

# Ubuntu Server CLI pro tips



## Networking

Get the IP address of all interfaces  
`networkctl status`

Display all IP addresses of the host  
`hostname -I`

Enable/disable interface  
`ip link set <interface> up`  
`ip link set <interface> down`

Manage firewall rules  
**enable firewall:** `sudo ufw enable`  
**list rules:** `sudo ufw status`  
**allow port:** `sudo ufw allow <port>`  
**deny port:** `sudo ufw deny <port>`

Connect remotely through SSH  
`ssh <user>@<host IP>`

## Packages

Search for packages  
`apt search <string>`  
`snap find <string>`

List available updates  
`apt list --upgradable`

Apply all available updates  
`sudo apt update && sudo apt upgrade`

Install from the Ubuntu archive:  
`sudo apt install <package>`

Install from the snap store:  
`sudo snap install <package>`

Which package provides this file?  
`sudo apt install apt-file`  
`sudo apt-file update`  
`apt-file <filename or command>`

## Files

List files  
`ls`

List files with permissions and dates  
`ls -al`

Common file operations  
**create empty:** `touch <filename>`  
**create with content:** `echo "<content>" > <filename>`  
**append content:** `echo "<content>" >> <filename>`  
**display a text file:** `cat <file>`  
**copy:** `cp <file> <target filename>`  
**move/rename:** `mv <file> <target directory/filename>`  
**delete:** `rm <file>`

Create a directory  
`mkdir <directory>`

Create directories recursively  
`mkdir -p <directory1>/<directory2>`

Delete a directory recursively  
`rm -r <directory>`

Quick file search  
`locate <q>`

Search string in file  
`grep <string> <filename>`

Search string recursively in directory  
`grep -Iris <string> <directory>`

## Security

Show which users are logged in  
`w`

Get password expiration date for <user>  
`chage -l <user>`

Set password expiration date for <user>  
`sudo chage <user>`

Lock a user account  
`sudo passwd -l <user>`

Unlock a user account  
`sudo passwd -u <user>`

List open ports and associated processes  
`sudo netstat -tulnp`

Automatically detect and ban abusive IP addresses  
`sudo apt install fail2ban`

Show banned IP addresses  
`sudo fail2ban-client status`  
`sudo fail2ban-client status <jail>`

Get the support status for installed packages  
`ubuntu-support-status`

Enable kernel live patching  
`sudo snap install canonical-livepatch`  
`sudo canonical-livepatch enable <token>`

Visit [ubuntu.com/livepatch](https://ubuntu.com/livepatch) to get a free token for up to 3 machines.

## Ubuntu release cadence

### Ubuntu 20.04 LTS

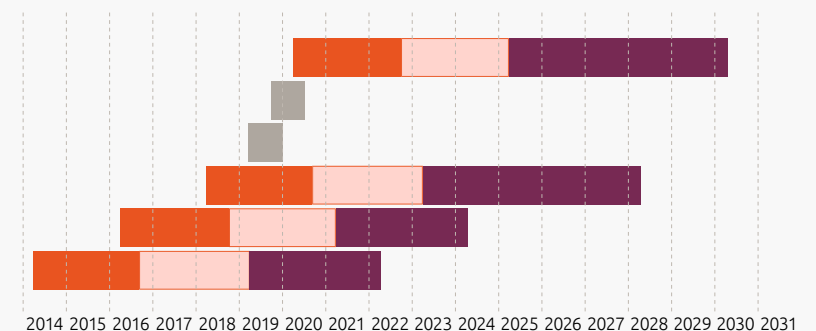
Ubuntu 19.10

Ubuntu 19.04

### Ubuntu 18.04 LTS

Ubuntu 16.04 LTS

Ubuntu 14.04 LTS



Hardware and maintenance updates

Maintenance updates

Interim release

Extended security maintenance for customers

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## Files

Find files modified in the last n minutes  
`find <directory> -mmin -<n> -type f`  
eg. `find . -mmin -5 -type f`

Show only the nth column  
`col<n> "<separator>" <filename>`  
eg. `col2 "," foo.csv`

Display file paginated  
`less <filename>`

Display first n lines  
`head -n <n> <filename>`

Display last n lines  
`tail -n <n> <filename>`

Follow file content as it increases  
`tail -f <filename>`

Pack a directory into an archive  
**zip:** `zip -r <target> <source dir>`  
**tar.gz:** `tar cvzf <target>.tar.gz <source dir>`

Unpack an archive  
**zip:** `unzip <zip file>`  
**tar.gz:** `tar xf <tar.gz file>`

Copy file to remote server  
`scp <filename> <user@server>:<destination>`  
eg. `scp config.yaml admin@192.0.0.0:/config`

Copy directory recursively from remote server  
`scp -r <user@server>:<source> <destination>`  
eg. `scp -r admin@192.0.0.0:/config /tmp`

## System

Display kernel version  
`uname -r`

Get disk usage  
`df -h`

Get memory usage  
`cat /proc/meminfo`

Get system time  
`timedatectl status`

Set system timezone  
`timedatectl list-timezones`  
`sudo timedatectl set-timezone <zone>`

Get all running services  
`systemctl --state running`

Start or stop a service  
`service <service> start/stop`

Monitor new logs for a service  
`journalctl -u <service> --since now -f`

Get the list of recent logins  
`last`

Display running processes  
`htop`

Kill process by id  
`kill <process id>`

Kill process by name  
`pkill <process name>`

Run command in the background  
`<command> &`

Display background commands  
`jobs`

Bring command <n> to the foreground  
`fg <n>`

## Kubernetes and containers

Install MicroK8s and list available add-ons  
`sudo snap install microk8s --classic`  
`microk8s.status --wait-ready`

Enable a MicroK8s add-on  
`microk8s.enable <service>`

View MicroK8s nodes and running services  
`microk8s.kubectl get nodes`  
`microk8s.kubectl get services`

[More MicroK8s help at microk8s.io/docs](https://microk8s.io/docs)

Launch a LXD container  
`lxd init`  
`lxc launch ubuntu:18.04 <container name>`

Or another distro  
`lxc launch images:centos/8/amd64 <container name>`

Get a shell inside a LXD container  
`lxc exec <name> -- /bin/bash`

Push a file to a LXD container  
`lxc file push <filename> <container name>/<path>`

Pull a file from a LXD container  
`lxc file pull <destination> <container name>/<file path>`

[More LXD help at linuxcontainers.org/lxd](https://linuxcontainers.org/lxd)

## Virtualisation

Install Multipass and launch an Ubuntu VM  
`sudo snap install multipass --classic`  
`multipass launch <image> --name <VM name>`

Omitting <image> will launch a VM with the latest Ubuntu LTS

Find available images  
`multipass find`

List existing VMs  
`multipass list`

Get a shell inside a VM  
`multipass shell <VM name>`

[More Multipass help at discourse.ubuntu.com](https://discourse.ubuntu.com)

## OpenStack

Install OpenStack and launch an instance  
`sudo snap install microstack --classic`  
`sudo microstack.init`  
`microstack.launch`

The Horizon dashboard is available at 10.20.20.1  
Default credentials: admin / keystone

[More MicroStack help at microstack.run/docs](https://microstack.run/docs)