

# Build Subversion from sources for Linux RedHat, CentOS or Ubuntu, including svn 1.14

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How to build Subversion / SVN from Sources (under CentOS 8, CentOS 7 or Ubuntu 18/19/20, so you can use the latest subversion version. This How-To is based on the following old blog post from 2012: [Building Subversion on Ubuntu 12.10](#) but over this 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 or the svn+ssh protocol, etc. which is not the purpose of this document. You can check [my notes on setup a subversion server for svn+ssh](#)

## Rocky Linux 9: build SVN 1.14 from sources

Pre-requisites:

```
yum -y install epel-release
```

```
yum install net-tools bind-utils nano wget perl mlocate crontabs cronie  
rsync openssh-server unzip perl-libwww-perl yum-utils curl psmisc git cpan  
colordiff pwgen bc perl-LWP-Protocol-https gcc libevent libevent-devel zlib  
zlib-devel bzip2-devel openssl-devel pcre pcre-devel libmcrypt libmcrypt-  
devel libjpeg-turbo-utils optipng zlib-devel libuuid-devel gcc make git  
autoconf automake pkgconfig utf8proc apr apr-devel apr-util apr-util-devel  
libtool boost python
```

As non-root user:

```
cd ~; mkdir src; cd src  
wget https://dlcdn.apache.org/subversion/subversion-1.14.2.tar.gz  
tar xzf subversion-1.14.2.tar.gz  
cd subversion-1.14.2
```

```
./get-deps.sh
```

Under Enterprise Linux 9 we must set this env. variable:

```
$ export LIBTOOL_M4=/usr/share/aclocal
```

Next, autogen:

```
$ ./autogen.sh  
[...]  
You can run ./configure now.  
[...]
```

Configure...

```
$ ./configure --with-lz4=internal --with-utf8proc=internal  
[...]  
config.status: executing svn_private_config.h.tmp commands
```

And make:

```
$ make
```

To check we pass all tests:

```
$ make check
```

Finally install:

```
$ sudo make install
```

We should have svn client there:

```
$ svn --version --quiet  
1.14.2
```

## CentOS 8 minimal: build SVN 1.14 from sources

Compilation tested on CentOS 8 (minimal install, NO stock subversion installed). Updated 2020-11-02

Pre-requisites:

```
yum -y install epel-release
```

```
yum install net-tools bind-utils nano wget perl mlocate mailx crontabs  
cronie rsync openssh-server unzip perl-libwww-perl yum-utils curl psmisc git  
cpan colordiff pwgen bc perl-LWP-Protocol-https gcc libevent libevent-devel  
zlib zlib-devel bzip2-devel openssl-devel pcre pcre-devel libmcrypt  
libmcrypt-devel libjpeg-turbo-utils optipng zlib-devel libuuid-devel gcc  
make git autoconf automake pkgconfig utf8proc apr apr-devel apr-util apr-  
util-devel libtool boost python2
```

As non-root user:

```
cd ~; mkdir src; cd src
wget https://dlcdn.apache.org/subversion/subversion-1.14.2.tar.gz
tar xzf subversion-1.14.2.tar.gz
cd subversion-1.14.2
```

```
./get-deps.sh
```

We have python executable as python2:

```
$ python2 --version
Python 2.7.17
```

Now, to avoid error: /usr/bin/env: 'python': No such file or directory when doing autogen:

```
$ sudo alternatives --set python /usr/bin/python2
```

```
$ python --version
Python 2.7.17
```

Under CentOS 8 we must set this env. variable:

```
$ export LIBT00L_M4=/usr/share/aclocal
```

Next, autogen:

```
$ ./autogen.sh
[...]
You can run ./configure now.
[...]
```

Configure...

```
$ ./configure --with-lz4=internal --with-utf8proc=internal
[...]
config.status: executing svn_private_config.h.tmp commands
```

And make:

```
$ make
```

To check we pass all tests:

```
$ make check
```

Finally install:

```
$ sudo make install
```

We should have svn client there:

```
$ svn --version --quiet  
1.14.2
```

Don't forget to check the Rebuilding from sources notes here:

<https://juangacovas.info/doku.php/linux/howtos/build-svn-from-sources#note-on-re-building-subversion-from-sources>

## CentOS 7 minimal: compiling SVN 1.14 from sources

Compilation tested on CentOS 7 (minimal install, NO stock subversion installed). Updated 2020-11-02

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 https://dlcdn.apache.org/subversion/subversion-1.14.1.tar.gz  
$ tar xzf subversion-1.14.1  
$ cd subversion-1.14.1  
$ ./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=../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
1.14.1
```

Also be sure to check the final notes at the bottom of this page, when you need to re-compile a newer version of SVN.

## 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 https://dlcdn.apache.org/subversion/subversion-1.14.1.tar.gz  
# tar xvzf subversion-*.tar.gz  
# cd subversion-1.14.1
```

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
1.14.1
```

## Note on RE-building subversion from sources

How to fix error: recipe for target 'subversion/svnmucc/svnmucc' failed

If you RE-build a new version from sources, you should move or delete all files prefixed `libsvn_*` from `/usr/local/lib` 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.

~~DISCUSSION|Comments~~

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<https://www.juangacovas.info/doku.php/linux/howtos/build-svn-from-sources?rev=1702803874>

Last update: 17/12/2023 10:04

