



Installing PostgreSQL

- How to Install PostgreSQL @ Home

COMP3311 22T3 ♦ Installing PostgreSQL ♦ [0/5]

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These slides (and accompanying video) describe

- how to install a PostgreSQL server from source code
- on MacOS or Linux

Pre-requisites: `make` and `gcc`

- guaranteed to be available on Linux
- will need to download Xcode on Mac

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Summary:

- download PostgreSQL tarball from [postgresql.org](https://www.postgresql.org)
- untar it and run `./configure --prefix=YourPGDir`
- `make` (takes a few minutes)
- `make install` (relatively quick)
- set up environment (`PGHOST`, `PGDATA`, `PATH`)
- `initdb` (creates *YourPGDir*)
- edit *YourPGDir*/data/postgresql.conf
- `pg_ctl start -l YourPGDir/Log`

And off you go ...

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My env script

```
# Set up environment for running PostgreSQL
# Must be "source"d from sh, bash, ksh, ...

# PostgreSQL needs more memory on MacOS
# sudo sysctl -w kern.sysv.shmmax=1073741824
# sudo sysctl -w kern.sysv.shmall=1073741824

PGHOME=/Users/jas/pgsql
export PGDATA=$PGHOME/data
export PGHOST=$PGDATA
export PGPORT=5432
export LD_LIBRARY_PATH=$PGHOME/lib
PATH=$PGHOME/bin:$PATH
pgl() { pg_ctl start -l $PGHOME/log ; }
pg0() { pg_ctl stop ; }
```

Obviously, adjust to suit your local conditions

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On MacOS, PostgreSQL grabs more memory than MacOS expects

If you have "Out of memory" (or somesuch) errors, you'll need

```
# PostgreSQL needs more memory
sudo sysctl -w kern.sysv.shmmax=1073741824
sudo sysctl -w kern.sysv.shmall=1073741824
```

You only need to run these commands once (if at all)

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What I edited in postgresql.conf

```
...
listen_addresses = ''      # what IP address(es) to listen on;
#port = 5432               # (change requires restart)
max_connections = 8        # (change requires restart)
#superuser_reserved_connections = 3 # (change requires restart)
unix_socket_directories = '/Users/jas/pgsql13/data'
                           # comma-separated list of directories
                           # (change requires restart)
...
```

The socket directory has to match the value of
\$PGDATA

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