

Cloud application development report

Configure the default project and region

- gcloud config set project [projectID] – sets the default project for subsequent commands
- gcloud config set compute/region [regionName] – sets the default region
- gcloud config set compute/zone [zoneName] – sets the default zone in the selected region
- gcloud config list – the command output a list of all current configuration settings in Google cloud

```
C:\Users\HP\AppData\Local\Google\Cloud SDK>gcloud config list
[accessibility]
screen_reader = False
[compute]
region = asia-central1
zone = asia-central1-a
[core]
account = beldeubaevatogzhan17@gmail.com
disable_usage_reporting = True
project = cloudapp-project-123
```

```
C:\Users\HP\AppData\Local\Google\Cloud SDK>gcloud version
Google Cloud SDK 490.0.0
beta 2024.08.23
bq 2.1.8
core 2024.08.23
gcloud-crc32c 1.0.0
gsutil 5.30
```

Questions:

1. What command did you use to authenticate with your Google account?

gcloud auth login – open a web browser to log in in Google account

2. How did you set the default project?

gcloud config set project [projectID]

3. What information does the gcloud info command provide?

The command provides a summary of the configuration (current configuration settings, SDK installation details, installation root, installation properties, current properties)

Exploring cloud shell

Create directory and create a simple file

```
C:\Users\HP\AppData\Local\Google\Cloud SDK> mkdir gcp-intro

C:\Users\HP\AppData\Local\Google\Cloud SDK>cd gcp-intro

C:\Users\HP\AppData\Local\Google\Cloud SDK\gcp-intro>nano README.md
"nano" не является внутренней или внешней
командой, исполняемой программой или пакетным файлом.

C:\Users\HP\AppData\Local\Google\Cloud SDK\gcp-intro>echo "GCP project">README.md
```

Questions:

1. What is the default home directory in Cloud Shell?

```
C:\Users\HP\AppData\Local\Google\Cloud SDK>cd C:\Users\HP

C:\Users\HP>
```

2. What tools are pre-installed in Cloud Shell?

When start cloud shell, it automatically creates a virtual machine. The vm pre-installed system tools: python, java, node.js

3. How can you open the built-in-code editor in Cloud Shell?

cloudshell edit README.md

Managing projects with Google cloud SDK

```
C:\Users\HP\AppData\Local\Google\Cloud SDK>gcloud projects create cloudapp-lab1-ex3 --name="My First GCP Project"
Create in progress for [https://cloudresourcemanager.googleapis.com/v1/projects/cloudapp-lab1-ex3].
Waiting for [operations/cp.4929590512070778966] to finish...done.
Enabling service [cloudapis.googleapis.com] on project [cloudapp-lab1-ex3]...
Operation "operations/acet.p2-286304140435-9613c78a-b3d0-47b2-9bd6-17825fddf3cd" finished successfully.

C:\Users\HP\AppData\Local\Google\Cloud SDK>gcloud config set project My First GCP Project
ERROR: (gcloud.config.set) unrecognized arguments:
  First
  GCP
  Project
To search the help text of gcloud commands, run:
gcloud help -- SEARCH_TERMS

C:\Users\HP\AppData\Local\Google\Cloud SDK>gcloud config set project cloudapp-lab1-ex3
Updated property [core/project].

C:\Users\HP\AppData\Local\Google\Cloud SDK>gcloud config list
[accessibility]
screen_reader = False
[compute]
region = asia-central1
zone = asia-central1-a
[core]
account = beldeubaevatogzhan17@gmail.com
disable_usage_reporting = False
project = cloudapp-lab1-ex3

Your active configuration is: [default]

C:\Users\HP\AppData\Local\Google\Cloud SDK>gcloud projects describe cloudapp-lab1-ex3
createTime: '2024-09-06T12:56:20.505412Z'
lifecycleState: ACTIVE
name: My First GCP Project
projectId: cloudapp-lab1-ex3
projectNumber: '286304140435'

C:\Users\HP\AppData\Local\Google\Cloud SDK>gcloud projects delete cloudapp-lab1-ex3
Your project will be deleted.

Do you want to continue (Y/n)?
```

- gcloud projects describe [projectID] – show metadata and information about the project
- gcloud projects delete [projectID] – delete the project from Google cloud account

Questions:

1. How do you list all projects associated with your account?

gcloud projects list

2. What command is used to set a default project?

gcloud config set project [projectID]

3. How do you describe project metadata?

gcloud projects describe [projectID]

Using cloud shell for basic operations

Directory structure:

```
C:\Users\HP\AppData\Local\Google\Cloud SDK>mkdir myproject
Подпапка или файл myproject уже существует.

C:\Users\HP\AppData\Local\Google\Cloud SDK>mldir myproject\src
"mldir" не является внутренней или внешней
командой, исполняемой программой или пакетным файлом.

C:\Users\HP\AppData\Local\Google\Cloud SDK>mkdir myproject\src

C:\Users\HP\AppData\Local\Google\Cloud SDK>mkdir myproject\tests

C:\Users\HP\AppData\Local\Google\Cloud SDK>mkdir myproject\docs
```

- echo. > [fileName] – create an empty file (alternative touch)
- echo “text” >> [fileName] – create a file and add text
- start notepad [fileName] – open a file for editing (alternative nano)
- type [fileName] – display the file’s content (alternative cat)
- del [fileName] – delete a file (alternative rm)

```
C:\Users\HP\AppData\Local\Google\Cloud SDK\myproject\docs>echo lab1 >> doc1.txt

C:\Users\HP\AppData\Local\Google\Cloud SDK\myproject\docs>type doc1.txt
lab1

C:\Users\HP\AppData\Local\Google\Cloud SDK\myproject\docs>start notepad doc1.txt

C:\Users\HP\AppData\Local\Google\Cloud SDK\myproject\docs>del doc1.txt

C:\Users\HP\AppData\Local\Google\Cloud SDK\myproject\docs>
```

Use gsutil to create a new Cloud Storage bucket and upload a file from your Cloud Shell environment.

- `gsutil mb gs://[bucketName]/` – create a new cloud storage bucket
- `gsutil cp smth.txt (or with local path) gs://[bucketName]/` - upload the file to bucket
- `gsutil ls` – show a list of all buckets in the project
- `gsutil ls gs://[bucketName]/` - output the content of the bucket

```
C:\Users\HP\AppData\Local\Google\Cloud SDK>gsutil mb gs://clouddapp-lab1-busket1/
Creating gs://clouddapp-lab1-busket1/...
AccessDeniedException: 403 The billing account for the owning project is disabled in state absent
```

Questions:

1. What command did you use to create the directory structure?

```
mkdir -p [directoryName]/[subdirectoryName]/...
```

2. How did you upload a file to a Cloud Storage bucket?

```
gsutil cp smth.txt (or with local path) gs://[bucketName]/
```

3. How can you list the contents of a cloud storage bucket?

```
gsutil ls gs://[bucketName]/
```

Automating tasks with shell scripts in cloud shell

- `chmod +x setup.sh` – command to change file access rights (file `setup.sh` executable)

`chmod +x setup.sh` – команда для изменения прав доступа к файлу (файл `setup.sh` исполняемый)

```
GNU nano 4.8                               setup.sh                               Modified
mkdir -p new-directory

echo "New file">new-directory/example.txt

gcloud config set project clouddapp-project-123

echo "This working"
```

Каталог и файл созданы

```
togzhan@LAPTOP-BSR7ABG2:~$ nano setup.sh
togzhan@LAPTOP-BSR7ABG2:~$ nano setup.sh
togzhan@LAPTOP-BSR7ABG2:~$ chmod +x setup.sh
togzhan@LAPTOP-BSR7ABG2:~$ ./setup.sh
Updated property [core/project].
This working
togzhan@LAPTOP-BSR7ABG2:~$
```

Questions:

1. What command did you use to make the script executable?

`chmod +x setup.sh`

2. How did you ensure the script was executed correctly?

```
togzhan@LAPTOP-BSR7ABG2:~$ gcloud config list
[accessibility]
screen_reader = False
[core]
account = beldeubaevatogzhan17@gmail.com
disable_usage_reporting = True
project = cloudapp-project-123

Your active configuration is: [default]
togzhan@LAPTOP-BSR7ABG2:~$ ls
'Cloud SDK'  gcp-intro  new-directory  seetup.sh  setup.sh
togzhan@LAPTOP-BSR7ABG2:~$
```

Linux > Ubuntu-20.04 > home > togzhan > new-directory			
Доступ стол	Имя	Дата изменения	Тип
	example.txt	08.09.2024 18:46	Текст

3. What steps did you script automate?

Create a directory and file inside