LXC Classic Linux containers

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.

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

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.

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

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

INSPECT

lxc-ls -f
List containers, state, IPs

lxc-ls --running
Only running containers

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

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

GET INSIDE

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

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

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

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

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.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)