Issue tracking and version control services: status update
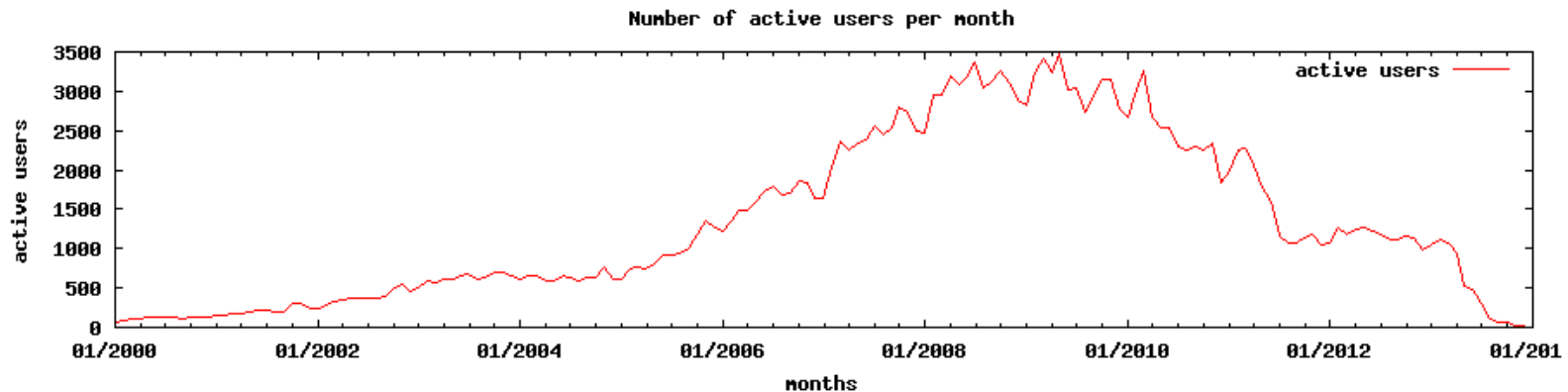
HEPiX Annecy, May 2014

Alvaro Gonzalez Alvarez, CERN IT-PES
on behalf of IT/PES/IS

- ## Version control Service
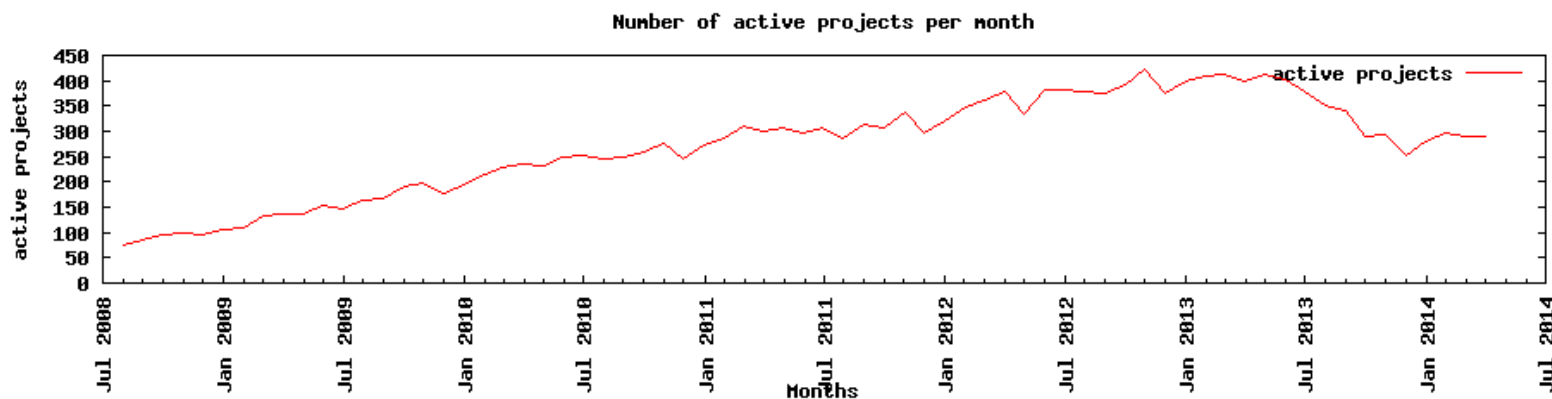 - CVS
  - SVN
  - GiT
    - Gitlab
    - SSH
- ## Jira
- ## CERNforge

- # Closed last autumn (Oct 2013)

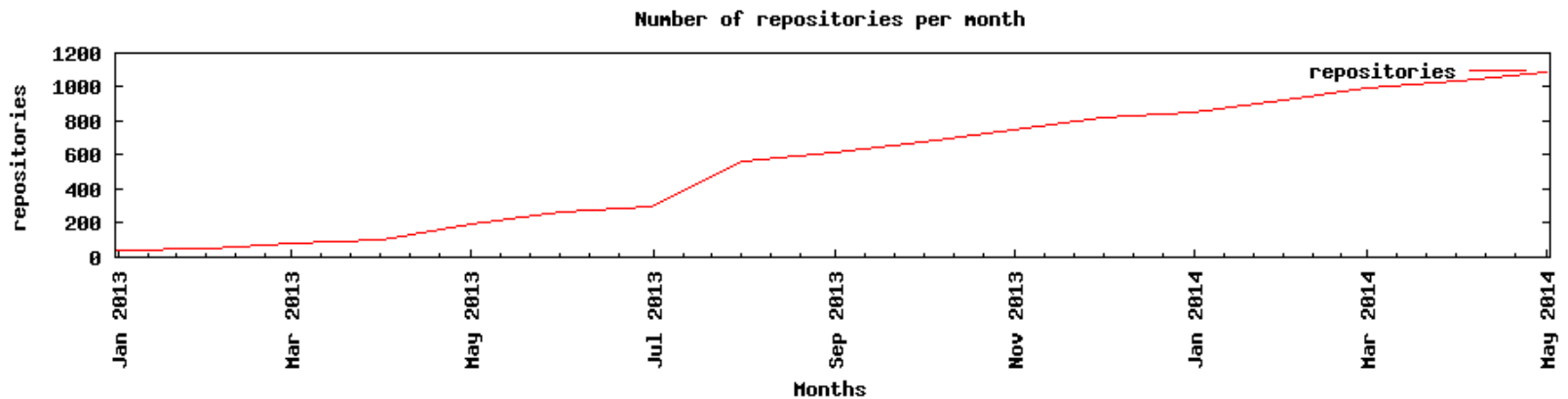 - ## Read only copy available at AFS for librarians only, no support, no web interface.

SUBVERSION
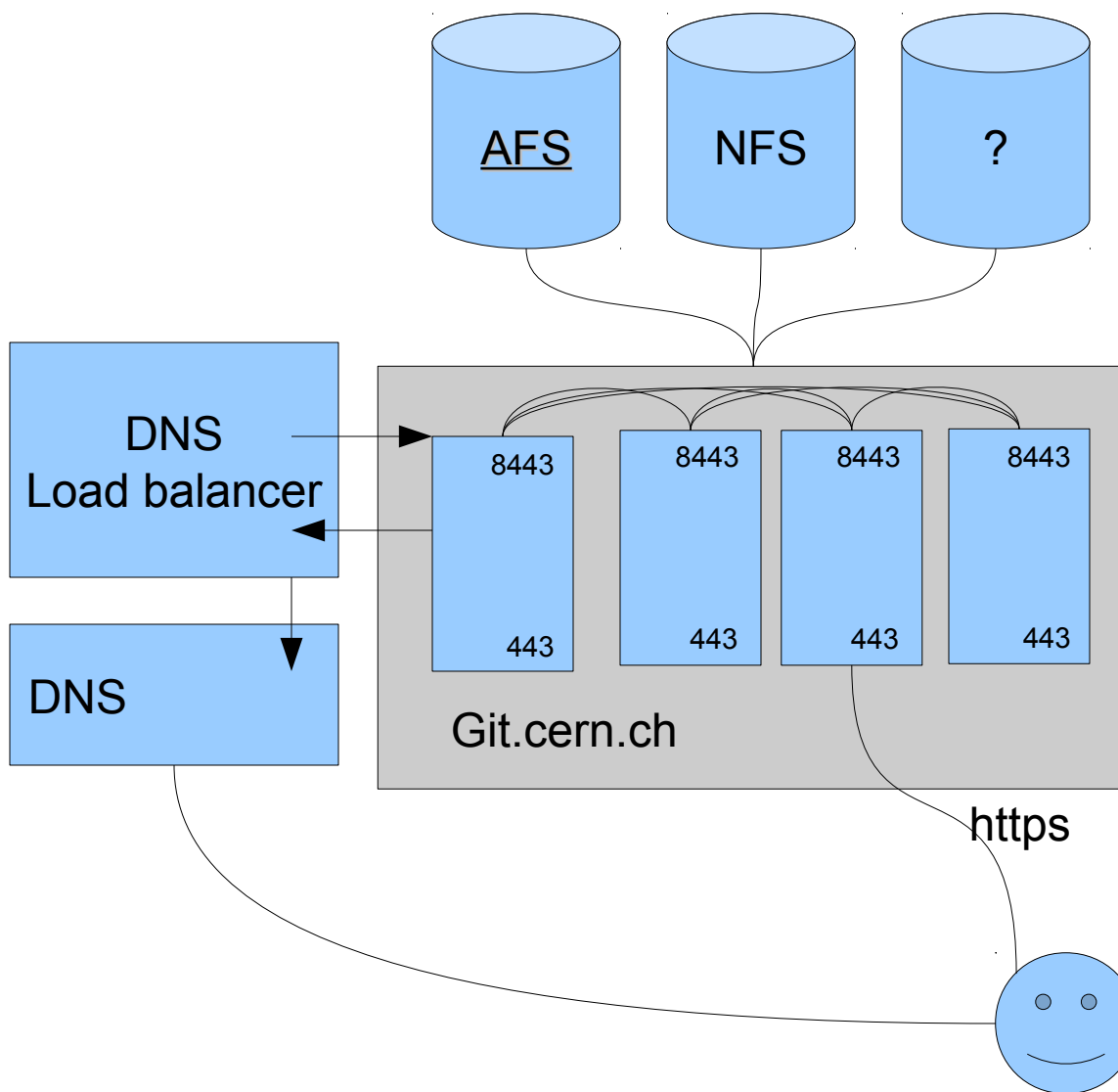
- ## Main VCS for CERN

  – Consolidating the service (learning from GIT)
  – Migration to puppet and SLC6, ongoing

  – 2417 projects ~291 active

  – http://cern.ch/svn

Number of active projects per month

- 1 year old.
  - High growth
  - Consolidating the service
  - 1069 projects ~564 active last month
  - http://cern.ch/git

Number of repositories per month

- VMs
- Puppet
- DNS LB
- Apache LB
- HTTP
- Gitolite3
- FS agnostic

AFS NFS ?

DNS
Load balancer

DNS

Git.cern.ch

8443 8443 8443 8443
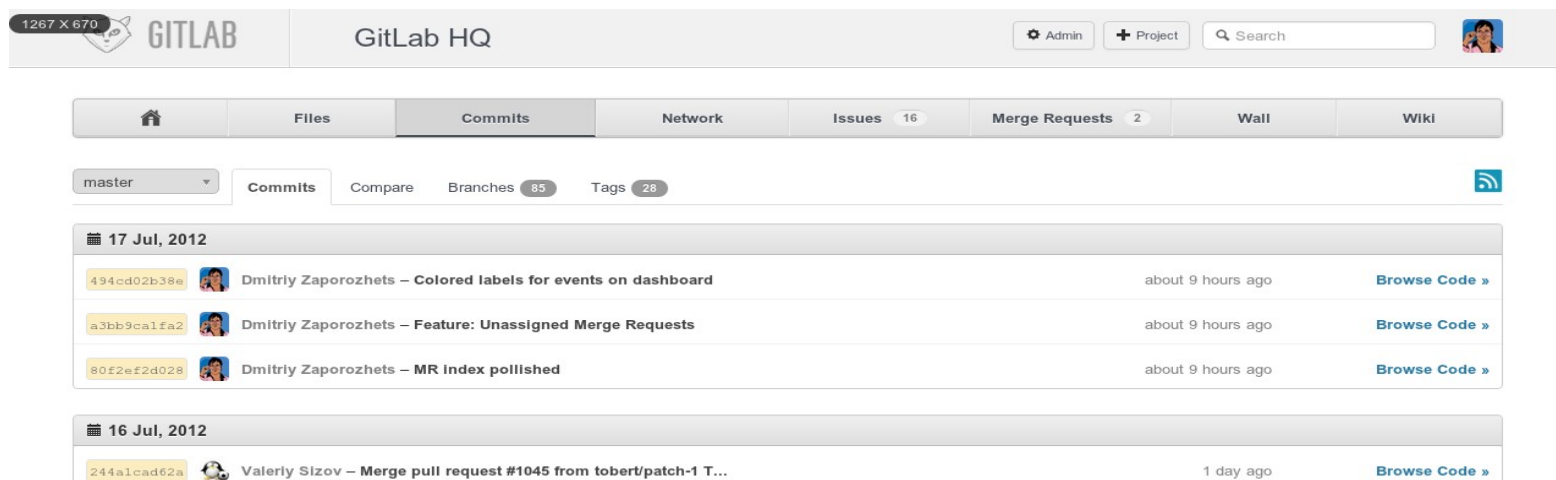
443 443 443 443

https

- Http
  - Public repositories, read only. Web and client
  - CERN public repositories, read only. Web and client. Only CERN IPs

- Https
  - Gitolite3 permissions
  - Caged user hook scripts (chroot)
  - Client authentication methods:
    - Ldap
    - Kerberos
  - Web:
    - Gitweb (SSO integration)
    - Fisheye (proprietary), with code review (optional add-on)
    - Gitlab (optional add-on), pilot phase

- Gitlab "github lookalike" web application.

- Good look and feel.

- Fast change, more features

- Promising and more scalable than the Atlassian stack.

- Pilot phase

- Separate repositories from git.cern.ch

- Pull requests
- Code Reviews
- Issue tracking integration
- Activity feeds
- Online web commits
- ...

- # SSH access for GIT
  - ## Pilot phase
    - ### Security evaluation ongoing
  - ## Multiple authentication methods
    - ### SSH keys
    - ### Kerberos access
    - ### Password

Issue Tracking Service
http://cern.ch/its
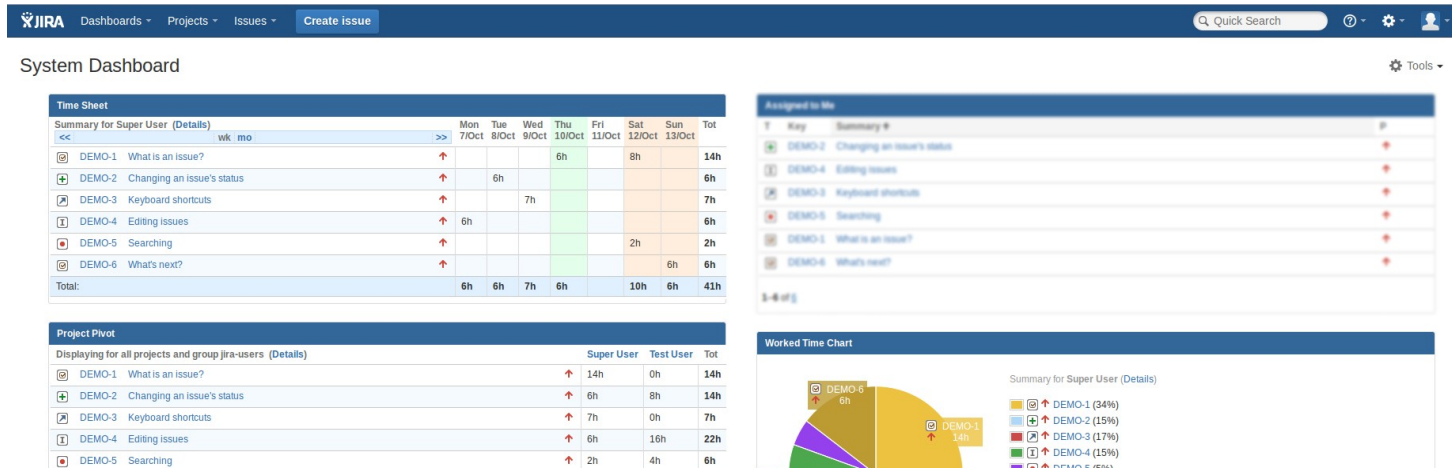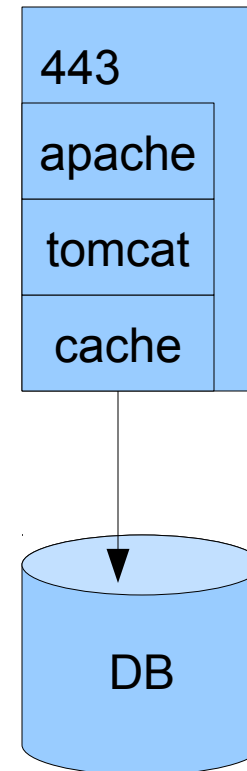
- Commercial product from Atlassian. Web application to track issues, focused in code bugs, but used for all sort of tasks.

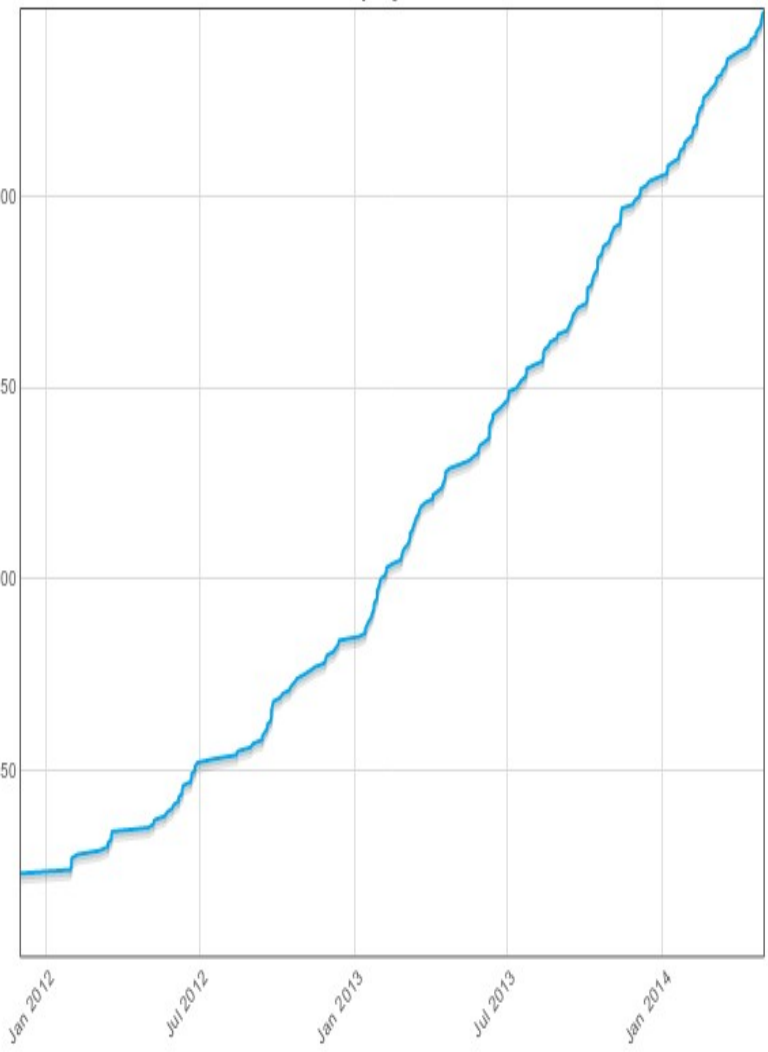- Single machine per instance
- Apache
- Tomcat
- Oracle DB

443

apache
tomcat
cache

DB

- Two Central instance for most needs
  - https://its.cern.ch/
  - https://open.its.cern.ch
- 4 production private instances, for people with special needs.
- Savannah (ROOT, GEANT4, ...) is being migrated to Jira in collaboration with CERN PH-SFT.
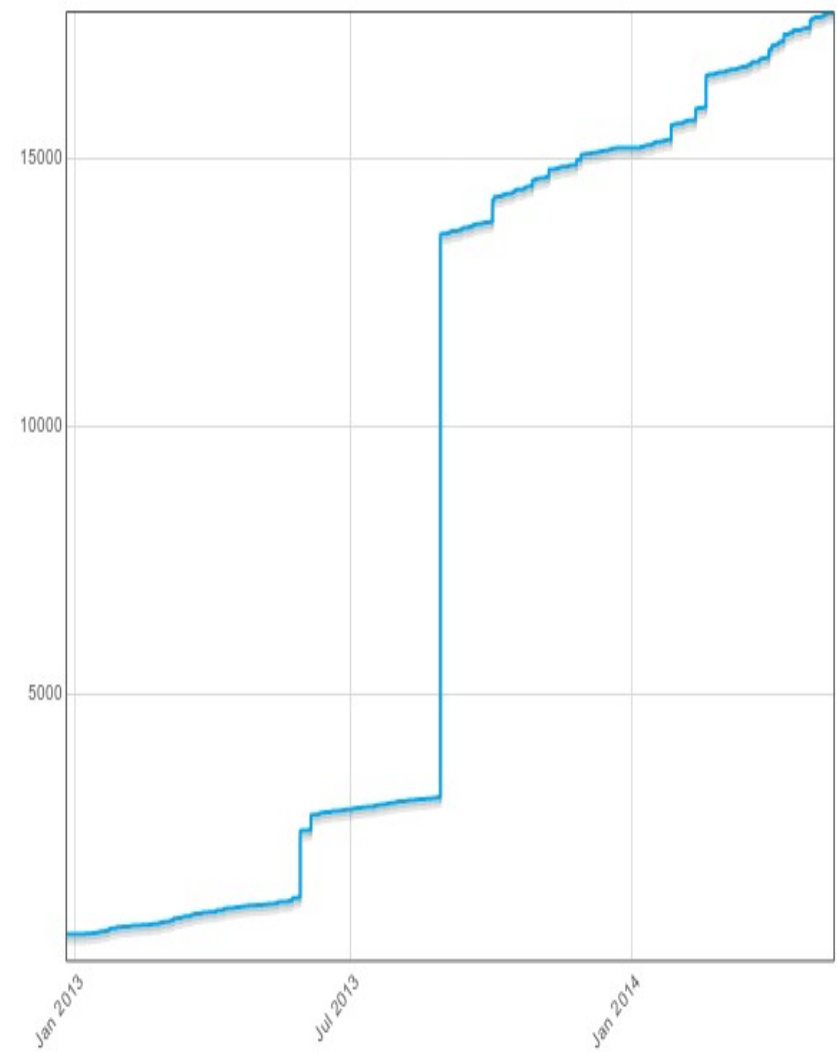- Migration to puppet, ongoing.

Number of projects over time

Number of users over time

- CERN Single Sign On (SSO) integration login
  - Use egroups as Jira groups transparently
  - Mobile login added
  - Using Crowd SSO as well so other Atlassian products can be integrated transparently
- GIT and SVN, reference Jira tickets from commits, see them in Jira
- Fisheye+Crucible integration, code review and create issues in Jira.
  - Lots of administration overhead, scalability issues.

- Portal to manage: Version control and Issue tracking.
  - Create, administer resources
  - Different roles (User, librarian, support).
  - Still adding new features
  - http://cern.ch/forge

CERN IT Department

?

Mine: Anyone with experience managing Gitlab?

- Backup slides

CERN **IT** Department

- GiT is a distributed version control system.

- It is *mainly* used to track changes of *source code* for an individual or a group of people.

- In contrast to subversion, it does not need a central point to share the code.

- In production since:
    Feb 2013

- http://cern.ch/git

git

- Why not …<insert_other_solution>?
  - Gitosis. deprecated
  - Gitorious. Non really free
- Free software
- Used widely
- Easy to adapt to our needs (egroups integration)
- Easy to manage permissions, supports delegation and version control