

Update on Version Control Services at CERN

Giacomo Tenaglia, Hugo Jonatan Hugosson,
Artur Wiecek, Alvaro Gonzalez Alvarez,
Manuel Guijarro

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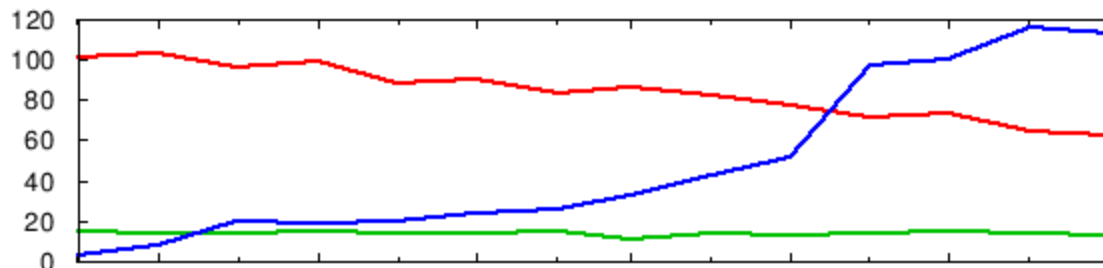
- Overview of VCS at CERN
- Subversion hosting
- VCS Roadmap
- Conclusions

- CVS
 - Started on 2000
 - >60 Active Projects, >23K commits/month
 - AFS-centric
- LCGCVS
 - Started on 2002
 - ~20 Active Projects, >22K commits/month
 - FS-based (faster access)
- Subversion
 - Pilot: June 2008, Production: January 2009
 - >110 Active Projects, >33K commits/month

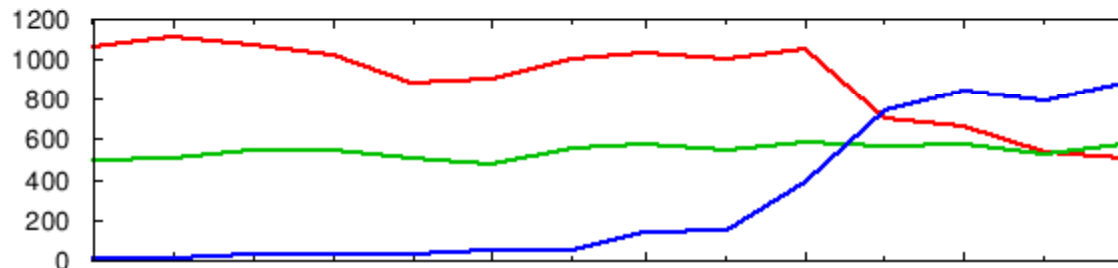
- CVS to Subversion Migration
 - Campaign started on January 2009
 - 34 CVS projects have migrated(*) so far, including:
 - ATLAS (Offline, Groups and Documents)
 - CMS Online and DAQ
 - CASTOR
 - 0 LCGCVS projects have migrated(*) so far
 - Tentative CVS shutdown (write access):
 - ~~End 2009~~
 - ~~End 2010~~
 - Beginning 2011

(*) based on spontaneous declarations by librarians

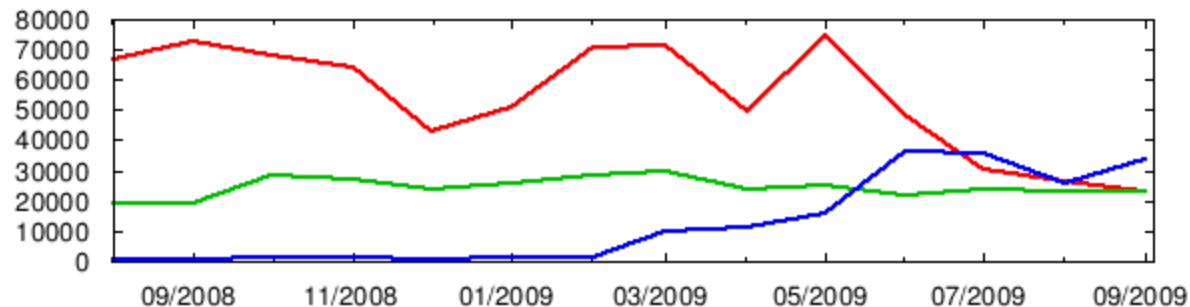
Number of active projects per month



Number of active users per month

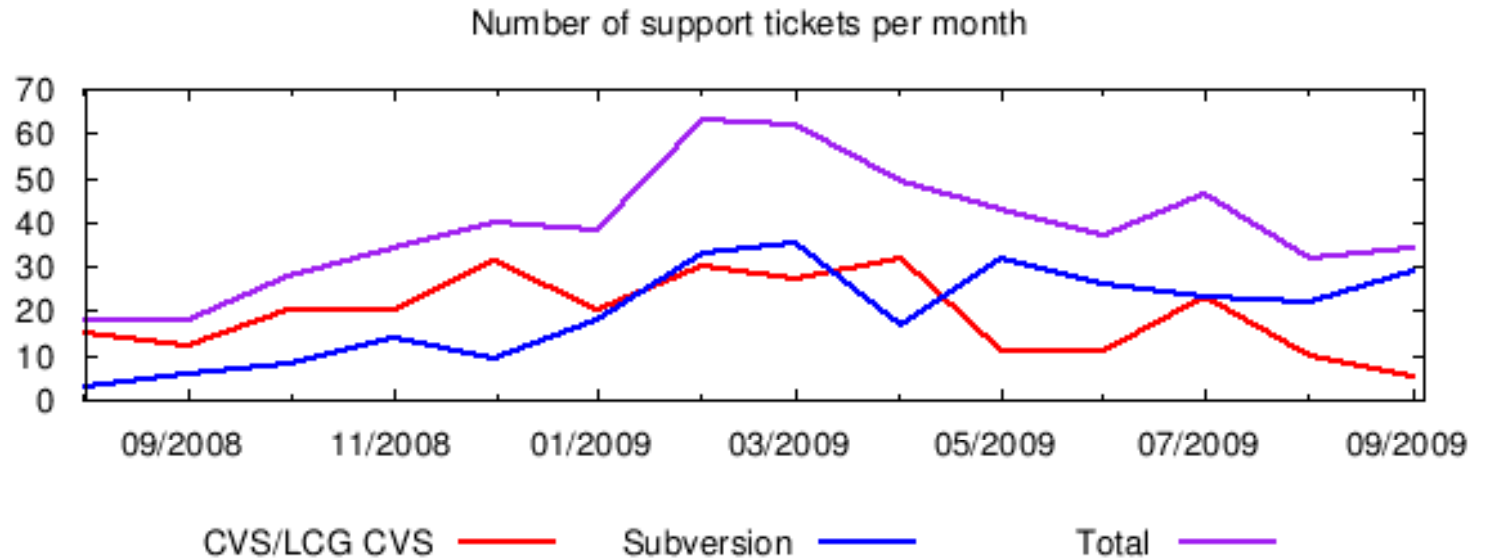


Number of commits per month



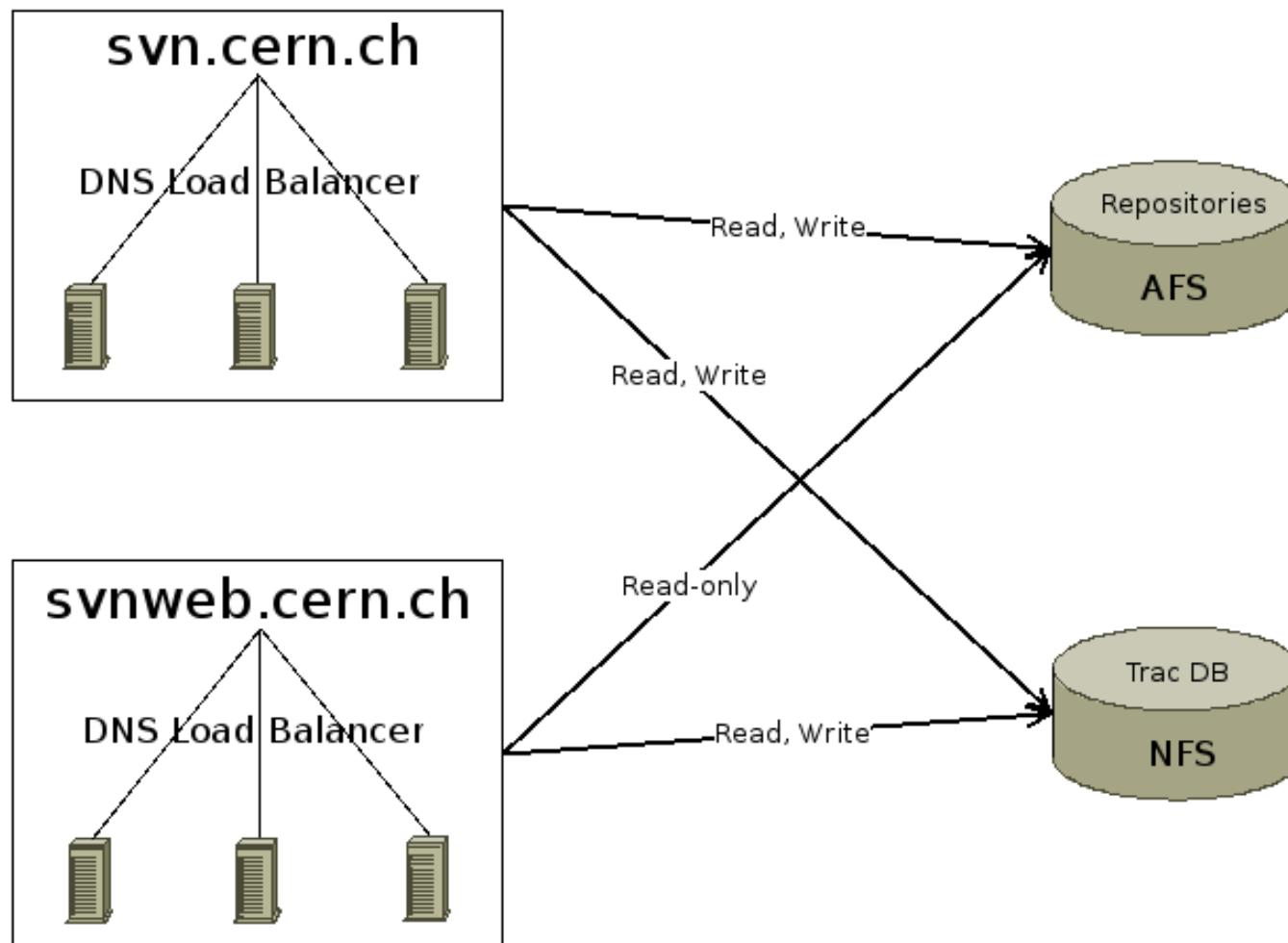
CVS — LCG CVS — Subversion —

DES Support Requests



Golden Rule:

“Thou Shalt Not Provide Personalizations”



- Repository access
 - “Core business”
 - Restricted shell (SVN+SSH)
 - Minimal Webserver config (HTTPS)
 - Hooks chrooted
- Web interface(s)
 - WebSVN
 - Trac (yes, it's also a ticketing system)
 - Standard CERN SSO authenticated access

- Administration delegated to librarians:
 - AuthZ management
 - Versioning of config files
 - Hooks personalization
 - Trac administrator privileges
- Usage statistics
- Personal repositories
 - Lifetime = account lifetime
 - Limited quota

- Librarians and Users have influence on:
 - Architecture and Standards (eg: NFS for Trac)
 - Functional Requirements (eg: HTTPS Access)
 - Usability Requirements (eg: Migration Recipes)
 - KPI (eg: Single repository availability)
- SVN Forum twice a year:
 - Meet users in non-stressful situations
 - Review of major changes and incidents
 - Presentation of current development efforts
 - Proposals for future changes and discussion

- Built on top of standard CERN IT tools:
 - HelpDesk
 - Change Management (TBD)
 - Incident Management (Remedy)
 - Access Management (E-Groups, CERN SSO)
 - Monitoring and Control (LEMON, SLS)
 - IT Operations (SLC, Quattor, TSM, AFS)
- Complemented by standard DES tools:
 - Functional Monitoring (Oracle EM)
 - Extended IT Operations (OffSite Backup)
 - NAS-based storage (NFS)

- CVS Migration
 - “Tags Blues”
 - Big success stories help.. sometimes
 - 100% User-driven
- Not your “standard” FLOSS-based service
 - AFS limitation on max files per dir: upgrade to SVN 1.5 Server-side
 - “Endless checkout” problem for statistics generation: change tool

- Clients madness
 - “1.5 is strongly recommended for branching/merging” (SVN Book)
 - SL5 has only 1.4
 - Server is 1.5 (“version envy”)
- Security is a trade-off
 - Less flexibility
 - Slower request fulfillment
- Full-blown test environment/sandbox
 - Lack of it

- LCGCVS: Migration to “standard” CVS
 - Measure performance
- CVS: Guess what ?
 - We rely on librarians will..
- SVN: Usability and Maintainability
 - User-centricness (docs, “My projects” page)
 - Fully move to NFS Storage

- VCS hosting is not trivial:
 - Users know clearly what they want (eg: [Trac popularity](#))
 - Being up to date is essential
- Communication with Users is useful:
 - Are we correctly measuring our Service ?
 - Are we implementing the right standards ?
 - Which percentage of the functionalities are actually used ?
- ITIL (in our case) works!

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Thanks for listening!

[http://cern.ch/\(\(lcg\)?cvs|svn\)](http://cern.ch/((lcg)?cvs|svn))