



Issue tracking and version control services: status update

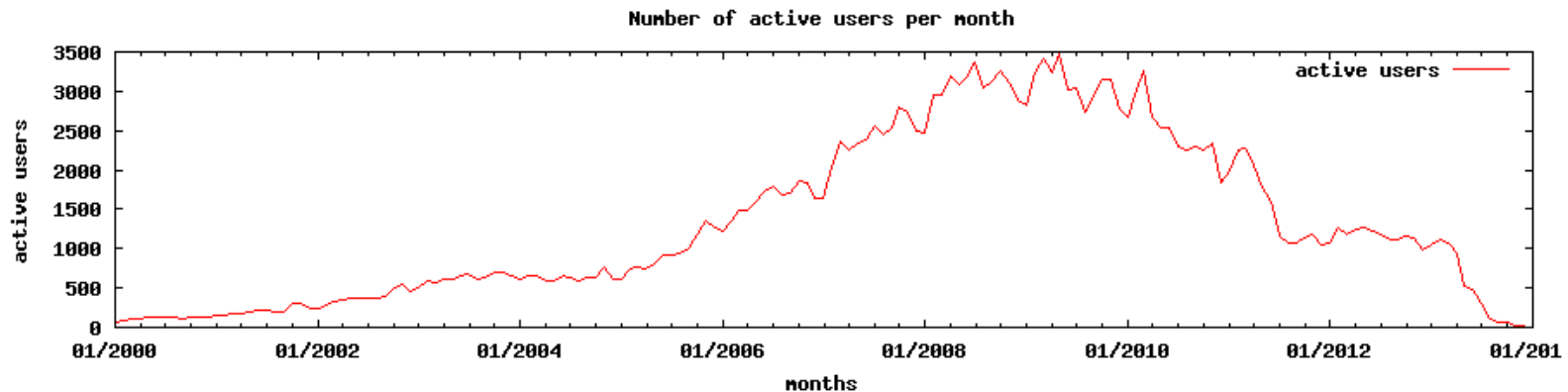
HEPiX Annecy, May 2014

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

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



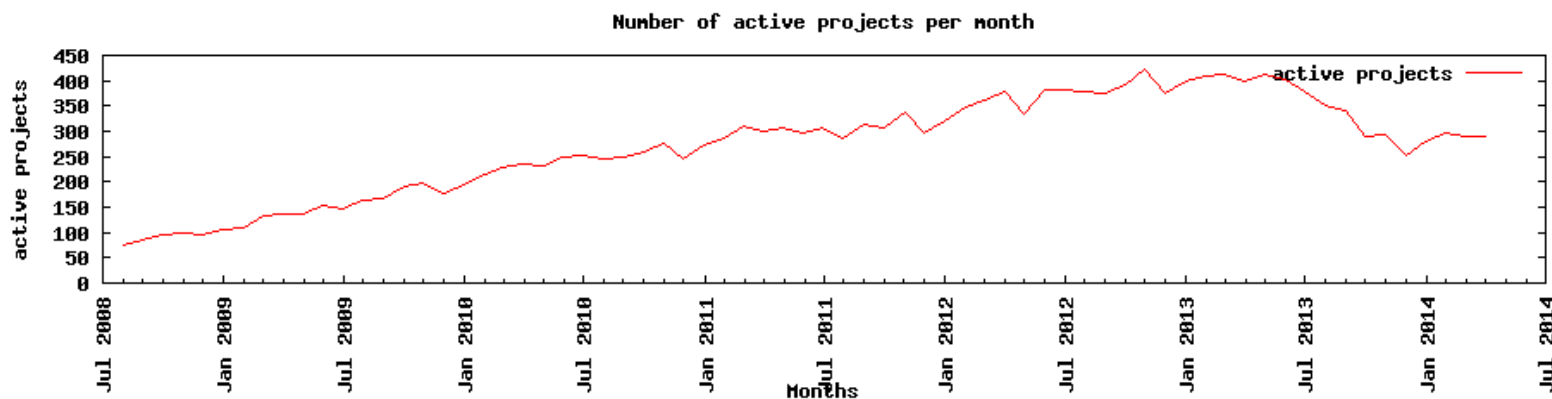
- Closed last autumn (Oct 2013)
 - Read only copy available at AFS for librarians only, no support, no web interface.



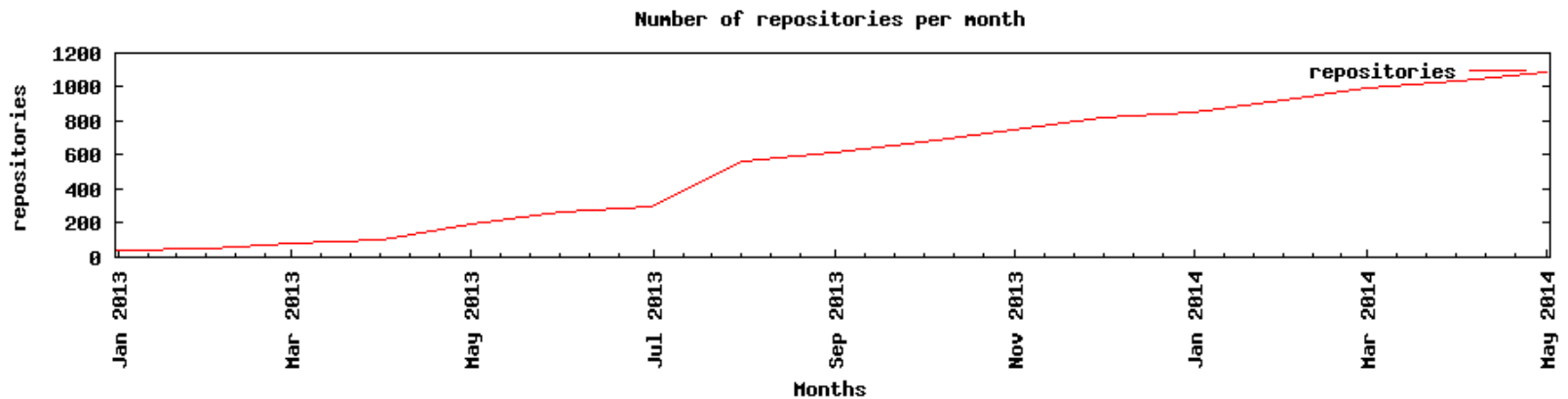


- Main VCS for CERN

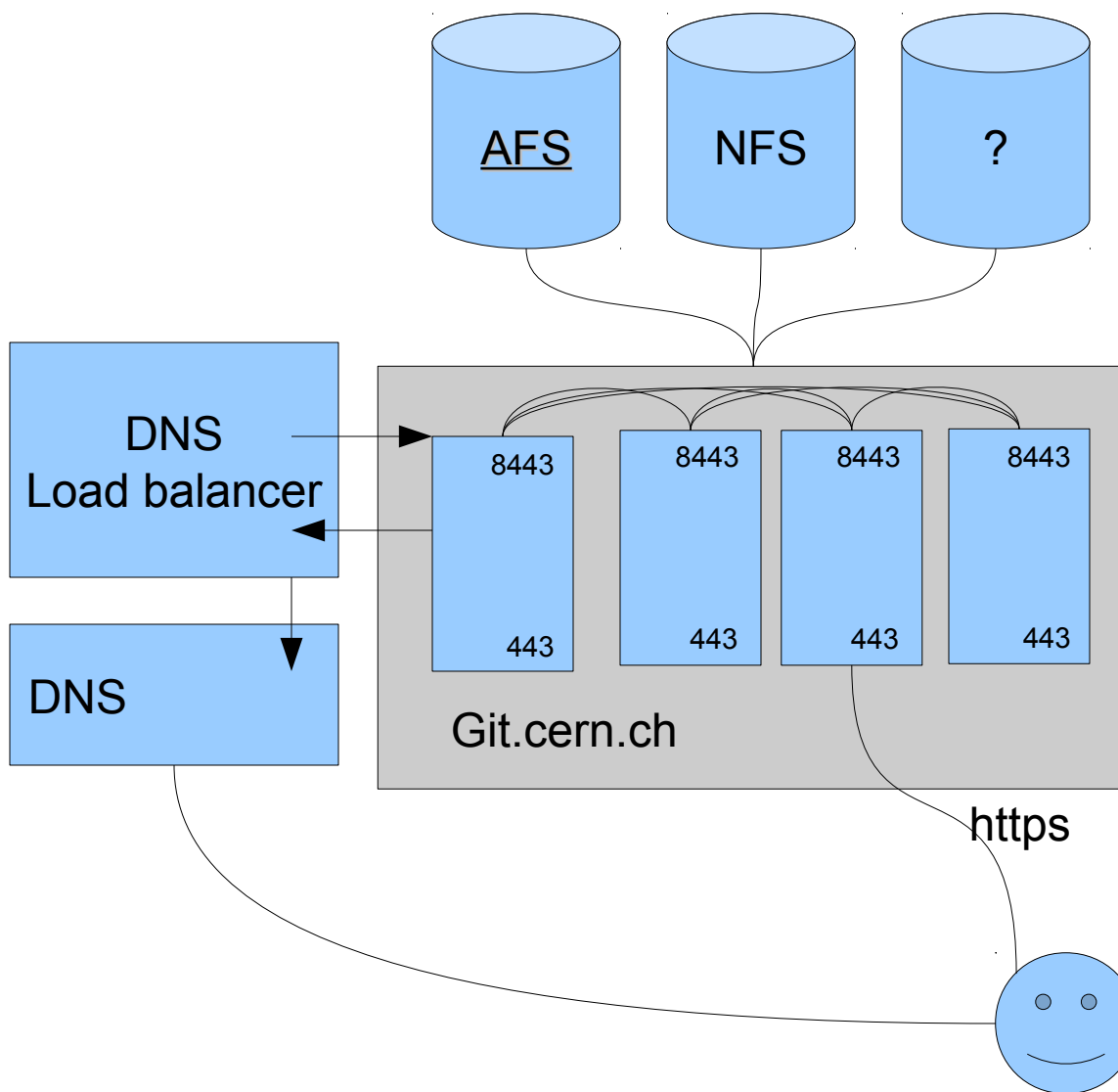
- Consolidating the service (learning from GIT)
- Migration to puppet and SLC6, ongoing
- 2417 projects ~291 active
- <http://cern.ch/svn>



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



PES GIT service schema



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

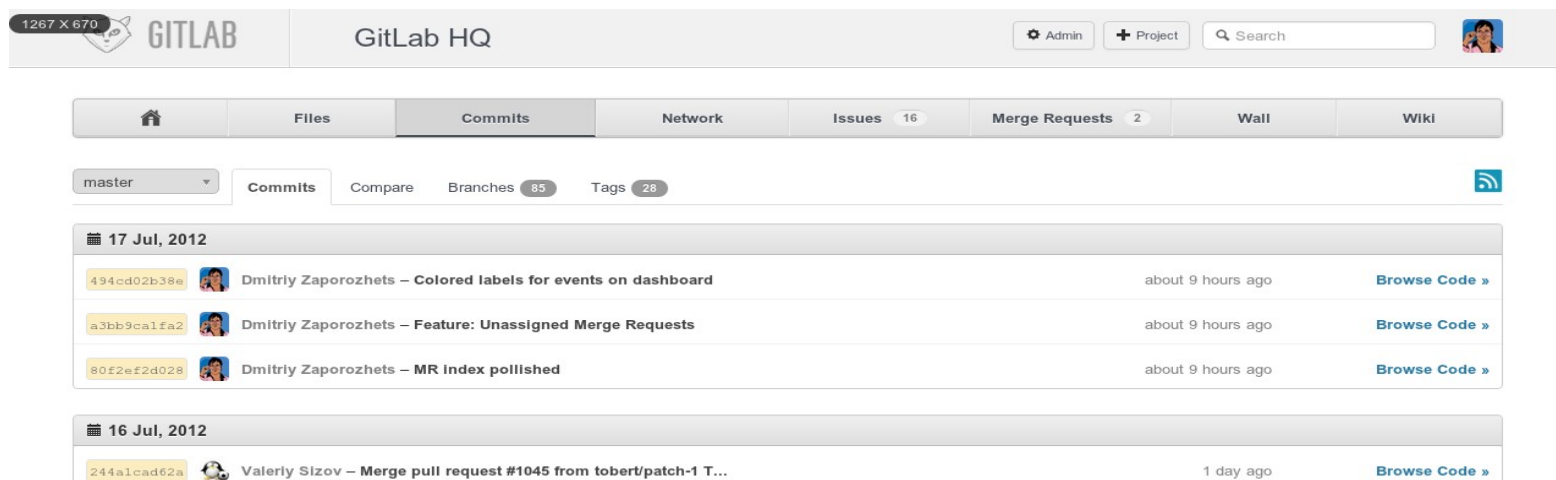
- Http
 - Public repositories, read only. Web and client
 - CERN public repositories, read only. Web and client. Only CERN IPs
- Https
 - Gitolite3 permissions
 - Caged user hook scripts (chroot)
 - Client authentication methods:
 - Ldap
 - Kerberos
 - Web:
 - Gitweb (SSO integration)
 - Fisheye (proprietary), 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



PES Gitlab features

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



The screenshot shows the GitLab web interface. At the top, there's a navigation bar with the GitLab logo, the text 'GitLab HQ', and buttons for 'Admin', 'Project', and a search bar. Below this is a secondary navigation bar with tabs for 'Files', 'Commits', 'Network', 'Issues' (16), 'Merge Requests' (2), 'Wall', and 'Wiki'. The 'Commits' tab is active, showing a list of commits for the 'master' branch. The commits are grouped by date: '17 Jul, 2012' and '16 Jul, 2012'. Each commit entry includes a commit hash, a user profile picture, the commit message, the time since the commit, and a 'Browse Code' link.

Date	Commit Hash	Author	Message	Time	Action
17 Jul, 2012	494cd02b38e	Dmitriy Zaporozhets	Colored labels for events on dashboard	about 9 hours ago	Browse Code »
	a3bb9ca1fa2	Dmitriy Zaporozhets	Feature: Unassigned Merge Requests	about 9 hours ago	Browse Code »
	80f2eF2d028	Dmitriy Zaporozhets	MR Index polished	about 9 hours ago	Browse Code »
16 Jul, 2012	244a1cad62a	Valeriy Sizov	Merge pull request #1045 from tobert/patch-1 T...	1 day ago	Browse Code »

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

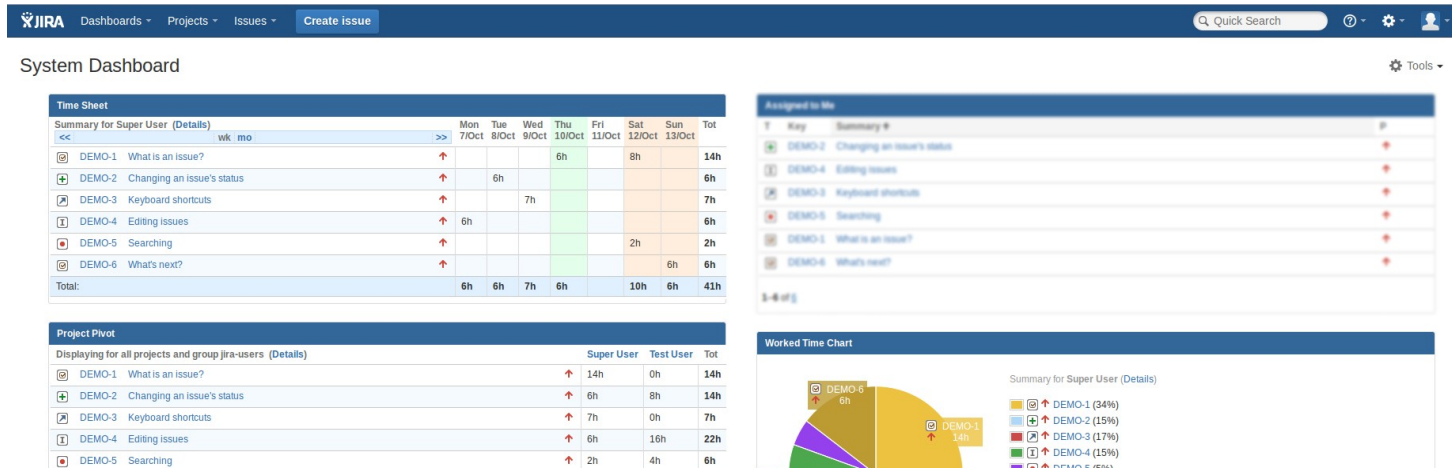


Issue Tracking Service

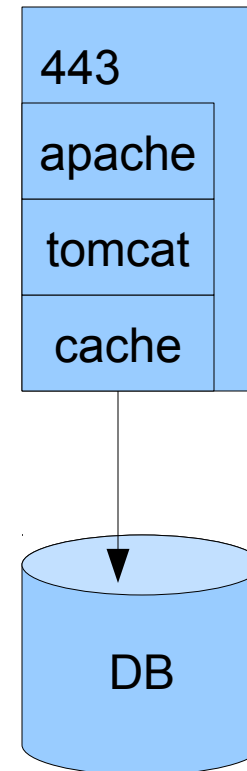
<http://cern.ch/its>



- 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

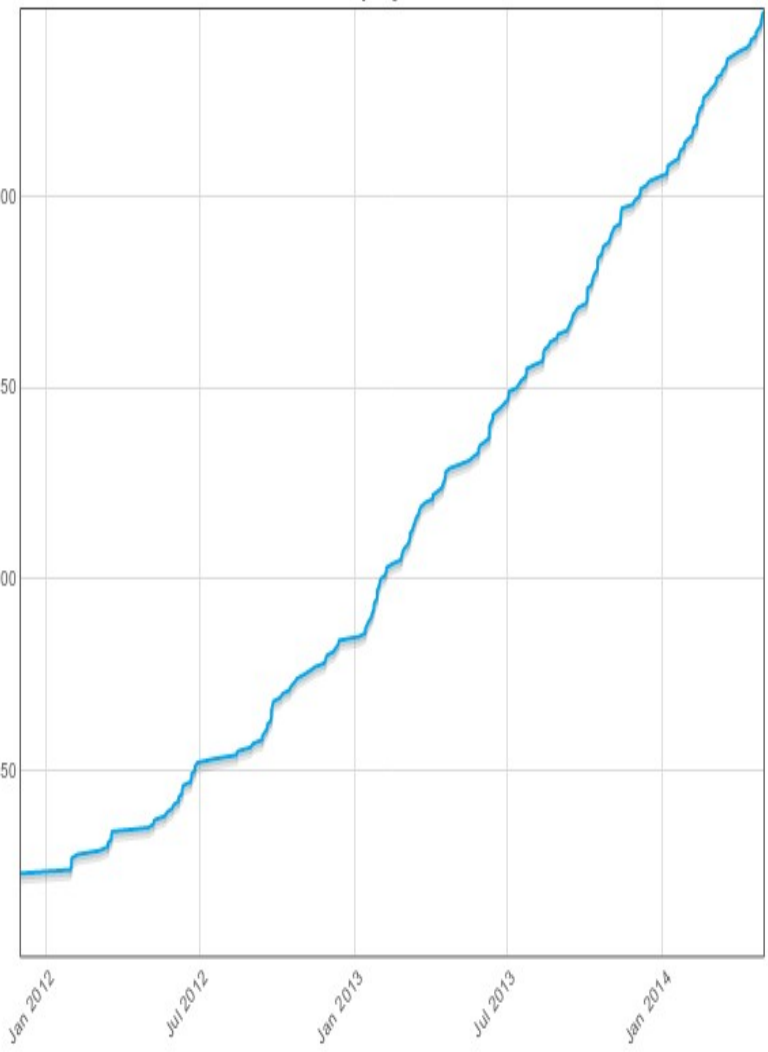


- Two Central instance for most needs
 - <https://its.cern.ch/>
 - <https://open.its.cern.ch>
- 4 production private instances, for people with special needs.
- Savannah (ROOT, GEANT4, ...) is being migrated to Jira in collaboration with CERN PH-SFT.
- Migration to puppet, ongoing.

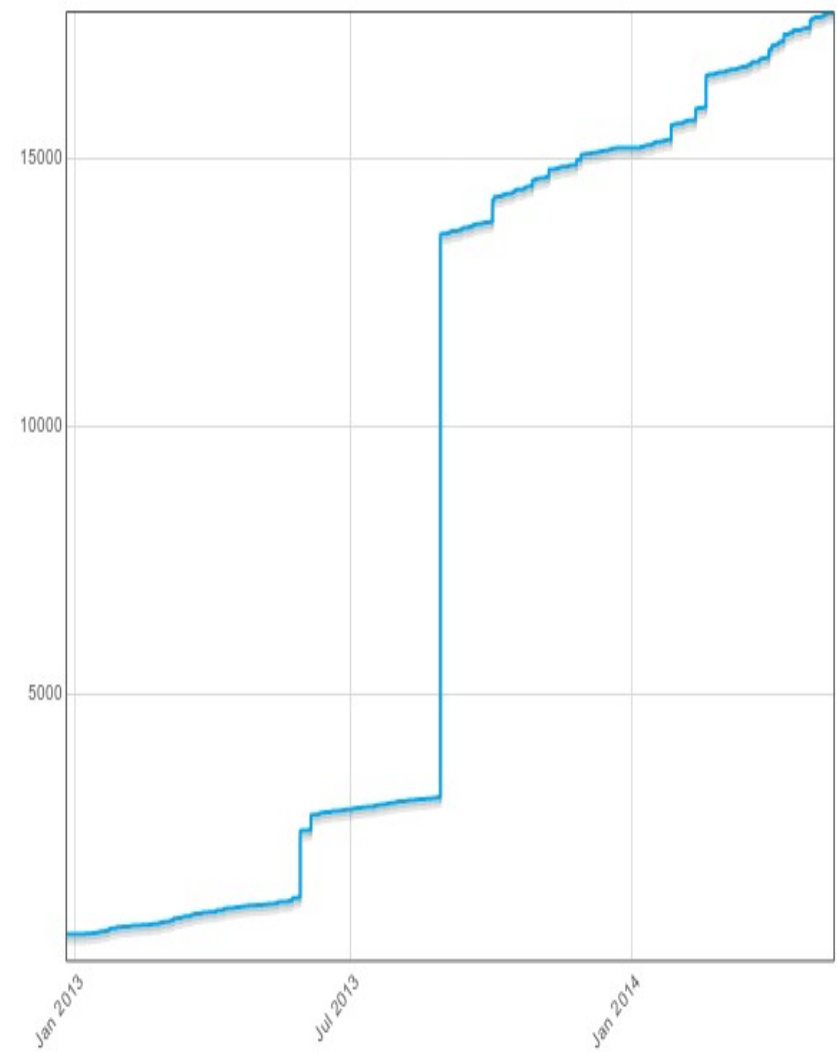


PES Central Jira Statistics

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>

The screenshot shows the CERN Forge (beta) web interface. The top navigation bar includes links for Home, New project, My projects, Librarian projects, Admin projects, and JIRA. The user is logged in as Alvaro Gonzalez Alvarez. The main content area is titled "Browse Librarian Projects" and displays a table of projects.

All projects	Name	Librarian	Status	Type
SVN projects	licmon_backup	liblicmo	active	SVN
Git projects	agonzale	agonzale	active	SVN
JIRA projects	boinc	pete	active	SVN
	jira	jiradmin	active	SVN
	remove-test	agonzadm	active	SVN
	test-gkoloven	agonzale	active	SVN
	Alvaro-test-re	agonzale	active	SVN
	boinc	project-lhcathome-it	active	GIT

On the right side of the interface, there are sections for "FREQUENTLY ASKED QUESTIONS" (with links to JIRA FAQ, SVN FAQ, and Git FAQ) and "SERVICES" (with links to JIRA, SVN, and Git).

PES Questions?

?

Mine: Anyone with experience managing Gitlab?

- Backup slides

- 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>



- 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