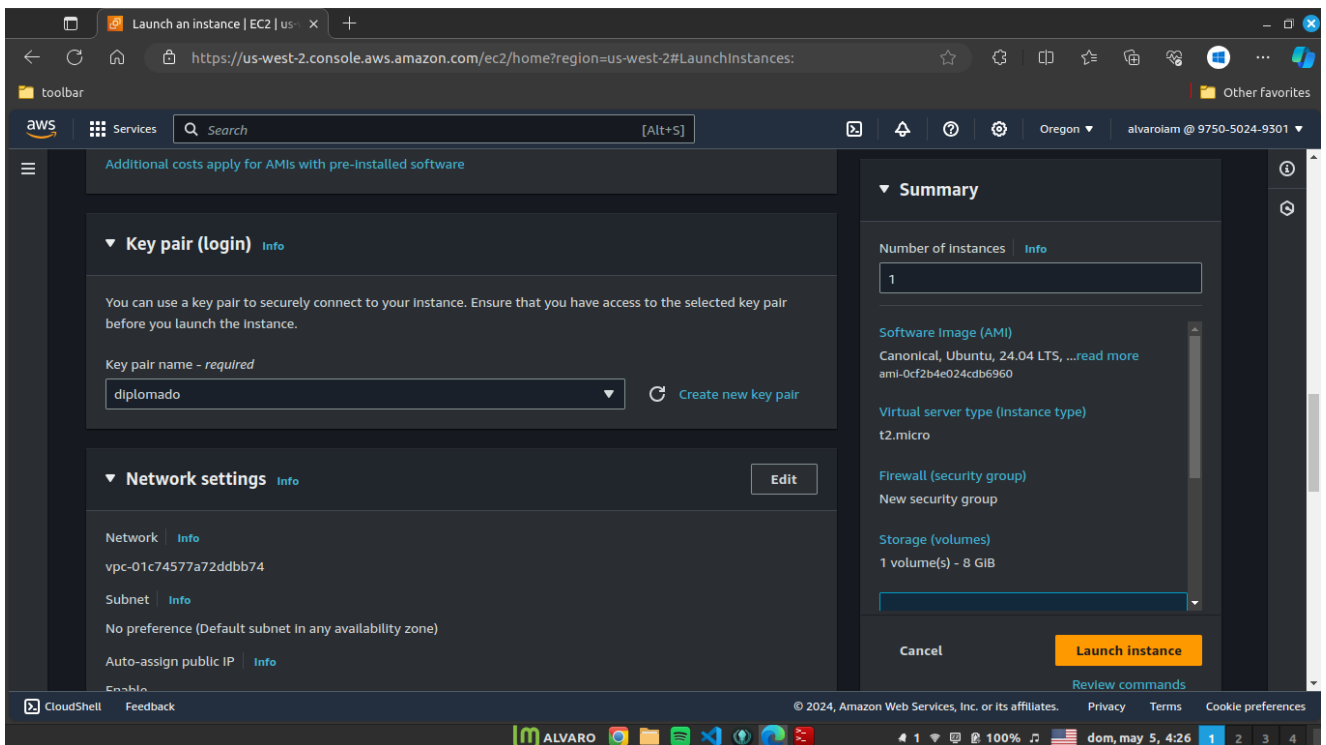# Diplomado_Cloud_Native

Se crearon las 3 VM con sus pares de llaves y se configuraron los puertos de seguridad para poder acceder a las VM desde el exterior.

Aplicando Ansible

En el entorno de ejecución de ansible, será aquella máquina que se configura la instalación de ansible así como también el gitlab-runner para el acceso de gitlab.

Pasando por esta configuración se edita el archivo /etc/host agregando las máquinas de aws que utilizaremos para agregar:

```
IP_MAQUINA [NOMBRE_REFERENCIA]
```

CONFIGURACION SSH

Para la configuración de ssh se debe de generar una llave ssh en la máquina de ansible y copiarla a las máquinas de aws para poder acceder a ellas sin necesidad de contraseña.

MAQUINA ANSIBLE CONTROLLER

```
ssh-keygen -t rsa -b 4096
cd ~/.ssh
cat id_rsa.pub
```


copiamos el contenido de la llave generada y la pegamos en el archivo ~/.ssh/authorized_keys de la maquina PRODUCCION.

MAQUINA DE PRODUCCION

```
sudo adduser ansible
sudo nano /etc/ssh/sshd_config
# Descomentar lo siguiente:
#       PasswordAuthentication yes
#       AuthorizedKeysFile      .ssh/authorized_keys
.ssh/authorized_keys2
sudo visudo
# Agregar la siguiente linea en especificaciones de usuario
privilegiado:
#       ansible ALL=(ALL) ALL
# --luego...
```

```
# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL
ansible ALL=(ALL)        ALL

# Members of the admin group may gain root privileges
%admin ALL=(ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL
```

```
# si es ubuntu
sudo systemctl restart ssh
# si es alguna vm de GCP o basada en CentOS
sudo systemctl restart sshd

cd ~/.ssh
sudo nano authorized_keys
# Pegar la llave generada en la maquina de ansible
```

```
ubuntu@ip-172-31-34-131:~/.ssh$ ls
authorized_keys  id_ed25519  id_ed25519.pub  id_rsa  id_rsa.pub  known_hosts
ubuntu@ip-172-31-34-131:~/.ssh$ cat id_rsa.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAACAQDJSfpI6yJcqigrVoy1rsuh0CxYZaRSghTZz23UKY3RHTX8souhWyqRlSb3pA5mBQ30e9o8AVAQ7pxD9UI12lh3vT
ro9zcESrYdRD8FO/LDUPGS3m7KlkKkVrvIxGtr6JeVmtnlDaNpDY2XfYBY0Ab9DLAKPlIHRCglorWK3805HLpe0/9wbhG9pI/8EP0GypkdZqzCTuJC0V/UEjDoUXsb
kY+DKC6Q3O9iR5hK7D3naPuF8jn4Z7lIEEKAV6NqBiGv4dSWkHEZoOmxfSfak6NvleC1g7R8DBRK2eap37egNTWp8POC766dZxcSbsmyttp8HmMAAGg7NvLlxWau1+
8jvRQovfratVbaN36+TyBJoVtr5vz6YT0tiTHheiMNWfz/vmNnkA4RdQYkPbjslcPS1rOn6NfJVumZmjCep2rPyOIAPTqar1Dm20PO55BCmC2KJpsEbx13q2z4uKSM
GXkZmrEcHGZHpJjApuS5Tii+DzWLYtwS6JPsvoR49y4J8yPwdWgs0b1UqECEo4bwo1IjJJ/zGQ4Yvf2p6p3pQjSztVWDVPj9zBv/2AXDHIsR+7H5QNG09gKwBRHks3
tKLWecdFLmMUfwAlAAHC5gXkvaqT+nW2aUIDvy1tEWk9JV18hWXei/H4/nKqiqZjrN0bw+3uQDqmcziVeTNgF1NulEJQ== ubuntu@ip-172-31-34-131
ubuntu@ip-172-31-34-131:~/.ssh$ ssh ansible@3.16.10.131
ansible@3.16.10.131: Permission denied (publickey).
ubuntu@ip-172-31-34-131:~/.ssh$ ssh ansible@3.16.10.131
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1008-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

   System information as of Mon May  6 05:05:17 UTC 2024
```

```
                              ansible@ip-172-31-47-102:~ 126x31
  GNU nano 7.2                    /home/ubuntu/.ssh/authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDSgJXw1TD/f9UK+7IKJFkBhT6DUCmFJY5pfqICgn5hEeC7bbBmEGKbf1qwcK9MTpucLYRXDKPcABc5Bxi8RLTF0>
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIJ0OxyFcCpvUDHiJXJ8speZ2bmpbcyCS6mrhXNTBhYHB ubuntu@ip-172-31-34-131

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAACAQCayH8dV1KdISJMTzEaNL26/C5WbubvPvSGL2lwDgxdwubIq6ihAHvIT7/7kld7azahyE3JQQmswakjUcX2ts0JM>

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAACAQDJSfpI6yJcqigrVoy1rsuh0CxYZaRSghTZz23UKY3RHTX8souhWyqRlSb3pA5mBQ30e9o8AVAQ7pxD9UI12lh3v>
```

```
su ansible
mkdir /home/ansible/.ssh
sudo cp /home/ubuntu/.ssh/authorized_keys /home/ansible/.ssh/ # copiamos
la llave a la carpeta de ansible

# por ultimo dar los permisos para que ansible pueda acceder a la
maquina
sudo chown -R ansible:ansible /home/ansible/.ssh
sudo chmod 700 /home/ansible/.ssh
sudo chmod 600 /home/ansible/.ssh/authorized_keys
```

MAQUINA DE ANSIBLE

```
ssh-copy-id ansible@<ip-maquina-produccion>
```

```
ubuntu@ip-172-31-34-131:~/.ssh$ ssh-copy-id ansible@3.16.10.131
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/ubuntu/.ssh/id_rsa.pub"
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/usr/bin/ssh-copy-id: WARNING: All keys were skipped because they already exist on the remote system.
                (if you think this is a mistake, you may want to use -f option)
```
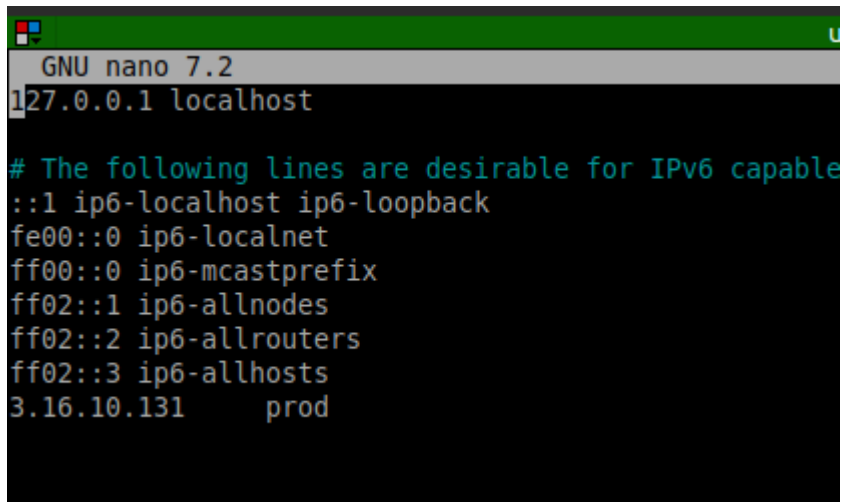
```
# INSTALACION DE ANSIBLE
sudo apt update
sudo apt install software-properties-common
sudo add-apt-repository --yes --update ppa:ansible/ansible
```

```
sudo apt install ansible
ansible --version
```

```
ubuntu@ip-172-31-34-131:~/.ssh$ ansible --version
ansible [core 2.16.6]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['/home/ubuntu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  ansible collection location = /home/ubuntu/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/bin/ansible
  python version = 3.12.3 (main, Apr 10 2024, 05:33:47) [GCC 13.2.0] (/usr/bin/python3)
  jinja version = 3.1.2
  libyaml = True
```

PING A MAQUINA DE PRODUCCION

```
# Agregar a /etc/hosts la ip de la maquina de produccion
sudo nano /etc/hosts
```
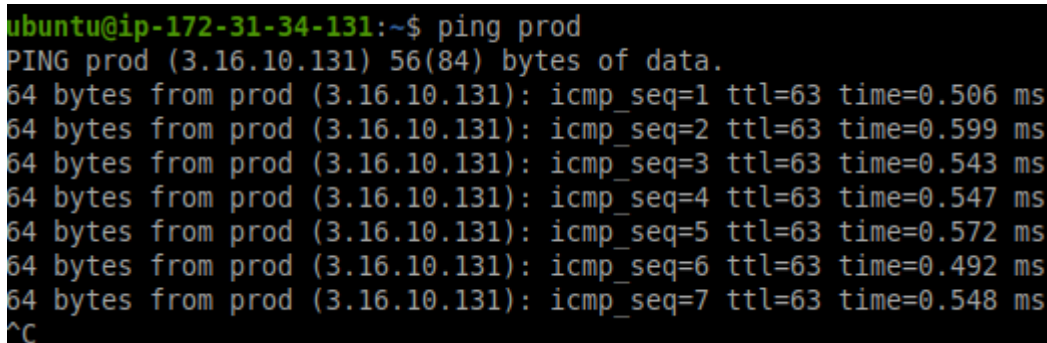
```
  GNU nano 7.2
127.0.0.1 localhost

# The following lines are desirable for IPv6 capable
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
3.16.10.131     prod
```

```
ping prod
```

```
ubuntu@ip-172-31-34-131:~$ ping prod
PING prod (3.16.10.131) 56(84) bytes of data.
64 bytes from prod (3.16.10.131): icmp_seq=1 ttl=63 time=0.506 ms
64 bytes from prod (3.16.10.131): icmp_seq=2 ttl=63 time=0.599 ms
64 bytes from prod (3.16.10.131): icmp_seq=3 ttl=63 time=0.543 ms
64 bytes from prod (3.16.10.131): icmp_seq=4 ttl=63 time=0.547 ms
64 bytes from prod (3.16.10.131): icmp_seq=5 ttl=63 time=0.572 ms
64 bytes from prod (3.16.10.131): icmp_seq=6 ttl=63 time=0.492 ms
64 bytes from prod (3.16.10.131): icmp_seq=7 ttl=63 time=0.548 ms
^C
```

Configuración de ANSIBLE

creamos el playbook y con el comando siguiente lo hacemos correr

```
ansible-playbook playBook.yaml
```