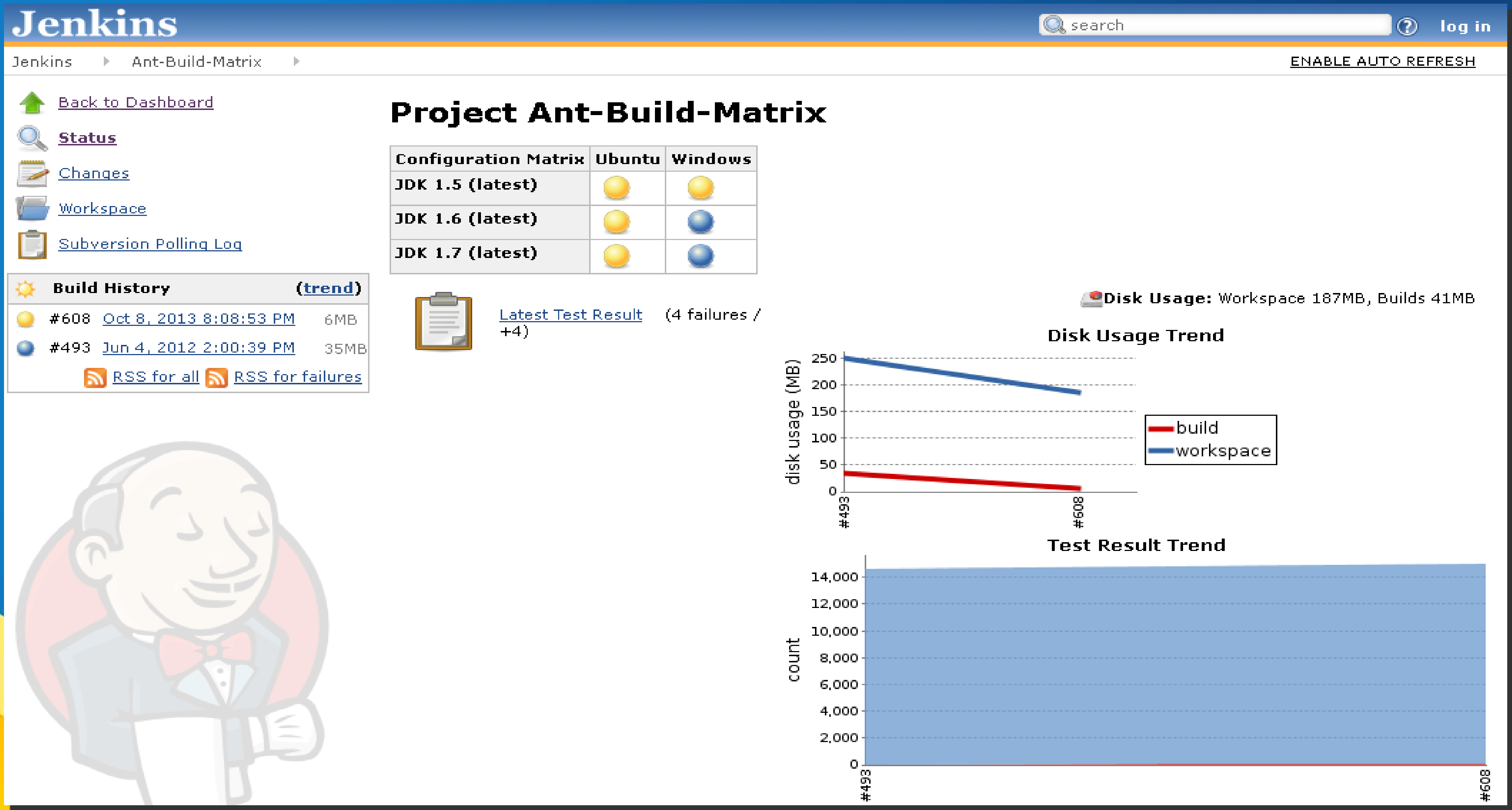


Jenkins

search | log in

Jenkins ▸ Ant-Build-Matrix ▸ ENABLE AUTO REFRESH

- Back to Dashboard
- Status
- Changes
- Workspace
- Subversion Polling Log

Build History (trend)

🟡	#608	Oct 8, 2013 8:08:53 PM	6MB
🔵	#493	Jun 4, 2012 2:00:39 PM	35MB

RSS for all RSS for failures

Project Ant-Build-Matrix

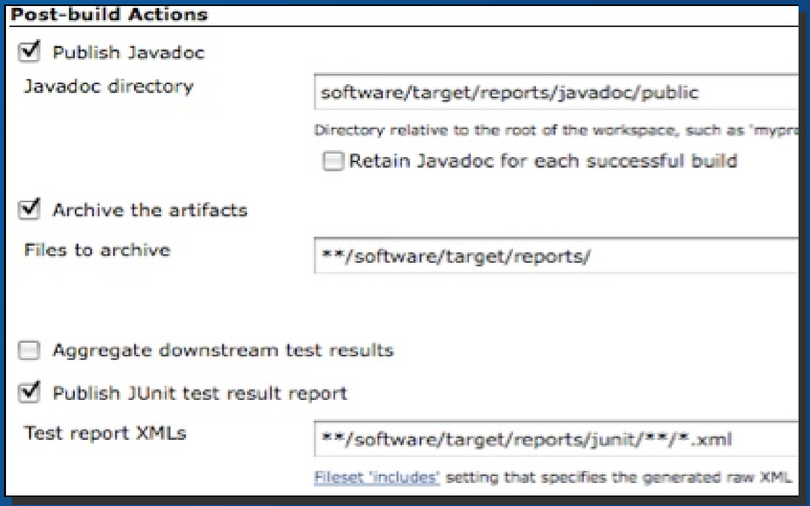
Configuration Matrix	Ubuntu	Windows
JDK 1.5 (latest)	🟡	🟡
JDK 1.6 (latest)	🟡	🔵
JDK 1.7 (latest)	🟡	🔵

Latest Test Result (4 failures / +4)

Disk Usage: Workspace 187MB, Builds 41MB

Jenkins: being efficient with C.I.

- Keep building time low
  - Convention over configuration
  - Multistage integration builds
  - Centralize dependency
  - Fail fast
- E-mail/RSS notification



Post-build Actions

☑ Publish Javadoc

Javadoc directory: software/target/reports/javadoc/public

Directory relative to the root of the workspace, such as 'mypro

□ Retain Javadoc for each successful build

☑ Archive the artifacts

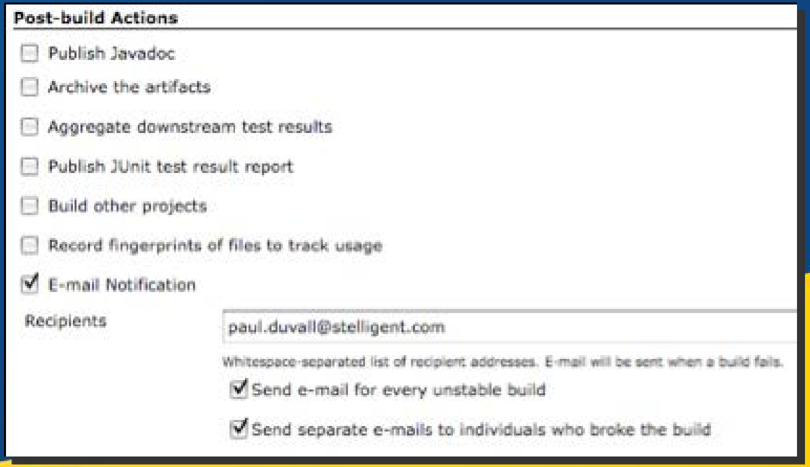
Files to archive: **/software/target/reports/

□ Aggregate downstream test results

☑ Publish JUnit test result report

Test report XMLs: **/software/target/reports/junit/**/*.xml

Fileset 'includes' setting that specifies the generated raw XML



Post-build Actions

□ Publish Javadoc

□ Archive the artifacts

□ Aggregate downstream test results

□ Publish JUnit test result report

□ Build other projects

□ Record fingerprints of files to track usage

☑ E-mail Notification

Recipients: paul.duvall@stelligent.com

Whitespace-separated list of recipient addresses. E-mail will be sent when a build fails.

☑ Send e-mail for every unstable build

☑ Send separate e-mails to individuals who broke the build

Sharing knowledge between teams

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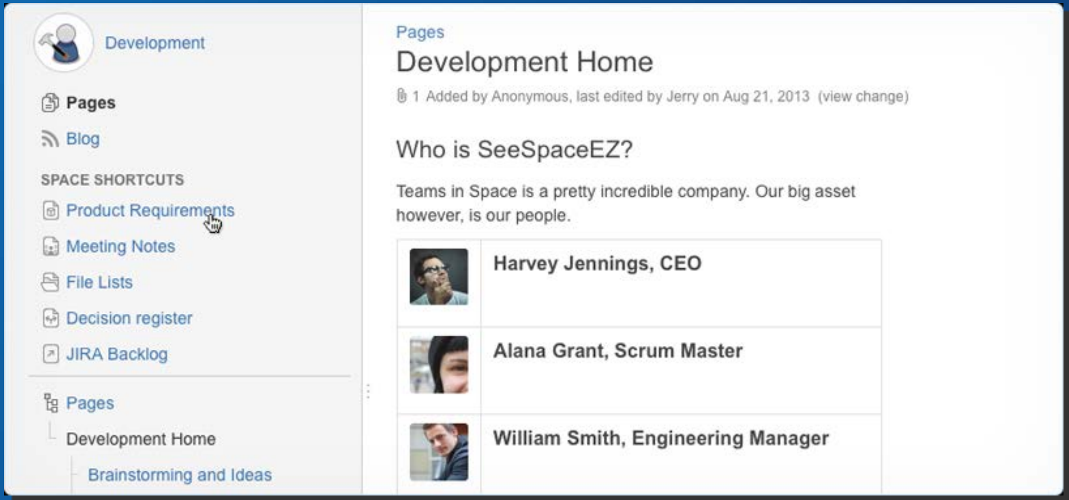
Confluence:

- Per project space
- Groups and user permissions
- Linking with Jira tasks



Pages

Development Home

1 Added by Anonymous, last edited by Jerry on Aug 21, 2013 (view change)

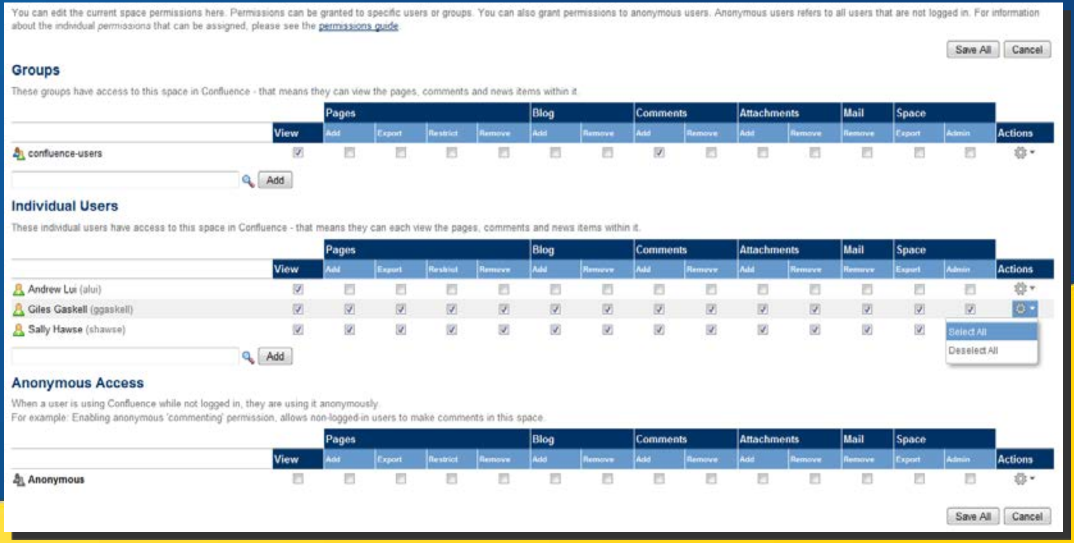
Who is SeeSpaceEZ?

Teams in Space is a pretty incredible company. Our big asset however, is our people.

Harvey Jennings, CEO

Alana Grant, Scrum Master

William Smith, Engineering Manager



You can edit the current space permissions here. Permissions can be granted to specific users or groups. You can also grant permissions to anonymous users. Anonymous users refers to all users that are not logged in. For information about the individual permissions that can be assigned, please see the permissions guide.

Groups

These groups have access to this space in Confluence - that means they can view the pages, comments and news items within it.

		Pages				Blog		Comments		Attachments		Mail	Space		
	View	Add	Export	Restrict	Remove	Add	Remove	Add	Remove	Add	Remove	Remove	Export	Admin	Actions
confluence-users	☑	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	⚙

Individual Users

These individual users have access to this space in Confluence - that means they can each view the pages, comments and news items within it.

		Pages				Blog		Comments		Attachments		Mail	Space		
	View	Add	Export	Restrict	Remove	Add	Remove	Add	Remove	Add	Remove	Remove	Export	Admin	Actions
Andrew Lui (alui)	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	⚙
Giles Gaskell (ggaskell)	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	⚙
Sally Hawse (shawse)	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑		

Anonymous Access

When a user is using Confluence while not logged in, they are using it anonymously.
For example: Enabling anonymous 'commenting' permission, allows non-logged-in users to make comments in this space.

		Pages				Blog		Comments		Attachments		Mail	Space		
	View	Add	Export	Restrict	Remove	Add	Remove	Add	Remove	Add	Remove	Remove	Export	Admin	Actions
Anonymous	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	⚙

References

- [1] NASA - Jet Propulsion Lab Launches Atlassian Into Space: http://blogs.atlassian.com/2012/05/nasa-atlassian-development-tools/
- [2] CERN - The software improvement process – tools and rules to encourage quality:

http://accelconf.web.cern.ch/accelconf/icalepcs2011/papers/thbhmust04.pdf

- [3] APACHE
  - Public Jenkins instance: https://builds.apache.org/
  - Restrictes Jira instance: https://issues.apache.org/jira/

Thanks !

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