

Compiling PARI from the GIT repository

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Introduction

This talk focuses on the current development version of the PARI library (2.8.*), available from our GIT repository, see

<http://pari.math.u-bordeaux.fr/anongit.html>

The text of this talk is available in the files `sources.*` in

[http://pari.math.u-bordeaux.fr/Events/
PARI2016/talks/](http://pari.math.u-bordeaux.fr/Events/PARI2016/talks/)

Windows users

Download a precompiled 64bit binary `gp64-gmp-git*.exe` or 32bit binary `gp32-gmp-git*.exe` from

<http://pari.math.u-bordeaux.fr/pub/pari/windows/snapshots/>

Mac OS users (Experimental)

Download a precompiled binary `gp-git*-osx` from

<http://pari.math.u-bordeaux.fr/pub/pari/mac/snapshots/>

Please tell us if it works!

From source with GIT

Clone the PARI repository with GIT (~ 150MB).

```
git clone http://pari.math.u-bordeaux.fr/git/pari.git
cd pari
```

From source without GIT

Download `pari-2.8-*.tar.gz` from

`http://pari.math.u-bordeaux.fr/pub/pari/snapshots/`

and unpack it

```
tar xf pari-2.8-*.tar.gz
cd pari-2.8-*
```

PARI compilation

```
./Configure --prefix=GPDIR --mt=pthread  
make -j4 gp  
make doc  
make statest-all  
make install  
make install-bin-sta  
./Configure --prefix=GPDIR.dbg -g  
make -j4 gp  
make install -C Olinux-x86_64.dbg  
GPDIR/bin/gp
```

GP configuration

Create and customize `~/.gprc`. Add

```
histfile = "~/.gp\_history"  
colors = "lightbg" \\ or "darkbg"  
lines = 40  
parisizemax = 4G \\ or the maximum amount of memory  
                \\ GP can use (important)  
read "~/.gprc.gp"
```

Create an empty file `~/.gprc.gp`

GP2C compilation

With GIT (and automake, autoconf):

```
git clone http://pari.math.u-bordeaux.fr/git/gp2c.git
cd gp2c
./autogen.sh
```

Without GIT: download GP2C from <http://pari.math.u-bordeaux.fr/download.html#gp2c>

```
tar xf gp2c-0.0.9p15.tar.gz
cd gp2c-0.0.9p15
```

GP2C compilation

```
./configure --prefix=$PWD/../GPDIR \  
    --with-paricfg=../GPDIR/lib/pari/pari.cfg \  
    --with-paricfg.dbg=../GPDIR.dbg/lib/pari/pari.cfg  
make check  
make install  
cd ..  
GPDIR/bin/gp2c -v
```

Updating GIT

To update GIT to the most recent revision:

```
git fetch
git rebase origin/master
```

Accessing remotes branches

Remote branches : by default, we only know the official repository (the one we cloned from, `origin`), but you can add other ones.

```
> git branch -a      # -a = add remote branches
...    many branches omitted !
remotes/origin/bill-sea-parallel
...
```

```
> git checkout origin/bill-sea-parallel -b
sea-parallel
```

Here we created a local branch `sea-parallel` out of the `origin/bill-sea-parallel`, and switched to it.

(Configure, make, test things...)

`git checkout master` to get back to main development branch.

Git branches

You can go back to the master branch by doing

```
git checkout master
```

You can see the latest commits in the current branch with

```
git log
```