

Sourceforge.net CVS ~ Compile Farm

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Sourceforge.net Services

- Web Tools for Community and Project Management
- File Release System
- Donation System
- Compile Farm
- CVS Service
- Project Web Service

Sourceforge.net CVS

- Each project is provided with a repository
 - Developers automatically granted permissions to commit changes
 - Read-only anonymous pserver-based access to repositories
 - Web-based access to repositories

Anonymous pserver access

- Uses pserver (password-authenticated server) method for anonymous access
 - `cvs -d:pserver:anonymous@cvs.sf.net:/cvsroot/<proj> login`
- Password is left blank for sourceforge
- Pserver sends passwords plaintext
 - Not used for developer access

Anonymous web-based access

- Uses ViewCVS, an open source project hosted on sourceforge

[\[cvs\]](#) / [tmans](#) / [ABNNSim](#) / [abnnsim](#)

cvs: tmans/ABNNSim/abnnsim 

Current directory: [\[cvs\]](#) / [tmans](#) / [ABNNSim](#) / [abnnsim](#)
Files shown: 10

File	Rev.	Age	Author	Last log entry
 Attic/ [show contents]				
 data/				
 heap/				
 tests/				
 ABNNSimModel.java	1.1.1.1	8 weeks	jnkor2	Intital import.
 Axon.java	1.1.1.1	8 weeks	jnkor2	Intital import.
 HeapableNode.java	1.1.1.1	8 weeks	jnkor2	Intital import.
 NetworkAnalyzer.java	1.1.1.1	8 weeks	jnkor2	Intital import.

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Developer Access

- Uses ssh for authentication
 - `setenv CVS_RSH ssh`
- Developer login performed before command is performed
 - `cvs -d:ext:<name>@cvs.sf.net:/cvsroot/<proj> import -m "<comment>" <modulename> vendor start`
 - `cvs -d:ext:<name>@cvs.sf.net:/cvsroot/<proj> checkout <modulename>`

Developer Access

- “All developer operations must be performed using SSH for authentication. If you use pserver authentication to checkout your working copy, you WILL NOT be able to perform write operations.”
- Any CVS / SSH client pair can be used
 - Command-Line CVS and OpenSSH
 - Tortoise CVS/ WinCVS and PuTTY in windows

Other CVS policies/services

- No interactive access available
- Nightly backup of daily changes
 - bzip2-compressed .tar archive
 - “Download Your Nightly CVS Tree Tarball” link on the Project Admin page

Sourceforge.net Compile Farm

- Pool of hosts available to developers for compiling and testing software
- 12 hosts
 - Six distinct operating systems
 - 5 separate architectures

Compile Farm Hosts

- 32-bit x86 Architecture:
 - x86-linux2: Fedora Linux FC2 running Linux 2.6 kernel
 - x86-openbsd1: OpenBSD 3.4
 - x86-solaris1: Sun Solaris 9
 - x86-linux1: Debian GNU/Linux 2.2 running Linux 2.4 kernel (included to match current library load of project web servers)
 - x86-freebsd1: FreeBSD 4.8
 - x86-netbsd1: NetBSD 1.6.1

Compile Farm Hosts

- **AMD 64-bit (Opteron) Architecture:**
 - amd64-linux1: Fedora Core release 3 running Linux 2.6 kernel
- **DEC Alpha (ev67) Architecture:**
 - alpha-linux1: Debian GNU/Linux 3.0 running Linux 2.2 kernel
- **PowerPC Architecture:**
 - ppc-osx1: Apple Mac OS X 10.1 Server with Fink running on an Apple Mac G4
 - ppc-osx2: Apple Mac OS X 10.2 Server with Fink running on an Apple Mac G4
- **Sparc (UltraSPARC-II) Architecture:**
 - sparc-solaris1, sparc-solaris2: Sun Solaris 9, running on two Sun Enterprise 220R systems

Accessing the Compile Farm

- Open to developers
- SSH
- “Opt in Basis”
 - Check box in Account Maintenance
 - Post a SSH public key

SSH Public/Private Key Generation

```
% ssh-keygen -t dsa -C "username@shell.sf.net"
Generating public/private dsa key pair.
Enter file in which to save the key (/home/username/.ssh/id_dsa):
Created directory '/home/username/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/username/.ssh/id_dsa.
Your public key has been saved in /home/username/.ssh/id_dsa.pub.
The key fingerprint is:
f3:31:a8:c6:82:18:c8:0f:dd:6b:fb:27:98:83:3d:3b username@shell.sf.net
```

General Process

- Transfer source code to the Compile Farm.
- Login to the Compile Farm.
- Access the desired Compile Farm host.
- Build (unpack, configure, compile) the software; research and fix any problems.
- Test the software.
- Build packages.
- Transfer packages from the Compile Farm.

File Transfers

- PuTTY – PSCP

```
C:\junk>pscp scp -l user -2 -i <key>.ppk <file>  
<user>@cf-shell.sf.net:/home/users/<u>/<us>/<user>/<file>
```

- Files Transferred To Compile Farm Shell

Accessing the Compile Farm

- cf.sourceforge.net
 - Compile Farm menu server
 - Select specific server to access
- cf-shell.sourceforge.net
 - Check file transfers
 - Ssh to compile hosts
- No direct access to compile farm hosts except through these

Development Tools

- Available on Most
 - GNU C Compiler
 - GNU Assembler
 - GNU Make
 - X11 Forwarding
- Available on a Few
 - Python
 - Perl
 - Java 2 JDK
- locate & which

Disk Quota

- Soft Quota – 256 Mb
- Hard Quota – 512 Mb
- If soft quota exceeded for more than 7 days, data is purged

Features

- Automated Repetitive Builds
 - Cron
- Test Portability
- Supports Popular Packaging
 - RPM, DEB, DMG and PKG, BSD, etc.

Demonstration & Questions

