

Build Subversion from sources, including svn 1.14

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How to build Subversion / SVN from Sources, on CentOS 7 or Ubuntu 18 / 19, so you can use the latest subversion version. This how-to is based on this blog post: [Building Subversion on Ubuntu 12.10](#) but over time some changes have been made.

NOTE: This how-to is OK for a subversion client OR updating the binaries of a subversion SERVER that does NOT use Apache or any other stuff. Since I'm only interested in svn+ssh protocol, it's fine for me. Anyway a subversion SERVER requires more setup if you want to use Apache, svn+ssh, etc. which is not the purpose of this document. You can check [my notes on setup a subversion server for svn+ssh](#)

CentOS 7 minimal: Compiling and installing SVN 1.14 from sources

Compilation tested on CentOS 7 (minimal install, NO stock subversion installed). Updated 2020-07-25

Subversion build: success as normal user (no root), under /home/user/src

Pre-requisites (and some other tools I like)

```
sudo yum install net-tools bind-utils nano
sudo yum install net-tools wget nano perl mlocate mailx bind-utils crontabs
cronie rsync openssh-server unzip perl-libwww-perl yum-utils deltarpm curl
psmisc git cpan colorize colordiff pwgen bc
sudo yum install epel-release
sudo yum install cpan colorize colordiff pwgen perl-LWP-Protocol-https
sudo yum install gcc libevent libevent-devel zlib zlib-devel bzip2-devel
gamin-devel lua lua-devel openssl-devel pcre pcre-devel pcre-static
libmcrypt libmcrypt-devel
sudo yum install libjpeg-turbo-utils optipng gifsicle
sudo yum install zlib-devel libuuid-devel gcc make git autoconf autogen
automake pkgconfig
sudo yum install utf8proc utf8proc-devel apr apr-devel apr-util apr-util-
devel libtool
```

Installing subversion from sources:

```
$ cd ~; mkdir src; cd src
$ wget http://ftp.cixug.es/apache/subversion/subversion-1.14.0.tar.gz
$ tar xzf subversion-*
```

```
$ cd subversion-*  
$ ./get-deps.sh apr serf zlib sqlite  
$ ./get-deps.sh
```

Now, since SVN 1.14.x, we need to make install newer APR tools (stock CentOS 7 version for APR is 1.5 which is old):

```
$ cd apr/; ./buildconf; ./configure; make; sudo make install  
$ cd ../apr-util; ./buildconf; ./configure --with-apr=/usr/local/src/subversion-1.14.0/apr; make; sudo make install  
$ cd ../apr-util/xml/expat/; ./buildconf.sh; ./configure; make; sudo make install; cd ../../..
```

Make sure you do this on CentOS:

```
$ export LIBTOOL_M4=/usr/share/aclocal  
$ export LIBTOOL_CONFIG=/usr/share/libtool/config
```

Then autogen will work:

```
./autogen.sh
```

Now for svn 1.14 we need to tell configure where APR is:

```
$ ./configure --with-lz4=internal  
$ ./configure --with-lz4=internal --with-apr=./apr --with-apr-util=./apr-util  
$ make
```

If you want peace of mind, run the tests:

```
$ make check
```

Install binaries:

```
$ sudo make install
```

Check version:

```
# svn --version --quiet  
1.14.0
```

Ubuntu 19 server: Compiling and installing SVN from

sources

Tested on Ubuntu 19 Server (minimal install, NO stock subversion previously installed)

Subversion build: success as a normal user, in /home/user/src

Pre-requisites on Ubuntu 18

```
# apt-get install build-essential git libtool libtool-bin unzip libutf8proc1  
libutf8proc-dev
```

Pre-requisites on Ubuntu 19 (libutf8proc1 is not needed anymore)

```
# apt-get install build-essential git libtool libtool-bin unzip
```

More pre-requisites:

- Enable (uncomment) the lines beginning with deb-src inside the file /etc/apt/sources.list
- Update the packages now with `sudo apt-get update`
- Get dependencies from the stock subversion (lazy & dirty) with `sudo apt-get build-dep subversion`

Download subversion sources:

```
# cd ~; mkdir src; cd src  
# wget http://ftp.cixug.es/apache/subversion/subversion-1.14.0.tar.gz  
# tar xvzf subversion-*.tar.gz  
# cd subversion-1.14.0
```

Going to compile and install subversion from sources on Ubuntu:

```
# ./get-deps.sh apr serf zlib sqlite  
# cd apr; ./buildconf  
# cd ../apr-util; ./buildconf  
# cd ../apr-util/xml/expat; ./buildconf.sh; cd ../../..
```

Continue:

```
# ./autogen.sh  
# ./configure --with-lz4=internal  
# make  
# make check  
# sudo make install
```

Everything went OK, make and (sudo) make install, BUT got this error when tried to execute svn command:

```
# svn  
svn: error while loading shared libraries: libsvn_ra_svn-1.so.0: cannot open
```

```
shared object file: No such file or directory
```

Fixed forcing ldconfig:

```
sudo ldconfig
```

Then it works:

```
# svn --version --quiet
1.14.0
```

Note on RE-building subversion from sources

If you RE-build a new version from sources, you should move all files `libsvn_*` from `/usr/local/lib` to some “old” directory to avoid the following errors when doing make (this is an example when I re-build svn v1.12 when previously compiled 1.11 on the same box):

```
../../subversion/libsvn_client/.libs/libsvn_client-1.so: undefined reference
to `svn_wc__get_experimental_dir'
../../subversion/libsvn_client/.libs/libsvn_client-1.so: undefined reference
to `svn_wc__find_copies_of_repos_path'
collect2: error: ld returned 1 exit status
build-outputs.mk:1194: recipe for target 'subversion/svnmucc/svnmucc' failed
make: *** [subversion/svnmucc/svnmucc] Error 1
```

After moving the files, make succeeded.

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