gcloud CLI Google Cloud CLI

START HERE

`gcloud` **`auth login`**
Sign in with your browser

`gcloud` **`storage ls`**
List buckets

`gcloud` **`projects list`**
See your projects

`gcloud` **`<group> --help`**
Explore any command

`gcloud` **`config set project`** *`<id>`*
Pick the active project

`gcloud` **`config list`**
Show active settings

`gcloud` **`compute instances list`**
List VMs

`gcloud` **`compute ssh`** *`<vm>`*
Log into a VM

Account who you are → `auth login` → **Configuration** project, region, zone → `config set` → **Command** gcloud compute ... → `--project` → **Resource** VM, bucket, role

CONCEPTS

Commands read as gcloud <product> <resource> <verb>, e.g. compute instances list. Add --help at any level to explore.

Most commands need a project. Set a default once, or override per call with --project.

Credentials from gcloud auth login are not used by client libraries; use application-default login for those.

AUTH AND ACCOUNTS

`gcloud` **`auth login`**
Sign in via browser

`gcloud` **`auth list`**
Show credentialed accounts

`gcloud` **`config set account`** *`<email>`*
Switch the active account

`gcloud` **`auth application-default login`**
Credentials for local code and SDKs
Separate from gcloud's own login; stored as a local ADC file.

`gcloud` **`auth activate-service-account --key-file`** *`<file>`*
Sign in as a service account

AUTH AND ACCOUNTS (cont.)

`gcloud` **`init`**
Guided first-time setup

CONFIG AND PROJECTS

`gcloud` **`config list`**
Show active properties

`gcloud` **`config set project`** *`<id>`*
Set default project

`gcloud` **`config set compute/region`** *`<region>`*
Set default region

`gcloud` **`config set compute/zone`** *`<zone>`*
Set default zone

`gcloud` **`config configurations list`**
List named configurations

`gcloud` **`config configurations create`** *`<name>`*
Create a configuration

`gcloud` **`config configurations activate`** *`<name>`*
Switch configuration

`gcloud` **`projects list`**
List projects you can see

`gcloud` **`services list --enabled`**
List enabled APIs

CONFIG AND PROJECTS (cont.)

`gcloud` **`services enable`** *`<api>`***`.googleapis.com`**
Enable an API

COMPUTE INSTANCES

`gcloud` **`compute instances list`**
List VMs

`gcloud` **`compute instances describe`** *`<vm>`*
Show one VM

`gcloud` **`compute instances create`** *`<vm>`*
Create a VM

`gcloud` **`compute instances create`** *`<vm>`* **`--machine-type=`***`<type>`* **`--image-family=`***`<family>`* **`--image-project=`***`<project>`*
Create with explicit size and image

`gcloud` **`compute instances start`** *`<vm>`*
Start a VM

`gcloud` **`compute instances stop`** *`<vm>`*
Stop a VM

`gcloud` **`compute instances delete`** *`<vm>`*
Delete a VM

SSH AND COPY

`gcloud` **`compute ssh`** *`<vm>`*
SSH into a VM
Creates and uploads an SSH key on first use.

`gcloud` **`compute ssh`** *`<vm>`* **`--zone=`***`<zone>`*
SSH naming the zone

`gcloud` **`compute ssh`** *`<vm>`* **`--command="`***`<cmd>`***`"`**
Run one command remotely

`gcloud` **`compute ssh`** *`<vm>`* **`--tunnel-through-iap`**
SSH without a public IP

`gcloud` **`compute ssh`** *`<vm>`* **`--L`** *`<port>`***`:localhost:`***`<port>`**
Forward a local port

`gcloud` **`compute scp`** *`<file>`* *`<vm>`***`:`***`<path>`**
Copy a file to a VM

STORAGE

`gcloud` **`storage ls`**
List buckets

`gcloud` **`storage ls gs://`***`<bucket>`***`/`***`<prefix>`**
List objects

`gcloud` **`storage cp`** *`<src>`* *`<dst>`*
Copy files to, from or between buckets

`gcloud` **`storage cp -r`** *`<dir>`* **`gs://`***`<bucket>`*
Upload a directory

STORAGE (cont.)

`gcloud` **`storage mv`** *`<src>`* *`<dst>`*
Move or rename objects

`gcloud` **`storage rm gs://`***`<bucket>`***`/`***`<object>`**
Delete an object

`gcloud` **`storage rm -r gs://`***`<bucket>`***`/`***`<prefix>`**
Delete recursively

`gcloud` **`storage rsync -r`** *`<src>`* *`<dst>`*
Sync a directory with a bucket

`gcloud` **`storage buckets create gs://`***`<bucket>`* **`--location=`***`<loc>`*
Create a bucket

IAM

`gcloud` **`iam service-accounts list`**
List service accounts

`gcloud` **`iam service-accounts create`** *`<name>`*
Create a service account

`gcloud` **`projects get-iam-policy`** *`<project>`*
Show who has which role

`gcloud` **`projects add-iam-policy-binding`** *`<project>`* **`--member=`***`<member>`* **`--role=`***`<role>`*
Grant a role
Members look like user:a@b.com or serviceAccount:<email>.

FORMAT AND FILTER

`--format=json`
Output as JSON

`--format="value(`*`<field>`***`)"`**
Print bare values for scripts

`--format="table(`*`<f1>`***`,`** *`<f2>`***`)"`**
Choose table columns

`--filter="`*`<field>`***`=`***`<value>`***`"`**
Keep matching rows

`--project=`*`<id>`*
Override the project for one call

HELP AND DISCOVERY

`gcloud` **`<group> --help`**
List subcommands in a group

RECIPES

Separate work and personal setups

```
gcloud config configurations
create work
gcloud config set project
<work-project>
gcloud config set account
<you@work.com>
gcloud config configurations
activate default
```

Script-friendly VM IPs

```
gcloud compute instances list \
  --filter="status=RUNNING" \
  --format="value(name,
networkInterfaces[0].
accessConfigs[0].natIP)"
```