구글 클라우드 플렛폼( GCP ) 설정

1. 인스턴스 설정

# 인스턴스 만들기

Marketplace

을 배포합니다.

VM 인스턴스를 만들려면 옵션 중 하나를 선택하세요. 새 VM 인스턴스 VM 인스턴스 하나를 처음부터 만듭니다. 템플릿에서 VM 인스턴스 만들기 기존 템플릿에서 VM 인스턴스 하나를 만듭 니다. 머신 이미지의 새 VM 인스턴스 기존 머신 이미지에서 VM 인스턴스 하나를 만듭니다.

VM 인스턴스에 바로 사용할 수 있는 솔루션



부팅 디스크 🕜

남아 있는 무료 평가판 크레딧 #301,847.766588 윌 \$97.49 예상 시간당 약 \$0.134

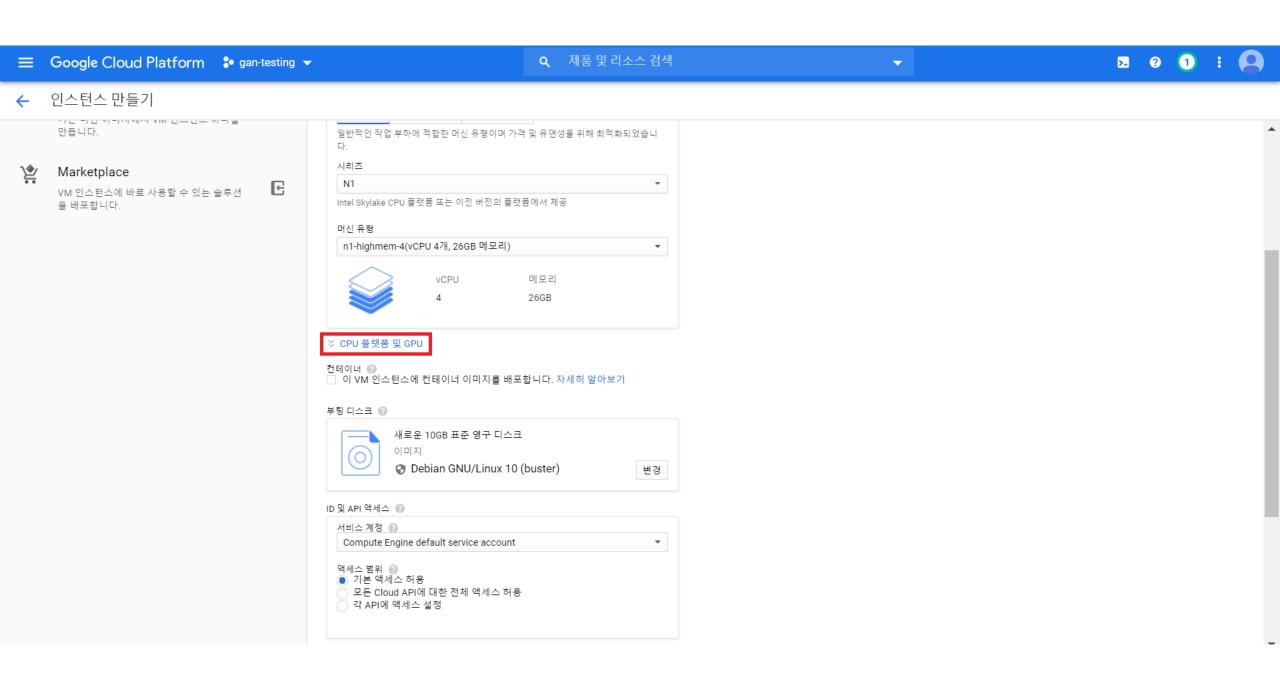
사용한 만큼만 비용 지불: 선불 비용 없이 초당 청구

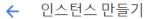
※ 세부정보

CPU를 조금 더 늘이려면

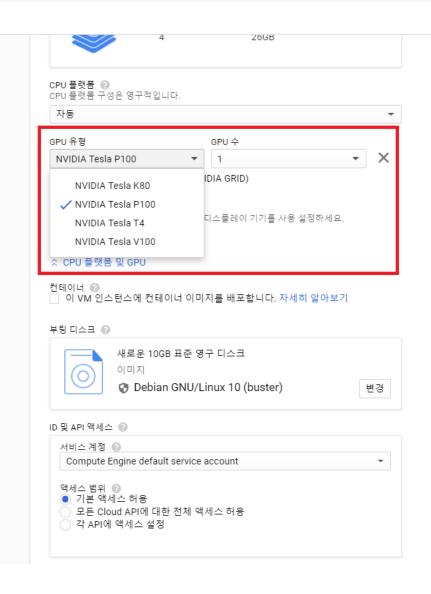
머신 유형 → 고성능 메모리 →

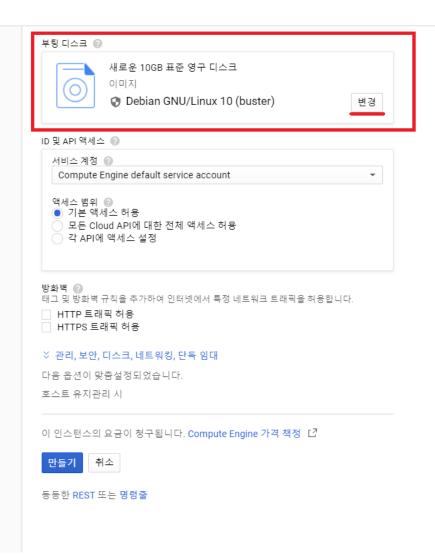
n1-highmem-4(vCPU 4개, 26GB 메모리) 선택







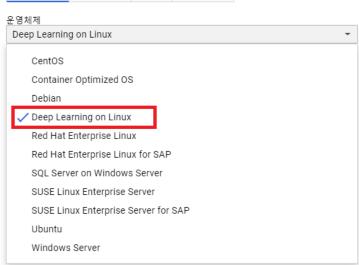




## 부팅 디스크

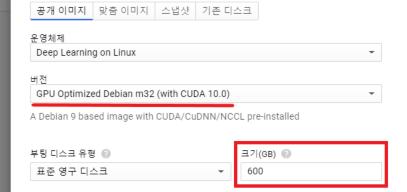
Select an image or snapshot to create a boot disk; or attach an existing disk. Can't find what you're looking for? Explore hundreds of VM solutions in Marketplace.

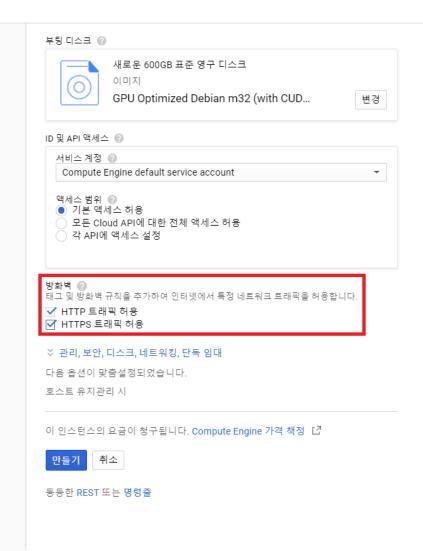
공개 이미지 및 맞춤 이미지 스냅샷 기존 디스크



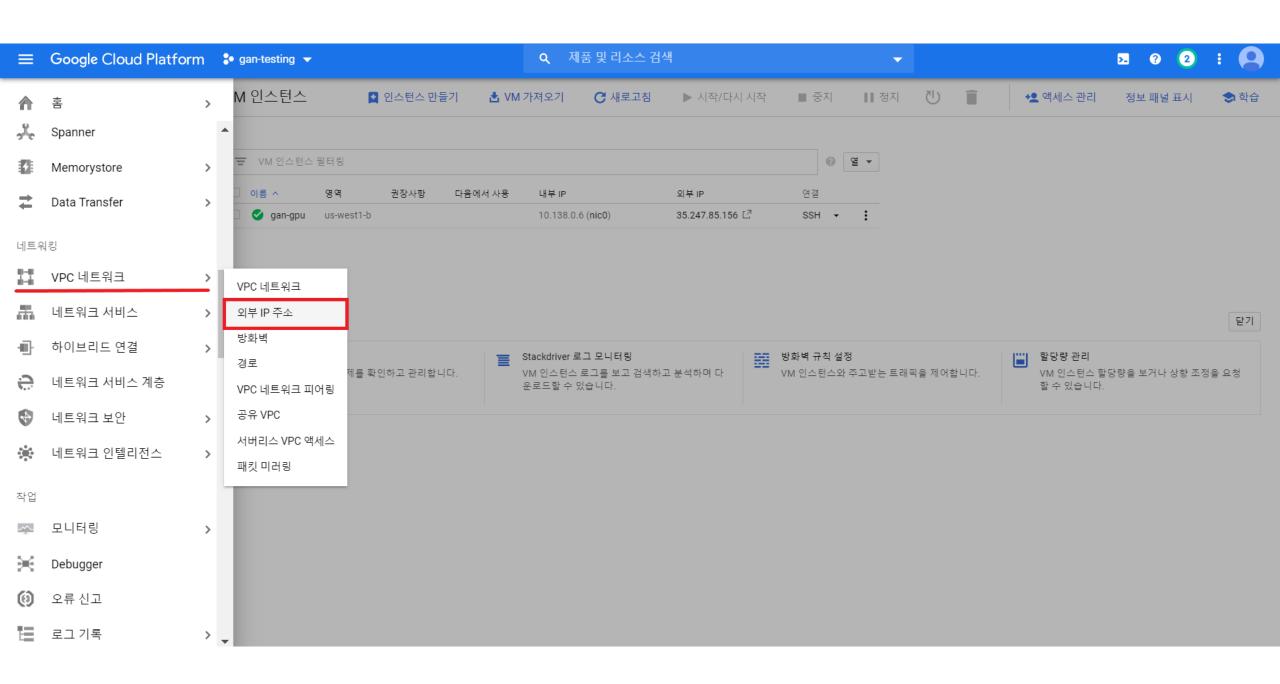


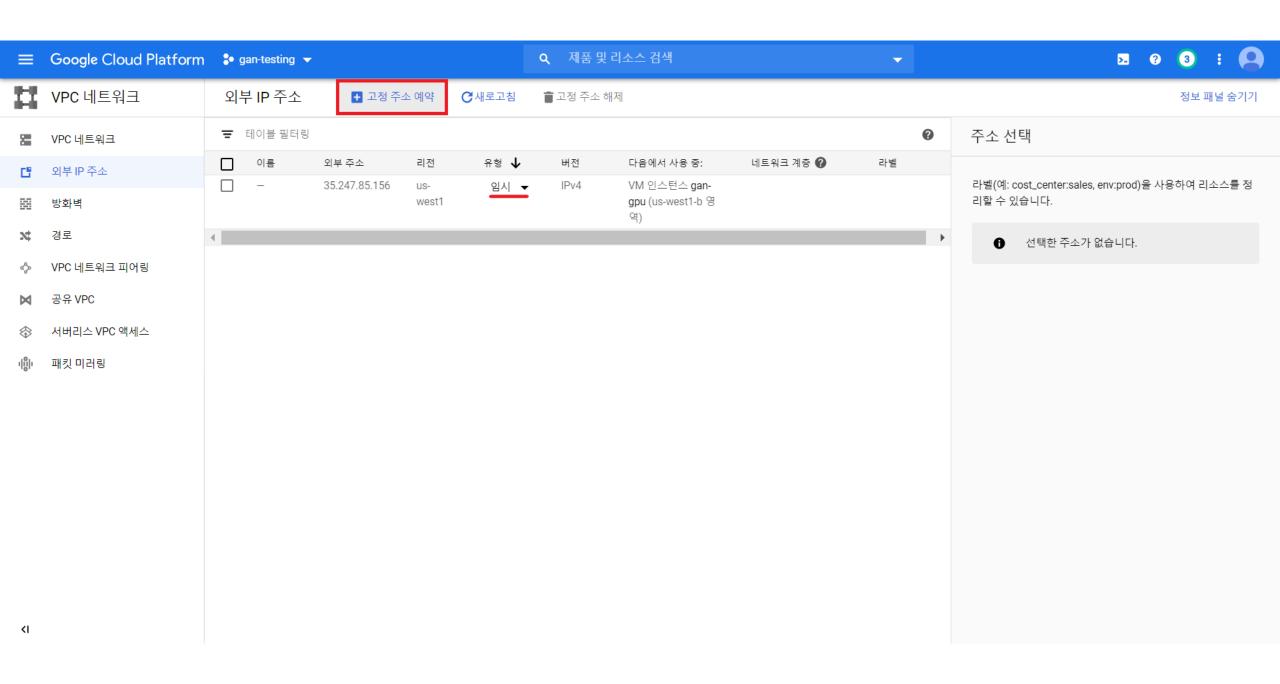
Select an image or snapshot to create a boot disk; or attach an existing disk. Can't find what you're looking for? Explore hundreds of VM solutions in Marketplace.

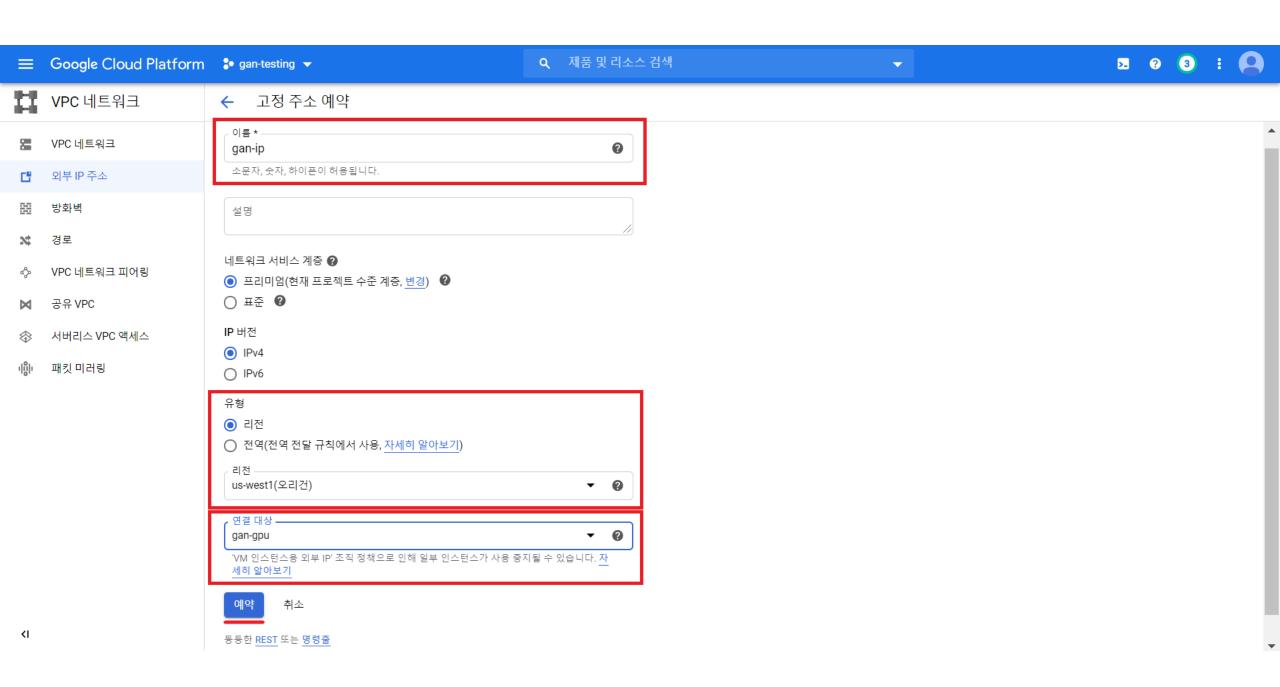


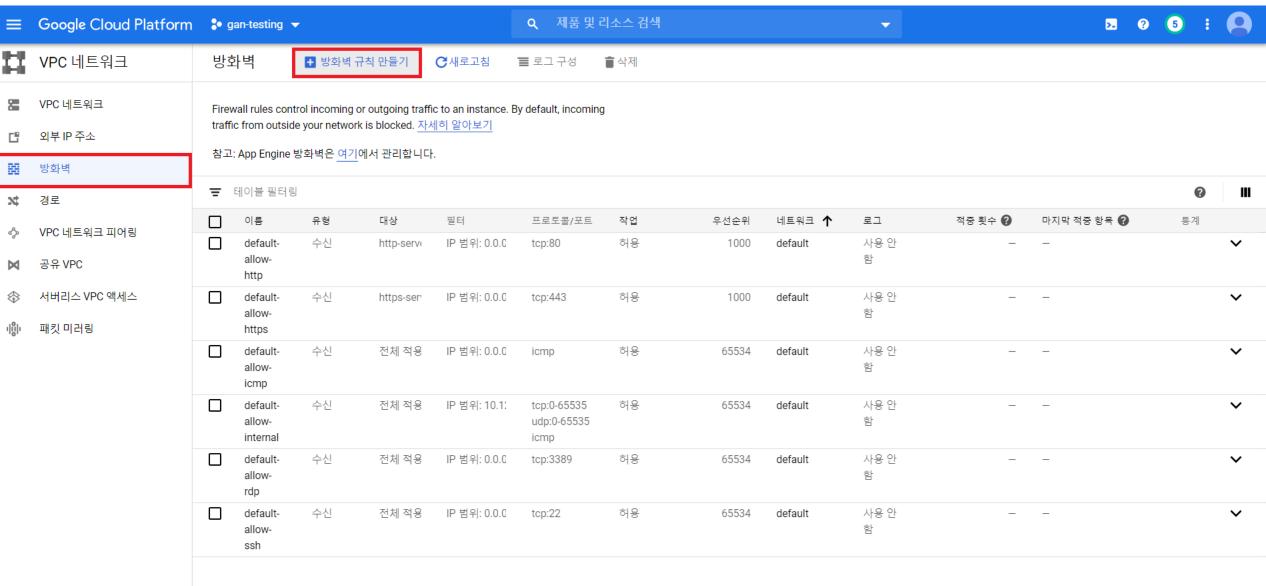


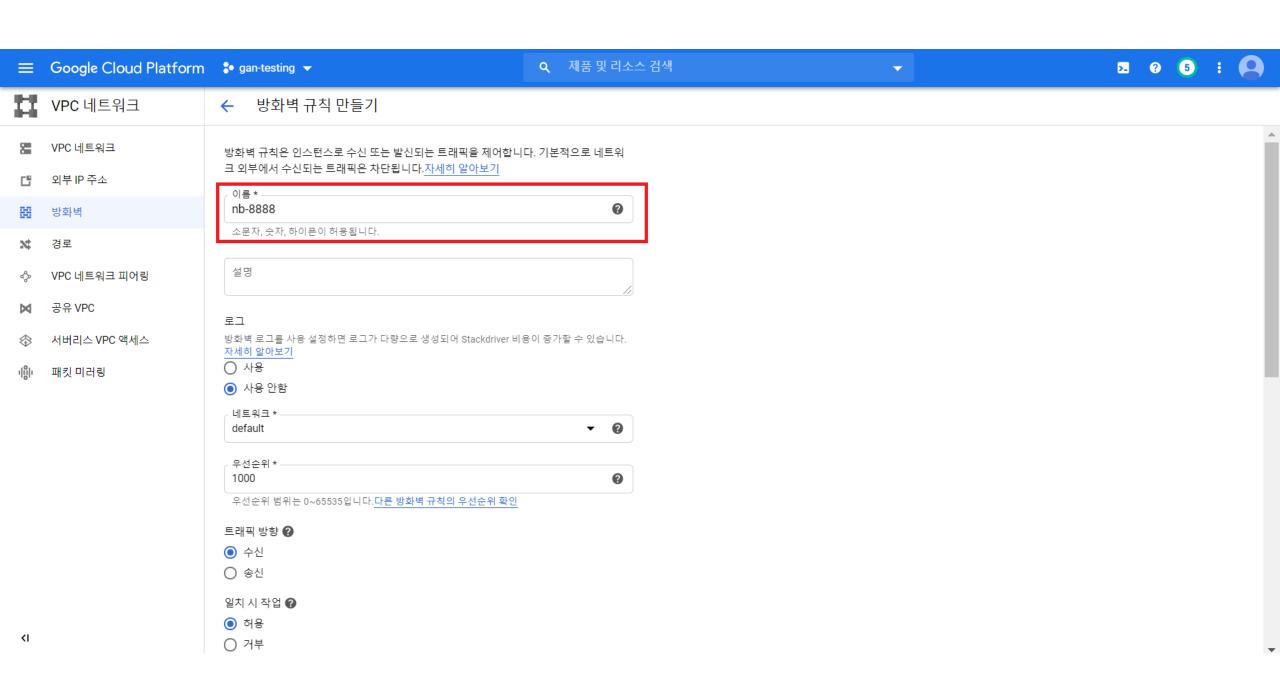
2. IP 고정

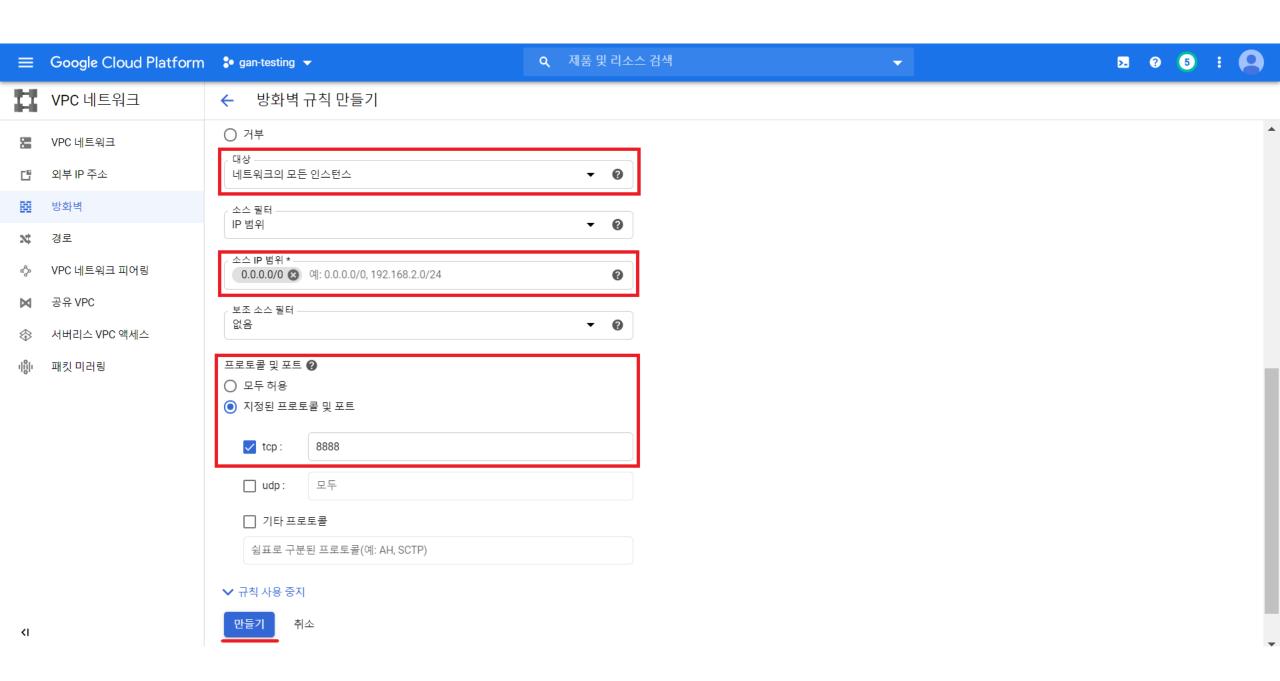


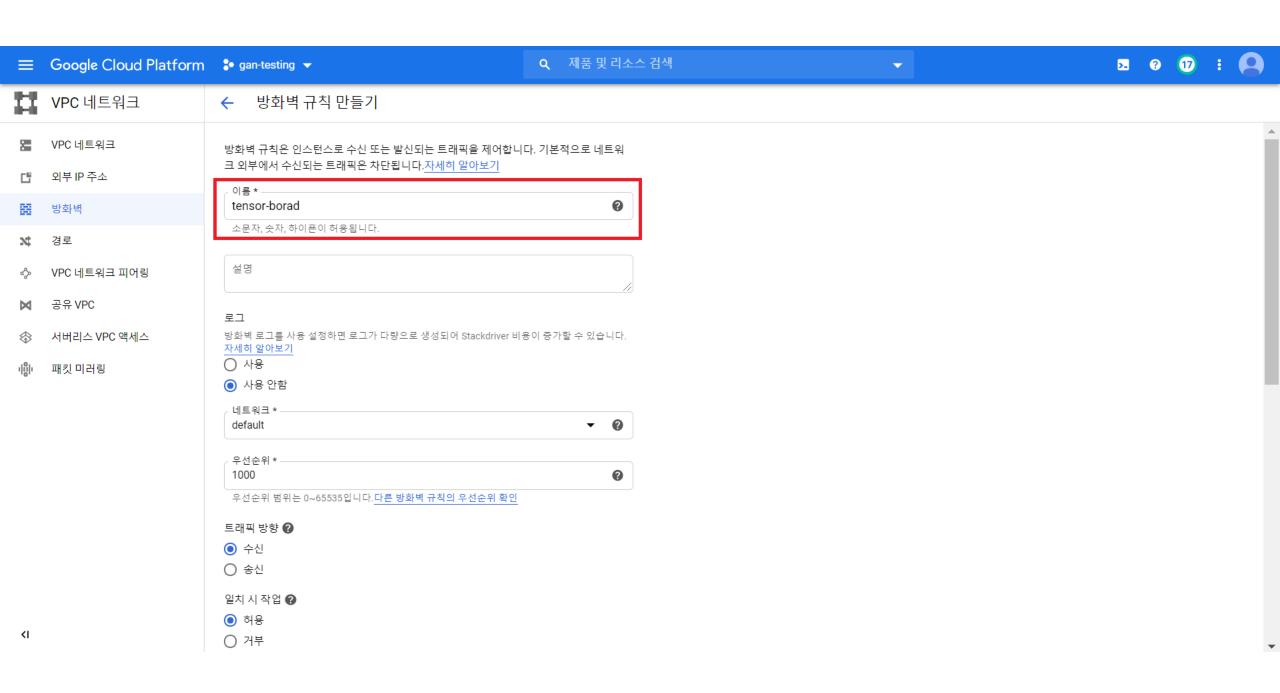


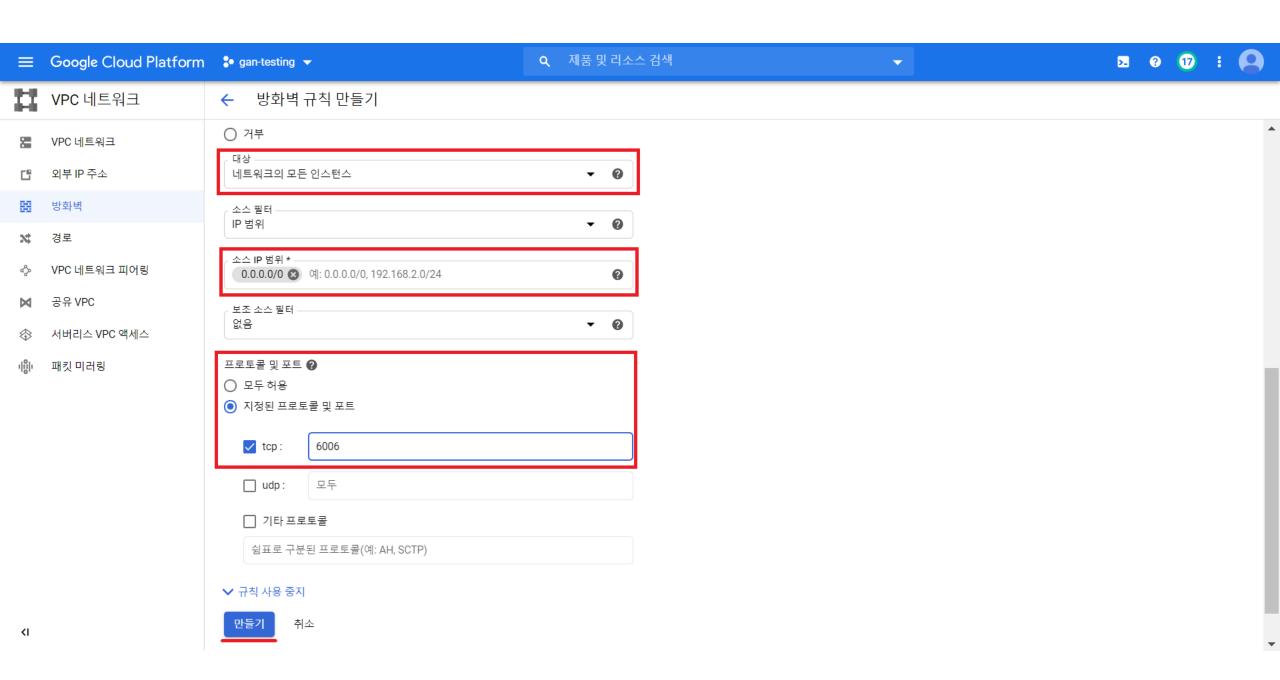


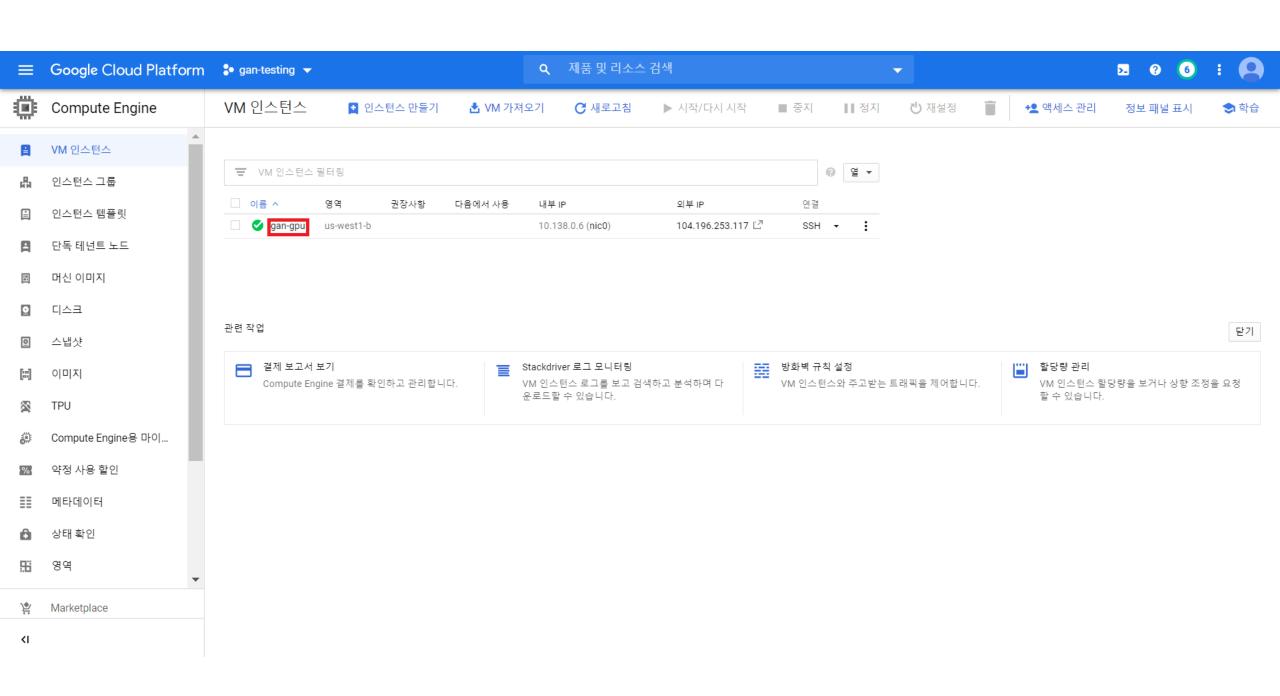


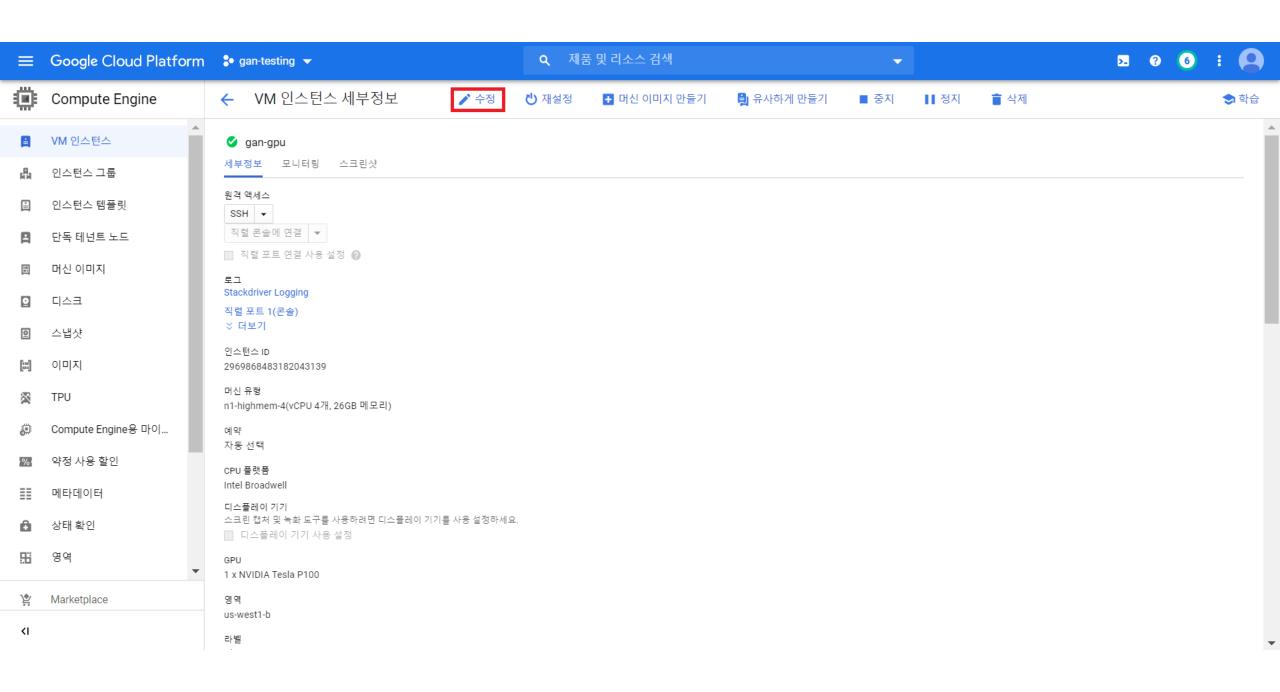


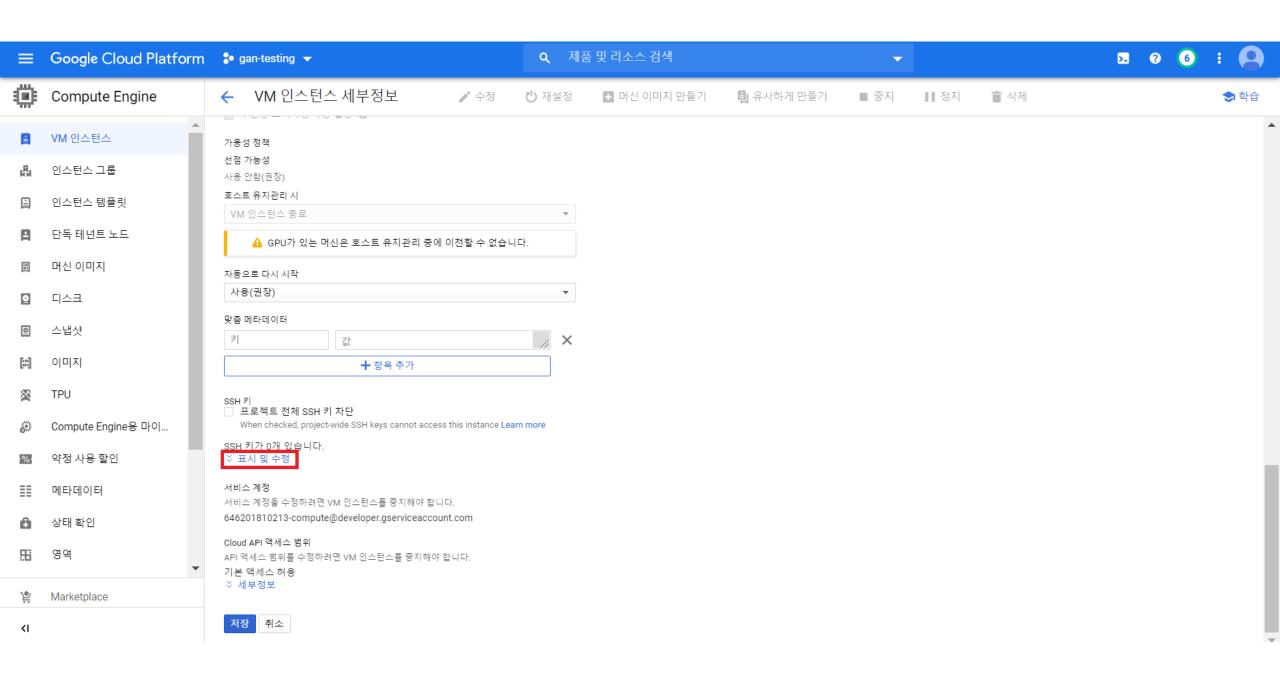


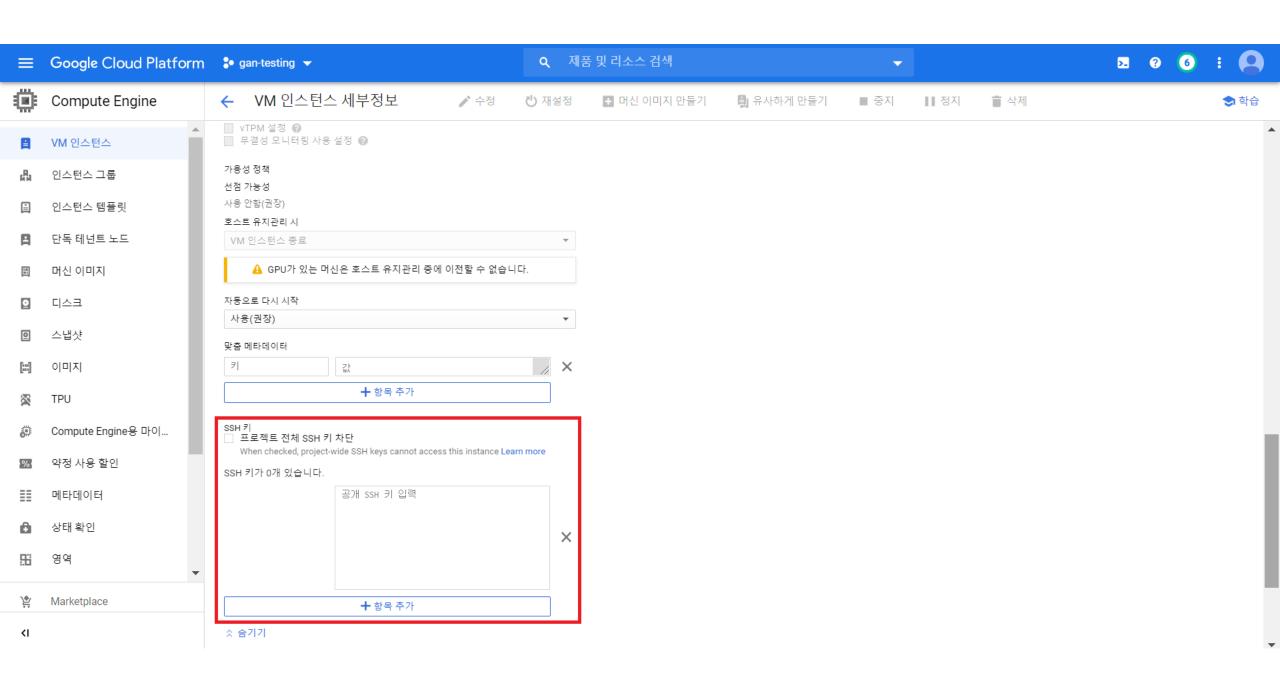


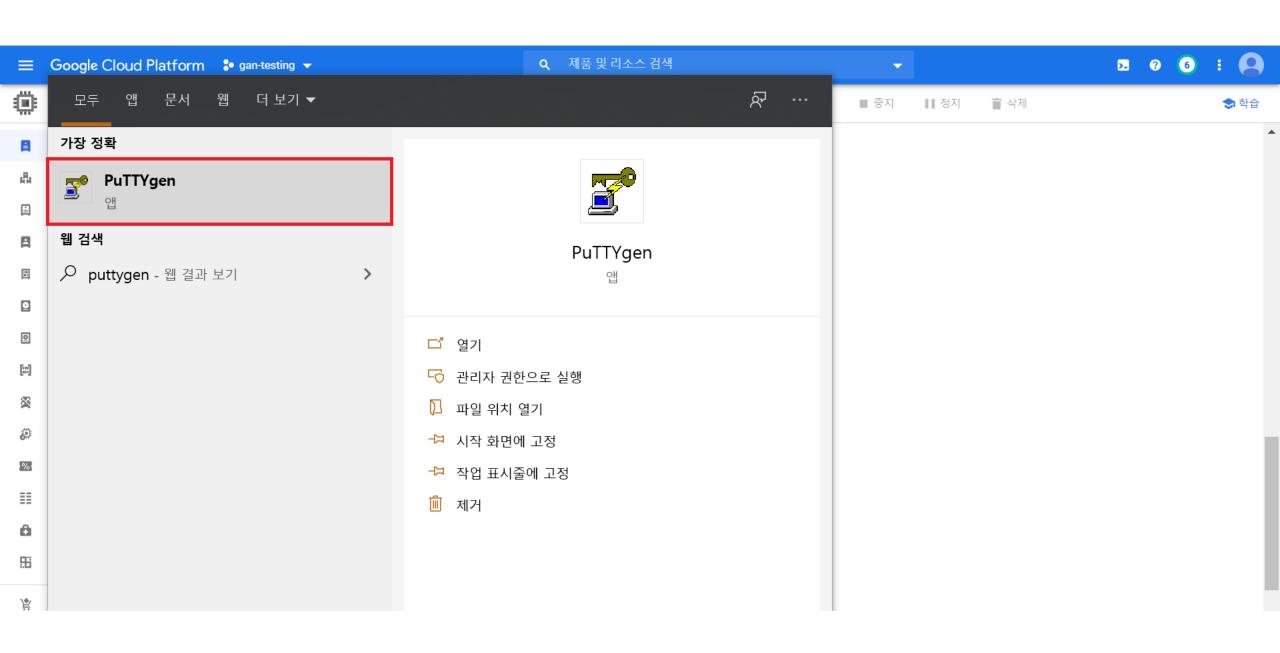










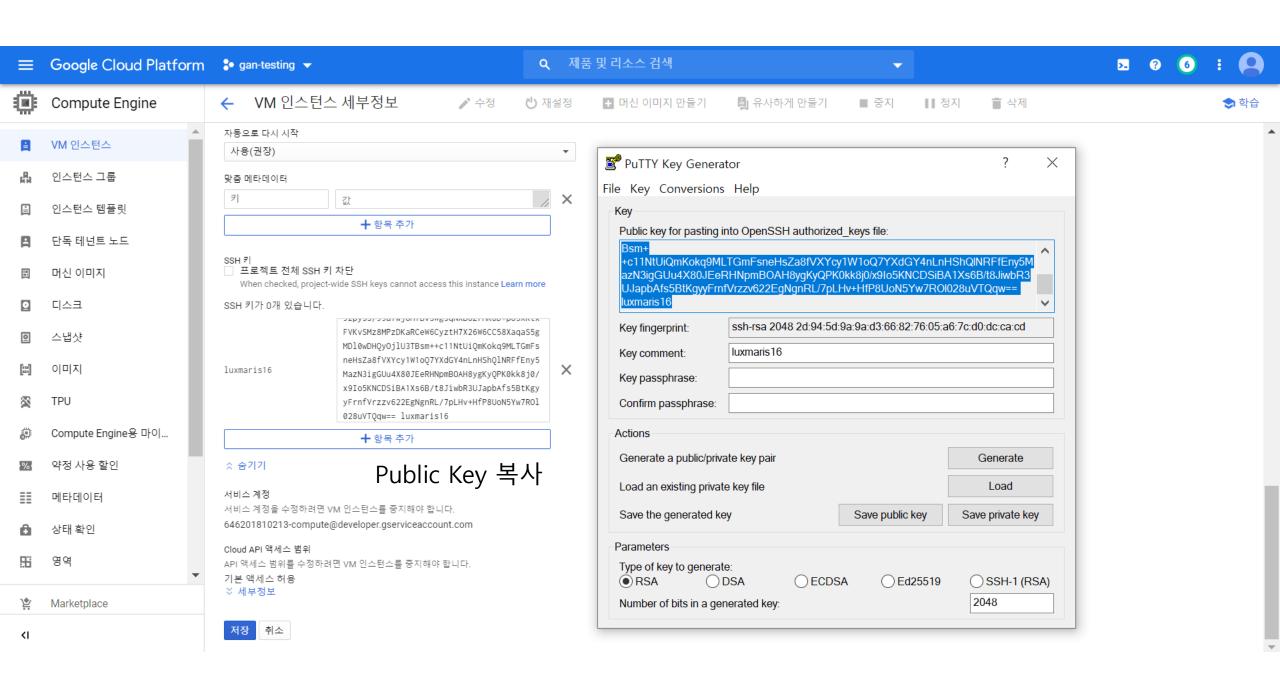


)	,
	,

# File Key Conversions Help

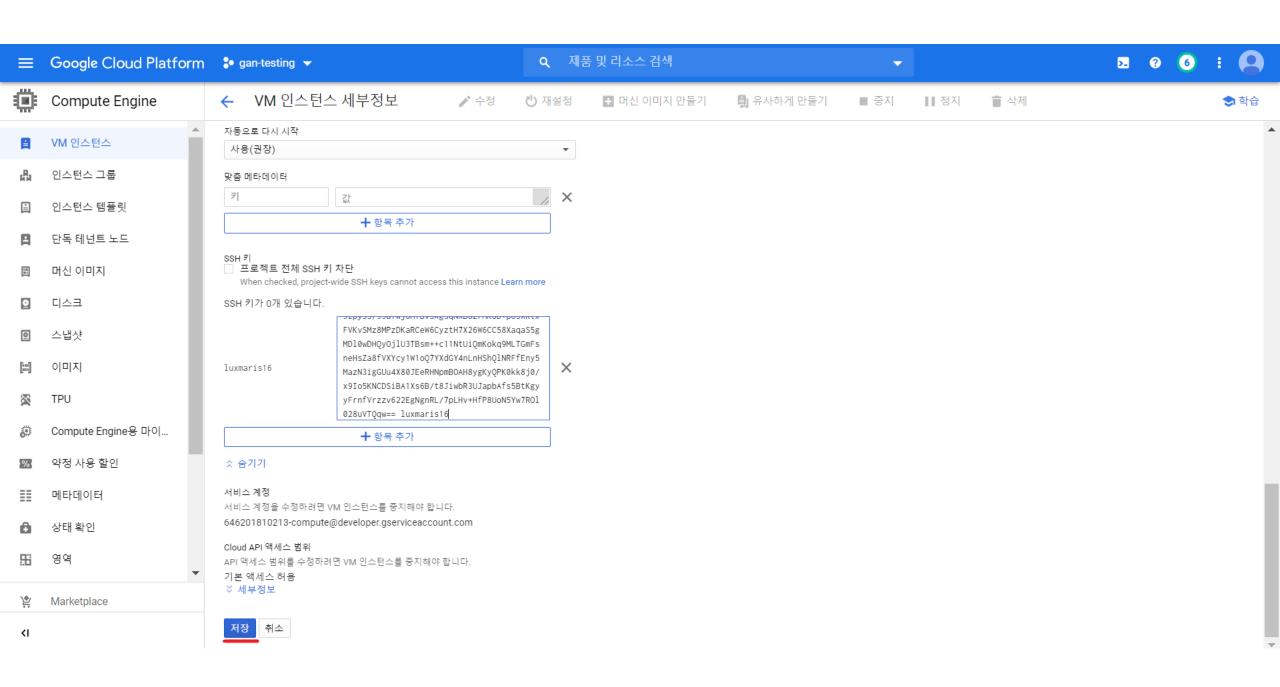
	ILTGmFsneHsZa8fVXYc eRHNpmBOAH8ygKyQPK			
	nfVrzzv622EgNgnRL/7pL			
Key fingerprint:	ssh-rsa 2048 2d:94:5d:9a:9a:d3:66:82:76:05:a6:7c:d0:dc:ca:cd			
Key comment:	luxmaris16			
Key passphrase:				
Confirm passphrase:				
Actions				
Generate a public/private key pair Generate				
Load an existing private key file			Load	
Save the generated I	кеу	Save public key	Save private key	
Parameters				
Type of key to general	ate:	SA	◯ SSH-1 (RSA)	
_	_		2048	

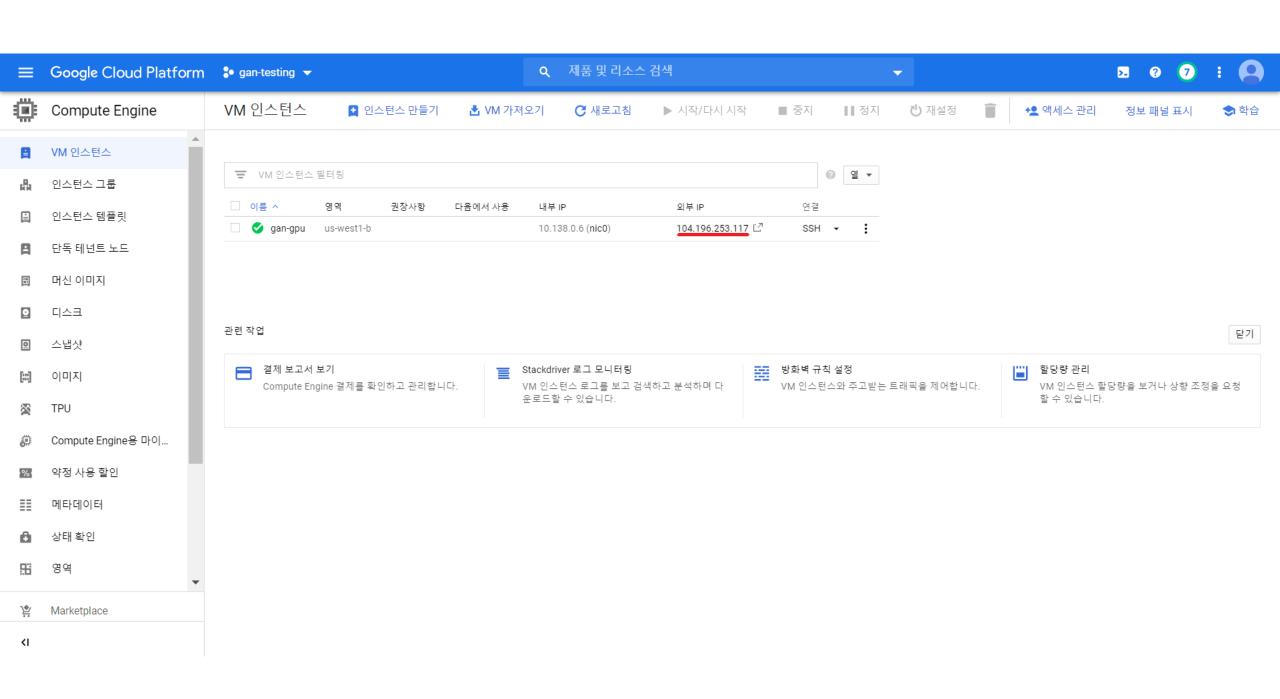
구글 계정 ID

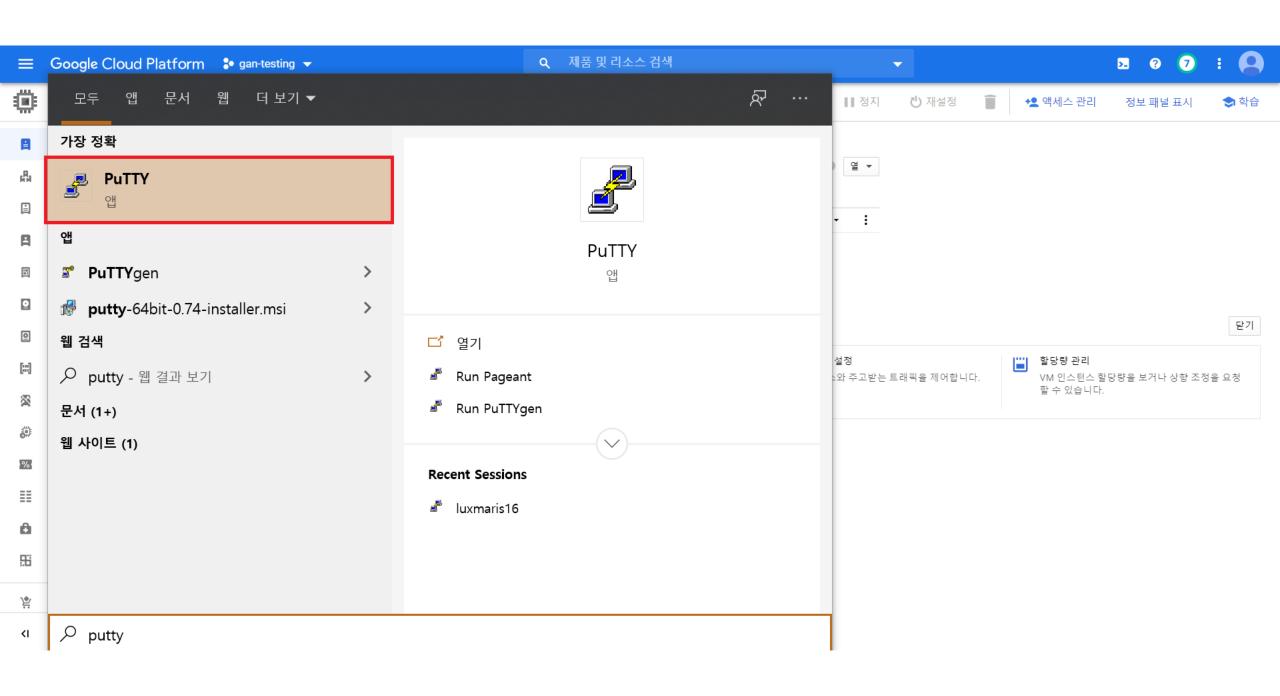


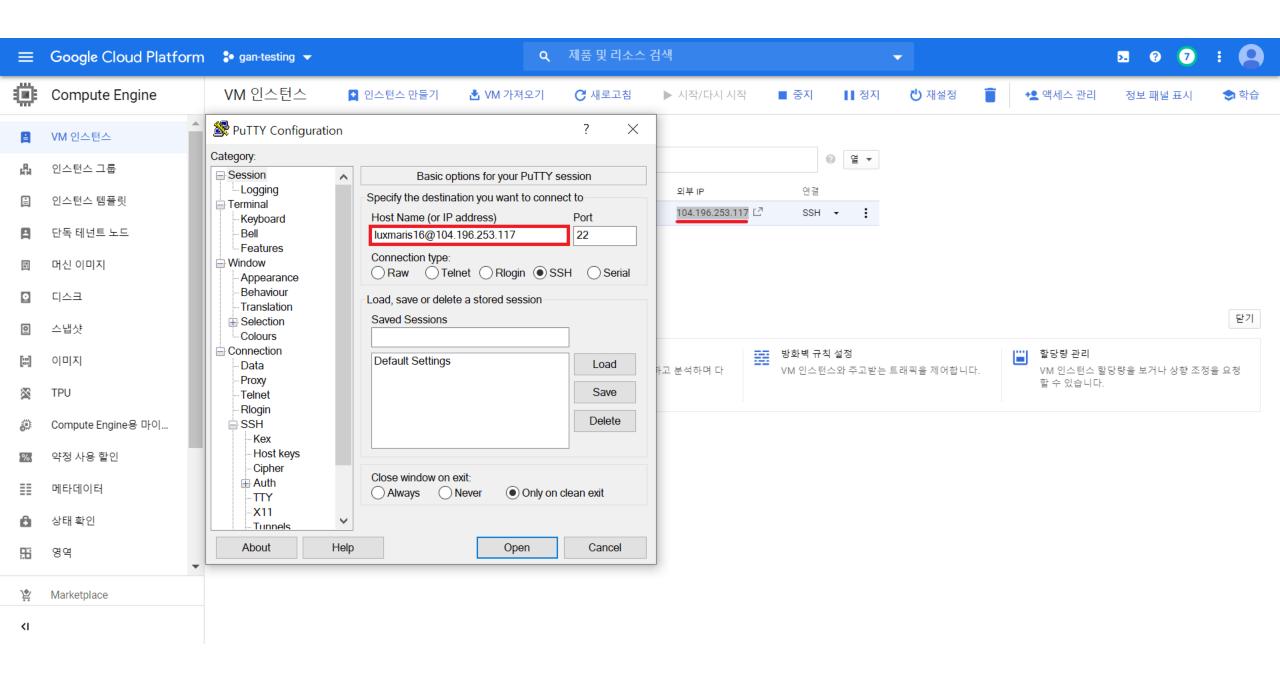


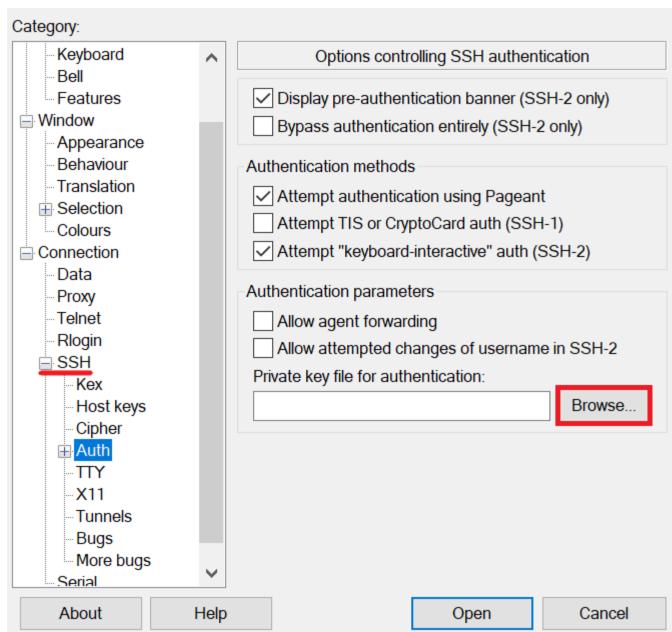
Key				
Public key for pasting	into OpenSSH authorize	d_keys file:		
azN3igGUu4X80JEe	LTGmFsneHsZa8fVXYc RHNpmBOAH8ygKyQPK fVrzzv622EgNgnRL/7pL	0kk8j0/x9Io5KNCDSiB <i>l</i>	A1Xs6B/t8JiwbR3	
Key fingerprint:	ssh-rsa 2048 2d:94:5d:9a:9a:d3:66:82:76:05:a6:7c:d0:dc:ca:cd			
Key comment:	luxmaris16			
Key passphrase:				
Confirm passphrase:				
Actions				
Generate a public/private key pair Generate				
Load an existing private key file			Load	
Save the generated ke	еу	Save public key	Save private key	
Parameters				
Type of key to general	te: DSA ○ ECDS	SA	◯ SSH-1 (RSA)	
Number of bits in a ge	nerated key:		2048	



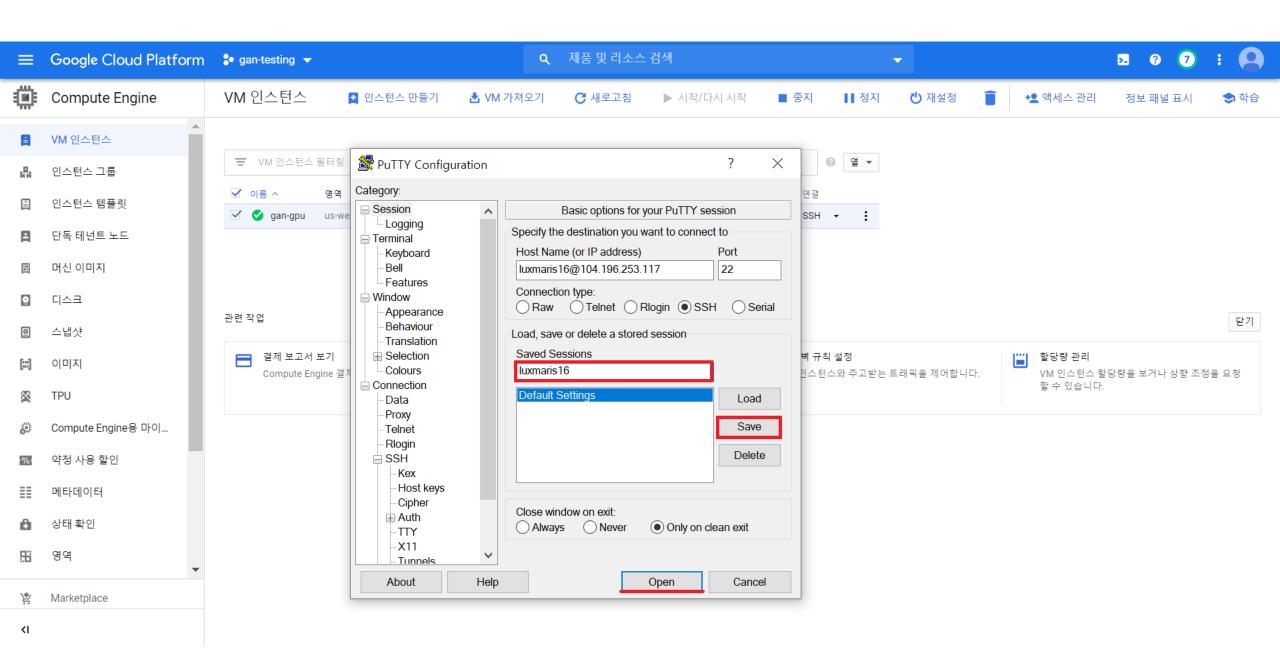








Private Key 입력







### WARNING - POTENTIAL SECURITY BREACH!

The server's host key does not match the one PuTTY has cached in the registry. This means that either the server administrator has changed the host key, or you have actually connected to another computer pretending to be the server.

The new ssh-ed25519 key fingerprint is: ssh-ed25519 255 29:2d:5d:f3:94:0b:eb:7b:a7:95:a0:14:3f:3b:77:a5 If you were expecting this change and trust the new key, hit Yes to update PuTTY's cache and continue connecting. If you want to carry on connecting but without updating the cache, hit No.

If you want to abandon the connection completely, hit Cancel. Hitting Cancel is the ONLY guaranteed safe choice.

Authenticating with public key "luxmaris16"

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Welcome to the Google Deep Learning VM

Version: common-cu100.m42

Based on: Debian GNU/Linux 9.11 (stretch) (GNU/Linux 4.9.0-11-amd64 x86\_64\n)

#### Resources:

- \* Google Deep Learning Platform StackOverflow: https://stackoverflow.com/questions/tagged/google-dl-platform
- \* Google Cloud Documentation: https://cloud.google.com/deep-learning-vm
- \* Google Group: https://groups.google.com/forum/#!forum/google-dl-platform

To reinstall Nvidia driver (if needed) run: sudo /opt/deeplearning/install-driver.sh

Linux gan-gpu 4.9.0-11-amd64 #1 SMP Debian 4.9.189-3+deb9u2 (2019-11-11) 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.

This VM requires Nvidia drivers to function correctly. Installation takes  $\sim 1$  m inute.

Would you like to install the Nvidia driver? [y/n] y

```
32-bit compatibility files will not be installed; if you wish to
        install them, re-run the installation and set a valid directory with
        the --compat32-libdir option.
Nvidia driver installed.
luxmaris16@gan-gpu:~$ nvidia-smi
Sat Jul 25 13:04:14 2020
 NVIDIA-SMI 410.104 Driver Version: 410.104 CUDA Version: 10.0
 GPU Name Persistence-M | Bus-Id Disp.A | Volatile Uncorr. ECC
 Fan Temp Perf Pwr: Usage/Cap| Memory-Usage | GPU-Util Compute M.
   O Tesla P100-PCIE... Off | 00000000:00:04.0 Off |
 N/A 33C PO 28W / 250W | 0MiB / 16280MiB | 0% Default
                                                            GPU Memory
 Processes:
           PID Type Process name
                                                            Usage
  No running processes found
luxmaris16@gan-gpu:~$
```

X

```
luxmaris16@gan-gpu:~$ git clone https://github.com/davidADSP/GDL code.git
Cloning into 'GDL code'...
remote: Enumerating objects: 48, done.
remote: Counting objects: 100% (48/48), done.
remote: Compressing objects: 100% (38/38), done.
remote: Total 385 (delta 26), reused 22 (delta 10), pack-reused 337
Receiving objects: 100% (385/385), 22.16 MiB | 33.59 MiB/s, done.
Resolving deltas: 100% (219/219), done.
luxmaris16@gan-gpu:~$ ls -al
total 36
drwxr-xr-x 6 luxmaris16 luxmaris16 4096 Jul 25 13:11 .
                       root
                                  4096 Jul 25 12:45 ...
drwxr-xr-x 4 root
-rw-r--r-- 1 luxmaris16 luxmaris16 220 May 15 2017 .bash loqout
-rw-r--r-- 1 luxmaris16 luxmaris16 3526 May 15 2017 .bashrc
drwxr-xr-x 3 luxmaris16 luxmaris16 4096 Jul 25 13:03 .config
drwxr-xr-x 2 luxmaris16 luxmaris16 4096 Jul 25 13:03 .docker
drwxr-xr-x 8 luxmaris16 luxmaris16 4096 Jul 25 13:11 GDL code
-rw-r--r-- 1 luxmaris16 luxmaris16 675 May 15 2017 .profile
drwx----- 2 luxmaris16 luxmaris16 4096 Jul 25 12:45 .ssh
```

X

## Anaconda Installers

Windows **#** 

Python 3.8

64-Bit Graphical Installer (466 MB)

32-Bit Graphical Installer (397 MB)

MacOS

Python 3.8

64-Bit Graphical Installer (462 MB)

64-Bit Command Line Installer (454 MB)

Linux 🔬

Python 3.8

● 64-Bit (x86) Installer

64-Bit (Power8 and F MB)

새 탭에서 링크 열기(T) 새 창에서 링크 열기(W) 시크릿 창에서 링크 열기(G)

다른 이름으로 링크 저장(K)...

링크 주소 복사(E)

검사(N) Ctrl+Shift+I

```
占 luxmaris16@gan-gpu: ~
```

```
luxmaris160gan-qpu:~$ qit clone https://qithub.com/davidADSP/GDL code.qit
Cloning into 'GDL code' ...
remote: Enumerating objects: 48, done.
remote: Counting objects: 100% (48/48), done.
remote: Compressing objects: 100% (38/38), done.
remote: Total 385 (delta 26), reused 22 (delta 10), pack-reused 337
Receiving objects: 100% (385/385), 22.16 MiB | 33.59 MiB/s, done.
Resolving deltas: 100% (219/219), done.
luxmaris16@gan-gpu:~$ ls -al
total 36
drwxr-xr-x 6 luxmaris16 luxmaris16 4096 Jul 25 13:11 .
                                  4096 Jul 25 12:45 ...
drwxr-xr-x 4 root
                       root
-rw-r--r-- 1 luxmaris16 luxmaris16 220 May 15 2017 .bash logout
-rw-r--r 1 luxmaris16 luxmaris16 3526 May 15 2017 .bashrc
drwxr-xr-x 3 luxmaris16 luxmaris16 4096 Jul 25 13:03 .config
drwxr-xr-x 2 luxmaris16 luxmaris16 4096 Jul 25 13:03 .docker
drwxr-xr-x 8 luxmaris16 luxmaris16 4096 Jul 25 13:11 GDL code
-rw-r--r 1 luxmaris16 luxmaris16 675 May 15 2017 .profile
drwx----- 2 luxmaris16 luxmaris16 4096 Jul 25 12:45 .ssh
luxmaris16@gan-gpu:~$ cd
luxmaris16@gan-gpu:~$ ls
luxmaris16@gan-gpu:~$ wget https://s3-us-west-1.amazonaws.com/udacity-dlnfd/data
sets/celeba.zip
--2020-07-25 13:17:05-- https://s3-us-west-1.amazonaws.com/udacity-dlnfd/datase
ts/celeba.zip
Resolving s3-us-west-1.amazonaws.com (s3-us-west-1.amazonaws.com)... 52.219.116.
Connecting to s3-us-west-1.amazonaws.com (s3-us-west-1.amazonaws.com) | 52.219.116
.1|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1443490838 (1.3G) [application/zip]
Saving to: 'celeba.zip'
                   celeba.zip
                                                                  in 1m 52s
2020-07-25 13:18:58 (12.3 MB/s) - 'celeba.zip' saved [1443490838/1443490838]
luxmaris16@gan-gpu:~$ ls
celeba.zip GDL code
luxmaris16@gan-gpu:~$
luxmaris16@gan-gpu:~$
luxmaris16@gan-gpu:~$ wget wget https://s3-us-west-1.amazonaws.com/udacity-dlnfd/datasets/celeba.zip
```

巾

**.** 

```
luxmaris16@qan-qpu:~$ wqet https://repo.anaconda.com/archive/Anaconda3-2020.07-Linux-x86 64.sh
--2020-07-25 13:23:22-- https://repo.anaconda.com/archive/Anaconda3-2020.07-Linux-x86 64.sh
Resolving repo.anaconda.com (repo.anaconda.com)... 104.16.131.3, 104.16.130.3, 2606:4700::6810:8303, ...
Connecting to repo.anaconda.com (repo.anaconda.com) | 104.16.131.3 | :443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 576830621 (550M) [application/x-sh]
Saving to: 'Anaconda3-2020.07-Linux-x86 64.sh'
Anaconda3-2020.07-Linux-x86 64.sh
                                                                                                                                                  in 2.6s
2020-07-25 13:23:24 (212 MB/s) - 'Anaconda3-2020.07-Linux-x86 64.sh' saved [576830621/576830621]
luxmaris16@gan-gpu:~$ ls -al
total 1973012
drwxr-xr-x 6 luxmaris16 luxmaris16
                                         4096 Jul 25 13:23 .
                                         4096 Jul 25 12:45 _.
drwxr-xr-x 4 root
                        root
-rw-r--r-- 1 luxmaris16 luxmaris16 576830621 Jul 23 18:25 Anaconda3-2020.07-Linux-x86 64.sh
-rw-r--r-- 1 luxmaris16 luxmaris16
                                          220 May 15 2017 .bash logout
-rw-r--r-- 1 luxmaris16 luxmaris16
                                         3526 May 15 2017 .bashrc
-rw-r--r- 1 luxmaris16 luxmaris16 1443490838 Apr 21 2017 celeba.zip
drwxr-xr-x 3 luxmaris16 luxmaris16
                                         4096 Jul 25 13:03 .config
drwxr-xr-x 2 luxmaris16 luxmaris16
                                         4096 Jul 25 13:03 .docker
drwxr-xr-x 8 luxmaris16 luxmaris16
                                         4096 Jul 25 13:11 GDL code
-rw-r--r-- 1 luxmaris16 luxmaris16
                                         675 May 15 2017 .profile
drwx----- 2 luxmaris16 luxmaris16
                                         4096 Jul 25 12:45 .ssh
luxmaris16@gan-gpu:~$ chmod +x Anaconda3-2020.07-Linux-x86 64.sh
luxmaris16@gan-gpu:~$ ./Anaconda3-2020.07-Linux-x86 64.sh
```

Welcome to Anaconda3 2020.07

In order to continue the installation process, please review the license agreement.

Please, press ENTER to continue

>>>

[no] >>> yes

kerberos (krb5, non-Windows platforms) A network authentication protocol designed to provide strong authentication cryptography A Python library which exposes cryptographic recipes and primitives. pycryptodome A fork of PyCrypto. It is a self-contained Python package of low-level crypt pycryptodomex A stand-alone version of pycryptodome. libsodium A software library for encryption, decryption, signatures, password hashing pynacl A Python binding to the Networking and Cryptography library, a crypto librar Last updated May 20, 2020 Do you accept the license terms? [yes|no]

Unpacking payload ...

libsodium A software library for encryption, decryption, signatures, password hashing pynacl A Python binding to the Networking and Cryptography library, a crypto librar Last updated May 20, 2020 Do you accept the license terms? [yes|no] [no] >>> yes Anaconda3 will now be installed into this location: /home/luxmaris16/anaconda3 - Press ENTER to confirm the location - Press CTRL-C to abort the installation - Or specify a different location below [/home/luxmaris16/anaconda3] >>> PREFIX=/home/luxmaris16/anaconda3

X

```
wurlitzer
                     pkgs/main/linux-64::wurlitzer-2.0.1-py38 0
  xlrd
                     pkgs/main/noarch::xlrd-1.2.0-py 0
  xlsxwriter
                     pkgs/main/noarch::xlsxwriter-1.2.9-py 0
  xlwt
                     pkgs/main/linux-64::xlwt-1.3.0-py38 0
                     pkgs/main/noarch::xmltodict-0.12.0-py 0
  xmltodict
                     pkgs/main/linux-64::xz-5.2.5-h7b6447c 0
  XZ
                     pkgs/main/linux-64::yaml-0.2.5-h7b6447c 0
  vaml
                     pkgs/main/noarch::yapf-0.30.0-py 0
  yapf
                     pkgs/main/linux-64::zeromq-4.3.2-he6710b0 2
  zeromq
                     pkgs/main/noarch::zict-2.0.0-py 0
  zict
                     pkgs/main/noarch::zipp-3.1.0-py 0
  zipp
                     pkgs/main/linux-64::zlib-1.2.11-h7b6447c 3
  zlib
                     pkgs/main/linux-64::zope-1.0-py38 1
  zope
                     pkgs/main/linux-64::zope.event-4.4-py38 0
  zope.event
                     pkgs/main/linux-64::zope.interface-4.7.1-py38h7b6447c 0
  zope.interface
                     pkgs/main/linux-64::zstd-1.4.5-h0b5b093 0
  zstd
Preparing transaction: done
Executing transaction: done
installation finished.
Do you wish the installer to initialize Anaconda3
by running conda init? [yes|no]
[no] >>> yes
```

```
luxmaris16@gan-gpu:~$ . .bashrc
(base) luxmaris16@qan-qpu:~$ jupyter notebook --qenerate-config
Writing default config to: /home/luxmaris16/.jupyter/jupyter notebook config.py
(base) luxmaris16@gan-gpu:~$ ls -al
total 1973028
drwxr-xr-x 9 luxmaris16 luxmaris16
                                          4096 Jul 25 13:33 .
                                          4096 Jul 25 12:45 ...
drwxr-xr-x 4 root
                        root
                                          4096 Jul 25 13:29 anaconda3
drwxr-xr-x 26 luxmaris16 luxmaris16
-rwxr-xr-x 1 luxmaris16 luxmaris16 576830621 Jul 23 18:25 Anaconda3-2020.07-Li
nux-x86 64.sh
-rw-r--r-- 1 luxmaris16 luxmaris16
                                          220 May 15 2017 .bash logout
-rw-r--r-- 1 luxmaris16 luxmaris16
                                          4021 Jul 25 13:29 .bashrc
-rw-r--r-- 1 luxmaris16 luxmaris16 1443490838 Apr 21 2017 celeba.zip
drwxr-xr-x 2 luxmaris16 luxmaris16
                                          4096 Jul 25 13:29 .conda
                                          4096 Jul 25 13:03 .config
drwxr-xr-x 3 luxmaris16 luxmaris16
drwxr-xr-x 2 luxmaris16 luxmaris16
                                         4096 Jul 25 13:03 .docker
                                          4096 Jul 25 13:11 GDL code
drwxr-xr-x 8 luxmaris16 luxmaris16
drwx----- 2 luxmaris16 luxmaris16
                                          4096 Jul 25 13:33 .jupyter
-rw-r--r-- 1 luxmaris16 luxmaris16
                                           675 May 15 2017 .profile
drwx----- 2 luxmaris16 luxmaris16
                                          4096 Jul 25 12:45 .ssh
(base) luxmaris16@gan-gpu:~$ cd .jupyter
(base) luxmaris16@gan-gpu:~/.jupyter$ ls -al
total 44
drwx----- 2 luxmaris16 luxmaris16 4096 Jul 25 13:33 .
drwxr-xr-x 9 luxmaris16 luxmaris16 4096 Jul 25 13:33 ...
-rw-r--r- 1 luxmaris16 luxmaris16 34523 Jul 25 13:33 jupyter notebook config.py
(base) luxmaris16@gan-gpu:~/.jupyter$ vim jupyter notebook config.py
```

🚅 luxmaris16@gan-gpu: ~/.jupyter

```
#c.NotebookApp.ignore minified js = False
## (bytes/sec) Maximum rate at which stream output can be sent on iopub before
  they are limited.
#c.NotebookApp.iopub data rate limit = 1000000
## (msqs/sec) Maximum rate at which messages can be sent on iopub before they are
  limited.
#c.NotebookApp.iopub msq rate limit = 1000
## The IP address the notebook server will listen on.
c.NotebookApp.ip = '0.0.0.0'
## Supply extra arguments that will be passed to Jinja environment.
#c.NotebookApp.jinja environment options = {}
## Extra variables to supply to jinja templates when rendering.
#c.NotebookApp.jinja template vars = {}
## The kernel manager class to use.
#c.NotebookApp.kernel manager class = 'notebook.services.kernels.kernelmanager.MappingKe
rnelManager'
```

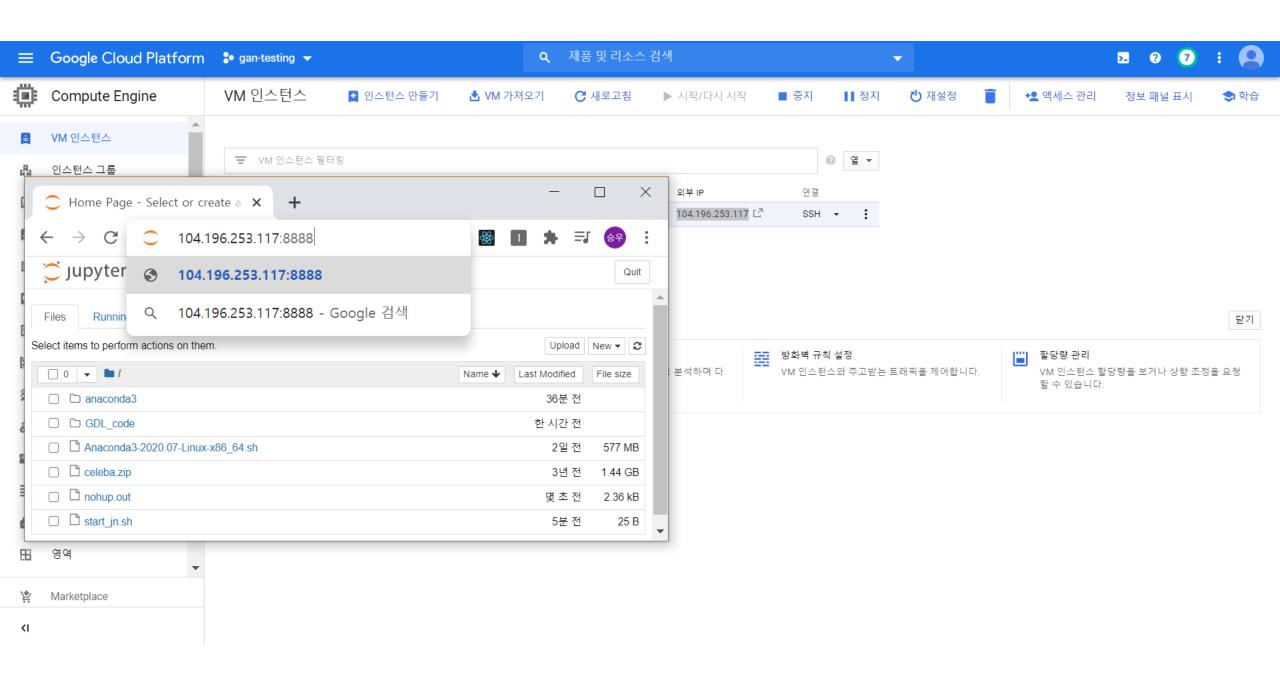
```
module, unless it is overridden using the --browser (NotebookApp.browser)
  configuration option.
#c.NotebookApp.open browser = True
  Hashed password to use for web authentication.
  To generate, type in a python/IPython shell:
    from notebook.auth import passwd; passwd()
  The string should be of the form type:salt:hashed-password.
c.NotebookApp.password = ''
  Forces users to use a password for the Notebook server. This is useful in a
  multi user environment, for instance when everybody in the LAN can access each
  other's machine through ssh.
  In such a case, server the notebook server on localhost is not secure since
  any user can connect to the notebook server via ssh.
c.NotebookApp.password required = False
## The port the notebook server will listen on.
c.NotebookApp.port = 8888
```

```
luxmaris16@gan-gpu: ~/.jupyter
  Terminals may also be automatically disabled if the terminado package is not
  available.
#c.NotebookApp.terminals enabled = True
# Token used for authenticating first-time connections to the server.
  When no password is enabled, the default is to generate a new, random token.
  Setting to an empty string disables authentication altogether, which is NOT
  RECOMMENDED.
 .NotebookApp.token = ''
## Supply overrides for the tornado.web.Application that the Jupyter notebook
  uses.
#c.NotebookApp.tornado settings = {}
## Whether to trust or not X-Scheme/X-Forwarded-Proto and X-Real-Ip/X-Forwarded-
  For headerssent by the upstream reverse proxy. Necessary if the proxy handles
  SSL
#c.NotebookApp.trust xheaders = False
## Disable launching browser by redirect file
```

```
be used to enable and disable the loading of the extensions. The extensions
  will be loaded in alphabetical order.
#c.NotebookApp.nbserver extensions = {}
## The directory to use for notebooks and kernels.
#c.NotebookApp.notebook dir = ''
## Whether to open in a browser after starting. The specific browser used is
  platform dependent and determined by the python standard library `webbrowser`
  module, unless it is overridden using the --browser (NotebookApp.browser)
  configuration option.
c.NotebookApp.open browser = False
# Hashed password to use for web authentication.
  To generate, type in a python/IPython shell:
    from notebook.auth import passwd; passwd()
  The string should be of the form type:salt:hashed-password.
c.NotebookApp.password = ''
## Forces users to use a password for the Notebook server. This is useful in a
```

```
(base) luxmaris16@gan-gpu:~$ vim start jn.sh
(base) luxmaris16@gan-gpu:~$ chmod +x start jn.sh
(base) luxmaris16@gan-gpu:~$ ./start jn.sh
(base) luxmaris16@qan-qpu:~$ nohup: appending output to 'nohup.out'
(base) luxmaris16@gan-gpu:~$ tail -f nohup.out
     File "/home/luxmaris16/anaconda3/lib/python3.8/importlib/ init .py", line 127, i
n import module
       return bootstrap. gcd import(name[level:], package, level)
     File "<frozen importlib. bootstrap>", line 1014, in gcd import
     File "<frozen importlib. bootstrap>", line 991, in find and load
     File "<frozen importlib. bootstrap>", line 973, in find and load unlocked
   ModuleNotFoundError: No module named 'nbdime'
[I 14:01:09.960 NotebookApp] Serving notebooks from local directory: /home/luxmaris16
[I 14:01:09.960 NotebookApp] The Jupyter Notebook is running at:
[I 14:01:09.960 NotebookApp] http://gan-gpu:8888/
[I 14:01:09.960 NotebookApp] Use Control-C to stop this server and shut down all kernels
(twice to skip confirmation).
```

占 luxmaris 16@gan-gpu: ~



```
(base) luxmaris16@gan-gpu:~$ conda create -n testGAN python=3.6 anaconda
Collecting package metadata (current repodata.json): done
Solving environment: done
## Package Plan ##
  environment location: /home/luxmaris16/anaconda3/envs/testGAN
 added / updated specs:
   - anaconda
   - python=3.6
The following packages will be downloaded:
                                           build
   package
   alabaster-0.7.12
                                                         18 KB
                                          py36 0
   anaconda-2020.07
                                         py36 0
                                                         17 KB
   anaconda-client-1.7.2
                                          py36 0
                                                        147 KB
   argh-0.26.2
                                          py36 0
                                                         36 KB
   asn1crypto-1.3.0
                                          py36 0
                                                        164 KB
   astroid-2.4.2
                                          ру36 0
                                                        279 KB
                                  pv36h7b6447c 1
   astropy-4.0.1.post1
                                                         6.1 MB
```



