

LAPORAN JARINGAN KOMPUTER
“Client Server”



Disusun :

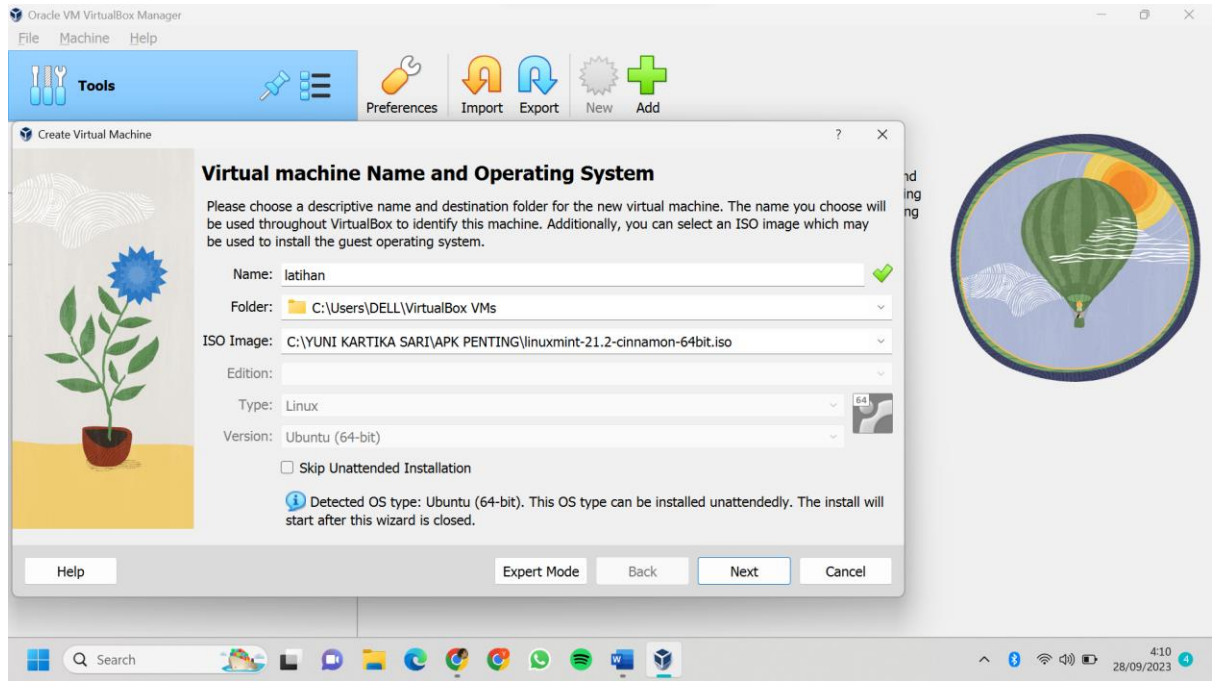
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Dosen Pengampuh : Adi Hermansyah, M.T.

PROGRAM STUDI SISTEM KOMPUTER
FAKULTAS ILMU KOMPUTER
UNIVERSITAS SRIWIJAYA
PALEMBANG
2023/2024

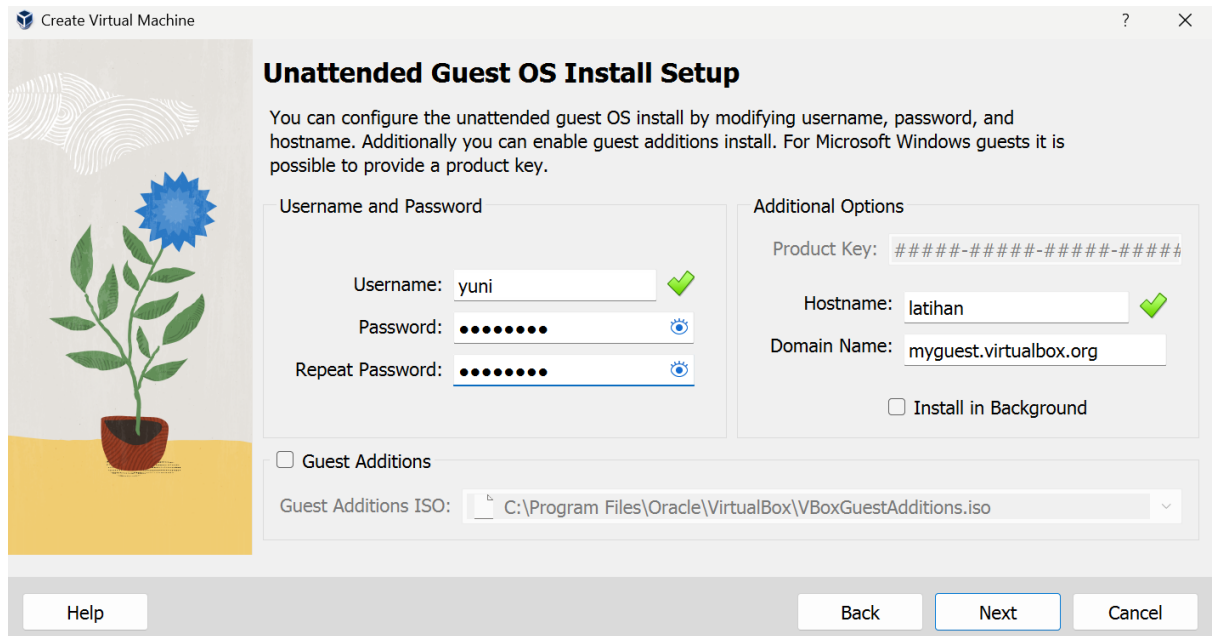
Langkah-Langkah :

1. Download dan Instal VirtualBox, Linux dan Putty
2. Buat virtual machine

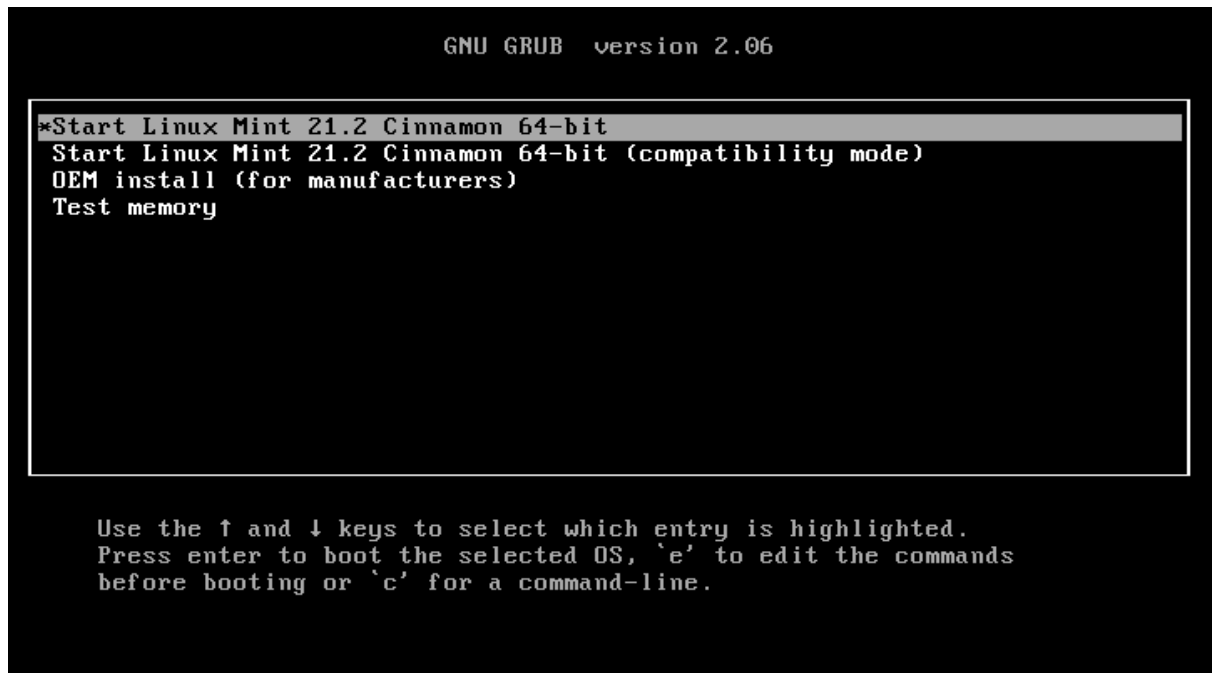
Buka VirtualBox kemudian klik “New” lalu isi nama (bebas) dan isi folder dengan linux yang sudah di download kemudian klik “Next”.



Kemudian isi “Username” dan “Password” lalu klik ”Next

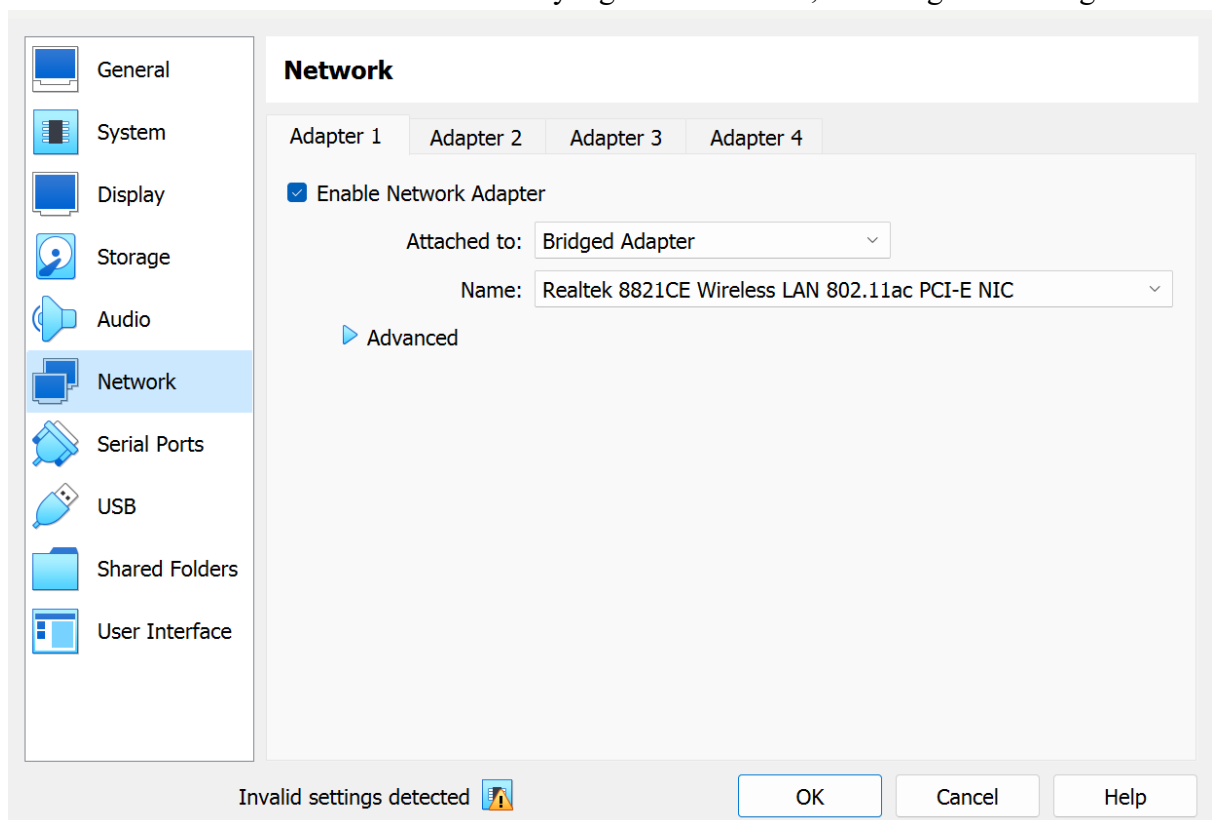


Lalu atur Hardware dan Virtual Hard Disk kemudian klik “Finish”



Pilih opsi paling atas dengan menekan Enter. Kemudian setelah semua proses instalasi selesai, tutup dan matikan virtual machine.

3. Buka VirtualBox dan klik virtual machine yang barusan dibuat, buka bagian “Settings”

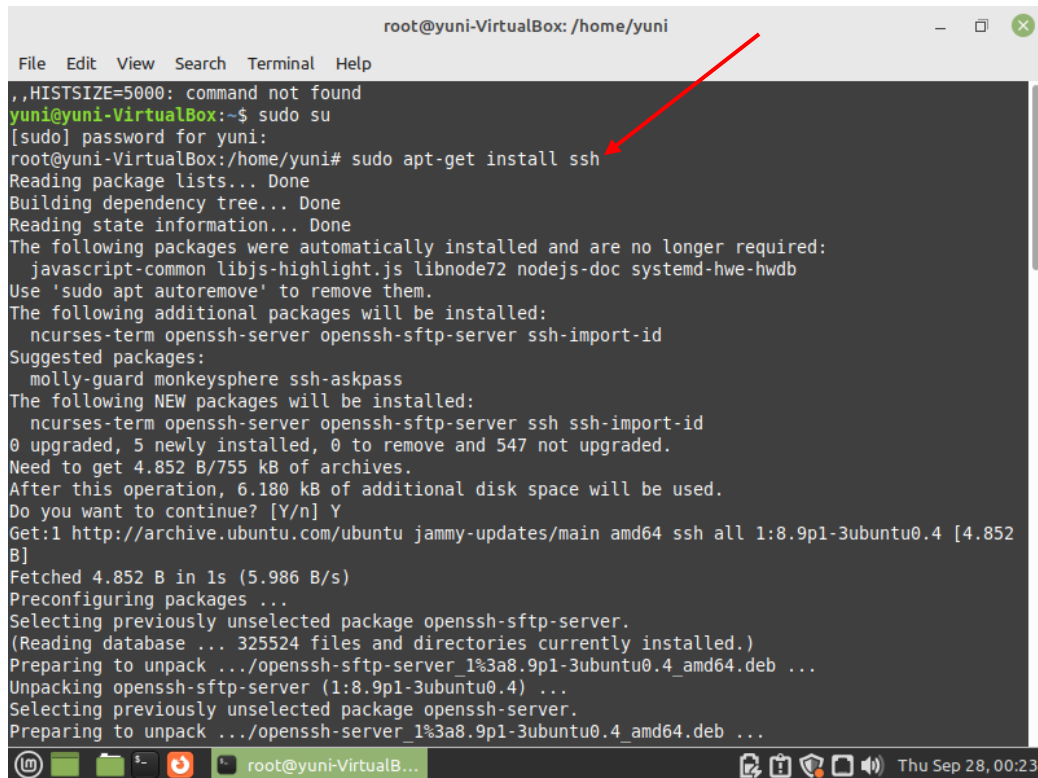


Pilih “Network” pada bagian Attached to ubah menjadi Bridge Adapter, klik “Ok”.

4. “Start” virtual machine lalu pilih akun user dan masukkan password, buka “Terminal”
5. Ketik # sudo su untuk masuk ke root direktori lalu masukkan password kemudian ketik “ping google.com” untuk mengecek apakah sudah tersambung ke internet. Apabila ping berhasil ketik CTRL+C untuk menghentikan ping.

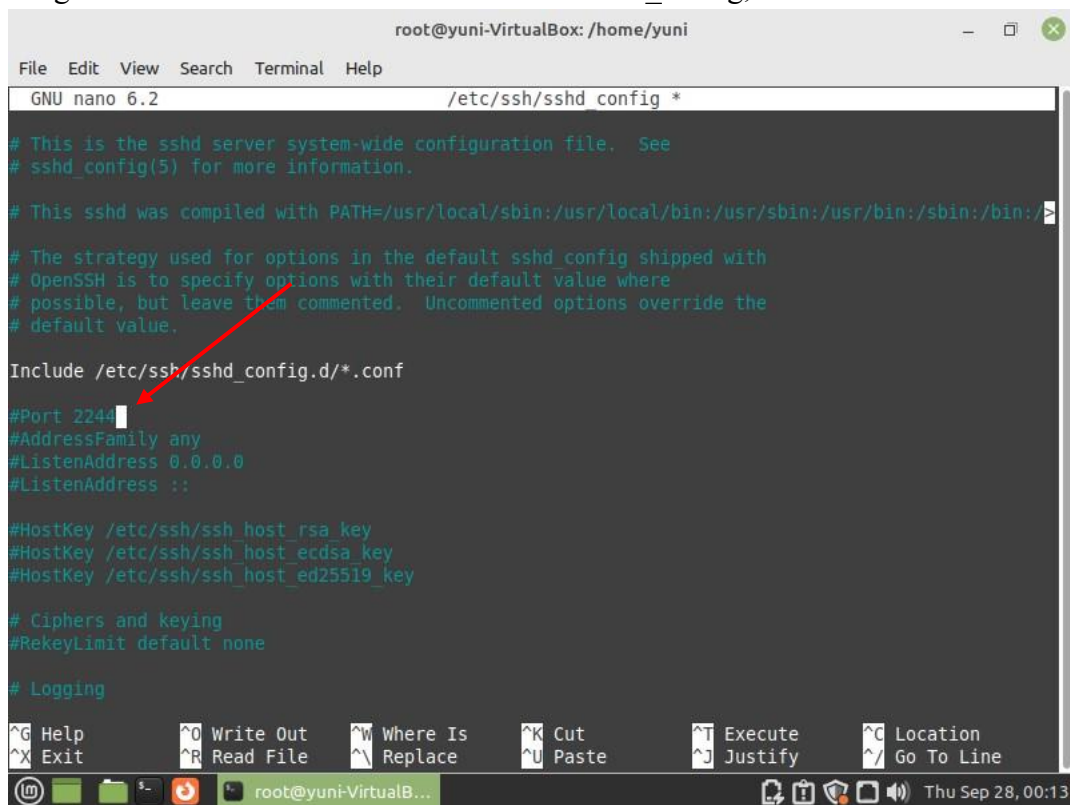
6. Install dan Konfigurasi SSH Server di Linux Mint Ubuntu

Untuk menginstall SSH Server di Linux Mint Ubuntu, login linux lalu buka terminal kemudian ketik perintah `# sudo apt-get install ssh`,

A terminal window titled 'root@yuni-VirtualBox: /home/yuni' showing the command 'sudo apt-get install ssh' being executed. The output lists packages to be installed, including 'openssh-server' and 'openssh-sftp-server'. A red arrow points to the command line. The terminal shows the progress of downloading and installing the packages, including the need for additional disk space and the selection of previously unselected packages.

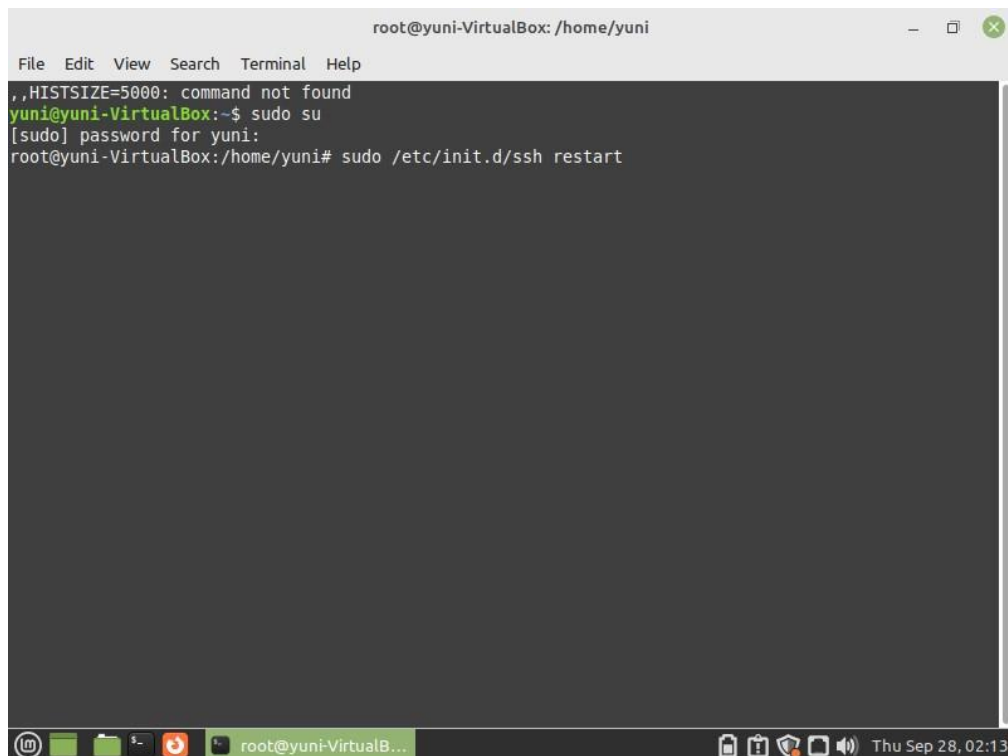
```
root@yuni-VirtualBox: /home/yuni
File Edit View Search Terminal Help
,,HISTSIZE=5000: command not found
yuni@yuni-VirtualBox:~$ sudo su
[sudo] password for yuni:
root@yuni-VirtualBox:/home/yuni# sudo apt-get install ssh
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
 javascript-common libjs-highlight.js libnode72 nodejs-doc systemd-hwe-hwdb
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
 ncurses-term openssh-server openssh-sftp-server ssh-import-id
Suggested packages:
 molly-guard monkeysphere ssh-askpass
The following NEW packages will be installed:
 ncurses-term openssh-server openssh-sftp-server ssh ssh-import-id
0 upgraded, 5 newly installed, 0 to remove and 547 not upgraded.
Need to get 4.852 B/755 kB of archives.
After this operation, 6.180 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 ssh all 1:8.9p1-3ubuntu0.4 [4.852 B]
Fetched 4.852 B in 1s (5.986 B/s)
Preconfiguring packages ...
Selecting previously unselected package openssh-sftp-server.
(Reading database ... 325524 files and directories currently installed.)
Preparing to unpack .../openssh-sftp-server_1%3a8.9p1-3ubuntu0.4_amd64.deb ...
Unpacking openssh-sftp-server (1:8.9p1-3ubuntu0.4) ...
Selecting previously unselected package openssh-server.
Preparing to unpack .../openssh-server_1%3a8.9p1-3ubuntu0.4_amd64.deb ...
```

Apabila sudah terinstal selanjutnya buka file config `sshd_config` pada directory `/etc/ssh` dengan teks editor nano `# sudo nano /etc/ssh/sshd_config`,

A terminal window titled 'root@yuni-VirtualBox: /home/yuni' showing the nano editor editing the file '/etc/ssh/sshd_config'. The editor displays the default configuration file content, including comments and settings like 'Port 2244'. A red arrow points to the 'Port 2244' line. The bottom of the terminal shows the nano editor's status bar with various shortcuts.

```
root@yuni-VirtualBox: /home/yuni
File Edit View Search Terminal Help
GNU nano 6.2 /etc/ssh/sshd_config *
# This is the sshd server system-wide configuration file. See
# sshd_config(5) for more information.
# This sshd was compiled with PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:
# The strategy used for options in the default sshd config shipped with
# OpenSSH is to specify options with their default value where
# possible, but leave them commented. Uncommented options override the
# default value.
Include /etc/ssh/sshd_config.d/*.conf
#Port 2244
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::
#HostKey /etc/ssh/ssh_host_rsa_key
#HostKey /etc/ssh/ssh_host_ecdsa_key
#HostKey /etc/ssh/ssh_host_ed25519_key
# Ciphers and keying
#RekeyLimit default none
# Logging
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^C Location
Thu Sep 28, 00:13
```

Ini hasilnya, cari baris “Port 22” lalu ganti dengan port bebas misal “Port 2244” lalu tekan CTRL+X kemudian Y dan Enter.

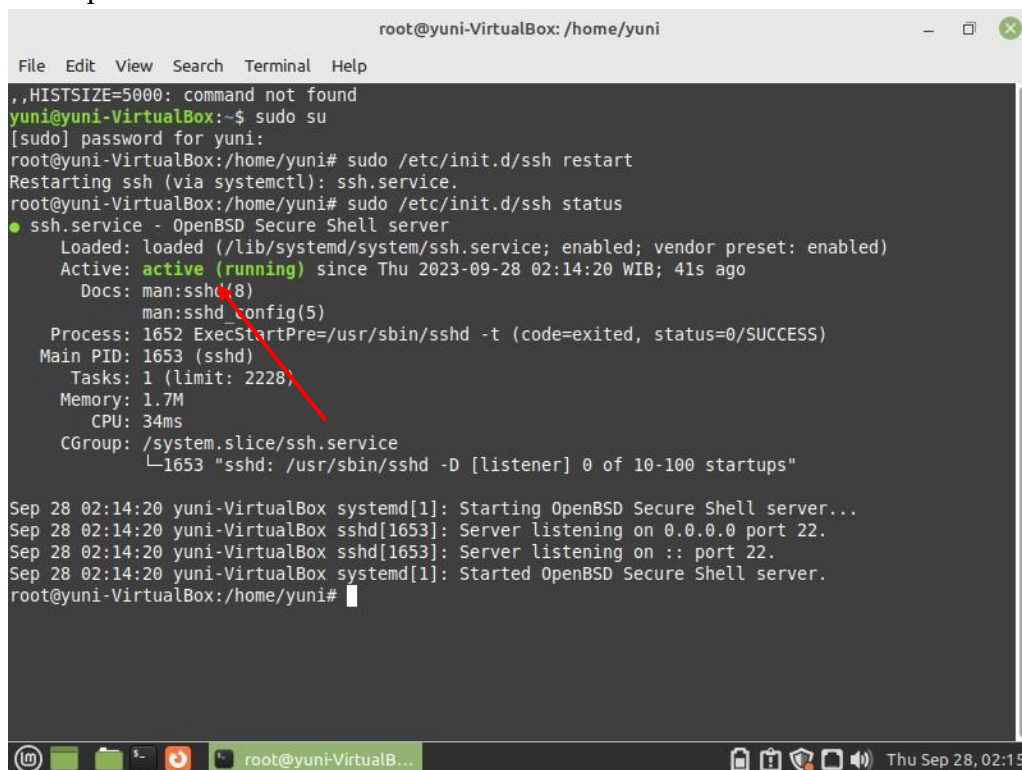


```
root@yuni-VirtualBox: /home/yuni
File Edit View Search Terminal Help
,,HISTSIZE=5000: command not found
yuni@yuni-VirtualBox:~$ sudo su
[sudo] password for yuni:
root@yuni-VirtualBox:/home/yuni# sudo /etc/init.d/ssh restart
```

Jika sudah, restart service SSH agar perubahan konfigurasi dapat dijalankan sistem # sudo /etc/init.d/ssh restart.

7. Cek Keaktifan server SSH

Ketik perintah # sudo /etc/init.d/ssh status

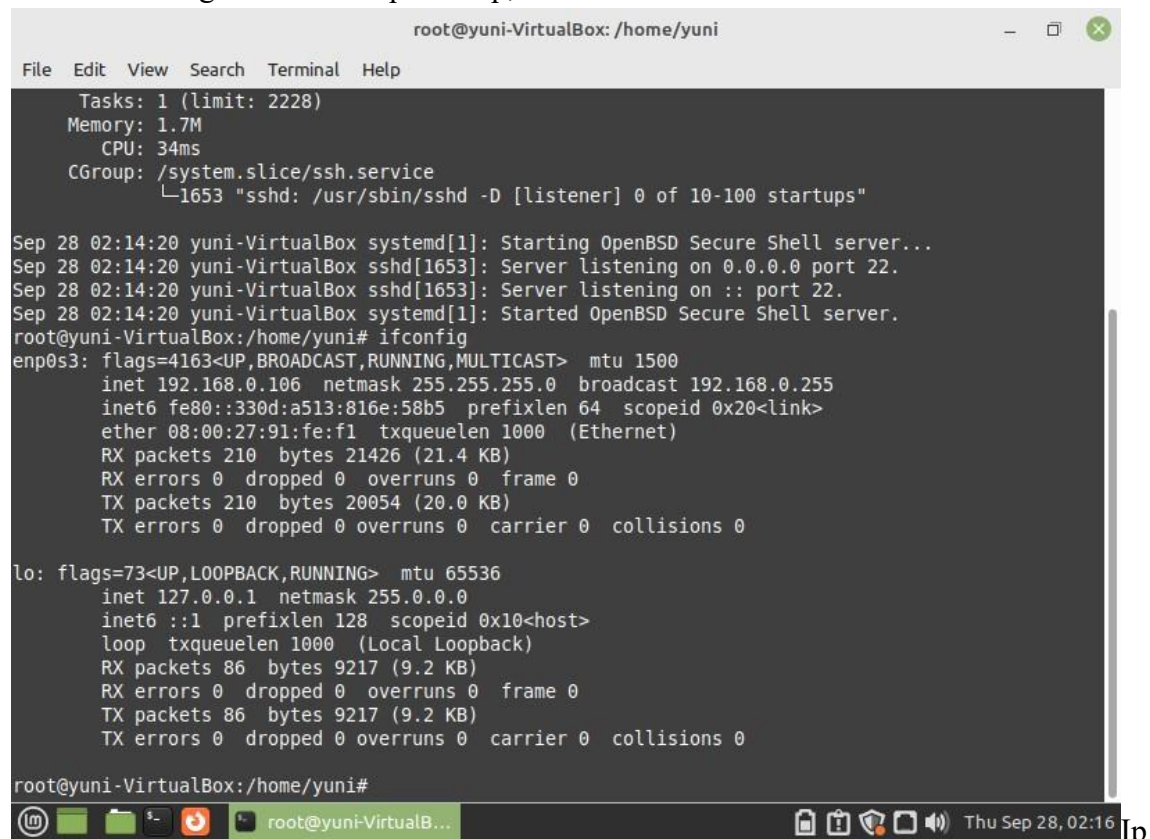


```
root@yuni-VirtualBox: /home/yuni
File Edit View Search Terminal Help
,,HISTSIZE=5000: command not found
yuni@yuni-VirtualBox:~$ sudo su
[sudo] password for yuni:
root@yuni-VirtualBox:/home/yuni# sudo /etc/init.d/ssh restart
Restarting ssh (via systemctl): ssh.service.
root@yuni-VirtualBox:/home/yuni# sudo /etc/init.d/ssh status
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Thu 2023-09-28 02:14:20 WIB; 41s ago
     Docs: man:sshd(8)
           man:sshd_config(5)
   Process: 1652 ExecStartPre=/usr/sbin/sshd -t (code=exited, status=0/SUCCESS)
    Main PID: 1653 (sshd)
      Tasks: 1 (limit: 2228)
     Memory: 1.7M
        CPU: 34ms
    CGroup: /system.slice/ssh.service
            └─1653 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Sep 28 02:14:20 yuni-VirtualBox systemd[1]: Starting OpenBSD Secure Shell server...
Sep 28 02:14:20 yuni-VirtualBox sshd[1653]: Server listening on 0.0.0.0 port 22.
Sep 28 02:14:20 yuni-VirtualBox sshd[1653]: Server listening on :: port 22.
Sep 28 02:14:20 yuni-VirtualBox systemd[1]: Started OpenBSD Secure Shell server.
root@yuni-VirtualBox:/home/yuni#
```

8. Mencari ip

Ketik # ifconfig untuk mendapatkan ip,



```
root@yuni-VirtualBox: /home/yuni
File Edit View Search Terminal Help

Tasks: 1 (limit: 2228)
Memory: 1.7M
CPU: 34ms
CGroup: /system.slice/ssh.service
└─1653 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

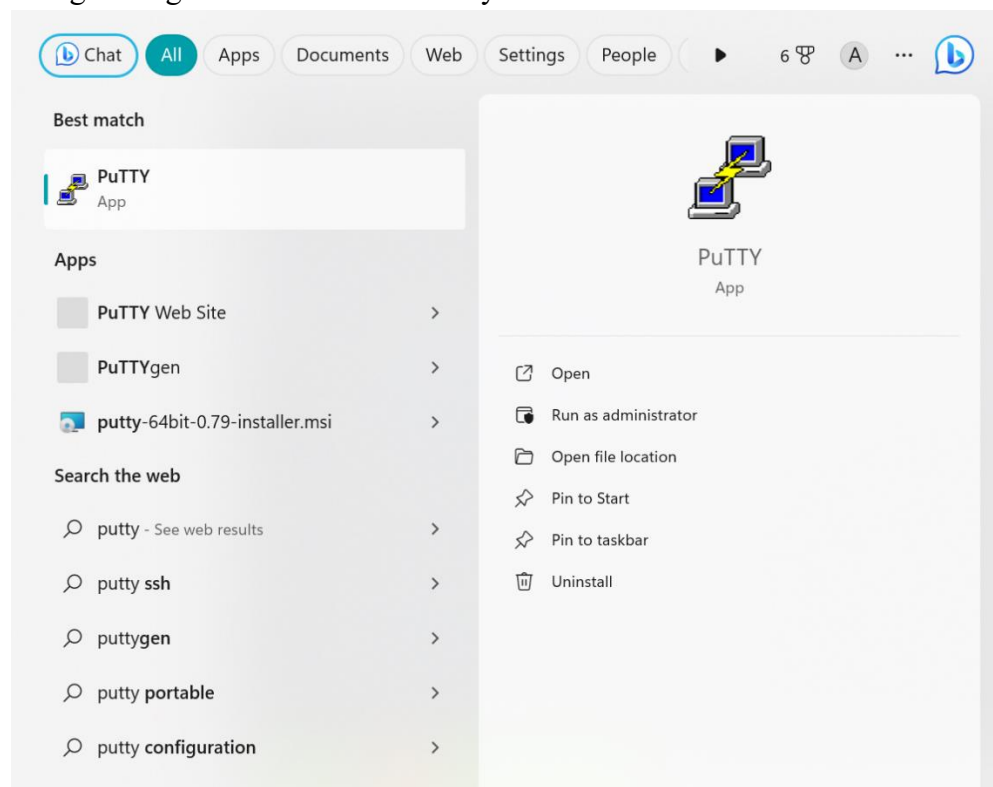
Sep 28 02:14:20 yuni-VirtualBox systemd[1]: Starting OpenBSD Secure Shell server...
Sep 28 02:14:20 yuni-VirtualBox sshd[1653]: Server listening on 0.0.0.0 port 22.
Sep 28 02:14:20 yuni-VirtualBox sshd[1653]: Server listening on :: port 22.
Sep 28 02:14:20 yuni-VirtualBox systemd[1]: Started OpenBSD Secure Shell server.
root@yuni-VirtualBox: /home/yuni# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.0.106 netmask 255.255.255.0 broadcast 192.168.0.255
    inet6 fe80::330d:a513:816e:58b5 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:91:fe:f1 txqueuelen 1000 (Ethernet)
    RX packets 210 bytes 21426 (21.4 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 210 bytes 20054 (20.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 86 bytes 9217 (9.2 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 86 bytes 9217 (9.2 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

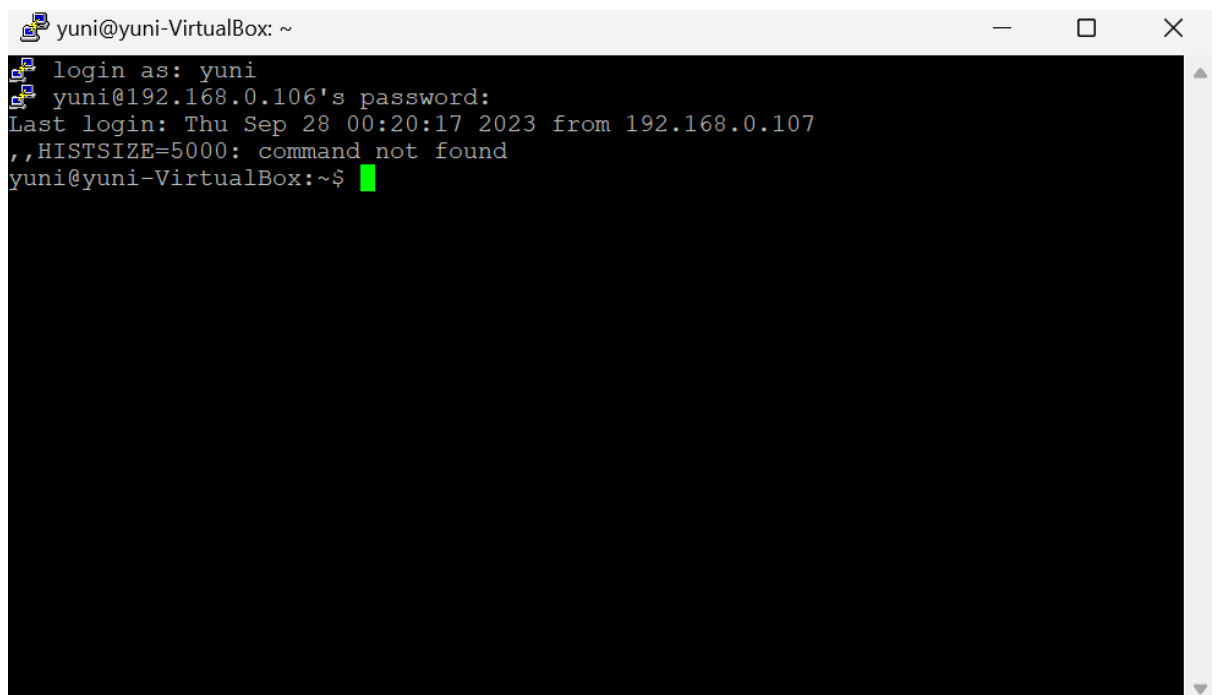
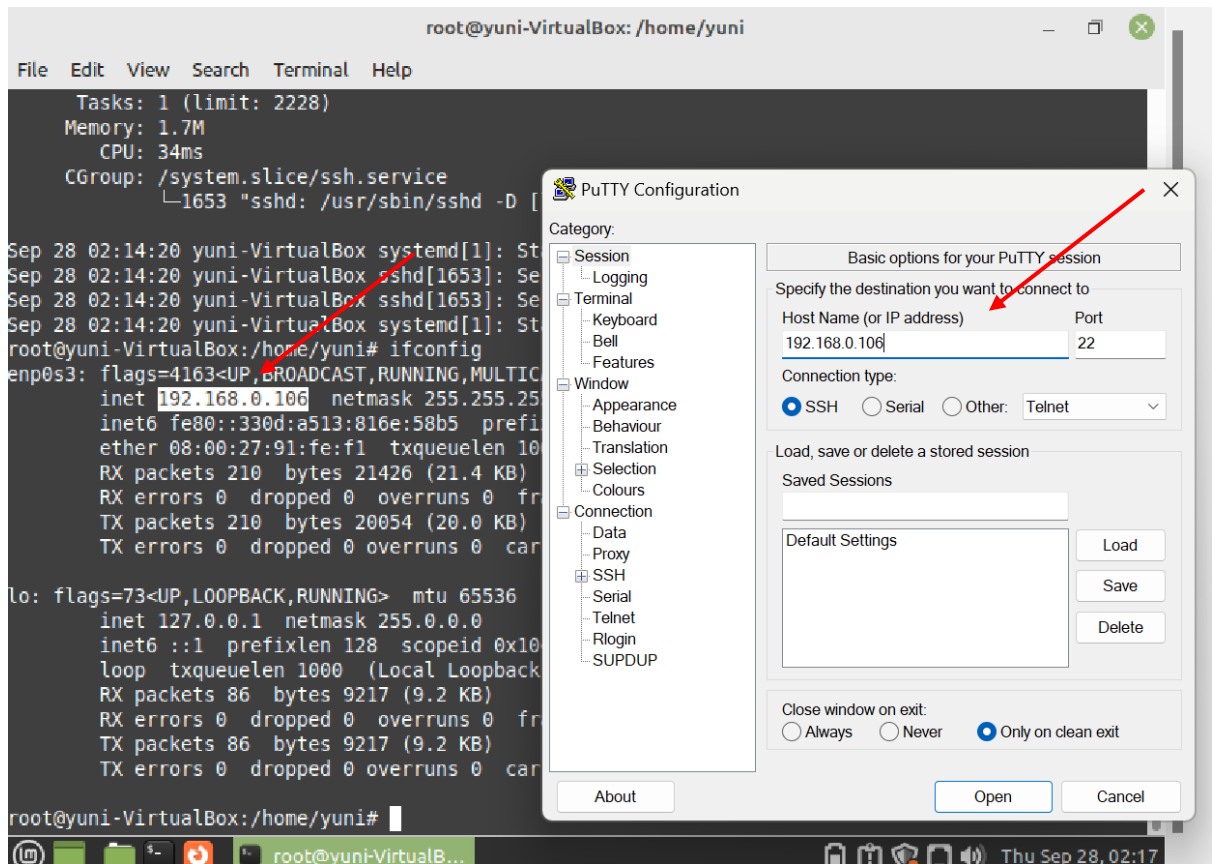
root@yuni-VirtualBox: /home/yuni#
```

sudah didapat selanjutnya.

9. Menghubungkan Linux Mint ke Putty



Buka putty lalu masukkan ip address lalu klik "Open".



Jika sudah maka akan muncul seperti ini kemudian login linux (yuni) dan masukkan password linux maka kita sudah terhubung.

```
root@yuni-VirtualBox: /home/yuni
login as: yuni
yuni@192.168.0.106's password:
Last login: Thu Sep 28 00:20:17 2023 from 192.168.0.107
,,HISTSIZE=5000: command not found
yuni@yuni-VirtualBox:~$ sudo su
[sudo] password for yuni:
root@yuni-VirtualBox:/home/yuni# reboot
```

Lakukan percobaan untuk memastikan apakah sudah terhubung atau tidak dengan ketik # sudo su, masukkan password kemudian ketik # reboot lalu tekan Enter.

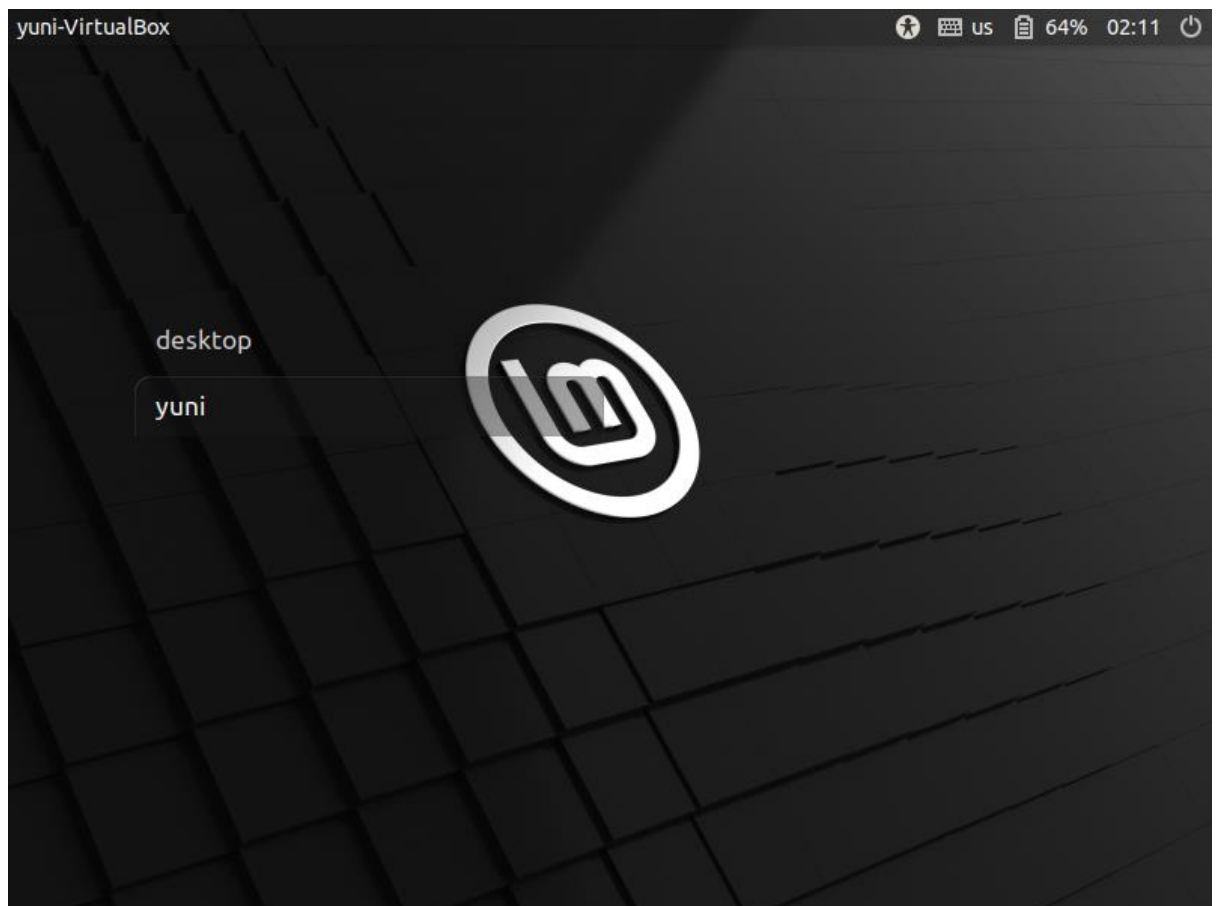
```
root@yuni-VirtualBox: /home/yuni
login as: yuni
yuni@192.168.0.106's password:
Last login: Thu Sep 28 00:20:17 2023 from 192.168.0.107
,,HISTSIZE=5000: command not found
yuni@yuni-VirtualBox:~$ sudo su
[sudo] password for yuni:
root@yuni-VirtualBox:/home/yuni# reboot
root@yuni-VirtualBox:/home/yuni#
```

PuTTY Fatal Error

Remote side unexpectedly closed network connection

OK

Putty error menutup linux di virtualbox berarti putty ke linux mint di virtualbox sudah terhubung,



Tampilan sudah tertutup dan linux mint kembali ke awal.