

Versioning Instructions

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SVN/CVS Server: 129.128.148.30

The following is a crash course for using Subversion. For more details, see <http://svnbook.red-bean.com/>

There are no instructions for CVS because SVN is my recommended choice.

How to create a new user on linux server (must have root access)

1. Create user
`/usr/sbin/useradd -d /home/[login*] -g users [login]`
2. Create password
`passwd`
3. Create a directory in the CVS folder**:
`mkdir -m 775 /CVS/[login]`
`chown [login]:users /CVS/[login]`
4. Create a directory in the SVN folder**:
`mkdir -m 775 /SVN/[login]`
`chown [login]:users /SVN/[login]`
5. Create a default SVN repository***:
`umask 0002`
`svnadmin create /SVN/[login]/repos`
`chown -R [login]:users /SVN/[login]/repos`

Example

```
/usr/sbin/useradd -d /home/joseph -g users joseph
passwd
mkdir -m 775 /CVS/joseph
chown joseph:users /CVS/joseph
mkdir -m 775 /SVN/joseph
chown joseph:users /SVN/joseph
umask 0002
svnadmin create /SVN/joseph/repos
chown -R joseph:users /SVN/joseph/repos
```

* [login] is the login name (e.g. joseph)

** /CVS and /SVN are the repository locations for CVS and SVN, respectively. To reduce clutter in the directory, there will be a folder for each user in each directory. The folder name will be the same as that user's login. For example, user "joseph" will correspond to two directories, /CVS/joseph and /SVN/joseph.

*** Each user will have a default SVN repository called *repos* located in /SVN/[login]/. For example, user "joseph" will have a repository /SVN/joseph/repos.

How to import into repository remotely

1. Import directories/files in your current working directory
`svn import -m '[message]' [login]@[server]/SVN/[login]/repos`

Example

```
svn import -m 'Initial import'
svn+ssh://joseph@129.128.148.30/SVN/joseph/repos
```

How to use repository remotely

1. Checkout default repository
`svn checkout svn+ssh://[login]@[server]/SVN/[login]/repos`
2. A directory called repos will be downloaded to the current directory. This directory is under version control and is where you should create files that require version control.
3. Add files to version control
Navigate into repos directory.
`svn add *`
4. Commit files
`svn commit -m '[message about files to be committed]'`

Example

```
svn checkout svn+ssh://joseph@129.128.148.30/SVN/joseph/repos
cd repos
[create files]
svn add *
svn commit -m 'Added new files.'
```

How to update

1. Navigate into a directory under version control.
2. Update files
`svn up`

How to create a new repository for one project

1. Log in to the SVN/CVS server
`ssh [login]@[host ip/name]`
2. If you want other users to be able to access your repository, you must change the umask first.
`umask 0002`
3. Create the repository
`svnadmin create /SVN/[login]/[project name]`
4. Checkout repository
`svn checkout file:///SVN/[login]/[project name]`
5. Create SVN directory structure
`cd [project name]`
`mkdir trunk branches tags`
6. Add files to version control
`svn add *`
7. Commit changes
`svn commit -m '[message]'`

Example

```
ssh joseph@129.128.148.30
umask 0002
svnadmin create /SVN/joseph/MyProject
svn checkout file:///SVN/joseph/MyProject
cd MyProject
mkdir trunk branches tags
svn add *
svn commit -m 'Created suggested subversion layout for project'
```

How to checkout a project from a SVN repository using the command line

1. Navigate into the directory which will contain the project.
2. Checkout the project.

```
svn checkout svn+ssh://[login]@[server]/SVN/[login]/  
[project name]/trunk [name*]
```

- * [name] is not required and will default to *trunk* if not given. It is recommended that an informative name be given.

Example

```
svn checkout svn+ssh://joseph@129.128.148.30/SVN/joseph/repos/  
MyProject/trunk MyProject
```

How to checkout a project from eclipse

1. Choose File → New → Project... .
2. Choose SVN → Checkout Projects from SVN.
3. Choose "Create a new repository location" and click Next.
4. Enter the url for the project (e.g. svn+ssh://joseph@129.128.148.30/SVN/joseph/MyProject) and click Next.
5. Choose trunk* and click Next.
6. Choose "Check out as a project in the workspace" and specify a project name (e.g. TTPLIMS) and click Next.
7. Click Finish.

- * Assuming the directory structure is laid out according to Subversion convention.

Berkeley DB Error

The following error arises occasionally:

Berkeley DB error

```
svn: Berkeley DB error while opening environment for filesystem  
/SVN/transplant_transcriptome_project/LIMS/db:
```

```
DB_RUNRECOVERY: Fatal error, run database recovery
```

No error

```
svn: bdb: PANIC: fatal region error detected; run recovery
```

When this occurs, go to the directory (in this case, /SVN/transplant_transcriptome_project/LIMS/db), and run the following commands:

```
db_recover  
chmod 664 *
```

The second command is required if other users access that repository.