

# **LAPORAN DEPLOY WEBSITE DI GOOGLE CLOUD PLATFORM**



**SMK Telkom Malang**



**PT PETROKIMIA GRESIK**

**Disusun oleh:**

**Meylani Cahya Ilahi**

**Program Keahlian:**

**Teknik Komputer dan Jaringan  
Cyber Security**

**Petrokimia Gresik  
Januari 2024**

## Judul :

Deploy Website di Google Cloud Platform

## Pendahuluan

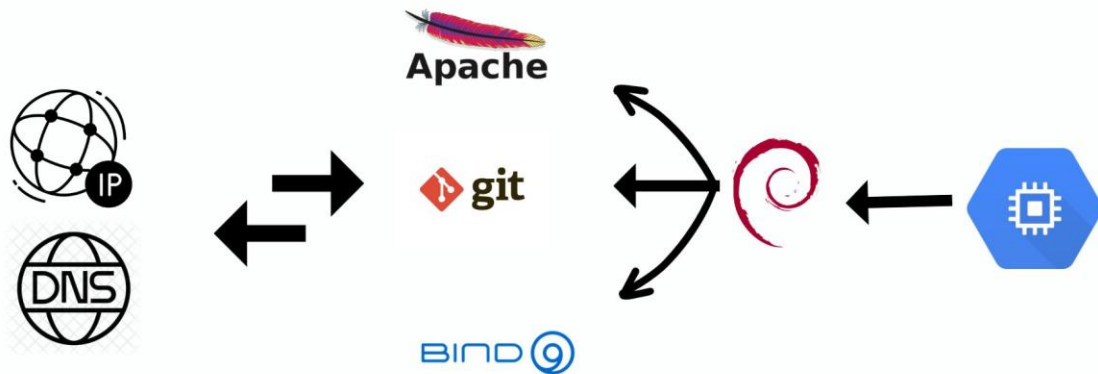
Tujuan :

1. Dapat mengetahui architecture yang digunakan saat deploy website
2. Dapat mengetahui cara deploy website ke Google Cloud Platform (GCP)

Architecture :

### ARCHITECTURE WEB SERVER GCP

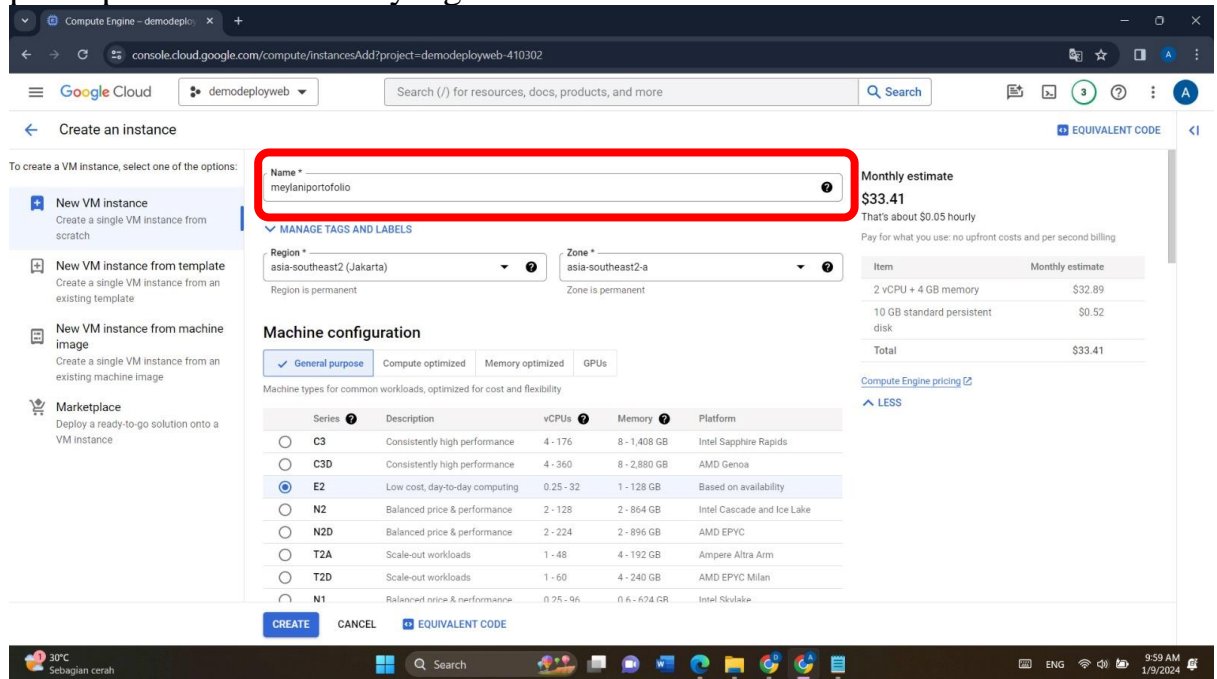
Deploy Website Portofolio Google Cloud Platform



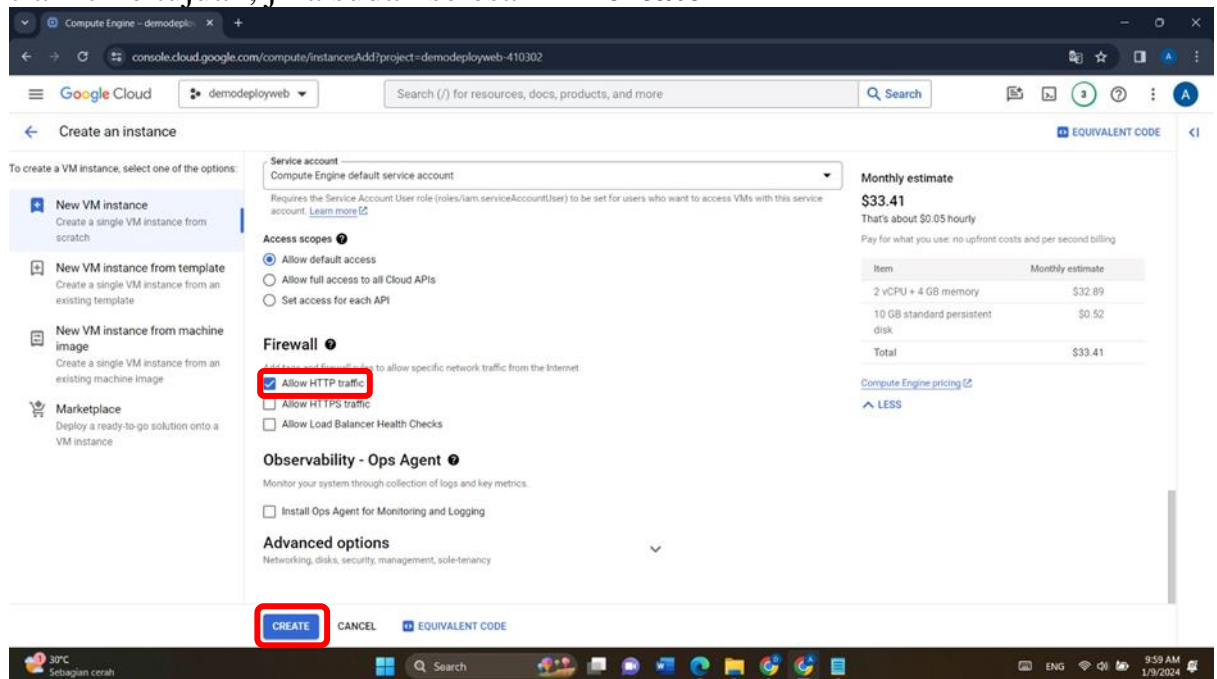
## Hasil Praktik

### 1. Create Instance

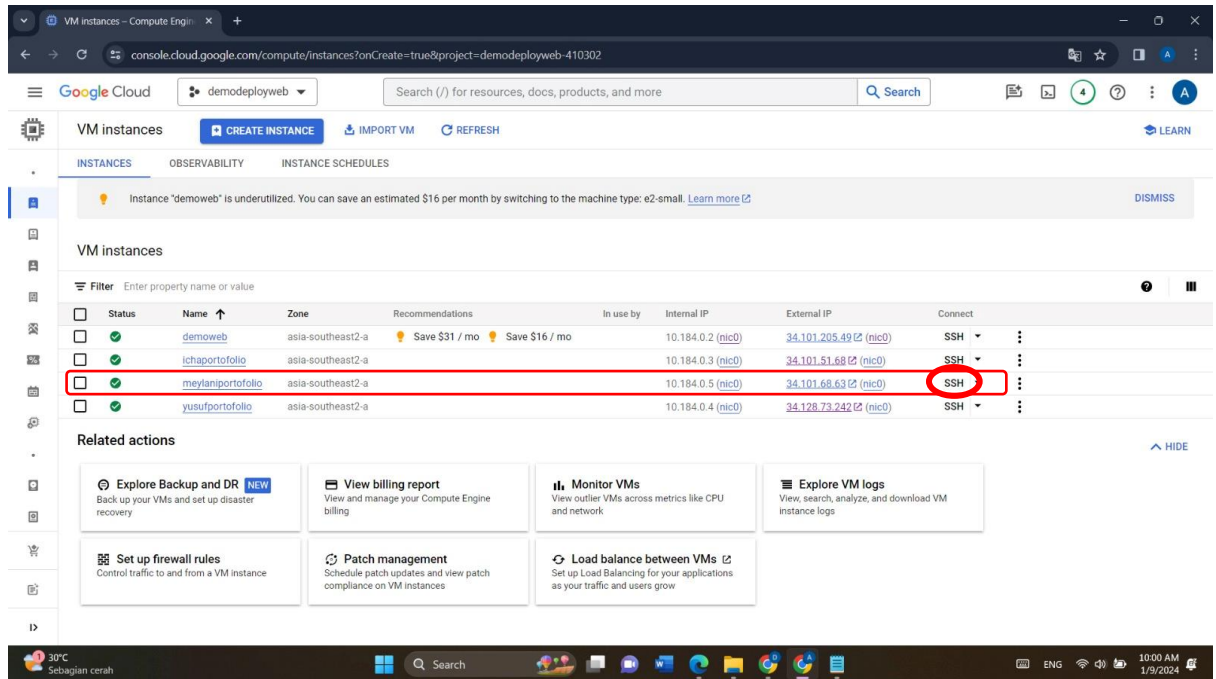
1.1 Langkah awal dari deploy website ke GCP adalah *create vm instance*, yakni dengan cara masuk ke **google compute engine > vm instance > create new instance**. Ubah nama instance sesuai keinginan, kemudian pilih spesifikasi machine yang dibutuhkan.



1.2 Kemudian atur untuk menu firewall, centang bagian *allow http traffic*, fungsinya adalah untuk memungkinkan instance mengirimkan traffic ke tujuan, jika sudah selesai klik **create**

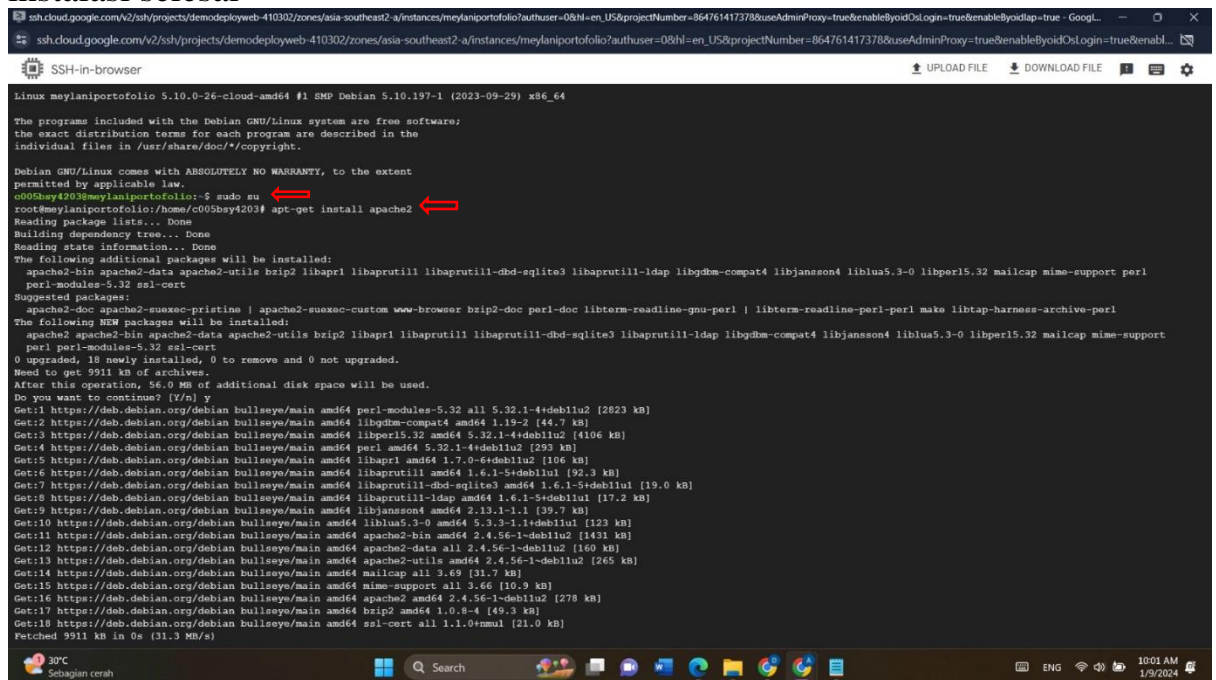


1.3 Tunggu Hingga proses create instance selesai. Setelah selesai **connect** kan instance **dengan ssh** untuk proses konfigurasi. Cara Connect nya adalah dengan **klik pada bagian ssh** nama instance yang telah dibuat

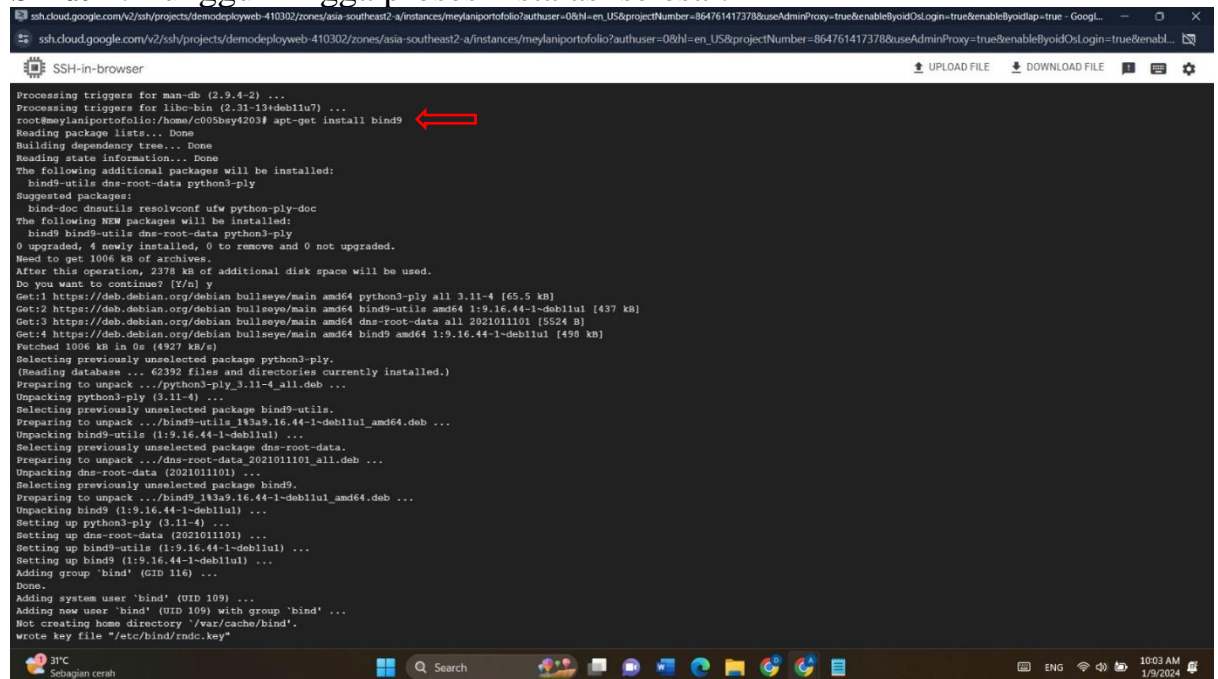


## 2. Proses Instalasi Apt yang Dibutuhkan

2.1 Setelah connect ke ssh, langsung **masuk ke root** agar memudahkan dalam proses konfigurasi, setelahnya **install apache 2**. Apache 2 sendiri merupakan salah satu *software* web server. Cara installnya adalah dengan menggunakan command **“apt-get install apache2”**, tunggu hingga proses instalasi selesai



**2.2** Langkah selanjutnya adalah **install bind9**, fungsi bind9 adalah digunakan sebagai dns server yang tujuannya untuk mengatur DNS pada OS Linux. Cara installnya menggunakan command “**apt-get install bind9**”. Tunggu Hingga proses instalasi selesai.

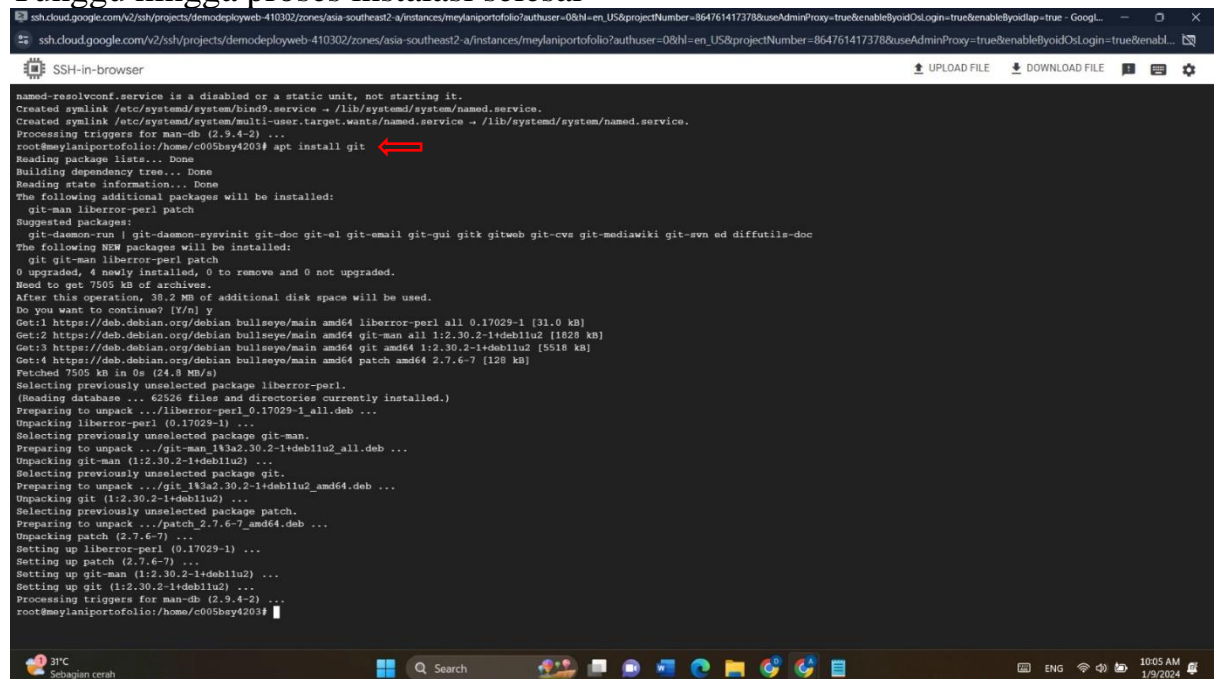


```
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniporfolio?authuser=0&hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enableYoidap=true - Google...
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniporfolio?authuser=0&hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enabl...

SSH-in-browser

Processing triggers for man-db (2.9.4-2) ...
Processing triggers for libc-bin (2.31-13+deb11u7) ...
root@meylaniporfolio:/home/c005bay4203# apt-get install bind9
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bind9-utils dns-root-data python3-ply
Suggested packages:
  bind-doc dnstools resolvconf ufw python-ply-doc
The following NEW packages will be installed:
  bind9 bind9-utils dns-root-data python3-ply
0 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
Need to get 1006 kB of archives.
After this operation, 2378 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 https://deb.debian.org/debian bullseye/main amd64 python3-ply all 3.11-4 [65.5 kB]
Get:2 https://deb.debian.org/debian bullseye/main amd64 bind9-utils amd64 1:9.16.44-1-deb11u1 [437 kB]
Get:3 https://deb.debian.org/debian bullseye/main amd64 dns-root-data all 2021011101 [5524 B]
Get:4 https://deb.debian.org/debian bullseye/main amd64 bind9 amd64 1:9.16.44-1-deb11u1 [498 kB]
Fetched 1006 kB in 0s (4927 kB/s)
Selecting previously unselected package python3-ply.
(Reading database ... 62392 files and directories currently installed.)
Preparing to unpack .../python3-ply_3.11-4_all.deb ...
Unpacking python3-ply (3.11-4) ...
Selecting previously unselected package bind9-utils.
Preparing to unpack .../bind9-utils_1:9.16.44-1-deb11u1_amd64.deb ...
Unpacking bind9-utils (1:9.16.44-1-deb11u1) ...
Selecting previously unselected package dns-root-data.
Preparing to unpack .../dns-root-data_2021011101_all.deb ...
Unpacking dns-root-data (2021011101) ...
Selecting previously unselected package bind9.
Preparing to unpack .../bind9_1:9.16.44-1-deb11u1_amd64.deb ...
Unpacking bind9 (1:9.16.44-1-deb11u1) ...
Setting up python3-ply (3.11-4) ...
Setting up dns-root-data (2021011101) ...
Setting up bind9-utils (1:9.16.44-1-deb11u1) ...
Setting up bind9 (1:9.16.44-1-deb11u1) ...
Adding group 'bind' (GID 116) ...
Done.
Adding system user 'bind' (UID 109) ...
Adding new user 'bind' (UID 109) with group 'bind' ...
Not creating home directory '/var/cache/bind'.
wrote key file '/etc/bind/rndc.key'
```

**2.3** Selanjutnya adalah **install git**, fungsi git nantinya akan digunakan untuk membuat Salinan repository dari website yang akan di deploy / di clone di GCP. Cara installnya menggunakan command “**apt install git**”. Tunggu hingga proses instalasi selesai



```
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniporfolio?authuser=0&hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enableYoidap=true - Google...
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniporfolio?authuser=0&hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enabl...

SSH-in-browser

named-resolvconf.service is a disabled or a static unit, not starting it.
Created symlink /etc/systemd/system/bind9.service -> /lib/systemd/system/named.service.
Created symlink /etc/systemd/system/multi-user.target.wants/named.service -> /lib/systemd/system/named.service.
Processing triggers for man-db (2.9.4-2) ...
root@meylaniporfolio:/home/c005bay4203# apt install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  git-man liberror-perl patch
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-el git-email git-gui gitk gitweb git-cvs git-mediawiki git-svn ed diffutils-doc
The following NEW packages will be installed:
  git git-man liberror-perl patch
0 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
Need to get 7505 kB of archives.
After this operation, 38.2 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 https://deb.debian.org/debian bullseye/main amd64 liberror-perl all 0.17029-1 [31.0 kB]
Get:2 https://deb.debian.org/debian bullseye/main amd64 git-man all 1:2.30.2-1+deb11u2 [1028 kB]
Get:3 https://deb.debian.org/debian bullseye/main amd64 git amd64 1:2.30.2-1+deb11u2 [5518 kB]
Get:4 https://deb.debian.org/debian bullseye/main amd64 patch amd64 2.7.6-7 [120 kB]
Fetched 7505 kB in 0s (24.9 MB/s)
Selecting previously unselected package liberror-perl.
(Reading database ... 62526 files and directories currently installed.)
Preparing to unpack .../liberror-perl_0.17029-1_all.deb ...
Unpacking liberror-perl (0.17029-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1:2.30.2-1+deb11u2_all.deb ...
Unpacking git-man (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package git.
Preparing to unpack .../git_1:2.30.2-1+deb11u2_amd64.deb ...
Unpacking git (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package patch.
Preparing to unpack .../patch_2.7.6-7_amd64.deb ...
Unpacking patch (2.7.6-7) ...
Setting up liberror-perl (0.17029-1) ...
Setting up patch (2.7.6-7) ...
Setting up git-man (1:2.30.2-1+deb11u2) ...
Setting up git (1:2.30.2-1+deb11u2) ...
Processing triggers for man-db (2.9.4-2) ...
root@meylaniporfolio:/home/c005bay4203#
```

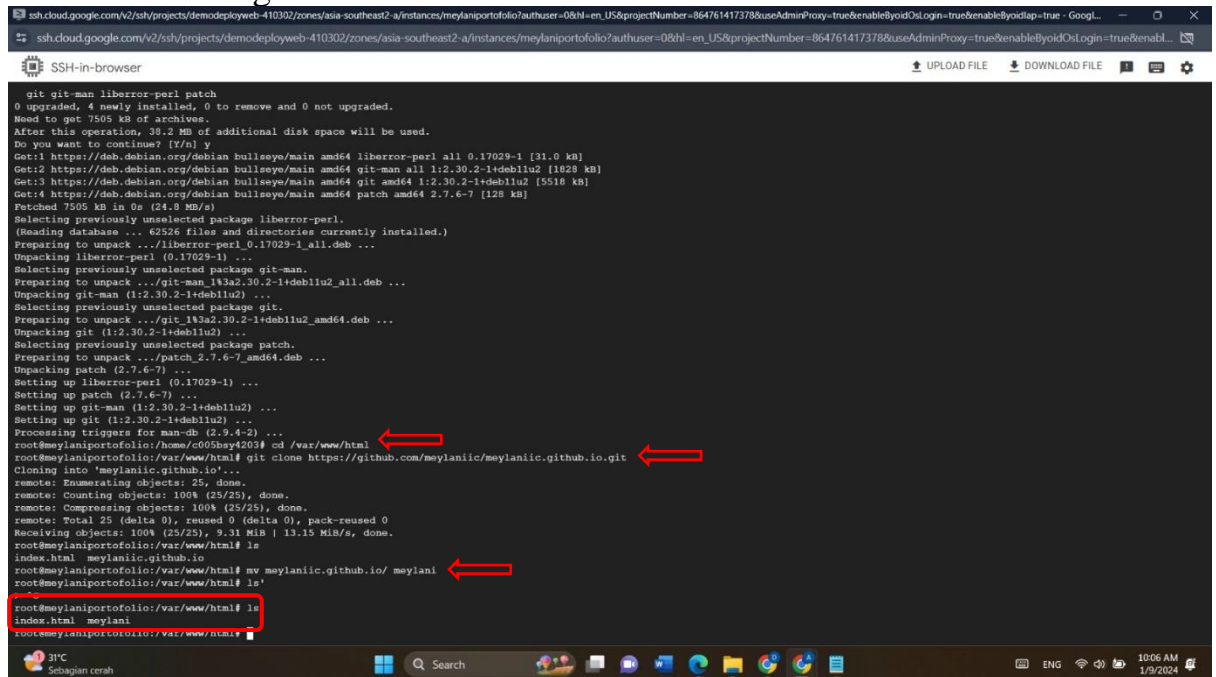


### 3. Clone Repository Website Yang Akan di Deploy

**3.1** Pertama masuk ke folder html dengan command “**cd /var/www/html**”, kemudian **copy repository website**, disini saya mengambil dari **github**, kemudian clone kan repository dengan command “**git clone [repository]**”.

Setelah selesai **cek** apakah **folder** sudah terisi dengan isi repository yang telah di clone tadi dengan menggunakan command “**ls**”.

**Ganti nama folder** hasil clone untuk memudahkan proses konfigurasi dengan command “**mv [nama file lama] [nama file baru]**”, Kemudian cek kembali dengan command ‘**ls**’

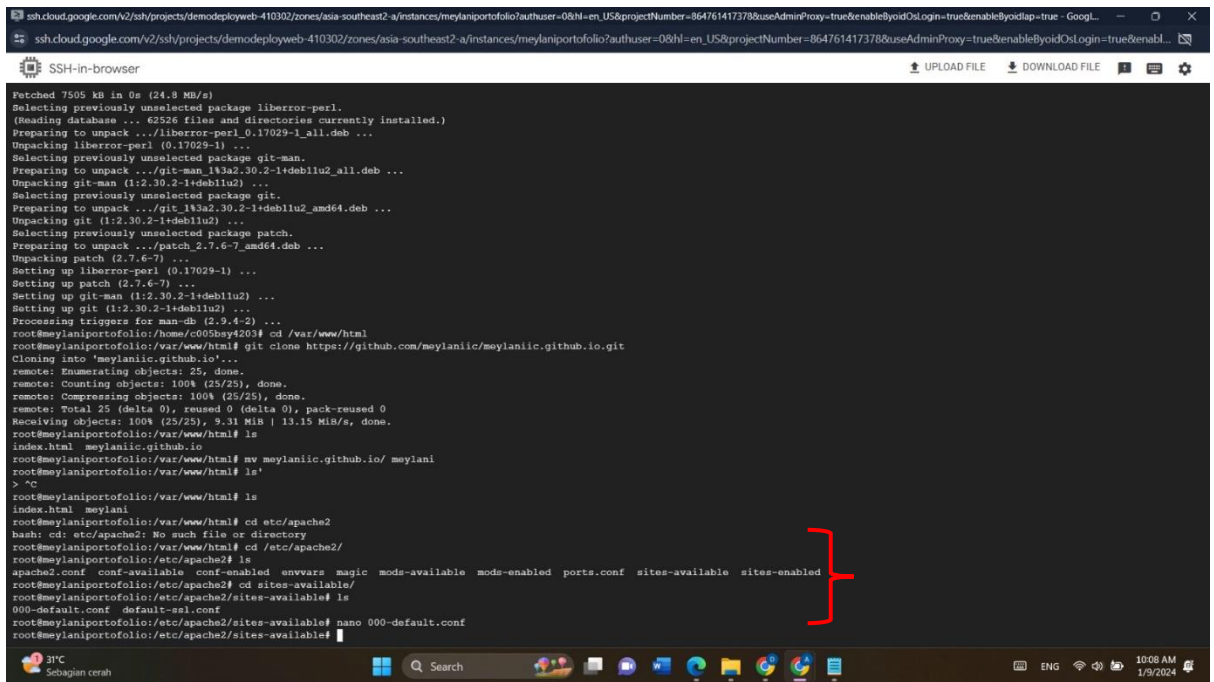


```
git git-man liberror-perl patch
0 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
Need to get 7505 kB of archives.
After this operation, 38.2 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 https://deb.debian.org/debian bullseye/main amd64 liberror-perl all 0.17029-1 [31.0 kB]
Get:2 https://deb.debian.org/debian bullseye/main amd64 git-man all 1:2.30.2-1+deb11u2 [1628 kB]
Get:3 https://deb.debian.org/debian bullseye/main amd64 git amd64 1:2.30.2-1+deb11u2 [5510 kB]
Get:4 https://deb.debian.org/debian bullseye/main amd64 patch amd64 2.7.6-7 [128 kB]
Fetched 7505 kB in 0s (24.8 MB/s)
Selecting previously unselected package liberror-perl.
(Reading database ... 62526 files and directories currently installed.)
Preparing to unpack .../liberror-perl_0.17029-1_all.deb ...
Unpacking liberror-perl (0.17029-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1:2.30.2-1+deb11u2_all.deb ...
Unpacking git-man (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package git.
Preparing to unpack .../git_1:2.30.2-1+deb11u2_amd64.deb ...
Unpacking git (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package patch.
Preparing to unpack .../patch_2.7.6-7_amd64.deb ...
Unpacking patch (2.7.6-7) ...
Setting up liberror-perl (0.17029-1) ...
Setting up patch (2.7.6-7) ...
Setting up git-man (1:2.30.2-1+deb11u2) ...
Setting up git (1:2.30.2-1+deb11u2) ...
Processing triggers for man-db (2.9.4-2) ...
root@maylaniportfolio:~# cd /var/www/html
root@maylaniportfolio:/var/www/html# git clone https://github.com/meylaniic/meylaniic.github.io.git
Cloning into 'meylaniic.github.io'...
remote: Enumerating objects: 25, done.
remote: Counting objects: 100% (25/25), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 25 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (25/25), 9.31 MiB | 13.15 MiB/s, done.
root@maylaniportfolio:/var/www/html# ls
index.html  meylaniic.github.io
root@maylaniportfolio:/var/www/html# mv meylaniic.github.io/ meylani
root@maylaniportfolio:/var/www/html# ls
index.html  meylani
```

### 4. Konfigurasi Web Server (Apache2)

**4.1** Langkah awal **setting apache** adalah masuk ke folder apache2 dengan command “**cd /etc/apache2**”.

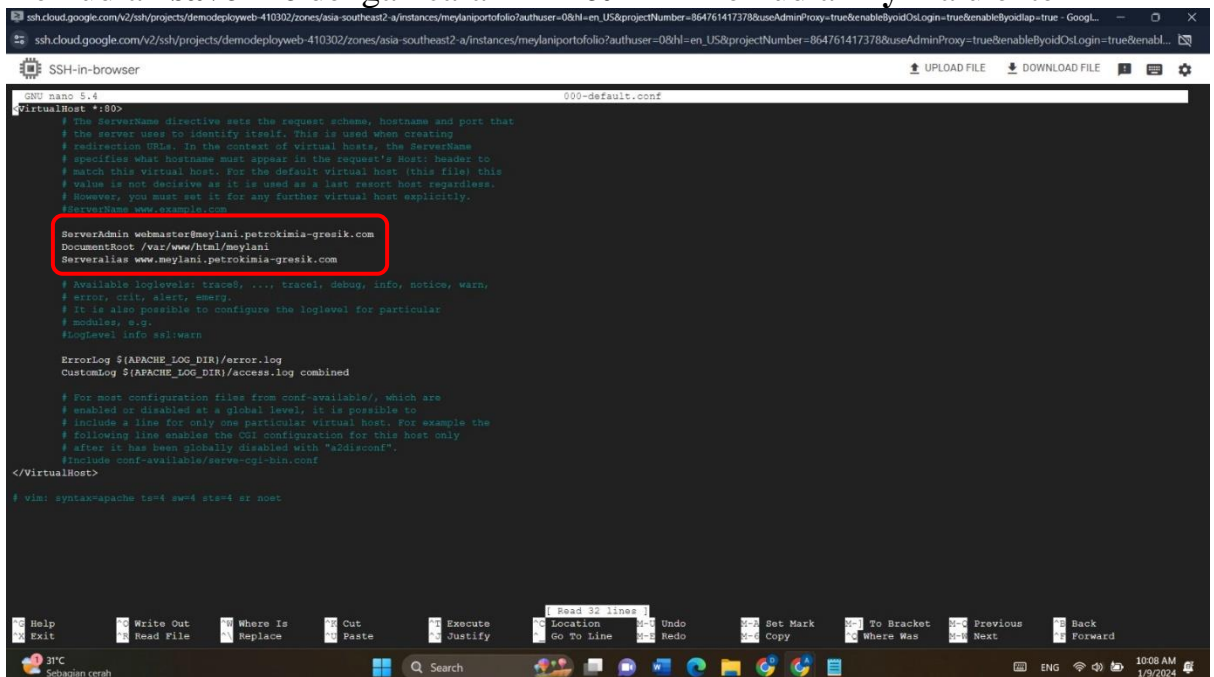
Kemudian di “**ls**” untuk mengetahui apa saja isi dari folder apache2, lalu **masuk** ke folder **sites-available** dengan menggunakan command “**cd sites-available**”, kemudian masuk ke dalam **file konfigurasi 00-default.conf** dengan menggunakan perintah “**nano 00-default.conf**”



```
Fetched 7505 kB in 0s (24.8 MB/s)
Selecting previously unselected package liberror-perl.
(Reading database ... 62825 files and directories currently installed.)
Preparing to unpack .../liberror-perl_0.17029-1_all.deb ...
Unpacking liberror-perl (0.17029-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1:2.30.2-1+deb11u2_all.deb ...
Unpacking git-man (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package git.
Preparing to unpack .../git_1:2.30.2-1+deb11u2_amd64.deb ...
Unpacking git (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package patch.
Preparing to unpack .../patch_2.7.6-7_amd64.deb ...
Unpacking patch (2.7.6-7) ...
Setting up liberror-perl (0.17029-1) ...
Setting up patch (2.7.6-7) ...
Setting up git-man (1:2.30.2-1+deb11u2) ...
Setting up git (1:2.30.2-1+deb11u2) ...
Processing triggers for man-db (2.9.4-2) ...
root@mylaniporfolio: /home/c05b94203# cd /var/www/html
root@mylaniporfolio: /var/www/html# git clone https://github.com/meylanic/meylanic.github.io.git
Cloning into 'meylanic.github.io'...
remote: Enumerating objects: 25, done.
remote: Counting objects: 100% (25/25), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 25 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (25/25), 9.31 MiB | 13.15 MiB/s, done.
root@mylaniporfolio: /var/www/html# ls
index.html  meylanic.github.io
root@mylaniporfolio: /var/www/html# mv meylanic.github.io/ meylani
root@mylaniporfolio: /var/www/html# ls
> ^C
root@mylaniporfolio: /var/www/html# ls
index.html  meylani
root@mylaniporfolio: /var/www/html# cd /etc/apache2
hash: cd: /etc/apache2: No such file or directory
root@mylaniporfolio: /var/www/html# cd /etc/apache2/
root@mylaniporfolio: /etc/apache2# ls
apache2.conf  conf-available  conf-enabled  envvars  magic  mods-available  mods-enabled  ports.conf  sites-available  sites-enabled
root@mylaniporfolio: /etc/apache2# cd sites-available/
root@mylaniporfolio: /etc/apache2/sites-available# ls
000-default.conf  default-ssl.conf
root@mylaniporfolio: /etc/apache2/sites-available# nano 000-default.conf
root@mylaniporfolio: /etc/apache2/sites-available#
```

## 4.2 Setelah masuk file konfigurasi 000-default.conf

- Ubah **localhost** menjadi **nama domain** yang akan digunakan.
  - Dibelakang **/var/www/html** tambahkan **/namafolder** yang telah di clone tadi fungsinya agar halaman web yang telah di clone dapat di akses pada domain tersebut.
  - Tambahkan juga **serveralias** **www.namadomain** fungsinya untuk menentukan Alamat lain yang ingin menggunakan virtual host.
- Kemudian **save file** dengan cara klik “**ctrl+x**” kemudian “**y**” lalu enter



```
# VirtualHost *:80
#
# The ServerName directive sets the request schema, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URIs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

ServerAdmin webmaster@meylani.petrokimia-gresik.com
DocumentRoot /var/www/html/meylani
ServerAlias www.meylani.petrokimia-gresik.com

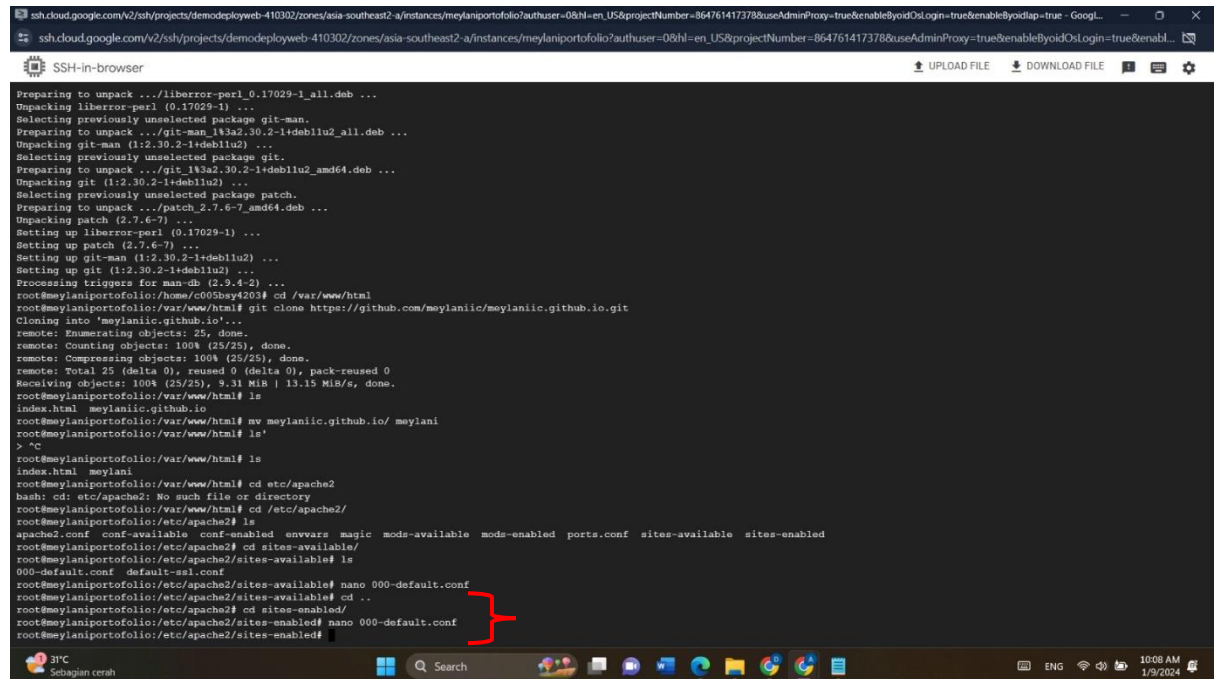
# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the ssl configuration for this host only
# after it has been globally disabled with "IncludeConf".
#Include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr=auto
```

### 4.3 Keluar dari folder sites-available dengan command “cd..”. Kemudian masuk ke dalam folder sites-enabled



```
Preparing to unpack .../liberror-perl_0.17029-1_all.deb ...
Unpacking liberror-perl (0.17029-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1:2.30.2-1+deb11u2_all.deb ...
Unpacking git-man (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package git.
Preparing to unpack .../git_1:2.30.2-1+deb11u2_amd64.deb ...
Unpacking git (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package patch.
Preparing to unpack .../patch_2.7.6-7_amd64.deb ...
Unpacking patch (2.7.6-7) ...
Setting up liberror-perl (0.17029-1) ...
Setting up patch (2.7.6-7) ...
Setting up git-man (1:2.30.2-1+deb11u2) ...
Setting up git (1:2.30.2-1+deb11u2) ...
Processing triggers for man-db (2.9.4-2) ...
root@meylaniportfolio: /home/c005bay4203# cd /var/www/html
root@meylaniportfolio: /var/www/html# git clone https://github.com/meylani/meylani.github.io.git
Cloning into 'meylani.github.io'...
remote: Enumerating objects: 25, done.
remote: Counting objects: 100% (25/25), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 25 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (25/25), 9.31 MiB | 13.15 MiB/s, done.
root@meylaniportfolio: /var/www/html# ls
index.html meylani.github.io
root@meylaniportfolio: /var/www/html# mv meylani.github.io/ meylani
root@meylaniportfolio: /var/www/html# ls
> ^C
root@meylaniportfolio: /var/www/html# ls
index.html meylani
root@meylaniportfolio: /var/www/html# cd /etc/apache2
bash: cd: /etc/apache2: No such file or directory
root@meylaniportfolio: /var/www/html# cd /etc/apache2/
root@meylaniportfolio: /etc/apache2# ls
apache2.conf conf-available conf-enabled envvars magic mods-available mods-enabled ports.conf sites-available sites-enabled
root@meylaniportfolio: /etc/apache2/sites-available# ls
000-default.conf default-ssl.conf
root@meylaniportfolio: /etc/apache2/sites-available# nano 000-default.conf
root@meylaniportfolio: /etc/apache2/sites-enabled# cd ..
root@meylaniportfolio: /etc/apache2# cd sites-enabled/
root@meylaniportfolio: /etc/apache2/sites-enabled# nano 000-default.conf
root@meylaniportfolio: /etc/apache2/sites-enabled#
```

### 4.4 Lakukan hal yang sama seperti di sites-available, yakni

- masuk file konfigurasi 000-default.conf Ubah **localhost** menjadi **nama domain** yang akan digunakan.
  - Dibelakang **/var/www/html** tambahkan **/namafolder** yang telah di clone tadi fungsinya agar halaman web yang telah di clone dapat di akses pada domain tersebut.
  - Tambahkan juga **serveralias** **www.namadomain** fungsinya untuk menentukan Alamat lain yang ingin menggunakan virtual host.
- Kemudian **save file** dengan cara **klik “ctrl+x”** kemudian **“y”** lalu enter



```
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniporfolio/author=08hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enableYoidap=true - GoogleL...
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniporfolio/author=08hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enabl...
SSH-in-browser
GNU nano 5.4 000-default.conf
VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

ServerAdmin webmaster@meylani.petrokimia-gresik.com
DocumentRoot /var/www/html/meylani
ServerAlias www.meylani.petrokimia-gresik.com

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#loglevel info sslwarn

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

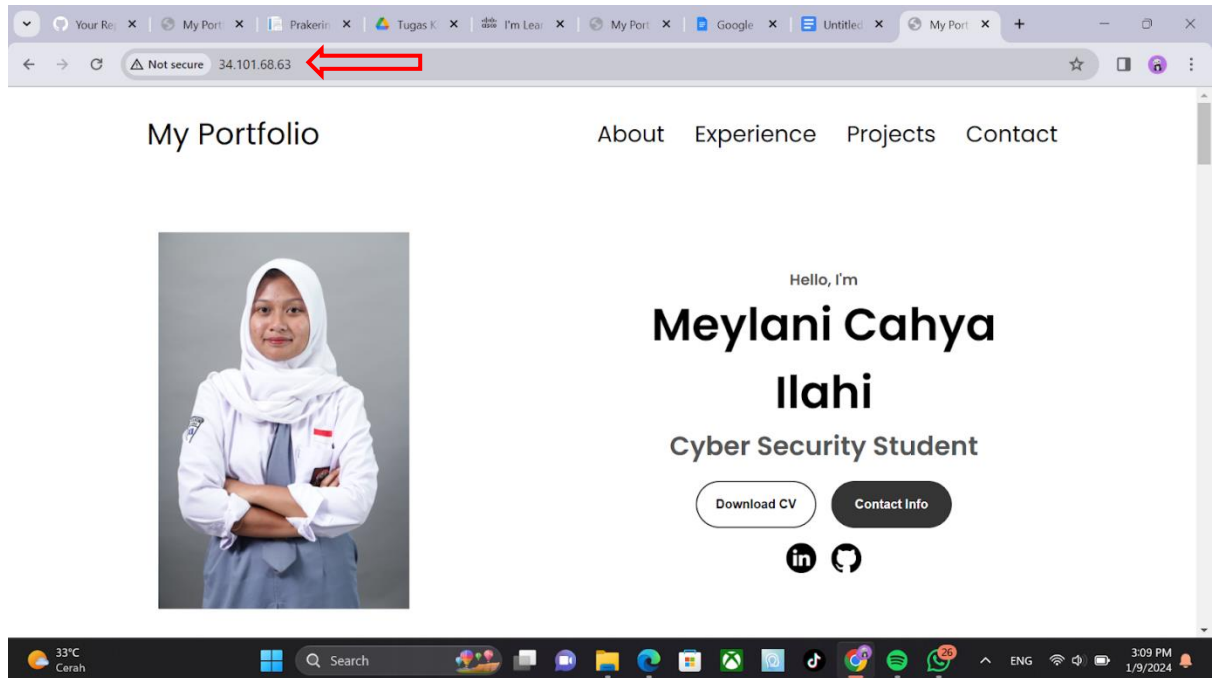
# For most configuration files from conf-available/, which are
# enabled or disabled at a global level, it is possible to
# include a line for only one particular virtual host. For example the
# following line enables the CGI configuration for this host only
# after it has been globally disabled with "a2disconf".
#include conf-available/serve-cgi-bin.conf
</VirtualHost>

# vim: syntax=apache ts=4 sw=4 sts=4 sr nost
Help Exit Write Out Read File Where Is Replace Cut Paste Execute Justify Location Go To Line Undo Redo Set Mark Copy To Bracket Where Was Previous Next Back Forward
33°C Sebagian cerah 1008 AM 1/9/2024
```

## 4.5 Setelahnya restart apache2 dengan menggunakan command “systemctl restart apache2”

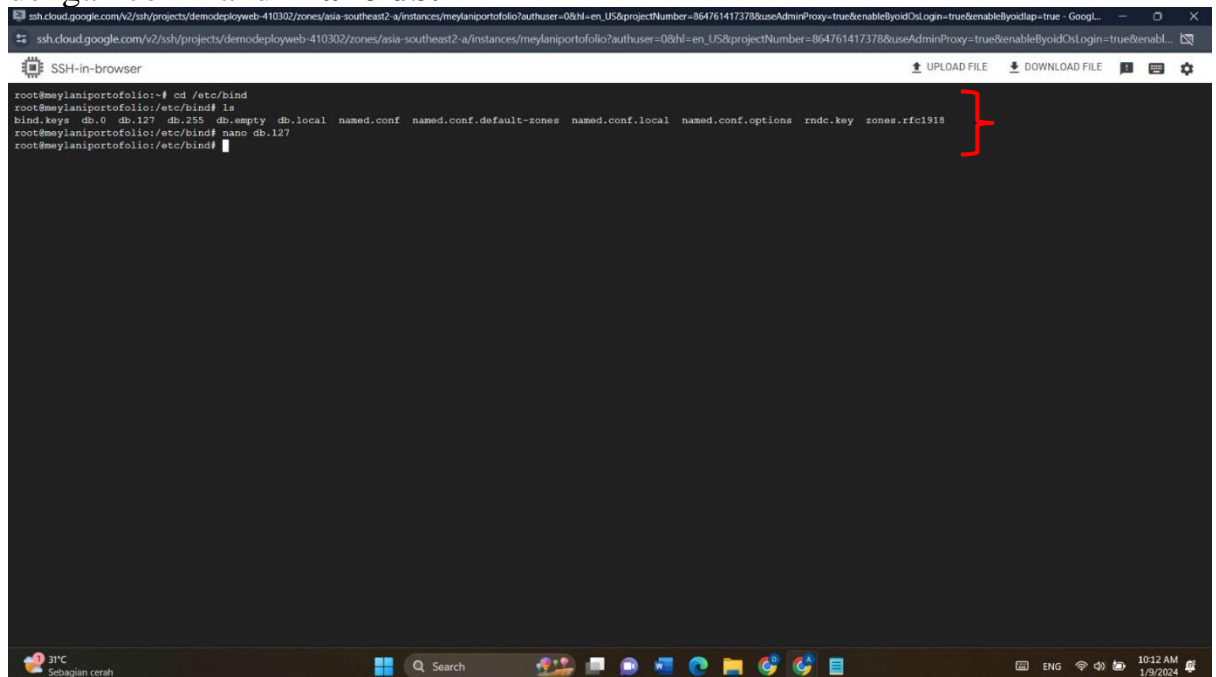
```
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniporfolio/author=08hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enableYoidap=true - GoogleL...
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniporfolio/author=08hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enabl...
SSH-in-browser
Unpacking liberror-perl (0.17029-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1:2.30.2-1+deb11u2_all.deb ...
Unpacking git-man (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package git.
Preparing to unpack .../git_1:2.30.2-1+deb11u2_amd64.deb ...
Unpacking git (1:2.30.2-1+deb11u2) ...
Selecting previously unselected package patch.
Preparing to unpack .../patch_2.7.6-7_amd64.deb ...
Unpacking patch (2.7.6-7) ...
Setting up liberror-perl (0.17029-1) ...
Setting up patch (2.7.6-7) ...
Setting up git-man (1:2.30.2-1+deb11u2) ...
Setting up git (1:2.30.2-1+deb11u2) ...
Processing triggers for man-db (2.9.4-2) ...
root@meylaniporfolio:~/home/c005bay4203# cd /var/www/html
root@meylaniporfolio:/var/www/html# git clone https://github.com/meylanic/meylanic.github.io.git
Cloning into 'meylanic.github.io'...
remote: Enumerating objects: 25, done.
remote: Counting objects: 100% (25/25), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 25 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (25/25), 9.31 MiB | 13.15 MiB/s, done.
root@meylaniporfolio:/var/www/html# ls
index.html meylanic.github.io
root@meylaniporfolio:/var/www/html# mv meylanic.github.io/ meylani
root@meylaniporfolio:/var/www/html# ls
> ^C
root@meylaniporfolio:/var/www/html# ls
index.html meylani
root@meylaniporfolio:/var/www/html# cd /etc/apache2
bash: cd: /etc/apache2: No such file or directory
root@meylaniporfolio:/var/www/html# cd /etc/apache2/
root@meylaniporfolio:/etc/apache2# ls
apache2.conf conf-available conf-enabled envvars magic mods-available mods-enabled ports.conf sites-available sites-enabled
root@meylaniporfolio:/etc/apache2# cd sites-available/
root@meylaniporfolio:/etc/apache2/sites-available# ls
000-default.conf default-ssl.conf
root@meylaniporfolio:/etc/apache2/sites-available# nano 000-default.conf
root@meylaniporfolio:/etc/apache2/sites-available# cd ..
root@meylaniporfolio:/etc/apache2# cd sites-enabled/
root@meylaniporfolio:/etc/apache2/sites-enabled# nano 000-default.conf
root@meylaniporfolio:/etc/apache2/sites-enabled# systemctl restart apache2
root@meylaniporfolio:/etc/apache2/sites-enabled#
```

**4.6 Akses web** yang telah di clone menggunakan **ip public instance (server)**, jika sudah muncul halaman website maka proses konfigurasi sudah berhasil

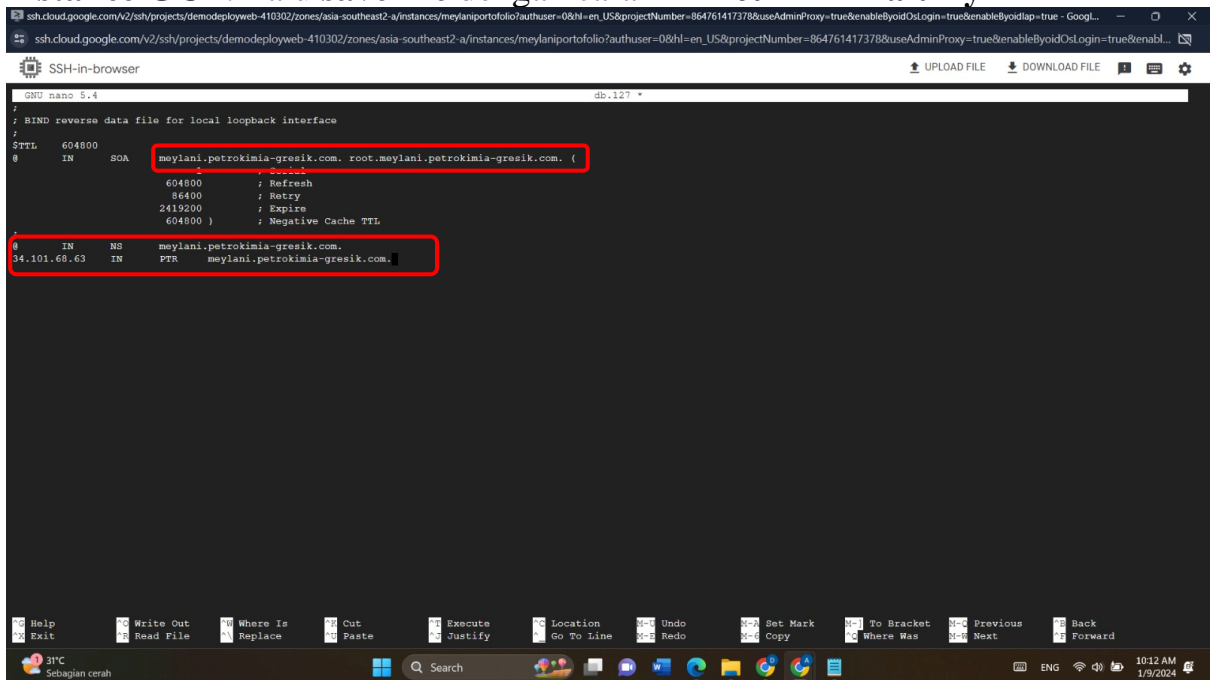


## 5. Konfigurasi DNS Server (Bind9)

**5.1** Masuk ke folder bind9 dengan command “**cd /etc/bind**”, kemudian ls untuk melihat isi dari folder bind. Lalu **masuk ke file konfigurasi db.127**, fungsi file ini adalah untuk file reverse / mentranslasikan IP ke domain. dengan command “**nano db.127**”

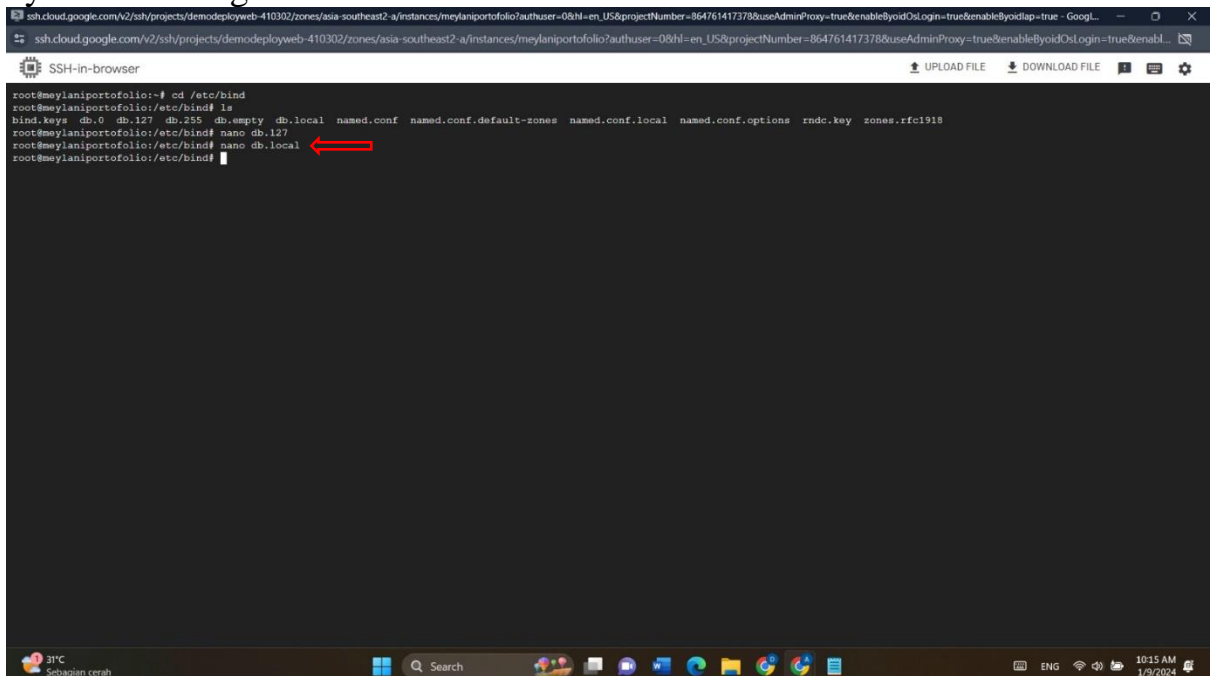


5.2 Setelah masuk ke file db.127, ganti **localhost** dengan **nama domain** yang akan digunakan, **ganti angka** pada baris terakhir menjadi **ip public instance GCP**. Lalu **save file** dengan cara klik “**ctrl + x**” lalu “**y**”



```
GNU nano 5.4 db.127
; BIND reverse data file for local loopback interface
$TTL 604800
@ IN SOA meylani.petrokimia-gresik.com. root.meylani.petrokimia-gresik.com. (
    604800 ; Refresh
    86400 ; Retry
    2419200 ; Expire
    604800 ) ; Negative Cache TTL
;
@ IN NS meylani.petrokimia-gresik.com.
34.101.68.63 IN PTR meylani.petrokimia-gresik.com.
```

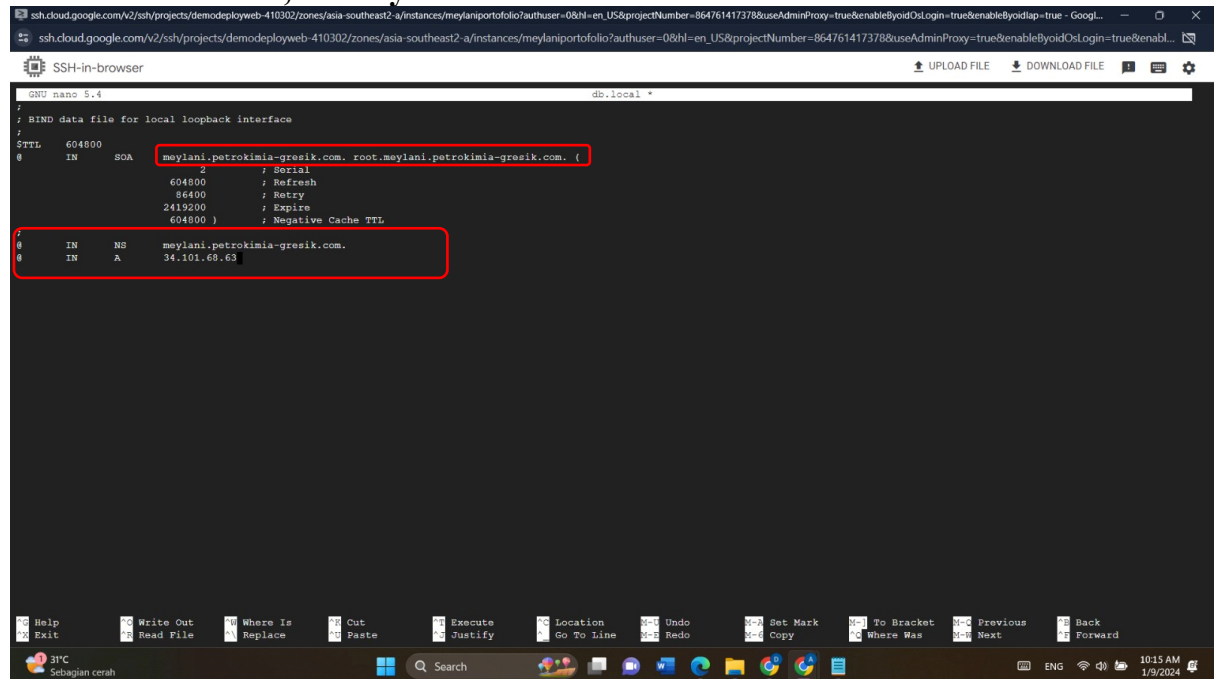
5.3 Kemudian beralih ke file konfigurasi **db.local**, fungsi dari file ini adalah untuk file forward / mentranslasikan domain ke ip. Cara masuk file nya adalah dengan command “**nano db.local**”



```
root@meylaniportfolio:~# cd /etc/bind
root@meylaniportfolio:/etc/bind# ls
bind.keys db.0 db.127 db.255 db.empty db.local named.conf named.conf.default-zones named.conf.local named.conf.options rndc.key zones.rfc1918
root@meylaniportfolio:/etc/bind# nano db.local
root@meylaniportfolio:/etc/bind#
```

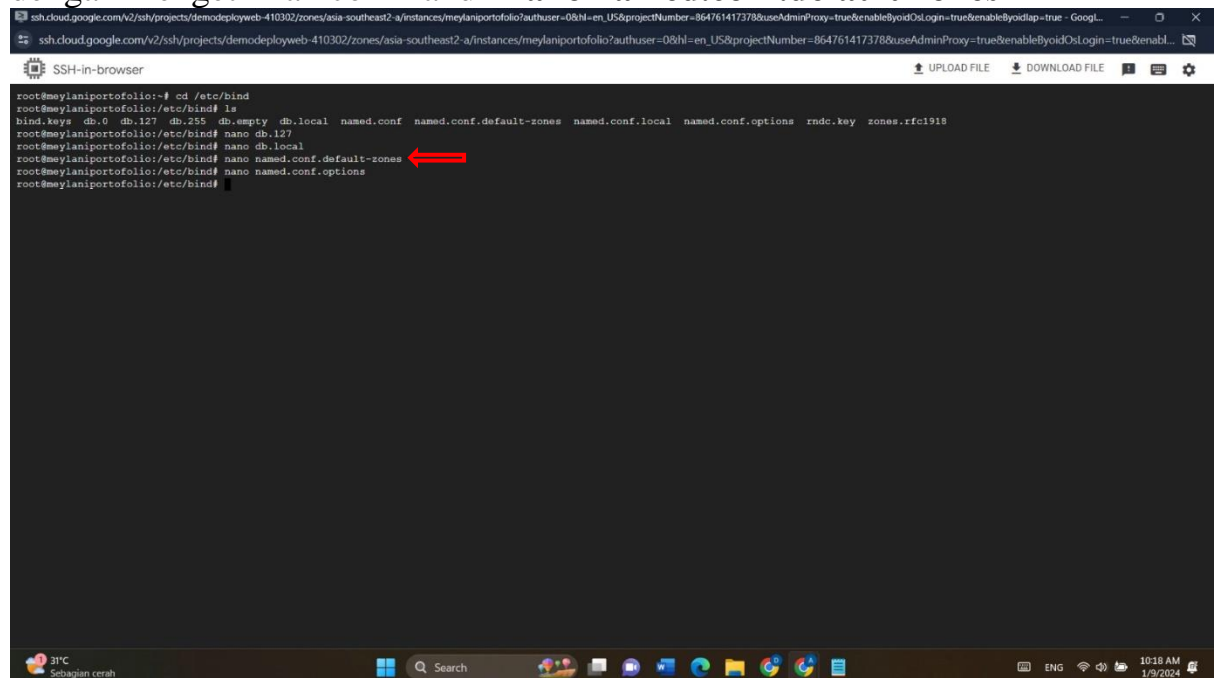
5.4 Setelah masuk file db.local, ganti **localhost** menjadi **nama domain** yang akan digunakan, dan **ganti ip 127.0.0.1** menjadi **ip public instance**

(server), lalu hapus bagian paling bawah dari isi file. Save file dengan cara klik “ctrl+x”, lalu “y”



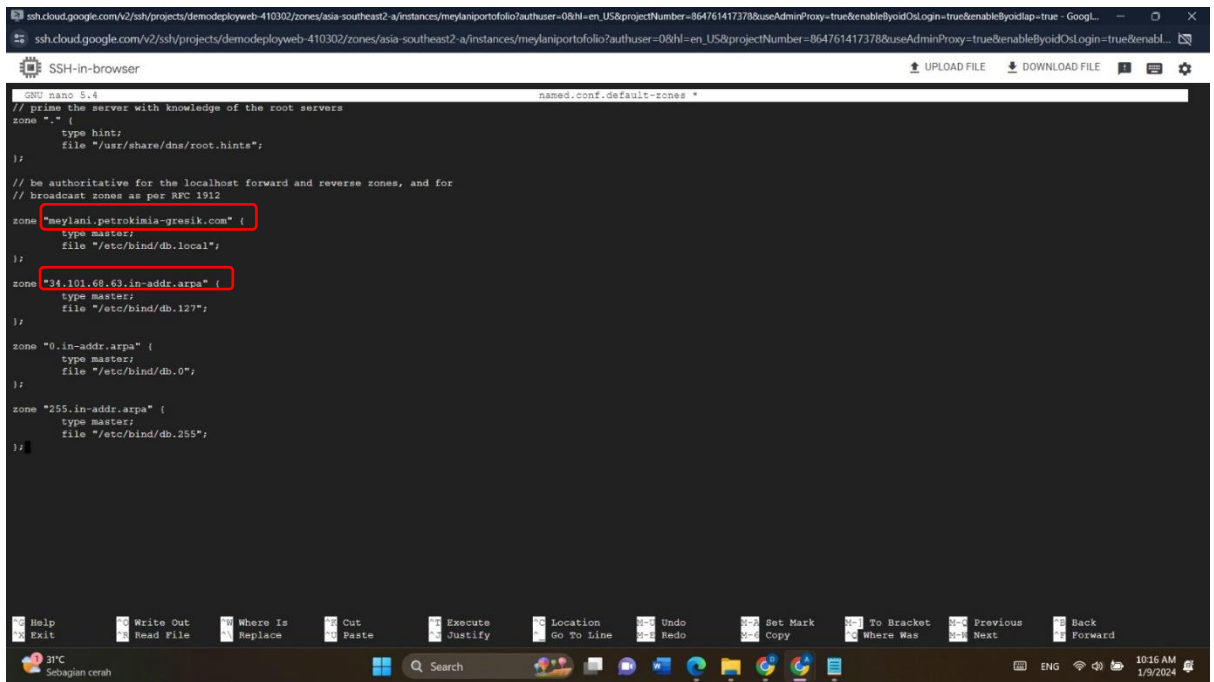
```
GNU nano 5.4 db.local
; BIND data file for local loopback interface
;
$TTL 604800
@      IN      SOA      meylani.petrokimia-gresik.com. root.meylani.petrokimia-gresik.com. (
                                2      ; Serial
                                604800  ; Refresh
                                86400   ; Retry
                                2419200 ; Expire
                                604800 ) ; Negative Cache TTL
;
@      IN      NS       meylani.petrokimia-gresik.com.
@      IN      A        34.101.68.63
```

**5.5** Selanjutnya masuk ke folder `named.conf.default-zones`. Fungsi dari file konfigurasi ini adalah untuk redirect DNS. Cara masuk filenya adalah dengan mengetikkan command “`nano named.conf.default-zones`”



```
root@meylaniportfolio:~# cd /etc/bind
root@meylaniportfolio:/etc/bind# ls
bind.keys  db.0  db.127  db.255  db.empty  db.local  named.conf  named.conf.default-zones  named.conf.local  named.conf.options  rndc.key  zones.rfc1918
root@meylaniportfolio:/etc/bind# nano db.127
root@meylaniportfolio:/etc/bind# nano db.local
root@meylaniportfolio:/etc/bind# nano named.conf.default-zones
root@meylaniportfolio:/etc/bind# nano named.conf.options
root@meylaniportfolio:/etc/bind#
```

**5.6** Setelah masuk ke file, ganti `localhost` menjadi `nama domain` yang akan digunakan, kemudian ganti juga `alamat ip default` menjadi `alamat ip instance (server)`. Lalu save file dengan cara klik “ctrl + x” dan “y”



```
GNU nano 5.4 named.conf.default-zones
// prime the server with knowledge of the root servers
zone "." {
    type hint;
    file "/usr/share/dns/root.hints";
};

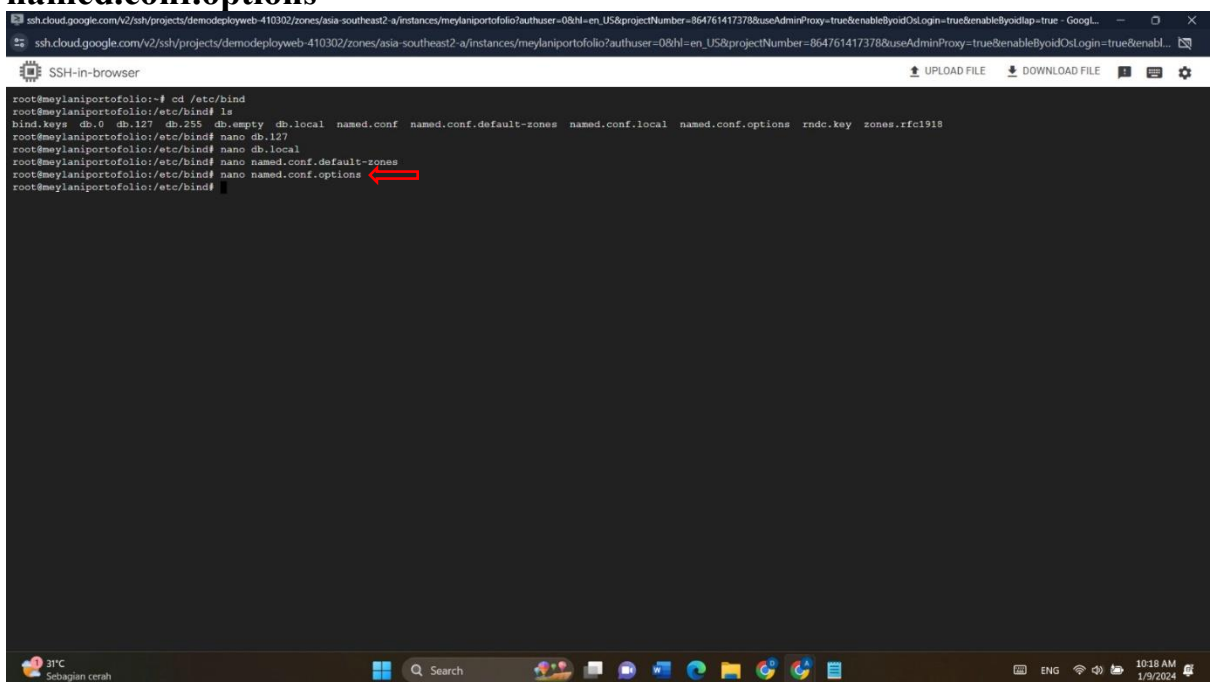
// be authoritative for the localhost forward and reverse zones, and for
// broadcast zones as per RFC 1912
zone "meylani.petrokimia-gresik.com" {
    type master;
    file "/etc/bind/db.local";
};

zone "34.101.68.63.in-addr.arpa" {
    type master;
    file "/etc/bind/db.127";
};

zone "0.in-addr.arpa" {
    type master;
    file "/etc/bind/db.0";
};

zone "255.in-addr.arpa" {
    type master;
    file "/etc/bind/db.255";
};
```

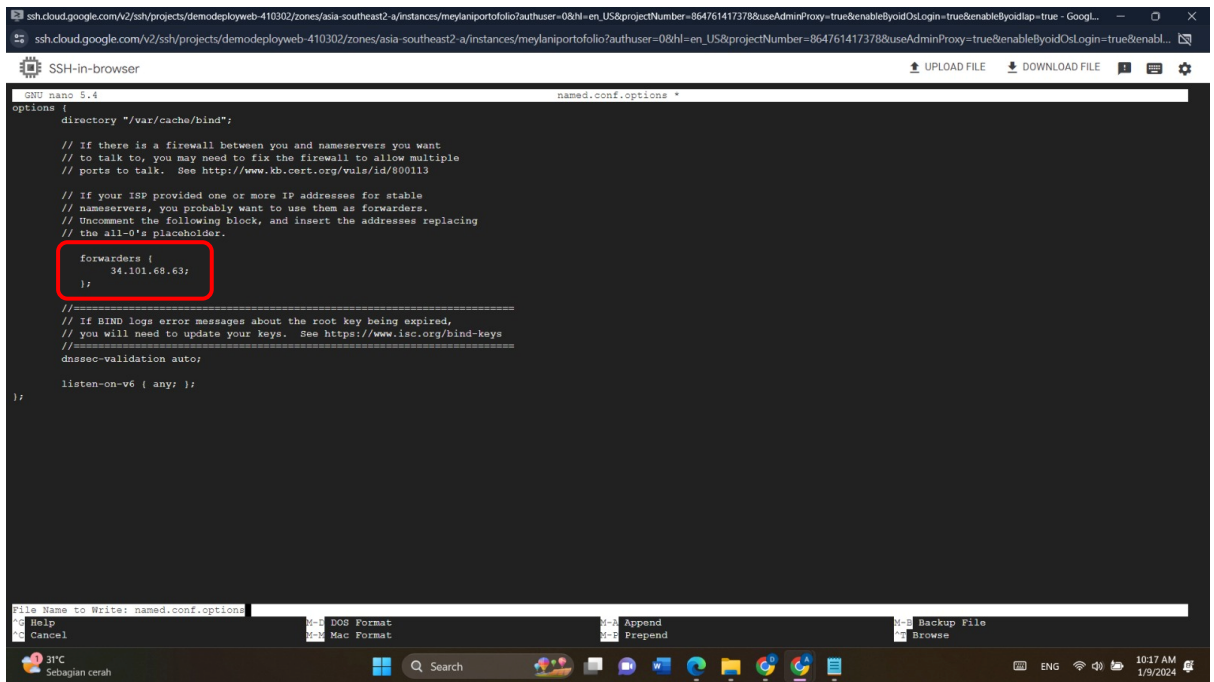
**5.7** Selanjutnya buka file **named.conf.options**. Fungsi dari file konfigurasi ini adalah untuk mendefinisikan letak letak file yang dituju DNS. Cara masuk ke file ini adalah dengan mengetikkan command “**nano named.conf.options**”



```
root@meylaniportfolio:~# cd /etc/bind
root@meylaniportfolio:/etc/bind# ls
bind.keys db.0 db.127 db.255 db.empty db.local named.conf named.conf.default-zones named.conf.local named.conf.options rndc.key zones.rfc1918
root@meylaniportfolio:/etc/bind# nano db.127
root@meylaniportfolio:/etc/bind# nano db.local
root@meylaniportfolio:/etc/bind# nano named.conf.default-zones
root@meylaniportfolio:/etc/bind# nano named.conf.options
root@meylaniportfolio:/etc/bind#
```

**5.8** Setelah masuk ke file, **Hapus** / yang ada di **depan forwarders** dan **2 baris bawahnya**, lalu kemudian **ganti IP default** menjadi **IP Instance (Server)**. Save file dengan cara klik “**ctrl+x**” dan “**y**”





```
GNU nano 5.4 named.conf.options
options {
    directory "/var/cache/bind";

    // If there is a firewall between you and nameservers you want
    // to talk to, you may need to fix the firewall to allow multiple
    // ports to talk.  See http://www.kb.cert.org/vuls/id/800113

    // If your ISP provided one or more IP addresses for stable
    // nameservers, you probably want to use them as forwarders.
    // Uncomment the following block, and insert the addresses replacing
    // the all-0's placeholder.

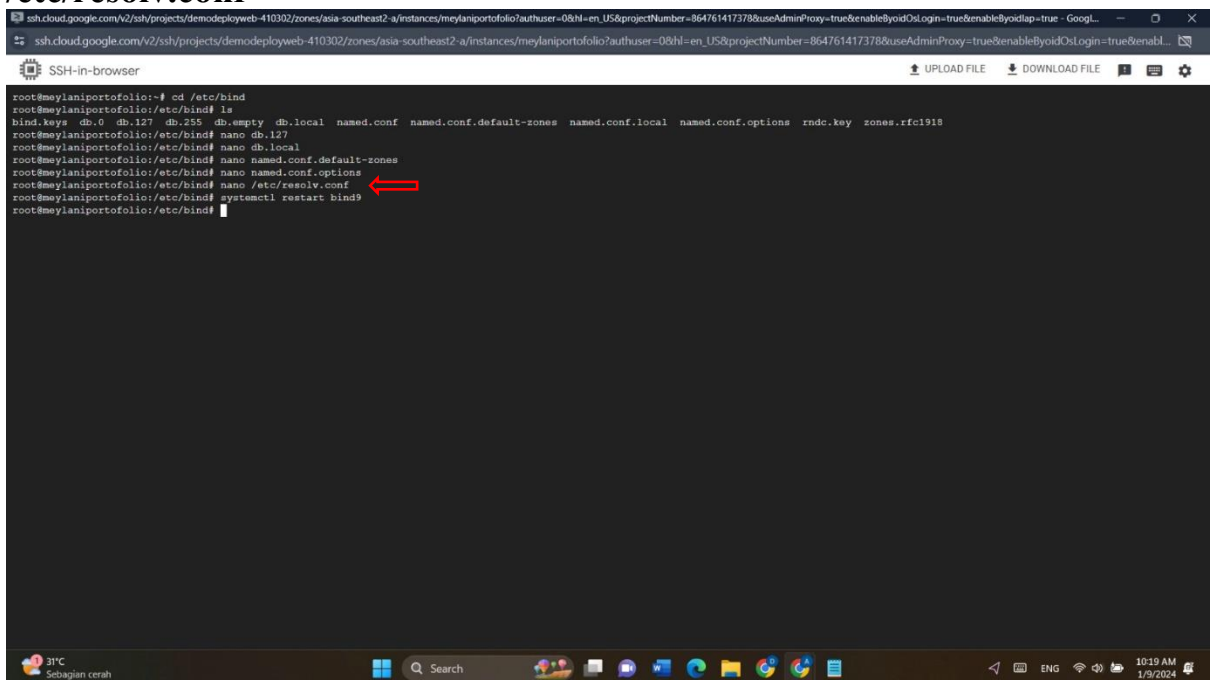
    forwarders {
        34.101.68.63;
    };

    //=====
    // If BIND logs error messages about the root key being expired,
    // you will need to update your keys.  See https://www.isc.org/bind-keys
    //=====
    dnssec-validation auto;

    listen-on-v6 { any; };
};

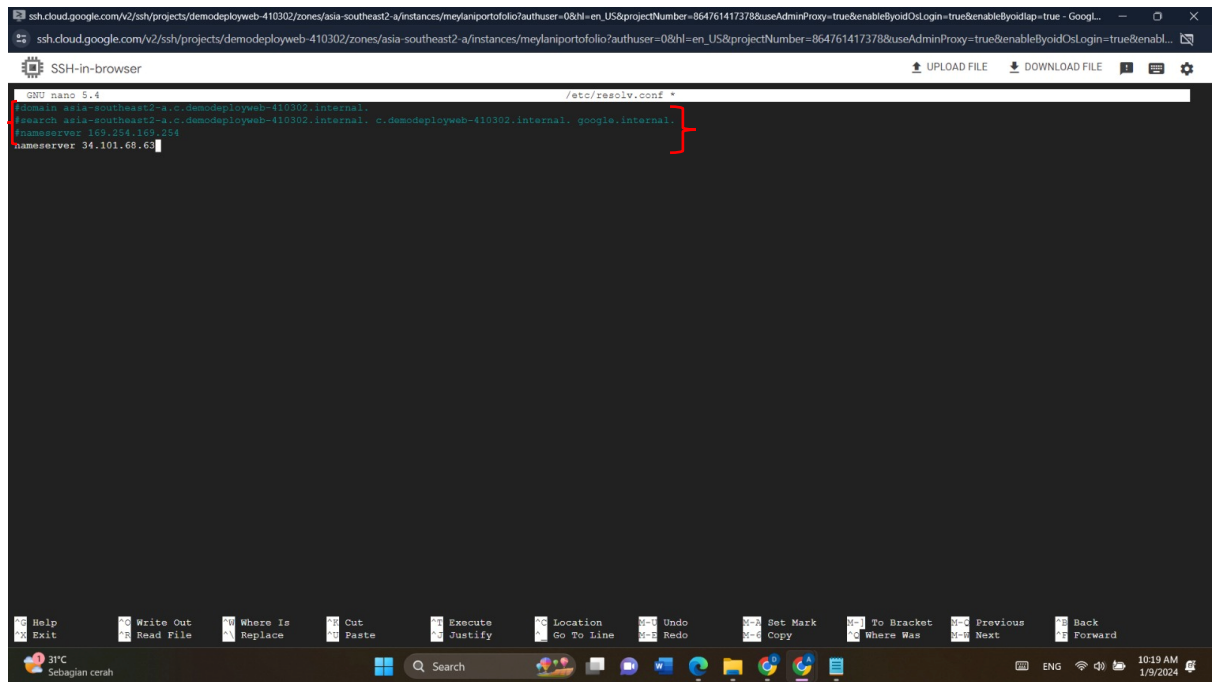
File Name to Write: named.conf.options
Help Cancel M-D DOS Format M-M Mac Format M-A Append M-E Prepend M-B Backup File Browse
31°C Sebagian cerah 10:17 AM 1/9/2024
```

**5.9** Kemudian masuk ke dalam file **resolv.conf**, fungsi file konfigurasi ini adalah untuk domain resolver (pembalik domain > ip dan sebaliknya). Cara masuk ke file ini adalah dengan mengetikkan command “**nano /etc/resolv.conf**”



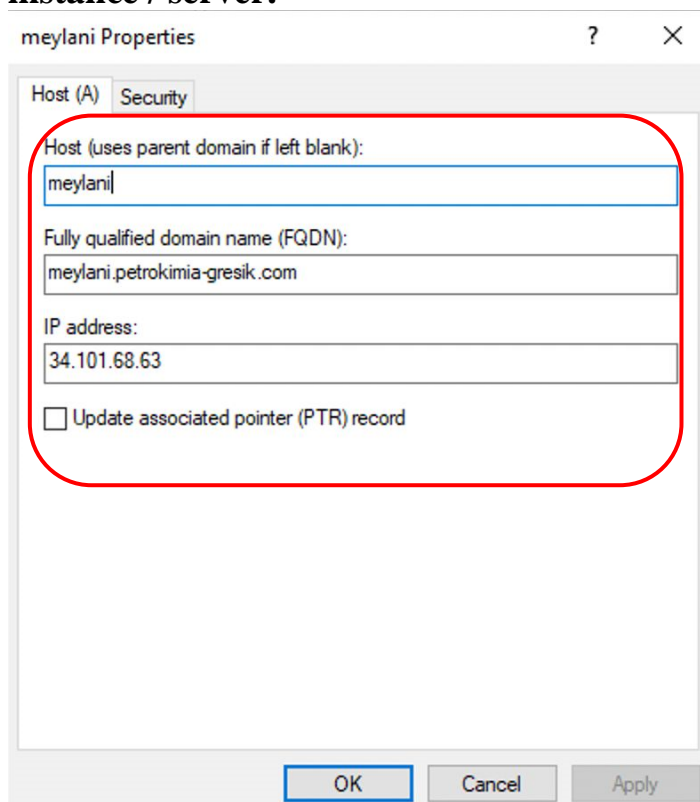
```
root@meilaniportfolio:~# cd /etc/bind
root@meilaniportfolio:/etc/bind# ls
bind.keys db.0 db.127 db.255 db.empty db.local named.conf named.conf.default-zones named.conf.local named.conf.options rndc.key zones.rfc1918
root@meilaniportfolio:/etc/bind# nano db.127
root@meilaniportfolio:/etc/bind# nano db.local
root@meilaniportfolio:/etc/bind# nano named.conf.default-zones
root@meilaniportfolio:/etc/bind# nano named.conf.options
root@meilaniportfolio:/etc/bind# nano /etc/resolv.conf
root@meilaniportfolio:/etc/bind# systemctl restart bind9
root@meilaniportfolio:/etc/bind#
```

**5.10** Setelah masuk ke file, berikan tanda # di depan semua isi file, fungsi tanda “#” sendiri adalah untuk menonaktifkan script yang ada dalam file. Setelah nya ketikkan nameserver [ip address instance / server]. Lalu save file dengan cara klik “ctrl+x” dan “y”



```
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniportfolio/authuser-08hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enableYoidlap=true - Googl...
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniportfolio/authuser-08hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enabl...
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE
GNU nano 5.4 /etc/resolv.conf
domain asia-southeast2-a.c.demodployweb-410302.internal.
search asia-southeast2-a.c.demodployweb-410302.internal. c.demodployweb-410302.internal. google.internal.
nameserver 169.254.169.254
nameserver 34.101.68.63
```

**5.11** Setelahnya **registrasikan domain** yang telah di **konfigurasi** kepada penyedia domain. Dengan cara **menuliskan nama domain** serta **IP public instance / server**.



**meylani Properties**

Host (A) Security

Host (uses parent domain if left blank):  
meylani

Fully qualified domain name (FQDN):  
meylani.petrokimia-gresik.com

IP address:  
34.101.68.63

☐ Update associated pointer (PTR) record

OK Cancel Apply

**5.12** Lakukan **restart bind9** dengan menggunakan command “**systemctl restart bind9**”

```
ssh.cloud.google.com/v2/ssh/projects/demodployweb-410302/zones/asia-southeast2-a/instances/meylaniportfolio/authuser-08hl=en_US&projectNumber=864761417378&useAdminProxy=true&enableYoidOsLogin=true&enableYoidlap=true - GoogleL...
SSH-in-browser
UPLOAD FILE
DOWNLOAD FILE
root@meylaniportfolio:~# cd /etc/bind
root@meylaniportfolio:/etc/bind# ls
bind.keys  db.0  db.127  db.255  db.empty  db.local  named.conf  named.conf.default-zones  named.conf.local  named.conf.options  rndc.key  zones.rfc1918
root@meylaniportfolio:/etc/bind# nano db.local
root@meylaniportfolio:/etc/bind# nano db.127
root@meylaniportfolio:/etc/bind# nano named.conf
root@meylaniportfolio:/etc/bind# nano named.conf.default-zones
root@meylaniportfolio:/etc/bind# nano named.conf.options
root@meylaniportfolio:/etc/bind# nano /etc/resolv.conf
root@meylaniportfolio:/etc/bind# systemctl restart bind9
root@meylaniportfolio:/etc/bind#
```

**5.13** Coba akses domain yang telah di konfigurasi dan di registrasikan, apabila sudah muncul halaman website nya, maka proses konfigurasi DNS sudah berhasil

