

GLOBAL FLAGS

Some flags are available throughout the gcloud experience, like:

--help

For when in doubt

--project

If using a project other than the current one

--quiet

Disable interactive prompts (and apply default values for inputs)

--verbosity

Can set verbosity levels at `debug`, `info`, `warning`, `error`, `critical`, and `none`

--version

Display gcloud version information (*only available at the global level*)

--format

Set output format as `config`, `csv`, `default`, `diff`, `disable`, `flattened`, `get`, `json`, `list`, `multi`, `none`, `object`, `table`, `text`, `value`, or `yaml`.

CLEANING UP RESULTS

Extricate the most from your output with the filter, format, limit, and sort-by flags. Examples:

```
gcloud compute instances list  
--filter="zone ~ ^us AND  
-machineType:f1-micro"
```

For Compute Engine instances with prefix us and not machine type f1-micro

```
gcloud projects list  
--format="table(projectNumber, project  
Id, createTime.date(tz=LOCAL))"\br  
--filter="createTime>=2018-01-15T12:0  
0:00" --sort-by=createTime
```

For a list of projects created on or after 15 January 2018, sorted from oldest to newest, presented as a table with project number, project id and creation time columns with dates and times in local timezone

```
gcloud compute instances list  
--filter="labels.my-label:*\r  
--limit=10
```

For a list of ten Compute Engine instances with a label my-label (of any value)

DISCOVERING COMMANDS

The gcloud command-line tool is a tree; non-leaf nodes are command groups and leaf nodes are commands. (Also, tab completion works for commands and resources!)

Most gcloud commands follow the following format:

`gcloud + release level (optional) + component + entity +
operation + positional args + flags`

For example:

```
gcloud + compute + instances + create + example-instance-1 +  
--zone=us-central1-a
```

Where:

Release Level refers to the command's release status

- **alpha** or **beta**. GA (General Availability) commands require no release level specification

Component refers to different Google Cloud services

- `compute` for Compute Engine, `app` for App Engine, etc.

Entity refers to the plural form of an element or collection of elements under a component

- `disks`, `firewalls`, `images`, `instances`, `regions`, `zones` for compute

Operation refers to the imperative verb form of the operation to be performed on the entity

- common operations are `describe`, `list`, `create/update`, `delete/clear`, `import`, `export`, `copy`, `remove`, `add`, `reset`, `restart`, `restore`, `run`, and `deploy`

Positional args refer to the required, order-specific arguments needed to execute the command

- **INSTANCE NAMES** is the required positional argument for `gcloud compute instances create`

Flags refer to the additional arguments, `--flag-name=(value)`, passed in to the command after positional args

- `--machine-type=MACHINE_TYPE` and `--preemptible` are optional flags for `gcloud compute instances create`

GCLLOUD COMMAND-LINE TOOL

Cheat sheet

<https://cloud.google.com/sdk/gcloud/reference/>

GETTING STARTED

gcloud init

Initialize, authorize, and configure gcloud

gcloud version

Display version and installed components

gcloud components install

Install specific components *

gcloud components update

Update Cloud SDK to the latest version *

gcloud config set project

Set a default Cloud Platform project to work on

gcloud info

Display current gcloud environment details

gcloud help

Search gcloud reference documents for specific terms

gcloud feedback

Provide feedback for the Cloud SDK team

gcloud topic

Supplementary help material for non-command topics like accessibility, filtering, and formatting

* For apt-get and yum, see <https://cloud.google.com/sdk/install>

PERSONALIZATION

gcloud config set

Define a property (like `compute/zone`) for current configuration

gcloud config get-value

Fetch value of a Cloud SDK property

gcloud config list

Display all the properties for the current configuration

gcloud config configurations create

Create a new named configuration



<https://cloud.google.com/sdk/gcloud/reference/>

PERSONALIZATION (CONT.)

gcloud config configurations list

Display a list of all available configurations

gcloud config configurations activate

Switch to an existing named configuration

CREDENTIALS

gcloud auth login

Authorize access for gcloud with Google user credentials and set current account as active

gcloud auth activate-service-account

Like gcloud auth login but with service account credentials

gcloud auth list

List all credentialed accounts

gcloud auth print-access-token

Display the current account's access token

gcloud auth revoke

Remove access credentials for an account

gcloud projects describe

Display metadata for a project (including its ID)

gcloud projects add-iam-policy-binding

Add an IAM policy binding to a project

GOOGLE KUBERNETES ENGINE (GKE)

gcloud auth configure-docker

Register gcloud as a Docker credential helper

gcloud container clusters create

Create a cluster to run GKE containers

gcloud container clusters list

List clusters to run GKE containers

gcloud container clusters

get-credentials

Update kubeconfig to get kubectl to use a GKE cluster

gcloud container images list-tags

List tag and digest metadata for a container image

IDENTITY & ACCESS MANAGEMENT (IAM)

gcloud iam list-grantable-roles

List IAM grantable roles for a resource

gcloud iam roles create

Create a custom role for a project or org

gcloud iam service-accounts create

Create a service account for a project

gcloud iam service-accounts keys list

List a service account's keys

gcloud iam service-accounts add-iam-policy-binding

Add an IAM policy to a service account

gcloud iam service-accounts set-iam-policy

Replace existing IAM policy

COMPUTE ENGINE

gcloud compute zones list

List Compute Engine zones

gcloud compute instances describe

Display a virtual machine (VM) instance's details

gcloud compute instances list

List all VM instances in a project

gcloud compute disks snapshot

Create snapshot of persistent disks

gcloud compute snapshots describe

Display a specified snapshot's details

gcloud compute snapshots delete

Delete a snapshot

gcloud compute ssh

Connect to a VM instance by using SSH

APP ENGINE

gcloud app deploy

Deploy your app's code and configuration to App Engine server

gcloud app versions list

List all versions of all services deployed to the App Engine server

gcloud app browse

Open the current app in a web browser

gcloud app create

Create an App Engine app within your current project

gcloud app logs read

Display the latest App Engine app logs

MISCELLANEOUS

gcloud kms decrypt

Decrypt ciphertext (to a plaintext file) using a Cloud Key Management Service (KMS) key

gcloud logging logs list

List your project's logs

gcloud sql backups describe

Display info about a Cloud SQL instance backup

gcloud sql export sql

Export data from a Cloud SQL instance to a SQL file

INSTALLING THE CLOUD SDK

Docs and installation instructions:

<https://cloud.google.com/sdk/docs/>

FLAGS & ARGUMENTS

Arguments can be **positional args**, which are set after command name and must respect the order of positional args or **flags**, which are set after positional args where the order of flags doesn't matter.

A flag is either a **name-value pair** (`--foo=bar`) or **boolean** (`--force/no-force`). Additionally, flags can either be **required** or **optional**. When optional, the default value is used if the flag isn't defined.

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