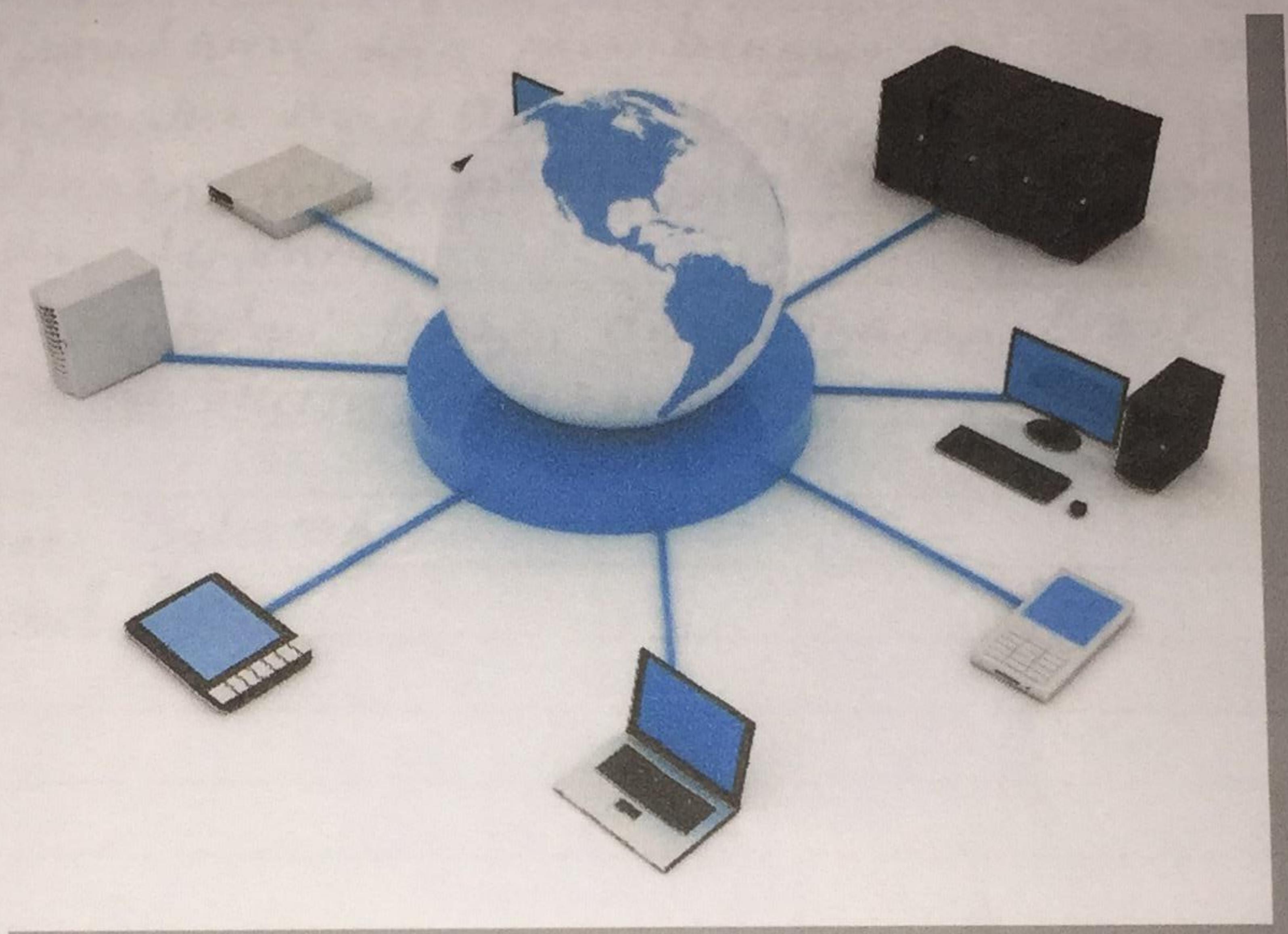


LAPORAN PENDAHULUAN

PRAKTIKUM JARINGAN KOMPUTER

PERIODE XXXII

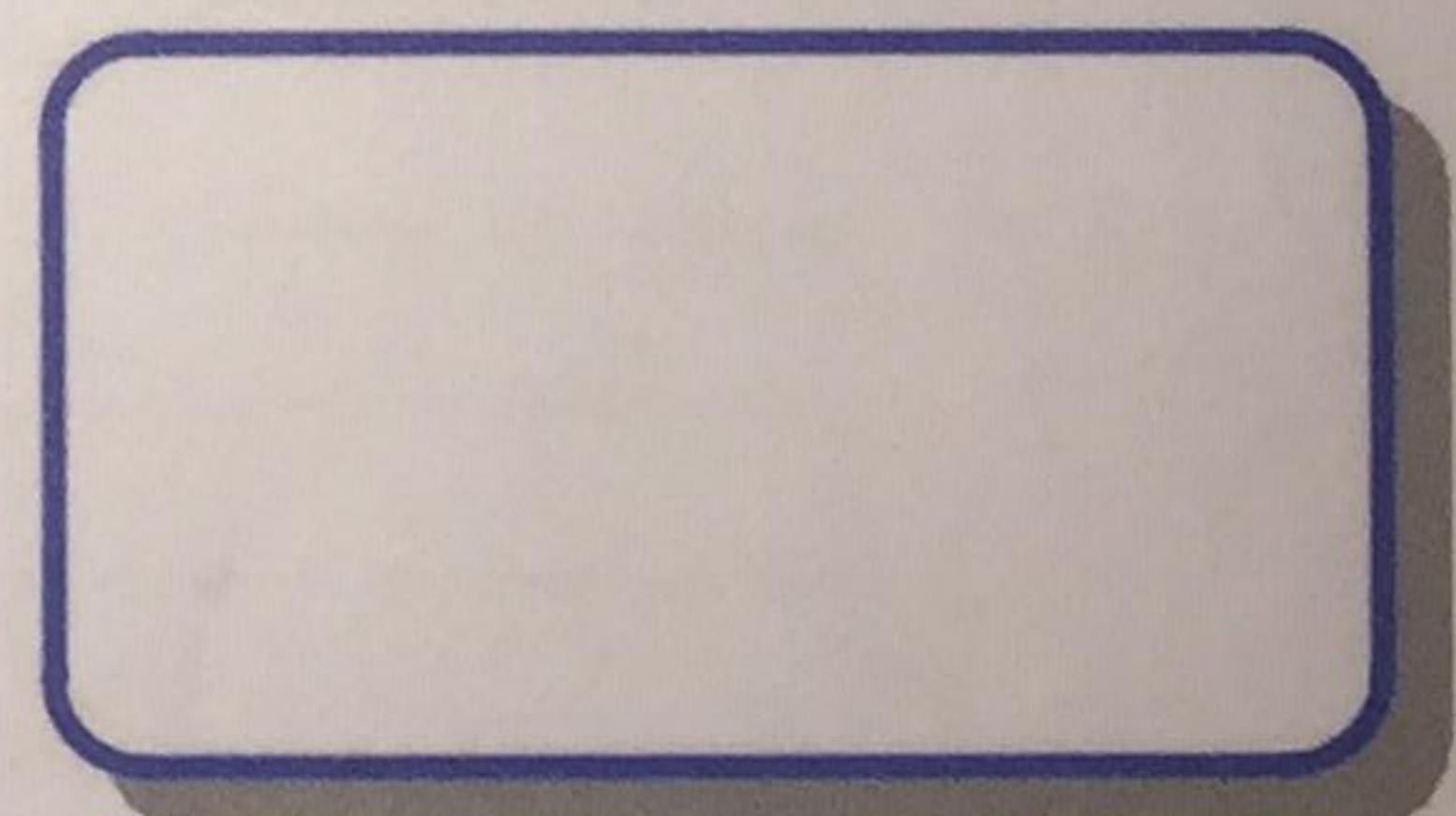


Modul : VII

Nama Praktikan

NPM

- | | |
|----------------------|-------------------|
| 1. Ryvana Suthelie | : 06.2018.1.07014 |
| 2. Ahmad Muchlasin | : 06.2018.1.06941 |
| 3. Ahmad Syarifuddin | : 06.2018.06989 |



LABORATORIUM JARINGAN KOMPUTER
JURUSAN TEKNIK INFORMATIKA
INSTITUT TEKNOLOGI ADHI TAMA SURABAYA
2020

TUJUAN DAN POKOK BAHASAN

MODUL VII MAIL SERVER

1. Tujuan

Setelah mengikuti praktikum, mahasiswa diharapkan mampu:

- a. Memahami dan membangun mail server.
- b. Mengatur Mail Server dalam Jaringan dengan memberikan host alias kepada user tertentu.
- c. Mengetahui fungsi dan layanan Mail Server beserta cara konfigurasinya.

2. Pokok Bahasan

- Mail Server

DASAR TEORI

BAB X MAIL SERVER

10.1 Pengertian Mail

Mail server adalah perangkat lunak program yang mendistribusikan file atau informasi sebagai respons atas permintaan yang dikirim via email, juga digunakan pada bitnet untuk menyediakan layanan serupa http://ftp.

10.2 Jenis-jenis mail

10.2.1 SMTP

Simple Mail Transfer Protocol (SMTP) adalah protokol standar yang digunakan untuk menerima email dari server jauh ke client email lokal.

10.2.2 POP3

Post Office Protocol Version 3 (POP3) adalah sebuah protokol mail standar yang digunakan untuk menerima email dari server jauh ke client email lokal.

10.2.3 IMAP

Internet Message Access Protocol (IMAP) adalah protokol mail yang digunakan untuk mengakses email pada web server remote dari client lokal.

10.2.4 Maildir

Maildir adalah format box penyimpanan surat dalam bentuk folder dan pada bentuk satu file (mbox).

10.2.5 Mbox

Mbox adalah penyimpanan semua email yang masuk menjadi 1 buah file yg besar sehingga untuk membaca email perlu di download seluruh email.

10.3 Macam-macam Mail Server (MTA)

10.3.1 Sendmail

Server email sendmail adalah sebuah server email standar yang salu pacet dengan sistem operasi linux/unix.

DASAR TEORI

10.3.2 Qmail

Server email Qmail adalah sebuah server email yang harus di install sendiri kedalam sistem operasi Unix/Unix. Qmail ini merupakan server email jawaban yang oleh pembuatnya disebut sebagai server email teraman karena sampai sekarang belum ditemukan satupun lubang pengguna yang bisa menyalin kinerjanya. Qmail ini dibuat oleh Dan J. Bernstein, seorang profesor Departemen Matematika, Statistik, dan Ilmu Komputer, Universitas Illinois, Chicago. Qmail sudah banyak digunakan oleh host-host ternama seperti Hotmail dan Yahoo! mail.

10.3.3 Postfix

Server email Postfix adalah sebuah server email yang dikembangkan sebagai pengganti Sendmail dan bisa dijalankan dengan baik di sistem operasi Unix dan Mac OS X. Postfix ini dibuat oleh Wietse Venema, seorang ahli pengamanan (security specialist) saat bekerja sebagai peneliti di IBM. Postfix merupakan versi yang dibeaskan secara gratis dari perusahaan email komersial IBM. Sieure Mailer pertama kali dibuat tahun 1998 dan menjadi popular karena mudah mendapatkan kode programnya dan dijalankan dalam sistem operasi berbasis Linux. Postfix dipasarkan mulai tanggal 22 Januari 1999.

10.3.4 Exim

Exim adalah agen transfer pesan (MTA) yang dikembangkan di University of Cambridge untuk digunakan pada sistem Unix yang terhubung ke Internet.

DASAR TEORI

10.u Squirrelmail

Squirrelmail adalah salah satu aplikasi web yang sudah tersedia di cPanel untuk keperluan membaca mail. Squirrelmail juga aplikasi webmail yang mendukung protoko^l IMAP dan SMTP dan menampilkan halaman dalam format HTML tanpa membutuhkan Java script. Sehingga bisa dilihat mudah dilalui menggunakan browser dan sangat ringan.

Dengan tampilannya yang sederhana, Squirrelmail mempunyai semua fungsi-fungsi yang seharusnya ada di aplikasi pembaca emai^l, mulipati penggunaan attachment, buku alamat, folder, kalender, dll. Jadi jika anda sedang butuh untuk membuat webmail dan memiliki internet tidak terlalu bagus, anda bisa memilih squirrelmail sebagai aplikasi pembaca emai^l anda.

10.u.1 Mail Server (LEMP & SquirrelMail) di Ubun^{tu} 16.04 LTS

Bentuk ini - cara mengkonfigurasi Mail Server di ubun^{tu} 16.04 :

1. Login sebagai root
2. Pertama set IP server menjadi 192.168.1.11/24, dan install nginx serta bind dengan domain jarkom.com yang memiliki subdomain mail.jarkom.com
3. Tambahkan domain name pada file "/etc/hosts" dengan perintah *nano /etc/hosts

DASAR TEORI

127.0.0.1

localhost

127.0.1.1

praktikan

192.168.1.11

Jarkom.com

192.168.1.11

mail.Jarkom.com

* 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

4. Install Postfix dengan perintah:

* apt-get install postfix

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

root@praktikan: ~ * nano /etc/dovecot/conf.d/
10-mail.conf

Tambahkan kata yang diblok, seperti libewah ini:
mail_location = maildir:~/Maildir.

7. Konfigurasi postfix dengan perintah:

* dpkg-reconfigure postfix

8. Set mailbox pada file "main.cf" dengan
perintah:

* nano /etc/postfix/main.cf

9. restart service postfix dan dovecot dengan
perintah:

* /etc/init.d/postfix restart

* /etc/init.d/dovecot restart

DASAR TEORI

10. lalu buat 2 user dengan nama test1 dan test2 dengan perintah:
* add user test1
* adduser test2
* isi info usernya lengkap
11. Install squirrelmail dengan perintah:
* apt-get install ~~squirrel~~ squirrelmail
12. Konfigurasi squirrelmail dengan perintah:
* squirrelmail - configure
13. Buat vhost pada nginx untuk squirrelmail dengan perintah:
* nano /etc/nginx/sites-available/mail
* ln -s /etc/nginx/sites-available/mail /etc/nginx/sites-enabled/mail
14. Aktifkan vhost mail dengan perintah:
* service nginx reload
atau
* /etc/init.d/nginx reload
15. reload service nginx dengan perintah:
* service nginx reload
16. Buka browser dan ketikan url
<http://mail.Jarkom.com>
17. login sebagai test1. Kirimkan message ke test2, lalu logout, login sebagai test2, lalu cek INBOX untuk melihat message dari test1.

LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhamdijir
ID Kelompok : JK189

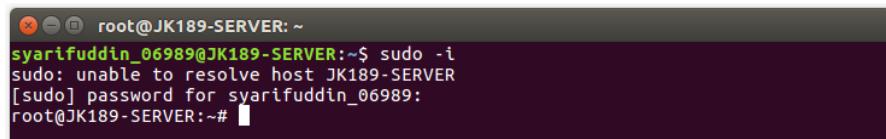
MODUL VII

MAIL SERVER

7. LANGKAH-LANGKAH PERCOBAAN MODUL VII

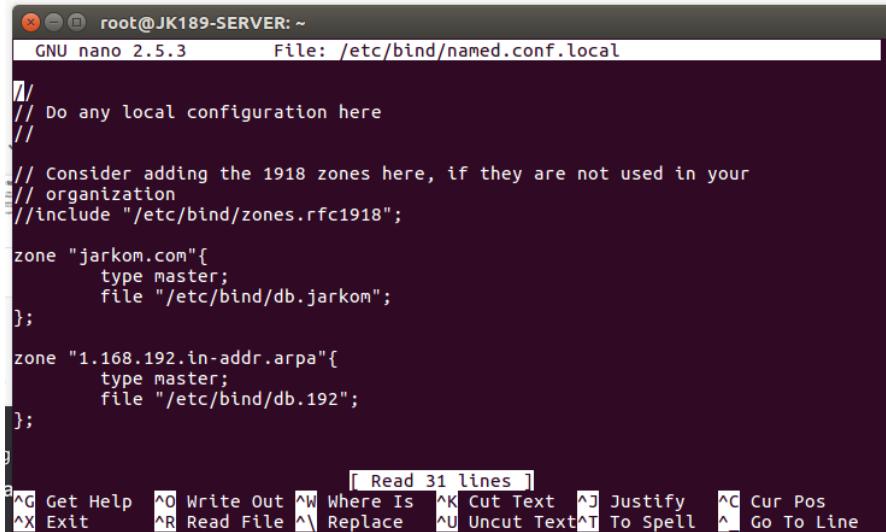
7.1 Mail Server di Ubuntu 16.04 LTS

1. Login sebagai root.



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

2. Pertama set IP server menjadi **192.168.1.1/24**, dan install **nginx** serta **bind** dengan domain jarkom.com yang memiliki subdomain mail.jarkom.com



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

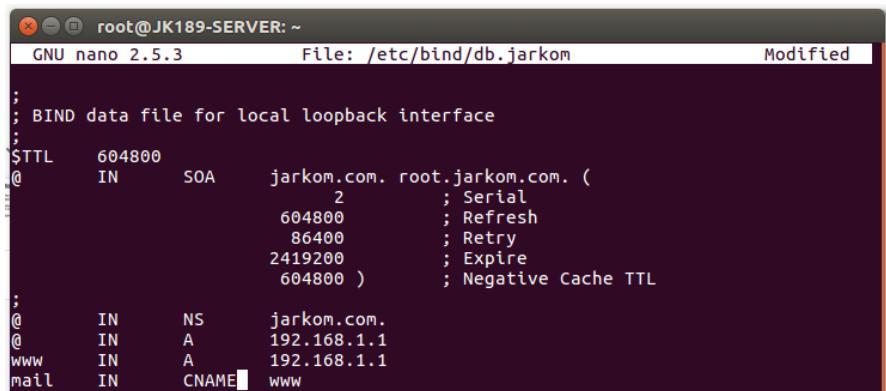
// Do any local configuration here
//

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

zone "jarkom.com"{
    type master;
    file "/etc/bind/db.jarkom";
};

zone "1.168.192.in-addr.arpa"{
    type master;
    file "/etc/bind/db.192";
};

[ Read 31 lines ]
^C 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
```



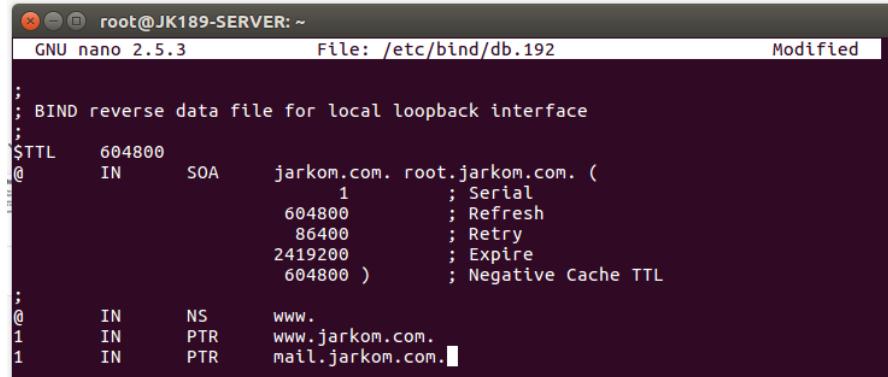
```
root@JK189-SERVER: ~
GNU nano 2.5.3      File: /etc/bind/db.jarkom      Modified

;
; BIND data file for local loopback interface
;

$TTL    604800
@       IN      SOA     jarkom.com. root.jarkom.com. (
                        2           ; Serial
                        604800      ; Refresh
                        86400       ; Retry
                        2419200     ; Expire
                        604800 )     ; Negative Cache TTL
;
@       IN      NS      jarkom.com.
@       IN      A       192.168.1.1
www    IN      A       192.168.1.1
mail   IN      CNAME  www
```

LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhamdijir
ID Kelompok : JK189

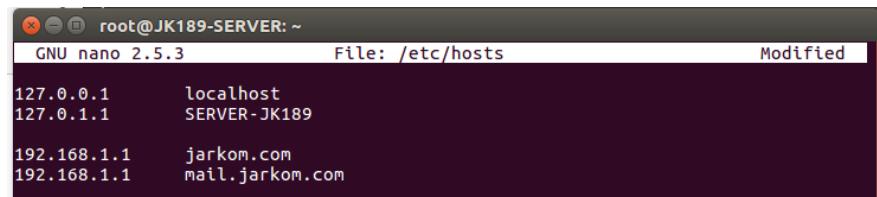


```
root@JK189-SERVER: ~
GNU nano 2.5.3          File: /etc/bind/db.192          Modified

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

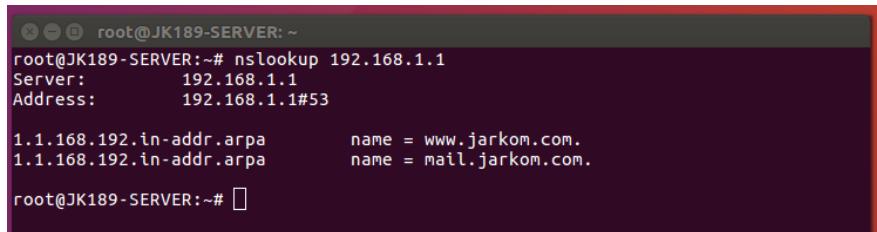
3. Tambahkan domain baru pada file “/etc/hosts” dengan perintah :

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



```
root@JK189-SERVER: ~
GNU nano 2.5.3          File: /etc/hosts          Modified

127.0.0.1      localhost
127.0.1.1      SERVER-JK189
192.168.1.1    jarkom.com
192.168.1.1    mail.jarkom.com
```



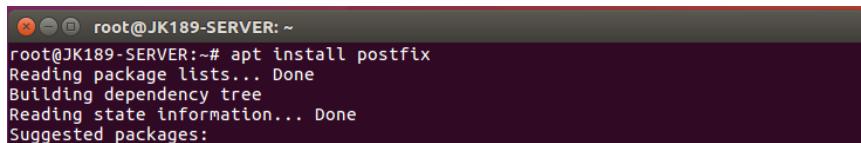
```
root@JK189-SERVER: ~
root@JK189-SERVER:~# nslookup 192.168.1.1
Server:           192.168.1.1
Address:          192.168.1.1#53

1.1.168.192.in-addr.arpa    name = www.jarkom.com.
1.1.168.192.in-addr.arpa    name = mail.jarkom.com.

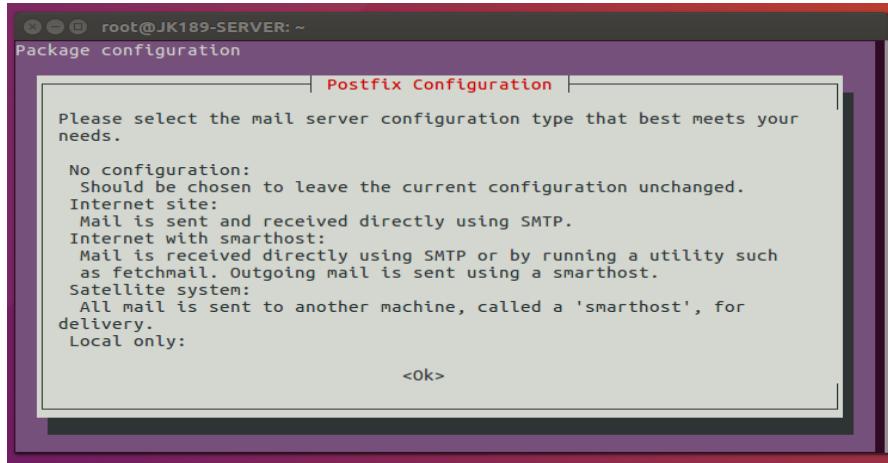
root@JK189-SERVER:~#
```

4. Install postfix dengan perintah:

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



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



Postfix Configuration

Please select the mail server configuration type that best meets your needs.

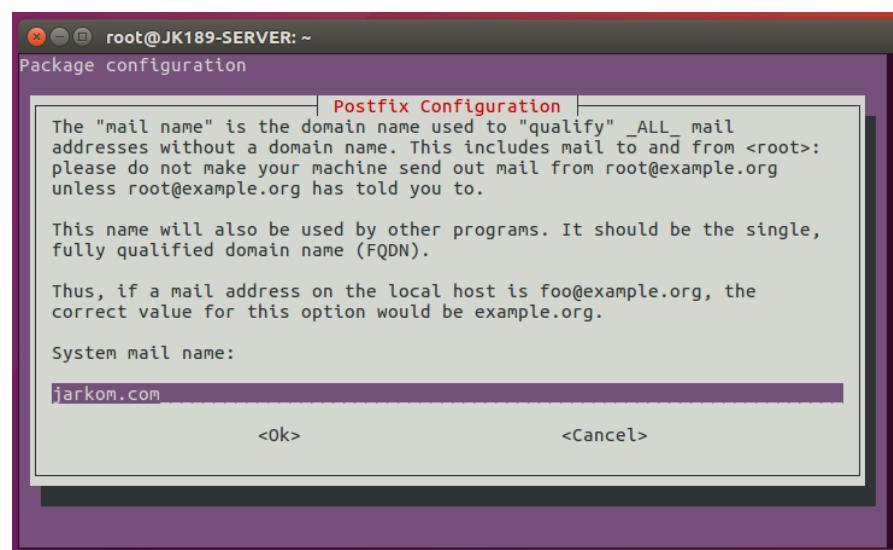
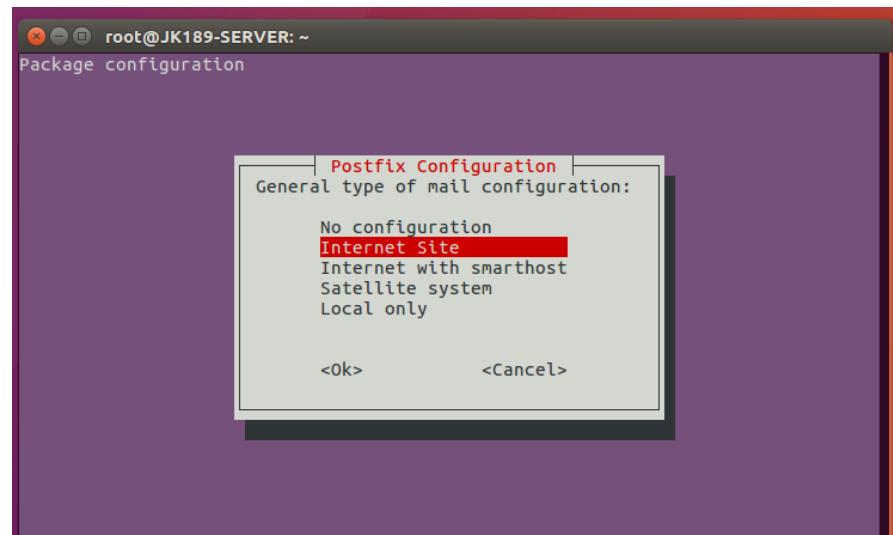
No configuration:
Should be chosen to leave the current configuration unchanged.
Internet site:
Mail is sent and received directly using SMTP.
Internet with smarthost:
Mail is received directly using SMTP or by running a utility such as fetchmail. Outgoing mail is sent using a smarthost.
Satellite system:
All mail is sent to another machine, called a 'smarthost', for delivery.
Local only:

<Ok>

LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhamdijir

ID Kelompok : JK189



```
root@JK189-SERVER: ~
setting relayhost:
setting mynetworks: 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128
setting mailbox_size_limit: 0
setting recipient_delimiter: +
setting inet_interfaces: all
setting inet_protocols: all
/etc/aliases does not exist, creating it.
WARNING: /etc/aliases exists, but does not have a root alias.

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

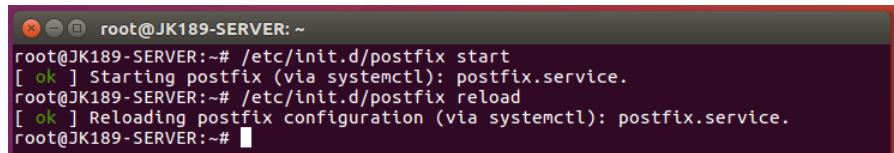
After modifying main.cf, be sure to run '/etc/init.d/postfix reload'.

Running newaliases
Processing triggers for libc-bin (2.23-0ubuntu11) ...
Processing triggers for systemd (229-4ubuntu21.27) ...
Processing triggers for ureadahead (0.100.0-19) ...
Processing triggers for ufw (0.35-0ubuntu2) ...
Rules updated for profile 'Bind9'

root@JK189-SERVER:~#
```

LAPORAN SEMENTARA

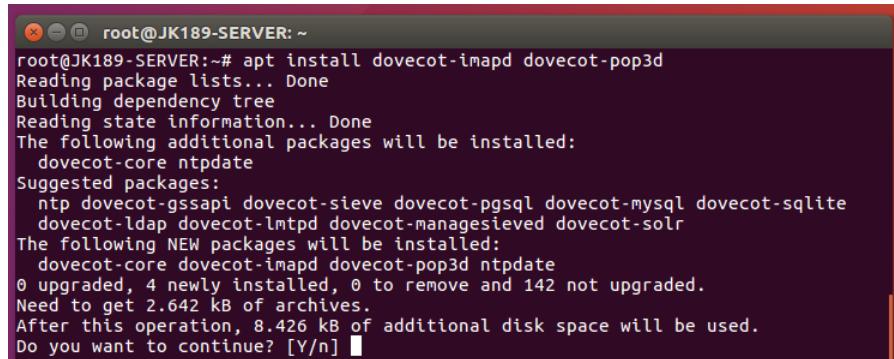
Modul : 7 Asisten: Muchamad Muhamdijir
ID Kelompok : JK189



```
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:~#
```

5. Install **dovecot** dengan perintah:

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



```
root@JK189-SERVER:~# apt install dovecot-imapd dovecot-pop3d
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  dovecot-core ntpdate
Suggested packages:
  ntp dovecot-gssapi dovecot-sieve dovecot-pgsql dovecot-mysql dovecot-sqlite
  dovecot-ldap dovecot-lmtpd dovecot-managesieved dovecot-solr
The following NEW packages will be installed:
  dovecot-core dovecot-imapd dovecot-pop3d ntpdate
0 upgraded, 4 newly installed, 0 to remove and 142 not upgraded.
Need to get 2.642 kB of archives.
After this operation, 8.426 kB of additional disk space will be used.
Do you want to continue? [Y/n] ■
```

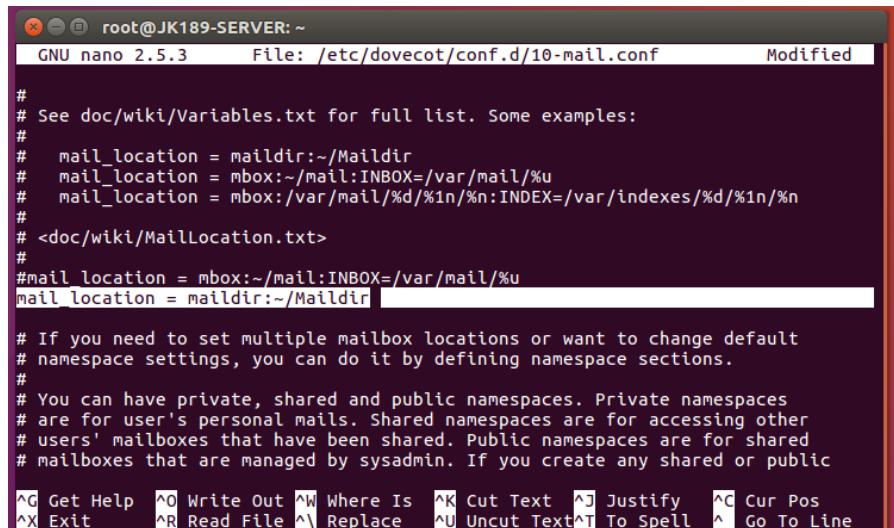
6. Konfigurasi dovecot dengan perintah:

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



```
root@JK189-SERVER:~# nano /etc/dovecot/conf.d/10-mail.conf
```

Tambahkan kata yang diblok seperti dibawah ini



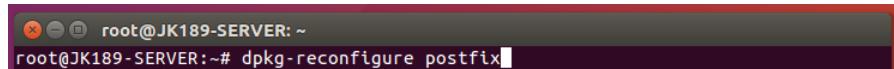
```
root@JK189-SERVER:~#
GNU nano 2.5.3      File: /etc/dovecot/conf.d/10-mail.conf      Modified

#
# See doc/wiki/Variables.txt for full list. Some examples:
#
#   mail_location = maildir:~/Maildir
#   mail_location = mbox:~/mail:INBOX=/var/mail/%u
#   mail_location = mbox:/var/mail/%d/%1n%:INDEX=/var/indexes/%d/%1n/%n
#
# <doc/wiki/MailLocation.txt>
#
#mail_location = mbox:~/mail:INBOX=/var/mail/%u
mail_location = maildir:~/Maildir ■

# If you need to set multiple mailbox locations or want to change default
# namespace settings, you can do it by defining namespace sections.
#
# You can have private, shared and public namespaces. Private namespaces
# are for user's personal mails. Shared namespaces are for accessing other
# users' mailboxes that have been shared. Public namespaces are for shared
# mailboxes that are managed by sysadmin. If you create any shared or public
```

7. Konfigurasi postfix dengan perintah:

```
# dpkg-reconfigure postfix
```

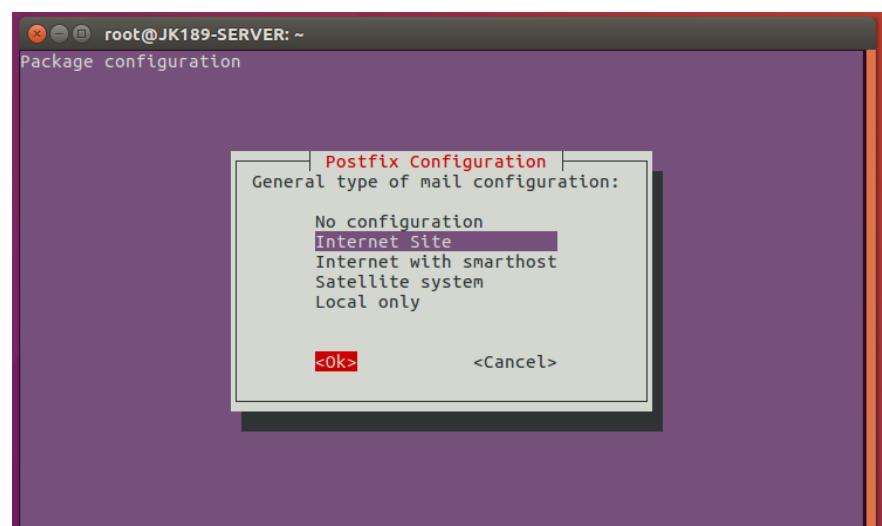
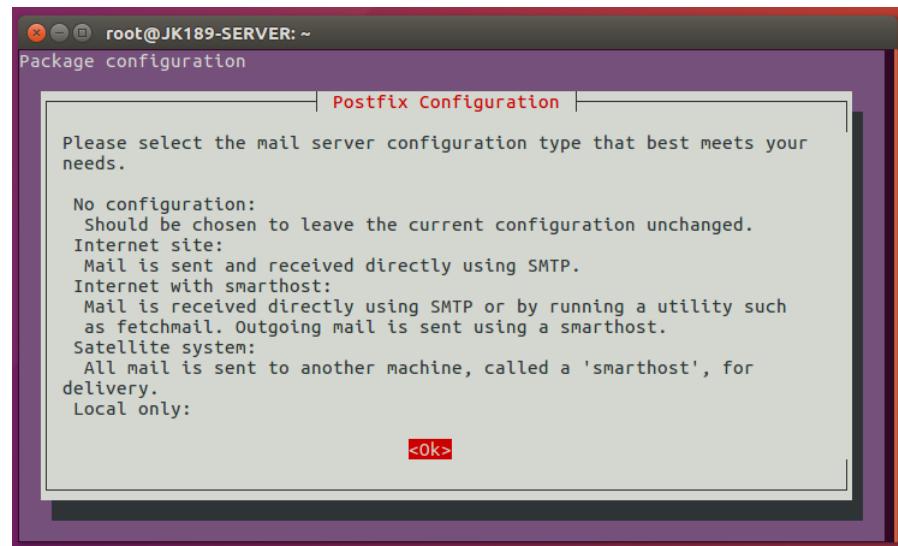


```
root@JK189-SERVER:~#
root@JK189-SERVER:~# dpkg-reconfigure postfix■
```

LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhamdijir

ID Kelompok : JK189



LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhamdijir

ID Kelompok : JK189



LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhamadjir

ID Kelompok : JK189

The image consists of three vertically stacked screenshots of a terminal window. The window title is "root@JK189-SERVER: ~" and the sub-title is "Package configuration". Each screenshot shows a configuration dialog box for Postfix.

Screenshot 1: Network Block Configuration

Postfix Configuration
Please specify the network blocks for which this host should relay mail. The default is just the local host, which is needed by some mail user agents. The default includes local host for both IPv4 and IPv6. If just connecting via one IP version, the unused value(s) may be removed.
If this host is a smarthost for a block of machines, you need to specify the netblocks here, or mail will be rejected rather than relayed.
To use the postfix default (which is based on the connected subnets), leave this blank.
Local networks:
127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128 192.168.1.1/24
<ok> <Cancel>

Screenshot 2: Mailbox Size Limit Configuration

Postfix Configuration
Please specify the limit that Postfix should place on mailbox files to prevent runaway software errors. A value of zero (0) means no limit. The upstream default is 51200000.
Mailbox size limit (bytes):
0
<ok> <Cancel>

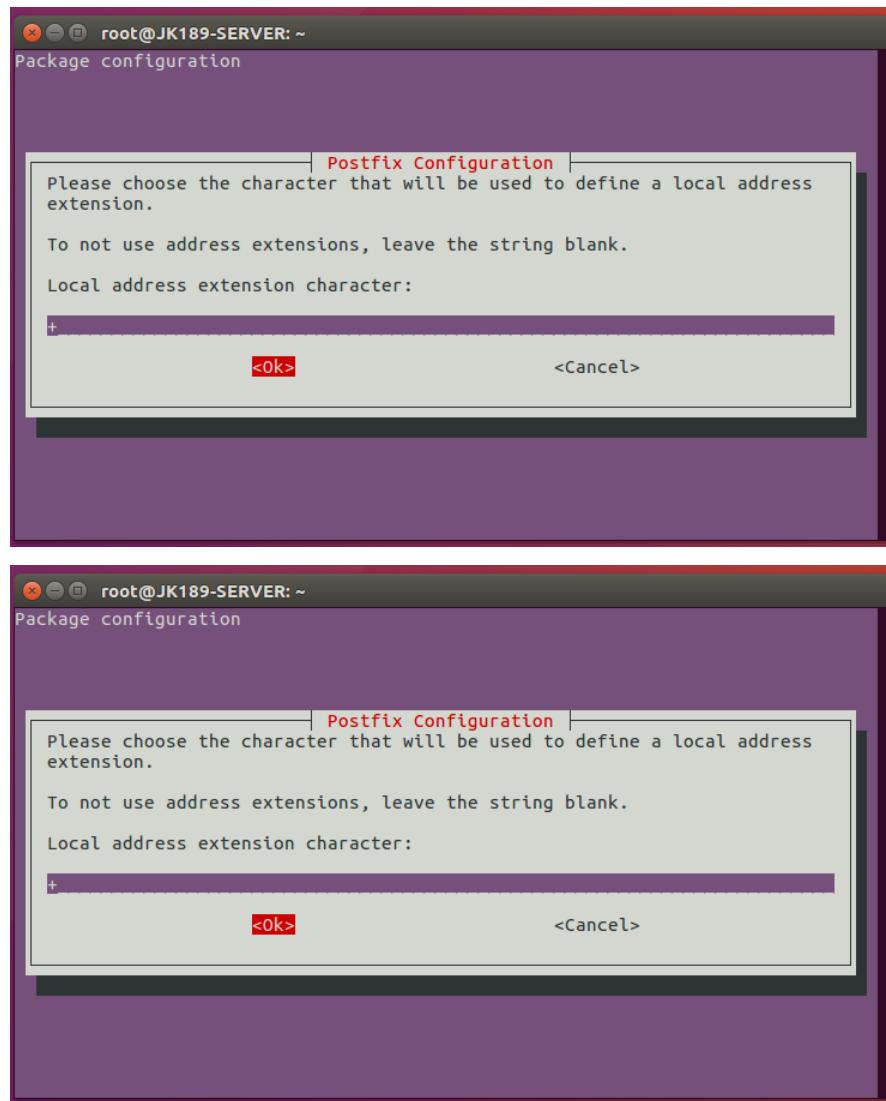
Screenshot 3: Local Address Extension Character Configuration

Postfix Configuration
Please choose the character that will be used to define a local address extension.
To not use address extensions, leave the string blank.
Local address extension character:
+
<ok> <Cancel>

LAPORAN SEMENTARA

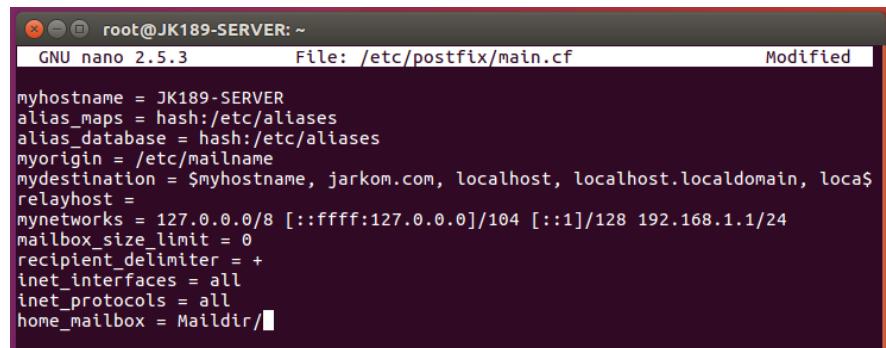
Modul : 7 Asisten: Muchamad Muhamadjir

ID Kelompok : JK189



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

```
# 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 = $myhostname, jarkom.com, localhost, localhost.localdomain, loca$relayhost =
mynetworks = 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128 192.168.1.1/24
mailbox_size_limit = 0
recipient_delimiter =
inet_interfaces = all
inet_protocols = all
home_mailbox = Maildir/
```

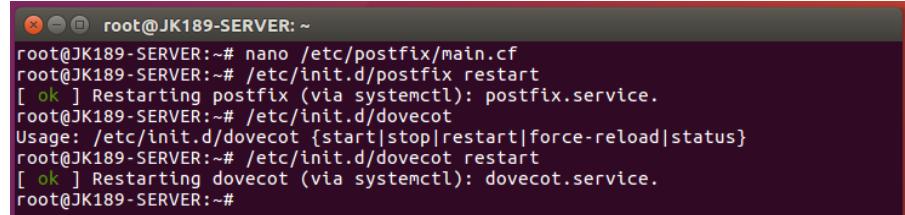
LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhadjir
ID Kelompok : JK189

9. Restart service postfix dan dovecot dengan perintah:

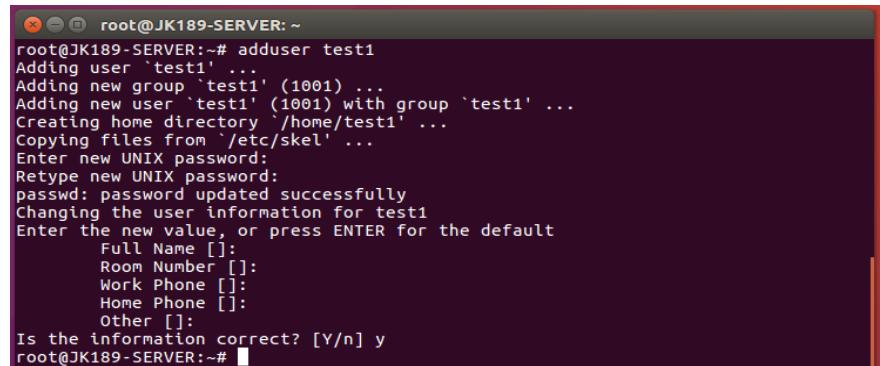
```
# /etc/init.d/postfix restart
```

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

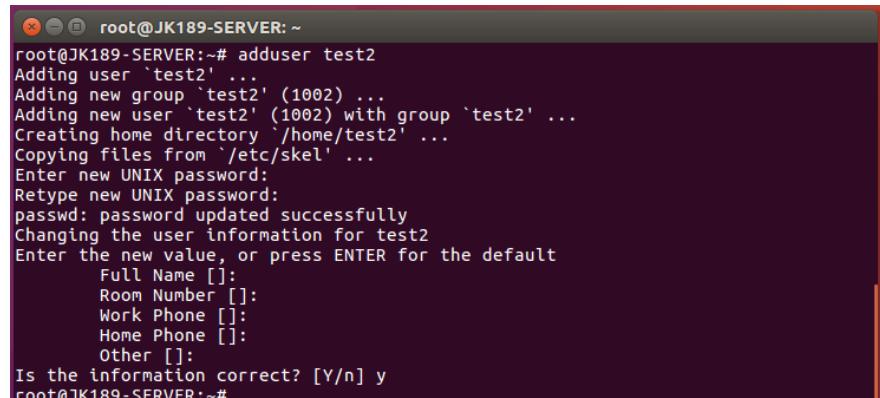


```
root@JK189-SERVER:~# nano /etc/postfix/main.cf
root@JK189-SERVER:~# /etc/init.d/postfix restart
[ ok ] Restarting postfix (via systemctl): postfix.service.
root@JK189-SERVER:~# /etc/init.d/dovecot
Usage: /etc/init.d/dovecot {start|stop|restart|force-reload|status}
root@JK189-SERVER:~# /etc/init.d/dovecot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

10. Lalu buat user dengan nama test1 dan test2 dengan perintah:



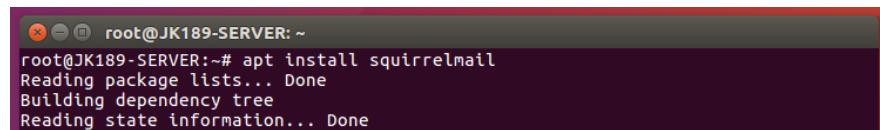
```
root@JK189-SERVER:~# adduser test1
Adding user `test1' ...
Adding new group `test1' (1001) ...
Adding new user `test1' (1001) with group `test1' ...
Creating home directory `/home/test1' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for test1
Enter the new value, or press ENTER for the default
      Full Name []:
      Room Number []:
      Work Phone []:
      Home Phone []:
      Other []
Is the information correct? [Y/n] y
root@JK189-SERVER:~#
```



```
root@JK189-SERVER:~# adduser test2
Adding user `test2' ...
Adding new group `test2' (1002) ...
Adding new user `test2' (1002) with group `test2' ...
Creating home directory `/home/test2' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for test2
Enter the new value, or press ENTER for the default
      Full Name []:
      Room Number []:
      Work Phone []:
      Home Phone []:
      Other []
Is the information correct? [Y/n] y
root@JK189-SERVER:~#
```

11. Install squirrelmail dengan perintah:

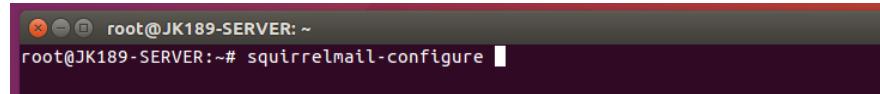
```
# apt-get install squirrelmail
```



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

12. Konfigurasi squirrelmail dengan perintah:

```
# squirrelmail-configure
```



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

LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhadjir
ID Kelompok : JK189

```
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 >> D
```

```
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

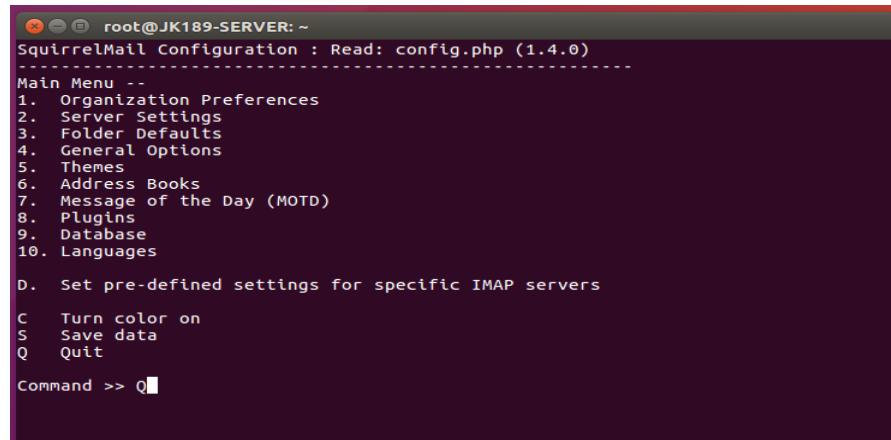
C Turn color on
S Save data
Q Quit

Command >> S

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

LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhamdijir
ID Kelompok : JK189



```
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

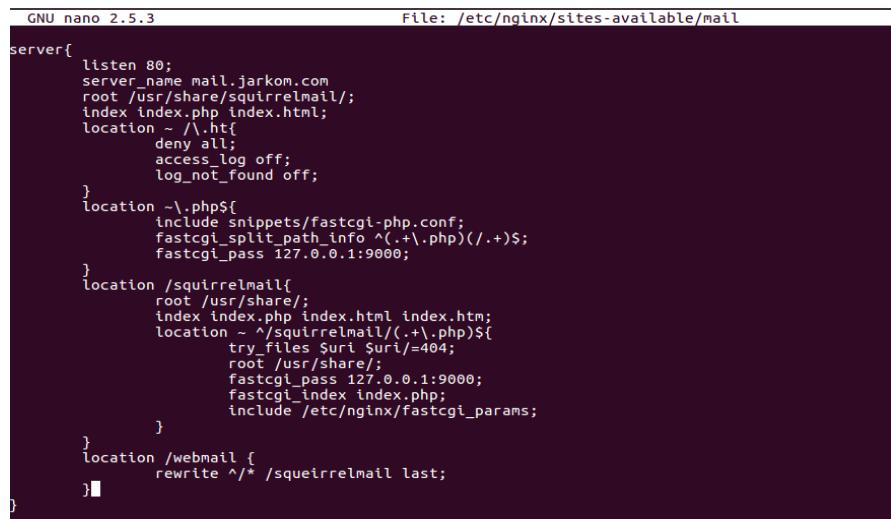
D. Set pre-defined settings for specific IMAP servers

C Turn color on
S Save data
Q Quit

Command >> Q
```

13. Buat vhost pada nginx untuk squirrelmail dengan perintah:

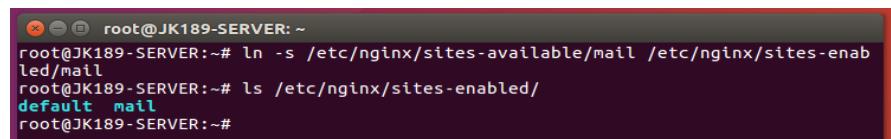
```
# nano /etc/nginx/sites-available/mail
```



```
GNU nano 2.5.3                                     File: /etc/nginx/sites-available/mail
server{
    listen 80;
    server_name mail.jarkom.com;
    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;
    }
}
```

14. Aktifkan vhost mail dengan perintah:

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



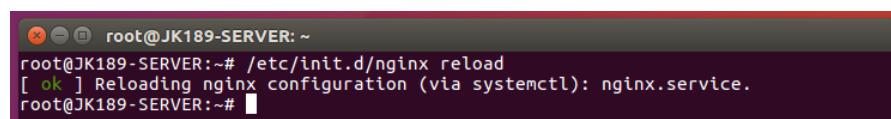
```
root@JK189-SERVER: ~# ln -s /etc/nginx/sites-available/mail /etc/nginx/sites-enabled/
root@JK189-SERVER: ~# ls /etc/nginx/sites-enabled/
default mail
root@JK189-SERVER: ~#
```

15. Reload service nginx dengan perintah:

```
# service nginx reload
```

Atau

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



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

LAPORAN SEMENTARA

Modul : 7 Asisten: Muchamad Muhadjir
ID Kelompok : JK189

16. Buka browser dan ketikkan url <http://mail.jarkom.com>



17. Login sebagai test1, Kirimkan message ke test 2, lalu logout, login sebagai test2, lalu cek INBOX untuk melihat message dari test1.

