tail, head and watch Peek, follow, repeat

CONCEPTS

head and tail show the start and end of a file; watch reruns any command and redraws the screen.

head start of file
↓ `-n N`
file or stdin
tail end of file
↓ `-f`
live stream new lines

tail -f follows the open file; after log rotation it keeps reading the old, renamed file. Use -F to follow the name.

These are GNU coreutils and procps behaviours; BSD and macOS tail/head lack some options and have no watch by default.

TAIL

`tail <file>`
Last 10 lines

`tail -n <N> <file>`
Last N lines

`tail -n +<N> <file>`
From line N to the end

`tail -c <N> <file>`
Last N bytes

`tail -c +<N> <file>`
From byte N to the end

`tail <file1> <file2>`
Last lines of several files, with headers

`tail -q <file1> <file2>`
Several files, no headers

`tail -v <file>`
Always print the file name header

`tail -z <file>`
Split on NUL instead of newline

FOLLOWING

`tail -f <file>`
Follow appended lines

`tail -F <file>`
Follow by name, retry if missing

FOLLOWING (cont.)

`tail -f <file1> <file2>`
Follow several files at once

`tail -n 0 -f <file>`
Follow only new lines

`tail -f --pid=<pid> <file>`
Stop when a process exits

`tail --retry -f <file>`
Keep trying until the file exists

`tail -f -s <secs> <file>`
Poll interval when not using inotify

`Ctrl+C`
Stop following

HEAD

`head <file>`
First 10 lines

`head -n <N> <file>`
First N lines

`head -n -<N> <file>`
All but the last N lines

`head -c <N> <file>`
First N bytes

`head -c -<N> <file>`
All but the last N bytes

`head <file1> <file2>`
First lines of several files, with headers

`head -q <file1> <file2>`
Several files, no headers

`head -z <file>`
Split on NUL instead of newline

`head -n 1`
First line of piped input

WATCH

`watch <cmd>`
Run every 2 seconds

`watch -n <secs> <cmd>`
Set the interval

`watch -d <cmd>`
Highlight changes between runs

`watch -d=permanent <cmd>`
Keep every change highlighted

`watch -t <cmd>`
Hide the header

WATCH (cont.)

`watch -e <cmd>`
Stop when the command fails

`watch -g <cmd>`
Exit when the output changes

`watch -q <cycles> <cmd>`
Exit after N unchanged runs

`watch -c <cmd>`
Keep ANSI colours

`watch -b <cmd>`
Beep when the command fails

`watch -p <cmd>`
Run at precise intervals

`watch -w <cmd>`
Do not wrap long lines

`watch -x <cmd> <args>`
Run without a shell

PIPES AND TEE

`<cmd> | tail -n <N>`
Keep the last N output lines

`<cmd> | head -n <N>`
Keep the first N output lines

`tail -f <file> | grep --line-buffered <pat>`
Filter a live log

`<cmd> | tee <file>`
Show output and save it

`<cmd> | tee -a <file>`
Append instead of overwrite

`<cmd> | sudo tee <file>`
Write to a root-owned file

`<cmd> | tee <file1> <file2>`
Write to several files

RECIPES

Follow a rotating log and filter

```
tail -F /var/log/nginx/error.log
\
  | grep --line-buffered -i error
```

Skip a CSV header and peek

```
tail -n +2 data.csv | head -n 5
```

Watch a directory grow

```
watch -n 1 -d 'ls -l /tmp | tail
-n 10'
```

Wait until a service is up

```
watch -g -n 2 'systemctl is-
active nginx'
# exits as soon as the output
changes
```