KOMPUTASI AWAN

Oleh :

Mochammad Iqbal
Islamay Arsy

1941720231

TI 3F

04 - Virtual Cloud Network (VCN)

Tujuan Pembelajaran

1. Mengetahui layanan Oracle Cloud Infrastructure Networking
2. Mampu mengaktifkan port 80 melalui Virtual Cloud Network (VCN) di layanan
Oracle Cloud
3. Mampu memasang Apache server dan mengonfigurasi IP tables Firewalls

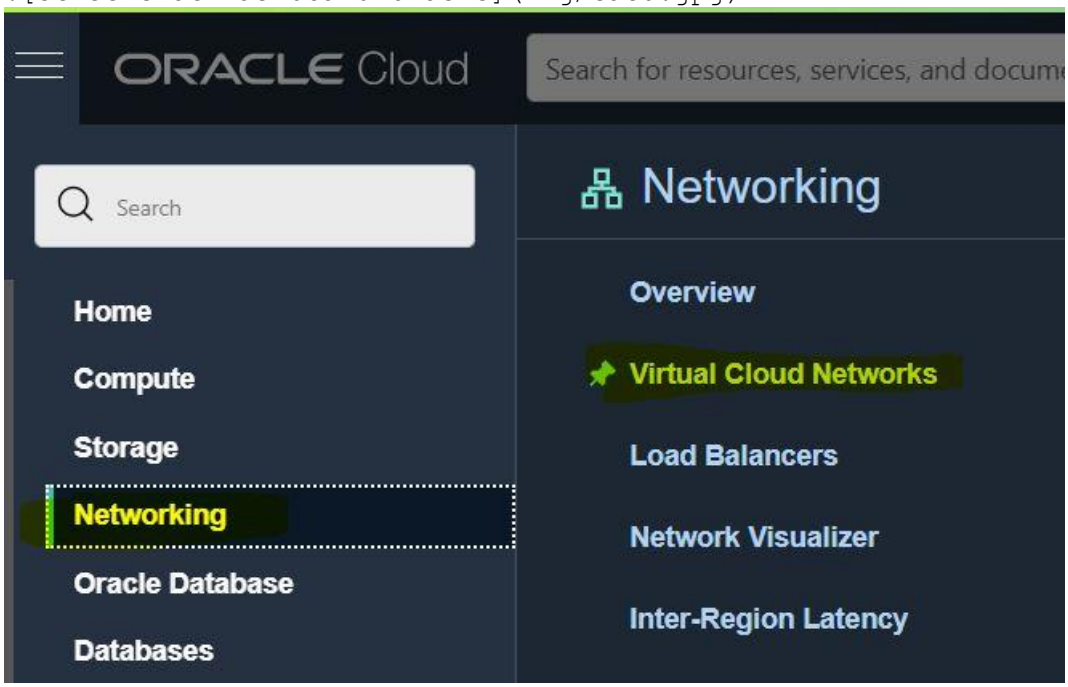
Hasil Praktikum

Praktikum 1: Mengaktifkan Port 80 melalui VCN di Oracle Cloud

Langkah 1: Silakan login ke akun Oracle Cloud Anda masing-masing melalui tautan ini
https://www.oracle.com/cloud/sign-in.html

Langkah 2: Setelah berhasil login dan ada di beranda Oracle Cloud akun Anda, silakan pilih
menu di pojok kiri atas, lalu pilih menu Networking > Virtual Cloud Networks

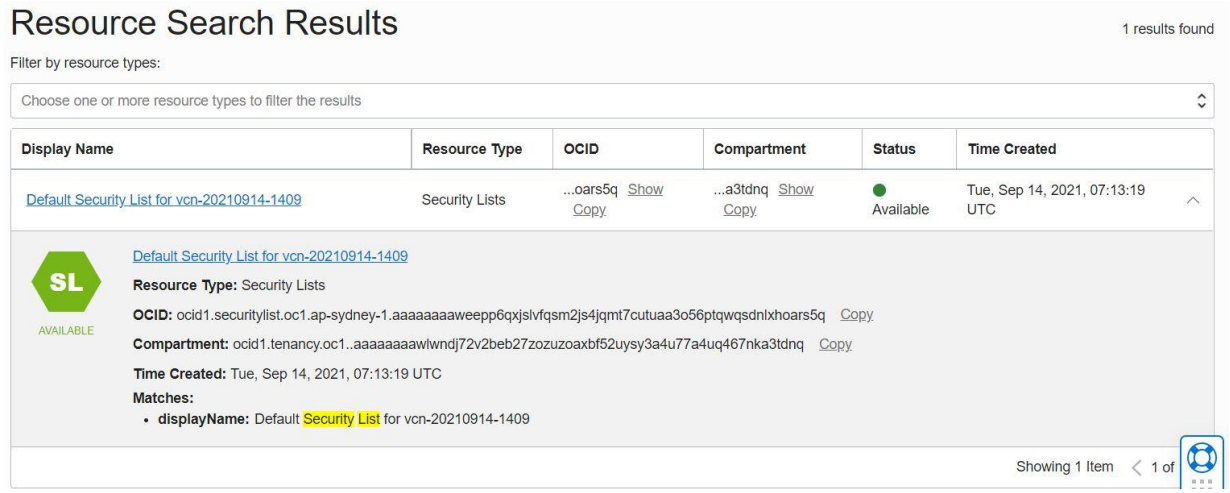
![Screenshot Dashboard Oracle](img/satu.jpg)



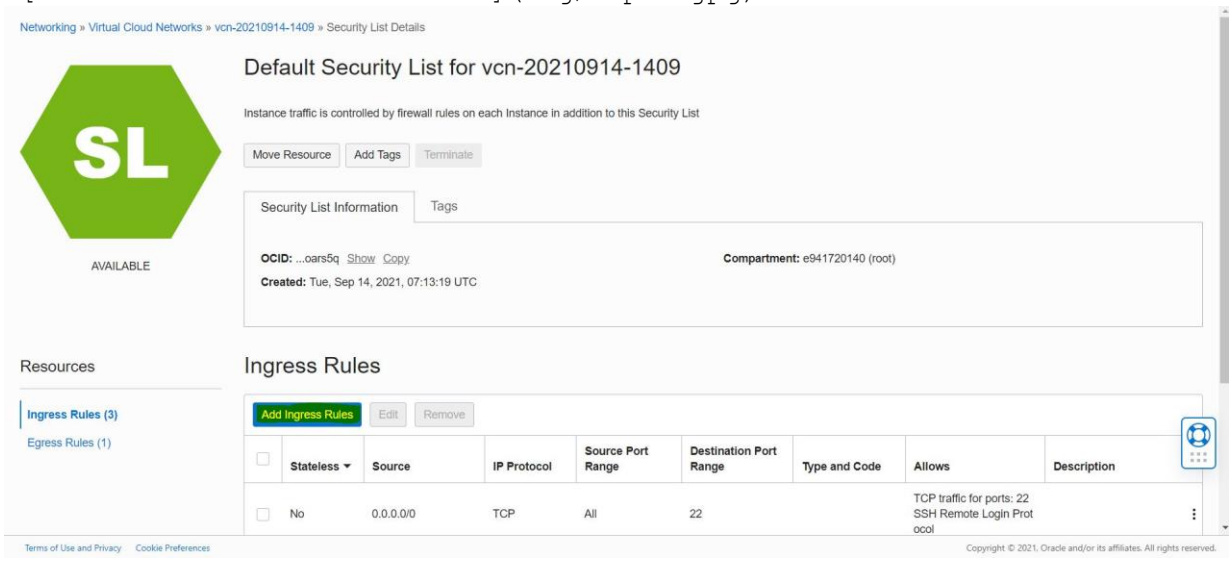
Langkah 3: Pastikan VCN sudah ada, biasanya jika berhasil telah membuat VM dari modul
pertemuan sebelumnya maka VCN akan tampil di sini. Silakan klik nama VCN tersebut.

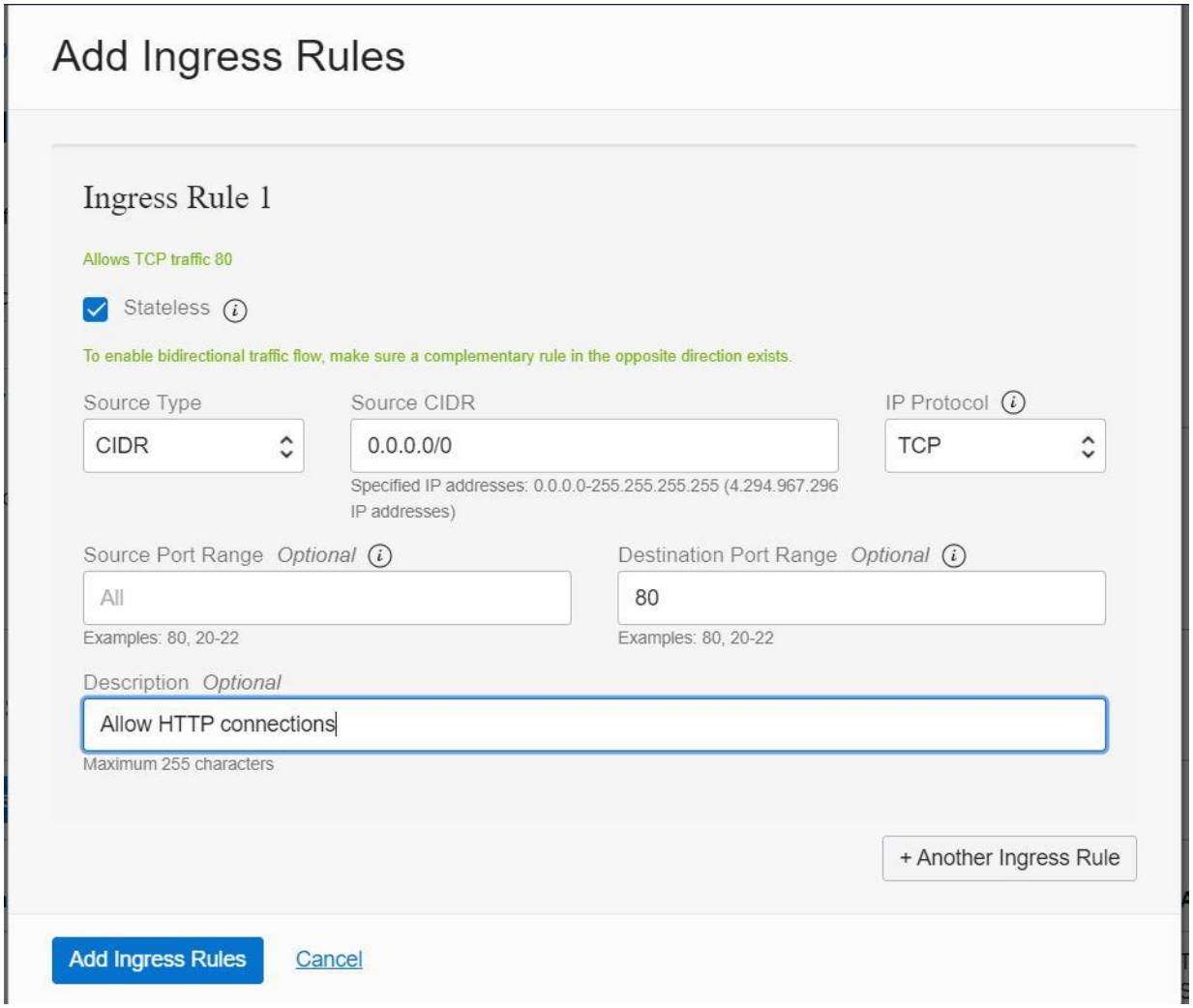
![Screenshot Dashboard Oracle](img/dua.jpg)

Langkah 4: Pilih Security Lists di panel kiri (Resources), lalu pilih Default Security List di
tabel yang tersedia.



Langkah 5: Klik tombol biru Add Ingress Rules untuk menambahkan port.





Isilah ingress rule dengan nilai-nilai seperti gambar di atas atau teks berikut:

Stateless: Checked

Source Type: CIDR

Source CIDR: 0.0.0.0/0

IP Protocol: TCP

Source port range: (biarkan kosong)

Destination Port Range: 80

Description: Allow HTTP connections

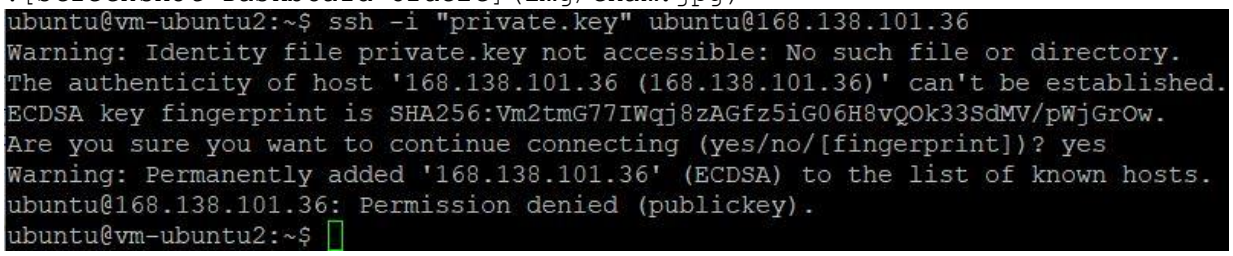
Terakhir, klik tombol Add Ingress Rules. Sekarang koneksi HTTP telah diizinkan. VCN Anda telah dikonfigurasi untuk Apache server.

Anda telah sukses membuat ingress rule yang berfungsi untuk membuka port 80 HTTP server VM Anda agar bisa diakses oleh publik.

Praktikum 2: Setup Apache di VM

Langkah 1: Buka instance Anda melalui menu Compute > Instances, kemudian copy IP public VM yang ingin kita akses untuk diatur web server Apache.

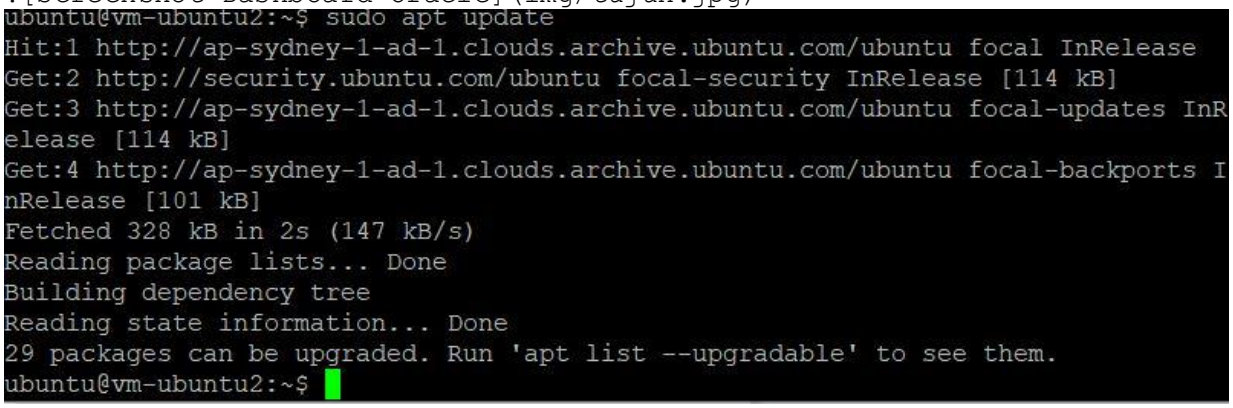
Langkah 2: Lakukan akses ke VM atau server kita dengan perintah berikut ini.
ssh -i "private.key" ubuntu@140.83.56.4
Pada font warna merah, silakan sesuaikan dengan private key dan IP public milik Anda. Anda bisa menggunakan CMD, powershell, putty, atau terminal (untuk pengguna Linux atau Mac OS).



Langkah 3: Setelah terkoneksi dengan VM Anda, silakan lakukan perintah berikut baris demi baris untuk menginstall Apache server.

```
sudo apt update

sudo apt -y install apache2
```



```
ubuntu@vm-ubuntu2:~$ sudo apt -y install apache2
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap libjansson4 liblua5.2-0 ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
  openssl-blacklist
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap libjansson4 liblua5.2-0 ssl-cert
0 upgraded, 11 newly installed, 0 to remove and 29 not upgraded.
Need to get 1866 kB of archives.
After this operation, 8088 kB of additional disk space will be used.
Get:1 http://ap-sydney-1-ad-1.clouds.archive.ubuntu.com/ubuntu focal/main amd64
libapr1 amd64 1.6.5-1ubuntu1 [91.4 kB]
Get:2 http://ap-sydney-1-ad-1.clouds.archive.ubuntu.com/ubuntu focal/main amd64
libaprutil1 amd64 1.6.1-4ubuntu2 [84.7 kB]
Get:3 http://ap-sydney-1-ad-1.clouds.archive.ubuntu.com/ubuntu focal/main amd64
libaprutil1-dbd-sqlite3 amd64 1.6.1-4ubuntu2 [10.5 kB]
Get:4 http://ap-sydney-1-ad-1.clouds.archive.ubuntu.com/ubuntu focal/main amd64
libaprutil1-ldap amd64 1.6.1-4ubuntu2 [8736 B]
Get:5 http://ap-sydney-1-ad-1.clouds.archive.ubuntu.com/ubuntu focal/main amd64
libjansson4 amd64 2.12-1build1 [28.9 kB]
Get:6 http://ap-sydney-1-ad-1.clouds.archive.ubuntu.com/ubuntu focal/main amd64
liblua5.2-0 amd64 5.2.4-1.1build3 [106 kB]
Get:7 http://ap-sydney-1-ad-1.clouds.archive.ubuntu.com/ubuntu focal-updates/mai
n amd64 apache2-bin amd64 2.4.41-4ubuntu3.6 [1180 kB]
Get:8 http://ap-sydney-1-ad-1.clouds.archive.ubuntu.com/ubuntu focal-updates/mai
n amd64 apache2-data all 2.4.41-4ubuntu3.6 [159 kB]
```

Langkah 4: Jalankan service Apache dengan perintah berikut.
sudo systemctl restart apache2

Langkah 5: Secara default pada VM Ubuntu kita untuk firewall itu statusnya disabled (tidak aktif), maka kita perlu mengaktifkannya dengan melakukan update pada iptabels terlebih dahulu. Lakukan perintah berikut baris demi baris.

sudo iptables -I INPUT 6 -m state --state NEW -p tcp --dport 80 -j ACCEPT

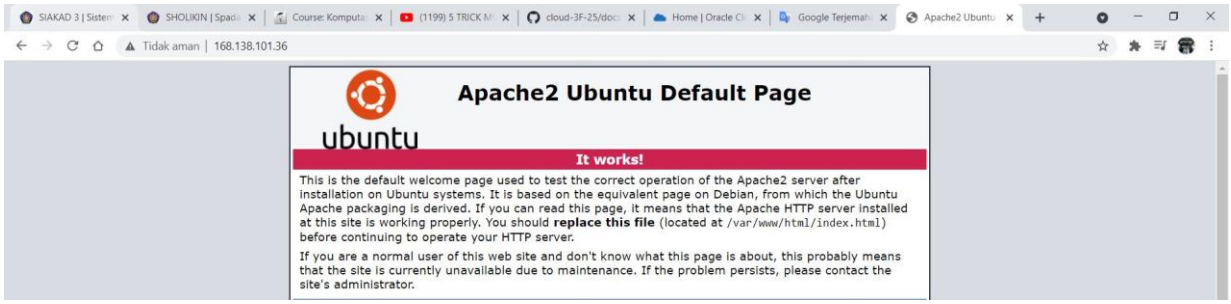
sudo netfilter-persistent save

![Screenshot Dashboard Oracle](img/sembilan.jpg)

```
ubuntu@vm-ubuntu2:~$ sudo iptables -I INPUT 6 -m state --state NEW -p tcp --dpor
t 80 -j ACCEPT
ubuntu@vm-ubuntu2:~$ sudo netfilter-persistent save
run-parts: executing /usr/share/netfilter-persistent/plugins.d/15-ip4tables save
run-parts: executing /usr/share/netfilter-persistent/plugins.d/25-ip6tables save
ubuntu@vm-ubuntu2:~$
```

Langkah 6: Sekarang Anda dapat melakukan uji server VM Anda dengan perintah curl localhost atau buka browser di komputer/laptop pribadi Anda dan arahkan ke IP public VM yang Anda miliki. Seharusnya jika sukses, maka akan tampil seperti gambar berikut ini.

![Screenshot Dashboard Oracle](img/sepuluh.jpg)


Tidak aman | 168.138.101.36
Apache2 Ubuntu Default Page
ubuntu
It works!
This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should replace this file (located at /var/www/html/index.html) before continuing to operate your HTTP server.
If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.