

CS 580 Client-Server Programming  
Spring Semester, 2006  
Doc 2 CVS  
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# CVS

## References

<http://www.cvshome.org/>

<http://www.tortoisecvs.org/>

Stremmer's remote CVS on Rohan page

[http://www-rohan.sdsu.edu/~stremmer/CS530/AS1/remote\\_cvs.html](http://www-rohan.sdsu.edu/~stremmer/CS530/AS1/remote_cvs.html)

UCB InfoSys 255 course information on CVS & Eclipse  
<http://www.sims.berkeley.edu/academics/courses/is255/f04/labs/lab090904/CVSHowTo/eclipseCvsHowTo.html>

CVS Eclipse Plug-in FAQ

[http://dev.eclipse.org/viewcvs/index.cgi/%7Echeckout%7E/platform-vcm-home/docs/online/cvs\\_features2.0/cvs-faq.html](http://dev.eclipse.org/viewcvs/index.cgi/%7Echeckout%7E/platform-vcm-home/docs/online/cvs_features2.0/cvs-faq.html)

## Books

Manual

<http://www.cvshome.org/docs/manual/>

There are a number of books on CVS

Pragmatic Version Control by Thomas & Hunt  
[http://www.pragmaticprogrammer.com/starter\\_kit/vc/](http://www.pragmaticprogrammer.com/starter_kit/vc/)

# CVS

Concurrent Versions System

Command line interface in Unix

Various interfaces in Window

For remote access need

Client

Server

## CVS on Windows

### TortoiseCVS

Nice CVS client and Server for Windows

Adds CVS menu options in Windows Explorer

Can use Rohan as remote server

<http://www.tortoisecvs.org/>

### CVS & Eclipse

Eclipse has a GUI interface for accessing CVS repositories

Can access local & remote CVS repositories

See

CVS Eclipse Plugin- FAQ

UCB InfoSys 255 course information on CVS & Eclipse

# CVS Issues

Initial setup

Creating new Project

Adding files

Versions

Branches

Remote Access

# CVS On Unix

# CVS Root on Unix

## One Time Only

To store your own files you need a cvs root (repository)

```
cvs -d cvsLocation init
```

## Example

```
cvs -d /home/ma/whitney/cvsRoot init
```

On Rohan cvs commands are in

```
/usr/local/bin
```

## Starting a New Project

```
rohan-> mkdir xmlrpcClient
```

```
rohan-> cd xmlrpcClient/
```

```
rohan-> cvs import -m "start assn1" cs580/xmlrpcClient yoyo start
```



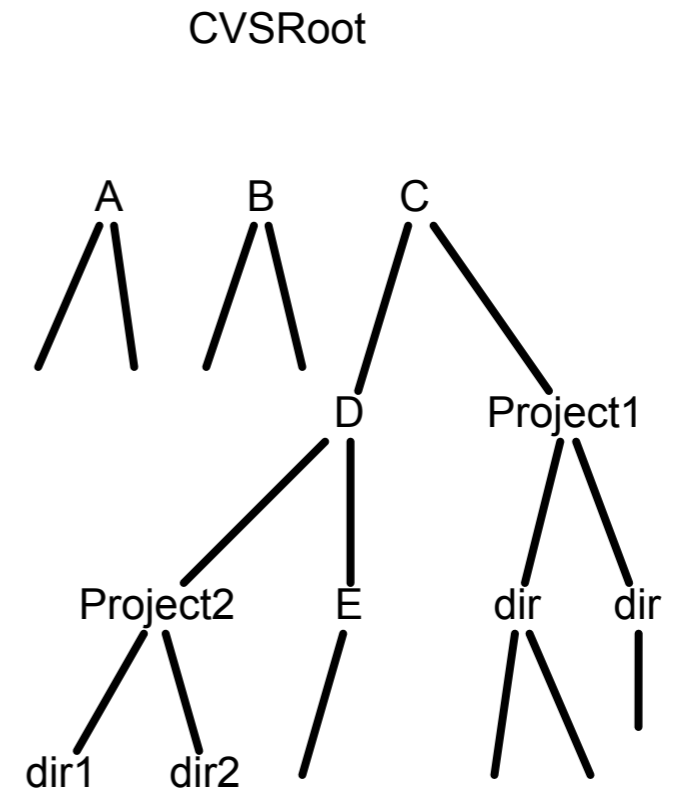
# CVS Tree

`cvs -d /home/ma/whitney/cvsRoot checkout C/D/Project2`

`cvs -d /home/ma/whitney/cvsRoot co C/D/Project2`

`cvs co C/D/Project2`            `#set CVSROOT`

`cvs co p2`                    `#Create module`



## Setting CVSROOT

For tcsh or csh in .cshrc or .login file add a line

```
setenv CVSROOT /home/ma/whitney/cvsRoot
```

For other shells you may need to use:

```
set CVSROOT='/home/ma/whitney/cvsRoot'
```

## Creating a CVS shortcut or Module

Get modules file

```
rohan-> cd ..
```

```
rohan-> cvs checkout CVSROOT/modules
```

```
rohan-> cd CVSROOT/
```

```
rohan-> ls
```

```
CVS/  modules
```

Edit modules file

Add the following line at the end the file

```
    assn1 cs580/xmlrpcClient
```

Commit the changes

```
rohan-> cvs commit -m "Added assn1 module" modules
```

Release the module file

```
rohan-> cd ..
```

```
rohan-> cvs release -d CVSROOT/
```

## Getting assn1 Project

```
rohan-> cvs checkout assn1
```

```
rohan-> cd assn1
```

```
rohan-> ls
```

```
CVS/
```

## Adding Files

Create a file called client.java using an editor

Tell cvs about the file

```
rohan-> cvs add -m "main client file" client.java
```

Commit any changes

```
rohan-> cvs commit -m "added main"
```

```
cvs commit: Examining .
```

```
RCS file: /home/ma/whitney/cvsRoot/cs580/xmlrpcClient/client.java,v  
done
```

```
Checking in client.java;
```

```
/home/ma/whitney/cvsRoot/cs580/xmlrpcClient/client.java,v <-- client.java  
initial revision: 1.1
```

```
done
```

## Accessing the log data

rohan-> **cv**s log

cv

s log: Logging .

RCS file: /home/ma/whitney/cvsRoot/cs580/xmlrpcClient/client.java,v

Working file: client.java

head: 1.2

branch:

locks: strict

access list:

symbolic names:

keyword substitution: kv

total revisions: 2; selected revisions: 2

description:

main client file

-----

revision 1.2

date: 2002/09/12 22:45:17; author: whitney; state: Exp; lines: +2 -0

added foobar method

-----

revision 1.1

date: 2002/09/12 22:44:16; author: whitney; state: Exp;

added main

## Comparing Files

```
rohan-> cvs diff -r 1.1 -r 1.2 client.java
```

```
Index: client.java
```

```
=====
```

```
RCS file: /home/ma/whitney/cvsRoot/cs580/xmlrpcClient/client.java,v
```

```
retrieving revision 1.1
```

```
retrieving revision 1.2
```

```
diff -r1.1 -r1.2
```

```
1a2,3
```

```
> // main
```

```
> // more code
```

## Files by Date

rohan-> **cv**s checkout -D yesterday assn1

rohan-> **cv**s checkout -D "2002-9-11 20:00" assn1

rohan-> **cv**s checkout -D "2002-9-11" assn1

rohan-> **cv**s checkout -d "1 hour ago" assn1



## Files by Version

```
rohan-> cvs checkout -r 1.1 assn1
```

## Creating a Branch

```
rohan->cvcs co assn1
```

```
rohan->cd assn1
```

```
rohan->cvcs tab -b branchA
```

Branch now created, but is in repository

Must check out branch to work on it

```
cvcs co -r branchA assn1
```

## Merging

Check out a branch

```
cv$ co assn1
```

Merge another branch

```
cv$ update -j branchA assn1
```

Now edit files to resolve conflicts

## Remote Access to CVS via Unix

For complete instructions see the page by Stewart Stremmler:

[http://www-rohan.sdsu.edu/~stremmler/CS530/AS1/remote\\_cvs.html](http://www-rohan.sdsu.edu/~stremmler/CS530/AS1/remote_cvs.html)

Set CVS\_RSH

```
setenv CVS_RSH /usr/bin/ssh
```

Set the CVSROOT environment variable

The general format is:

```
:ext:username@servermachine:/absolutePathToCVSRoot
```

For example I use:

```
setenv CVSROOT :ext:whitney@rohan.sdsu.edu:/home/ma/whitney/cvsRoot
```

## Remote Access to Rohan CVS using TortoiseCVS

Right-click on Windows Explorer window  
Select "CVS Checkout"

Protocol: Secure shell (:ext:)  
Server: rohan.sdsu.edu  
Port: (keep blank)  
Repository folder: /Full/path/to/your/repository  
Username: your rohan login

Must select a Module

To avoid having to enter password each time see:  
<http://www.tortoise cvs.org/faq.html#sshkeys>