

LAPORAN TEST AKHIR

**Praktikum Jaringan Komputer
Periode XXXII**



Disusun Oleh :

Nama praktikan	NPM
1. Achmad Muchlasin	06.2018.1.06941
2. Ryvana Suthelie	06.2018.1.07014
3. Ahmad Syarifuddin	06.2018.1.06989

**LABORATORIUM JARINGAN KOMPUTER
FAKULTAS TEKNIK ELEKTRO DAN
TEKNOLOGI INFORMASI
INSTITUT TEKNOLOGI ADHI TAMA SURABAYA
2020**

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

Tujuan

1. DHCP

Tujuan DHCP adalah agar tidak melakukan komfigurasi manual pada Client.

2. Router

Tujuan Routing adalah untuk menghubungkan beberapa jaringan dan packet forwarding yang digunakan untuk LAN maupun WAN.

3. FTP

Tujuan FTP adalah untuk sharing data, menyediakan indirect atau implicit remote computer, menyediakan tempat penyimpanan bagi user, menyediakan transfer data yang reliable dan efisien.

4. DNS

Tujuan DNS adalah untuk menerjemahkan alamat IP menjadi sebuah nama domain dan juga sebaliknya.

5. Web Server

Tujuan Web Server adalah untuk melakukan atau akan mentransfer berkas permintaan malalui protocol komunikasi yang telah ditentukan sedemikian rupa.

6. Mail Server

Tujuan Mail Server adalah untuk pengaturan atau penyaluran atau penerimaan respon atas email yang masuk.

7. Squid Server

Tujuan Squid Server adalah sebagai gateway untuk komputer client, yang mana sebagai penyarig hasil penjelajahan.

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

1. Topologi



Keterangan:

- 1. Pada PC-ROUTER menggunakan eth0 dan eth1.**
- 2. IP yang digunakan akan ditentukan saat TA Jarkom XXXII. Misalnya pada PC-ROUTER,**
eth0 : 172.15.1.1 255.255.0.0
eth1 : 192.10.1.1 255.255.255.0

VLSM

Pada kampus ITATS terdapat sebuah network address 172.20.0.0/16. IP tersebut akan dibagi berbagai gedung yang ada di ITATS, di Gedung A ada 4090 host. Sedangkan pada di gedung B dan Gedung C ada 2040 host. Di Gedung F, Gedung G, dan Gedung H ada 1020 host. Kemudian kantin, dan kemahasiswaan ada 500 host. Tentukan network address yang baru, broadcast address yang baru, dan subnet yang baru!

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

2. Soal Study Kasus

a. DHCP (5 Point)

Setting DHCP Statis(Fixed IP) dan Dinamis di PC-ROUTER agar bisa mendistribusikan **IP Statis** pada PC-SERVER dan **IP Dinamis** pada PC-CLIENT.

b. Router (5 Point)

Konfigurasi pada PC SERVER/ROUTER agar antara PC-CLIENT_1 dan PC-CLIENT_2 dapat **saling terkoneksi** (saling ping).

Setting IP Lan Card pada PC Router

Eth0 = IP: 175.15.1.1 NetMask : 255.255.0.0

Eth1 = IP: 192.10.1.1 NetMask : 255.255.255.0

c. FTP (10 Point)

Konfigurasikan pada PC-SERVER agar dapat memberikan akses FTP kepada PC-CLIENT_1 dan PC-CLIENT_2 menggunakan ftp.itats.ac.id

(Sebelumnya harus sudah terkomfigurasi DNS Di PC-SERVER/ROUTER)

d. DNS (15 Point)

Konfigurasikan agar PC-SERVER misal memiliki domain sebagai berikut:

- **www.itats.ac.id**
- **mail.itats.ac.id**
- **basprog.itats.ac.id**
- **rpl.itats.ac.id**
- **jarkom.itats.ac.id**
- **ftp.itats.ac.id**

Sehingga PC-CLIENT_1 dan PC-CLIENT_2 dapat saling **terkoneksi dengan domain** tersebut.

e. Web Server (8 Point)

Buatlah web dengan domain **www.itats.ac.id** di PC-SERVER dengan 4 buah halaman web yang mana:

- Halaman satunya merupakan **halaman utama / induk** (buat seperti tampilan web). **(1 Point)**

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

- Sedangkan **3 halaman lainnya** yang terdapat di halaman utama, berisi **Logo Lab Masing-masing, keterangan singkat dan praktikum yang dijalankan.** **(4 Point)**
 - Serta PC-ROUTER dan PC-CLIENT dapat **memanggil web** tersebut melalui web browser dengan domain tersebut. **(3 Point)**
- f. **Mail Server (12 point)**
- Konfigurasikan **Squirrelmail** di **PC-SERVER**, agar pada **PC-CLIENT_1** dan **PC-CLIENT_2** dapat saling mengirimkan email.
- Untuk uji coba silahkan kirim pesan antar server dan client.
- g. **Squid Server (5 Point)**
- Lakukan **Blocking terhadap website** dengan domain yang telah diberikan **(3 Point)**
 - Lakukan **Blocking terhadap keyword** yang telah diberikan **(2 Point)**
- Keyword : PORNO**

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

Jawaban :

1. Topologi

VLSM

IP Address : 172.20.0.0/16

Subnet Mask : 255.255.0.0

Perhitungan VLSM

Gedung A

Jumlah host : 4094 host

Prefix baru : /20

Subnet mask : 255.255.240.0

Wildcard :

255. 255. 255. 255

255. 255. 240. 0

0. 0. 15. 255

Broadcast :

172. 20. 0. 0

0. 0. 15. 255

172. 20. 15. 255

Network ID : 172.20.0.0/20

Host Min : 172.20.0.1

Host Max : 172.20.15.254

Subnet Mask : 255.255.240.0

Broadcast : 172.20.15.255

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

Gedung B dan C

Jumlah host : 2046 host
Prefix baru : /21
Subnet mask : 255.255.248.0

Wildcard :
255. 255. 255. 255
255. 255. 248. 0
0. 0. 7 . 255

Broadcast :
172. 20. 16. 0
0. 0. 7 . 255
172. 20. 23. 255

Network ID : 172.20.16.0/21
Host Min : 172.20.16.1
Host Max : 172.20.23.254
Subnet Mask : 255.255.248.0
Broadcast : 172.20.23.255

Gedung F, G, dan H

Jumlah host : 1022
Prefix baru : /22
Subnet mask : 255.255.252.0

Wildcard :
255. 255. 255. 255
255. 255. 252. 0
0. 0. 3 . 255

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

Broadcast :

172. 20. 24. 0

0. 0. 3 . 255

172. 20. 27. 255

Network ID : 172.20.24.0/22

Host Min : 172.20.24.1

Host Max : 172.20.27.254

Subnet Mask : 255.255.248.0

Broadcast : 172.20.27.255

Gedung F, G, dan H

Jumlah host : 510

Prefix baru : /23

Subnet mask : 255.255.254.0

Wildcard :

255. 255. 255. 255

255. 255. 254. 0

0. 0. 1 . 255

Broadcast :

172. 20. 28. 0

0. 0. 1 . 255

172. 20. 29. 255

Network ID : 172.20.28.0/23

Host Min : 172.20.28.1

Host Max : 172.20.29.254

Subnet Mask : 255.255.254.0

Broadcast : 172.20.29.255

STUDY KASUS TEST AKHIR PRAKTIKUM

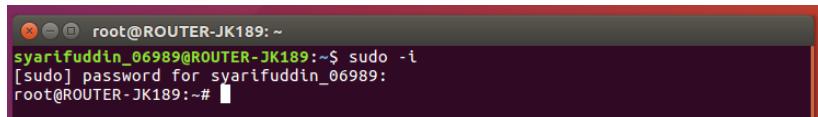
JARINGAN KOMPUTER XXXII

2. Soal Study Kasus

a. DHCP

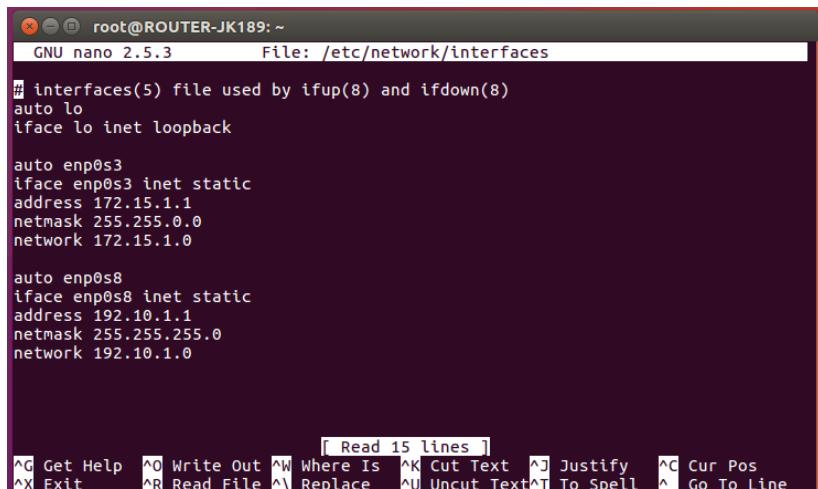
i. Konfigurasi DHCP Dinamis

1. Masuk ke terminal dengan Ctrl+T
2. Login sebagai User Root



```
root@ROUTER-JK189: ~
syarifuddin_06989@ROUTER-JK189:~$ sudo -i
[sudo] password for syarifuddin_06989:
root@ROUTER-JK189:~#
```

3. Set IP address PC-ROUTER menjadi 172.15.1.1 & 192.10.1.1



```
root@ROUTER-JK189: ~
GNU nano 2.5.3      File: /etc/network/interfaces

# interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

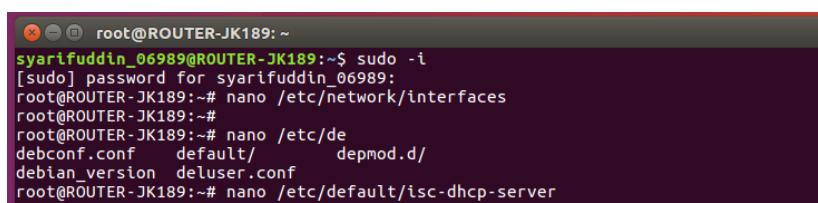
auto enp0s3
iface enp0s3 inet static
address 172.15.1.1
netmask 255.255.0.0
network 172.15.1.0

auto enp0s8
iface enp0s8 inet static
address 192.10.1.1
netmask 255.255.255.0
network 192.10.1.0

[ Read 15 lines ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit     ^R Read File  ^\ Replace   ^U Uncut Text  ^T To Spell  ^_ Go To Line
```

4. Lakukan editing pada file /etc/dhcp/isc-dhcp-server

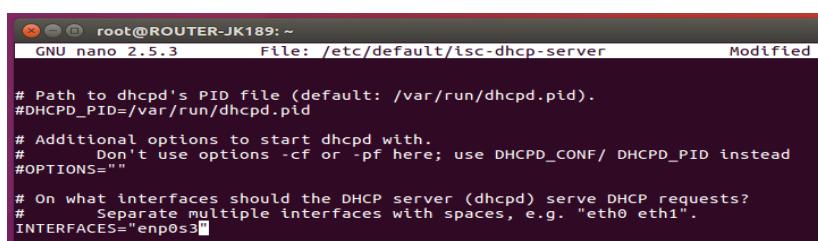
```
# nano /etc/dhcp/isc-dhcp-server
```



```
root@ROUTER-JK189: ~
syarifuddin_06989@ROUTER-JK189:~$ sudo -i
[sudo] password for syarifuddin_06989:
root@ROUTER-JK189:~# nano /etc/network/interfaces
root@ROUTER-JK189:~# nano /etc/de
debconf.conf default/ depmod.d/
debian_version deluser.conf
root@ROUTER-JK189:~# nano /etc/default/isc-dhcp-server
```

5. Edit menjadi:

```
# interfaces = [nama_interfaces]
```



```
root@ROUTER-JK189: ~
GNU nano 2.5.3      File: /etc/default/isc-dhcp-server      Modified

# Path to dhcpcd's PID file (default: /var/run/dhcpcd.pid).
#DHCPD_PID=/var/run/dhcpcd.pid

# Additional options to start dhcpcd with.
#       Don't use options -cf or -pf here; use DHCPD_CONF/ DHCPD_PID instead
#OPTIONS=""

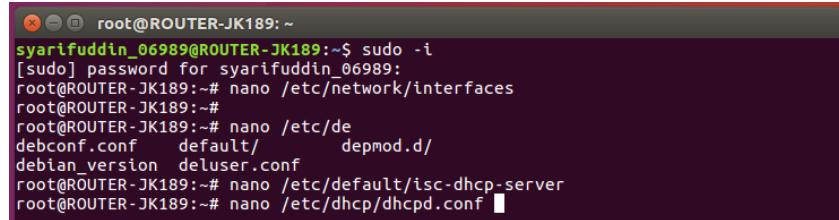
# On what interfaces should the DHCP server (dhcpcd) serve DHCP requests?
#       Separate multiple interfaces with spaces, e.g. "eth0 eth1".
INTERFACES="enp0s3"
```

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

6. Lakukan editing pada file /etc/dhcp/dhcp.conf dengan mengetikkan perintah:

```
# nano /etc/dhcp/dhcp.conf
```

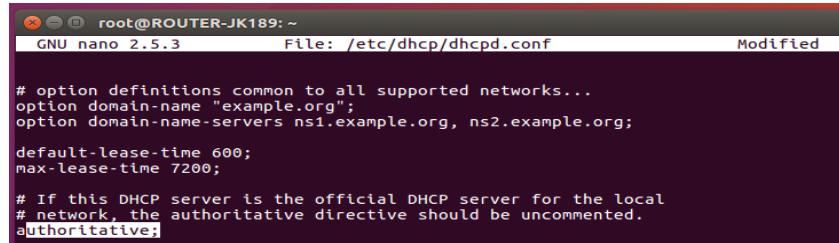


```
root@ROUTER-JK189:~$ sudo -i  
[sudo] password for syarifuddin_06989:  
root@ROUTER-JK189:~# nano /etc/network/interfaces  
root@ROUTER-JK189:~# nano /etc/de  
debconf.conf default/ debmod.d/  
debian_version deluser.conf  
root@ROUTER-JK189:~# nano /etc/default/isc-dhcp-server  
root@ROUTER-JK189:~# nano /etc/dhcp/dhcpd.conf
```

7. Aktifkan perintah:

Autoritative

NB : cara mengaktifkan hapus '#'

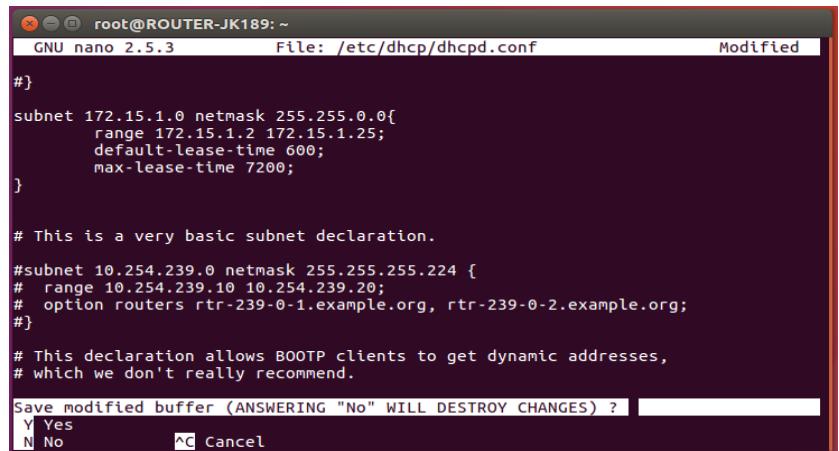


```
root@ROUTER-JK189:~$ nano /etc/dhcp/dhcpd.conf  
# option definitions common to all supported networks...  
option domain-name "example.org";  
option domain-name-servers ns1.example.org, ns2.example.org;  
  
default-lease-time 600;  
max-lease-time 7200;  
  
# If this DHCP server is the official DHCP server for the local  
# network, the authoritative directive should be uncommented.  
authoritative;
```

8. Lalu ketikkan perintah:

```
subnet 172.15.1.0 netmask 255.255.0.0 {  
    range 172.15.1.2 172.15.1.24;  
    default-lease-time 600;  
    max-lease-time 7200;  
}
```

NB : Pada contoh skrip diatas, Server memberikan range IP kepada user, mulai 172.15.1.2 sampai 172.15.1.24



```
root@ROUTER-JK189:~$ nano /etc/dhcp/dhcpd.conf  
#}  
  
subnet 172.15.1.0 netmask 255.255.0.0{  
    range 172.15.1.2 172.15.1.25;  
    default-lease-time 600;  
    max-lease-time 7200;  
}  
  
# This is a very basic subnet declaration.  
  
#subnet 10.254.239.0 netmask 255.255.255.224 {  
#    range 10.254.239.10 10.254.239.20;  
#    option routers rtr-239-0-1.example.org, rtr-239-0-2.example.org;  
#}  
  
# This declaration allows BOOTP clients to get dynamic addresses,  
# which we don't really recommend.  
  
Save modified buffer (ANSWERING "No" WILL DESTROY CHANGES) ? [Y/N]  
Y Yes  
N No  
C Cancel
```

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

9. Simpan hasil pekerjaan anda dengan mengetikkan sintaks perintah Ctrl+x kemudian tekan Y lalu enter.

```
# This declaration allows BOOTP clients to get dynamic addresses,  
# which we don't really recommend.  
  
Save modified buffer (ANSWERING "No" WILL DESTROY CHANGES) ?  
Y Yes  
N No       Cancel
```

10. Jalankan / restart DHCPD Server dengan perintah berikut ini:

```
# /etc/init.d/isc-dhcp-server restart
```

Atau restart service dhcpcd dengan:

```
# service dhcpcd restart
```

```
root@ROUTER-JK189:~# /etc/init.d/isc-dhcp-server restart  
[ ok ] Restarting isc-dhcp-server (via systemctl): isc-dhcp-server.service.  
root@ROUTER-JK189:~#
```

11. DHCP berhasil kita setting, dan selanjutnya setting di server, client1 & client2.

12. Setting interfaces client menjadi :

```
auto [nama_interfaces]
```

```
iface [nama_interfaces] inet dhcp
```

NB : iface [nama_interfaces] inet dhcp disini sedikit berbeda dengan yang sebelumnya dapat dilihat bahwa terdapat keyword *dhcp* yang menunjukkan bahwa sifat ip bersifat dinamis.

Server

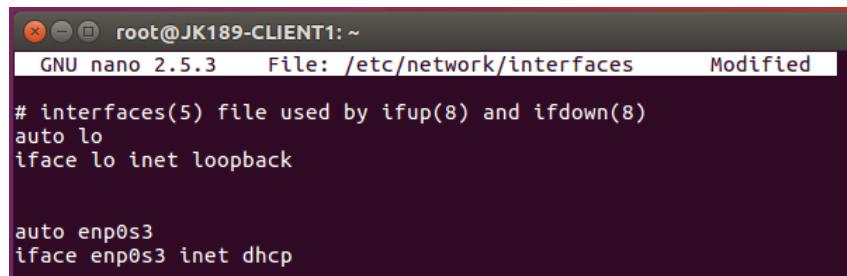
```
root@JK189-SERVER:~#  
syarifuddin_06989@JK189-SERVER:~$ sudo -i  
sudo: unable to resolve host JK189-SERVER: Connection timed out  
[sudo] password for syarifuddin_06989:  
root@JK189-SERVER:~#
```

```
root@JK189-SERVER:~#  
GNU nano 2.5.3          File: /etc/network/interfaces           Modified  
  
# interfaces(5) file used by ifup(8) and ifdown(8)  
auto lo  
iface lo inet loopback  
  
auto enp0s3  
iface enp0s3 inet dhcp
```

Client 1 :

```
root@JK189-CLIENT1:~#  
syarifuddin_06989@JK189-CLIENT1:~$ sudo -i  
sudo: unable to resolve host JK189-CLIENT1: Connection refused  
[sudo] password for syarifuddin_06989:  
root@JK189-CLIENT1:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

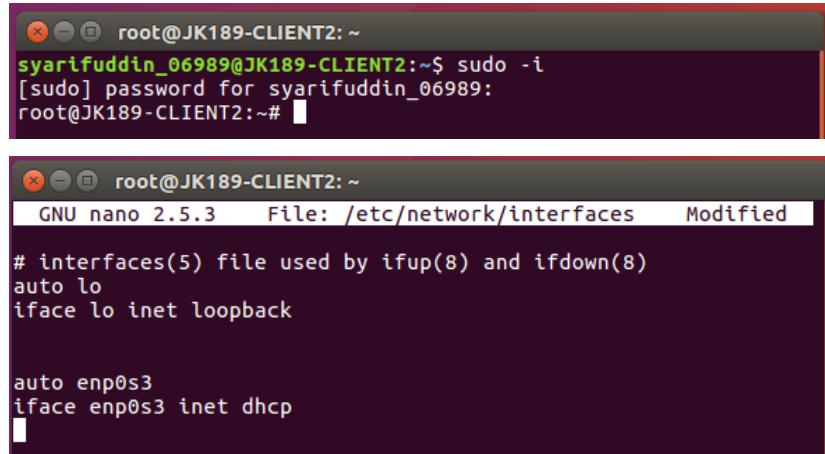


```
root@JK189-CLIENT1: ~
GNU nano 2.5.3      File: /etc/network/interfaces      Modified

# interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

auto enp0s3
iface enp0s3 inet dhcp
```

Client 2 :



```
root@JK189-CLIENT2: ~
syarifuddin_06989@JK189-CLIENT2:~$ sudo -i
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT2:~#
```



```
root@JK189-CLIENT2: ~
GNU nano 2.5.3      File: /etc/network/interfaces      Modified

# interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

auto enp0s3
iface enp0s3 inet dhcp
```

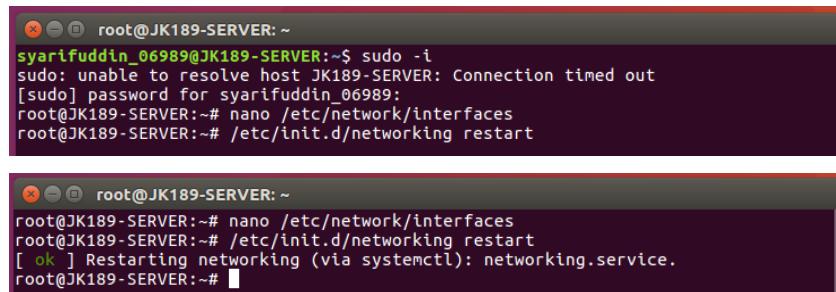
13. Kemudian restart service network dengan perintah:

/etc/init.d/networking restart

Atau

ifup [nama_interfaces]

Server :

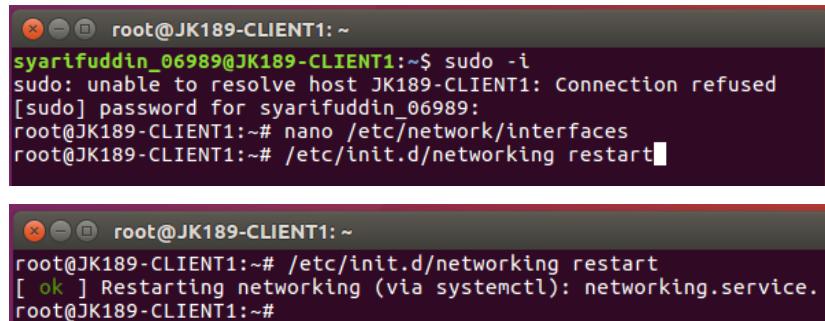


```
root@JK189-SERVER: ~
syarifuddin_06989@JK189-SERVER:~$ sudo -i
sudo: unable to resolve host JK189-SERVER: Connection timed out
[sudo] password for syarifuddin_06989:
root@JK189-SERVER:~# nano /etc/network/interfaces
root@JK189-SERVER:~# /etc/init.d/networking restart
```



```
root@JK189-SERVER: ~
root@JK189-SERVER:~# nano /etc/network/interfaces
root@JK189-SERVER:~# /etc/init.d/networking restart
[ ok ] Restarting networking (via systemctl): networking.service.
root@JK189-SERVER:~#
```

Client 1 :



```
root@JK189-CLIENT1: ~
syarifuddin_06989@JK189-CLIENT1:~$ sudo -i
sudo: unable to resolve host JK189-CLIENT1: Connection refused
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT1:~# nano /etc/network/interfaces
root@JK189-CLIENT1:~# /etc/init.d/networking restart
```



```
root@JK189-CLIENT1: ~
root@JK189-CLIENT1:~# /etc/init.d/networking restart
[ ok ] Restarting networking (via systemctl): networking.service.
root@JK189-CLIENT1:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

Client 2 :

```
root@JK189-CLIENT2:~# /etc/init.d/networking restart
[....] Restarting networking (via systemctl): networking.service
[.ok]
root@JK189-CLIENT2:~#
```

14. Jika sudah mendapatkan IP, cek IP client dengan perintah:

```
# ifconfig
```

Server :

```
root@JK189-SERVER:~#
syarifuddin_06989@JK189-SERVER:~$ sudo -i
sudo: unable to resolve host JK189-SERVER: Connection timed out
[sudo] password for syarifuddin_06989:
root@JK189-SERVER:~# clear
root@JK189-SERVER:~# ifconfig
enp0s3    Link encap:Ethernet HWaddr 08:00:27:c6:dc:36
          inet addr:172.15.1.2 Bcast:172.15.255.255 Mask:255.255.0.0
          inet6 addr: fe80::a00:27ff:fecc:dc36/64 Scope:Link
                  UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
                  RX packets:141 errors:0 dropped:0 overruns:0 frame:0
                  TX packets:68 errors:0 dropped:0 overruns:0 carrier:0
                  collisions:0 txqueuelen:1000
                  RX bytes:24052 (24.0 KB)  TX bytes:7894 (7.8 KB)
```

Client 1 :

```
root@JK189-CLIENT1:~#
syarifuddin_06989@JK189-CLIENT1:~$ sudo -i
sudo: unable to resolve host JK189-CLIENT1
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT1:~# clear
root@JK189-CLIENT1:~# ifconfig
enp0s3    Link encap:Ethernet HWaddr 08:00:27:9f:fd:f7
          inet addr:172.15.1.3 Bcast:172.15.255.255 Mask:255.255.0.0
          inet6 addr: fe80::a00:27ff:fe9f:fd7/64 Scope:Link
                  UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
                  RX packets:84 errors:0 dropped:0 overruns:0 frame:0
                  TX packets:70 errors:0 dropped:0 overruns:0 carrier:0
                  collisions:0 txqueuelen:1000
                  RX bytes:13741 (13.7 KB)  TX bytes:7404 (7.4 KB)
```

Client 2 :

```
root@JK189-CLIENT2:~#
root@JK189-CLIENT2:~# ifconfig
enp0s3    Link encap:Ethernet HWaddr 08:00:27:c4:9e:5b
          inet addr:172.15.1.4 Bcast:172.15.255.255 Mask:255.255.0.0
          inet6 addr: fe80::a00:27ff:fec4:9e5b/64 Scope:Link
                  UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
                  RX packets:3 errors:0 dropped:0 overruns:0 frame:0
                  TX packets:58 errors:0 dropped:0 overruns:0 carrier:0
                  collisions:0 txqueuelen:1000
                  RX bytes:180 (180.0 B)  TX bytes:6397 (6.3 KB)
```

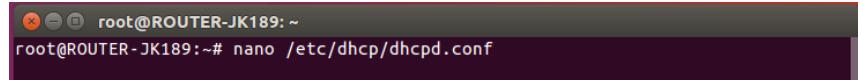
STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

ii. Konfigurasi Fixed DHCP

1. Buka file /etc/dhcp/dhcp.conf dengan perintah:

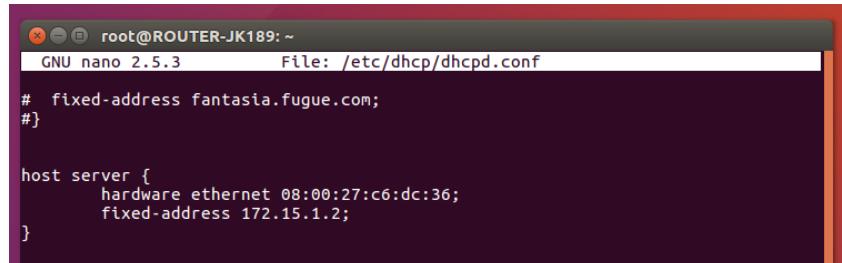
```
# nano /etc/dhcp/dhcp.conf
```



```
root@ROUTER-JK189:~# nano /etc/dhcp/dhcpd.conf
```

2. Tambahkan sintak berikut dibawah konfigurasi DHCP yang telah dilakukan pada langkah percobaan, untuk memberikan fixed IP address 172.15.1.2 kepada server :

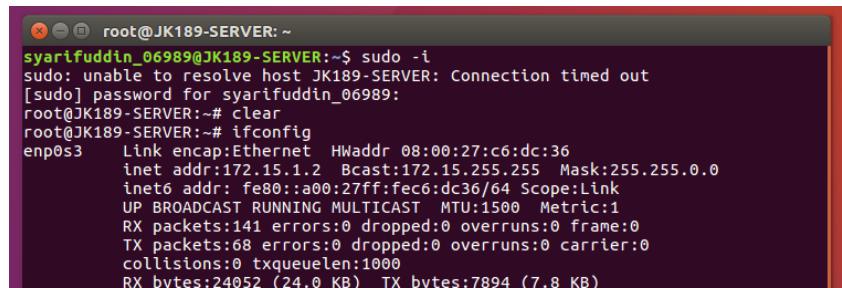
```
host server{
    hardware ethernet 08:00:27:9f:fd:f7;
    fixed-address 172.15.1.2;
}
```



```
root@ROUTER-JK189:~# nano /etc/dhcp/dhcpd.conf
# fixed-address fantasia.fugue.com;
#}

host server {
    hardware ethernet 08:00:27:c6:dc:36;
    fixed-address 172.15.1.2;
}
```

3. Kode hardware ethernet merupakan kode hardware milik client yang bisa dilihat dengan perintah # ifconfig pada komputer server.



```
root@JK189-SERVER:~# sudo -i
[sudo] password for syarifuddin_06989
root@JK189-SERVER:~# clear
root@JK189-SERVER:~# ifconfig
enp0s3    Link encap:Ethernet HWaddr 08:00:27:c6:dc:36
          inet addr:172.15.1.2 Bcast:172.15.255.255 Mask:255.255.0.0
          inet6 addr: fe80::a00:27ff:fe:dc36/64 Scope:Link
            UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
            RX packets:141 errors:0 dropped:0 overruns:0 frame:0
            TX packets:68 errors:0 dropped:0 overruns:0 carrier:0
            collisions:0 txqueuelen:1000
            RX bytes:24052 (24.0 KB)  TX bytes:7894 (7.8 KB)
```

4. Restart DHCP pada komputer router.

```
# /etc/init.d/isc-dhcp-server restart
```

Atau restart service dhcpcd dengan:

```
# service dhcpcd restart
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

```
root@ROUTER-JK189:~# /etc/init.d/isc-dhcp-server restart
[ ok ] Restarting isc-dhcp-server (via systemctl): isc-dhcp-server.service.
root@ROUTER-JK189:~#
```

5. Setting interfaces server menjadi dhcp.

Contoh :

```
auto [nama_interfaces]
iface [nama_interfaces]
```

```
root@JK189-SERVER:~#
GNU nano 2.5.3           File: /etc/network/interfaces      Modified
# interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

auto enp0s3
iface enp0s3 inet dhcp
```

6. Kemudian restart service network server

Server

```
root@JK189-SERVER:~#
syarifuddin_06989@JK189-SERVER:~$ sudo -i
sudo: unable to resolve host JK189-SERVER: Connection timed out
[sudo] password for syarifuddin_06989:
root@JK189-SERVER:~# nano /etc/network/interfaces
root@JK189-SERVER:~# /etc/init.d/networking restart
```

```
root@JK189-SERVER:~#
root@JK189-SERVER:~# nano /etc/network/interfaces
root@JK189-SERVER:~# /etc/init.d/networking restart
[ ok ] Restarting networking (via systemctl): networking.service.
root@JK189-SERVER:~#
```

```
root@JK189-SERVER:~#
syarifuddin_06989@JK189-SERVER:~$ sudo -i
sudo: unable to resolve host JK189-SERVER: Connection timed out
[sudo] password for syarifuddin_06989:
root@JK189-SERVER:~# clear
root@JK189-SERVER:~# ifconfig
enp0s3    Link encap:Ethernet HWaddr 08:00:27:c6:dc:36
          inet addr:172.15.1.2 Bcast:172.15.255.255 Mask:255.255.0.0
                  inet6 addr: fe80::a00:27ff:fec6:dc36/64 Scope:Link
                      UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
                      RX packets:141 errors:0 dropped:0 overruns:0 frame:0
                      TX packets:68 errors:0 dropped:0 overruns:0 carrier:0
                      collisions:0 txqueuelen:1000
                      RX bytes:24052 (24.0 KB) TX bytes:7894 (7.8 KB)
```

STUDY KASUS TEST AKHIR PRAKTIKUM

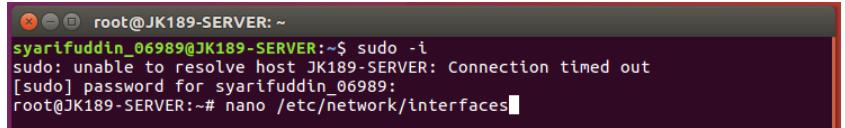
JARINGAN KOMPUTER XXXII

b. Router

a. Konfigurasi untuk PC Router:

1. Setting IP untuk eth0 172.15.1.1 dan eth1 192.10.1.1 dengan subnetmask yaitu 255.255.0.0 & 255.255.255.0 dengan perintah berikut:

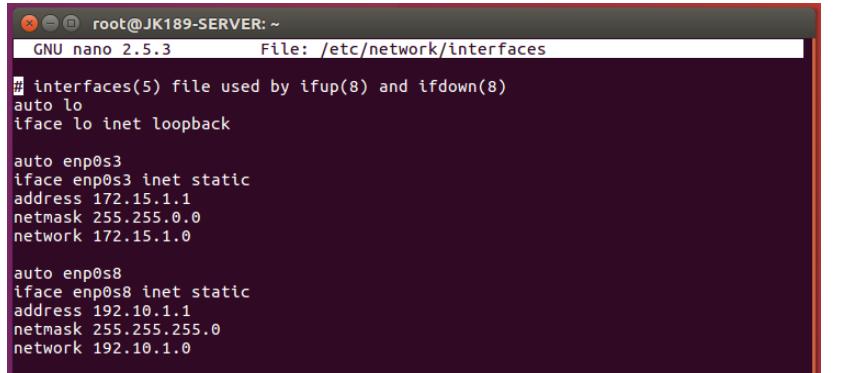
```
# nano /etc/network/interfaces
```



```
root@JK189-SERVER:~$ sudo -i  
sudo: unable to resolve host JK189-SERVER: Connection timed out  
[sudo] password for syarifuddin_06989:  
root@JK189-SERVER:~# nano /etc/network/interfaces
```

```
auto [nama_interfaces_0]  
iface [nama_interfaces_0] inet static  
address 172.15.1.1  
netmask 255.255.0.0  
network 172.15.1.0  
gateway 172.15.1.1
```

```
auto [nama_interfaces_1]  
iface [nama_interfaces_1] inet static  
address 192.10.1.1  
netmask 255.255.255.0  
network 192.10.1.0  
gateway 192.10.1.1
```



```
root@JK189-SERVER:~$  
GNU nano 2.5.3          File: /etc/network/interfaces  
  
# interfaces(5) file used by ifup(8) and ifdown(8)  
auto lo  
iface lo inet loopback  
  
auto enp0s3  
iface enp0s3 inet static  
address 172.15.1.1  
netmask 255.255.0.0  
network 172.15.1.0  
  
auto enp0s8  
iface enp0s8 inet static  
address 192.10.1.1  
netmask 255.255.255.0  
network 192.10.1.0
```

Simpan dengan **ctrl+x** kemudian tekan **y** lalu **enter**

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

2. Kemudian restart interfaces menggunakan perintah berikut:

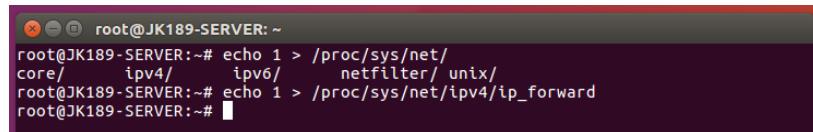
```
# /etc/init.d/networking restart
```

Atau

```
# ifup [nama_interfaces_0] dan ifup  
[nama_interface_1]
```

3. Supaya bisa meneruskan paket kita setting dengan mengetik perintah:

```
# echo 1 > /proc/sys/net/ipv4/ip_forward
```

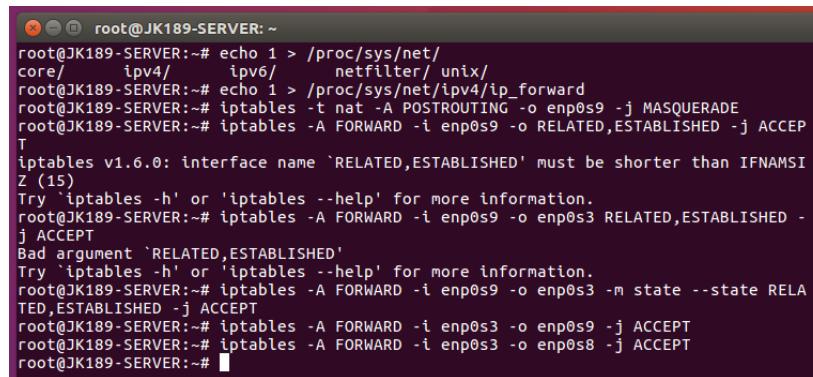


```
root@JK189-SERVER:~# echo 1 > /proc/sys/net/  
core/ipv4/ipv6/netfilter/unix/  
root@JK189-SERVER:~# echo 1 > /proc/sys/net/ipv4/ip_forward  
root@JK189-SERVER:~#
```

4. Tambahkan iptable untuk forwarding interfaces eth0 ke eth1 di PC

Router dengan perintah berikut:

```
# sudo iptables -t nat -A POSTROUTING -o eth2 -j  
MASQUERADE  
  
# sudo iptables -A FORWARD -i eth1 -o eht0 -m state  
-state RELATED, ESTABLISHED -j ACCEPT  
  
# sudo iptables -A FORWARD -i eth0 -o eht1 -j  
ACCEPT
```



```
root@JK189-SERVER:~# echo 1 > /proc/sys/net/  
core/ipv4/ipv6/netfilter/unix/  
root@JK189-SERVER:~# echo 1 > /proc/sys/net/ipv4/ip_forward  
root@JK189-SERVER:~# iptables -t nat -A POSTROUTING -o enp0s9 -j MASQUERADE  
root@JK189-SERVER:~# iptables -A FORWARD -i enp0s9 -o RELATED,ESTABLISHED -j ACCEP  
T  
iptables v1.6.0: interface name 'RELATED,ESTABLISHED' must be shorter than IFNAMSIZ  
(15)  
Try 'iptables -h' or 'iptables --help' for more information.  
root@JK189-SERVER:~# iptables -A FORWARD -i enp0s9 -o enp0s3 RELATED,ESTABLISHED -  
j ACCEPT  
Bad argument 'RELATED,ESTABLISHED'  
Try 'iptables -h' or 'iptables --help' for more information.  
root@JK189-SERVER:~# iptables -A FORWARD -i enp0s9 -o enp0s3 -m state --state RELA  
TED,ESTABLISHED -j ACCEPT  
root@JK189-SERVER:~# iptables -A FORWARD -i enp0s3 -o enp0s9 -j ACCEPT  
root@JK189-SERVER:~# iptables -A FORWARD -i enp0s3 -o enp0s8 -j ACCEPT  
root@JK189-SERVER:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

5. Lakukan tes ping ke [nama_interfaces_0] dan [nama_interfaces_1].

```
root@JK189-SERVER:~# ping 172.15.1.1
PING 172.15.1.1 (172.15.1.1) 56(84) bytes of data.
64 bytes from 172.15.1.1: icmp_seq=1 ttl=64 time=0.099 ms
64 bytes from 172.15.1.1: icmp_seq=2 ttl=64 time=0.101 ms
64 bytes from 172.15.1.1: icmp_seq=3 ttl=64 time=0.101 ms
64 bytes from 172.15.1.1: icmp_seq=4 ttl=64 time=0.111 ms
64 bytes from 172.15.1.1: icmp_seq=5 ttl=64 time=0.111 ms
64 bytes from 172.15.1.1: icmp_seq=6 ttl=64 time=0.110 ms
64 bytes from 172.15.1.1: icmp_seq=7 ttl=64 time=0.111 ms
^C
--- 172.15.1.1 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6124ms
rtt min/avg/max/mdev = 0.099/0.106/0.111/0.009 ms
root@JK189-SERVER:~# ping 192.10.1.1
PING 192.10.1.1 (192.10.1.1) 56(84) bytes of data.
64 bytes from 192.10.1.1: icmp_seq=1 ttl=64 time=0.170 ms
64 bytes from 192.10.1.1: icmp_seq=2 ttl=64 time=0.099 ms
64 bytes from 192.10.1.1: icmp_seq=3 ttl=64 time=0.084 ms
64 bytes from 192.10.1.1: icmp_seq=4 ttl=64 time=0.099 ms
64 bytes from 192.10.1.1: icmp_seq=5 ttl=64 time=0.100 ms
64 bytes from 192.10.1.1: icmp_seq=6 ttl=64 time=0.095 ms
^C
--- 192.10.1.1 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5103ms
```

6. Lihat hasil konfigurasi pada table routing dengan mengetikkan:

```
# route -n
```

```
root@JK189-SERVER:~#
--- 172.15.1.1 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6124ms
rtt min/avg/max/mdev = 0.099/0.106/0.111/0.009 ms
root@JK189-SERVER:~# ping 192.10.1.1
PING 192.10.1.1 (192.10.1.1) 56(84) bytes of data.
64 bytes from 192.10.1.1: icmp_seq=1 ttl=64 time=0.170 ms
64 bytes from 192.10.1.1: icmp_seq=2 ttl=64 time=0.099 ms
64 bytes from 192.10.1.1: icmp_seq=3 ttl=64 time=0.084 ms
64 bytes from 192.10.1.1: icmp_seq=4 ttl=64 time=0.099 ms
64 bytes from 192.10.1.1: icmp_seq=5 ttl=64 time=0.100 ms
64 bytes from 192.10.1.1: icmp_seq=6 ttl=64 time=0.095 ms
^C
--- 192.10.1.1 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5103ms
rtt min/avg/max/mdev = 0.084/0.107/0.170/0.031 ms
root@JK189-SERVER:~# route -n
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
0.0.0.0          10.0.4.2        0.0.0.0         UG   100    0        0 enp0s9
10.0.4.0          0.0.0.0         255.255.255.0   U    100    0        0 enp0s9
169.254.0.0       0.0.0.0         255.255.0.0     U    1000   0        0 enp0s8
172.15.0.0        0.0.0.0         255.255.0.0     U     0    0        0 enp0s3
192.10.1.0        0.0.0.0         255.255.255.0   U     0    0        0 enp0s8
root@JK189-SERVER:~#
```

b. Konfigurasi Client1

1. Login sebagai User Root.

```
root@JK189-CLIENT1:~#
syarifuddin_06989@JK189-CLIENT1:~$ sudo -i
sudo: unable to resolve host JK189-CLIENT1
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT1:~#
```

2. Setting IP yang satu kelas dengan PC Router, misalnya:

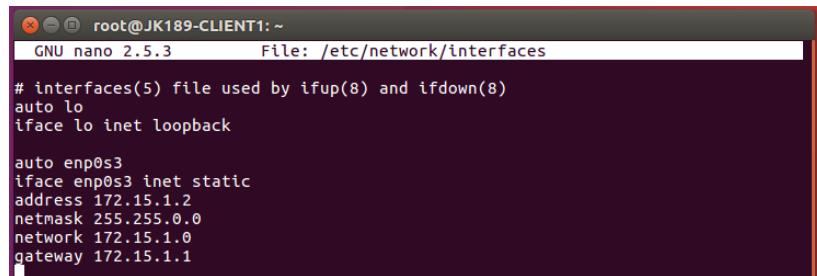
```
# nano /etc/network/interfaces
```

```
root@JK189-CLIENT1:~#
syarifuddin_06989@JK189-CLIENT1:~$ sudo -i
sudo: unable to resolve host JK189-CLIENT1
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT1:~# nano /etc/network/interfaces
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

```
auto [nama_interfaces]
iface [nama_interfaces]
address 172.15.1.2
netmask 255.255.0.0
network 172.15.1.0
gateway 172.15.1.1
```

Simpan dengan ctrl+x kemudian tekan y lalu enter



```
root@JK189-CLIENT1: ~
GNU nano 2.5.3      File: /etc/network/interfaces

# interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

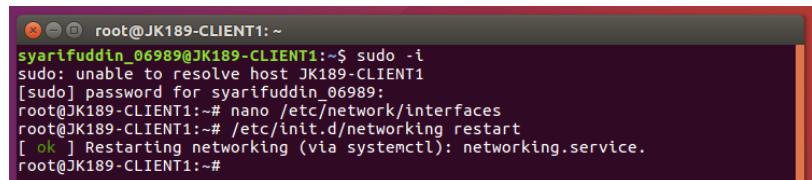
auto enp0s3
iface enp0s3 inet static
address 172.15.1.2
netmask 255.255.0.0
network 172.15.1.0
gateway 172.15.1.1
```

3. Restart service network

```
# /etc/init.d/networking restart
```

Atau

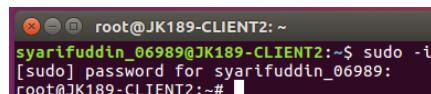
```
#ifup [nama_intefaces]
```



```
root@JK189-CLIENT1: ~
syarifuddin_06989@JK189-CLIENT1:~$ sudo -i
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT1:~# nano /etc/network/interfaces
root@JK189-CLIENT1:~# /etc/init.d/networking restart
[ ok ] Restarting networking (via systemctl): networking.service.
root@JK189-CLIENT1:~#
```

c. Konfigurasi Client2

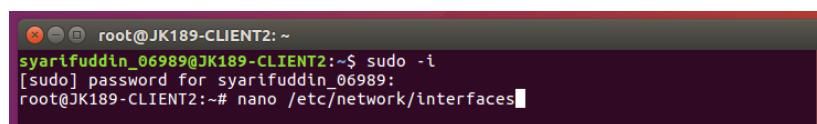
1. Login User Root.



```
root@JK189-CLIENT2: ~
syarifuddin_06989@JK189-CLIENT2:~$ sudo -i
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT2:~#
```

2. Setting IP yang satu kelas dengan PC Router, misalnya:

```
# nano /etc/network/interfaces
```

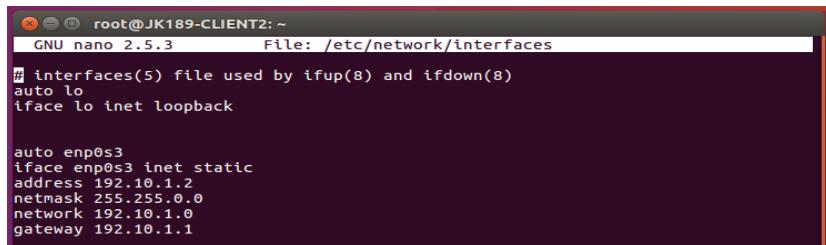


```
root@JK189-CLIENT2: ~
syarifuddin_06989@JK189-CLIENT2:~$ sudo -i
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT2:~# nano /etc/network/interfaces
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

```
auto [nama_interfaces]
iface [nama_interfaces]
address 192.10.1.2
netmask 255.255.255.0
network 192.10.1.0
gateway 192.10.1.1
```

Simpan dengan ctrl+x kemudian tekan y lalu enter



```
root@JK189-CLIENT2:~#
GNU nano 2.5.3      File: /etc/network/interfaces
# interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

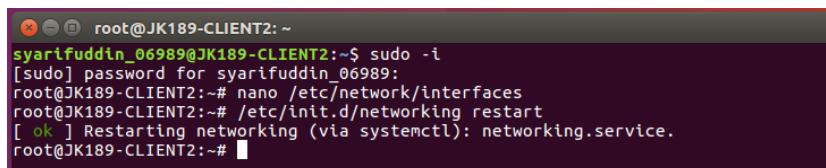
auto enp0s3
iface enp0s3 inet static
address 192.10.1.2
netmask 255.255.0.0
network 192.10.1.0
gateway 192.10.1.1
```

3. Restart service network.

```
# /etc/init.d/networking restart
```

Atau

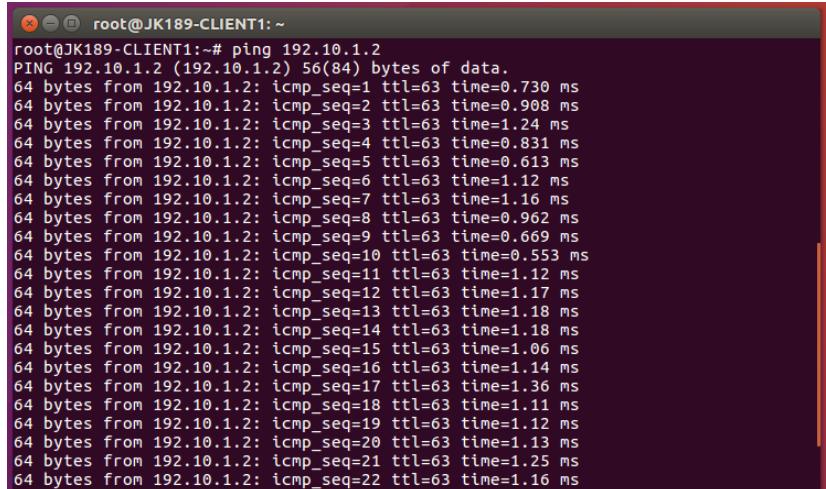
```
#ifup [nama_intefaces]
```



```
root@JK189-CLIENT2:~#
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT2:~# nano /etc/network/interfaces
root@JK189-CLIENT2:~# /etc/init.d/networking restart
[ ok ] Restarting networking (via systemctl): networking.service.
root@JK189-CLIENT2:~#
```

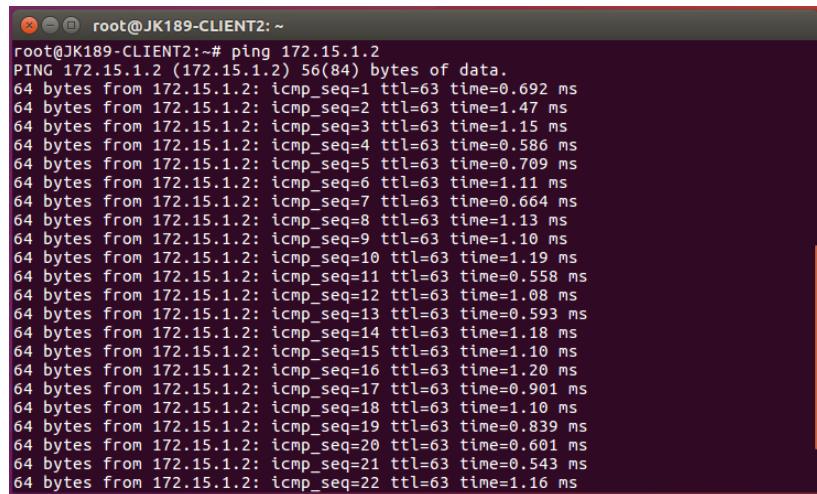
d. Pengetesan Routing

1. Lakukan ping dari client1 ke client2 atau sebaliknya (proses ping harus menunjukkan koneksi), seperti dibawah ini:



```
root@JK189-CLIENT1:~# ping 192.10.1.2
PING 192.10.1.2 (192.10.1.2) 56(84) bytes of data.
64 bytes from 192.10.1.2: icmp_seq=1 ttl=63 time=0.730 ms
64 bytes from 192.10.1.2: icmp_seq=2 ttl=63 time=0.908 ms
64 bytes from 192.10.1.2: icmp_seq=3 ttl=63 time=1.24 ms
64 bytes from 192.10.1.2: icmp_seq=4 ttl=63 time=0.831 ms
64 bytes from 192.10.1.2: icmp_seq=5 ttl=63 time=0.613 ms
64 bytes from 192.10.1.2: icmp_seq=6 ttl=63 time=1.12 ms
64 bytes from 192.10.1.2: icmp_seq=7 ttl=63 time=1.16 ms
64 bytes from 192.10.1.2: icmp_seq=8 ttl=63 time=0.962 ms
64 bytes from 192.10.1.2: icmp_seq=9 ttl=63 time=0.669 ms
64 bytes from 192.10.1.2: icmp_seq=10 ttl=63 time=0.553 ms
64 bytes from 192.10.1.2: icmp_seq=11 ttl=63 time=1.12 ms
64 bytes from 192.10.1.2: icmp_seq=12 ttl=63 time=1.17 ms
64 bytes from 192.10.1.2: icmp_seq=13 ttl=63 time=1.18 ms
64 bytes from 192.10.1.2: icmp_seq=14 ttl=63 time=1.18 ms
64 bytes from 192.10.1.2: icmp_seq=15 ttl=63 time=1.06 ms
64 bytes from 192.10.1.2: icmp_seq=16 ttl=63 time=1.14 ms
64 bytes from 192.10.1.2: icmp_seq=17 ttl=63 time=1.36 ms
64 bytes from 192.10.1.2: icmp_seq=18 ttl=63 time=1.11 ms
64 bytes from 192.10.1.2: icmp_seq=19 ttl=63 time=1.12 ms
64 bytes from 192.10.1.2: icmp_seq=20 ttl=63 time=1.13 ms
64 bytes from 192.10.1.2: icmp_seq=21 ttl=63 time=1.25 ms
64 bytes from 192.10.1.2: icmp_seq=22 ttl=63 time=1.16 ms
```

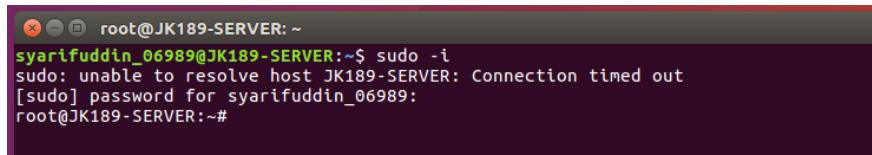
STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



```
root@JK189-CLIENT2:~# ping 172.15.1.2
PING 172.15.1.2 (172.15.1.2) 56(84) bytes of data.
64 bytes from 172.15.1.2: icmp_seq=1 ttl=63 time=0.692 ms
64 bytes from 172.15.1.2: icmp_seq=2 ttl=63 time=1.47 ms
64 bytes from 172.15.1.2: icmp_seq=3 ttl=63 time=1.15 ms
64 bytes from 172.15.1.2: icmp_seq=4 ttl=63 time=0.586 ms
64 bytes from 172.15.1.2: icmp_seq=5 ttl=63 time=0.709 ms
64 bytes from 172.15.1.2: icmp_seq=6 ttl=63 time=1.11 ms
64 bytes from 172.15.1.2: icmp_seq=7 ttl=63 time=0.664 ms
64 bytes from 172.15.1.2: icmp_seq=8 ttl=63 time=1.13 ms
64 bytes from 172.15.1.2: icmp_seq=9 ttl=63 time=1.10 ms
64 bytes from 172.15.1.2: icmp_seq=10 ttl=63 time=1.19 ms
64 bytes from 172.15.1.2: icmp_seq=11 ttl=63 time=0.558 ms
64 bytes from 172.15.1.2: icmp_seq=12 ttl=63 time=1.08 ms
64 bytes from 172.15.1.2: icmp_seq=13 ttl=63 time=0.593 ms
64 bytes from 172.15.1.2: icmp_seq=14 ttl=63 time=1.18 ms
64 bytes from 172.15.1.2: icmp_seq=15 ttl=63 time=1.10 ms
64 bytes from 172.15.1.2: icmp_seq=16 ttl=63 time=1.20 ms
64 bytes from 172.15.1.2: icmp_seq=17 ttl=63 time=0.901 ms
64 bytes from 172.15.1.2: icmp_seq=18 ttl=63 time=1.10 ms
64 bytes from 172.15.1.2: icmp_seq=19 ttl=63 time=0.839 ms
64 bytes from 172.15.1.2: icmp_seq=20 ttl=63 time=0.601 ms
64 bytes from 172.15.1.2: icmp_seq=21 ttl=63 time=0.543 ms
64 bytes from 172.15.1.2: icmp_seq=22 ttl=63 time=1.16 ms
```

c. FTP

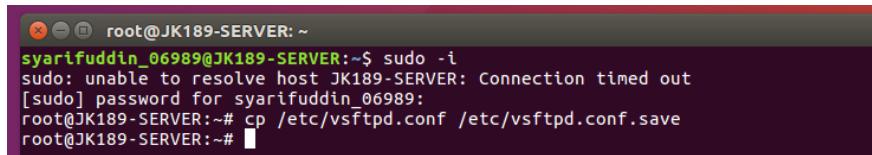
1. Masuk ke terminal PC Server dan Login sebagai user root.



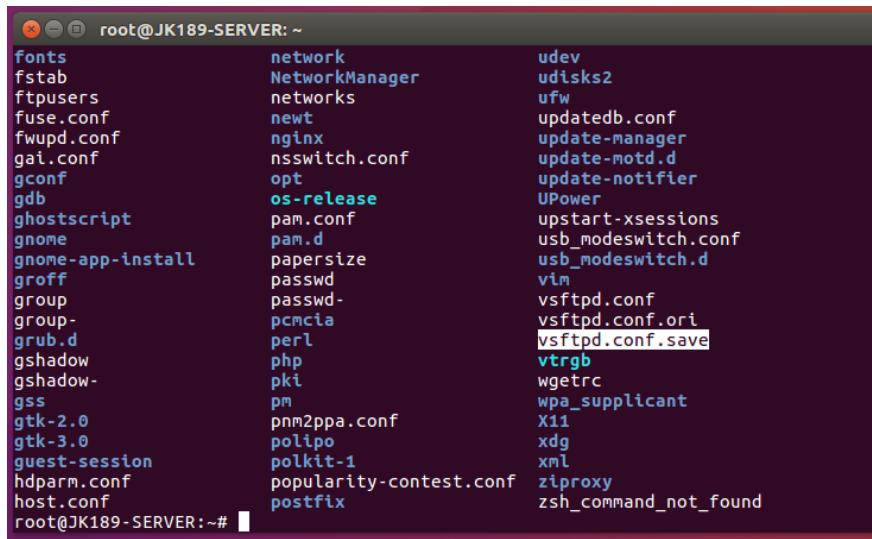
```
root@JK189-SERVER:~#
syarifuddin_06989@JK189-SERVER:~$ sudo -i
sudo: unable to resolve host JK189-SERVER: Connection timed out
[sudo] password for syarifuddin_06989:
root@JK189-SERVER:~#
```

2. Lakukan backup file vsftpd.conf yang asli dengan perintah :

```
# cp /etc/vsftpd.conf /etc/vsftpd.conf_ori
```



```
root@JK189-SERVER:~#
syarifuddin_06989@JK189-SERVER:~$ sudo -i
sudo: unable to resolve host JK189-SERVER: Connection timed out
[sudo] password for syarifuddin_06989:
root@JK189-SERVER:~# cp /etc/vsftpd.conf /etc/vsftpd.conf.save
root@JK189-SERVER:~#
```



```
root@JK189-SERVER:~#
fonts                  network               udev
fstab                  NetworkManager        udisks2
ftpusers               networks              ufw
fuse.conf              newt                 updatedb.conf
fwupd.conf             nginx                update-manager
gat.conf               nsswitch.conf        update-motd.d
gconf                  opt                  update-notifier
gdb                   os-release           UPower
ghostscript            pam.conf             upstart-xsessions
gnome                 pam.d                usb_modeswitch.conf
gnome-app-install      pam.passwd          vim
groff                 pam.pam             vsftpd.conf
group                 pcmcia              vsftpd.conf_ori
group-                perl                vsftpd.conf.save
grub.d                php                 vtrgb
gshadow                pki                 wgetrc
gshadow-               pm                 wpa_supplicant
gss                   pnmp2ppa.conf       X11
gtk-2.0                polipo             xdg
gtk-3.0                polkit-1           xml
guest-session          popularity-contest.conf  zipproxy
hdparm.conf            postfix             zsh_command_not_found
host.conf
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

3. Edit file konfigurasi didalam /etc/vsftpd.conf dengan perintah:

```
# nano /etc/vsftpd.conf
```

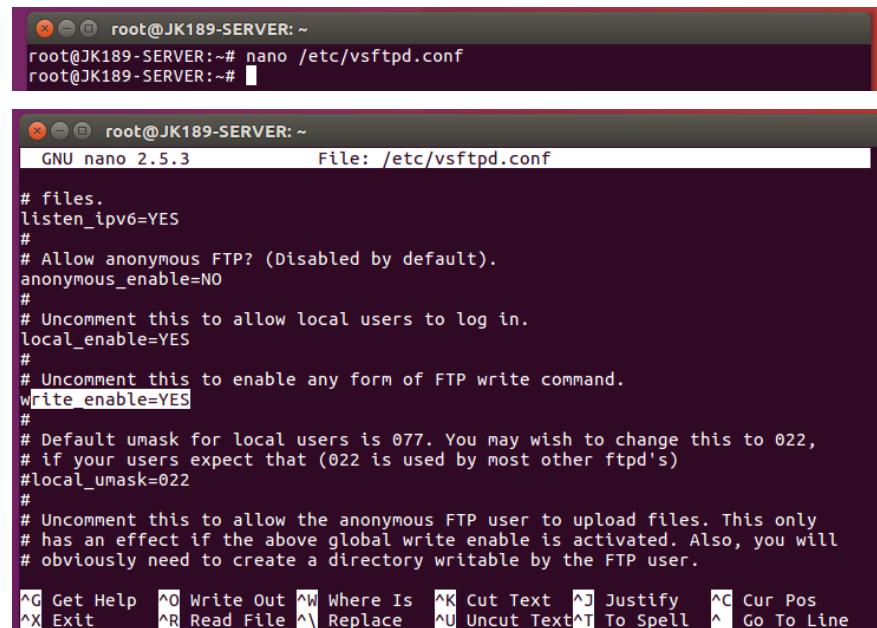
```
listen=NO
```

```
anonymous_enable=NO
```

```
local_enable=YES
```

```
write_enable=YES
```

Kemudian simpan dengan Ctrl+X, Yes lalu enter.



```
root@JK189-SERVER:~# nano /etc/vsftpd.conf
#
# files.
listen_ipv6=YES
#
# Allow anonymous FTP? (Disabled by default).
anonymous_enable=NO
#
# Uncomment this to allow local users to log in.
local_enable=YES
#
# Uncomment this to enable any form of FTP write command.
write_enable=YES
#
# Default umask for local users is 077. You may wish to change this to 022,
# if your users expect that (022 is used by most other ftppd's)
#local_umask=022
#
# Uncomment this to allow the anonymous FTP user to upload files. This only
# has an effect if the above global write enable is activated. Also, you will
# obviously need to create a directory writable by the FTP user.

^G Get Help ^O Write Out ^W Where Is ^X Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^A Replace ^U Uncut Text^T To Spell ^L Go To Line
```

4. Restart service ftp dengan perintah:

```
# service vsftpd restart
```

Atau

```
# /etc/init.d/vsftpd restart
```

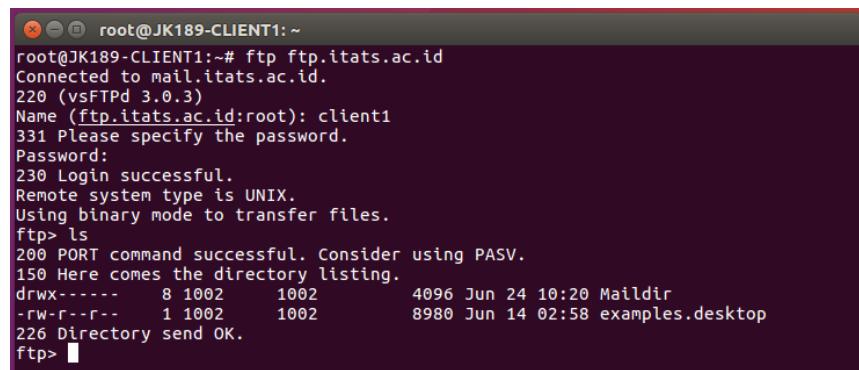


```
root@JK189-SERVER:~# nano /etc/vsftpd.conf
root@JK189-SERVER:~# nano /etc/vsftpd.conf
root@JK189-SERVER:~# /etc/init.d/vsftpd restart
[ ok ] Restarting vsftpd (via systemctl): vsftpd.service.
root@JK189-SERVER:~#
```

5. Untuk pengimplementasian FTP kita menggunakan terminal & browser untuk client1 dan client2.
6. Masuk ke komputer client 1 (login sebagai root), dan ketikkan perintah berikut:

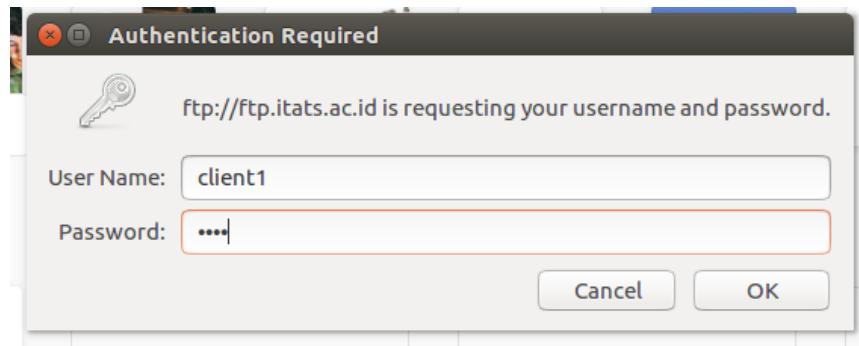
```
# ftp ftp.itats.ac.id
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

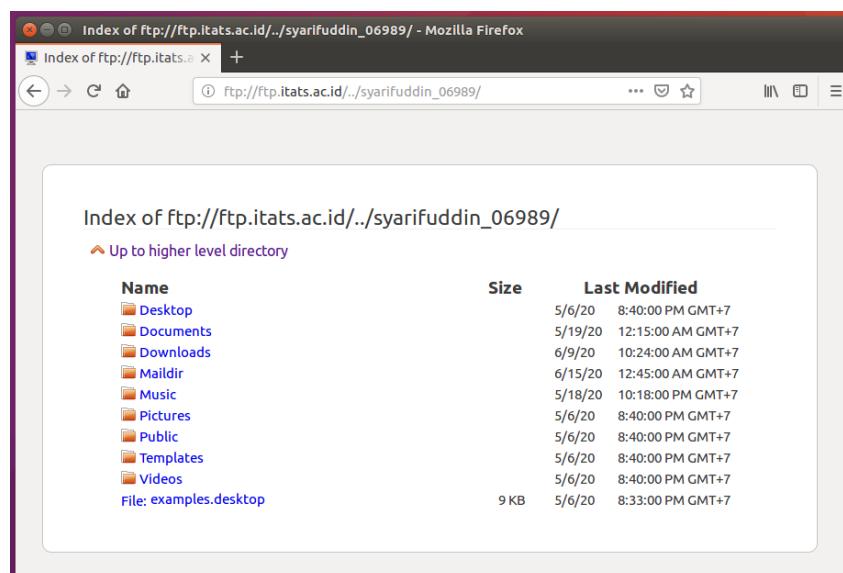


```
root@JK189-CLIENT1: ~
root@JK189-CLIENT1:~# ftp ftp.itats.ac.id
Connected to mail.itats.ac.id.
220 (vsFTPd 3.0.3)
Name (ftp.itats.ac.id:root): client1
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
drwx----- 8 1002 1002 4096 Jun 24 10:20 Maildir
-rw-r--r-- 1 1002 1002 8980 Jun 14 02:58 examples.desktop
226 Directory send OK.
ftp> 
```

Buka browser dan masukkan url <ftp://ftp.itats.ac.id>



Dan hasilnya sebagai berikut,

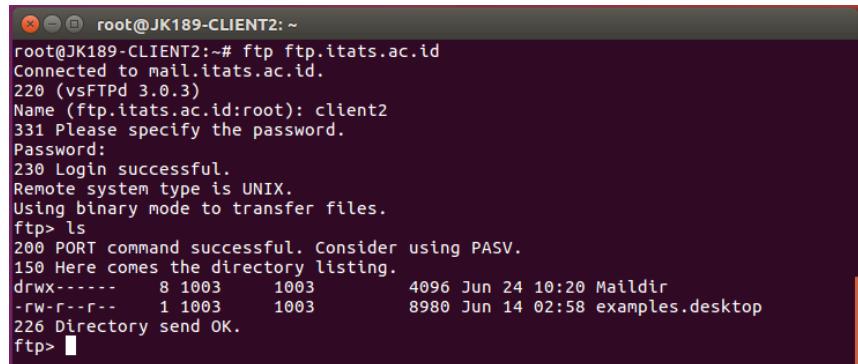


STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

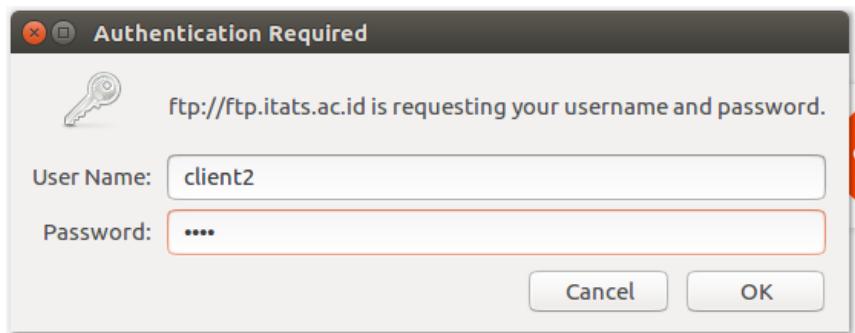
7. Masuk ke komputer client 2 (login sebagai root), dan ketikkan perintah berikut:

```
# ftp ftp.itats.ac.id
```

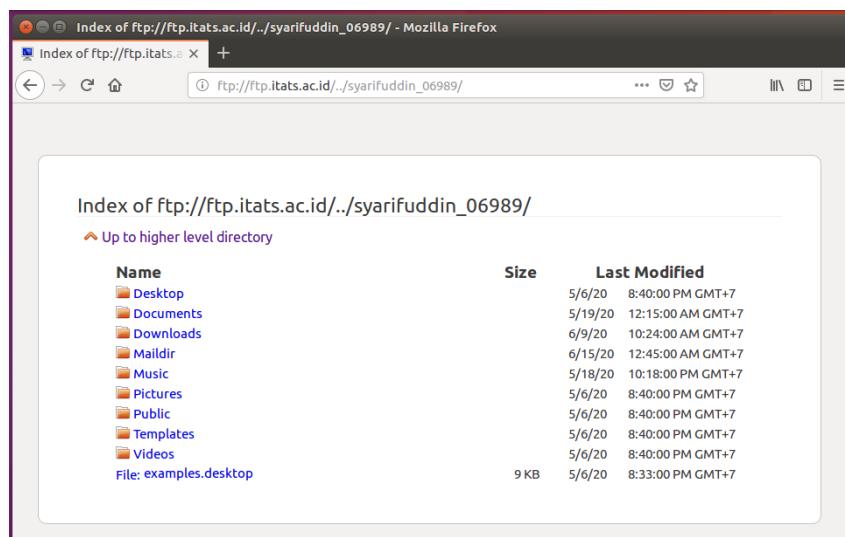


```
root@JK189-CLIENT2:~# ftp ftp.itats.ac.id
Connected to mail.itats.ac.id.
220 (vsFTPd 3.0.3)
Name (ftp.itats.ac.id:root): client2
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls
200 PORT command successful. Consider using PASV.
150 Here comes the directory listing.
drwx----- 8 1003 1003 4096 Jun 24 10:20 Maildir
-rw-r--r-- 1 1003 1003 8980 Jun 14 02:58 examples.desktop
226 Directory send OK.
ftp> 
```

Buka browser dan masukkan url <ftp://ftp.itats.ac.id>



Dan hasilnya sebagai berikut,

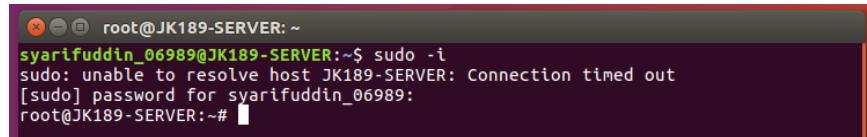


STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

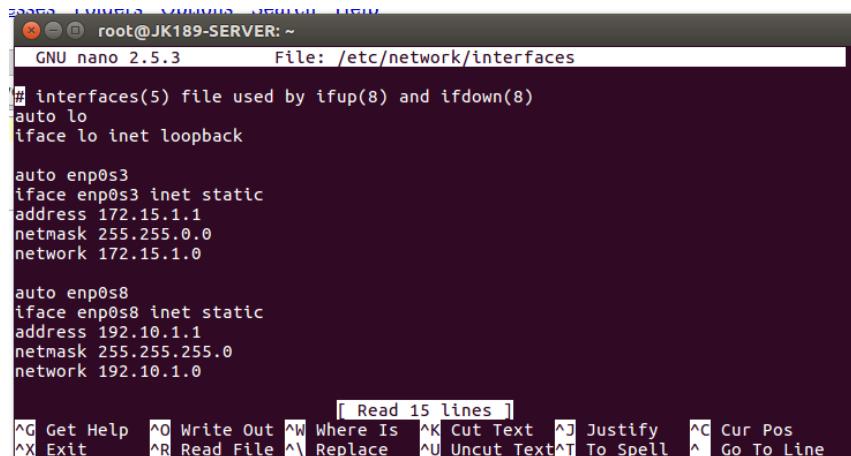
d. DNS

1. Login sebagai User Root



```
root@JK189-SERVER: ~
syarifuddin_06989@JK189-SERVER:~$ sudo -i
sudo: unable to resolve host JK189-SERVER: Connection timed out
[sudo] password for syarifuddin_06989:
root@JK189-SERVER:~#
```

2. Setting IP address Komputer Server 172.15.1.1



```
root@JK189-SERVER: ~
GNU nano 2.5.3      File: /etc/network/interfaces

# interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

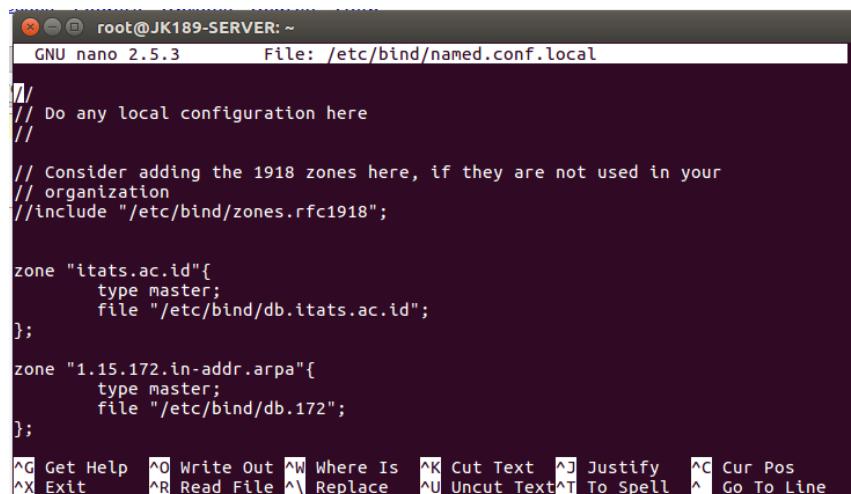
auto enp0s3
iface enp0s3 inet static
address 172.15.1.1
netmask 255.255.0.0
network 172.15.1.0

auto enp0s8
iface enp0s8 inet static
address 192.10.1.1
netmask 255.255.255.0
network 192.10.1.0

[ Read 15 lines ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text^T To Spell  ^_ Go To Line
```

3. Konfigurasikan file paket bind named.conf.local dengan cara:

```
# nano /etc/bind/named.conf.local
```



```
root@JK189-SERVER: ~
GNU nano 2.5.3      File: /etc/bind/named.conf.local

// Do any local configuration here
//

// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

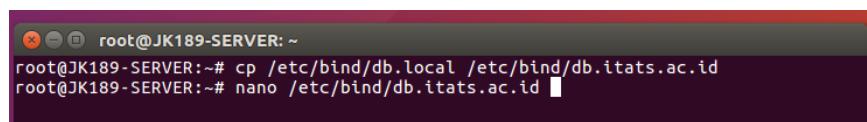
zone "itats.ac.id"{
    type master;
    file "/etc/bind/db.itats.ac.id";
};

zone "1.15.172.in-addr.arpa"{
    type master;
    file "/etc/bind/db.172";
};

[ Read 15 lines ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text^T To Spell  ^_ Go To Line
```

4. Copykan file db.local ke db.itats.ac.id

```
# cp /etc/bind/db.local /etc/bind/db.itats.ac.id
```

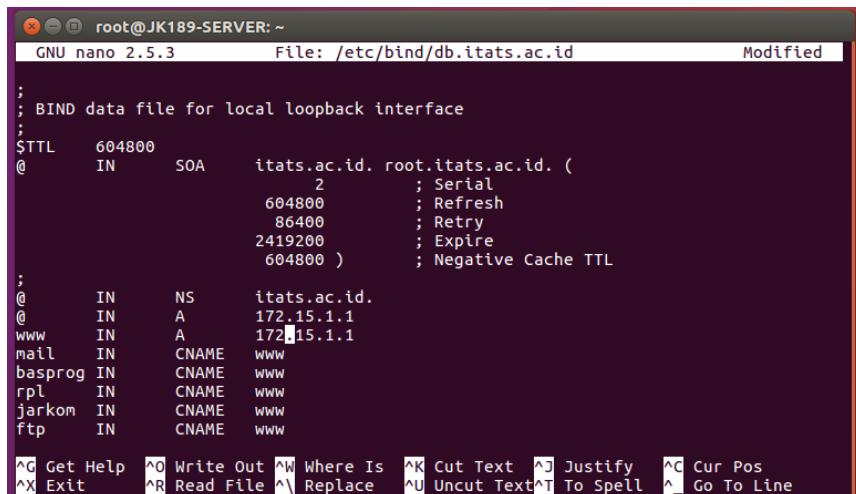


```
root@JK189-SERVER: ~
root@JK189-SERVER:~# cp /etc/bind/db.local /etc/bind/db.itats.ac.id
root@JK189-SERVER:~# nano /etc/bind/db.itats.ac.id
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

5. Edit isi dari file db.itats.ac.id dengan perintah:

```
# nano /etc/bind/db.itats.ac.id
```

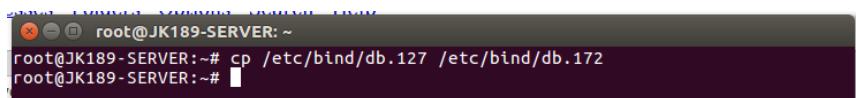


```
; BIND data file for local loopback interface
;
$TTL    604800
@       IN      SOA     itats.ac.id. root.itats.ac.id. (
                        2           ; Serial
                        604800      ; Refresh
                        86400       ; Retry
                       2419200     ; Expire
                        604800 )    ; Negative Cache TTL
;
@       IN      NS      itats.ac.id.
@       IN      A       172.15.1.1
www    IN      A       172.15.1.1
mail   IN      CNAME   www
basprog IN      CNAME   www
rpl    IN      CNAME   www
jarkom IN      CNAME   www
ftp    IN      CNAME   www
```

Kemudian simpan dengan kombinasi tombol Ctrl+X, Yes lalu enter.

6. Copykan file db.127 ke db.172

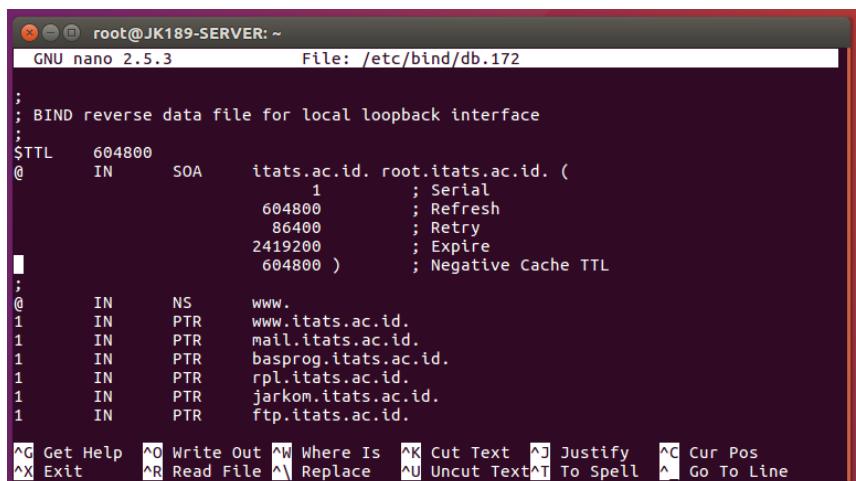
```
# cp /etc/bind/db.127 /etc/bind/db.172
```



```
root@JK189-SERVER:~# cp /etc/bind/db.127 /etc/bind/db.172
root@JK189-SERVER:~#
```

7. Edit isi file db.172 dengan perintah

```
# nano /etc/bind/db.172
```

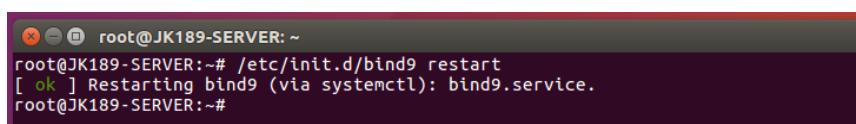


```
; BIND reverse data file for local loopback interface
;
$TTL    604800
@       IN      SOA     itats.ac.id. root.itats.ac.id. (
                        1           ; Serial
                        604800      ; Refresh
                        86400       ; Retry
                       2419200     ; Expire
                        604800 )    ; Negative Cache TTL
;
@       IN      NS      www.
1       IN      PTR     www.itats.ac.id.
1       IN      PTR     mail.itats.ac.id.
1       IN      PTR     basprog.itats.ac.id.
1       IN      PTR     rpl.itats.ac.id.
1       IN      PTR     jarkom.itats.ac.id.
1       IN      PTR     ftp.itats.ac.id.
```

Kemudian simpan dengan Ctrl+X, Yes lalu enter.

8. Restart service dengan perintah:

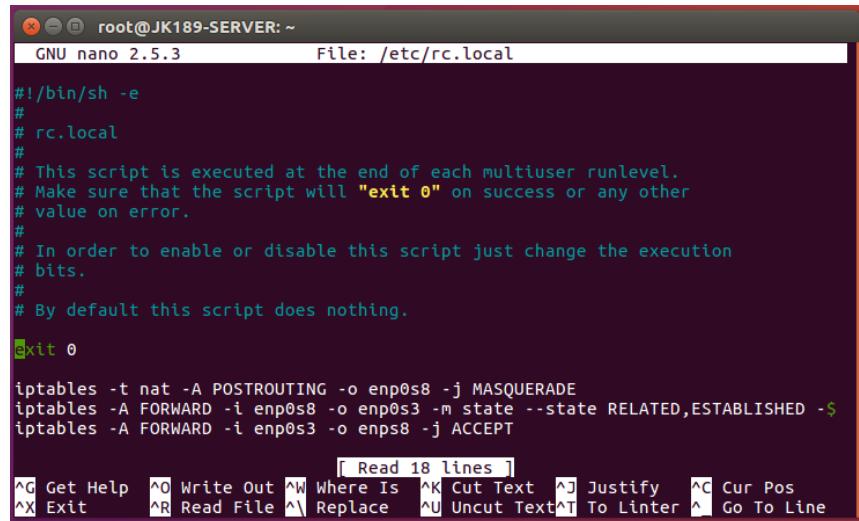
```
# /etc/init.d/bind9 restart
```



```
root@JK189-SERVER:~# /etc/init.d/bind9 restart
[ ok ] Restarting bind9 (via systemctl): bind9.service.
root@JK189-SERVER:~#
```

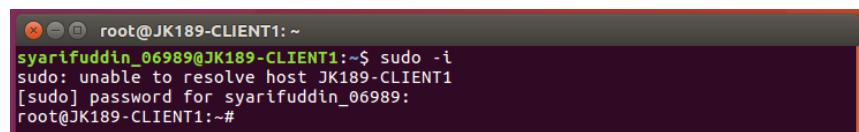
STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

9. Konfigurasi IP Tables dengan perintah:



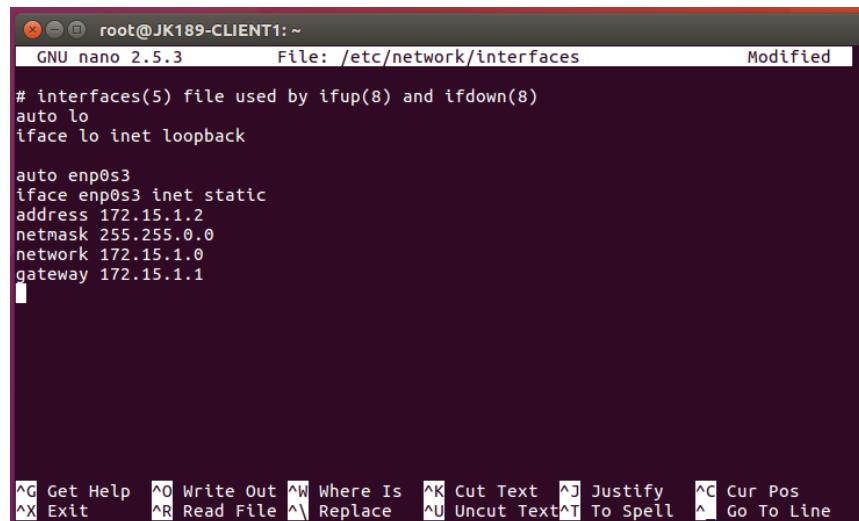
```
root@JK189-SERVER:~  
GNU nano 2.5.3      File: /etc/rc.local  
  
#!/bin/sh -e  
#  
# rc.local  
#  
# This script is executed at the end of each multiuser runlevel.  
# Make sure that the script will "exit 0" on success or any other  
# value on error.  
#  
# In order to enable or disable this script just change the execution  
# bits.  
#  
# By default this script does nothing.  
  
exit 0  
  
iptables -t nat -A POSTROUTING -o enp0s8 -j MASQUERADE  
iptables -A FORWARD -i enp0s8 -o enp0s3 -m state --state RELATED,ESTABLISHED -d 172.15.1.0/16 -j ACCEPT  
iptables -A FORWARD -i enp0s3 -o enps8 -j ACCEPT
```

10. Login Ke sisi client dengan root user :



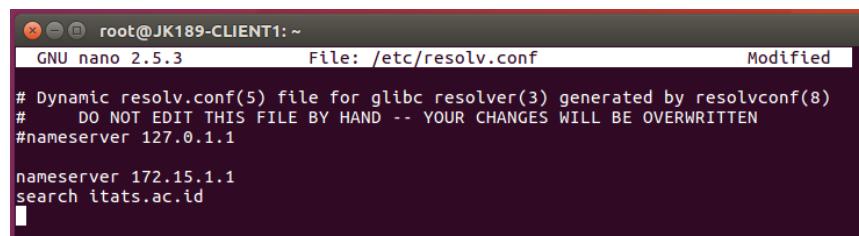
```
root@JK189-CLIENT1:~  
syarifuddin_06989@JK189-CLIENT1:~$ sudo -i  
sudo: unable to resolve host JK189-CLIENT1  
[sudo] password for syarifuddin_06989:  
root@JK189-CLIENT1:~#
```

11. Kemudian konfigurasi interface network client sebagai berikut :



```
root@JK189-CLIENT1:~  
GNU nano 2.5.3      File: /etc/network/interfaces      Modified  
  
# interfaces(5) file used by ifup(8) and ifdown(8)  
auto lo  
iface lo inet loopback  
  
auto enp0s3  
iface enp0s3 inet static  
    address 172.15.1.2  
    netmask 255.255.0.0  
    network 172.15.1.0  
    gateway 172.15.1.1
```

12. Edit resolv.conf pada client 1 sebagai berikut :



```
root@JK189-CLIENT1:~  
GNU nano 2.5.3      File: /etc/resolv.conf      Modified  
  
# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)  
# DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN  
nameserver 127.0.1.1  
  
nameserver 172.15.1.1  
search itats.ac.id
```

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

13. Kemudian check dns dengan perintah nslookup sebagai berikut :

```
root@JK189-CLIENT1:~# nslookup 172.15.1.1
Server:      172.15.1.1
Address:    172.15.1.1#53

1.1.15.172.in-addr.arpa name = jarkom.itats.ac.id.
1.1.15.172.in-addr.arpa name = ftp.itats.ac.id.
1.1.15.172.in-addr.arpa name = mail.itats.ac.id.
1.1.15.172.in-addr.arpa name = basprog.itats.ac.id.
1.1.15.172.in-addr.arpa name = rpl.itats.ac.id.
1.1.15.172.in-addr.arpa name = www.itats.ac.id.

root@JK189-CLIENT1:~#
```

Lakukan juga pada domain, itats.ac.id

```
root@JK189-CLIENT1:~# nslookup itats.ac.id
Server:      172.15.1.1
Address:    172.15.1.1#53

Name:  itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT1:~#
```

Lakukan juga pada Sub domain,mail.itats.ac.id

```
root@JK189-CLIENT1:~# nslookup mail.itats.ac.id
Server:      172.15.1.1
Address:    172.15.1.1#53

mail.itats.ac.id      canonical name = www.itats.ac.id.
Name:  www.itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT1:~#
```

Lakukan juga pada Sub domain, basprog.itats.ac.id

```
root@JK189-CLIENT1:~# nslookup basprog.itats.ac.id
Server:      172.15.1.1
Address:    172.15.1.1#53

basprog.itats.ac.id      canonical name = www.itats.ac.id.
Name:  www.itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT1:~#
```

Lakukan juga pada Sub domain, rpl.itats.ac.id

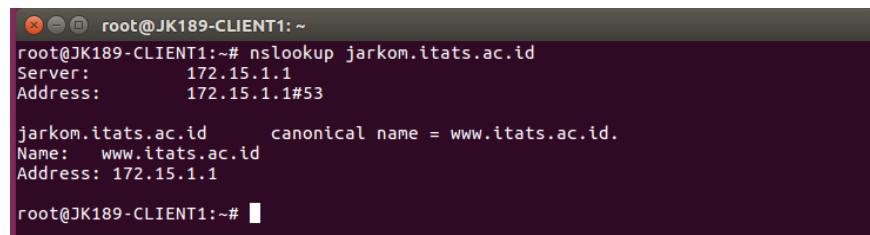
```
root@JK189-CLIENT1:~# nslookup rpl.itats.ac.id
Server:      172.15.1.1
Address:    172.15.1.1#53

rpl.itats.ac.id canonical name = www.itats.ac.id.
Name:  www.itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT1:~#
```

Lakukan juga pada Sub domain, jarkom.itats.ac.id

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

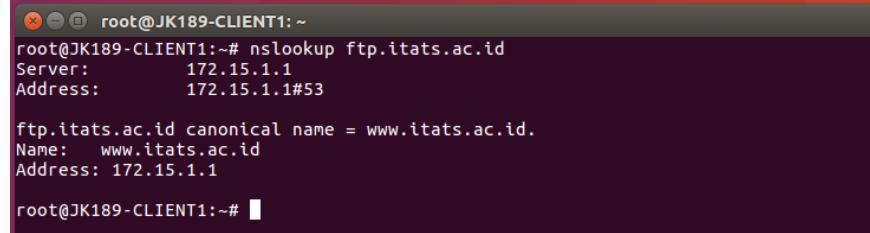


```
root@JK189-CLIENT1:~# nslookup jarkom.itats.ac.id
Server:      172.15.1.1
Address:     172.15.1.1#53

jarkom.itats.ac.id    canonical name = www.itats.ac.id.
Name:   www.itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT1:~#
```

Lakukan juga pada Sub domain, ftp.itats.ac.id

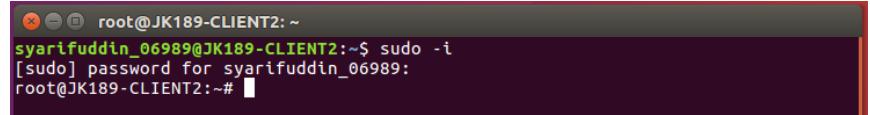


```
root@JK189-CLIENT1:~# nslookup ftp.itats.ac.id
Server:      172.15.1.1
Address:     172.15.1.1#53

ftp.itats.ac.id canonical name = www.itats.ac.id.
Name:   www.itats.ac.id
Address: 172.15.1.1

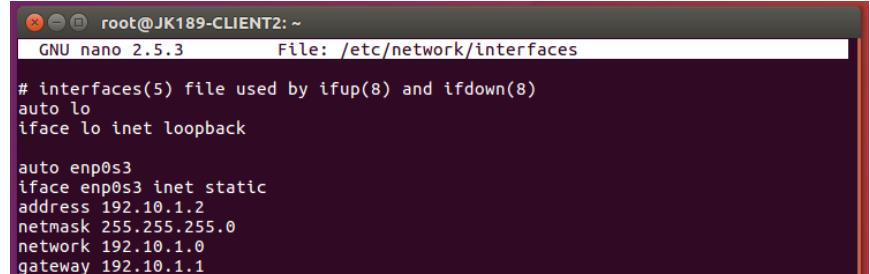
root@JK189-CLIENT1:~#
```

14. Kemudian kita lakukan konfigurasi terhadap client 2, masuk ke root terlebih dahulu,



```
root@JK189-CLIENT2:~# sudo -i
[sudo] password for syarifuddin_06989:
root@JK189-CLIENT2:~#
```

15. Konfigurasi network interface client 2 sebagai berikut :

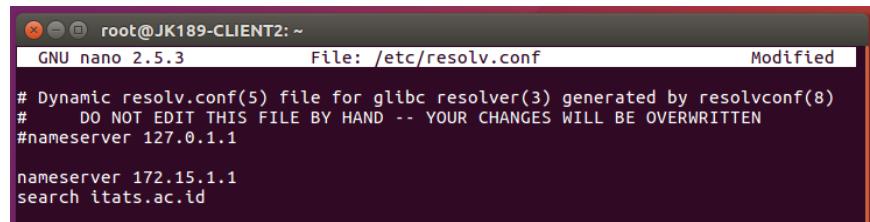


```
root@JK189-CLIENT2:~# nano /etc/network/interfaces
GNU nano 2.5.3          File: /etc/network/interfaces

# interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

auto enp0s3
iface enp0s3 inet static
address 192.168.1.2
netmask 255.255.255.0
network 192.168.1.0
gateway 192.168.1.1
```

16. Konfigurasi nameserver pada resolv.conf sebagai berikut :

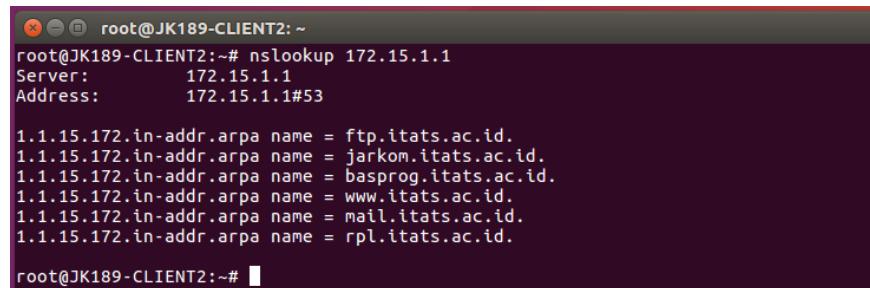


```
root@JK189-CLIENT2:~# nano /etc/resolv.conf
GNU nano 2.5.3          File: /etc/resolv.conf          Modified

# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
# DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
#nameserver 127.0.1.1

nameserver 172.15.1.1
search itats.ac.id
```

17. Kemudian check dns dengan perintah nslookup sebagai berikut :



```
root@JK189-CLIENT2:~# nslookup 172.15.1.1
Server:      172.15.1.1
Address:     172.15.1.1#53

1.1.15.172.in-addr.arpa name = ftp.itats.ac.id.
1.1.15.172.in-addr.arpa name = jarkom.itats.ac.id.
1.1.15.172.in-addr.arpa name = basprog.itats.ac.id.
1.1.15.172.in-addr.arpa name = www.itats.ac.id.
1.1.15.172.in-addr.arpa name = mail.itats.ac.id.
1.1.15.172.in-addr.arpa name = rpl.itats.ac.id.

root@JK189-CLIENT2:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

Lakukan juga pada domain, itats.ac.id

```
root@JK189-CLIENT2:~# nslookup itats.ac.id
Server:      172.15.1.1
Address:     172.15.1.1#53

Name:  itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT2:~#
```

Lakukan juga pada Sub domain, mail.itats.ac.id

```
root@JK189-CLIENT2:~# nslookup basprog.itats.ac.id
Server:      172.15.1.1
Address:     172.15.1.1#53

basprog.itats.ac.id    canonical name = www.itats.ac.id.
Name:  www.itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT2:~#
```

Lakukan juga pada Sub domain, basprog.itats.ac.id

```
root@JK189-CLIENT2:~# nslookup mail.itats.ac.id
Server:      172.15.1.1
Address:     172.15.1.1#53

mail.itats.ac.id    canonical name = www.itats.ac.id.
Name:  www.itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT2:~#
```

Lakukan juga pada Sub domain, rpl.itats.ac.id

```
root@JK189-CLIENT2:~# nslookup rpl.itats.ac.id
Server:      172.15.1.1
Address:     172.15.1.1#53

rpl.itats.ac.id canonical name = www.itats.ac.id.
Name:  www.itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT2:~#
```

Lakukan juga pada Sub domain, jarkom.itats.ac.id

```
root@JK189-CLIENT2:~# nslookup jarkom.itats.ac.id
Server:      172.15.1.1
Address:     172.15.1.1#53

jarkom.itats.ac.id    canonical name = www.itats.ac.id.
Name:  www.itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT2:~#
```

Lakukan juga pada Sub domain, ftp.itats.ac.id

```
root@JK189-CLIENT2:~# nslookup ftp.itats.ac.id
Server:      172.15.1.1
Address:     172.15.1.1#53

ftp.itats.ac.id canonical name = www.itats.ac.id.
Name:  www.itats.ac.id
Address: 172.15.1.1

root@JK189-CLIENT2:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

18. Kemudian langkah selanjutnya ialah melakukan chek terhadap domain yang telah dikonfigurasi pada client 1, sebagai berikut

```
root@JK189-CLIENT1:~# ping itats.ac.id
PING itats.ac.id (172.15.1.1) 56(84) bytes of data.
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=1 ttl=64 time=0.527 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=2 ttl=64 time=0.612 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=3 ttl=64 time=0.590 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=4 ttl=64 time=0.440 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=5 ttl=64 time=0.634 ms
^C
--- itats.ac.id ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4102ms
rtt min/avg/max/mdev = 0.440/0.560/0.634/0.074 ms
root@JK189-CLIENT1:~# ping mail.itats.ac.id
PING mail.itats.ac.id (172.15.1.1) 56(84) bytes of data.
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=1 ttl=64 time=0.551 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=2 ttl=64 time=0.729 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=3 ttl=64 time=0.783 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=4 ttl=64 time=0.612 ms
^C
--- mail.itats.ac.id ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3049ms
rtt min/avg/max/mdev = 0.551/0.668/0.783/0.097 ms
root@JK189-CLIENT1:~# ping basprog.itats.ac.id
PING mail.itats.ac.id (172.15.1.1) 56(84) bytes of data.
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=1 ttl=64 time=0.304 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=2 ttl=64 time=0.616 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=3 ttl=64 time=0.458 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=4 ttl=64 time=0.637 ms
^X64 bytes from itats.ac.id (172.15.1.1): icmp_seq=5 ttl=64 time=0.651 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=6 ttl=64 time=0.667 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=7 ttl=64 time=0.715 ms
^C
--- mail.itats.ac.id ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6133ms
rtt min/avg/max/mdev = 0.304/0.578/0.715/0.135 ms
root@JK189-CLIENT1:~# ping rpl.itats.ac.id
PING mail.itats.ac.id (172.15.1.1) 56(84) bytes of data.
```

19. Kemudian langkah selanjutnya ialah melakukan chek terhadap domain yang telah dikonfigurasi pada client 2, sebagai berikut

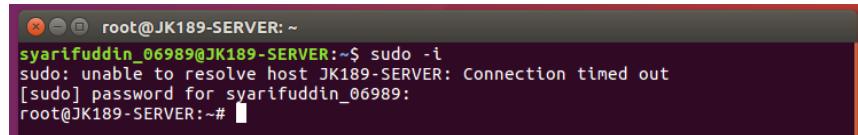
```
root@JK189-CLIENT2:~# ping itats.ac.id
PING itats.ac.id (172.15.1.1) 56(84) bytes of data.
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=1 ttl=64 time=0.496 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=2 ttl=64 time=0.553 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=3 ttl=64 time=0.482 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=4 ttl=64 time=0.672 ms
^C
--- itats.ac.id ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3052ms
rtt min/avg/max/mdev = 0.482/0.550/0.672/0.080 ms
root@JK189-CLIENT2:~# ping mail.itats.ac.id
PING mail.itats.ac.id (172.15.1.1) 56(84) bytes of data.
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=1 ttl=64 time=0.676 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=2 ttl=64 time=0.686 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=3 ttl=64 time=0.379 ms
^C
--- mail.itats.ac.id ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2014ms
rtt min/avg/max/mdev = 0.379/0.580/0.686/0.143 ms
root@JK189-CLIENT2:~# ping basprog.itats.ac.id
PING mail.itats.ac.id (172.15.1.1) 56(84) bytes of data.
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=1 ttl=64 time=0.356 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=2 ttl=64 time=0.904 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=3 ttl=64 time=0.342 ms
^C
--- mail.itats.ac.id ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2020ms
rtt min/avg/max/mdev = 0.342/0.534/0.904/0.261 ms
root@JK189-CLIENT2:~# ping rpl.itats.ac.id
PING mail.itats.ac.id (172.15.1.1) 56(84) bytes of data.
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=1 ttl=64 time=0.319 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=2 ttl=64 time=0.312 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=3 ttl=64 time=0.329 ms
64 bytes from itats.ac.id (172.15.1.1): icmp_seq=4 ttl=64 time=0.309 ms
^C
--- mail.itats.ac.id ping statistics ---
```

STUDY KASUS TEST AKHIR PRAKTIKUM

JARINGAN KOMPUTER XXXII

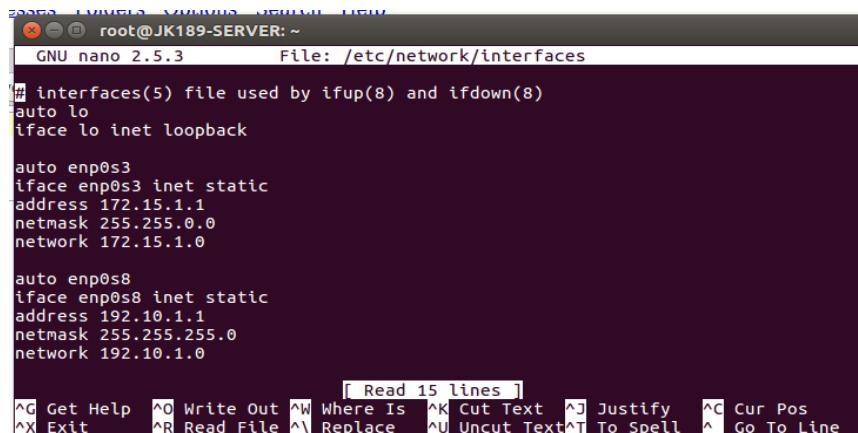
e. Web Server

1. Login sebagai root



```
root@JK189-SERVER:~  
syarifuddin_06989@JK189-SERVER:~$ sudo -i  
sudo: unable to resolve host JK189-SERVER: Connection timed out  
[sudo] password for syarifuddin_06989:  
root@JK189-SERVER:~#
```

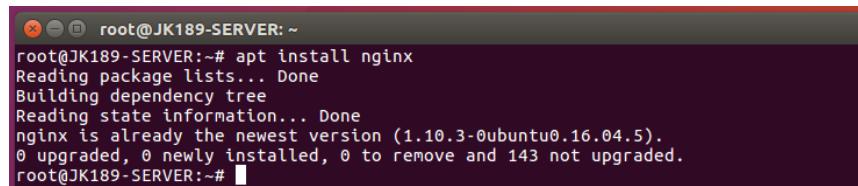
2. Set IP menjadi 172.15.1.1 dan buat domain dengan nama itats.ac.id



```
root@JK189-SERVER:~  
GNU nano 2.5.3           File: /etc/network/interfaces  
  
# interfaces(5) file used by ifup(8) and ifdown(8)  
auto lo  
iface lo inet loopback  
  
auto enp0s3  
iface enp0s3 inet static  
address 172.15.1.1  
netmask 255.255.0.0  
network 172.15.1.0  
  
auto enp0s8  
iface enp0s8 inet static  
address 192.10.1.1  
netmask 255.255.255.0  
network 192.10.1.0  
  
[ Read 15 lines ]  
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos  
^X Exit      ^R Read File  ^A Replace  ^U Uncut Text  ^T To Spell  ^L Go To Line
```

3. Lalu install Nginx dengan perintah:

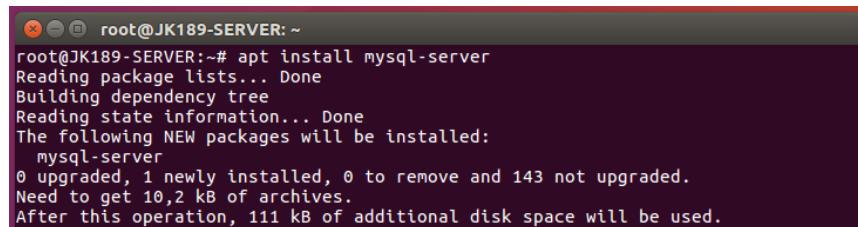
```
# apt-get install nginx
```



```
root@JK189-SERVER:~# apt install nginx  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
nginx is already the newest version (1.10.3-0ubuntu0.16.04.5).  
0 upgraded, 0 newly installed, 0 to remove and 143 not upgraded.  
root@JK189-SERVER:~#
```

4. Install MySql Server dengan perintah:

```
# apt-get install mysql-server
```



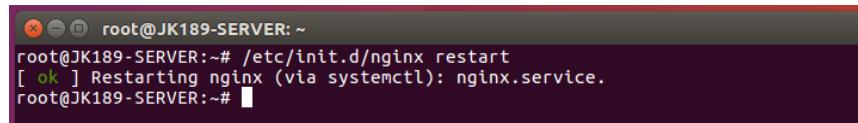
```
root@JK189-SERVER:~# apt install mysql-server  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following NEW packages will be installed:  
  mysql-server  
0 upgraded, 1 newly installed, 0 to remove and 143 not upgraded.  
Need to get 10,2 kB of additional disk space.  
After this operation, 111 kB of additional disk space will be used.
```

5. Jalankan Service Nginx dengan perintah:

```
# service nginx start
```

Atau

```
# /etc/init.d/nginx start
```

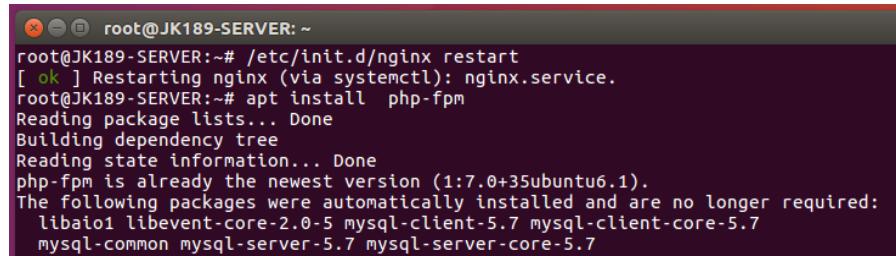


```
root@JK189-SERVER:~# /etc/init.d/nginx restart  
[ ok ] Restarting nginx (via systemctl): nginx.service.  
root@JK189-SERVER:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

6. Install php7 fpm dengan perintah:

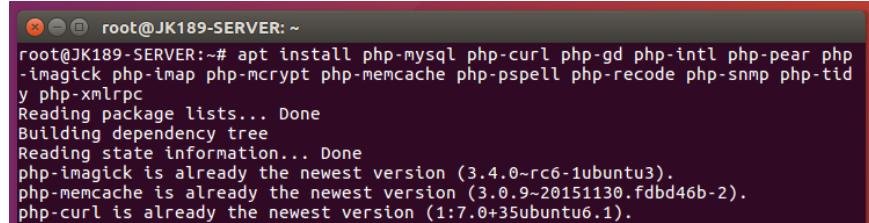
```
# apt-get install php-fpm
```



```
root@JK189-SERVER:~# /etc/init.d/nginx restart
[ ok ] Restarting nginx (via systemctl): nginx.service.
root@JK189-SERVER:~# apt install php-fpm
Reading package lists... Done
Building dependency tree
Reading state information... Done
php-fpm is already the newest version (1:7.0+35ubuntu6.1).
The following packages were automatically installed and are no longer required:
 libaio1 libevent-core-2.0-5 mysql-client-5.7 mysql-client-core-5.7
 mysql-common mysql-server-5.7 mysql-server-core-5.7
```

7. Install paket agar mysql support dengan php7 dengan perintah:

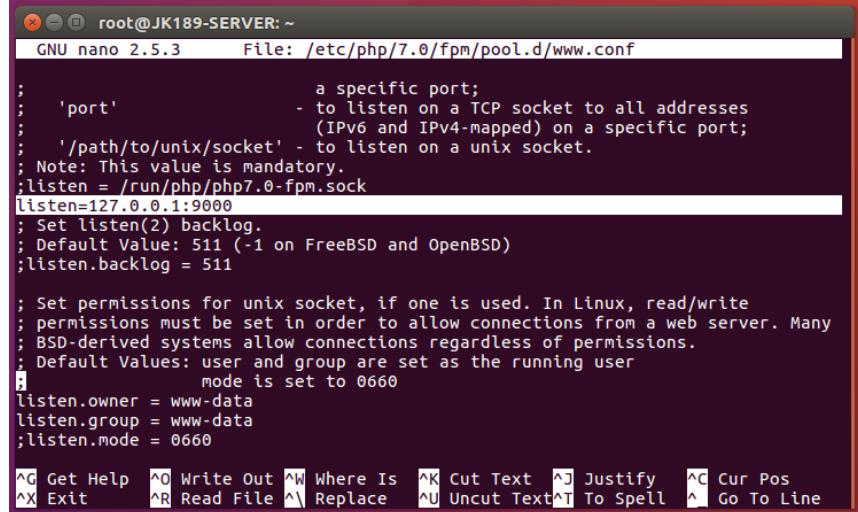
```
# apt-get install php-mysql php-curl php-gd php-intl php-pear php-
imagick php-imap php-mcrypt php-memcache php-pspell php-recode
php-snmp php-tidy php-xmlrpc
```



```
root@JK189-SERVER:~# apt install php-mysql php-curl php-gd php-intl php-pear php-
imagick php-imap php-mcrypt php-memcache php-pspell php-recode php-snmp php-tid
y php-xmlrpc
Reading package lists... Done
Building dependency tree
Reading state information... Done
php-imagick is already the newest version (3.4.0~rc6-1ubuntu3).
php-memcache is already the newest version (3.0.9~20151130.fdbd46b-2).
php-curl is already the newest version (1:7.0+35ubuntu6.1).
```

8. Lalu kita buat agar php-fpm menggunakan koneksi TCP dengan mengedit file “/etc/php/7.0/fpm/pool.d/www.conf”

```
# nano /etc/php/7.0/fpm/pool.d/www.conf
```



```
root@JK189-SERVER:~# nano 2.5.3      File: /etc/php/7.0/fpm/pool.d/www.conf
;
;           a specific port;
;           - to listen on a TCP socket to all addresses
;           (IPv6 and IPv4-mapped) on a specific port;
;           '/path/to/unix/socket' - to listen on a unix socket.
; Note: This value is mandatory.
;listen = /run/php/php7.0-fpm.sock
listen=127.0.0.1:9000
; Set listen(2) backlog.
; Default Value: 511 (-1 on FreeBSD and OpenBSD)
;listen.backlog = 511

; Set permissions for unix socket, if one is used. In Linux, read/write
; permissions must be set in order to allow connections from a web server. Many
; BSD-derived systems allow connections regardless of permissions.
; Default Values: user and group are set as the running user
;                 mode is set to 0660
listen.owner = www-data
listen.group = www-data
;listen.mode = 0660

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text  ^T To Spell  ^_ Go To Line
```

STUDY KASUS TEST AKHIR PRAKTIKUM

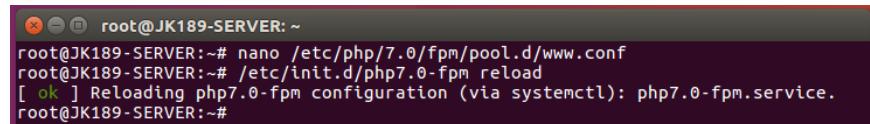
JARINGAN KOMPUTER XXXII

9. Lalu reload service php7-fpm dengan perintah:

```
# service php7.0-fpm reload
```

Atau

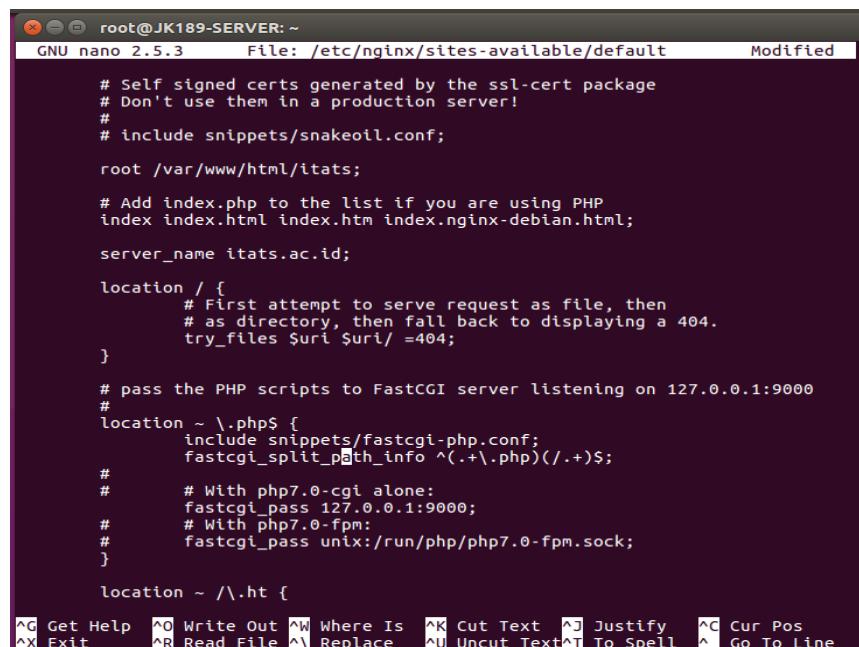
```
# /etc/init.d/php7.0-fpm reload
```



```
root@JK189-SERVER:~# nano /etc/php/7.0/fpm/pool.d/www.conf
root@JK189-SERVER:~# /etc/init.d/php7.0-fpm reload
[ ok ] Reloading php7.0-fpm configuration (via systemctl): php7.0-fpm.service.
root@JK189-SERVER:~#
```

10. Edit file “/etc/nginx/sites-available/default” dengan perintah:

```
# nano /etc/nginx/sites-available/default
```



```
root@JK189-SERVER:~#
GNU nano 2.5.3      File: /etc/nginx/sites-available/default      Modified

# Self signed certs generated by the ssl-cert package
# Don't use them in a production server!
#
# include snippets/snakeoil.conf;
root /var/www/html/itats;

# Add index.php to the list if you are using PHP
index index.html index.htm index.nginx-debian.html;

server_name itats.ac.id;

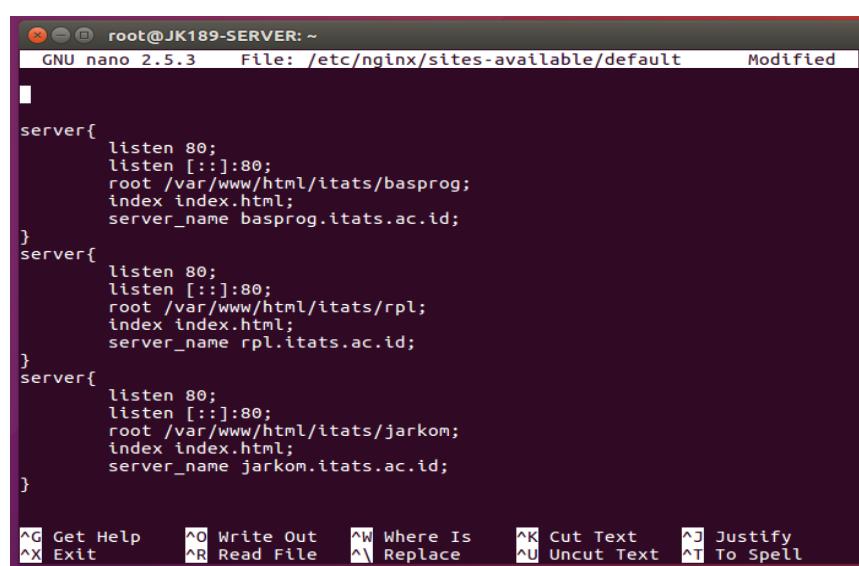
location / {
    # First attempt to serve request as file, then
    # as directory, then fall back to displaying a 404.
    try_files $uri $uri/ =404;
}

# pass the PHP scripts to FastCGI server listening on 127.0.0.1:9000
#
location ~ \.php$ {
    include snippets/fastcgi-php.conf;
    fastcgi_split_path_info ^(.+\.php)(/.+)$;
#
# With php7.0-cgi alone:
fastcgi_pass 127.0.0.1:9000;
#
# With php7.0-fpm:
#     fastcgi_pass unix:/run/php/php7.0-fpm.sock;
}

location ~ /\.ht {
```

**^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^A Replace ^U Uncut Text ^T To Spell ^L Go To Line**

Kemudian tambahkan konfigurasi sebagai berikut :



```
root@JK189-SERVER:~#
GNU nano 2.5.3      File: /etc/nginx/sites-available/default      Modified

server{
    listen 80;
    listen [::]:80;
    root /var/www/html/itats/basprog;
    index index.html;
    server_name basprog.itats.ac.id;
}
server{
    listen 80;
    listen [::]:80;
    root /var/www/html/itats/rpl;
    index index.html;
    server_name rpl.itats.ac.id;
}
server{
    listen 80;
    listen [::]:80;
    root /var/www/html/itats/jarkom;
    index index.html;
    server_name jarkom.itats.ac.id;
}
```

**^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify
^X Exit ^R Read File ^A Replace ^U Uncut Text ^T To Spell**

STUDY KASUS TEST AKHIR PRAKTIKUM

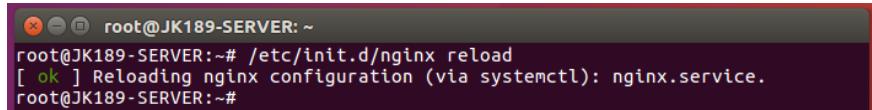
JARINGAN KOMPUTER XXXII

11. Save konfigurasi dan restart nginx dengan perintah:

```
# service nginx reload
```

Atau

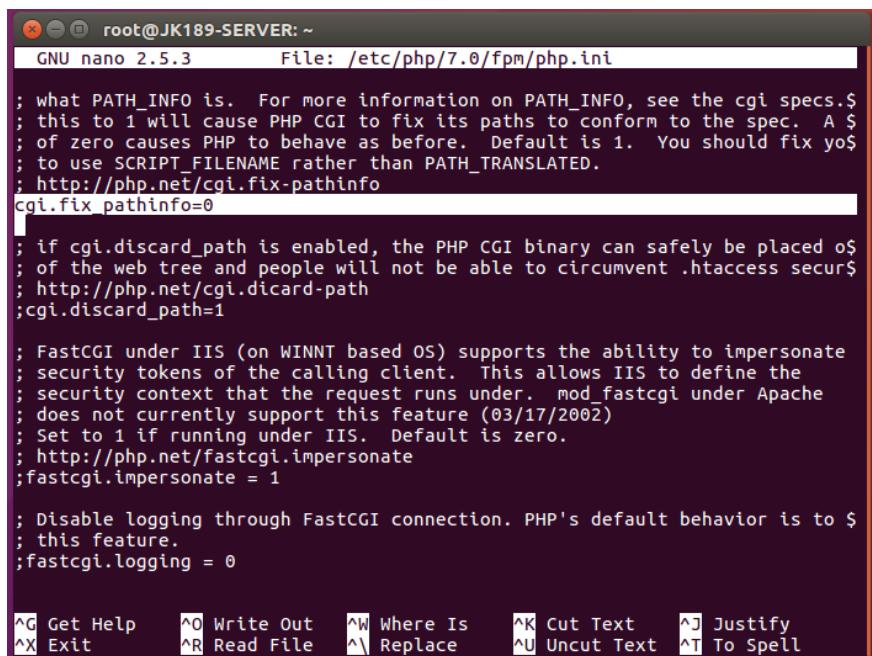
```
# /etc/init.d/nginx reload
```



```
root@JK189-SERVER:~# /etc/init.d/nginx reload
[ ok ] Reloading nginx configuration (via systemctl): nginx.service.
```

12. Edit file “/etc/php/7.0/fpm/php.ini” seperti berikut:

```
# nano /etc/php/7.0/fpm/php.ini
```



```
root@JK189-SERVER:~# nano 2.5.3      File: /etc/php/7.0/fpm/php.ini

; what PATH_INFO is. For more information on PATH_INFO, see the cgi specs.$
; this to 1 will cause PHP CGI to fix its paths to conform to the spec. A $
; of zero causes PHP to behave as before. Default is 1. You should fix yo$.
; to use SCRIPT_FILENAME rather than PATH_TRANSLATED.
; http://php.net/cgi.fix-pathinfo
cgi.fix_pathinfo=0

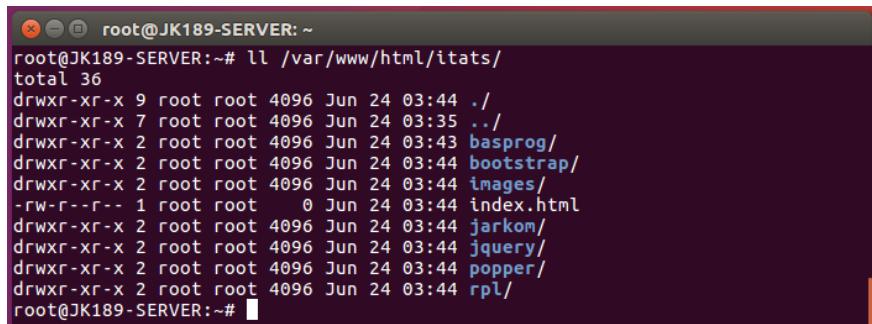
; if cgi.discard_path is enabled, the PHP CGI binary can safely be placed o$.
; of the web tree and people will not be able to circumvent .htaccess secur$.
; http://php.net/cgi.discard-path
;cgi.discard_path=1

; FastCGI under IIS (on WINNT based OS) supports the ability to impersonate
; security tokens of the calling client. This allows IIS to define the
; security context that the request runs under. mod fastcgi under Apache
; does not currently support this feature (03/17/2002)
; Set to 1 if running under IIS. Default is zero.
; http://php.net/fastcgi.impersonate
;fastcgi.impersonate = 1

; Disable logging through FastCGI connection. PHP's default behavior is to $
; this feature.
;fastcgi.logging = 0

^G Get Help      ^O Write Out    ^W Where Is     ^K Cut Text    ^J Justify
^X Exit          ^R Read File   ^Y Replace      ^U Uncut Text  ^I To Spell
```

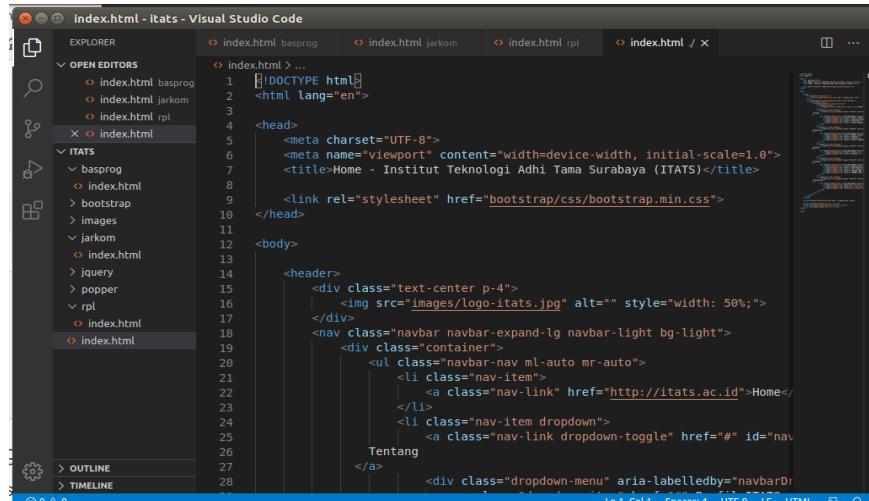
13. Buat folder baru pada folder /var/www/html sebagai berikut :



```
root@JK189-SERVER:~# ll /var/www/html/itats/
total 36
drwxr-xr-x 9 root root 4096 Jun 24 03:44 .
drwxr-xr-x 7 root root 4096 Jun 24 03:35 ..
drwxr-xr-x 2 root root 4096 Jun 24 03:43 basprog/
drwxr-xr-x 2 root root 4096 Jun 24 03:44 bootstrap/
drwxr-xr-x 2 root root 4096 Jun 24 03:44 images/
-rw-r--r-- 1 root root 0 Jun 24 03:44 index.html
drwxr-xr-x 2 root root 4096 Jun 24 03:44 jarkom/
drwxr-xr-x 2 root root 4096 Jun 24 03:44 jquery/
drwxr-xr-x 2 root root 4096 Jun 24 03:44 popper/
drwxr-xr-x 2 root root 4096 Jun 24 03:44 rpl/
root@JK189-SERVER:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

14. Kemudian lakukan editing pada file-file tersebut, seperti berikut :

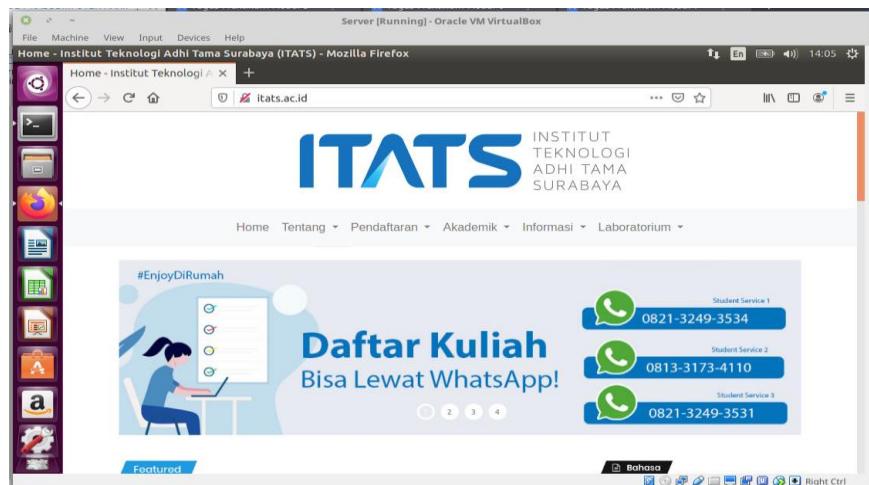


```
index.html - Itats - Visual Studio Code
OPEN EDITORS
ITATS
  basprog
    index.html
  bootstrap
  images
  jarkom
    index.html
  rpl
    index.html
  index.html
index.html

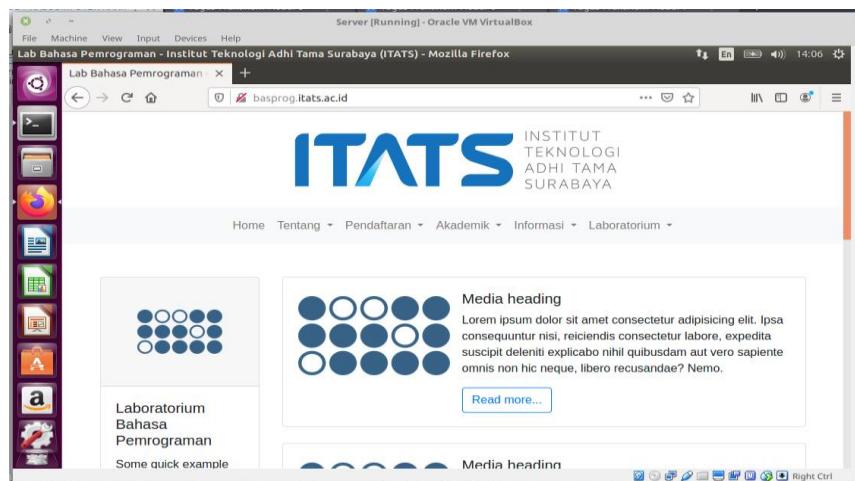
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Home - Institut Teknologi Adhi Tama Surabaya (ITATS)</title>
  <link rel="stylesheet" href="bootstrap/css/bootstrap.min.css">
</head>
<body>
  <header>
    <div class="text-center p-4">
      
    </div>
    <nav class="navbar navbar-expand-lg navbar-light bg-light">
      <div class="container">
        <ul class="navbar-nav ml-auto mr-auto">
          <li class="nav-item">
            <a class="nav-link" href="http://itats.ac.id">Home</a>
          <li class="nav-item dropdown">
            <a class="nav-link dropdown-toggle" href="#" id="navbarDropdown">Tentang</a>
            <div class="dropdown-menu" aria-labelledby="navbarDropdown">
              <a class="dropdown-item" href="#">Tentang ITATSVisi dan MisiStruktur OrganisasiPrestasiAlumniKontak
```

15. Dan hasil akhirnya ialah sebagai berikut

a. Server

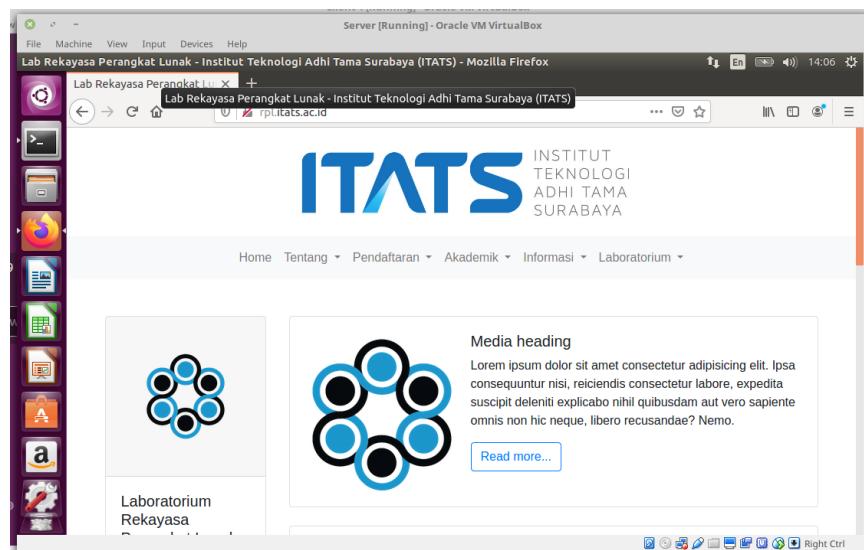


itats.ac.id

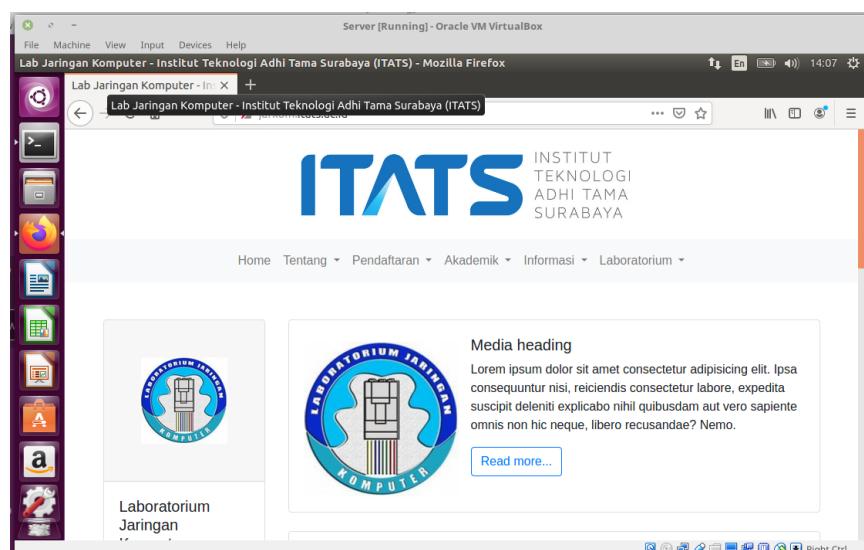


basprog.itats.ac.id

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



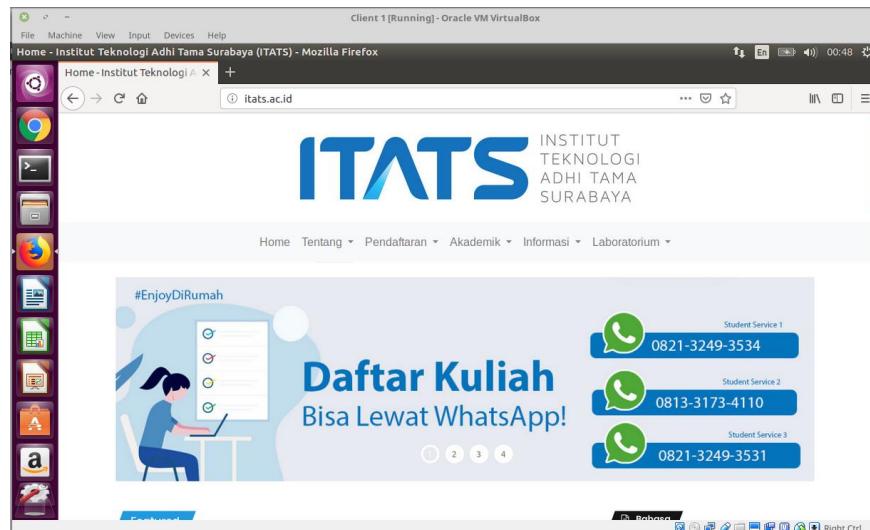
rpl.itats.ac.id



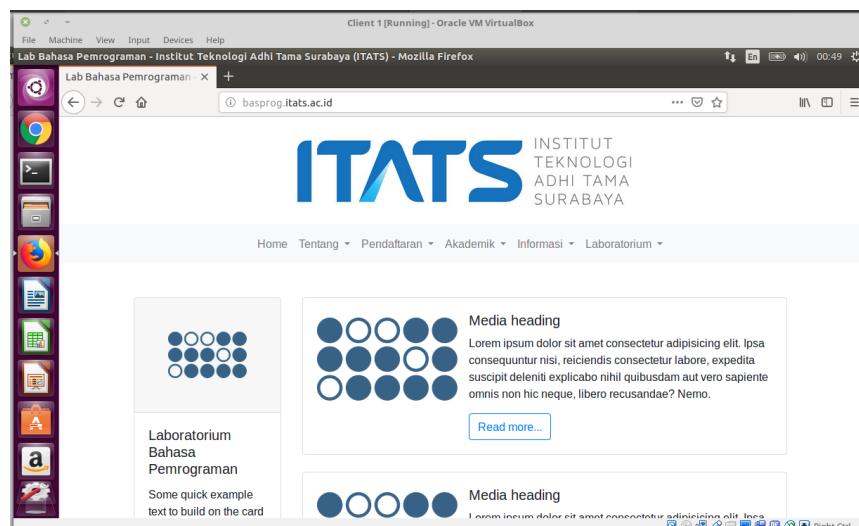
jarkom.itats.ac.id

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

b. Client 1

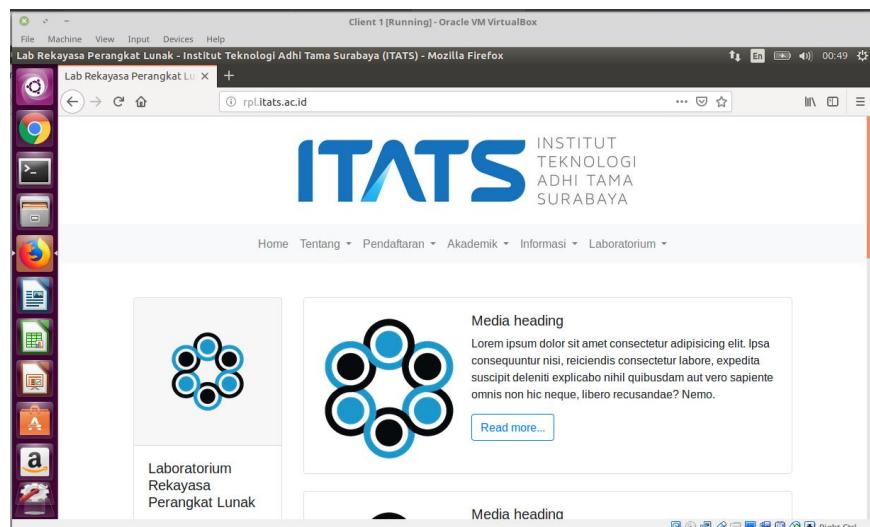


itats.ac.id

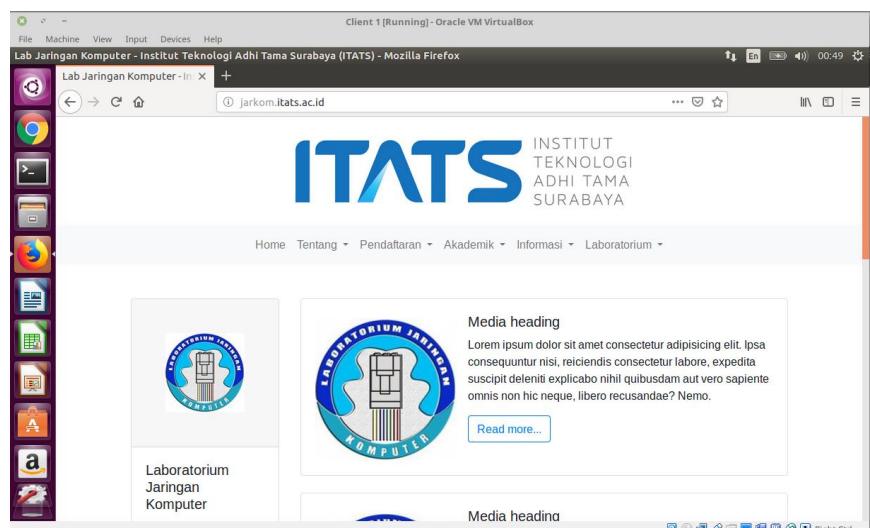


basprog.itats.ac.id

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



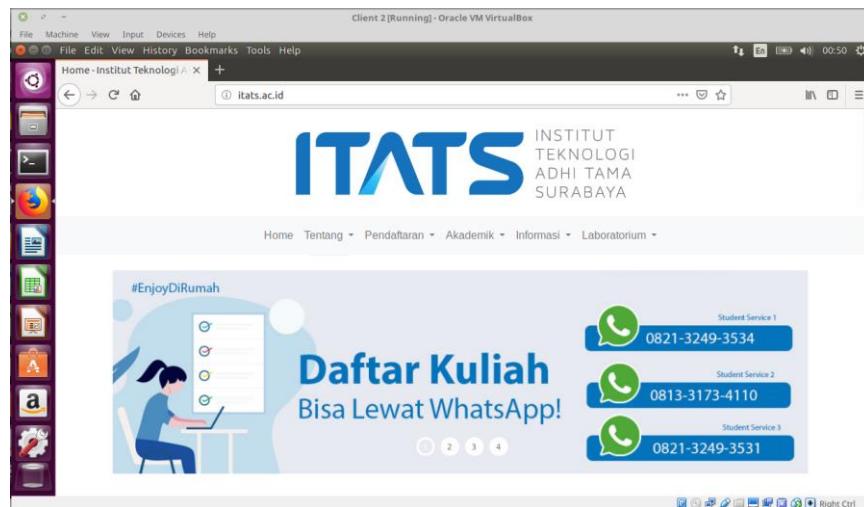
rpl.itats.ac.id



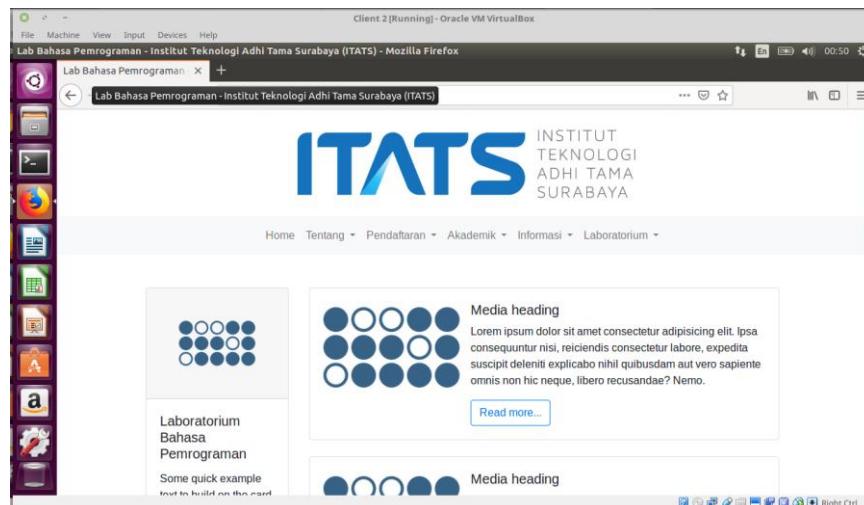
jarkom.itats.ac.id

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

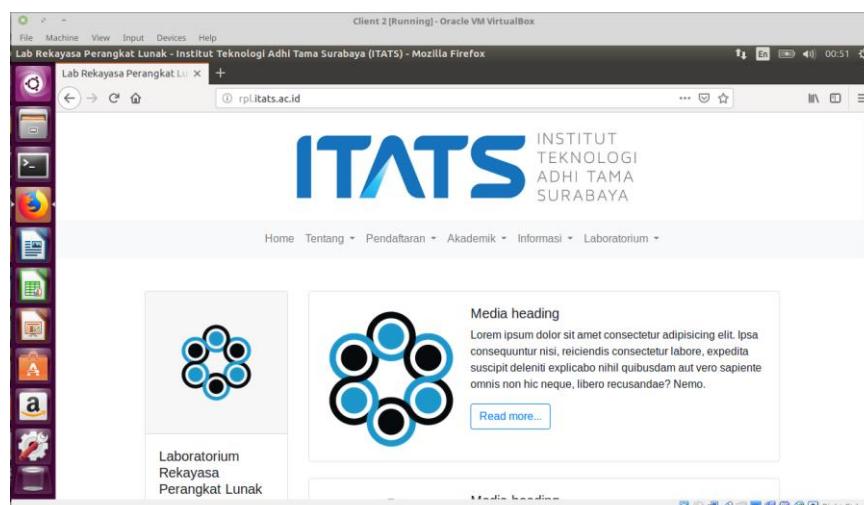
c. Client 2



itats.ac.id

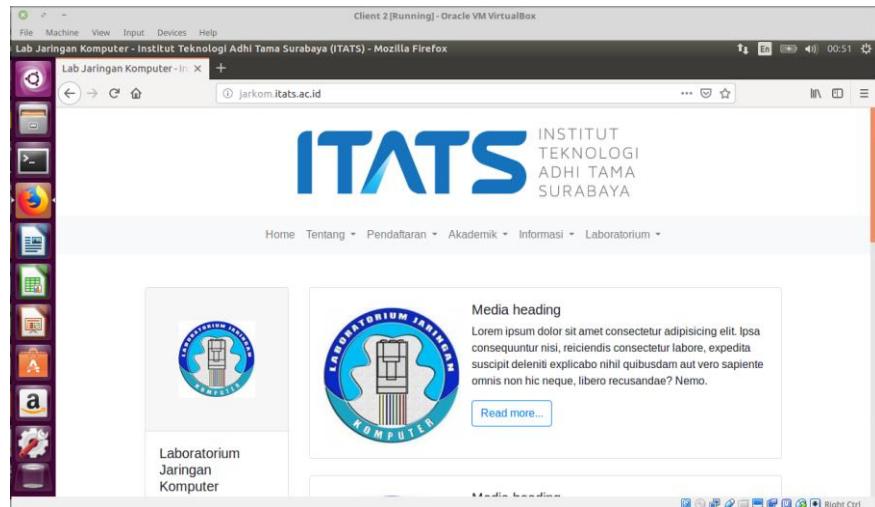


basprog.itats.ac.id



STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

rpl.itats.ac.id



jarkom.itats.ac.id

f. Mail Server

1. Login sebagai root.

```
root@JK189-SERVER: ~
syarifuddin_06989@JK189-SERVER:~$ sudo -i
sudo: unable to resolve host JK189-SERVER: Connection timed out
[sudo] password for syarifuddin_06989:
root@JK189-SERVER:~#
```

2. Pertama set IP server menjadi **172.15.1.1**, dan install **nginx** serta **bind** dengan domain **itats.ac.id** yang memiliki subdomain **mail.itats.ac.id**

```
root@JK189-SERVER: ~
GNU nano 2.5.3          File: /etc/bind/named.conf.local          Modified
// Do any local configuration here
//
// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

zone "itats.ac.id"{
    type master;
    file "/etc/bind/db.itats.ac.id";
};

zone "1.15.172.in-addr.arpa"{
    type master;
    file "/etc/bind/db.172";
};

[ Read 28 lines ]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit      ^R Read File ^A Replace   ^U Uncut Text ^T To Spell ^L Go To Line
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

```
GNU nano 2.5.3           File: /etc/bind/db.172
;
; BIND reverse data file for local loopback interface
;
$TTL    604800
@      IN      SOA     itats.ac.id. root.itats.ac.id. (
                      1                   ; Serial
                      604800             ; Refresh
                      86400              ; Retry
                     2419200            ; Expire
                     604800 )           ; Negative Cache TTL
;
@      IN      NS      www.
1      IN      PTR     www.itats.ac.id.
1      IN      PTR     mail.itats.ac.id.
1      IN      PTR     basprog.itats.ac.id.
1      IN      PTR     rpl.itats.ac.id.
1      IN      PTR     jarkom.itats.ac.id.
1      IN      PTR     ftp.itats.ac.id.

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text  ^T To Spell  ^_ Go To Line
```

```
GNU nano 2.5.3           File: /etc/bind/db.itats.ac.id           Modified
;
; BIND data file for local loopback interface
;
$TTL    604800
@      IN      SOA     itats.ac.id. root.itats.ac.id. (
                      2                   ; Serial
                      604800             ; Refresh
                      86400              ; Retry
                     2419200            ; Expire
                     604800 )           ; Negative Cache TTL
;
@      IN      NS      itats.ac.id.
@      IN      A       172.15.1.1
www   IN      CNAME   www
mail   IN      CNAME   www
basprog IN      CNAME   www
rpl    IN      CNAME   www
jarkom  IN      CNAME   www
ftp    IN      CNAME   www

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text  ^T To Spell  ^_ Go To Line
```

3. Tambahkan domain baru pada file “/etc/hosts” dengan perintah :

```
# nano /etc/hosts
```

```
GNU nano 2.5.3           File: /etc/hosts           Modified
127.0.0.1      localhost
127.0.1.1      SERVER-JK189
172.15.1.1      itats.ac.id
172.15.1.1      mail.itats.ac.id basprog.itats.ac.id rpl.itats.ac.id jarkom.itats.ac.id

# The following lines are desirable for IPv6 capable hosts
::1      ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
```

```
root@JK189-SERVER:~# nslookup 172.15.1.1
Server:      127.0.0.1
Address:      127.0.0.1#53

1.1.15.172.in-addr.arpa name = www.itats.ac.id.
1.1.15.172.in-addr.arpa name = jarkom.itats.ac.id.
1.1.15.172.in-addr.arpa name = basprog.itats.ac.id.
1.1.15.172.in-addr.arpa name = ftp.itats.ac.id.
1.1.15.172.in-addr.arpa name = mail.itats.ac.id.
1.1.15.172.in-addr.arpa name = rpl.itats.ac.id.

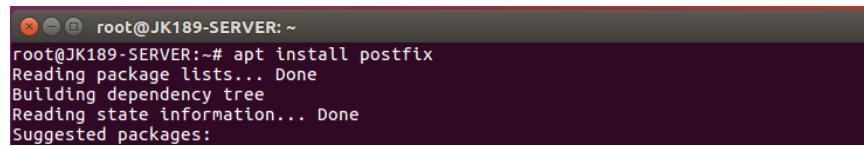
root@JK189-SERVER:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM

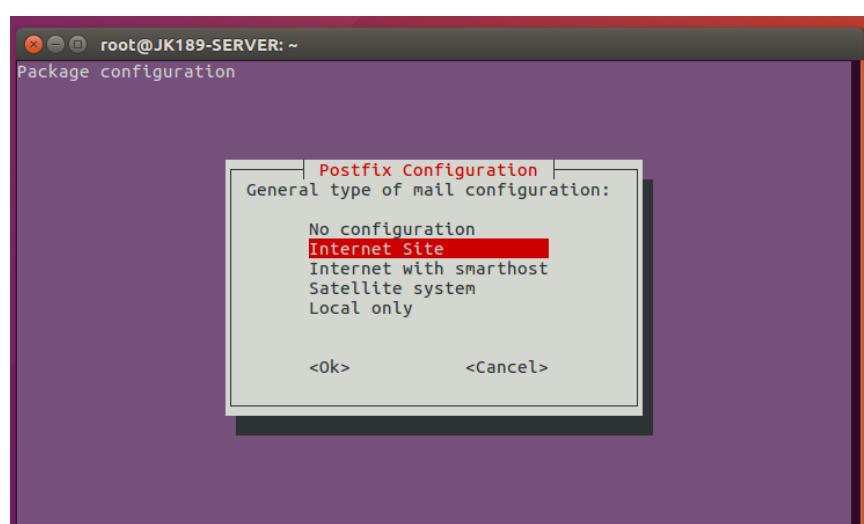
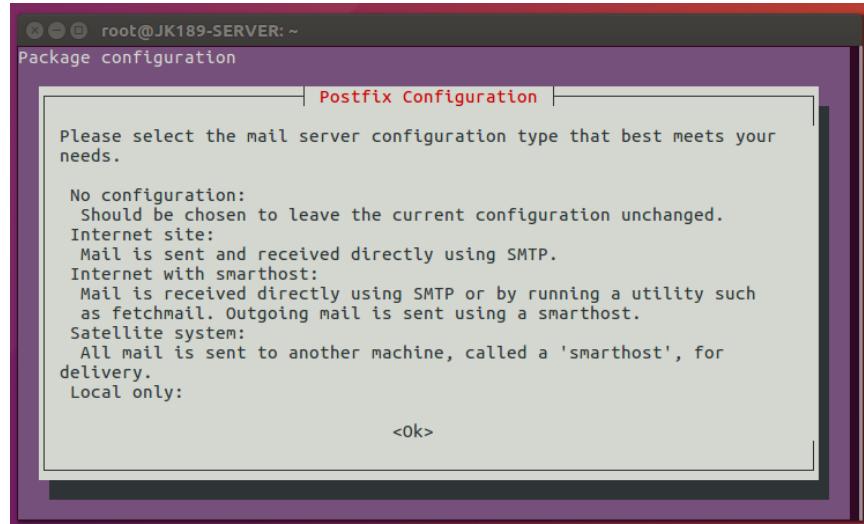
JARINGAN KOMPUTER XXXII

4. Install postfix dengan perintah:

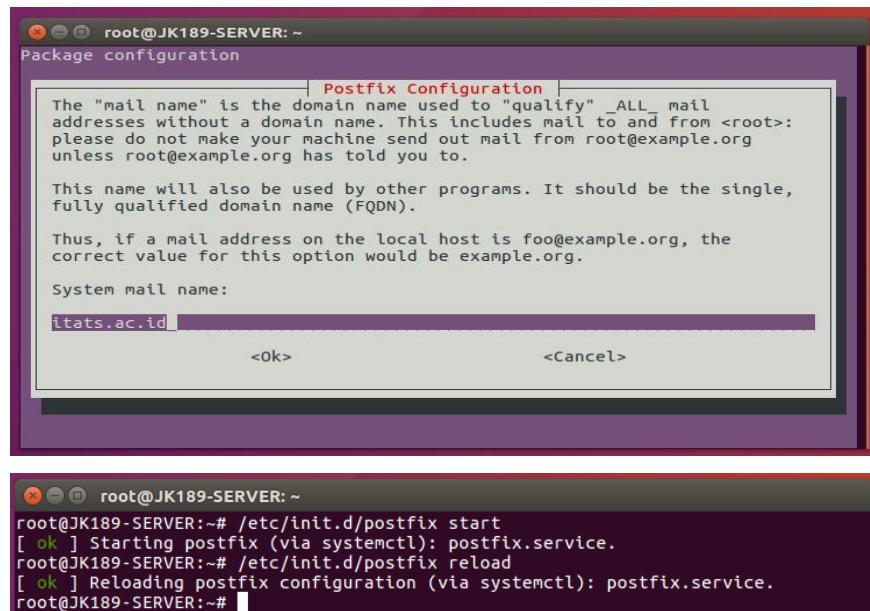
```
# apt-get install postfix
```



```
root@JK189-SERVER:~# apt install postfix
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
```

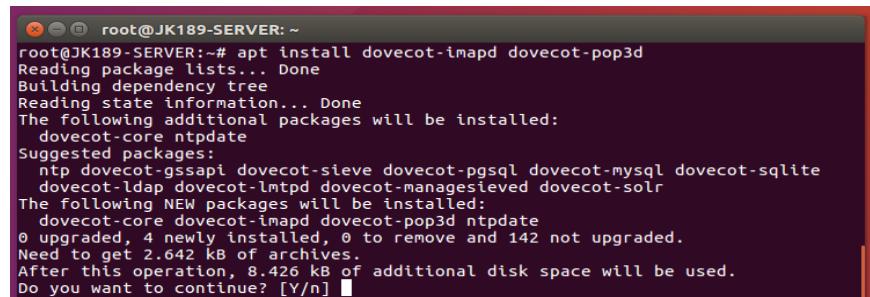


STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



5. Install dovecot dengan perintah:

```
# apt-get install dovecot-imapd dovecot-pop3d
```

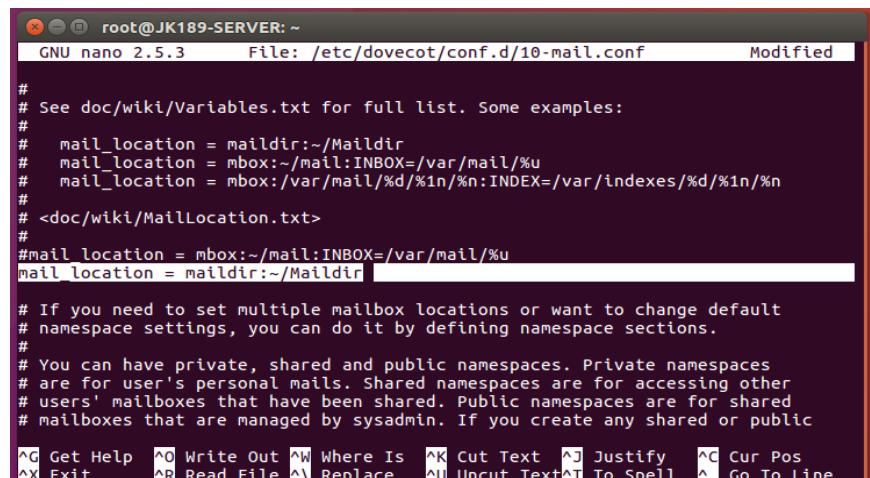


6. Konfigurasi dovecot dengan perintah:

```
# nano /etc/dovecot/conf.d/10-mail.conf
```



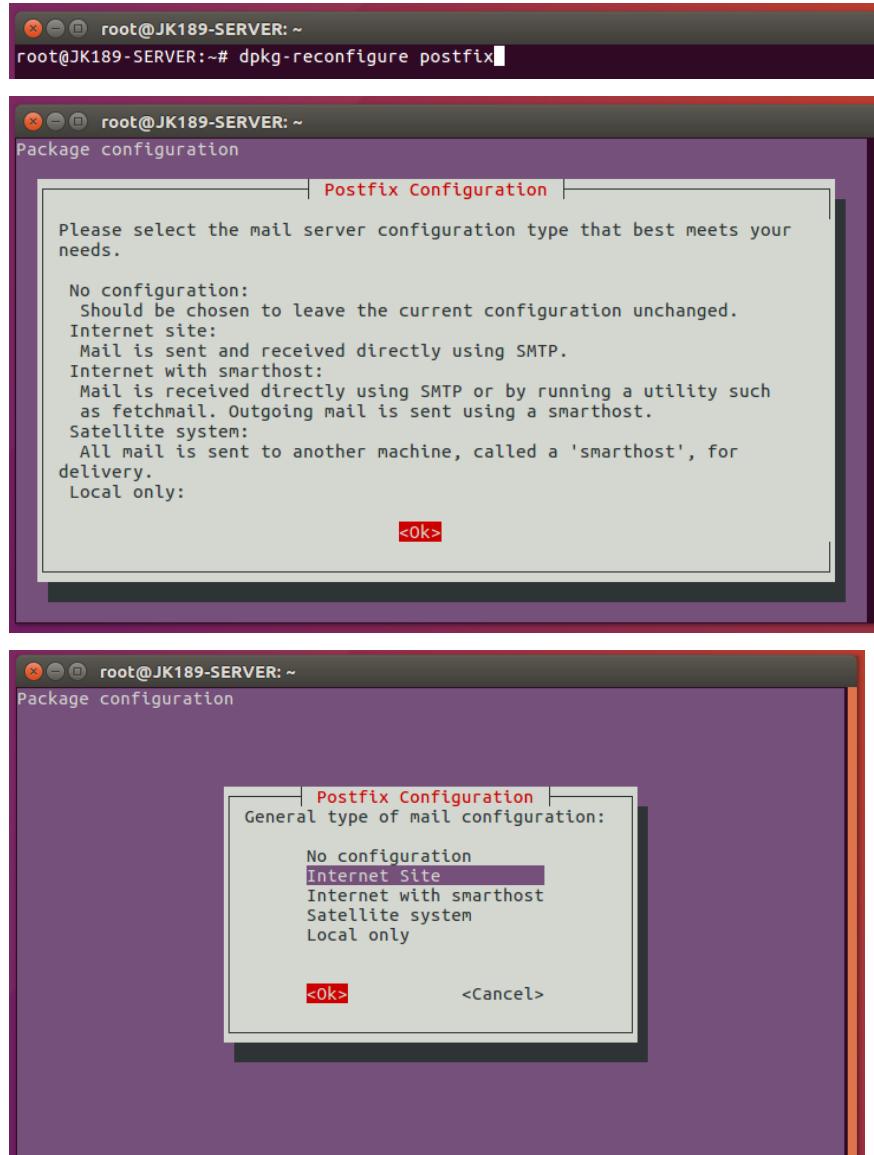
Tambahkan kata yang diblok seperti dibawah ini



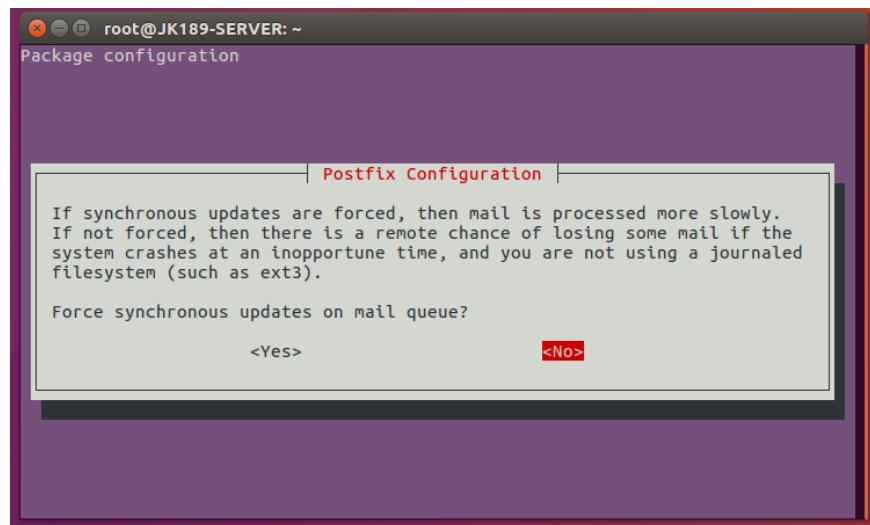
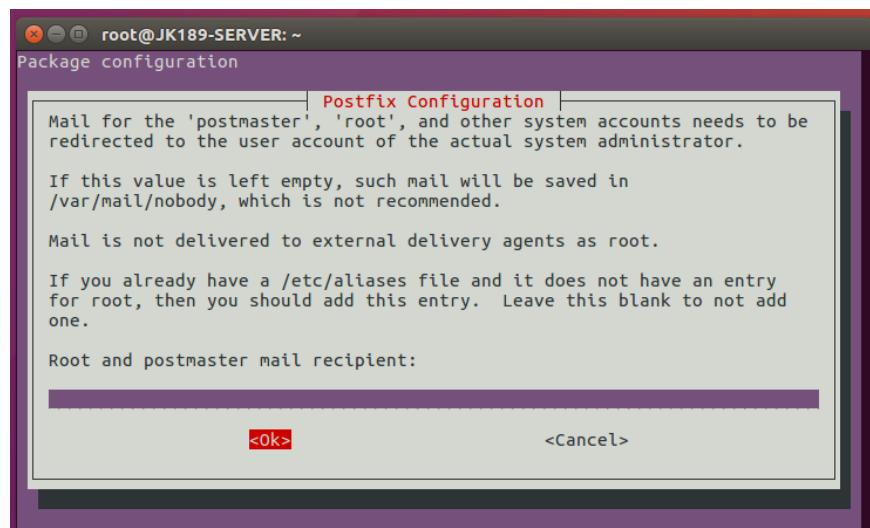
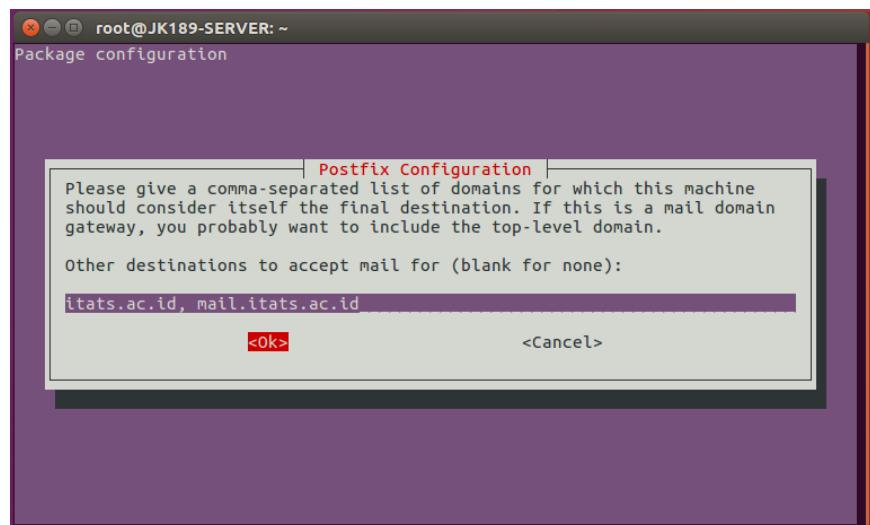
STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

7. Konfigurasi postfix dengan perintah:

```
# dpkg-reconfigure postfix
```



STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



```
root@JK189-SERVER:~# dpkg-reconfigure postfix
setting synchronous mail queue updates: false
setting myorigin
setting destinations: itats.ac.id, mail.itats.ac.id
setting relayhost:
setting mynetworks: 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128 172.15.1.1/24
setting mailbox_size_limit: 0
setting recipient_delimiter: +
setting inet_interfaces: all
setting inet_protocols: all
WARNING: /etc/aliases exists, but does not have a root alias.

Postfix is now set up with the changes above. If you need to make changes, edit
/etc/postfix/main.cf (and others) as needed. To view Postfix configuration
values, see postconf(1).

After modifying main.cf, be sure to run '/etc/init.d/postfix reload'.

Running newaliases
Processing triggers for libc-bin (2.23-0ubuntu11) ...
root@JK189-SERVER:~#
```

```
root@JK189-SERVER:~# /etc/init.d/postfix start
[ ok ] Starting postfix (via systemctl): postfix.service.
root@JK189-SERVER:~# /etc/init.d/postfix reload
[ ok ] Reloading postfix configuration (via systemctl): postfix.service.
root@JK189-SERVER:~#
```

8. Set mailbox pada file “main.cf” dengan perintah:

```
# nano /etc/postfix/main.cf
```

```
root@JK189-SERVER:~# nano /etc/postfix/main.cf
GNU nano 2.5.3           File: /etc/postfix/main.cf          Modified

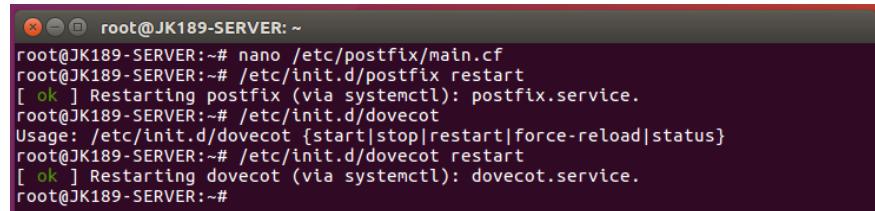
myhostname = JK189-SERVER
alias_maps = hash:/etc/aliases
alias_database = hash:/etc/aliases
myorigin = /etc/mailname
mydestination = itats.ac.id, mail.itats.ac.id
relayhost =
mynetworks = 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128 172.15.1.1/24
mailbox_size_limit = 0
recipient_delimiter = +
inet_interfaces = all
inet_protocols = all
home_mailbox = Maildir/
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

9. Restart service postfix dan dovecot dengan perintah:

```
# /etc/init.d/postfix restart
```

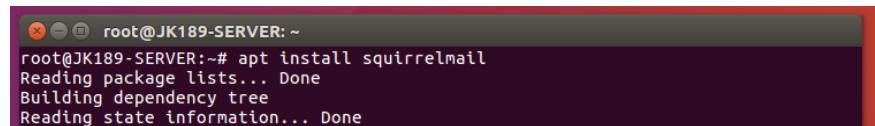
```
# /etc/init.d/dovecot restart
```



```
root@JK189-SERVER:~# nano /etc/postfix/main.cf
root@JK189-SERVER:~# /etc/init.d/postfix restart
[ ok ] Restarting postfix (via systemctl): postfix.service.
root@JK189-SERVER:~# /etc/init.d/dovecot
Usage: /etc/init.d/dovecot [start|stop|restart|force-reload|status]
root@JK189-SERVER:~# /etc/init.d/dovecot restart
[ ok ] Restarting dovecot (via systemctl): dovecot.service.
root@JK189-SERVER:~#
```

10. Install squirrelmail dengan perintah:

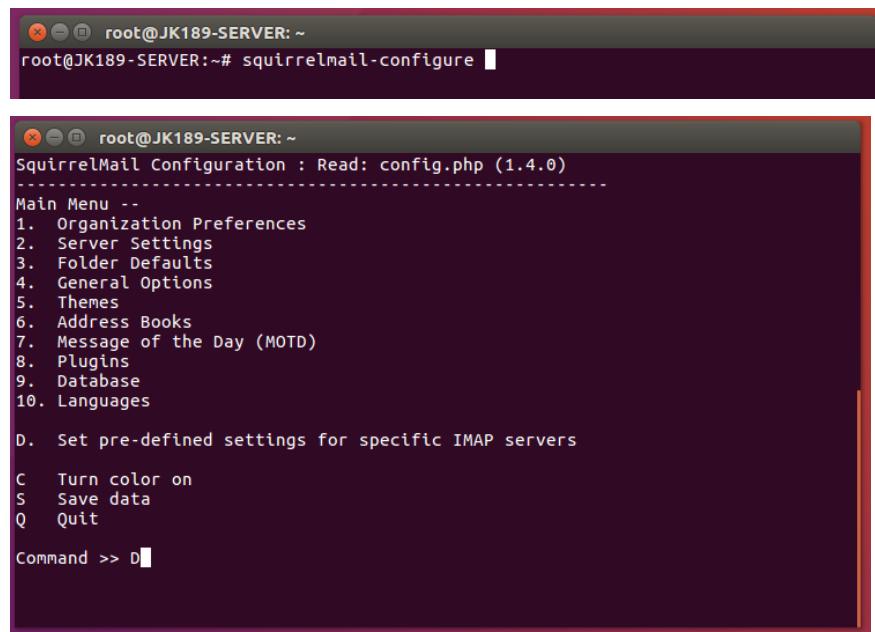
```
# apt-get install squirrelmail
```



```
root@JK189-SERVER:~# apt install squirrelmail
Reading package lists... Done
Building dependency tree
Reading state information... Done
```

11. Konfigurasi squirrelmail dengan perintah:

```
# squirrelmail-configure
```



```
root@JK189-SERVER:~# squirrelmail-configure
```



```
SquirrelMail Configuration : Read: config.php (1.4.0)
-----
Main Menu --
1. Organization Preferences
2. Server Settings
3. Folder Defaults
4. General Options
5. Themes
6. Address Books
7. Message of the Day (MOTD)
8. Plugins
9. Database
10. Languages

D. Set pre-defined settings for specific IMAP servers
C Turn color on
S Save data
Q Quit

Command >> D
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

```
root@JK189-SERVER: ~
cyrus      = Cyrus IMAP server
dovecot    = Dovecot Secure IMAP server
exchange   = Microsoft Exchange IMAP server
hmailserver = hMailServer
macosx     = Mac OS X Mailserver
mercury32   = Mercury/32
uw         = University of Washington's IMAP server
gmail      = IMAP access to Google mail (Gmail) accounts

quit       = Do not change anything
Command >> courier

    imap_server_type = courier
    default_folder_prefix = INBOX.
        trash_folder = Trash
        sent_folder = Sent
        draft_folder = Drafts
        show_prefix_option = false
    default_sub_of_inbox = true
show_contain_subfolders_option = false
    optional_delimiter = .
        delete_folder = true

Press enter to continue...■
```

```
root@JK189-SERVER: ~
SquirrelMail Configuration : Read: config.php (1.4.0)
-----
Main Menu --
1. Organization Preferences
2. Server Settings
3. Folder Defaults
4. General Options
5. Themes
6. Address Books
7. Message of the Day (MOTD)
8. Plugins
9. Database
10. Languages

D. Set pre-defined settings for specific IMAP servers

C Turn color on
S Save data
Q Quit

Command >> S

Data saved in config.php
Press enter to continue...■
```

```
root@JK189-SERVER: ~
SquirrelMail Configuration : Read: config.php (1.4.0)
-----
Main Menu --
1. Organization Preferences
2. Server Settings
3. Folder Defaults
4. General Options
5. Themes
6. Address Books
7. Message of the Day (MOTD)
8. Plugins
9. Database
10. Languages

D. Set pre-defined settings for specific IMAP servers

C Turn color on
S Save data
Q Quit

Command >> Q■
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

12. Buat vhost pada nginx untuk squirrelmail dengan perintah:

```
# nano /etc/nginx/sites-available/mail
```

The screenshot shows a terminal window titled "root@JK189-SERVER: ~". It displays the contents of the file "/etc/nginx/sites-available/mail" using the GNU nano 2.5.3 editor. The configuration includes directives for listening on port 80, setting the server name to mail.itats.ac.id, and defining locations for static files and PHP scripts. It also includes a location block for squirrelmail and a rewrite rule for webmail.

```
root@JK189-SERVER: ~
GNU nano 2.5.3      File: /etc/nginx/sites-available/mail

server{
    listen 80;
    server_name mail.itats.ac.id;
    root /usr/share/squirrelmail/;
    index index.php index.html;
    location ~ /\.ht {
        deny all;
        access_log off;
        log_not_found off;
    }
    location ~ \.php$ {
        include snippets/fastcgi-php.conf;
        fastcgi_split_path_info ^(.+\.php)(/.+)$;
        fastcgi_pass 127.0.0.1:9000;
    }
    location /squirrelmail {
        root /usr/share/;
        index index.php index.html index.htm;
        location ~ ^/squirrelmail/(.+\.php)$ {
            try_files $uri $uri/ = 404;
            root /usr/share/;
            fastcgi_pass 127.0.0.1:9000;
            fastcgi_index index.php;
            include /etc/nginx/fastcgi_params;
        }
    }
    location /webmail {
        rewrite ^/* /squirrelmail last;
    }
}

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Uncut Text^T To Spell  ^L Go To Line
```

13. Aktifkan vhost mail dengan perintah:

```
# ln -s /etc/nginx/sites-available/mail      /etc/nginx/sites-
enabled/mail
```

The screenshot shows a terminal window titled "root@JK189-SERVER: ~". It displays the command "ln -s /etc/nginx/sites-available/mail /etc/nginx/sites-enabled/" being run by the root user. The output shows the symbolic link has been created successfully.

```
root@JK189-SERVER: ~
root@JK189-SERVER:~# ln -s /etc/nginx/sites-available/mail /etc/nginx/sites-enabled/
root@JK189-SERVER:~# ls /etc/nginx/sites-enabled/
default  mail
root@JK189-SERVER:~#
```

14. Reload service nginx dengan perintah:

```
# service nginx reload
```

Atau

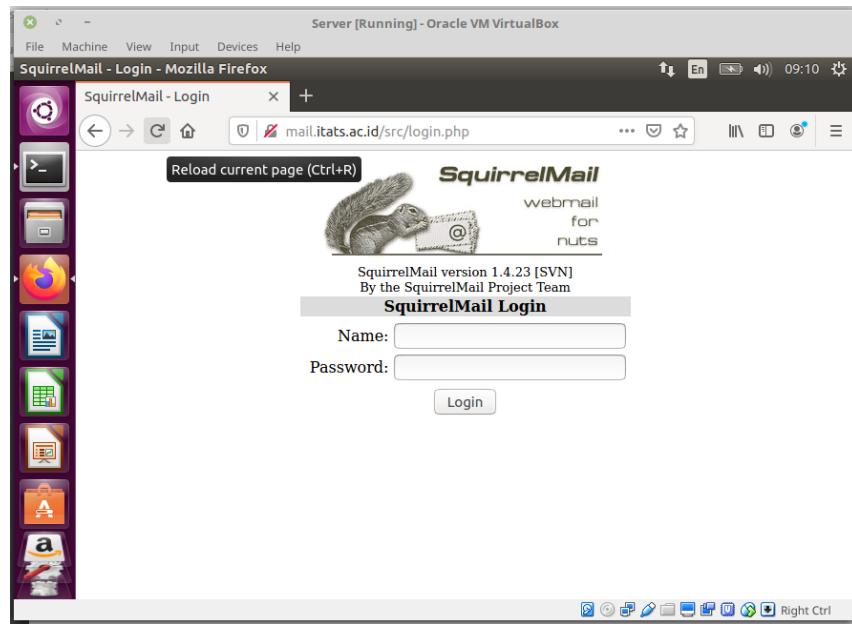
```
# /etc/init.d/nginx reload
```

The screenshot shows a terminal window titled "root@JK189-SERVER: ~". It displays the command "/etc/init.d/nginx reload" being run by the root user. The output shows the reload was successful, indicating the configuration changes have been applied.

```
root@JK189-SERVER: ~
root@JK189-SERVER:~# /etc/init.d/nginx reload
[ ok ] Reloading nginx configuration (via systemctl): nginx.service.
root@JK189-SERVER:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

15. Buka browser dan ketikkan url <http://mail.itats.ac.id>



16. Login kemudian Kirimkan message ke client1 & client2



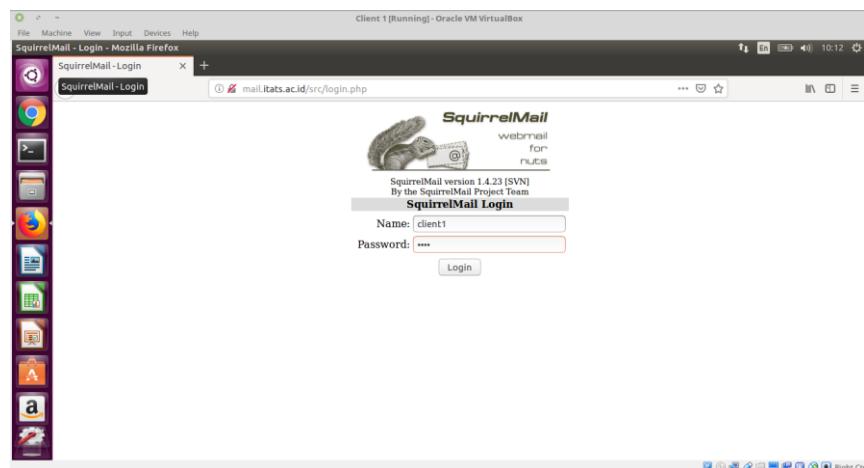
STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



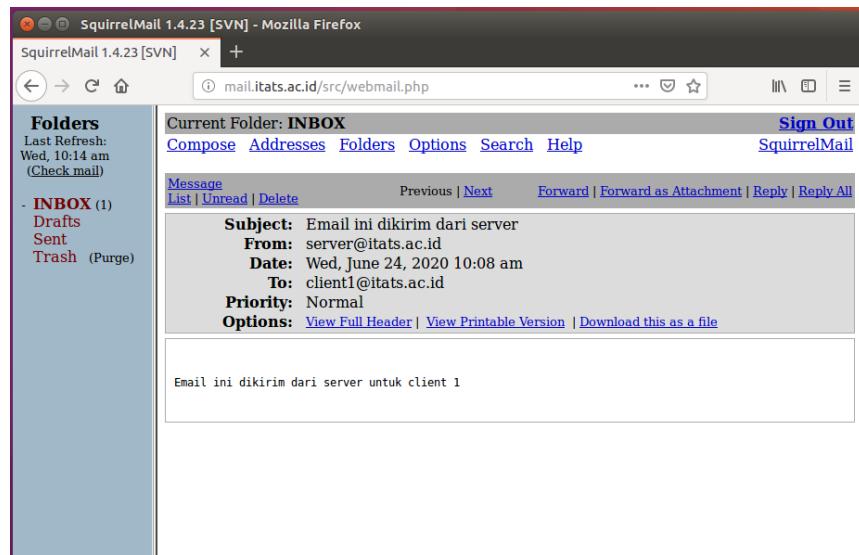
17. Masuk ke client1 & client2 dan buka browser ketikkan

<http://mail.itats.ac.id> , kemudian periksa email yang telah dikirim oleh server ke client1 & client2

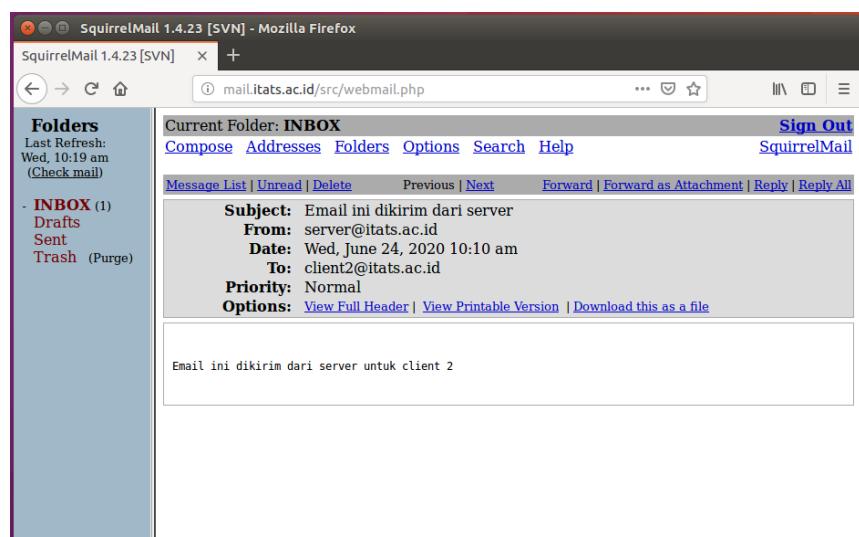
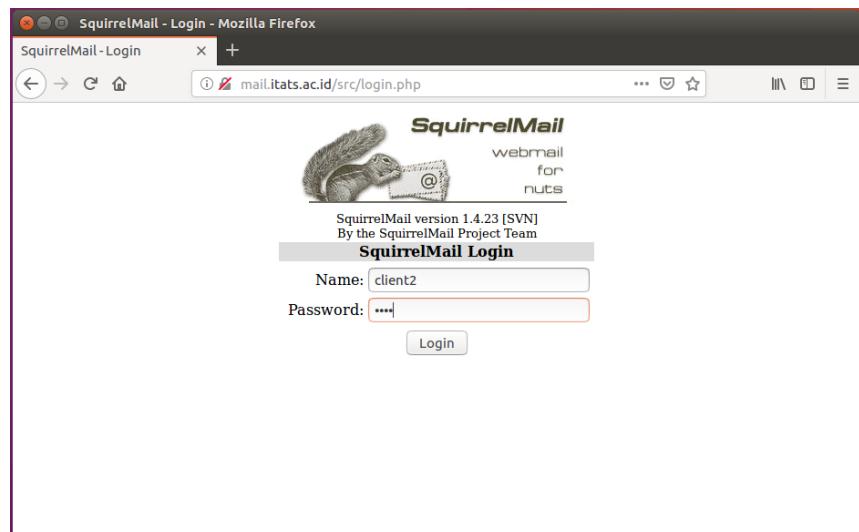
Client 1



STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



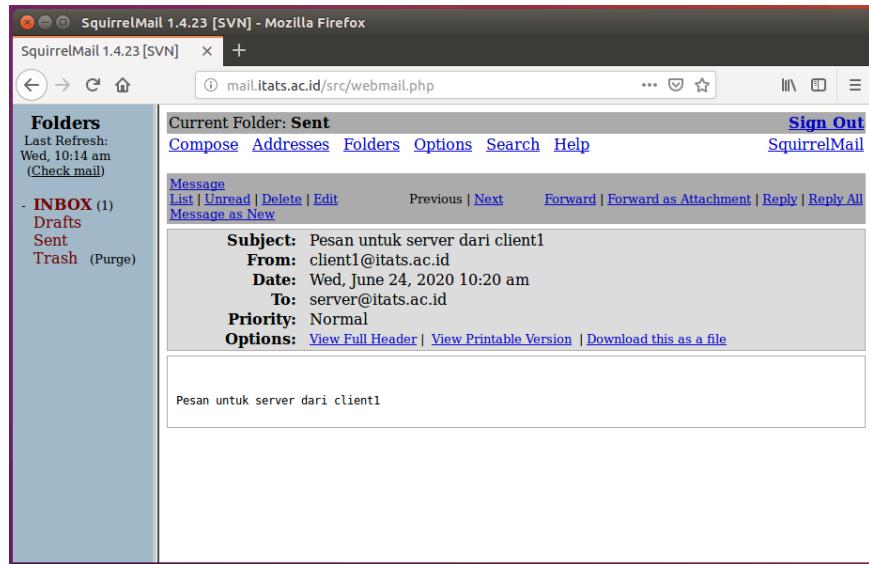
Client 2



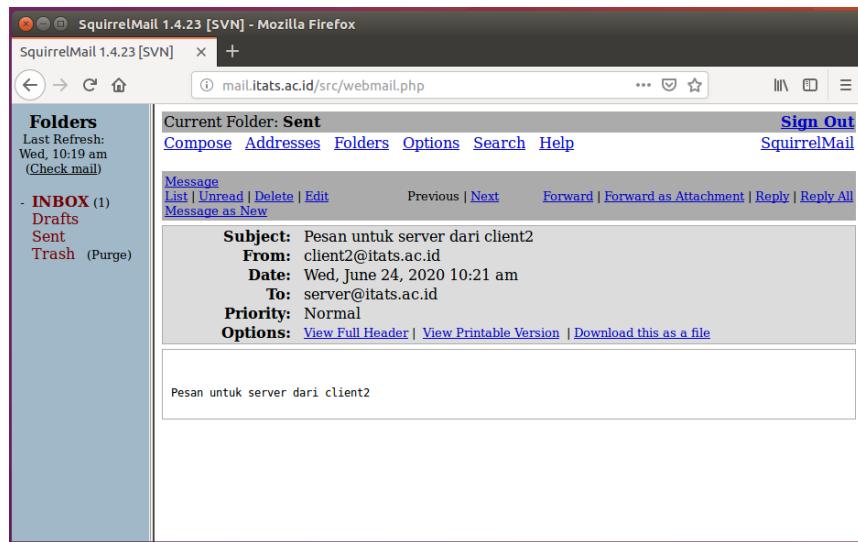
STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

18. Kemudian coba kirimkan email dari client1 & client 2 ke server

Client 1



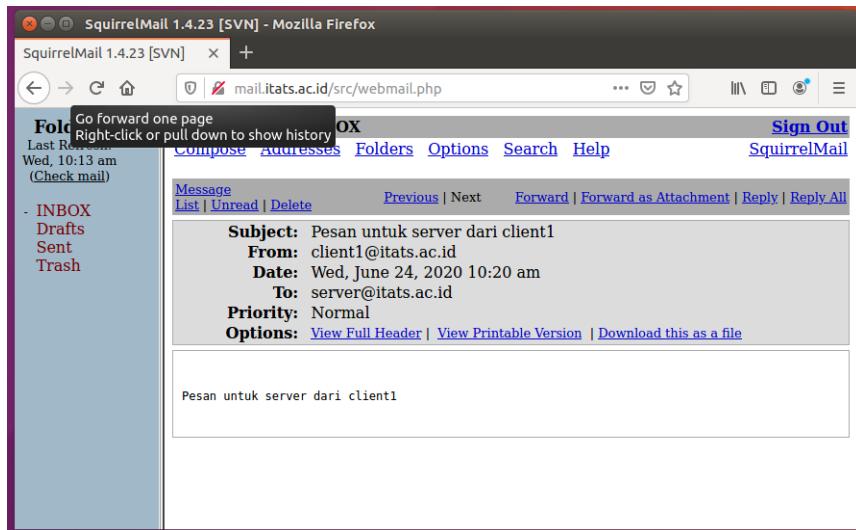
Client 2



STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

19. Kemudian buka email yang dikirim client1 & client2

Email dari Client 1



Email dari Client 2



g. Squid Server

1. Masuk ke super user dengan mengetikkan perintah:

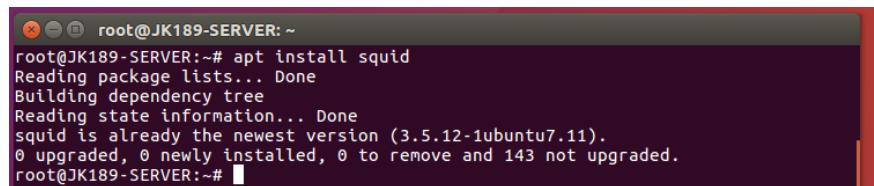
```
# sudo -i
```

```
root@JK189-SERVER: ~
syarifuddin_06989@JK189-SERVER:~$ sudo -i
sudo: unable to resolve host JK189-SERVER
[sudo] password for syarifuddin_06989:
root@JK189-SERVER:~#
```

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

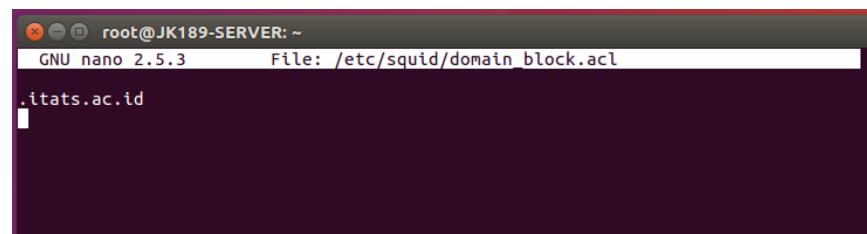
2. Install aplikasi proxy dengan perintah:

```
# apt-get install squid
```



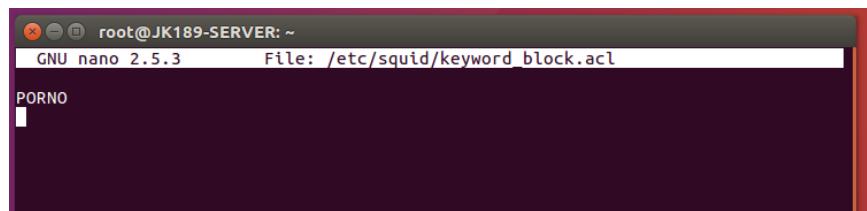
```
root@JK189-SERVER:~# apt install squid
Reading package lists... Done
Building dependency tree
Reading state information... Done
squid is already the newest version (3.5.12-1ubuntu7.11).
0 upgraded, 0 newly installed, 0 to remove and 143 not upgraded.
root@JK189-SERVER:~#
```

3. Buat file konfigurasi untuk client1 pada “*/etc/squid/domain_block.acl*” dan isikan alamat domain yang akan diblock, sebagai berikut :



```
root@JK189-SERVER:~#
GNU nano 2.5.3      File: /etc/squid/domain_block.acl
.itats.ac.id
```

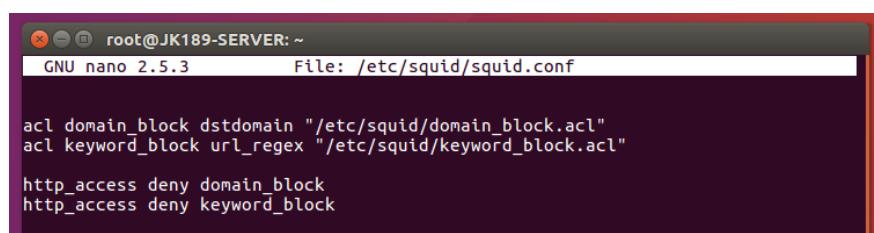
4. Buat file konfigurasi untuk client1 pada “*/etc/squid/keyword_block.acl*” dan isikan extensi keyword yang akan diblock, sebagai berikut :



```
root@JK189-SERVER:~#
GNU nano 2.5.3      File: /etc/squid/keyword_block.acl
PORNO
```

5. Setting konfigurasi squid3 di file “*/etc/squid/squid.conf*”

```
# nano /etc/squid/squid.conf
```



```
root@JK189-SERVER:~#
GNU nano 2.5.3      File: /etc/squid/squid.conf

acl domain_block dstdomain "/etc/squid/domain_block.acl"
acl keyword_block url_regex "/etc/squid/keyword_block.acl"

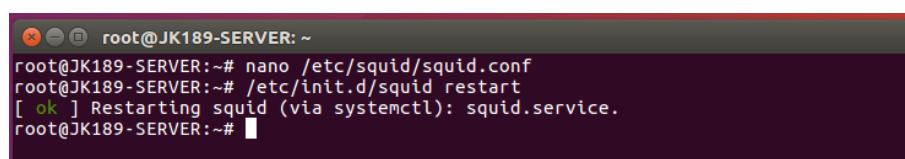
http_access deny domain_block
http_access deny keyword_block
```

6. Restart squid:

```
# service squid restart
```

Atau

```
# /etc/init.d/squid restart
```



```
root@JK189-SERVER:~#
root@JK189-SERVER:~# nano /etc/squid/squid.conf
root@JK189-SERVER:~# /etc/init.d/squid restart
[ ok ] Restarting squid (via systemctl): squid.service.
root@JK189-SERVER:~#
```

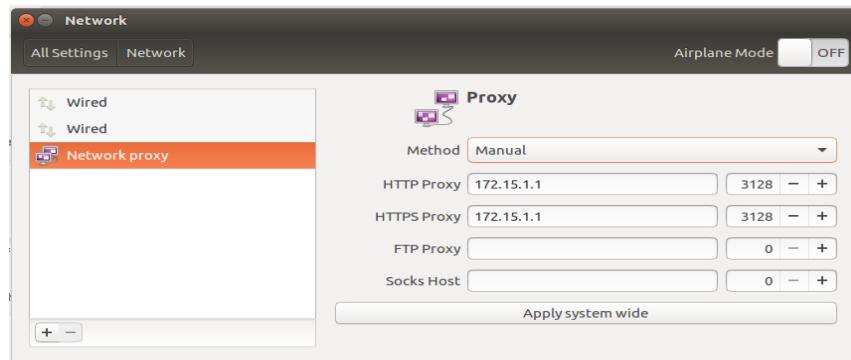
STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

7. Kemudian konfigurasikan proxy sebagai berikut :

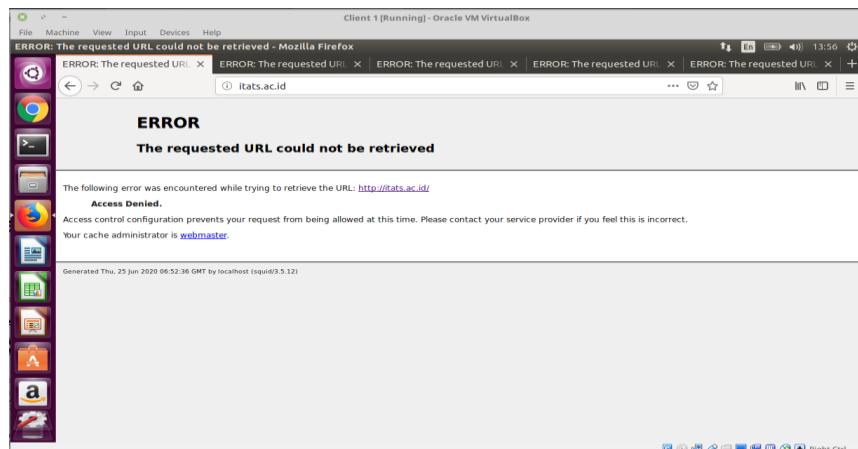
Untuk client1 dengan IP : 172.15.1.1 & port :3128

Untuk client2 dengan IP : 172.15.1.1 & port :3128

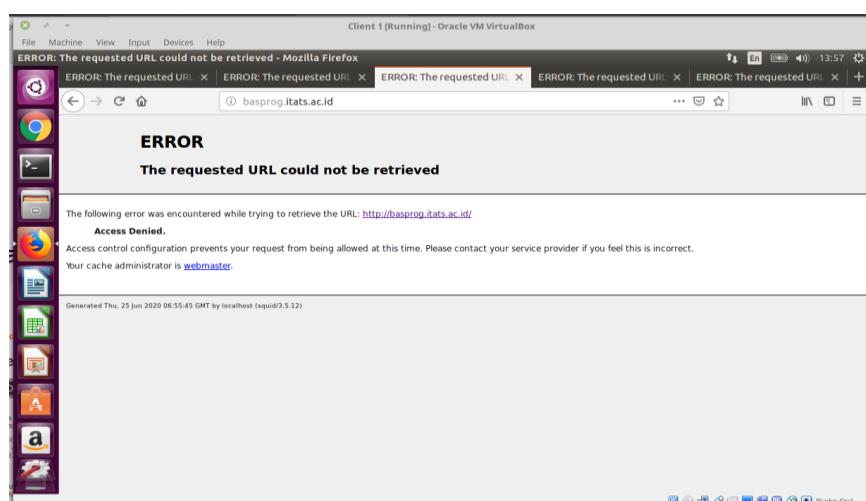
Berikut adalah contohnya,



8. Selanjutnya kita lakukan tes ke client1 dengan mengakses domain yang telah ditentukan, dan hasilnya sebagai berikut,

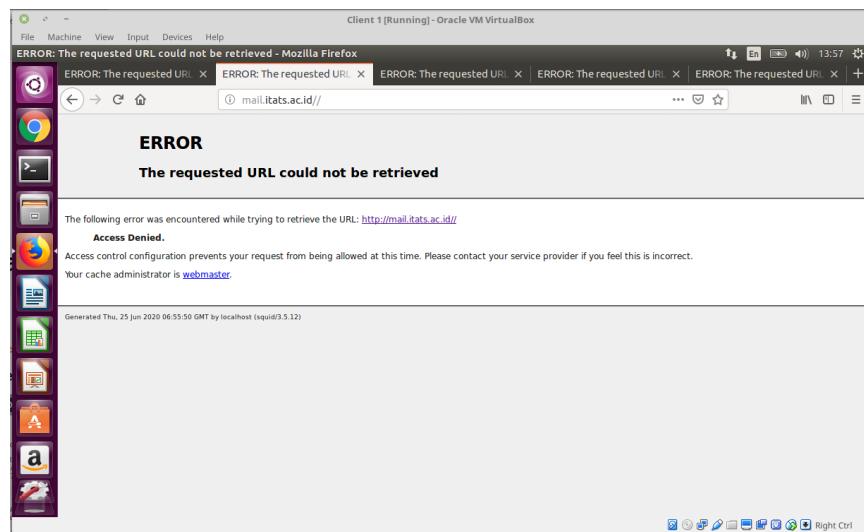


itats.ac.id

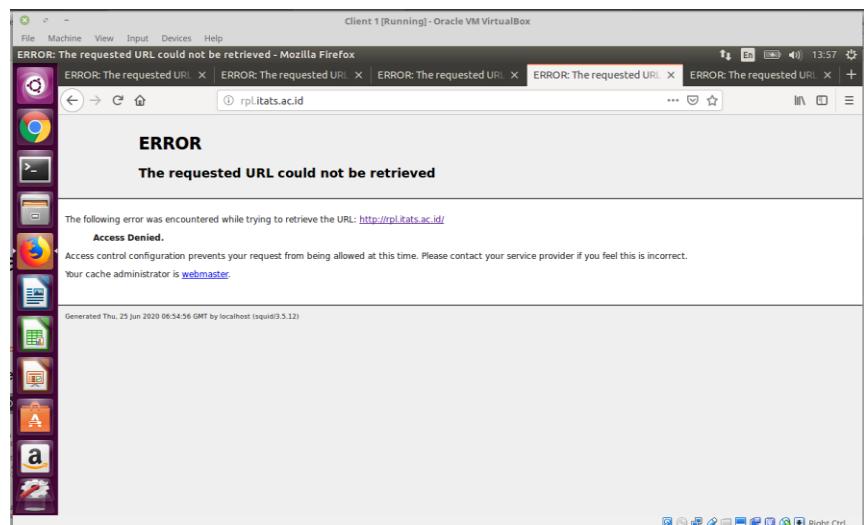


basprog.itats.ac.id

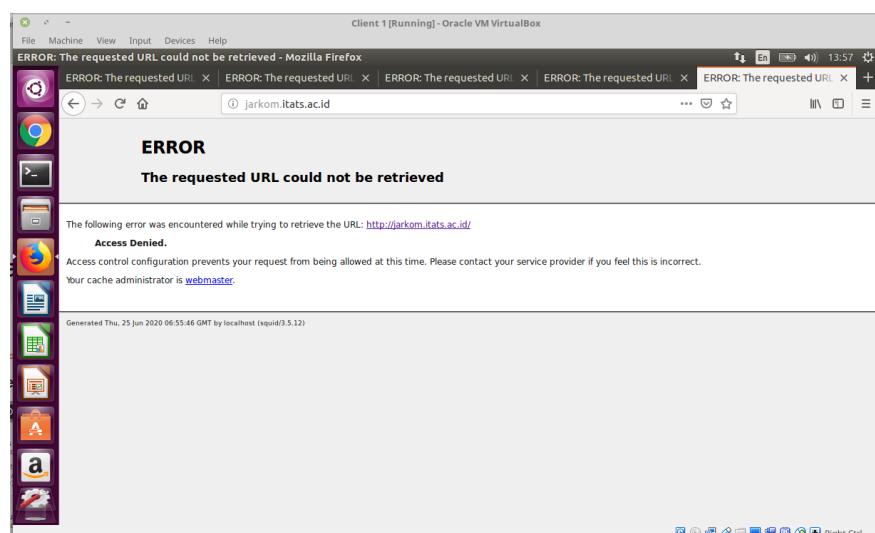
STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII



mail.itats.ac.id



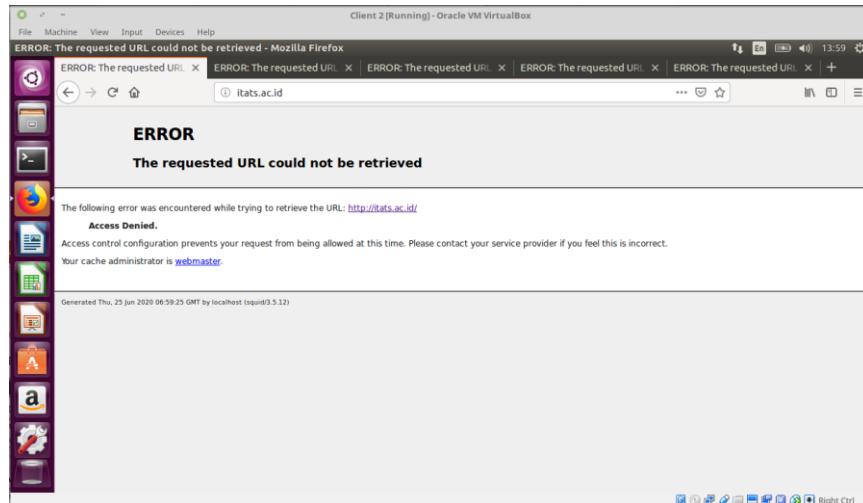
rpl.itats.ac.id



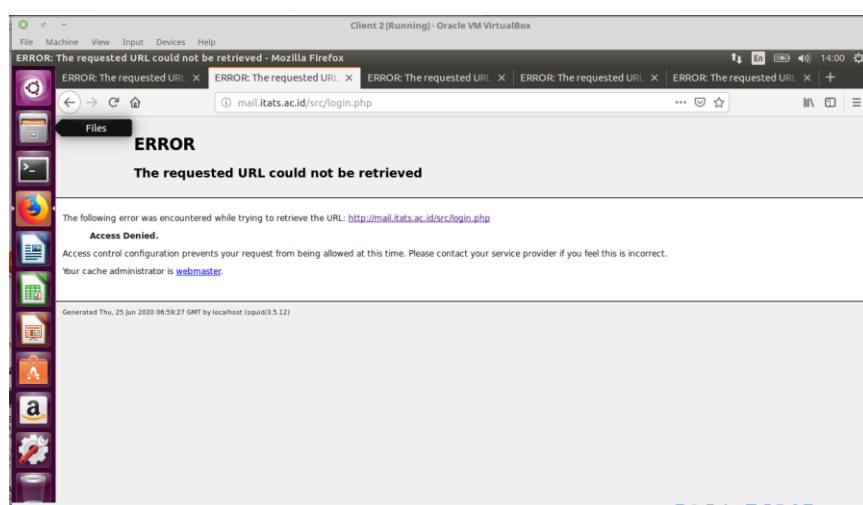
jarkom.itats.ac.id

STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

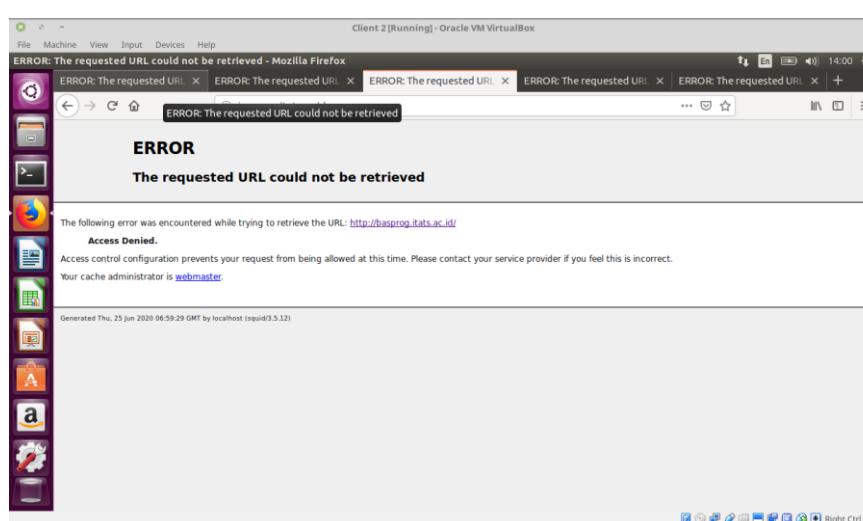
9. Kemudian untuk client2 ialah sebagai berikut,



itats.ac.id

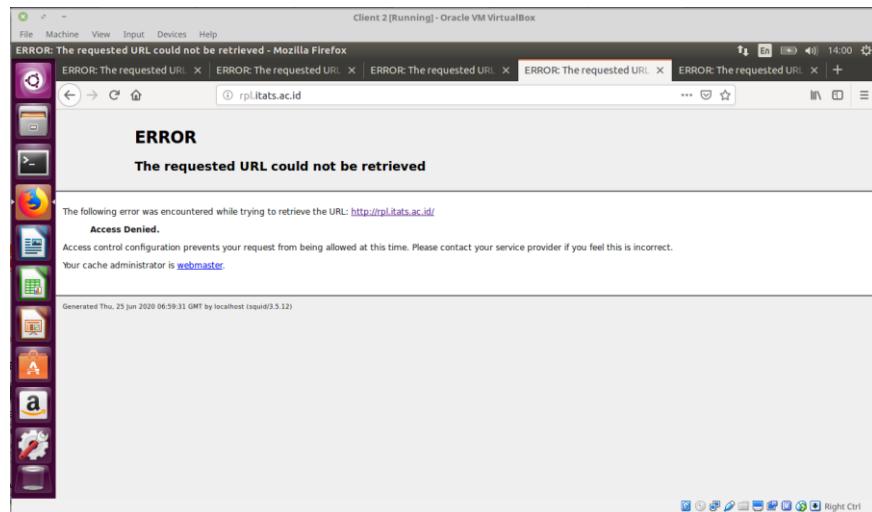


mail.itats.ac.id

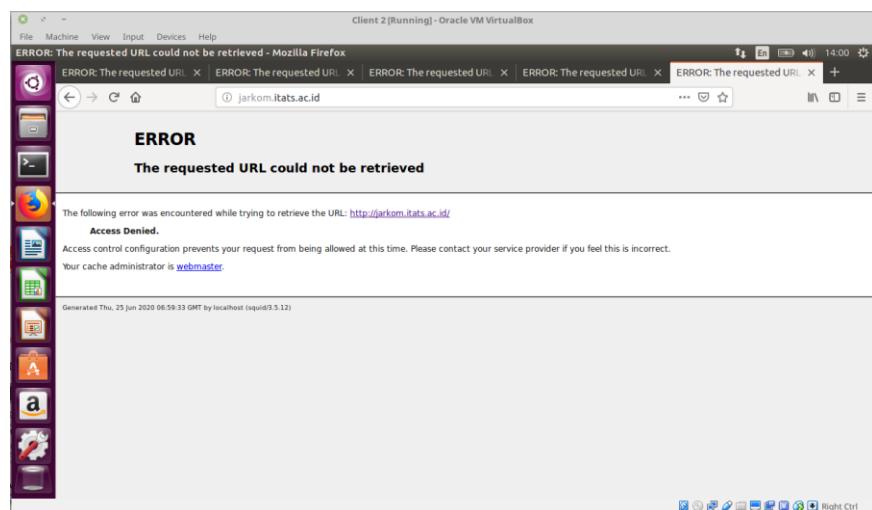


STUDY KASUS TEST AKHIR PRAKTIKUM JARINGAN KOMPUTER XXXII

basprog.itats.ac.id



rpl.itats.ac.id



jarkom.itats.ac.id