

Setting ssh for both server and client

```
server1 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
mine25x@mine:~$ sudo apt install openssh-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:9.6p1-3ubuntu13.5).
0 upgraded, 0 newly installed, 0 to remove and 15 not upgraded.
mine25x@mine:~$ sudo systemctl status ssh
* ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/usr/lib/systemd/system/ssh.service; disabled; preset: enabled)
   Active: inactive (dead)
TriggeredBy: ● ssh.socket
   Docs: man:sshd(8)
        man:sshd_config(5)
mine25x@mine:~$ sudo ufw allow ssh
Rules updated
Rules updated (v6)

uriel@uriel-Legion-5-15ACH6H:~$ ssh mine25x@192.168.1.7
mine25x@192.168.1.7's password:
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-48-generic x86_64)

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

System information as of Fri Nov 15 01:10:19 PM UTC 2024

System load:  0.0               Processes:            111
Usage of /:   58.1% of 4.10GB   Users logged in:     1
Memory usage: 10%              IPv4 address for enp0s3: 192.168.1.7
Swap usage:   0%

Cgroup default: cilen,1000
Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

uriel@uriel-Legion-5-15ACH6H:~$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/uriel/.ssh/id_rsa): /home/uriel/.ssh/id_rsa
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/uriel/.ssh/id_rsa
Your public key has been saved in /home/uriel/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:TFMuitDcU4QnavdqOAXG7NK7pDH706TrpUjhBljutU uriel@uriel-Legion-5-15ACH6H
The key's randomart image is:
+---[RSA 3072]-----+
|  .o . .             |
|  . o o              |
|o. . .+. .          |
|o= ...++ o          |
|+ o EB.oS           |
|  ** o++ .          |
|+oXO.               |
|+..+Boo             |
|o+..*               |
+---[SHA256]-----+
uriel@uriel-Legion-5-15ACH6H:~$
```

creating a key and sending it to server

```
mine25x@mine: ~  
uriel@uriel-Legion-5-15ACH6H:~$ ssh-copy-id mine25x@192.168.1.7  
The authenticity of host '192.168.1.7 (192.168.1.7)' can't be established.  
ED25519 key fingerprint is SHA256:RKno9YkdishYZu3WxygK9JU9L2YCMHh6VVzRtV5susg.  
This key is not known by any other names.  
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes  
/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: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to i  
ninstall the new keys  
mine25x@192.168.1.7's password:  
  
Number of key(s) added: 1  
  
Now try logging into the machine, with: "ssh 'mine25x@192.168.1.7'"  
and check to make sure that only the key(s) you wanted were added.  
  
uriel@uriel-Legion-5-15ACH6H:~$ ssh mine25x@192.168.1.7  
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-48-generic x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:       https://ubuntu.com/pro  
  
System information as of Fri Nov 15 01:24:33 PM UTC 2024  
  
System load:  0.32          Processes:            115  
Usage of /:   58.2% of 4.10GB Users logged in:        1  
Memory usage: 8%          IPv4 address for enp0s3: 192.168.1.7  
Swap usage:   0%  
  
Expanded Security Maintenance for Applications is not enabled.  
  
0 updates can be applied immediately.  
  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
Last login: Fri Nov 15 13:10:19 2024 from 192.168.1.11  
mine25x@mine:~$
```

installing lvm2

```
mine25x@mine: ~  
mine25x@mine:~$ sudo apt install lvm2 -y  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
lvm2 is already the newest version (2.03.16-3ubuntu3.1).  
0 upgraded, 0 newly installed, 0 to remove and 15 not upgraded.  
mine25x@mine:~$
```

creating a new partition

```
mine25x@mine:~$ lsblk
NAME        MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
sda          8:0    0     6G  0 disk
├─sda1       8:1    0     1M  0 part
├─sda2       8:2    0    1.8G  0 part /boot
└─sda3       8:3    0    4.2G  0 part
   └─lvubuntu--vg-ubuntu--lv 252:0    0    4.2G  0 lvm /
sdb          8:16   0    1.0G  0 disk
└─r0         11:0   0   1024M  0 rom

mine25x@mine:~$ sudo fdisk /dev/sdb
[sudo] password for mine25x:
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-48-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/support
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Welcome to fdisk (util-linux 2.09-2).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new DOS (MBR) disklabel with disk identifier 0x536b7bf5.

Command (m for help): m

Help:
DOS (MBR)
a toggle a bootable flag
b edit nested BSD disklabel
c toggle the dos compatibility flag

Generic
d delete a partition
l list known partition types
n add a new partition
p print the partition table
t change a partition type
v verify the partition table
i print information about a partition

Misc
m print this menu
u change display/entry units
x extra functionality (experts only)

Script
```

```
mine25x@mine:~$ fdisk /dev/sdb
Script
l load disk layout from sfdisk script file
O dump disk layout to sfdisk script file

Save & Exit
w write table to disk and exit
q quit without saving changes

Create a new label
g create a new empty GPT partition table
G create a new empty SGI (IRIX) partition table
o create a new empty MBR (DOS) partition table
s create a new empty Sun partition table

Command (m for help): p
Disk /dev/sdb: 1 GiB, 1073741824 bytes, 2097152 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x536b7bf5

Command (m for help): n
Partition type
  p primary (0 primary, 0 extended, 4 free)
  e extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-2097151, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-2097151, default 2097151):

Created a new partition 1 of type 'Linux' and of size 1023 MiB.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.
```


mount

```
mine25x@mine:~$ sudo lvcreate -L 10G -n lv_data vg_server
Volume group "vg_server" has insufficient free space (255 extents): 2560 required.
mine25x@mine:~$ sudo lvcreate -L 500M -n lv_data vg_server
Logical volume "lv_data" created.
mine25x@mine:~$ sudo mkfs.ext4 /dev/vg_server/lv_data
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 128000 4k blocks and 128000 inodes
Filesystem UUID: 0491625a-cc27-49c3-83b5-15c0d0009bb3
Superblock backups stored on blocks:
    32768, 98304

Allocating group tables: done
Writing inode tables: done
Creating journal (4096 blocks): done
Writing superblocks and filesystem accounting information: done
```

create swap and enable it

The screenshot shows a terminal window with the following output:

```
mine25x@mine:~$ free -h
              total        used        free      shared  buff/cache   available
Mem:            1.9Gi          307Mi        1.6Gi          1.1Mi        187Mi        1.6Gi
Swap:            0B               0B

mine25x@mine:~$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sda         8:0    0    60G  0 disk
├─sda1      8:1    0    1.1M  0 part
├─sda2      8:2    0    1.8G  0 part /boot
├─sda3      8:3    0    4.2G  0 part
└─ubuntu--vg-ubuntu--lv 252:0  0    4.2G  0 lvm /
sdb         8:16   0     1G  0 disk
└─sdb1      8:17   0   1023M  0 part
vg_server--lv_data 252:1  0    500M  0 lvm
sr0        11:0    1   1024M  0 rom
```

Below the terminal output, there is a system message indicating a scheduled shutdown:

```
Broadcast message from root@mine on pts/1 (Fri 2024-11-15 14:41:41 UTC):
The system will power off at Fri 2024-11-15 14:42:41 UTC!
Shutdown scheduled for Fri 2024-11-15 14:42:41 UTC, use 'shutdown -c' to cancel.
mine25x@mine:~$ client_loop: send disconnect: Broken pipe
uriel@uriel-Legion-5-15ACH6H:~$ ssh mine25x@192.168.1.7
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-48-generic x86_64)

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

System information as of Fri Nov 15 02:42:47 PM UTC 2024
System load:  0.81          Processes:      120
Usage of /:   59.1% of 4.10GB Users logged in:   0
Memory usage: 9%           IPv4 address for enp0s3: 192.168.1.7
Swap usage:  0%

Expanded Security Maintenance for Applications is not enabled.
0 updates can be applied immediately.
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status
```

look there is no sdc so we gonna create a new VHD from VM

