



## SOP – Linux HPC install R

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### 1 Purpose

Install current version of R in Linux HPC cluster running CentOS 6. These instructions install a complete copy of the required libraries together with R.

### 2 Download, build and install

- Change into the shared application group and set destination

```
newgrp farmbio-cluster-app
umask 002
P=/opt/local64/R/3.3.0/
mkdir $P
```

- bzip2-1.0.6 <http://www.bzip.org/1.0.6/bzip2-1.0.6.tar.gz>

```
make install PREFIX=$P
```

- curl-7.48.0 <https://curl.haxx.se/download/curl-7.48.0.tar.bz2>

```
./configure --prefix=$P && make -j 8 && make install
```

- pcre-8.38 <ftp://ftp.csx.cam.ac.uk/pub/software/programming/pcre/pcre-8.38.tar.gz>

```
./configure --prefix=$P --enable-utf8 && make -j 8 && make install
```

- xz-5.2.2 <http://tukaani.org/xz/xz-5.2.2.tar.gz>

```
./configure --prefix=$P && make -j 8 && make install
```

- zlib-1.2.8 <http://zlib.net/zlib-1.2.8.tar.gz>

```
./configure --prefix=$P && make -j 8 && make install
```

- R-3.30 <http://ftp.acc.umu.se/mirror/CRAN/src/base/R-3/R-3.3.0.tar.gz>

```
export PATH=$P/bin:$PATH
export LD_LIBRARY_PATH=$P/lib
export CFLAGS="-I$P/include"
export LDFLAGS="-L$P/lib"
./configure --prefix=$P && make -j 8 && make install
```

### 3 List and install modules

There is a script in **R.packages.sh** that takes as an argument either a single R version and then give a list of packages that it has installed and the string to install them. With two arguments it compares the lists and give a list of the missing.

- To list all modules for a certain version:

```
R.packages.sh 3.2.3
```

- To get the difference in packages between two versions:

```
R.packages.sh 3.2.3 3.3.0
```

- Packages in CRAN – get installation string from above and paste it into R

```
/opt/local64/R/3.3.0/bin/R
> install.packages(c("xpose4"), dependencies = TRUE)
```

- Older versions of modules – install from command line

```
/opt/local64/R/3.3.0/bin/R CMD INSTALL RcppArmadillo_0.5.500.2.0.tar.gz
```

### 4 Make the new version as default

- Change the symbolic link so that the new version is used as default!

```
cd /opt/local64/R
ln -f -s 3.3.0 current #force create symbolic link so that default $PATH works
```

### 5 Done!