

CVS/SVN

Versionsverwaltung

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Inhalt

- Basics
- CVS
- SVN
- Alternatives



Basics

Basics

- Codemanagement
- Who did
 - what?
 - when?
 - why?
- Delta-Compression
- Typically client/server

CVS

Overview

- Concurrent Versions System
- Replaces RCS (1990 CVS 1.0)
- New: Multiple files/folders!
- “Check out” / “check in”

Features

- Server: Unix
- Client: “Unix, Windows NT/95, OS/2 and VMS”
- Branches
- Unreserved checkouts

Limitations

- No renaming/removing
- Commits not atomic
- No versioning of symlinks
- Limited unicode support
- Limited binary file support

Server-Setup

- (x)inetd
- httpasswd: user/pw OR SystemAuth=yes
- `mkdir myprojectdir`
- `cd myprojectdir`
- `touch myfile`
- `cvs import -m "description" myproject vendortag
releasetag`

Client

- export
CVSRROOT=:pserver:username@123.45.67.89:/home/cvsroot
- cvs login
- cvs checkout myproject
- cd myproject
- vi myfile
- cvs commit -m ‘‘Comments’’ myfile

Subversion

Overview

- Wants to replace CVS
- because CVS “just wasn’t implemented as well as it could be”
- Started in 2000, hosted itself in 2001



Features

- True atomic commits
- Files can be renamed/copied/moved/removed
- Versioning of symbolic links
- Efficient binary file support
- Optional file locking
- ...



Access

- Local/network filesystem
- Custom protocol, optionally over ssh
- WebDAV/DeltaV: Apache2 mod_dav_svn

Server-Setup

- Install using your favourite package manager (or build from source..)
- `mkdir -p /home/svn/repositories`
- Edit `httpd.conf`
- Create `svn-policy-file`
- Create `svn-auth-file`

Repository-Setup

- `svnadmin create /home/svn/repositories/myrep`
- `chown -R http.http /home/svn/repositories/myrep`
- Edit `svn-policy-file`

Repository-Setup

- `cd /path/to/new/codedir`
- `mkdir branches tags trunk`
- `cp -R /path/to/old/codedir/* trunk`
- `svn import -m 'Initial import'`
`https://domain.tld/svn/myrep`

Usage

- `cd /path/to/new/codedir`
- `svn co https://domain.tld/svn/myrep/`
- `vi myrep/trunk/myfile`
- `svn commit`

Usage

- Editing files: as usual
- `touch file1`
- `svn add file1`
- `svn move file1 file2`
- `svn copy file2 file2.old`
- `svn delete file2`
- `svn commit`

Usage

- `svn status`
- `svn diff`
- `svn revert`
- `svn update`
- `svn resolve`

Locks

- `svn lock logo.png -m 'Get of my lawn!'`
 - `svn unlock logo.png`
 - `svn commit`

Alternatives

- USB-Stick
- GIT
- ...

Fragen?