




Task 1

By `gcloud init` we are authenticating with our Google account:

Cloud SDK > Documentation

Эта информация оказалась полезной?  

 You are now authenticated with the gcloud CLI! [Send feedback](#)

The authentication flow has completed successfully. You may close this window, or check out the resources below.

Information about command-line tools and client libraries

To learn more about Google Cloud CLI commands, see the [gcloud CLI guide](#).

To learn more about the command-line tools for App Engine, Compute Engine, Cloud Storage, BigQuery, Cloud SQL, and Cloud DNS (which are all bundled with the gcloud CLI), see [Accessing services with the gcloud CLI](#).

If you're a client application developer and want to find out more about accessing Google Cloud services with a programming language or framework, see [Client Libraries Explained](#).

```
C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud config set project my-unique-cloud-project-123
WARNING: [zhuldizkuatkizy@gmail.com] does not have permission to access projects instance [my-unique-cloud-project-123] (or it may not exist)
es not have permission. This command is authenticated as zhuldizkuatkizy@gmail.com which is the active account specified by the [core/account] property.
Are you sure you wish to set property [core/project] to my-unique-cloud-project-123?
Do you want to continue (Y/n)? y
Updated property [core/project].

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud config set compute/region us-central1
WARNING: us-central1 is not a valid region. Run 'gcloud compute regions list' to get all regions.
Are you sure you wish to set property [compute/region] to us-central1?
Do you want to continue (Y/n)? y
Updated property [compute/region].

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud config set compute/zone us-central1-a
WARNING: us-central1-a is not a valid zone. Run 'gcloud compute zones list' to get all zones.
Are you sure you wish to set property [compute/zone] to us-central1-a?
Do you want to continue (Y/n)? y
Updated property [compute/zone].

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud config list
[accessibility]
screen_reader = True
[compute]
region = us-central1
zone = us-central1-a
[core]
account = zhuldizkuatkizy@gmail.com
disable_usage_reporting = True
project = my-unique-cloud-project-123

Your active configuration is: [default]

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud version
Google Cloud SDK 492.0.0
```

Questions

a) What command did you use to authenticate with your Google account?

- The command used to authenticate is part of the `gcloud init` process.

b) How did you set the default project?

- During the `gcloud init` process, you will be prompted to choose or create a project. Or we can also set the default project manually with:

```
gcloud config set project [PROJECT_ID]
```

c) What information does the `gcloud info` command provide?

- The `gcloud info` command provides the following details:
 - Google Cloud SDK version
 - Configured account and project
 - Active configuration name
 - Current environment details such as Python version, platform, and system paths

```
C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud info
Google Cloud SDK [492.0.0]

Platform: [Windows, x86_64] uname_result(system='Windows', node='Huawei_D16', release='10', version='10.0.22631', machine='AMD64')
Locale: ('Russian_Kazakhstan', '1251')
Python Version: [3.11.9 (tags/v3.11.9:de54cf5, Apr 2 2024, 10:12:12) [MSC v.1938 64 bit (AMD64)]]
Python Location: [C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\platform\bundledpython\python.exe]
OpenSSL: [OpenSSL 3.0.13 30 Jan 2024]
Requests Version: [2.25.1]
urllib3 Version: [1.26.9]
Default CA certs file: [C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\bin\..\lib\third_party\certifi\cacert.pem]
Site Packages: [Disabled]

Installation Root: [C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk]
Installed Components:
  bq: [2.1.8]
  core: [2024.09.06]
  gcloud-crc32c: [1.0.0]
  gsutil: [5.30]
System PATH: [C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\bin\..\bin\sdk;C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\bin;C:\Program Files (x86)\Microsoft\Edge\Application;C:\Windows\System32\HWAUDIO\Driver;C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;C:\Windows\System32\WindowsPowerShell\v1.0\;C:\Windows\System32\OpenSSH\;C:\Users\Administrator\AppData\Local\Microsoft\WindowsApps\;C:\Users\zhuld\AppData\Local\Microsoft\WindowsApps;C:\Users\zhuld\AppData\Local\Programs\Microsoft VS Code\bin;]
Python PATH: [C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\bin\..\lib\third_party;C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\bin\..\lib;C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\lib;C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\platform\bundledpython\python311.zip;C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\platform\bundledpython\DLL;C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\platform\bundledpython\Lib;C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\platform\bundledpython]
Cloud SDK on PATH: [True]
Kubectl on PATH: [False]

Installation Properties: [C:\Users\zhuld\AppData\Local\Google\Cloud SDK\google-cloud-sdk\properties]
User Config Directory: [C:\Users\zhuld\AppData\Roaming\gcloud]
Active Configuration Name: [default]
Active Configuration Path: [C:\Users\zhuld\AppData\Roaming\gcloud\configurations\config_default]

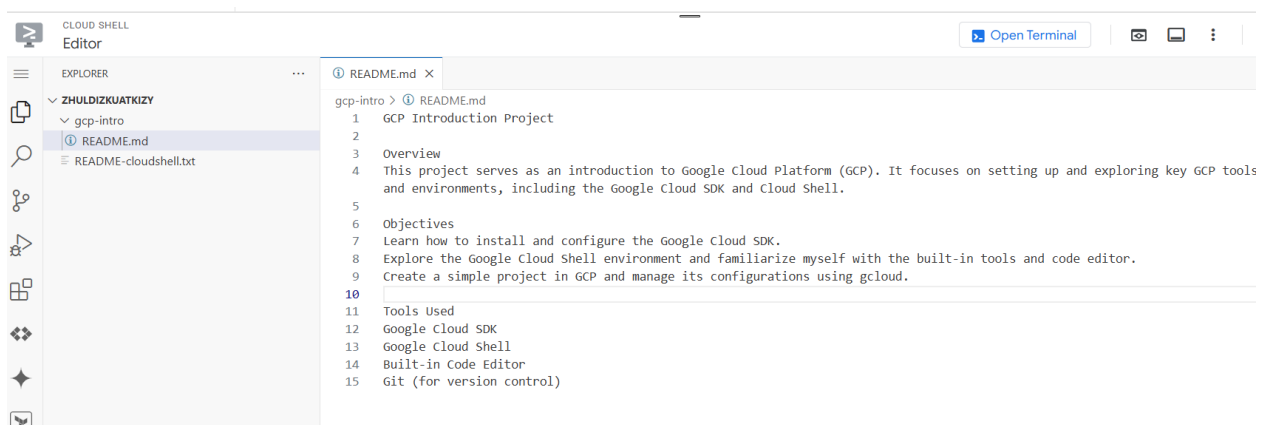
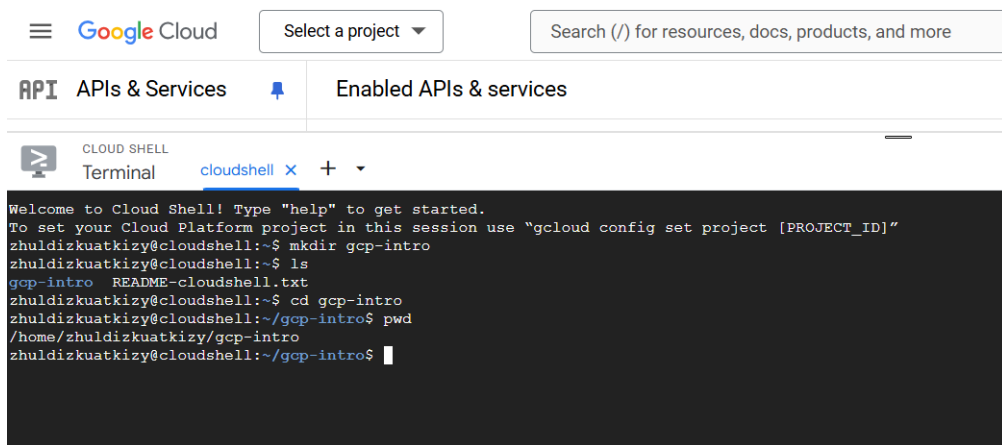
Account: [zhuldizkuatkizy@gmail.com]
Project: [my-unique-cloud-project-123]
Universe Domain: [googleapis.com]

Current Properties:
  [accessibility]
    screen_reader: [True] (property file)
  [compute]
    zone: [us-central1-a] (property file)
    region: [us-central1] (property file)
  [core]
    account: [zhuldizkuatkizy@gmail.com] (property file)
    disable_usage_reporting: [True] (property file)
    project: [my-unique-cloud-project-123] (property file)

Logs Directory: [C:\Users\zhuld\AppData\Roaming\gcloud\logs]
Last Log File: [C:\Users\zhuld\AppData\Roaming\gcloud\logs\2024.09.16\15.57.46.933137.log]

git: [NOT AVAILABLE]
]sh: [OpenSSH_for_Windows_8.6p1, LibreSSL 3.4.3]
```

Task 2



Questions:

a) What is the default home directory in Cloud Shell?

- The default home directory is typically `/home/zhuldizkuatkizy`. You can check it by running: `echo $HOME`

b) What tools are pre-installed in Cloud Shell?

- Cloud Shell comes pre-installed with various tools, including:
 - **gcloud** (Google Cloud CLI)
 - **git** (for version control)
 - **Python** and **Node.js** (for scripting)
 - **Compilers** for Java, C++, and others

c) How can you open the built-in code editor in Cloud Shell?

- By clicking the "Open Editor" button in the Cloud Shell window.

Task 3

```
C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud projects list
Listed 0 items.

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud projects create PROJECT_ID --name="My First GCP Project"
ERROR: (gcloud.projects.create) argument PROJECT_ID: Bad value [PROJECT_ID]: Project IDs are immutable and can be set only during project creation. They must start with a lowercase letter and can have lowercase ASCII letters, digits or hyphens. Project IDs must be between 6 and 30 characters.
Usage: gcloud projects create [PROJECT_ID] [optional flags]
optional flags may be --enable-cloud-apis | --folder | --help | --labels |
--name | --organization | --set-as-default | --tags

For detailed information on this command and its flags, run:
gcloud projects create --help

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud projects create my-first-project --name="My First GCP Project"
ERROR: (gcloud.projects.create) Project creation failed. The project ID you specified is already in use by another project. Please try an alternative ID.

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud projects create my-first-gcp-project-2024-zd --name="My First GCP Project"
Create in progress for [https://cloudresourcemanager.googleapis.com/v1/projects/my-first-gcp-project-2024-zd].
Waiting for [operations/cp.6583953201177645670] to finish...done.
Enabling service [cloudapis.googleapis.com] on project [my-first-gcp-project-2024-zd]...
Operation "operations/acat.p2-342854494561-67c6c0c4-e4c6-4fa0-9cea-6ab350adcac6" finished successfully.

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud config set project my-first-gcp-project-2024-zd
Updated property [core/project].

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud projects describe my-first-gcp-project-2024-zd
createTime: '2024-09-16T11:19:25.704879Z'
lifecycleState: ACTIVE
name: My First GCP Project
projectId: my-first-gcp-project-2024-zd
projectNumber: '342854494561'

C:\Users\zhuld\AppData\Local\Google\Cloud SDK>gcloud projects delete my-first-gcp-project-2024-zd
Your project will be deleted.

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

Deleted [https://cloudresourcemanager.googleapis.com/v1/projects/my-first-gcp-project-2024-zd].

You can undo this operation for a limited period by running the command below.
```

Questions:

a) How do you list all projects associated with your account?

- Using: `gcloud projects list`

b) What command is used to set a default project?

```
gcloud config set project PROJECT_ID
```

c) How do you describe project metadata?

- Use: `gcloud projects describe PROJECT_ID`

Task 4

```
zhuldizkuatkizy@cloudshell:~/gcp-intro$ mkdir -p myproject/src myproject/tests myproject/docs
zhuldizkuatkizy@cloudshell:~/gcp-intro$ touch myproject/src/main.py
zhuldizkuatkizy@cloudshell:~/gcp-intro$ touch myproject/tests/test_main.py
zhuldizkuatkizy@cloudshell:~/gcp-intro$ touch myproject/docs/README.md
zhuldizkuatkizy@cloudshell:~/gcp-intro$ nano myproject/src/main.py
zhuldizkuatkizy@cloudshell:~/gcp-intro$ cat myproject/src/main.py

zhuldizkuatkizy@cloudshell:~/gcp-intro$ rm myproject/tests/test_main.py
zhuldizkuatkizy@cloudshell:~/gcp-intro$ gsutil mb gs://my-first-gcp-bucket-2024-zd
Creating gs://my-first-gcp-bucket-2024-zd/...
You are attempting to perform an operation that requires a project id, with none configured. Please re-run gsutil config and make sure to follow the instructions for finding and entering your default project id.
zhuldizkuatkizy@cloudshell:~/gcp-intro$ ^C
zhuldizkuatkizy@cloudshell:~/gcp-intro$ gcloud config set project ^C
zhuldizkuatkizy@cloudshell:~/gcp-intro$ gcloud config set project myproject
WARNING: [zhuldizkuatkizy@gmail.com] does not have permission to access projects instance [myproject] (or it may not exist): The caller does not have permission. This command is authenticated as zhuldizkuatkizy@gmail.com which is the active account specified by the [core/account] property
Are you sure you wish to set property [core/project] to myproject?

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

Updated property [core/project].
zhuldizkuatkizy@cloudshell:~/gcp-intro (myproject)$ gcloud projects list
Listed 0 items.
```

Questions:

a) What command did you use to create the directory structure?

- `mkdir -p myproject/src myproject/tests myproject/docs`

b) How did you upload a file to a Cloud Storage bucket?

- Using the following command: `gsutil cp myproject/docs/README.md gs://[BUCKET_NAME]`

c) How can you list the contents of a Cloud Storage bucket?

- Using: `gsutil ls gs://[BUCKET_NAME]`

Task 5

```
zhuldizkuatkizy@cloudshell:~ (myproject)$ cd ~/gcp-intro
zhuldizkuatkizy@cloudshell:~/gcp-intro (myproject)$ nano setup.sh
zhuldizkuatkizy@cloudshell:~/gcp-intro (myproject)$ nano setup.sh
zhuldizkuatkizy@cloudshell:~/gcp-intro (myproject)$ chmod +x setup.sh
zhuldizkuatkizy@cloudshell:~/gcp-intro (myproject)$ ./setup.sh
WARNING: [zhuldizkuatkizy@gmail.com] does not have permission to access projects instance [myproject] (or it may not exist): The caller does not have permission. This command is authenticated as zhuldizkuatkizy@gmail.com which is the active account specified by the [core/account] property
Are you sure you wish to set property [core/project] to myproject?

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

Updated property [core/project].
zhuldizkuatkizy@cloudshell:~/gcp-intro (myproject)$ ls myproject/scripts
sample.txt
zhuldizkuatkizy@cloudshell:~/gcp-intro (myproject)$ cat myproject/scripts/sample.txt
This is a simple text file created by setup.sh
zhuldizkuatkizy@cloudshell:~/gcp-intro (myproject)$
```

Questions:

a) What command did you use to make the script executable?

- `chmod +x setup.sh`

b) How did you ensure the script was executed correctly?

- By:
 - Checking that the directory and file were created as specified.
 - Verifying that the Google Cloud project was set correctly.

c) What steps did your script automate?

- Created a new directory `myproject/scripts`.
- Created a simple text file `sample.txt` with a specified message.
- Set a default Google Cloud project using `gcloud config set project`.