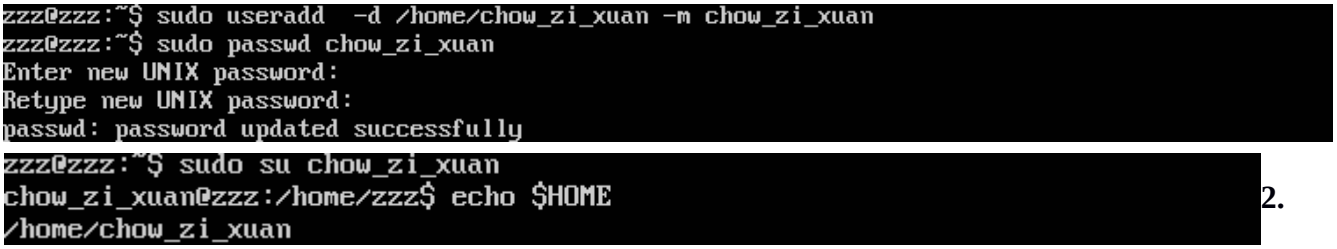
Lab Test 1
zzz is server1
b622 is server2

1.
Command
sudo useradd -d /home/chow_zi_xuan -m chow_zi_xuan
sudo passwd chow_zi_xuan
scam605
scam605
sudo su chow_zi_xuan
echo $HOME

Screenshot



2.
Command
sudo usermod -aG sudo chow_zi_xuan

Screenshot

3.
File to be edited
etc/network/interfaces

Command to check / show the network interface available:

sudo vim etc/network/interfaces

iface enp03s inet static
    address 192.168.40.101
    netmask 255.255.255.0
    network 192.168.40.0
    gateway 192.168.40.254
    dns-nameservers 8.8.8.8

Save and Exit
:wq

Screenshot

```
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto enp0s3
iface enp0s3 inet static
        address 192.168.40.101
        netmask 255.255.255.0
        network 192.168.40.0
        gateway 192.168.40.254
        dns-nameservers 8.8.8.8_
```

Commands to make the new configuration of network interface takes effect
systemctl restart networking.service

```
chow_zi_xuan@zzz:/etc/network$ systemctl restart networking.service
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ===
Authentication is required to restart 'networking.service'.
Multiple identities can be used for authentication:
 1.  zzz,,, (zzz)
 2.  chow_zi_xuan
Choose identity to authenticate as (1-2): 2
Password:
==== AUTHENTICATION COMPLETE ===
```

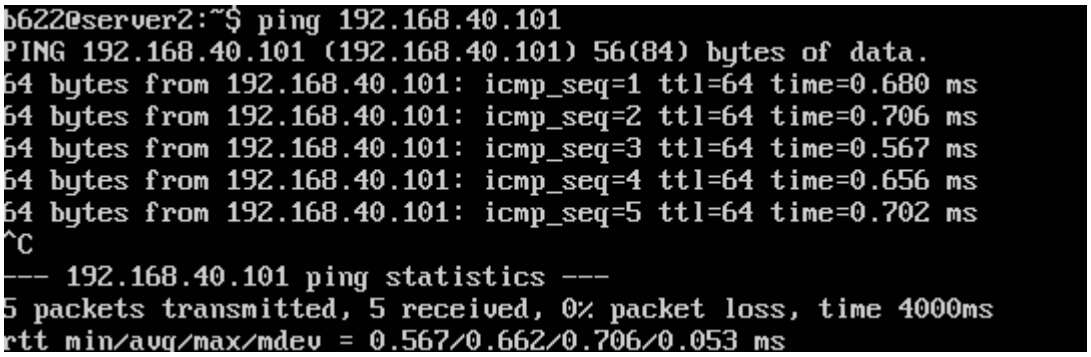
4.
Command
hostnamectl set-hostname server2
logout and login again

Screenshot

```
b622@b622:~$ hostnamectl set-hostname server2
==== AUTHENTICATING FOR org.freedesktop.hostname1.set-static-hostname ===
Authentication is required to set the statically configured local host name, as well as the pretty h
ost name.
Authenticating as: b622,,, (b622)
Password:
==== AUTHENTICATION COMPLETE ===
```

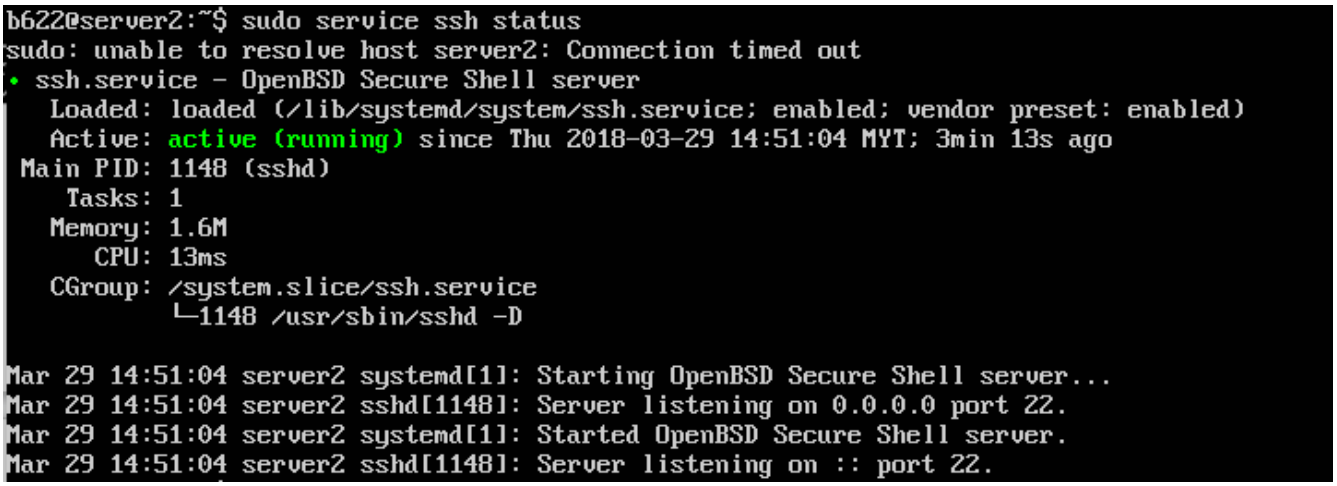
5.
Command
ping 192.168.40.101

Screenshot



6.
Command
sudo service ssh status

Screenshot



7.
Command
sudo service ssh status
or
vi /etc/ssh/sshd_config

Screenshot

```
# Package generated configuration file
# See the sshd_config(5) manpage for details

# What ports, IPs and protocols we listen for
Port 22
```

8.
Command
ssh-keygen

Screenshot

```
b622@server2:~$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/b622/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/b622/.ssh/id_rsa.
Your public key has been saved in /home/b622/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:l17M/2DpYVym2qOKDeZbFlA3SfiAHTzoDMkTaON/8Is b622@server2
The key's randomart image is:
+---[RSA 2048]----+
|   o.o =o++.     |
|  + = o.*...     |
| o . =.  +       |
|  . . o. +.      |
|   . o  S +   o  |
|    . oo o o =   |
|     oo.+   X    |
|    Eo.*   *.+   |
|      +.o.o.o..  |
+----[SHA256]-----+
```

9.
Command
ssh-copy-id -i ~/.ssh/id_rsa.pub chow_zi_xuan@192.168.40.101

Screenshot

```
b622@server2:~$ ssh-copy-id -i ~/.ssh/id_rsa.pub chow_zi_xuan@192.168.40.101
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/home/b622/.ssh/id_rsa.pub"
The authenticity of host '192.168.40.101 (192.168.40.101)' can't be established.
ECDSA key fingerprint is SHA256:oM3twG1Bc/hvTnnEvEBfXHsoiEqt3bREC+2+q+tZYZM.
Are you sure you want to continue connecting (yes/no)? yes
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are alr
eady installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to inst
all the new keys
chow_zi_xuan@192.168.40.101's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh 'chow_zi_xuan@192.168.40.101'"
and check to make sure that only the key(s) you wanted were added.
```

10.
Command
sudo vi /etc/ssh/sshd_config/

Screenshot

```
# Package generated configuration file
# See the sshd_config(5) manpage for details

# What ports, IPs and protocols we listen for
Port 10022
```

11.
Command
sudo service ssh restart

Screenshot

```
chow_zi_xuan@zzz:/home/zzz$ sudo service ssh restart
chow_zi_xuan@zzz:/home/zzz$ sudo service ssh status
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Thu 2018-03-29 15:13:57 +08; 12s ago
 Main PID: 1915 (sshd)
    Tasks: 1
   Memory: 716.0K
      CPU: 7ms
   CGroup: /system.slice/ssh.service
           └─1915 /usr/sbin/sshd -D

Mar 29 15:13:57 zzz systemd[1]: Starting OpenBSD Secure Shell server...
Mar 29 15:13:57 zzz sshd[1915]: Server listening on 0.0.0.0 port 10022.
Mar 29 15:13:57 zzz sshd[1915]: Server listening on :: port 10022.
Mar 29 15:13:57 zzz systemd[1]: Started OpenBSD Secure Shell server.
```

12.
Command
sudo pvcreate /*dev*/sdb

Screenshot

```
zzz@server1:~$ sudo pvcreate /dev/sdb
WARNING: ext4 signature detected on /dev/sdb at offset 1080. Wipe it? [y/n]: y
  Wiping ext4 signature on /dev/sdb.
  Physical volume "/dev/sdb" successfully created
```

13.
Command
sudo vgcreate vg-db /dev/sdb

Screenshot

```
zzz@server1:~$ sudo vgcreate vg-db /dev/sdb
  Volume group "vg-db" successfully created
```

14.
Command
sudo lvcreate -n dbvol -l 100%FREE vg-db
Screenshot

```
zzz@server1:~$ sudo lvcreate -n dbvol -l 100%FREE vg-db
  Logical volume "dbvol" created.
```

15.
Command
sudo lvdisplay

Screenshot

```
zzz@server1:~$ sudo lvdisplay
  --- Logical volume ---
  LV Path                /dev/vg-db/dbvol
  LV Name                dbvol
  VG Name                vg-db
  LV UUID                g8ufHz-JT6Z-6YBI-ch1u-413x-eMPz-0qK0HJ
  LV Write Access        read/write
  LV Creation host, time server1, 2018-03-29 15:46:27 +0800
  LV Status              available
  # open                 0
  LV Size                5.00 GiB
  Current LE             1279
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     256
  Block device           252:0
```

16.

Command

sudo mkfs.ext4 /dev/mapper/vg--db-dbvol

Screenshot