

# Virtual Seismological CentOS 6 x86\_64 Machine

## install virtual box for you pc/laptop

download here [Oracle VirtualBox](#)

## install basic server system

follow [howto\\_centos\\_server](#)

```
root/password => sismologia/sismologia
user/password => sismologo/sismologo
```

## install GuestAdditions

```
yum update kernel*
yum install gcc kernel-devel kernel-headers
```

add to /etc/profile the KERN\_DIR environment variable

```
export KERN_DIR=/usr/src/kernels/`uname -r`
reboot
```

press **HOST+D** or VirtualMachine menu → Devices → Install Guest Additions

```
cd /media/VirtualBoxGuestAdditions
./VBoxLinuxAdditions.run
reboot
```

done, your screen can be bigger...

## install gfortran and f77 compatibility

```
yum install gcc-gfortran compat-gcc-34-g77
```

## install some python utilities

```
yum install ipython scipy numpy python-matplotlib python-matplotlib-tk
```

```
python-lxml python-setuptools
# easy_install -U distribute
```

## TauP

Download <http://www.seis.sc.edu/TauP/> last release ⇒  
<http://www.seis.sc.edu/downloads/TauP/TauP-2.0.tgz>

Extract file into install dir:

```
# tar -xvzf TauP-2.0.tgz
# mv TauP-2.0 /opt
```

Add your TauP to PATH in your /etc/profile:

```
export TAUP_HOME=/opt/TauP-2.0
export PATH=$PATH:$TAUP_HOME/bin
```

## SeisGram2K

Download [SeisGram2K60.jar](#) and

[sg2kdefaults](#)

see install instructions: [http://alomax.free.fr/seisgram/ver60/SeisGram2K\\_install.html](http://alomax.free.fr/seisgram/ver60/SeisGram2K_install.html)

see also [seisgram2k](#)

if can download a previous version from <ftp://trovador.iag.usp.br/tecnico/SeisGram2K53.pt-BR.jar>

Extract file into install dir:

```
# mkdir /opt/seisgram2k
# mv _downloaded_file /opt/seisgram2k
```

Create a shortcut

```
# touch /opt/seisgram2k/seisgram
# chmod +x /opt/seisgram2k/seisgram
# vim /opt/seisgram2k/seisgram
```

add this content:

```
#!/bin/bash
SG_HOME=/opt/seisgram2k
JAR=$SG_HOME/SeisGram2K53.pt-BR.jar
java -Xmx64m -classpath $JAR net.alomax.seisgram2k.SeisGram2K $*
```

Add it to PATH in your /etc/profile:

```
export SEISGRAM_HOME=/opt/seisgram2k
export PATH=$PATH:$SEISGRAM_HOME
```

## SOD

download

```
# wget http://www.seis.sc.edu/downloads/sod/3.0.0/sod-3.0.0.tgz
```

unpack

```
# tar -xvzf sod-3.0.0.tgz
```

add it to your path

```
export SOD_HOME=/opt/sod-3.0.0
export PATH=$PATH:$SOD_HOME/bin
```

more info: [SOD](#)

## rdSeed

Download <http://www.iris.edu/pub/programs/rdseedv5.1.tar.gz>

```
# tar -xvzf rdseedv5.1.tar.gz
# cd rdseedv5.1
# make
# mkdir /opt/local/bin
# mv rdseed /opt/local/bin
```

Add it to PATH in your /etc/profile:

```
export PATH=$PATH:/opt/local/bin
```

## miniSEED tools

For each tool Download source from [IRIS](#)

```
# tar -xvzf _file_
# cd _dir_
# make
# mv _binary_ /opt/local/bin
```

Add it to PATH in your /etc/profile:

```
export PATH=$PATH:/opt/local/bin
```

## PASSCAL software

download latest version

```
# wget
http://www.passcal.nmt.edu/ftp/software/passsoft/linux/x86_64/PASSOFT-LATEST.x86_64.tar.bz2
```

unzip

```
# bunzip2 PASSOFT-LATEST.x86_64.tar.bz2
```

untar

```
# tar -xvf PASSOFT-LATEST.x86_64.tar
```

deploy

```
# mv passcal /opt/passcal
```

add these lines to /etc/profile to setup your environment

```
# passcal
export PASSOFT=/opt/passcal
export PASSCAL=/opt/passcal
export PATH=${PATH}:${PASSCAL}/bin:${PASSCAL}/other/bin
export MANPATH=${PASSCAL}/man:${MANPATH}
```

## SAC

follow [sac\\_101](#)

## PQL II

browse your version [here](#) or

download directly

```
# wget
http://www.passcal.nmt.edu/ftp/software/pql/linux/x86_64/PQL-2010-246.x86_64
```

```
.rpm
```

install it

```
# rpm -ivh PQL-2010-246.x86_64.rpm
```

## SeisAn

see [reference](#)

browse software and manuals [here](#)

make install dir

```
# mkdir /opt/seisan-9.0.1; cd !$
```

download directly

```
# wget
ftp://ftp.geo.uib.no/pub/seismo/SOFTWARE/SEISAN_9.0.1/seisan_v9.0.1_linux_64
bit.tar.gz
```

extract

```
# tar -xvzf seisan_v9.0.1_linux_64bit.tar.gz
```

modify SEISAN\_TOP directory in **COM/SEISAN.bash**

```
export SEISAN_TOP="/opt/seisan-9.0.1"
```

add it to /etc/profile

```
export SEISAN_HOME="/opt/seisan-9.0.1"
source ${SEISAN_HOME}/COM/SEISAN.bash
```

if you need compile other tools follow [Jim Tang](#)

## PDCC

download code

```
# wget http://www.iris.edu/pub/programs/pdcc/pdcc-3.8.1.zip
# unzip /pdcc-3.8.1.zip
# mv PDCC-3.8 pdcc-3.8
# mv pdcc-3.8 /opt
```

create shortcut

```
# touch pdcc
# chmod +x pdcc
# vim pdcc
```

put there these lines

```
#!/bin/bash
OLD_DIR=`pwd`
PDCC_HOME="/opt/pdcc-3.8"
cd $PDCC_HOME
java -Xmx256m -jar ./run_pdcc.jar
cd $OLD_DIR
```

export to path in /etc/profile

```
export PATH=$PATH:/opt/pdcc-3.8
```

## RFNT Codes

raw reference [Charles Ammon](#)

download

```
# wget http://eqseis.geosc.psu.edu/%7ecammon/Archives/RftnCodes.tar.gz
```

unpack

```
# tar -xvzf RftnCodes.tar.gz
```

change sacio lib reference in **build.it.csh**

```
setenv SACLIB /opt/sac/lib/lib sacio.a
```

ensure if you had gcc-g77 compatibility

```
# yum install compat-gcc-34-g77
```

make

```
# csh build.it.csh
```

add it to PATH in your /etc/profile

```
export RFTN_HOME="/opt/Rftn.Codes"
export PATH=$PATH:$RFTN_HOME/bin
```

## GMT

ensure that you have epel repository installed (see [howto\\_centos\\_server](#)) and install

```
# yum install GMT
```

caso necessite do gmtdefaults existe um exemplo para a versao 3 [aqui](#)

## Hermann, Programs 3.30

check if you have ncurses-devel:

```
# yum install ncurses-devel
```

note: until now this is the only dependences that we didn't had.

download

```
# wget http://www.eas.slu.edu/eqc/eqc_cps/Download/NP330.Feb-09-2012.tgz
```

unpack

```
# tar -xvzf NP330.Feb-09-2012.tgz
```

put it were you want

```
# mv PROGRAMS.330 /opt
```

run Setup to your arch

```
# cd /opt/PROGRAMS.330  
# ./Setup LINUX64
```

make it (I've got 132 programs)

```
# ./C
```

add it to your PATH

```
export P330_HOME="/opt/PROGRAMS.330"  
export PATH=$P330_HOME/bin:$PATH
```

**please note** that some program can be exist in more than one location, then check version of program that you're using e.g.

- /opt/local/bin/rdseed (v5.1)
- /opt/PROGRAMS.330/bin/rdseed (v5.0)

more [info](#)

see also [changeset](#)

## BRbFast

follow [brbfast](#)

## focmec

```
# wget ftp://trovador.iag.usp.br/pub/software/focmec.tar
# tar -xvzf focmec.tar
# cd __dir__/src
```

set fortran compiler on **build\_package** file...

run it

```
# ./build_package
```

share it on PATH

```
export FM_HOME=/opt/local/focmec
export PATH=$FM_HOME/bin:$PATH
```

## SU - Seismic Unix

Pacotes para o Seismic Unix estão disponíveis para algumas distros. Para instalá-los, [siga estas instruções](#).

### Install it from source

download and unpack

```
# wget ftp://ftp.cwp.mines.edu/pub/cwpcodes/cwp_su_all_43R1.tgz
# tar -xvzf cwp_su_all_43R1.tgz
```

set CWPROOT envvar

```
# export CWPROOT=/opt/SU
```

choose your Makefile.config

```
# mv $CWPROOT/src/configs/Makefile.config.ARCH $CWPROOT/src
```

make

```
# make install
# make finstall
# make utils
# make sinstall
```

install motif development

```
# yum install openmotif-devel mesa-libGL-devel mesa-libGLU-devel mesa-
libGLw-devel freeglut-devel libXi-devel
```

make X app

```
# make xtinstall
# make xminstall
# make mglinstall
```

more [info](#)

## **HYP071**

download

```
# make -f makefile
# make -f makefile3
# f77 -o wadati wadati.f
```

set you path

## **hypoDD**

download & unpack

```
# wget http://www.ldeo.columbia.edu/~felixw/HYPODD/HYPODD_1.3.tar.gz
# tar -xvzf HYPODD_1.3.tar.gz
```

```
# mv HYPODD /opt
```

```
# cd src && make
```

set your path

## obspy

follow [howto\\_centos\\_server](#)

## some data converters

see <http://www.iris.edu/pub/programs/converters/>

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