Manuel d'installation de PARI/GP

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Introduction

This talk focuses on the current stable version of the PARI library (2.15.1), The text of this talk is available in the files `sources.*` in

> https://pari.math.u-bordeaux.fr/Events/
> PARI2022b/talks/

Windows users

Download a precompiled 64bit installer `Pari64-2-15-1.exe` or 32bit binary `Pari32-2-15-1.exe` from

`https: //pari.math.u-bordeaux.fr/pub/pari/windows/`

Mac OS users

Download a precompiled DMG for intel
`PariGP-full-2.15.1.dmg` or arm
`PariGP-arm-full-2.15.1.dmg` based mac.

`https://pari.math.u-bordeaux.fr/pub/pari/mac/`

on some system, you need to go to the file menu and select open, so that you can bypass the security check.

Linux

To install all the packages required to build pari from source:
Debian/Ubuntu

```
sudo apt-get build-dep pari
sudo apt-get install libreadline-dev libgmp-dev
```

Fedora

```
sudo dnf install readline-devel gmp-devel
```

If you want to use git, also do
Debian/Ubuntu

```
sudo apt-get install git bison automake autoconf
```

Fedora

```
sudo dnf install git bison automake autoconf
```

From source with GIT

Clone the PARI repository with GIT ($\sim$ 150MB).

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

From source without GIT

Download `pari-2.15.1` from

  https://pari.math.u-bordeaux.fr/pub/pari/unix

and unpack it

```
tar xf pari-2.15.1.tar.gz
cd pari-2.151.
```

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.dbg
make install -C Olinux-x86_64.dbg
GPDIR/bin/gp
```

Optional PARI packages

To install optional PARI packages from
```
https://pari.math.u-bordeaux.fr/packages.html
```

```
wget https://pari.math.u-bordeaux.fr/\
pub/pari/packages/galdata.tgz
tar xf galdata.tgz
wget https://pari.math.u-bordeaux.fr/\
pub/pari/packages/elldata.tgz
tar xf elldata.tgz
wget https://pari.math.u-bordeaux.fr/\
pub/pari/packages/galpol.tgz
tar xf galpol.tgz
wget https://pari.math.u-bordeaux.fr/\
pub/pari/packages/seadata.tgz
tar xf seadata.tgz
wget https://pari.math.u-bordeaux.fr/\
```

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)
threadsizemax = 1G
read "~/.gprc.gp"
```

Create an empty file ~/.gprc.gp

Updating GIT

To update GIT to the most recent revision:

```
git fetch
git rebase origin/master
./Configure -l
make install
```