

LEMBAR KERJA PESERTA DIDIK

NAMA : Mita Sugiarti
KELAS : XI TJKT 4
SEMESTER : Ganjil (1)
KOMPETENSI KEAHLIAN : Teknik Komputer dan Jaringan
TOPIK : Remote Server
MATA PELAJARAN : Administrasi Sistem Jaringan
ALOKASI WAKTU : 270 Menit

A. Kompetensi Dasar

- 3.2. Mengevaluasi *Remote Server*
- 4.2. Mengkonfigurasi *Remote Server*

B. Indikator Pencapaian Kompetensi

- 3.1.1 Menjelaskan konsep Remote Server
- 3.1.2 Menentukan cara konfigurasi Remote Server
- 4.1.1 Melakukan konfigurasi Remote Server
- 4.1.2 Menguji hasil konfigurasi Remote Server
- 4.1.3 Membuat laporan konfigurasi Remote Server

C. Tujuan Pembelajaran

- 1) Setelah melakukan literasi dari bahan bacaan yang tersedia atau dari internet peserta didik mampu menjelaskan konsep remote server dengan benar secara mandiri
- 2) Setelah melakukan literasi dari bahan bacaan yang tersedia atau dari internet peserta didik mampu menentukan cara konfigurasi remote server dengan benar secara mandiri
- 3) Setelah melakukan literasi dari bahan bacaan yang tersedia atau dari internet peserta didik mampu melakukan konfigurasi remote server dengan tepat secara mandiri

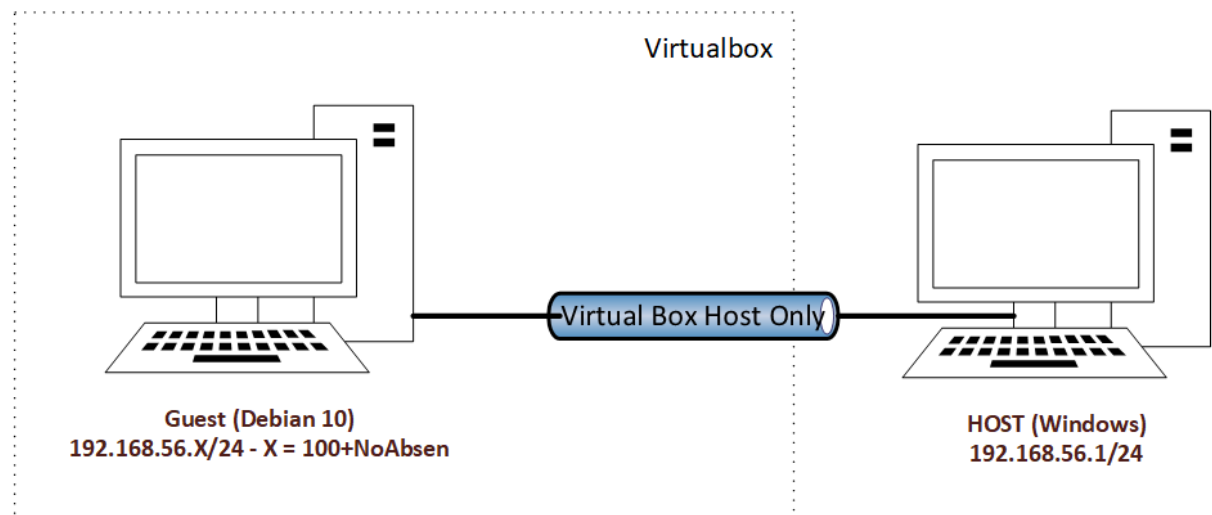
- 4) Setelah melakukan literasi dari bahan bacaan yang tersedia atau dari internet peserta didik mampu menguji hasil konfigurasi remote server dengan tepat secara mandiri
- 5) Setelah melakukan literasi dari bahan bacaan yang tersedia atau dari internet peserta didik mampu Menentukan cara konfigurasi Remote Server dengan tepat secara mandiri

D. Alat dan Bahan

- 1) 1 Unit PC/Laptop
- 2) Aplikasi Virtual Box
- 3) PC Virtual / Guest pada virtual box
- 4) Sistem Operasi Debian 10 yang sudah terinstall pada PC Virtual / Guest pada virtual box
- 5) DVD Debian 10
- 6) Aplikasi Putty
- 7) Aplikasi WinSCP

E. Langkah Pembelajaran

Topologi



Skema IP Address

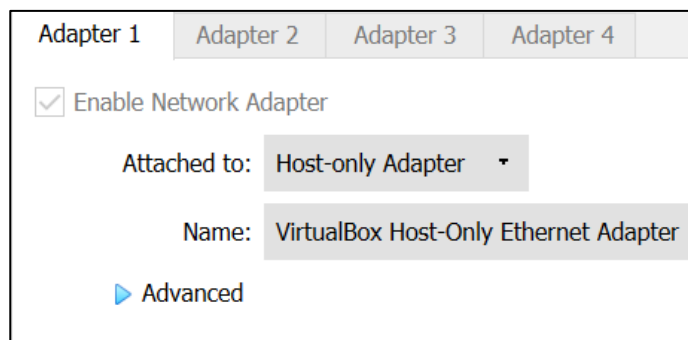
IP Host (Windows) : 192.168.56.1/24

IP Guest (Debian 10) : 192.168.56.X/24 dimana X = 100+Noabsen

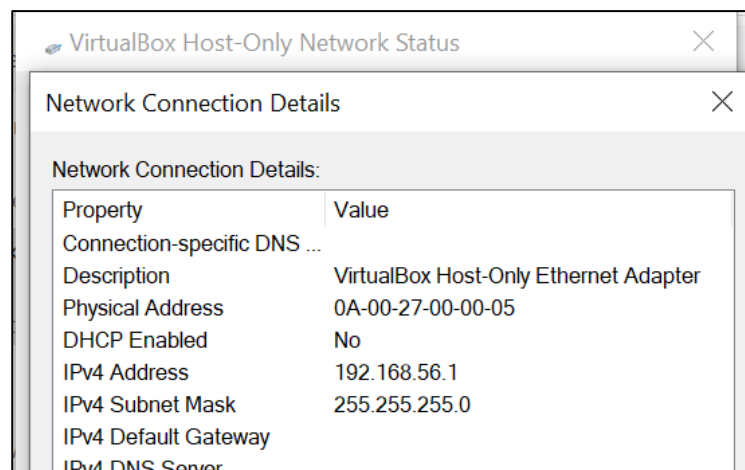
SSH Port Number Hardening : 200+Noabsen

Langkah Kerja

- 1) Silahkan persiapan diri dan duduk di meja kerja
- 2) Siapkan Virtual PC/Guest Debian 10 pada virtualbox. Sesuaikan nama hostname dan username debian (nama masing-masing) sesuai praktikum instalasi debian 10 yang telah dilakukan pada pertemuan sebelumnya.
- 3) Konfigurasi network guest debian 10 dengan pengaturan **Host Only Adapter**



- 4) Pastikan konfigurasi jaringan (IP address) pada Host Windows sesuai dengan topologi.



```
Debian GNU/Linux 10 pctkj tty1
pctkj login: usertkj
Password:
Last login: Mon Aug 22 13:29:32 WIB 2022 on tty1
Linux pctkj 4.19.0-17-amd64 #1 SMP Debian 4.19.194-1 (2021-06-10) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
usertkj@pctkj:~$
```

8) Pastikan konfigurasi jaringan pada server debian 10 sesuai dengan topologi.

Jalankan perintah dibawah ini untuk melakukan pemeriksaan :

```
usertkj@localhost:~$ ip address
```

```
usertkj@pctkj:~$ ip address
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:51:36:7e brd ff:ff:ff:ff:ff:ff
    inet 192.168.56.100/24 brd 192.168.56.255 scope global enp0s3
        valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fe51:367e/64 scope link
        valid_lft forever preferred_lft forever
usertkj@pctkj:~$ _
```

Jika ip address belum sesuai, maka lakukan konfigurasi jaringan terlebih dahulu.

9) Pastikan koneksi dari client (windows) ke server debian 10 sudah terhubung.

Buka aplikasi command prompt pada windows dan gunakan perintah ping , seperti contoh perintah dibawah ini :

```
C:\Users\trima> ping 192.168.56.100
```

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.19044.1889]
(c) Microsoft Corporation. All rights reserved.

C:\Users\trima>ping 192.168.56.100

Pinging 192.168.56.100 with 32 bytes of data:
Reply from 192.168.56.100: bytes=32 time<1ms TTL=64
Reply from 192.168.56.100: bytes=32 time<1ms TTL=64
Reply from 192.168.56.100: bytes=32 time<1ms TTL=64
Reply from 192.168.56.100: bytes=32 time=1ms TTL=64

Ping statistics for 192.168.56.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Percobaan OpenSSH Server

- 10) Pada server debian, lakukan pemeriksaan apakah aplikasi ssh server sudah terinstall atau tidak. Dapat gunakan perintah dibawah ini :

```
usertkj@localhost:~$ dpkg -l | grep ssh
```

```
usertkj@pctkj:~$ dpkg -l | grep ssh
ii  libssh2-1:amd64      1.8.0-2.1          amd64      SSH2 client-side
library
ii  openssh-client      1:7.9p1-10+deb10u2 amd64      secure shell (SSH
) client, for secure access to remote machines
usertkj@pctkj:~$
```

Hasil diatas menunjukkan bahwa openssh server belum terinstall.

- 11) Lakukan penginstallan openssh server. Periksa apakah aplikasi openssh server tersedia di repository atau tidak, dapat gunakan perintah ini:

```
usertkj@localhost:~$ apt-cache search ssh | grep server
```

```
usertkj@pctkj:~$ apt-cache search ssh | grep server
cockpit-bridge - Cockpit bridge server-side component
x2goserver-xsession - X2Go Server (Xsession runner)
cockpit-dashboard - Cockpit remote servers and dashboard
openssh-sftp-server - secure shell (SSH) sftp server module, for SFTP access from remote machines
openssh-server - secure shell (SSH) server, for secure access from remote machines
task-ssh-server - SSH server
ssh - secure shell client and server (metapackage)
usertkj@pctkj:~$
```

Jika hasil apt-cache search tidak memunculkan openssh-server, maka perlu ditambahkan DVD debian ke 1 ke dalam repository. Masukkan (attach) terlebih dahulu DVD debian ke 1 lalu ketikkan perintah `sudo apt-cdrom add` Jalankan perintah untuk melakukan proses penginstallan openssh-server :

```
usertkj@localhost:~$ sudo apt install openssh-server
```

```
usertkj@pctkj:~$ sudo apt install openssh-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  openssh-sftp-server
Suggested packages:
  molly-guard monkeysphere rssh ssh-askpass ufw
The following NEW packages will be installed:
  openssh-server openssh-sftp-server
0 upgraded, 2 newly installed, 0 to remove and 0 not upgraded.
Need to get 0 B/397 kB of archives.
After this operation, 1,609 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 cdrom://[Debian GNU/Linux 10.10.0 _Buster_ - Official amd64 DVD Binary-1 20210619-16:12] buste
r/main amd64 openssh-sftp-server amd64 1:7.9p1-10+deb10u2 [44.6 kB]
Get:2 cdrom://[Debian GNU/Linux 10.10.0 _Buster_ - Official amd64 DVD Binary-1 20210619-16:12] buste
r/main amd64 openssh-server amd64 1:7.9p1-10+deb10u2 [352 kB]
Preconfiguring packages ...
Selecting previously unselected package openssh-sftp-server.
(Reading database ... 35768 files and directories currently installed.)
Preparing to unpack .../openssh-sftp-server_7.9p1-10+deb10u2_amd64.deb ...
Unpacking openssh-sftp-server (1:7.9p1-10+deb10u2) ...
```

Saat proses penginstallan kita akan diminta untuk memasukkan (attach) DVD debian ke 1.

- 12) Lakukan pemeriksaan apakah aplikasi openssh server sudah tersintall atau belum. Dapat gunakan perintah dibawah ini :

```
usertkj@localhost:~$ dpkg -l | grep ssh
```

```
usertkj@pctkj:~$ dpkg -l | grep ssh
ii  libssh2-1:amd64      1.8.0-2.1          amd64      SSH2 client-side
      library
ii  openssh-client      1:7.9p1-10+deb10u2 amd64      secure shell (SSH
) client, for secure access to remote machines
ii  openssh-server      1:7.9p1-10+deb10u2 amd64      secure shell (SSH
) server, for secure access from remote machines
ii  openssh-sftp-server 1:7.9p1-10+deb10u2 amd64      secure shell (SSH
) sftp server module, for SFTP access from remote machines
usertkj@pctkj:~$
```

- 13) Lakukan pemeriksaan apakah aplikasi openssh server sudah berjalan atau tidak. Dapat gunakan perintah dibawah ini :

```
usertkj@localhost:~$ sudo systemctl status sshd
```

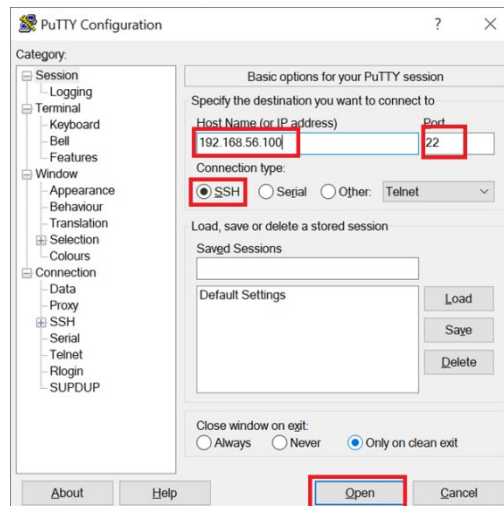
```
usertkj@pctkj:~$ sudo systemctl status sshd
• ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Mon 2022-08-22 16:01:14 WIB; 8min ago
     Docs: man:sshd(8)
           man:sshd_config(5)
   Main PID: 5663 (sshd)
     Tasks: 1 (limit: 1149)
    Memory: 1.1M
    CGroup: /system.slice/ssh.service
            └─5663 /usr/sbin/sshd -D
```

- 14) Lakukan pemeriksaan apakah aplikasi openssh server berjalan pada port number berapa. Dapat gunakan perintah dibawah ini :

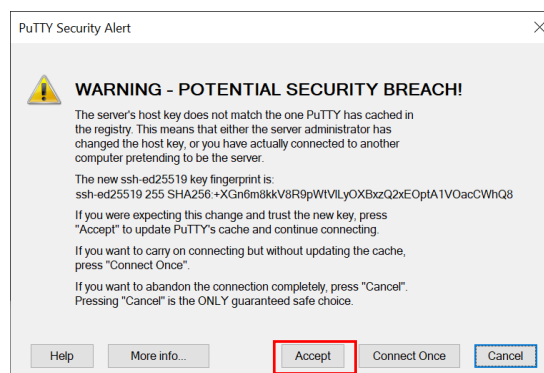
```
usertkj@localhost:~$ ss -lntup
```

```
usertkj@pctkj:~$ ss -lntup
Netid      State      Recv-Q     Send-Q     Local Address:Port      Peer Address:Port
udp        UNCONN    0           0           0.0.0.0:59486           0.0.0.0:*
udp        UNCONN    0           0           0.0.0.0:631            0.0.0.0:*
udp        UNCONN    0           0           0.0.0.0:5353           0.0.0.0:*
udp        UNCONN    0           0           [::]:5353              [::]:*
udp        UNCONN    0           0           [::]:44270             [::]:*
tcp        LISTEN    0           128        0.0.0.0:22              0.0.0.0:*
tcp        LISTEN    0           5          127.0.0.1:631           0.0.0.0:*
tcp        LISTEN    0           128        [::]:22                 [::]:*
tcp        LISTEN    0           5          [::1]:631               [::]:*
```

- 15) Lakukan pengujian dari client menggunakan aplikasi putty. Buka aplikasi putty di windows. Masukan ip address server, pilih connection type ssh dan pilih port 22 lalu tekan **Open**



- 16) Akan ada muncul dialog box mengenai pengcopyan ssh-key ke client. Klik Accept untuk meneruskan.



- 17) Setelah itu Anda diminta untuk memasukkan username dan password. Gunakan usertkj atau user yang sudah dimasukan group sudo.

```

usertkj@pctkj: ~
└─$ login as: usertkj
usertkj@192.168.56.100's password:
Linux pctkj 4.19.0-17-amd64 #1 SMP Debian 4.19.194-1 (2021-06-10) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Mon Aug 22 13:47:49 2022
usertkj@pctkj:~$

```

Percobaan Ganti Port Default SSH

- 18) Default port ssh yaitu TCP/22, salah satu cara hardening (mengamankan) server adalah dengan mengganti default port numbertanya. Untuk mengganti default port SSH perlu dilakukan konfigurasi pada server. Konfigurasi port ssh terletak pada file `/etc/ssh/sshd_config`. Lakukan pengeditan file tersebut, uncomment (hapus tanda #) bagian `#Port 22` lalu ganti port number nya sesuai dengan topologi.

```

usertkj@localhost:~$ cd /etc/ssh
usertkj@localhost:/etc/ssh$ sudo nano sshd_config

```

Berikut dibawah isi file default /etc/ssh/sshd_config (sebelum dikonfigurasi)

```

GNU nano 3.2 sshd_config
#      $OpenBSD: sshd_config,v 1.103 2018/04/09 20:41:22 tj Exp $
# This is the sshd server system-wide configuration file.  See
# sshd_config(5) for more information.
# This sshd was compiled with PATH=/usr/bin:/bin:/usr/sbin:/sbin
# 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.
#Port 22
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::

```

Berikut dibawah isi file /etc/ssh/sshd_config setelah dikonfigurasi

```

GNU nano 3.2 sshd_config Modified
#      $OpenBSD: sshd_config,v 1.103 2018/04/09 20:41:22 tj Exp $
# This is the sshd server system-wide configuration file.  See
# sshd_config(5) for more information.
# This sshd was compiled with PATH=/usr/bin:/bin:/usr/sbin:/sbin
# 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.
Port 200
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::

```

- 19) Lakukan restart aplikasi openssh server dan pemeriksaan openssh server berjalan pada port yang baru

```

usertkj@localhost:~$ sudo systemctl restart sshd
usertkj@localhost:~$ ss -lntup

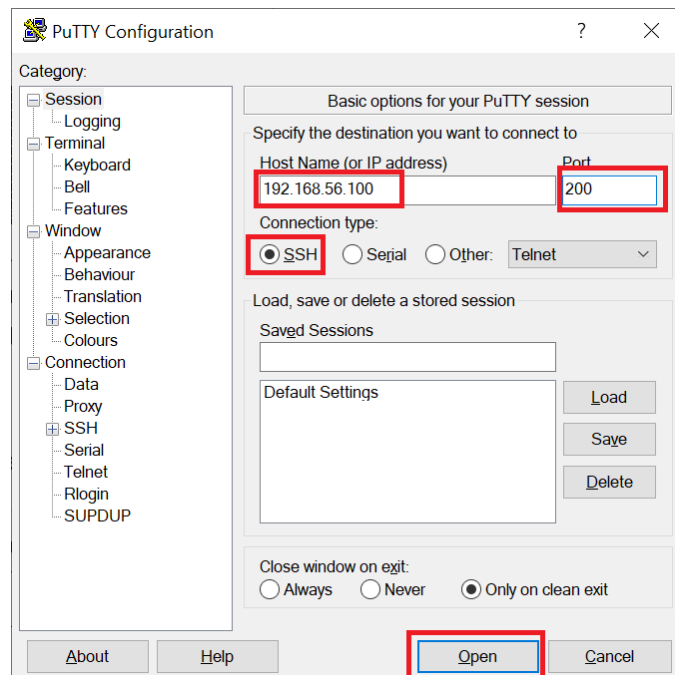
```

```

usertkj@pctkj:/etc/ssh$ sudo systemctl restart sshd
usertkj@pctkj:/etc/ssh$ ss -lntup
Netid      State      Recv-Q     Send-Q     Local Address:Port      Peer Address:Port
udp        UNCONN    0           0           0.0.0.0:37259           0.0.0.0:*
udp        UNCONN    0           0           0.0.0.0:631            0.0.0.0:*
udp        UNCONN    0           0           0.0.0.0:5353           0.0.0.0:*
udp        UNCONN    0           0           [::]:37718             [::]:*
udp        UNCONN    0           0           [::]:5353              [::]:*
tcp        LISTEN    0           5           127.0.0.1:631          0.0.0.0:*
tcp        LISTEN    0          128           0.0.0.0:200           0.0.0.0:*
tcp        LISTEN    0           5           [::1]:631             [::]:*
tcp        LISTEN    0          128           [::]:200              [::]:*
usertkj@pctkj:/etc/ssh$

```

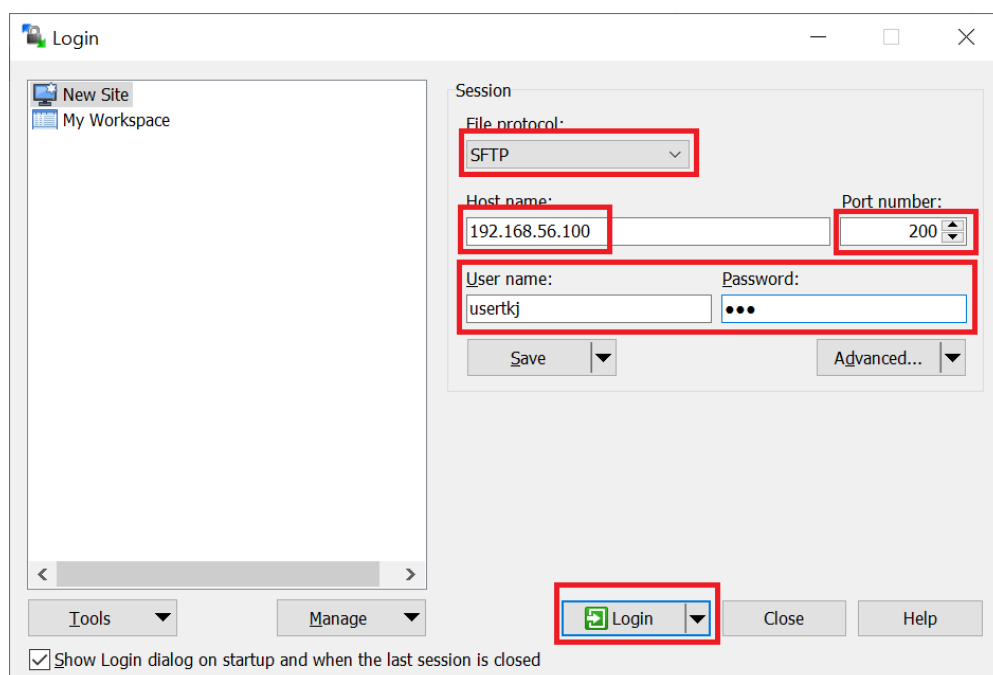
- 20) Lakukan pengujian dari client menggunakan aplikasi putty. Buka aplikasi putty di windows. Masukan ip address server, pilih connection type ssh dan pilih port yang diganti lalu tekan **Open**



- 21) Pastikan user dapat login menggunakan putty dengan port number baru.

Pengujian kirim file menggunakan WinSCP

- 22) Buka aplikasi WinSCP. Masukan ip address server pada bagian hostname, pilih file protocol : SFTP, pilih port yang diganti, sesuaikan username dan password lalu tekan **Login**

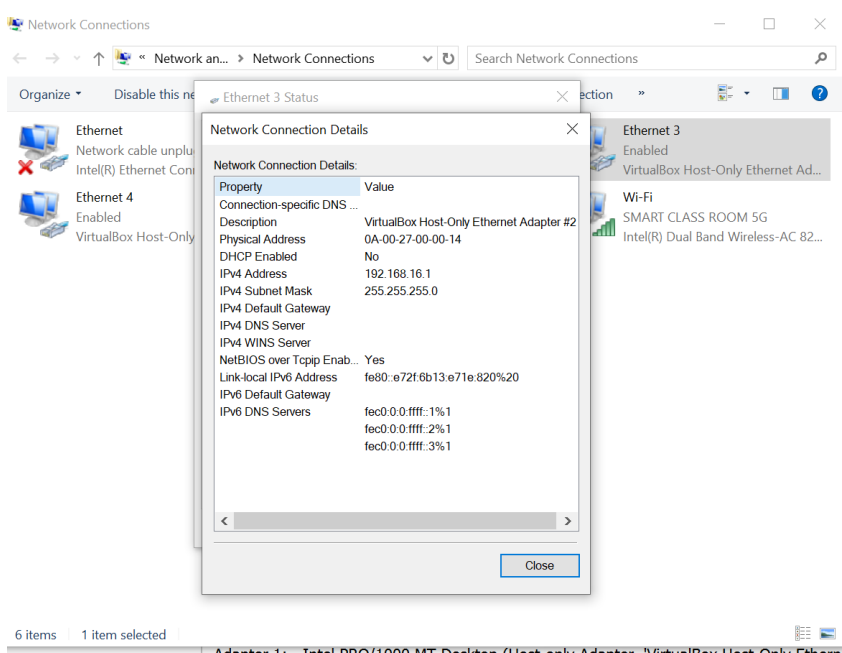


23) Jika sudah melakukan login, lakukan percobaan upload File/folder.

F. Lembar Pengerjaan

Jelaskan langkah-langkah yang dikerjakan dan Simpan screenshot dari setiap langkah kerja yang Anda lakukan pada lembar kerja berikut :

LEMBAR Pengerjaan / SCREENSHOOT PRAKTIKUM



The screenshot shows the Windows Network Connections window. A 'Network Connection Details' dialog box is open for 'Ethernet 3'. The details are as follows:

Property	Value
Connection-specific DNS ...	
Description	VirtualBox Host-Only Ethernet Adapter #2
Physical Address	0A-00-27-00-00-14
DHCP Enabled	No
IPv4 Address	192.168.16.1
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	
IPv4 DNS Server	
IPv4 WINS Server	
NetBIOS over Tcpip Enab...	Yes
Link-local IPv6 Address	fe80::e72f6b13e71e820%20
IPv6 Default Gateway	
IPv6 DNS Servers	fec0:0:0fff::1%1 fec0:0:0fff::2%1 fec0:0:0fff::3%1

```
Debian GNU/Linux 12 XITKJ4-16 tty1
XITKJ4-16 login: usertkj
Password:
Linux XITKJ4-16 6.1.0-9-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.27-1 (2023-05-08) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu Aug 21 15:43:19 WIB 2025 on tty1
```

```
usertkj@XITKJ4-16:~$ ip address
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:0b:ab:a6 brd ff:ff:ff:ff:ff:ff
    inet 192.168.16.254/24 brd 192.168.16.255 scope global enp0s3
        valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fe0b:aba6/64 scope link
        valid_lft forever preferred_lft forever
usertkj@XITKJ4-16:~$ _
```

ca. Command Prompt

```
Microsoft Windows [Version 10.0.19045.6216]
(c) Microsoft Corporation. All rights reserved.

C:\Users\USER>ping 192.168.16.1

Pinging 192.168.16.1 with 32 bytes of data:
Reply from 192.168.16.1: bytes=32 time<1ms TTL=128
Reply from 192.168.16.1: bytes=32 time<1ms TTL=128
Reply from 192.168.16.1: bytes=32 time<1ms TTL=128
Reply from 192.168.16.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.16.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\USER>ping 192.168.16.254

Pinging 192.168.16.254 with 32 bytes of data:
Reply from 192.168.16.254: bytes=32 time<1ms TTL=64
Reply from 192.168.16.254: bytes=32 time<1ms TTL=64
Reply from 192.168.16.254: bytes=32 time<1ms TTL=64
Reply from 192.168.16.254: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.16.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
usertkj@XITKJ4-16:~$ dpkg -l | grep ssh
ii  libssh2-1:amd64      1.10.0-3+b1      amd64      SSH2 client-side libr
y
ii  openssh-client      1:9.2p1-2        amd64      secure shell (SSH) clie
nt, for secure access to remote machines
ii  openssh-server      1:9.2p1-2        amd64      secure shell (SSH) serv
er, for secure access from remote machines
ii  openssh-sftp-server 1:9.2p1-2        amd64      secure shell (SSH) sftp
server module, for SFTP access from remote machines
ii  task-ssh-server     3.73             all        SSH server
```

```
usertkj@XITKJ4-16:~$ apt-cache search ssh | grep server
openssh-sftp-server - secure shell (SSH) sftp server module, for SFTP access from remote machines
openssh-server - secure shell (SSH) server, for secure access from remote machines
task-ssh-server - SSH server
usertkj@XITKJ4-16:~$ _
```

```
usertkj@XITKJ4-16:~$ sudo apt install openssh-server
[sudo] password for usertkj:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:9.2p1-2).
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
usertkj@XITKJ4-16:~$ _
```

```
usertkj@XITKJ4-16:~$ dpkg -l | grep ssh
ii  libssh2-1:amd64      1.10.0-3+b1      amd64      SSH2 client-side libr
y
ii  openssh-client      1:9.2p1-2        amd64      secure shell (SSH) clie
nt, for secure access to remote machines
ii  openssh-server      1:9.2p1-2        amd64      secure shell (SSH) serv
er, for secure access from remote machines
ii  openssh-sftp-server 1:9.2p1-2        amd64      secure shell (SSH) sftp
server module, for SFTP access from remote machines
ii  task-ssh-server     3.73             all        SSH server
usertkj@XITKJ4-16:~$
```

```

usertkj@XITKJ4-16:~$ sudo systemctl status sshd
• ssh.service - OpenBSD Secure Shell server
  Loaded: loaded (/lib/systemd/system/ssh.service; enabled; preset: enabled)
  Active: active (running) since Thu 2025-08-21 09:25:07 WIB; 6h ago
  Docs: man:sshd(8)
        man:sshd_config(5)
  Main PID: 466 (sshd)
  Tasks: 1 (limit: 1099)
  Memory: 6.6M
  CPU: 104ms
  CGroup: /system.slice/ssh.service
          └─466 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Aug 21 09:25:07 XITKJ4-16 systemd[1]: Starting ssh.service - OpenBSD Secure Shell server...
Aug 21 09:25:07 XITKJ4-16 sshd[466]: Server listening on 0.0.0.0 port 22.
Aug 21 09:25:07 XITKJ4-16 sshd[466]: Server listening on :: port 22.
Aug 21 09:25:07 XITKJ4-16 systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
Aug 21 14:12:13 XITKJ4-16 sshd[1419]: Connection closed by 192.168.11.1 port 49603 [preauth]
usertkj@XITKJ4-16:~$

```

```

usertkj@XITKJ4-16:~$ ss -lntup
Netid  State  Recv-Q  Send-Q  Local Address:Port  Peer Address:Port  Process
tcp    LISTEN  0       128     0.0.0.0:22          0.0.0.0:*          sshd
tcp    LISTEN  0       128     [::]:22            [::]:*              sshd
usertkj@XITKJ4-16:~$

```

```

usertkj@XITKJ4-16: ~
login as: usertkj
usertkj@192.168.16.254's password:
Linux XITKJ4-16 6.1.0-9-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.27-1 (2023-05-08)
) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu Aug 21 15:56:08 2025
usertkj@XITKJ4-16:~$

```

```

usertkj@XITKJ4-16: /etc/ssh
GNU nano 7.2          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/bin:/usr/bin:/bin:/usr/games

# 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 22
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::

#HostKey /etc/ssh/ssh_host_rsa_key
#HostKey /etc/ssh/ssh_host_ecdsa_key
[ Read 122 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^N Replace   ^U Paste     ^J Justify   ^_ Go To Line

```

```

usertkj@XITKJ4-16: /etc/ssh
GNU nano 7.2          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/bin:/usr/bin:/bin:/usr/games

# 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 200
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::

#HostKey /etc/ssh/ssh_host_rsa_key
#HostKey /etc/ssh/ssh_host_ecdsa_key

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute   ^C Location
^X Exit      ^R Read File  ^_ Replace    ^U Paste      ^J Justify   ^_ Go To Line

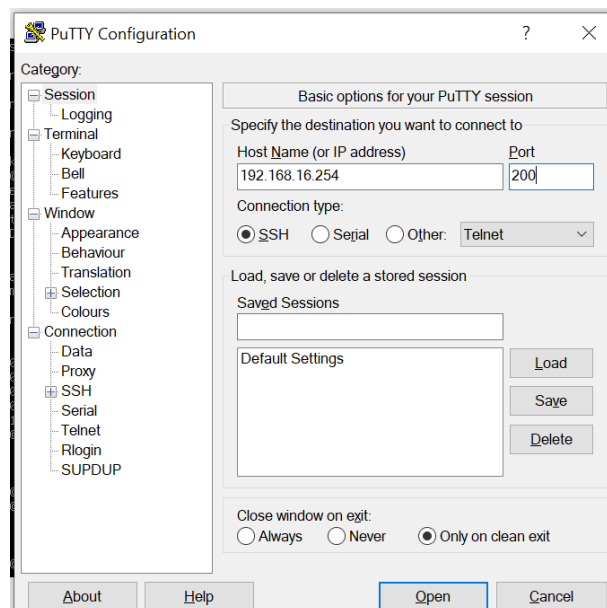
```

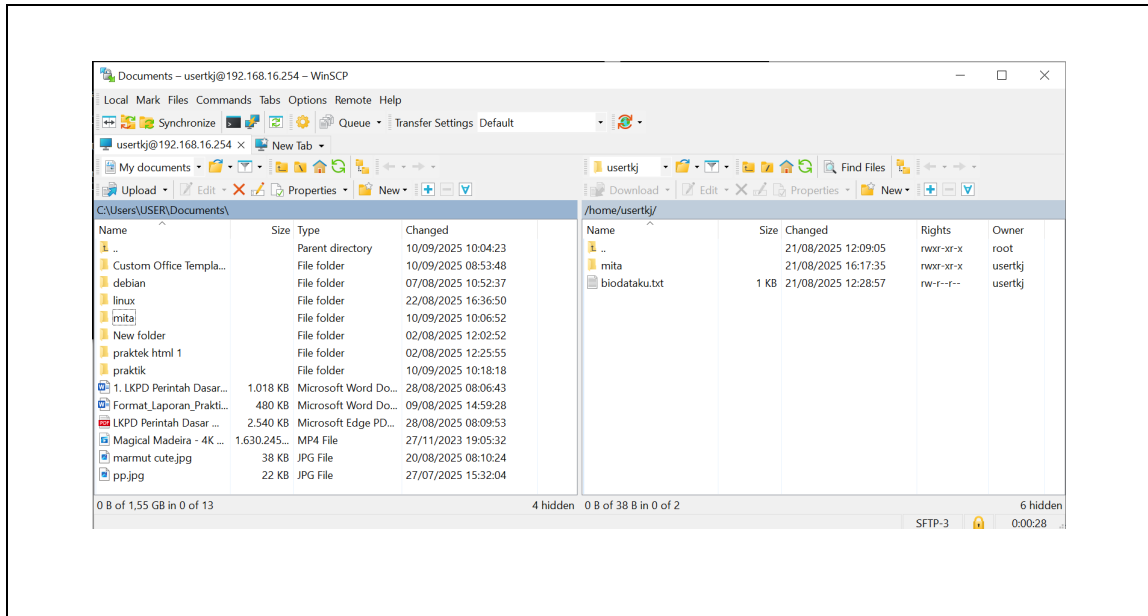
```

usertkj@XITKJ4-16:~$ sudo systemctl status sshd
• ssh.service - OpenBSD Secure Shell server
  Loaded: loaded (/lib/systemd/system/ssh.service; enabled; preset: enabled)
  Active: active (running) since Thu 2025-08-21 09:25:07 WIB; 6h ago
    Docs: man:sshd(8)
          man:sshd_config(5)
  Main PID: 466 (sshd)
    Tasks: 1 (limit: 1099)
  Memory: 6.6M
    CPU: 104ms
  CGroup: /system.slice/ssh.service
          └─466 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Aug 21 09:25:07 XITKJ4-16 systemd[1]: Starting ssh.service - OpenBSD Secure Shell server...
Aug 21 09:25:07 XITKJ4-16 sshd[466]: Server listening on 0.0.0.0 port 22.
Aug 21 09:25:07 XITKJ4-16 sshd[466]: Server listening on :: port 22.
Aug 21 09:25:07 XITKJ4-16 systemd[1]: Started ssh.service - OpenBSD Secure Shell server.
Aug 21 14:12:13 XITKJ4-16 sshd[1419]: Connection closed by 192.168.11.1 port 49603 [preauth]
usertkj@XITKJ4-16:~$ ss -lntup
Netid  State  Recv-Q  Send-Q  Local Address:Port  Peer Address:Port  Process
tcp    LISTEN  0       128    0.0.0.0:22         0.0.0.0:*          sshd
tcp    LISTEN  0       128    [::]:22           [::]:*             sshd
usertkj@XITKJ4-16:~$ sudo systemctl restart sshd
usertkj@XITKJ4-16:~$ ss -lntup
Netid  State  Recv-Q  Send-Q  Local Address:Port  Peer Address:Port  Process
tcp    LISTEN  0       128    0.0.0.0:200       0.0.0.0:*          sshd
tcp    LISTEN  0       128    [::]:200         [::]:*             sshd
usertkj@XITKJ4-16:~$

```





G. Kesimpulan

Buatlah kesimpulan dari praktikum yang sudah dilakukan pada lembar kerja berikut :

KESIMPULAN

Kesimpulan dari praktikum ini adalah saya bisa mengenal perintah :

1. `dpkg -l | grep ssh` : fungsinya untuk mengecek paket apa saja yang berhubungan dengan ssh yang sudah terinstal di system.
 - `dpkg -l` : menampilkan daftar semua paket yang terinstal
 - `grep ssh` : memfilter hasil agar hanya menampilkan paket yang mengandung ssh (misalnya `openssh-client`, `openssh-server`)
Gunanya untuk tahu apakah ssh server sudah terinstal atau belum.
2. `sudo systemctl status sshd` : fungsinya untuk melihat status layanan ssh apakah aktif (`running`) atau tidak, dan kapan terakhir kali dijalankan.

Gunanya untuk memastikan ssh server sedang berjalan dan bisa menerima koneksi.

3. ss -lntup : fungsinya untuk melihat jaringan yang sedang aktif

- -l : hanya untuk menampilkan port yang aktif.
- n : untuk menampilkan port dalam bentuk angka, bukan nama service.
- t : menampilkan koneksi TCP.
- u : menampilkan koneksi UDP.
- P : menampilkan program/proses yang menggunakan port.

Gunanya untuk mengecek apakah port 22 (ssh) sudah terbuka dan digunakan oleh sshd

H. Daftar Pustaka

- Debian 10 Handbook