Install pulsar software on nancep1 /2

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Note:
The installation on nancep1/2 is based on LOFAR svn release, but pulsar software is in “src” branch!

On first login of nancep
ln -s /opt/lofar/login/bashrc ~/.bashrc

source .bashrc

We need:

- tempo (done)
- presto (skip this for the moment)
- tempo2 (done)
- psrchive (done)
- psrcat (done)
- dspsr (done)
- calceph (done)
- psrdada (done)
- sigproc (done)
- coast_guard (done)

Already installed:
pgplot

All installation is done with **user** privileges.

add to .bashrc:

```
if [ -e $HOME/.mysetenv.bash ]; then
        source $HOME/.mysetenv.bash
fi
```

About the file .mysetenv.bash

```
touch .mysetenv.bash
# add
# for setting history length see HISTSIZE and HISTFILESIZE in bash(1)
HISTSIZE=100000
HISTFILESIZE=200000

# don't put duplicate lines in the history. See bash(1) for more options
# ... or force ignoredups and ignorespace

HISTTIMEFORMAT='%F %T '; export HISTTIMEFORMAT
HISTCONTROL=ignoreboth:ignoredups:ignorespace; export HISTCONTROL
HISTFILESIZE=200000; export HISTFILESIZE # the bash history should save 200000 commands
PROMPT_COMMAND='history -a'; export PROMPT_COMMAND # record command into
```

history and recall them "as you issue it"

up arrow search
bind '"\e[A":history-search-backward
bind '"\e[B":history-search-forward

# PGPLOT
PGPLOT_DIR="/usr/lib/pgplot"; export PGPLOT_DIR
PGPLOT_INCLUDES="/usr/include"; export PGPLOT_INCLUDES
LD_LIBRARY_PATH="/usr/lib"; export LD_LIBRARY_PATH
PGPLOT_FONT="/usr/lib/pgplot5/grfont.dat"; export PGPLOT_FONT
PGPLOT_DEV="/xs"; export PGPLOT_DEV
PGPLOT_BACKGROUND="white"; export PGPLOT_BACKGROUND
PGPLOT_FOREGROUND="black"; export PGPLOT_FOREGROUND

# PSRHOME
PSRHOME=/home/artemis/software; export PSRHOME
# adapt path as required

# install psrcat
# emacs -nw ~/.mysetenv.bash
# psrcat
PSRCAT_FILE=/home/artemis/software/psrcat/psrcat.db; export PSRCAT_FILE
# adapt path as required
PATH=$PATH:$PSRHOME/psrcat; export PATH
cd ~/.
mkdir software
cd ~/software
wget http://www.atnf.csiro.au/people/pulsar/psrcat/downloads/psrcat_pkg.tar.gz
tar -xvvf psrcat_pkg.tar.gz
mv psrcat_tar psrcat
cd psrcat
./makeit
source ~/.bashrc
psrcat
working!

# install calceph-2.2.0
# emacs -nw ~/.mysetenv.bash
# calceph-2.2.0
PATH=$PATH:$PSRHOME/calceph-2.2.0/install/bin; export PATH
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$PSRHOME/calceph-2.2.0/install/lib; export LD_LIBRARY_PATH
C_INCLUDE_PATH=$C_INCLUDE_PATH:$PSRHOME/calceph-2.2.0/install/include; export C_INCLUDE_PATH
# to terminal
source ~/.bashrc
source ~/.mysetenv.bash
cd ~/software
wget http://www.imcce.fr/inpop/calceph/calceph-2.2.0.tar.gz
tar -xvvf calceph-2.2.0.tar.gz

cd calceph-2.2.0
mkdir install
./configure --prefix=/home/artemis/software/calceph-2.2.0/install
make
make install

# install tempo2
# emacs -nw ~/.mysetenv.bash
# TEMPO2
TEMPO2=$PSRHOME/tempo2/T2runtime; export TEMPO2
PATH=$PATH:$PSRHOME/tempo2/T2runtime/bin; export PATH
# to terminal
source ~/.bashrc
source ~/.mysetenv.bash
cd ~/software
cvs -z3 -d:pserver:anonymous@tempo2.cvs.sourceforge.net:/cvsroot/tempo2 co tempo2
station positions are already included!
cd tempo2
./bootstrap
./configure --x-libraries=/usr/lib/x86_64-linux-gnu --with-calceph=/home/artemis/software/calceph-2.2.0/install/lib
make

readEphemeris_calceph.C:42:21: fatal error: calceph.h: No such file or directory

compilation terminated.

depbase=`echo readEphemeris_calceph.lo | sed 's|[^/]*$|.deps/&|;s|\.lo$||'`;/bin/bash ./libtool --tag=CXX   --mode=compile g++ -DHAVE_CONFIG_H -I.   -I//include -I/usr/local/include -I/home/artemis/software/calceph-2.2.0/install/include -g -O2 -MT readEphemeris_calceph.lo -MD -MP -MF $depbase.Tpo -c -o readEphemeris_calceph.lo readEphemeris_calceph.C &&mv -f $depbase.Tpo $depbase.Plo

make
make install
make plugins
make plugins-install
tempo2 -h
working!
cd /home/artemis/software/tempo2/T2runtime/observatory
cp -p aliases aliases_ORIG
emacs -nw aliases
insert a line after “lofar t”, so it shows:
#lofar t

#FRlfr u

#ncyobs w

```
# install PSRCHIVE
# emacs -nw ~/.mysetenv.bash
# PSRCHIVE
PATH=$PATH:$PSRHOME/psrchive/install/bin; export PATH
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$PSRHOME/psrchive/install/lib; export
LD_LIBRARY_PATH
C_INCLUDE_PATH=$C_INCLUDE_PATH=:$PSRHOME/psrchive/install/include; export
C_INCLUDE_PATH

# PYTHON
PYTHONPATH=$PYTHONPATH:$PSRHOME/psrchive/install/lib/python2.7/site-packages;
export PYTHONPATH

# to terminal
source ~/.bashrc
source ~/.mysetenv.bash
cd ~/software
git clone git://git.code.sf.net/p/psrchive/code psrchive
cd psrchive
mkdir install
./bootstrap
./configure --prefix=/home/artemis/software/psrchive/install --x-libraries=/usr/lib/x86_64-linux-gnu
--enable-shared
make
make install

# install PSRDADA
# emacs -nw ~/.mysetenv.bash
# PSRDADA
PATH=$PATH:$PSRHOME/psrdada/install/bin; export PATH
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$PSRHOME/psrdada/lib; export
LD_LIBRARY_PATH
C_INCLUDE_PATH=$C_INCLUDE_PATH:$PSRHOME/psrdada/install/include; export
C_INCLUDE_PATH
# to terminal
source ~/.bashrc
source ~/.mysetenv.bash
cd ~/software
touch $HOME/.cvspass
cvs -d:pserver:anonymous@psrdada.cvs.sourceforge.net:/cvsroot/psrdada login
[enter]
cvs -z3 -d:pserver:anonymous@psrdada.cvs.sourceforge.net:/cvsroot/psrdada co -P psrdada
cd psrdada
./bootstrap
./configure --prefix=/home/artemis/software/psrdada/install --x-libraries=/usr/lib/x86_64-linux-gnu
make
make install

# install DSPSR
# emacs -nw ~/.mysetenv.bash
# DSPSR
PATH=$PATH:$PSRHOME/dspsr/install/bin; export PATH
```

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:$PSRHOME/dspsr/lib; export
LD_LIBRARY_PATH
C_INCLUDE_PATH=$C_INCLUDE_PATH:$PSRHOME/dspsr/include; export
C_INCLUDE_PATH
# to terminal
source ~/.bashrc
source ~/.mysetenv.bash
cd ~/software
git clone git://git.code.sf.net/p/dspsr/code dspsr
cd dspsr
./bootstrap
./configure --prefix=/home/artemis/software/dspsr/install --x-libraries=/usr/lib/x86_64-linux-gnu
# edit dspsr/backends.list, remove all and add
dada dummy fits lump puma2 sigproc
make
make install

#install SIGPROC (version of M. Keith)
# emacs -nw ~/.mysetenv.bash
# SIGPROC
PATH=$PATH:$PSRHOME/sigproc/install/bin; export PATH
# to terminal
source ~/.bashrc
source ~/.mysetenv.bash
cd ~/software
git clone https://github.com/SixByNine/sigproc.git
cd sigproc
./bootstrap
./configure --prefix=/home/artemis/software/sigproc/install --x-libraries=/usr/lib/x86_64-linux-gnu
make
make install

# install coast_guard
# emacs -nw ~/.mysetenv.bash
# coast_guard
PATH=$PATH:$PSRHOME/coast_guard; export PATH
COASTGUARD_CFG=$PSRHOME/coast_guard/configurations; export COASTGUARD_CFG
# to terminal
source ~/.bashrc
source ~/.mysetenv.bash
cd ~/software
copy version from nancep1
[no compilation required]
/home/artemis/software/coast_guard
cp -p utils.py utils.py_ORIG
scp -p nancep1:~/software/coast_guard/utils.py .

# install tempo
# emacs -nw ~/.mysetenv.bash
# tempo
TEMPO=$PSRHOME/tempo; export TEMPO
PATH=$PATH:$PSRHOME/tempo/install/bin; export PATH
```

```
# to terminal
source ~/.bashrc
source ~/.mysetenv.bash
cd ~/software
git clone git://git.code.sf.net/p/tempo/tempo
cd tempo
./prepare
./configure --prefix=/home/artemis/software/tempo/install –x-libraries=/usr/lib/x86_64-linux-gnu
make
make install
# temp -h
cd /home/artemis/software/tempo
mv obsys.dat obsys.dat_ORIG
scp -p artemis@nancep1:~/software/tempo/obsys.dat .
grep FR606 obsys.dat
```