# LXC Classic Linux containers

**Template** download, busybox → `lxc-create` → **Container dir** config + rootfs → `lxc-start` → **RUNNING** init + namespaces → `lxc-stop` → **STOPPED** still defined → `lxc-destroy` → **Gone** dir removed

## CONCEPTS

Every tool is a separate lxc-* program taking -n <name>; there is no single lxc command in the classic tools. The lxc client of LXD/Incus is a different thing: see the Incus sheet.

Unprivileged containers (run as your user, uid-mapped) need /etc/subuid, /etc/subgid and an /etc/lxc/lxc-usernet quota; root-run containers are privileged by default.

Containers live in /var/lib/lxc/<name>/ (root) or ~/.local/share/lxc/ (unprivileged); -P <path> points any tool at another store.

## CREATE AND DESTROY

**`lxc-create -n <name> -t download`**
Create from the image server (asks distro)

**`lxc-create -n <name> -t download -- -d debian -r bookworm -a amd64`**
Create non-interactively

## CREATE AND DESTROY (cont.)

**`lxc-create -n <name> -t download -f <config>`**
Create with a config file

**`lxc-create -n <name> -t download -B btrfs`**
Pick the backing store

**`lxc-destroy -n <name>`**
Delete a stopped container

**`lxc-destroy -n <name> -f`**
Stop and delete in one go

## RUN AND STOP

**`lxc-start -n <name>`**
Start in the background

**`lxc-start -n <name> -F`**
Start in foreground, see boot output

**`lxc-start -n <name> -l DEBUG -o <file>`**
Log a failing start

**`lxc-stop -n <name>`**
Request clean shutdown

**`lxc-stop -n <name> -k`**
Kill instead of shutting down

**`lxc-stop -n <name> -t <sec>`**
Hard-stop after a timeout

**`lxc-stop -n <name> -r`**
Reboot the container

## RUN AND STOP (cont.)

**`lxc-freeze -n <name>`**
Pause all processes

**`lxc-unfreeze -n <name>`**
Resume a frozen container

## INSPECT

**`lxc-ls -f`**
List containers, state, IPs

**`lxc-ls --running`**
Only running containers

**`lxc-ls --stopped`**
Only stopped containers

**`lxc-ls --filter <regex>`**
Filter names by regex

**`lxc-ls -F NAME,STATE,IPV4`**
Pick the fancy columns

**`lxc-info -n <name>`**
Show state, PID, IPs, usage

**`lxc-info -n <name> -iH`**
Only the IP addresses, plain

**`lxc-info -n <name> -s`**
Only the state

**`lxc-info -n <name> -S`**
Usage stats (CPU, memory, I/O)

**`lxc-top`**
Live per-container usage

## GET INSIDE

**`lxc-attach -n <name>`**
Shell inside the container

**`lxc-attach -n <name> -- <cmd>`**
Run one command inside

**`lxc-attach -n <name> --clear-env -- <cmd>`**
Run with a clean environment

**`lxc-console -n <name>`**
Attach to the container console

## CLONES AND SNAPSHOTS

**`lxc-snapshot -n <name>`**
Create next snapshot (snap0, snap1...)

**`lxc-snapshot -n <name> -L`**
List snapshots

**`lxc-snapshot -n <name> -r <snap>`**
Restore a snapshot

**`lxc-snapshot -n <name> -d <snap>`**
Delete a snapshot

**`lxc-copy -n <name> -N <new>`**
Clone a container

## CLONES AND SNAPSHOTS (cont.)

**`lxc-copy -n <name> -N <new> -s`**
Clone as copy-on-write snapshot

**`lxc-copy -n <name> -e`**
Start a throwaway ephemeral copy

## CONFIG AND LIMITS

**`lxc.start.auto = 1`**
Start at host boot

**`lxc.net.0.type = veth`**
Virtual NIC type

**`lxc.net.0.link = <bridge>`**
Bridge to attach to

**`lxc.net.0.flags = up`**
Bring the NIC up

**`lxc.mount.entry = <src> <dst> none bind 0 0`**
Bind-mount a host dir

**`lxc.cgroup2.memory.max = <bytes>`**
Memory limit (cgroup v2)

## FILES AND PATHS

**`/var/lib/lxc/<name>/config`**
Per-container config (root)