

LAPORAN PRAKTIKUM OS SERVER & SISTEM ADMIN

MINGGU KE-2
INSTALLASI SSH SERVER CENTOS

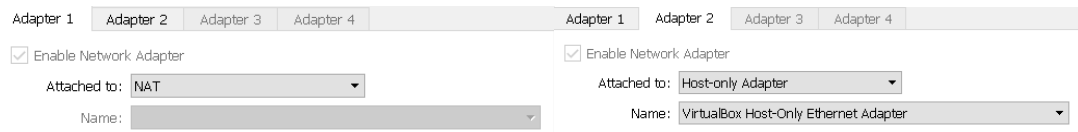


Disusun Oleh:
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**PROGRAM STUDI S1 - TEKNIK KOMPUTER
FAKULTAS ILMU KOMPUTER
UNIVERSITAS AMIKOM YOGYAKARTA
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Praktikum ke-2, Instalasi SSH Server

1. Identifikasi terlebih dahulu adapter yang akan digunakan. Disini ada 2 adapter yakni NAT dan Host-only.



Tertampil juga 2 adapter pada centos yang belum memiliki IP Address.

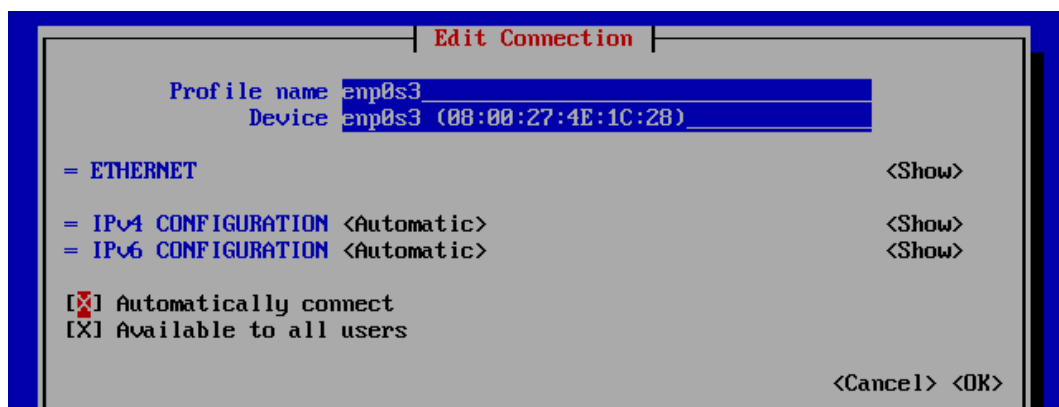
```
[root@localhost ~]# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:4e:1c:28 brd ff:ff:ff:ff:ff:ff
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:a5:24:12 brd ff:ff:ff:ff:ff:ff
[root@localhost ~]#
```

2. Disini centos pada virtualbox dikoneksikan dengan internet agar dapat menginstall paket yang dibutuhkan nantinya. Pada centos perintah nmtui digunakan untuk mengatur jaringan pada sistem operasi.

```
[root@localhost ~]# nmtui
```



Aktifkan automatically connect pada adapter NAT. kemudian keluar dan lakukan restart network serta reboot.



```
[root@localhost ~]# systemctl restart network
[root@localhost ~]# sudo shutdown -r now_
```

- Setelah itu dilakukan percobaan ping ke alamat google.com dan hasilnya terhubung makan centos telah terkoneksi dengan internet.

```
[root@localhost ~]# ping google.com
PING google.com (74.125.68.138) 56(84) bytes of data:
64 bytes from sc-in-f138.1e100.net (74.125.68.138): icmp_seq=1 ttl=105 time=41.8 ms
64 bytes from sc-in-f138.1e100.net (74.125.68.138): icmp_seq=2 ttl=105 time=39.6 ms
64 bytes from sc-in-f138.1e100.net (74.125.68.138): icmp_seq=3 ttl=105 time=39.9 ms
64 bytes from sc-in-f138.1e100.net (74.125.68.138): icmp_seq=4 ttl=105 time=39.8 ms
```

- Paket yang diinstall yaitu nano, karena pada perintah-perintah selanjutnya kita akan menggunakannya untuk mengedit file konfigurasi.

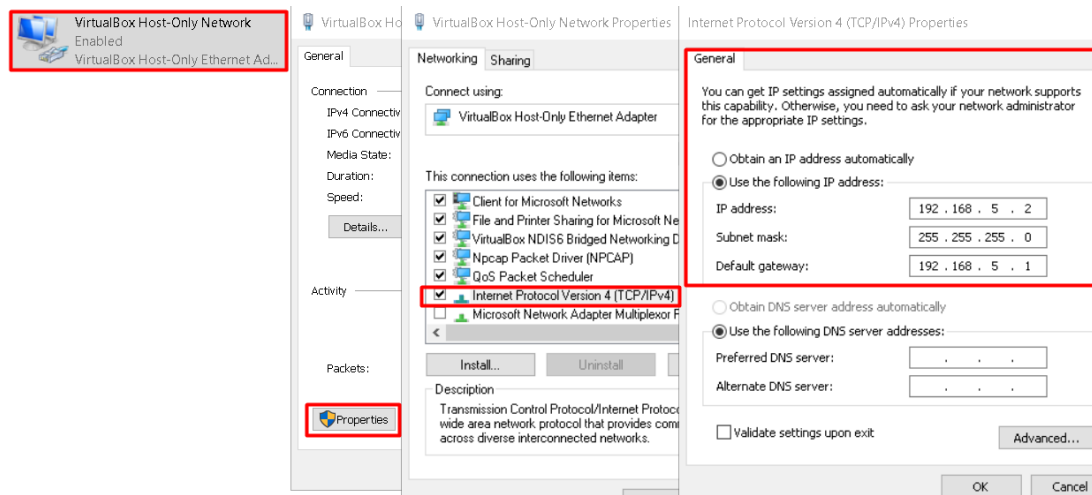
```
[root@localhost ~]# yum install nano_
=====
Package Arch Version Repository Size
=====
Installing:
nano x86_64 2.3.1-10.el7 base 440 k
=====
Transaction Summary
=====
Install 1 Package

Total download size: 440 k
Installed size: 1.6 M
Is this ok [y/d/N]: y
Downloading packages:
warning: /var/cache/yum/x86_64/7/base/packages/nano-2.3.1-10.el7.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID f4a80eb5: NOKEY
Public key for nano-2.3.1-10.el7.x86_64.rpm is not installed
nano-2.3.1-10.el7.x86_64.rpm | 440 kB 00:00:00
Retrieving key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
Importing GPG key 0xF4A80EB5:
 Userid : "CentOS-7 Key (CentOS 7 Official Signing Key) <security@centos.org>"
 Fingerprint: 6341 ab27 53d7 8a78 a7c2 7bb1 24c6 a8a7 f4a8 0eb5
 Package : centos-release-7-9.2009.0.el7.centos.x86_64 (@anaconda)
 From : /etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
Is this ok [y/N]: y
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
 Installing : nano-2.3.1-10.el7.x86_64 1/1
 Verifying : nano-2.3.1-10.el7.x86_64 1/1

Installed:
 nano.x86_64 0:2.3.1-10.el7

Complete!
```

- Tentukan alamat ip yang akan digunakan, pada windows adapter virtualbox host only dengan alamat ip 192.168.5.2.



6. Masuk pada file konfigurasi ip address adapter virtualbox host only dengan perintah nano sesuai dengan perintah pada gambar.

```
[root@localhost ~]# nano /etc/sysconfig/network-scripts/ifcfg-enp0s8
```

Hapus semua isi file kemudian tuliskan konfigurasi dibawah.

```
GNU nano 2.3.1      File: /etc/sysconfig/network-scripts/ifcfg-enp0s8

DEVICE="enp0s8"
BOOTPROTO=static
ONBOOT=yes
IPADDR=192.168.5.5
NETMASK=255.255.255.0
GATEWAY=192.168.5.1
```

7. Kemudian save file konfigurasi dan restart network, setelah itu percobaan untuk ping ke alamat ip virtualbox adapter pada windows.

```
[root@localhost ~]# systemctl restart network
[root@localhost ~]# ping 192.168.5.2
PING 192.168.5.2 (192.168.5.2) 56(84) bytes of data.
64 bytes from 192.168.5.2: icmp_seq=1 ttl=128 time=0.839 ms
64 bytes from 192.168.5.2: icmp_seq=2 ttl=128 time=0.549 ms
64 bytes from 192.168.5.2: icmp_seq=3 ttl=128 time=0.569 ms
64 bytes from 192.168.5.2: icmp_seq=4 ttl=128 time=0.587 ms
^C
--- 192.168.5.2 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3007ms
rtt min/avg/max/mdev = 0.549/0.636/0.839/0.117 ms
[root@localhost ~]#
```

8. Konfigurasikan file sshd_config dengan menghilangkan tanda # untuk mengaktifkan permiroot.

```
[root@localhost ~]# nano /etc/ssh/sshd_config_

GNU nano 2.3.1      File: /etc/ssh/sshd_config      Modified

#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::

HostKey /etc/ssh/ssh_host_rsa_key
#HostKey /etc/ssh/ssh_host_dsa_key
HostKey /etc/ssh/ssh_host_ecdsa_key
HostKey /etc/ssh/ssh_host_ed25519_key

# Ciphers and keying
#RekeyLimit default none

# Logging
#SyslogFacility AUTH
SyslogFacility AUTHPRIV
#LogLevel INFO

# Authentication:
#LoginGraceTime 2m
PermitRootLogin yes
#StrictModes yes
#MaxAuthTries 6
#MaxSessions 10
```

9. Save file konfigurasi sshd_config kemudian restart sshd serta pastikan status telah berjalan atau active.

```
[root@localhost ~]# service sshd restart
Redirecting to /bin/systemctl restart sshd.service
[root@localhost ~]# service sshd status
Redirecting to /bin/systemctl status sshd.service
■ sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Thu 2023-09-14 03:01:54 EDT; 8s ago
     Docs: man:sshd(8)
           man:sshd_config(5)
   Main PID: 1346 (sshd)
    CGroup: /system.slice/ssh.service
            └─1346 /usr/sbin/sshd -D

Sep 14 03:01:54 localhost.localdomain systemd[1]: Stopped OpenSSH server daemon.
Sep 14 03:01:54 localhost.localdomain systemd[1]: Starting OpenSSH server daemon...
Sep 14 03:01:54 localhost.localdomain sshd[1346]: Server listening on 0.0.0.0 port 22.
Sep 14 03:01:54 localhost.localdomain sshd[1346]: Server listening on :: port 22.
Sep 14 03:01:54 localhost.localdomain systemd[1]: Started OpenSSH server daemon.
[root@localhost ~]# _
```

10. Masuk pada cmd windows kemudian ping alamat ip centos yakni 192.168.5.5.

```
C:\Users\RIDHA NURRACHMAT>ping 192.168.5.5

Pinging 192.168.5.5 with 32 bytes of data:
Reply from 192.168.5.5: bytes=32 time<1ms TTL=64
Reply from 192.168.5.5: bytes=32 time<1ms TTL=64
Reply from 192.168.5.5: bytes=32 time<1ms TTL=64
Reply from 192.168.5.5: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.5.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

11. Setelah dapat terhubung ping, remote sistem operasi centos menggunakan cmd windows perintah ssh root@(ip centos). Pada gambar ssh remote telah berhasil dan mencoba untuk melihat alamat ip dengan perintah centos dan perintah reboot.

```
C:\Users\RIDHA NURRACHMAT>ssh root@192.168.5.5
The authenticity of host '192.168.5.5 (192.168.5.5)' can't be established.
ECDSA key fingerprint is SHA256:9PNv2S085Yd/KmHP080HWI5VWVklmQydzF/QScQk16o.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.5.5' (ECDSA) to the list of known hosts.
root@192.168.5.5's password:
Last login: Thu Sep 14 02:54:32 2023
[root@localhost ~]# ip a
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 08:00:27:4e:1c:28 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global noprefixroute dynamic enp0s3
        valid_lft 85583sec preferred_lft 85583sec
    inet6 fe80::ad49:d296:abdb:c253/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
3: enp0s8: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 08:00:27:a5:24:12 brd ff:ff:ff:ff:ff:ff
    inet 192.168.5.5/24 brd 192.168.5.255 scope global noprefixroute enp0s8
        valid_lft forever preferred_lft forever
    inet6 fe80::a00:27ff:fea5:2412/64 scope link
        valid_lft forever preferred_lft forever
[root@localhost ~]# reboot
Connection to 192.168.5.5 closed by remote host.
Connection to 192.168.5.5 closed.
```