

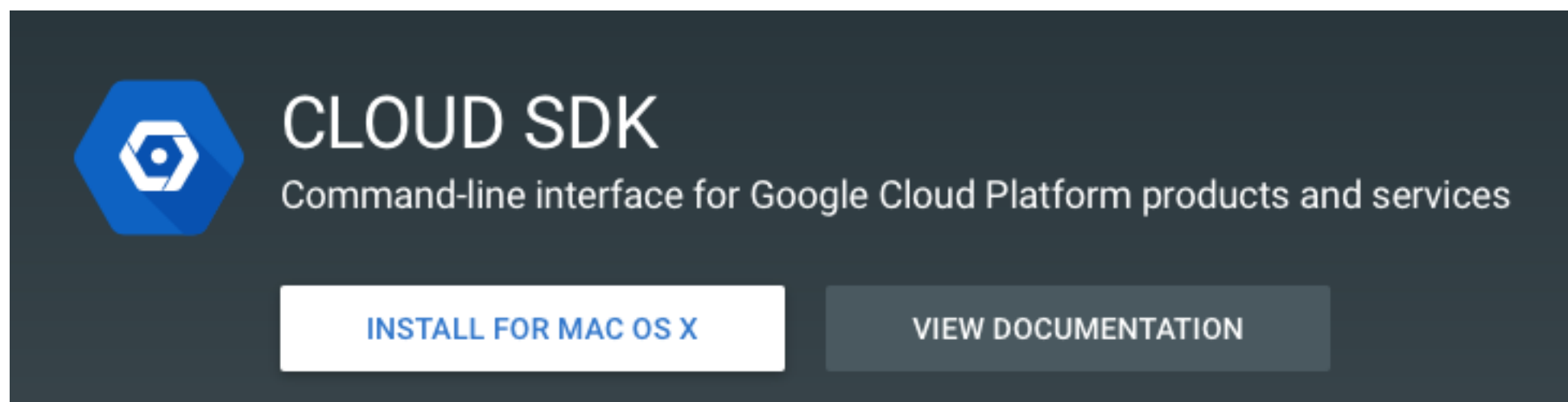
06. Google Cloud - gcloud

Telung Pan Ph.D.
telung@mac.com

Google Cloud SDK

gcloud

- The Cloud SDK is a set of tools for Cloud Platform
- It contains gcloud, gsutil, and bq, which you can use to access Google Compute Engine, Google Cloud Storage, Google BigQuery, and other products and services from the command-line.




gcloud

- <https://cloud.google.com/sdk/docs/quickstart-mac-os-x>
- download the Cloud SDK installer
- Python installed.

- 安裝後，要求登入
- 以自己帳號登入
- 允許授權
- 後續進行登入指令 `gcloud init`
- 選擇或新增專案 (project)
gcloud alpha projects create project-id (例如：
g9220812-1234)
或直接到 Console <https://console.developers.google.com/project>

新增專案

專案名稱 

My Project

您的專案 ID 為「daring-diode-149712」  [編輯](#)

[顯示進階選項...](#)

[取消](#) [建立](#)

What is gcloud?

- gcloud is a tool that provides the primary command-line interface 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.
 - Google Cloud SQL instances
 - Google Container Engine clusters
 - Google Cloud Dataproc clusters and jobs
 - Google Cloud DNS managed zones and record sets
 - Google Cloud Deployment manager deployments

基本指令

- gcloud components list
- gcloud components update
- gcloud init (重新指定帳號與專案名稱)
- gcloud auth login (重新驗證帳號)

list

- gcloud auth list
- gcloud config list
- gcloud info

Using cloud interactive Shell

- gcloud components list
- gcloud components install alpha
- gcloud alpha shell

Virtual Machine Instances



The screenshot displays the Google Cloud Platform (GCP) console interface. At the top, a blue header bar contains the GCP logo, the text "Google Cloud Platform", a dropdown menu for "My Project", and a search bar. Below the header, a left-hand navigation pane lists several options: "Compute Engine" (with a microchip icon), "VM 執行個體" (with a server rack icon and highlighted in blue), "執行個體群組" (with a group of people icon), "執行個體範本" (with a document icon), and "磁碟" (with a disk icon). The main content area on the right is titled "VM 執行個體". It features a promotional message in Chinese: "只要申請免費試用，即可開始使用「Compute Engine」". Below this message is a blue button labeled "申請免費試用". At the bottom of the main area, a line of text states: "未經許可，Google 絕不會在免費試用期間向您收取任何費用。"

Google Cloud Platform My Project

Compute Engine VM 執行個體

VM 執行個體

執行個體群組

執行個體範本

磁碟

只要申請免費試用，即可開始使用「Compute Engine」

[申請免費試用](#)

未經許可，Google 絕不會在免費試用期間向您收取任何費用。

Creating and Starting an Instance

- gcloud compute images list

```
telung — -bash — 114x27
pandelongde-MBP:~ telung$ gcloud compute images list
```

NAME	PROJECT	FAMILY	DEPRECATED	STATUS
centos-6-v20161027	centos-cloud	centos-6		READY
centos-7-v20161027	centos-cloud	centos-7		READY
coreos-alpha-1221-0-0-v20161103	coreos-cloud	coreos-alpha		READY
coreos-beta-1192-2-0-v20161102	coreos-cloud	coreos-beta		READY
coreos-stable-1185-3-0-v20161101	coreos-cloud	coreos-stable		READY
debian-8-jessie-v20161027	debian-cloud	debian-8		READY
rhel-6-v20161027	rhel-cloud	rhel-6		READY
rhel-7-v20161027	rhel-cloud	rhel-7		READY
sles-11-sp4-v20161021	suse-cloud	sles-11		READY
sles-12-sp2-v20161108	suse-cloud	sles-12		READY
ubuntu-1204-precise-v20161109	ubuntu-os-cloud	ubuntu-1204-lts		READY
ubuntu-1404-trusty-v20161109	ubuntu-os-cloud	ubuntu-1404-lts		READY
ubuntu-1604-xenial-v20161115	ubuntu-os-cloud	ubuntu-1604-lts		READY
ubuntu-1610-yakkety-v20161020	ubuntu-os-cloud	ubuntu-1610		READY
windows-server-2008-r2-dc-v20161012	windows-cloud	windows-2008-r2		READY
windows-server-2012-r2-dc-v20161012	windows-cloud	windows-2012-r2		READY
windows-server-2016-dc-v20161012	windows-cloud	windows-2016		READY
sql-2012-standard-windows-2012-r2-dc-v20161012	windows-sql-cloud	sql-std-2012-win-2012-r2		READY
sql-2012-web-windows-2012-r2-dc-v20161012	windows-sql-cloud	sql-web-2012-win-2012-r2		READY
sql-2014-standard-windows-2012-r2-dc-v20161012	windows-sql-cloud	sql-std-2014-win-2012-r2		READY
sql-2014-web-windows-2012-r2-dc-v20161012	windows-sql-cloud	sql-web-2014-win-2012-r2		READY

Creating an instance from an image

- Creating an instance from a public image
- _ from a private image
- _ with an image stored with you
- _ from a snapshot
- _ with access to other Google Cloud Services
- _ in a custom subnet network

Delete instance

- ***gcloud compute instances list***
- ***gcloud compute instances delete instance-0812***

```
[mini:~ telung$ gcloud compute instances delete instance-0812
The following instances will be deleted. Any attached disks configured
to be auto-deleted will be deleted unless they are attached to any
other instances or the `--keep-disks` flag is given and specifies them
for keeping. Deleting a disk is irreversible and any data on the disk
will be lost.
- [instance-0812] in [asia-east1-b]

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

Create a database on
an instance

1. Create a Compute Engine instance

- Create an instance
gcloud compute instances create instance-0812
- Connect to the instance using ssh
gcloud compute ssh instance-0812

```
[mini:~ telung$ gcloud compute ssh instance-0812
Linux instance-0812 4.9.0-3-amd64 #1 SMP Debian 4.9.30-2+deb9u3 (2017-08-06) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Sun Oct 15 11:44:03 2017 from 111.253.218.109
telung@instance-0812:~$
```


2. Install MySQL

- Update the apt-get package manager.
sudo apt-get update
- Install MySQL. The installation process starts the MySQL service for you.
sudo apt-get -y install mysql-server

```
telung — telung@instance-0812: ~ — ssh • Python -S ~/google-cloud-sdk/lib/gcloud.py compute ssh inst...
[telung@instance-0812:~$ sudo apt-get update]
Ign:1 http://deb.debian.org/debian stretch InRelease
Hit:2 http://deb.debian.org/debian stretch-updates InRelease
Hit:3 http://deb.debian.org/debian stretch-backports InRelease
Hit:4 http://security.debian.org stretch/updates InRelease
Hit:5 http://packages.cloud.google.com/apt cloud-sdk-stretch InRelease
Hit:6 http://deb.debian.org/debian stretch Release
Hit:7 http://packages.cloud.google.com/apt google-compute-engine-stretch-stable InRelease
Hit:9 http://packages.cloud.google.com/apt google-cloud-packages-archive-keyring-stretch InRelease
Reading package lists... Done
[telung@instance-0812:~$ sudo apt-get -y install mysql-server]
Reading package lists... Done
Building dependency tree
Reading state information... Done
mysql-server is already the newest version (5.5.9999+default).
```


Connect to MySQL

- `mysql -u root -p`
- `sudo mysql`
- `use mysql`
- `update user set password = 'yunccloud' where user = 'root';`
- `grant all on *.* to root@'localhost' identified by 'yunccloud';`
- `FLUSH PRIVILEGES;`
- `quit`

Test DATABASE

- CREATE DATABASE matthias;
- USE matthias;
- SHOW TABLES;

```
mysql> CREATE TABLE pet (name VARCHAR(20), owner VARCHAR(20),  
-> species VARCHAR(20), sex CHAR(1), birth DATE, death DATE);
```

```
DESCRIBE pet;
```

```
mysql> INSERT INTO pet  
-> VALUES ('Puffball', 'Diane', 'hamster', 'f', '1999-03-30', NULL);
```