

Unix Commands: a Quick Reference



Here is a short list of the main commands that you can come across in demos and keys to practical assignments. As a rule, each command has some options that can change its behavior. Some of the popular options are shown in examples.

- man** Reference information for any command
`man man`
Reference documentation for the man command itself.
- pwd** Print the name of the current directory
- cd** Switch to another directory
`cd /home/student/dev1; cd ..`
Switch to the directory with the course materials, and then go up one level.
- ls** List directory contents
`ls -l ~`
List the contents of the Home directory in a detailed output format.
- sudo** Execute a command as a superuser (or another user)
`sudo -u postgres ls /var/lib/postgresql/12/main`
View data directory of a cluster (known as PGDATA).
- su** Switch to a superuser (or another user)
`sudo su - postgres`
Switch to the postgres user. The “dash” sign takes into account the .profile configuration file.
- cat** Print the content of a file
`cat /etc/postgresql/12/main/postgresql.conf`
The content of the specified file.
- head, tail** Print the first (last) lines of a file
`sudo head -n 1 /var/lib/postgresql/12/main/postmaster.pid`
The first line of the specified file (contains the postmaster process ID).
`tail -n 5 /var/log/postgresql/postgresql-12-main.log`
The last five lines of the server log.

- grep** Filter lines in a file
- ```
cat /var/log/postgresql/postgresql-12-main.log | grep FATAL
```
- Find all lines with the word “FATAL” in the output of the cat command (the pipe symbol indicates that the output of cat should be used as input for grep).
- ```
grep ^[^\#] /etc/postgresql/12/main/pg_hba.conf
```
- Regular expressions: find all lines that do not start with a hash.
- echo** Print text
- ```
sudo -u postgres echo 'work_mem = 16MB' >>
↪ /etc/postgresql/12/main/postgresql.conf
```
- Add a line to the end of the postgresql.conf file (a single > will simply rewrite the file).
- mkdir, rmdir** Create (delete) a directory
- ```
mkdir ~/ts_dir
```
- Create a directory with the specified name. You can delete only an empty directory.
- cp, mv** Copy (move) files and directories
- ```
cp /etc/postgresql/12/main/postgresql.conf postgresql.conf.backup
```
- Copy and rename the specified file in the current directory.
- ```
cd ~; mv dev1/ dev1_handouts/
```
- Move the directory with course handouts to a different location (i.e., rename the directory).
- rm** Delete a file
- ```
sudo rm /var/log/postgresql/postgresql-12-main.log
```
- Delete the server log file.
- ps** List active processes
- ```
ps -o pid,command --ppid `sudo head -n 1  
↪ /var/lib/postgresql/12/main/postmaster.pid`
```
- List child processes of postmaster (the command in `backquotes` is replaced by its output).
- time** Run another command and measure its execution time
- ```
time sleep 1
```
- Measure execution time of the command that sleeps for one second.
- sed** Stream editor
- Sed is convenient to use in scripts. Otherwise, use a regular text editor.