This page contains an overview of the gcloud command-line tool and its common command patterns and quirks.

The gcloud command-line interface is a tool that provides the primary CLI to Google Cloud Platform. You can use this tool to perform many common platform tasks either from the command-line or in scripts and other automations.

For example, you can use the gcloud CLI to create and manage:

- Google Compute Engine virtual machine instances and other resources

- Google Cloud SQL instances

- Google Kubernetes Engine clusters

- Google Cloud Dataproc clusters and jobs

- Google Cloud DNS managed zones and record sets

- Google Cloud Deployment manager deployments

You can also use the gcloud CLI to deploy App Engine applications and perform other tasks. Read the gcloud CLI reference (/sdk/gcloud/reference) to learn more about the capabilities of this tool.

The gcloud CLI is a part of the Google Cloud SDK (/sdk/docs/). You must download and install the SDK (/sdk/downloads) on your system and initialize it (/sdk/docs/initializing) before you can use the gcloud command-line tool.

By default, the SDK installs those gcloud CLI commands that are at the General Availability level only. Additional functionality is available in SDK components (/sdk/docs/components) named `alpha` and `beta`. These components allow you to use the gcloud CLI to work with Google Cloud Bigtable, Google Cloud Dataflow and other parts of the Cloud Platform at earlier release levels than General Availability.

The gcloud CLI releases have the same version number as the SDK. The current SDK version is 277.0.0. You can download and install previous versions of the SDK from the download archive (https://storage.cloud.google.com/cloud-sdk-release).

The gcloud command-line tool is available automatically in Google Cloud Shell. If you are using Cloud Shell, you do no to install the gcloud CLI manually in order to use it.

You can download the latest version of Cloud SDK, which includes the gcloud command-line tool, from the download page (/sdk/docs/#install_the_latest_cloud_tools_version_cloudsdk_current_version).

The gcloud CLI commands have the following release levels:

Release level	Label	Description
General Availability	None	Commands are considered fully stable and available for production use. Advance warnings will be made for commands that break current functionality and documented in the release notes (/sdk/docs/release-notes).
Beta	`beta`	Commands are functionally complete, but may still have some outstanding issues. Breaking changes to these commands may be made without notice.
Alpha	`alpha`	Commands are in early release and may change without notice.

The `alpha` and `beta` components are not installed by default when you install the SDK. You must install these (/sdk/docs/managing-components) separately using the `gcloud components install` command. If you try to run an alpha or beta command and the corresponding component is not installed, the gcloud command-line tool will prompt you to install it.

Within each release level, gcloud CLI commands are organized into a nested hierarchy of command groups, each of which represents a product or feature of the Cloud Platform or its functional

subgroups.

For example:

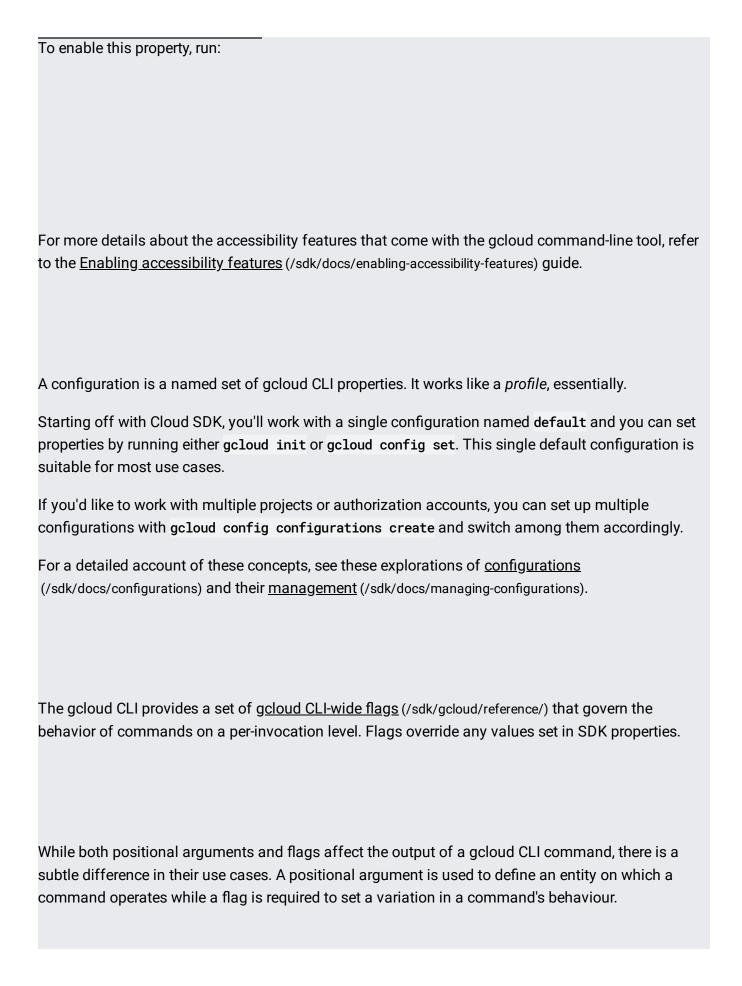| Command group	Description
`gcloud compute`	Commands related to Compute Engine in general availability
`gcloud compute instances`	Commands related to Compute Engine instances in general availability
`gcloud beta compute`	Commands related to Compute Engine in Beta
`gcloud alpha app`	Commands related to managing App Engine deployments in Alpha

You can run gcloud CLI commands from the command line in the same way you use other command-line tools. You can also run gcloud CLI commands from within scripts and other automations (/sdk/docs/scripting-gcloud), for example, when using Jenkins to automate Cloud Platform tasks.

gcloud CLI reference documentation and examples use backslashes, \, to denote long commands. You can execute ands as-is (Windows users can use ^ instead of \). If you'd like to remove the backslashes, be sure to remove newline ensure the command is read as a single line.

gcloud CLI properties are settings that affect the behavior of the gcloud CLI and other Cloud SDK tools. Some of these properties can be set by either global or command flags - in which case, the value set by the flag takes precedence.

A list of available properties can be found here (/sdk/docs/properties).

For a more streamlined screen reader experience, the gcloud command-line tool comes with an `accessibility/screen_reader` property.

To enable this property, run:

For more details about the accessibility features that come with the gcloud command-line tool, refer to the Enabling accessibility features (/sdk/docs/enabling-accessibility-features) guide.

A configuration is a named set of gcloud CLI properties. It works like a *profile*, essentially.

Starting off with Cloud SDK, you'll work with a single configuration named `default` and you can set properties by running either `gcloud init` or `gcloud config set`. This single default configuration is suitable for most use cases.

If you'd like to work with multiple projects or authorization accounts, you can set up multiple configurations with `gcloud config configurations create` and switch among them accordingly.

For a detailed account of these concepts, see these explorations of configurations (/sdk/docs/configurations) and their management (/sdk/docs/managing-configurations).

The gcloud CLI provides a set of gcloud CLI-wide flags (/sdk/gcloud/reference/) that govern the behavior of commands on a per-invocation level. Flags override any values set in SDK properties.

While both positional arguments and flags affect the output of a gcloud CLI command, there is a subtle difference in their use cases. A positional argument is used to define an entity on which a command operates while a flag is required to set a variation in a command's behaviour.

Successful output of gcloud CLI commands is written to stdout. All other types of responses - prompts, warnings, and errors - are written to stderr. Note that anything written to stderr is not stable and should not be scripted against.

For a definitive list of guidelines on handling output, read this section (/sdk/docs/scripting-gcloud#handling_output).

To protect against unintended destructive actions, the gcloud CLI will confirm your intentions before executing commands such as `gcloud projects delete`.

You can also expect prompts if you were to create a Google Compute Engine virtual machine instance, say 'test-instance', using `gcloud compute instances create test-instance`. You will be asked to choose a zone to create the instance in.

To disable prompting, use the `--quiet` flag.

Note, the wording of prompts can change and should not be scripted against.

The `--quiet` flag (also, `-q`) for the gcloud (/sdk/gcloud/reference) CLI disables all interactive prompts when running gcloud CLI commands and comes in handy when scripting. In the event input is needed, defaults will be used. If there aren't any, an error will be raised.

To suppress printing of command output to standard output and standard error in the terminal, use the `--no-user-output-enabled` flag.

To adjust verbosity of logs instead, use the `--verbosity` flag and define the appropriate level.

By default, when a gcloud CLI command returns a list of resources, they are pretty-printed to standard output. To produce more meaningful output, the format, filter and projection flags allow you to

finetune your output.

If you'd like to define just the format of your output, use the `--format` flag (/sdk/gcloud/reference/topic/formats) to produce a tabulated or flattened version of your output (for interactive display) or a machine-readable version of the output (`json`, `csv`, `yaml`, `value`).

To format a list of keys that select resource data values, use `projections` (/sdk/gcloud/reference/topic/projections). To further refine your output to criteria you define, use `filter` (/sdk/gcloud/reference/topic/filters).

If you'd like to work through a quick interactive tutorial to help get you familiar with filter and format functionality, follow the link below.

(https://console.cloud.google.com/cloudshell/open?git_repo=https://github.com/GoogleCloudPlatform/cloud-shell-tutorials&page=editor&tutorial=cloudsdk/tutorial.md)

- Learn more about gcloud command-line tool commands in the gcloud CLI Reference (/sdk/gcloud/reference).