

Concurrent Version System

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This document will briefly describe how to set up a CVS and do some basic work on a project with it.

1. To install the CVS, just download the source, issue a `./configure`, a `make` and a `make install`. Edit the `.profile` file of the current user and add the following lines: `CVSROOT=/usr/local/cvsroot export CVSROOT`

Then issue a "cvs init" to generate the registry

Import a module: `cvs import testModule testProject ver1_0`

Incorporate all files

`cvs checkout testModule -j testModule map is gemaakt met de index.html`

Edit some files and issue a `cvs commit`

To add a file to the repository: `cvs add %file%`

To see changes between versions, issue a `cvs diff -c -2 1.1 1.2 %file%`

To tag a module: `cvs tag Release1`

To restore a version: `cvs checkout -rRelease1 testModule`

2. We remotely connected and worked on a project. The security issue that is involved with the remote CVS server is that it sends it's source-code unencrypted. This way, everyone can read the data, of mangle it. Also, the server can be hacked, making it execute arbitrary code. To counteract this, the server can be jailed with `chroot`, that way it can never leave it's home directory.

Also, submitting code via a `ssh` terminal will improve security greatly, but users then have to work from the command line. Another option is using a VPN to connect to the repository. That way, the data will also be encrypted, and users can use their own GUI to develop the project.

3. CVS versus SVN Some advantages of SVN are that a build will be committed fully or not at all, with CVS you could commit a build partly is an error occurred during the commit action. With SVN you can rename files, with CVS you'd have to rename the file, delete it from the project and add it again. This way all version information was lost. SVN has a version number for the whole module, not for just a file. A SVN server is faster, has more features for offline mode, and produces less traffic. Meta data can be set

On the other hand, SVN has some disadvantages also; The tag-option is not available. You cannot notify another developer that you have taken a file for editing. It is still relatively new so there isn't as much support for it, and it isn't widely implemented yet.

4. CVS GUI A nice GUI for the CVS system is tkcvs. This program can generate schematics of all revisions, list revision documentary, make tags and branches, merge branches, and much more.