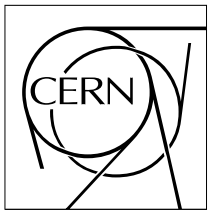
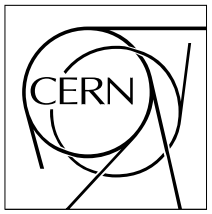


Status of the central CVS service at CERN.

J.Manuel Guijarro
October 2002

PS/Unix Infrastructure Section
IT Division, CERN



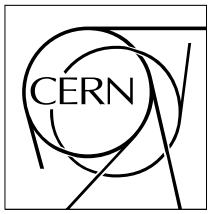
Status of the Central CVS service at CERN

Outline:

- Background
- Selected Architecture
- Analysis of User Requirements
- Tests Results (Performance and reliability)
- Tests Conclusion
- Current Status
- Pending issues

J.Manuel Guijarro
October 2002

PS/Unix Infrastructure Section
IT Division, CERN



Status of the Central CVS service at CERN

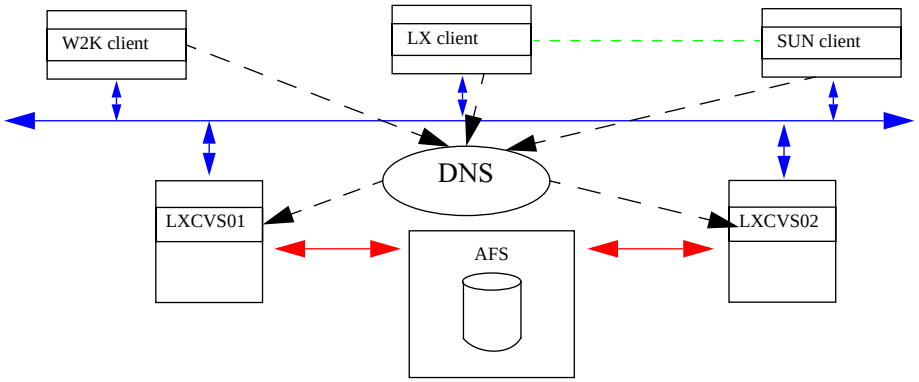
Background:

- Users requested the setup of Central CVS service
- User Requirements Collection (Existing CVS services)
- Architecture Proposal
- Constrain: Define a service to address user requirements within available resources (Weight Requirements).

J.Manuel Guijarro
October 2002

PS/Unix Infrastructure Section
IT Division, CERN

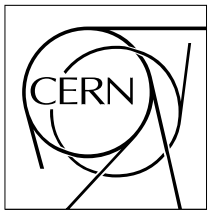
Selected Architecture: Cheap HA



.

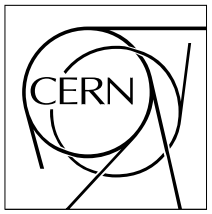
Advantages: No single point of failure, Scalable, No human intervention, No DiskArray, High Manageability, Hardware already available

Disadvantages: AFS and DNS dependency (already the case for almost everybody).



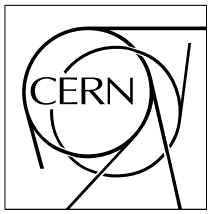
Analysis of User Requirements (I):

- H.A. Downtime: No resources => Cheap H.A.
- CVS locks monitoring: Have to be implemented.
- # of repositories: Its Maintenance Cost will be linked to the central CVS service evolution.
- Performance: Acceptable in all proposed architectures (see tests results).
- Scalability: Load Increase=> Add new nodes



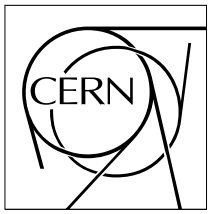
Analysis of User Requirements (II):

- Manageability: Have to be implemented. New Projects Registration, Access Granting to Librarians, etc.
- Access Schemes: pserver, kserver and SSH.
  - CVS + Kerberos debugging (Thanks Rainer + Ignacio): ISS=>krb.realms/SRVTAB
  - Restricted Shell implementation (Thanks Lionel + Jan Iven)
- CVS data integrity: AFS backup+cvsupd+castor
- Migration of existing projects: Unknown
- Monitoring system: CNSURE (or replacement)



Analysis of User Requirements (III):

- UNIX and Windows Accessibility: 1 FTE (few months) for packaging + a named contact for updates and user problems.
- CVSWEB/Bonsai: Central WEB Servers.R/O. Fellow
- Bugzilla and lxr: Not CVS. Not implemented.
- Project Management features: Expensive NO-CVS features which fall out of the scope.
- LCG CVS Requirements (Torre Wenaus): Included in the original list.



Status of the Central CVS service at CERN

Tested Applications:

abi-1.0.1 - 51 MB, 4699 files

octave-2.0.14 -18 MBytes, 3306 files

mrproject-0.5.1 -4Mbytes, 434 files-

- On 6 configurations:

  KER/AFS: Kerberos IV access; AFS Repository; ISSCVS

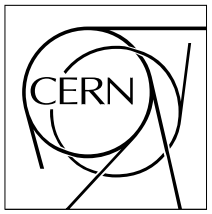
  KER/UFS: Kerberos IV access; Local Repository; ISSCVS

  PRO/AFS: Kerberos IV access; AFS Repository; Production

  PRO/UFS: Kerberos IV access; Local Repository; Production

  SSH/UFS: SSH access; Local Repository; ISSCVS

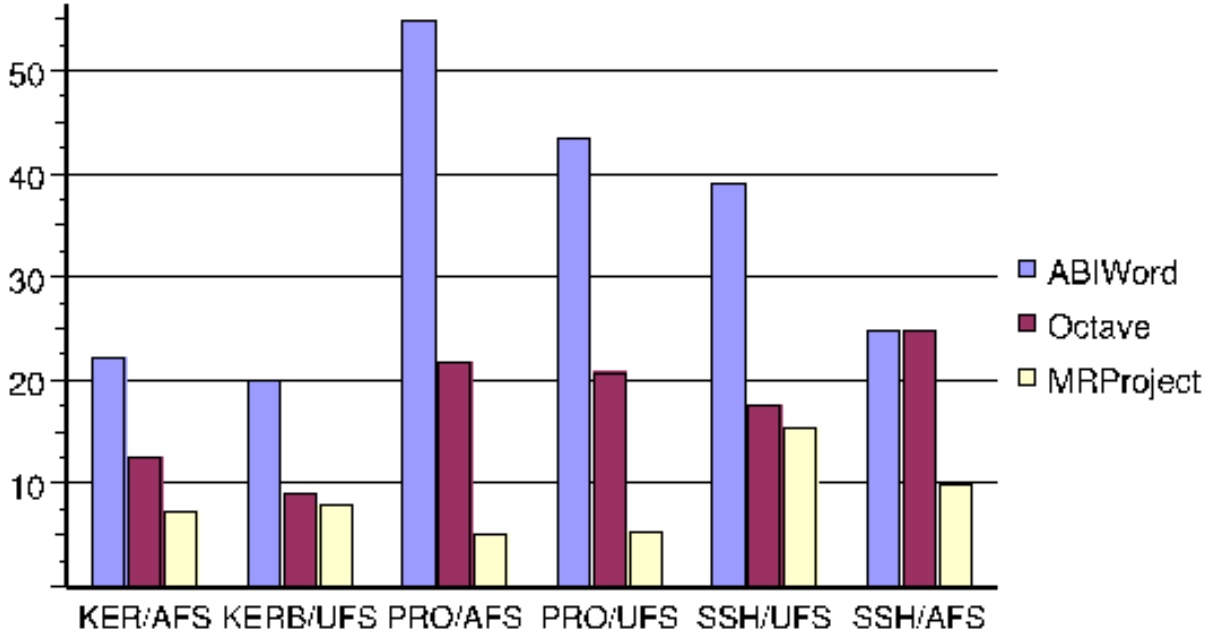
  SSH/AFS: SSH access; AFS Repository; ISSCVS

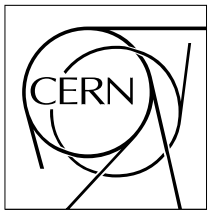


Status of the Central CVS service at CERN

Check Out Results:

	KER/AFS	KERB/UFS	PRO/AFS	PRO/UFS	SSH/UFS	SSH/AFS
ABIWord	22.129	19.998	54.937	43.431	39.127	24.916
Octave	12.634	8.98	21.782	20.771	17.57	24.916
MRProject	7.253	7.906	5.091	5.243	15.46	9.859

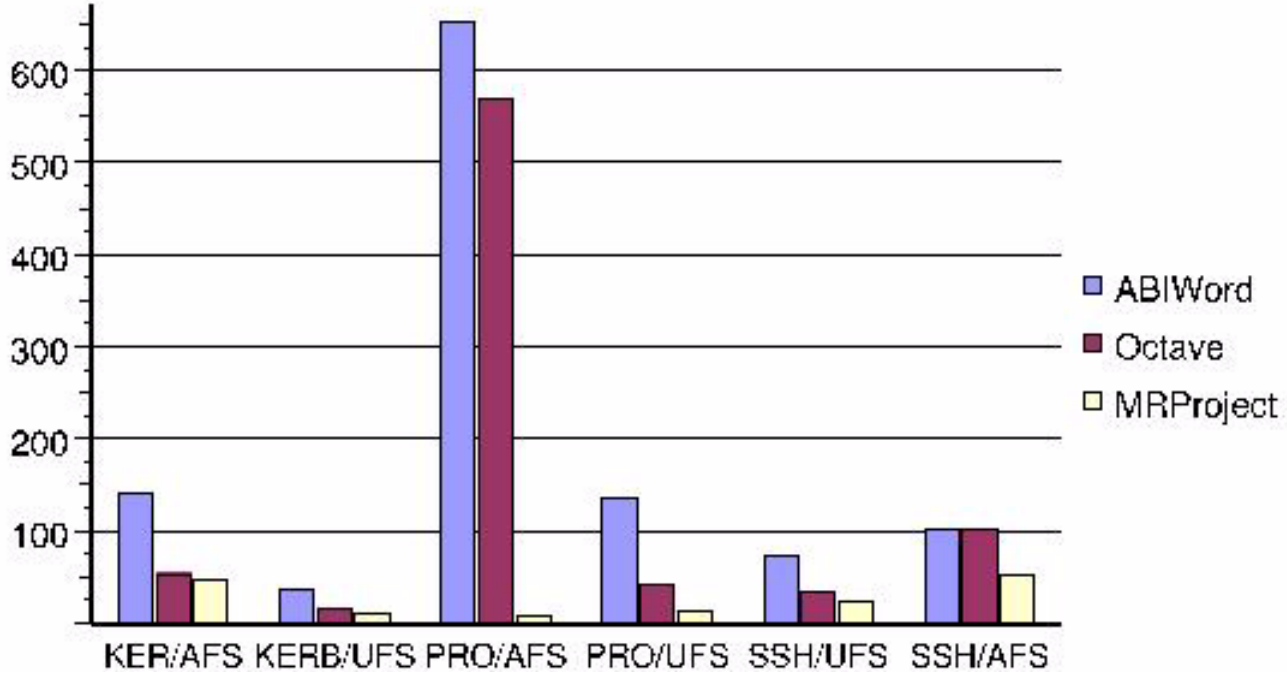


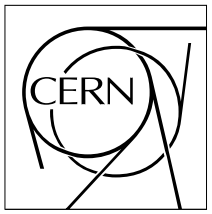


Status of the Central CVS service at CERN

Check In Results:

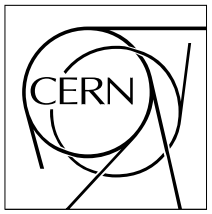
	KER/AFS	KERB/UFS	PRO/AFS	PRO/UFS	SSH/UFS	SSH/AFS
ABIWord	142.394	35.905	653.922	135.564	72.553	103.42
Octave	54.014	16.665	569.563	42.358	33.69	103.42
MRProject	48.466	12.076	7.19	14.028	24.4	52.633





Tests Results:

- Sequential access: to time CO/CI
- Concurrent access: to check CVS locks creation
- Local Repository.vs. AFS Repository: A bit faster. Both Acceptable.
- CVS Kerberos IV.vs. SSH access: A bit faster but SSH also needed (CVS users from outside CERN).
- CVS Locks: No more in AFS than in local file system
- Transparent Fail-over takes less than 30 seconds
- Conclusion: Architecture accepted => Implementation.



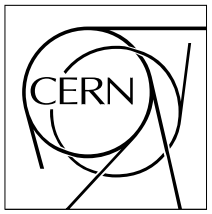
Status of the Central CVS service at CERN

Current Status:

- Being used in Production by Anaphe
- Being evaluated by Atlas before migration
- Being tested by LCG
- Preparing IT/CO/BE migration
- CVS Locks monitoring system: Working
- CVSUP repository mirroring and Castor archive: Working
- CVSWEB for each project: Working
- CVS access monitoring system: Working

J.Manuel Guijarro
October 2002

PS/Unix Infrastructure Section
IT Division, CERN



Status of the Central CVS service at CERN

Still pending:

- Finish Windows CVS client test:

  Anonymous pserver: OK

  Kerberos IV access will never work (since there is no K4 client for W2000)

  Kerberos V may work in the future (not now)

  Only hope for now: making it work through puTTY (via SSH).

- Automate Project creation and Service Administration
- Provide wider choice of WEB interface(s)
- Problems resolving isscvs.cern.ch from outside CERN

  (under investigation with CS group)

- Write documentation