

# Unicorn





# Plan

- **command**
- **combine**
- **conquer**

## Command: cat, tail & head

# output contents of file to STDOUT

cat file

# print the last 10 lines to STDOUT

tail file

# print last 20 lines and keep following

tail -n 20 -f file

# Combine

```
# The pipe character connects left STDIN with right STDOUT  
head -n 100 file | tail -n 10
```

```
# FIFO (named pipes)  
mkfifo my_pipe  
gzip -9 -c < my_pipe > out.gz &  
cat file > my_pipe  
rm my_pipe
```

# Combine

# output to file

```
cat file > other_file
```

# Dump database, zip and save to dated file

```
pg_dumpall | gzip -c > database_$(date +%Y-%m-%d).sql.gz
```

## Bonus: bcat <sup>1</sup>

# Pipe STDOUT to your browser

# eg: read man page

gem install bcat

man tail | bcat

# in .bashrc or .zshrc

export MANPAGER='col -b | bcat'

<sup>1</sup> <https://www.g-loaded.eu/2006/11/06/netcat-a-couple-of-useful-examples/>

# Command: sort & uniq

# Sort lines of a file, numerically

```
sort -nr file
```

# Only show duplicate lines once (input must be sorted)

```
uniq
```

# Count duplicate lines

```
uniq -c
```

# Command: curl

```
# Transfer from URL.
```

```
# Use 'copy as curl' from Chrome. Cookies!
```

```
curl 'http://localhost:3000/assets/application-...js'  
-H 'Cookie: _session_id=d42df..; XSRF-TOKEN=7Kj5K..;' > app.js
```



# Command: netcat <sup>1</sup>

# Server serves a file

```
cat backup.iso | nc -l 3333
```

# Client downloads the file

# Show progress with pv

```
nc 192.168.0.1 3333 | pv -b > backup.iso
```

# Create partition image, send to a remote machine

```
dd if=/dev/hdb5 | gzip -9 | nc -l 3333
```

<sup>1</sup> <https://www.g-loaded.eu/2006/11/06/netcat-a-couple-of-useful-examples/>

# Command: ssh

# SSH tunnel (poor man's ngrok, expose localhost externally)

```
ssh -f server.com -L 3000:server.com:3000 -N
```

# Or access production data with Postgres GUI tools

# locally on port 63333

```
ssh -L 63333:localhost:5432 joe@foo.com
```

# Command: wc, ls

# Count lines

```
cat file | wc -l
```

# Count chars

```
cat file | wc -m
```

# Count words

```
cat file | wc -w
```

# Files sorted by time modified, recent last

```
ls -ltr
```

# Command: netstat

```
# On linux (not BSD/OS X),
# show programs listening to tcp
sudo netstat -tpl
```

Active Internet connections (only servers)						
Proto	Recv-Q	Send-Q	Local Address	Foreign Address	State	PID/Program name
tcp	0	0	localhost:5562	*:*	LISTEN	29038/ppx
tcp	0	0	*:6379	*:*	LISTEN	3554/redis-server *
tcp	0	0	*:ssh	*:*	LISTEN	21352/sshd
tcp	0	0	*:postgresql	*:*	LISTEN	23240/postgres
tcp6	0	0	:::6379	:::*	LISTEN	3554/redis-server *
tcp6	0	0	:::ssh	:::*	LISTEN	21352/sshd
tcp6	0	0	:::postgresql	:::*	LISTEN	23240/postgres



# Command: ps, top, iotop

# List running commands of all users

ps aux

# Activity monitor for linux

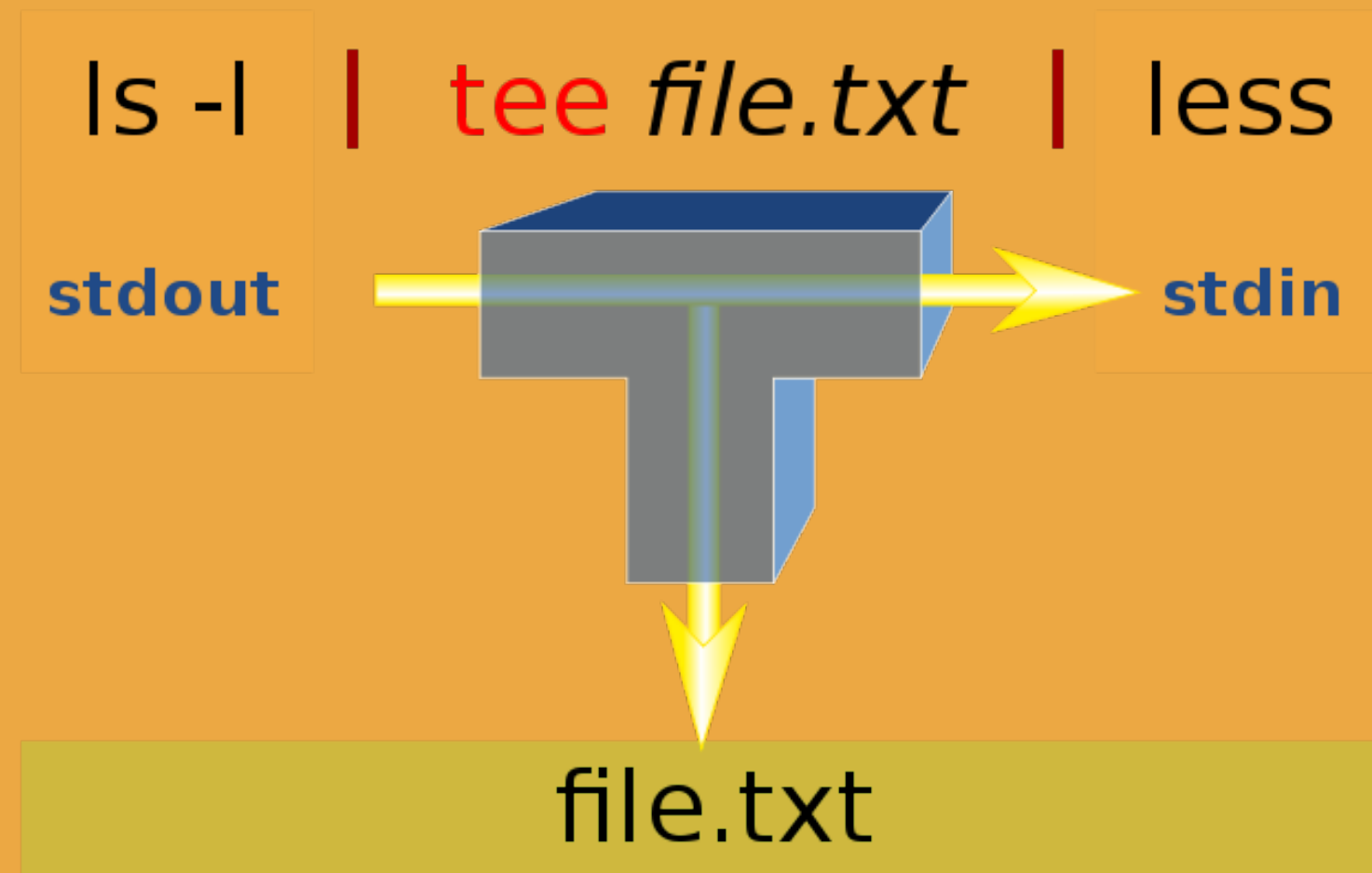
top

# Show disk IO usage per program

sudo iotop

# Command: tee, sudo

```
# tee is like ruby's tap
# ssh with normal sudo user, and write STDIN to a file as root
cat ~/.ssh/id_rsa.pub | ssh user@server "sudo tee -a /root/.ssh/authorized_keys"
```



**OS X: pbcopy, pbpaste**

**Tool: sed**

# like ruby's gsub but for streams



**Tool: awk**

# short for awkward ;)

# Tool: grep

# Conquer

## Copy the contents of a remote file to clipboard

```
ssh server.com "cat /remote/file" | pbcopy
```

# Conquer

## Tail a server log in your browser

```
ssh server.com "tail -f $RAILS_ROOT/log/production.log" | bcat
```



# Conquer

## Find the longest lines in a text file

```
cat app.js | awk '{print length, $0}' | sort -nr | head -100 | less
```

# Conquer

## Transfer postgresql database in one awesome pipe

# From the receiving end

```
ssh server.com "pg_dumpall | gzip -6" | gunzip -c | psql
```

Conquer

**Find the most used commands from your shell history**

# Conquer

## Find the most used commands from your shell history

```
history | awk '{print $2}' | sort | uniq -c | sort -nr | head
```



## More

- <https://www.tjhsst.edu/~dhyatt/superap/unixcmd.html>
- <https://www.tutorialspoint.com/unix/unix-useful-commands.htm>
- <https://www.quora.com/What-is-the-best-list-of-Unix-commands-that-I-can-stick-on-the-walls-of-my-cubicle>