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))"\
--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:*"
--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, ect.

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

Google Cloud

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

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 documentss 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

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.