# Multipass Ubuntu VMs on demand

## CONCEPTS

Multipass runs Ubuntu VMs on your host. Launch, use and throw them away in seconds.

**Image** Ubuntu release
↓ launch
**Running** instance
↓ stop
**Stopped** snapshots here
↓ delete
**Deleted** recoverable
↓ purge
**Gone** disk freed

Deleted instances are only hidden until you purge them; recover brings them back.

The instance named primary is the default for shell, exec and stop when no name is given.

## CREATE AND INSPECT

**multipass launch [*image*] --name *name***
Create and start an instance

**multipass launch --cpus *n* --memory *size* --disk *size***
Set the VM resources

**multipass images**
List available images

**multipass list**
List instances and their IPs

**multipass info *name***
Show details of an instance

**multipass list --format json**
Machine-readable list

**multipass info --all**
Details of every instance

**multipass launch --cloud-init *file***
Configure at first boot

**multipass launch --mount *host-dir*:*vm-dir***
Mount a folder at launch

**multipass clone *name* --name *new***
Copy a stopped instance

## ACCESS

**multipass shell [*name*]**
Open a shell in the instance

## ACCESS (cont.)

**multipass exec *name* -- *cmd***
Run a command in the instance

**multipass exec *name* --working-directory *dir* -- *cmd***
Run in a given directory

**multipass alias *name*:*cmd* [*alias*]**
Run a VM command from the host

## LIFECYCLE

**multipass stop *name***
Stop an instance

**multipass start *name***
Start a stopped instance

**multipass restart *name***
Restart an instance

**multipass suspend *name***
Suspend, keeping memory state

**multipass stop --all**
Stop every instance

**multipass delete *name***
Delete (recoverable)

**multipass recover *name***
Bring back a deleted instance

**multipass purge**
Permanently remove deleted instances

**multipass delete --purge *name***
Delete and purge at once

## FILES

**multipass transfer *file* *name*:*path***
Copy host file to instance

**multipass transfer *name*:*path* *dest***
Copy instance file to host

**multipass transfer --recursive *src* *name*:*path***
Copy a directory tree

**multipass mount *host-dir* *name*:*vm-dir***
Share a host folder

**multipass unmount *name*[:*path*]**
Remove a mount

## SNAPSHOTS

**multipass snapshot *name* --name *snap***
Snapshot a stopped instance

**multipass snapshots**
List snapshots

**multipass restore *name*.*snap***
Roll back to a snapshot

## SETTINGS

**multipass get --keys**
List all setting keys

**multipass get *key***
Read a setting

**multipass set local.driver=*driver***
Choose the hypervisor

**multipass set local.*name*.cpus=*n***
Resize a stopped instance's CPUs

**multipass set local.*name*.memory=*size***
Resize its memory

**multipass set local.*name*.disk=*size***
Grow its disk

**multipass version**
Show client and daemon versions

**multipass help *command***
Help for one command

## RECIPES

### Throwaway test box

```
multipass launch 24.04 --name scratch
multipass exec scratch -- sudo apt-get install -y <pkg>
multipass delete --purge scratch
```

### Share project, work inside

```
multipass launch --name dev --cpus 2 --memory 4G
multipass mount ~/<project> dev:/home/ubuntu/<project>
multipass shell dev
```

### Checkpoint before risky change

```
multipass stop dev
multipass snapshot dev --name before-upgrade
multipass start dev
# if it goes wrong
multipass stop dev && multipass restore dev.before-upgrade
```