CVS Server Setup Guide

Brad Touesnard

Table of Contents

1.0 Introduction

The Concurrrent Versioning System (CVS) has become an integral tool in the development of many software applications. Unfortunately, the process of setting-up the server discourages many from using CVS. This document was written to give a start-to-finish installation and setup of CVS on Red Hat Linux.

Please refer to the documentation provided from the CVS web site if you encounter problems. Also, the FAQ is often very helpful.

http://www.cvshome.org/docs/
http://ccvs.cvshome.org/fom/fom.cgi

2.0 Installation

2.1 Obtaining the Source Distribution

The best way to install the latest release of CVS is to obtain the source code and compile CVS.

To download the source code proceed to the CVS web site:
http://www.cvshome.org/

Navigate to the download page of the CVS web site. There will be a large list of releases but the "stable" release is the one you should download.

2.2 Configuring and Installing the Source Distribution

Configuring the source distribution determines what operating system you are using and where the binary files should be installed.

To get the source distribution onto the CVS server, you can either upload from your machine to the server or download it directly to the server from the CVS website. The later is detailed in following instructions:

1. Login to the Red Hat Linux server via SSH

2. `su`
   Switch to the root user. Enter the password for the root user when prompted.

3. `cd /usr/local/src`
   Change to the source repository directory.

4. `wget <URL_of_CVS_distribution_file>`
   Download the source distribution. Replace <URL_of_CVS_distribution_file> with the actual URL to download the CVS distribution file.

5. `tar –xzvf cvs-1.xx.tar.gz`

Decompress and untar the source files. This should create a new directory with a name similar to that of the distribution file containing all the CVS source files. You should briefly review the files "README" and "INSTALL" in the new directory for detailed instructions on configuring and installing CVS.

6. `cd cvs-1.xx`
   Change to the new CVS source directory

7. `./configure`
   Configure the CVS source for installation. This creates a "make" file to compile the source and install it.

8. `make`
   Compile the CVS binaries.

9. `make install`
   Install the binaries and documentation on the system.

3.0 The Repository

The CVS repository is basically a directory in which all the files and directories under version control are stored. This document covers the bare minimum of what is needed to get the CVS repository up and running. It is recommended that you review the CVS manual (a.k.a the Cederqvist) for more information.

3.1 Create a New Repository

Create a new "cvs" user with "cvs" as its default group. You must be logged-in as the root user to do this.

```
groupadd cvs
useradd –g cvs cvs
```

In addition to adding a new user and group to the Linux system, this should create a new home directory for the user. By default, this is /home/cvs.

Now, login as the "cvs" user and create a new directory for the repository root. You must set the permissions on the repository root to be group writable and set the "set gid flag" so that any files that are added to the repository belong to the "cvs" group. This ensures that users belonging to the "cvs" group will have access to these files.

```
su cvs
mkdir ~cvs/cvsroot
chmod 0770 ~cvs/cvsroot
chmod g+s ~cvs/cvsroot
```

Finally to initialize the new repository, execute:

```
cvs –d ~cvs/cvsroot init
```

3.2 Creating a New User for CVS Access

A user has to be a member of the "cvs" group to have access to the new CVS repository. So we must create a new user of the "cvs" group and set its password. You must be logged-in as the root user to do this.

```
useradd –g cvs brad
passwd brad
```

Now we must enable CVS to find the repository root when the user executes CVS commands. We can accomplish this by setting the "CVSROOT" environment variable in the user's profile. Add the following to the user's .bash_profile (e.g. /home/brad/.bash_profile).

```
CVSROOT=/home/cvs/cvsroot
umask 006
export CVSROOT
```

You should now be able to login as the new Linux user and execute CVS commands on the new repository. For example, you could try creating a test module and import it into CVS:

```
su brad
cd ~
mkdir testmodule
echo "This is a test file." >> testmodule/test.txt
cvs import –m "Importing test." testmodule Vendor–1 Release–1
```

It is recommended that you refer to the Cederqvist CVS manual for more information about running CVS commands.

4.0 Sources

Please refer to the following documentation for further information:

Step-to-step guide to stablish a CVS system
http://www.salleurl.edu/~is04069/Codders/cvspasoapaso.html

Cederqvist CVS Manual
http://www.cvshome.org/docs/manual/