

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`

Show routes
`ip route`

Which route will be used to reach a host
`ip route get <IP>`

Which route will be used to reach a host
`ip route get <IP>`

List open ports and associated processes
`sudo ss -tulpn`

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>`

Security

Show which users are logged in
`w`

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

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

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

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

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

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

Ubuntu Advantage

Enable Ubuntu Advantage
Visit ubuntu.com/advantage to get a free token for up to 3 machines (or 50 if you are an official Ubuntu Community member).
`sudo ua attach <token>`

Check Ubuntu Advantage Service availability and entitlement
`sudo ua status`

Enable or disable a service
`sudo ua enable <service>`
`sudo ua disable <service>`

Fix a CVE/USN
`sudo ua fix <cve/usn>`

See packages update availability status of the system
`sudo ubuntu-security-status`

See CVEs that Livepatch has patched
`canonical-livepatch status --verbose`

Packages

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

List available package versions
`apt-cache policy <package>`

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>`

Remove the package
`sudo apt remove <package>`

Remove the package
`sudo apt remove <package>`

Remove the package and all its configuration files
`sudo apt purge <package>`

Reinstall broken package
`sudo apt install -f --reinstall <package>`

Which files does this package provide?
`dpkg-query -L <package>`

Which package provides this file?
`dpkg-query -S <path>`

Files

List files with permissions and dates
`ll`

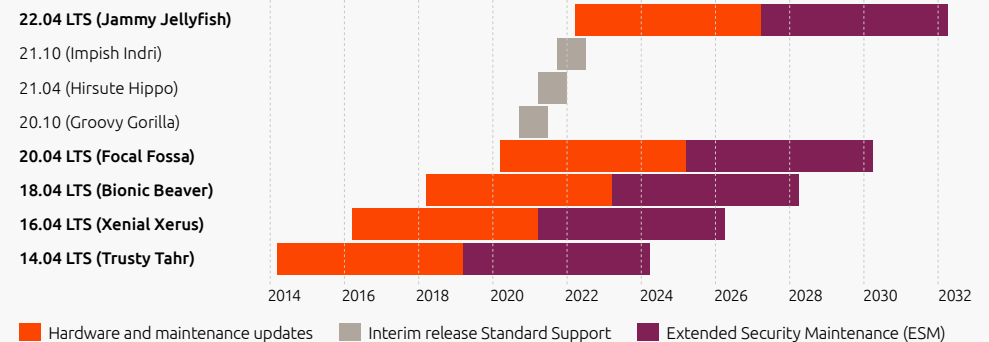
Common file operations
create empty: `touch <filename>`
create with size: `fallocate -l <size> <filename>`
create with content: `echo "<content>" > <filename>`

Quick file search
`locate <filename>`

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

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

Ubuntu release cadence



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ubuntu
Delivered by Canonical

Files

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

Show only the `n`th 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
tar.gz: `tar cvzf <target>.tar.gz <source dir>`
zip: `zip -r <target> <source dir>`

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

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

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

System

Display kernel version `uname -r`

Get root 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/failing services
`systemctl --state running`
`systemctl --state failed`

Start, stop or restart a service
`systemctl start/stop/restart <service>`

Get the full content of a systemd unit including overrides
`systemctl cat <service>`

Edit a systemd avoiding conflicts with package updates
`systemctl edit <service>`

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

Monitor all logs since boot `journalctl --boot 0`

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> &`
staying alive after hangup and logging to file
`nohup <command> >> /var/log/yourcommand.log 2>&1 &`

Display background commands `jobs`

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

Ubuntu VMs on workstation

Install Multipass and launch an Ubuntu VM
`sudo snap install multipass`
`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

Micro clouds

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> 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>`

Launch a LXD VM
`lxc launch images:ubuntu/20.04 <vm name> --vm`

Get a shell inside a LXD VM
`lxc exec <name> bash`

More LXD help at linuxcontainers.org/lxd

Bare metal provisioning

Start a VM with a MAAS demo
`wget -qO- https://raw.githubusercontent.com/canonical/maas-multipass/main/maas.yml \`
`| multipass launch --name maas -c4 -m8GB -d32GB`
`--cloud-init -`

Find the IP address of the MAAS demo server
`multipass list | grep maas | awk '{print $3}'`

Access MAAS dashboard using IP from `multipass list`
<http://10.x.x.x:5240/>
Default username and password is admin:admin

More MAAS help at maas.io

Kubernetes

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

Enable auxiliary Kubernetes services with MicroK8s add-ons
`microk8s enable <add-ons>`

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

More MicroK8s help at microk8s.io/docs

OpenStack

Install MicroStack and launch test instance
`sudo snap install microstack --devmode --beta`
`sudo microstack.init --auto --control`
`microstack.launch cirros -n test`

Get admin password
`sudo snap get microstack config.credentials.keystone-password`

Access Horizon dashboard
<https://10.20.20.1>

More MicroStack help at microstack.run/docs