

GCloud

Gcloud command syntax `gcloud <global flags> <service/product> <group/area> <command> <flags> <parameters>`

global flags format `--project myprojid`
OR
`--project=myprojid`

Set config property `gcloud config set <property> <value>`

Check config property `gcloud config get-value <property>`

Remove config property `gcloud config unset <property>`

Interactive config creation `gcloud init`

List all properties in a configuration `gcloud config list`

List all configurations `gcloud config configurations list`

Make new configuration `gcloud config configurations create <NewConfigName>`

Switch to an existing config `gcloud config configurations activate <NewConfigName>`

Specify config in a command `--configuration=ITS_NAME`
ex. `gcloud --configuration=newconfig config list`

Global Flags

`--help, -h, --project <ProjectID>, --account <Account>, --filter, --format <JSON, YAML, CSV>, --quite, -q`

Config Properties

- * Set "core/account" or "account" to replace "--account"
- * Set "core/project" or "project" to replace "--project"
- * Set "compute/region" to replace "--region"
- * Set "compute/zone" to replace "--zone"

Global Flags

`--account` User account to use for invocation

`--billing-project` GCP Object that will be charged quota for operations performed in gcloud.
Use this flag when you want to use resources from project, but billed to a different project.

`--configuration` configuration to be used for this invocation.

Global Flags (cont)

`--flags-file` A YAML or JSON file that specifies a `--flag:value` dictionary

`--flatten=[KEY,...]` Flatten output resources slices in KEY into separate records for each item in each slice.

`--format` Format for printing command output resources.

`--help` Display detailed help

`--project` Specify projectId to be used in this invocation

`--quiet` Disable all interactive prompts.

`--verbosity` one of **debug, info, warning, error, critical, none**

`--version, -v` Print version and exit

`-h` Print summary help and exit.

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Get info on a topic `gcloud topic filters`

System Administration

Get user `whoami`

Get Machine name `hostname`

Get IP address of current machine `curl api.ipify.org`

Ping with limited repetitions `ping -c 3 myhappyvm`

SSH to the instance `gcloud compute ssh myhappyvm`

Get info stored by metadata service `curl -H "Metadata-Flavor:google" metadata.google.internal/computeMetadata/v1/`

We can ping a Compute instance only using the external IP of the instance.

It is not possible to SSH directly to an instance. Hence use **gcloud compute ssh**

We can drill down into the Metadata service file system using the Curl Output.

Project

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| Create a project | <code>gcloud projects create [PROJECT_ID] [--folder=FO-LDER_ID] [--labels=[KEY=VALUE,...]][--name=NAME][--set-as-default]</code> |
| List all projects for active account | <code>gcloud projects list [--filter=EXPRESSION][--limit=LIMIT][--page-size=PAGE_SIZE][--sort-by=[FIELD,...]][--uri]</code> |
| Delete a project | <code>gcloud projects delete PROJECT_ID_OR_NUMBER</code> |
| Print Metadata of a project | <code>gcloud projects describe PROJECT_ID_OR_NUMBER</code> |
| Undelete a project | <code>gcloud projects undelete PROJECT_ID_OR_NUMBER</code> |
| Update name of a project | <code>gcloud projects update PROJECT_ID --name=NAME</code> |

You can add Project Wide Flags at the end of all of the above commands.
 --accounts, --billing-project, --configuration, --flags-file, --flatten, --format, --help, --impersonate-service-account, --log-http, --project, --quiet, --trace-token, --user-output-enabled, --verbosity

Run **\$ gcloud help** for details

Components, SDK

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| List all installed components | <code>gcloud components list</code> |
| Install auto-completion tool | <code>sudo apt-get install google-cloud-sdk</code> |
| Enable auto-completion tool | <code>gcloud beta interactive</code> |

PubSub

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| Create a topic | <code>gcloud pubsub topics create myTopic</code> |
| List all topics | <code>gcloud pubsub topics list</code> |

PubSub (cont)

| | |
|---|---|
| Delete a topic | <code>gcloud pubsub topics delete Test1</code> |
| Create a subscription for topic myTopic | <code>gcloud pubsub subscriptions create --topic myTopic mySubscription</code> |
| Delete a subscription | <code>gcloud pubsub subscriptions delete Test1</code> |
| Publish a message to a topic | <code>gcloud pubsub topics publish myTopic --message "Message"</code> |
| Pull a published message | <code>gcloud pubsub subscriptions pull mySubscription --auto-ack</code> |
| Pull all published messages | <code>gcloud pubsub subscriptions pull mySubscription --auto-ack --limit=3</code> |

Once a message is pulled, it is deleted from the queue. Messages are pulled randomly.

Compute

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| Create an instance | <code>gcloud compute instances create <myvm></code> |
| Delete an instance | <code>gcloud compute instances delete <myvm></code> |
| Get List of instances | <code>gcloud compute instances list</code> |
| Get list of machine types | <code>gcloud compute machine-types list</code> |
| Limit list of machine types | <code>gcloud compute machine-types list --filter="NAME:f1-micro AND ZONE~us-west"</code> |
| SSH to an instance | <code>gcloud compute ssh myhappyvm</code> |

gcloud compute ssh will create the SSH keys if it is being run for the first time for an instance.



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Services

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| Get list of services | <code>gcloud services list</code> |
| Get list of enabled services | <code>gcloud services list --enabled</code> |
| Get list of available services | <code>gcloud services list --available</code> |
| Get list of available services containing "compute" | <code>gcloud services list --available grep compute</code> |

Storage

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| CLI for accessing storage API | <code>gsutil</code> |
| List all storage buckets | <code>gsutil ls</code> |
| List objects in a bucket | <code>gsutil ls gs://storage-lab-console</code> |
| List all objects in a folder | <code>gsutil ls gs://storage-lab-console/**</code> This lists all objects in a flat structure |
| Create Bucket | <code>gsutil mb [-c class] [-l location] [-p proj_id] gs://new-bucket-name</code> |
| Get labels for bucket in JSON format | <code>gsutil label get gs://storage-lab-cli/</code> |
| Add label to bucket | <code>gsutil label ch -l "extralabel:extravalue" gs://storage-lab-cli/</code> |
| Set labels for a bucket | <code>gsutil label set labels.json gs://storage-lab-cli/</code> |
| Check status of versioning on bucket | <code>gsutil versioning get gs://storage-lab-cli</code> |
| Turn on versioning for bucket | <code>gsutil versioning set on gs://storage-lab-cli</code> |
| Turn off versioning for bucket | <code>gsutil versioning set off gs://storage-lab-cli</code> |

Storage (cont)

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| Delete a file from bucket | <code>gsutil rm gs://storage-lab-cli/REA-DME.txt</code> |
| Make a file public in a storage bucket | <code>gsutil acl ch -u AllUsers:R gs://storage-lab-cli/Selfie.jpg</code> |
| Remove public access for file | <code>gsutil acl ch -d AllUsers gs://storage-lab-cli/Selfie.jpg</code> |

BigQuery

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| Examine schema of the Shakespeare table in samples dataset | <code>bq show bigquery-public-data:samples.shakespeare</code> |
| Get help on query command | <code>bq help query</code> |
| Get list of all commands used by bigquery | <code>bq help</code> |
| List existing projects in the dataset | <code>bq ls</code> |
| List datasets in a public dataset project | <code>bq ls bigquery-public-data:</code> |
| Create a dataset | <code>bq mk babynames</code> |
| Run a query on BigQuery dataset | <code>bq query --use_legacy=false 'SELECT word FROM ...'</code> |
| Create or update a table AND load data | <code>bq load <dataset_name>.<table_name> <local_file> name:string,gender:string,count:integer</code> |
| List tables in a BQ dataset | <code>bq ls babynames</code> |
| Examine schema of a dataset table | <code>bq show <dataset_name>.<table_name></code> |

`--use_legacy=false` is an optional flag.



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