

## STEP 1 : INSTALASI DAN KONFIGURASI DNS SERVER

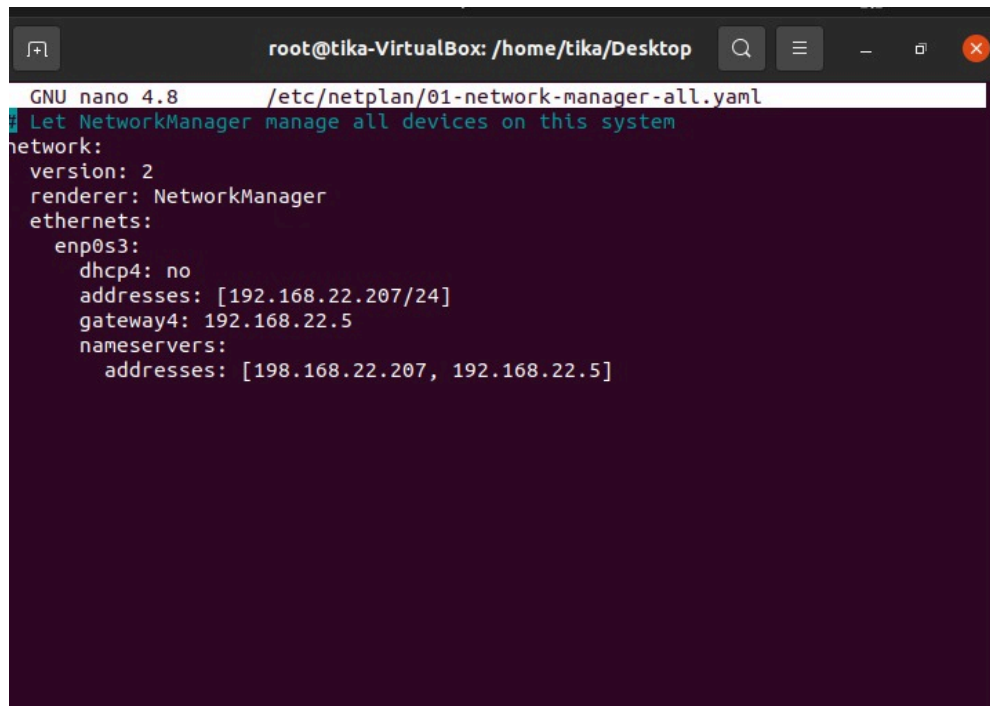
- Install Bind9

```
tika@tika-VirtualBox:~/Desktop$ sudo su
[sudo] password for tika:
root@tika-VirtualBox:/home/tika/Desktop# apt install bind9
Reading package lists... Done
Building dependency tree
Reading state information... Done
bind9 is already the newest version (1:9.16.1-0ubuntu2.10).
0 upgraded, 0 newly installed, 0 to remove and 126 not upgraded.
root@tika-VirtualBox:/home/tika/Desktop#
```

- Ufw allow 53

```
root@tika-VirtualBox:/home/tika/Desktop# ufw allow 53
Skipping adding existing rule
Skipping adding existing rule (v6)
root@tika-VirtualBox:/home/tika/Desktop#
```

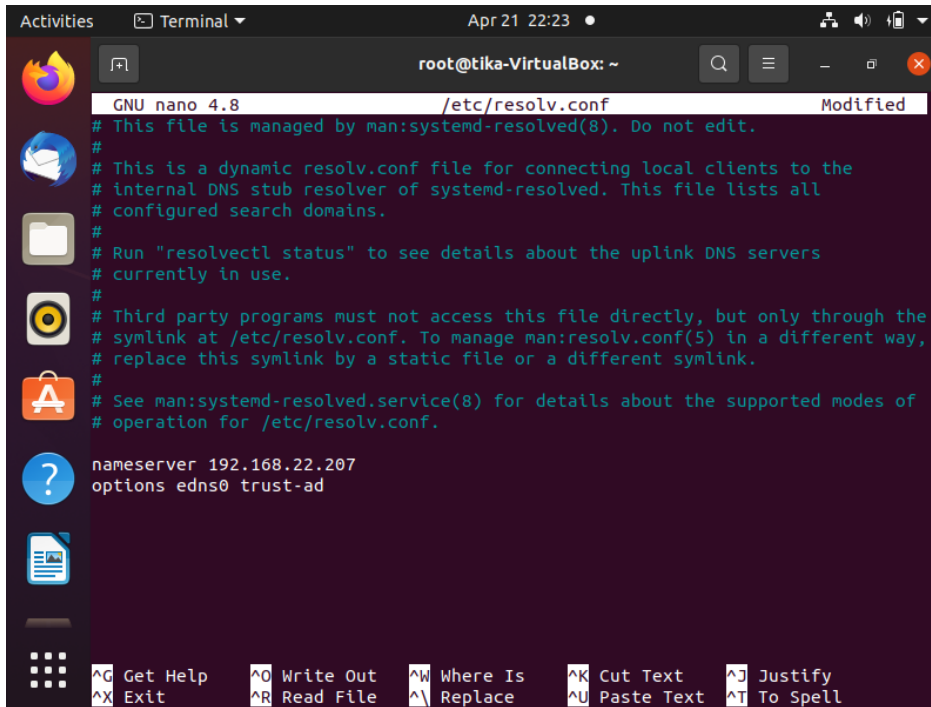
- Konfigurasi Ip address



The screenshot shows a terminal window titled "root@tika-VirtualBox: /home/tika/Desktop". Inside the terminal, the GNU nano 4.8 editor is open, editing the file "/etc/netplan/01-network-manager-all.yaml". The editor displays the following YAML configuration for NetworkManager:

```
Let NetworkManager manage all devices on this system
network:
  version: 2
  renderer: NetworkManager
  ethernets:
    enp0s3:
      dhcp4: no
      addresses: [192.168.22.207/24]
      gateway4: 192.168.22.5
      nameservers:
        addresses: [198.168.22.207, 192.168.22.5]
```

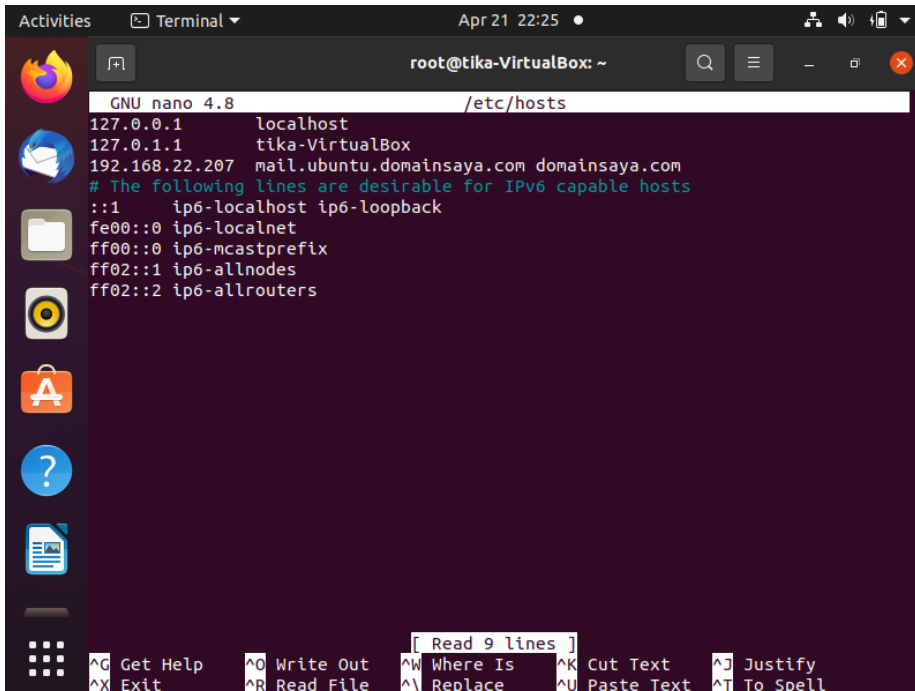
- Untuk dapat menggunakan layanan DNS, tambahkan alamat DNS server ke dalam file `/etc/resolv.conf`.



```

GNU nano 4.8 /etc/resolv.conf Modified
# This file is managed by man:systemd-resolved(8). Do not edit.
#
# This is a dynamic resolv.conf file for connecting local clients to the
# internal DNS stub resolver of systemd-resolved. This file lists all
# configured search domains.
#
# Run "resolvectl status" to see details about the uplink DNS servers
# currently in use.
#
# Third party programs must not access this file directly, but only through the
# symlink at /etc/resolv.conf. To manage man:resolv.conf(5) in a different way,
# replace this symlink by a static file or a different symlink.
#
# See man:systemd-resolved.service(8) for details about the supported modes of
# operation for /etc/resolv.conf.
nameserver 192.168.22.207
options edns0 trust-ad
  
```

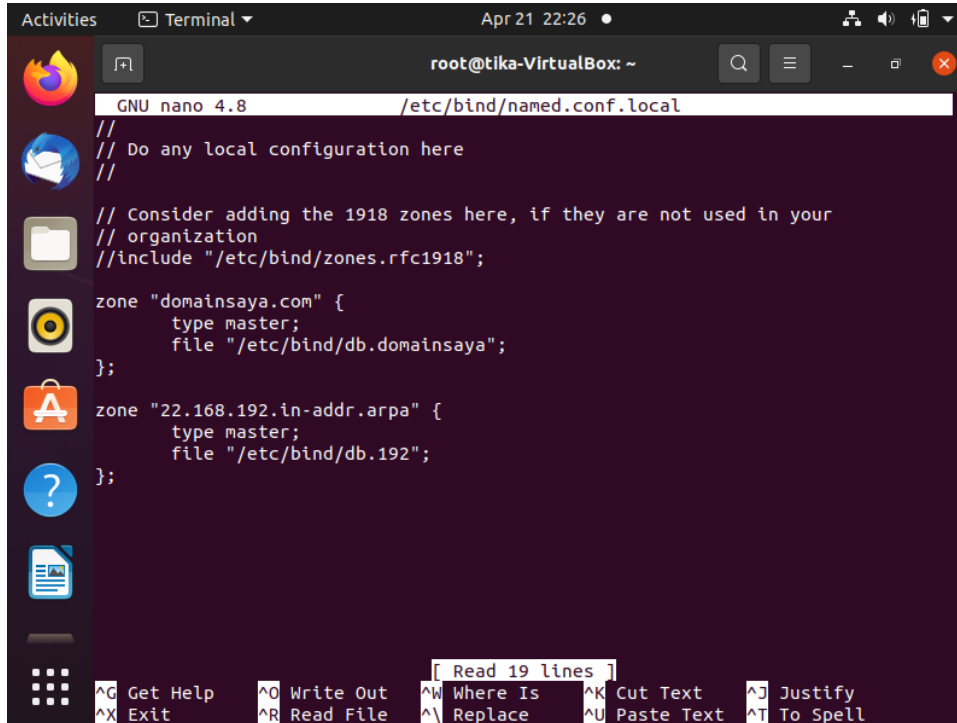
- Untuk *setting hostname* konfigurasi pada file `/etc/hosts`



```

GNU nano 4.8 /etc/hosts
127.0.0.1 localhost
127.0.1.1 tika-VirtualBox
192.168.22.207 mail.ubuntu.domainsaya.com domainsaya.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
  
```

- konfigurasi pada *file* bind/named.conf.local



A terminal window titled 'root@tika-VirtualBox: ~' showing the GNU nano 4.8 editor editing the file /etc/bind/named.conf.local. The editor displays the following configuration:

```
//
// Do any local configuration here
//

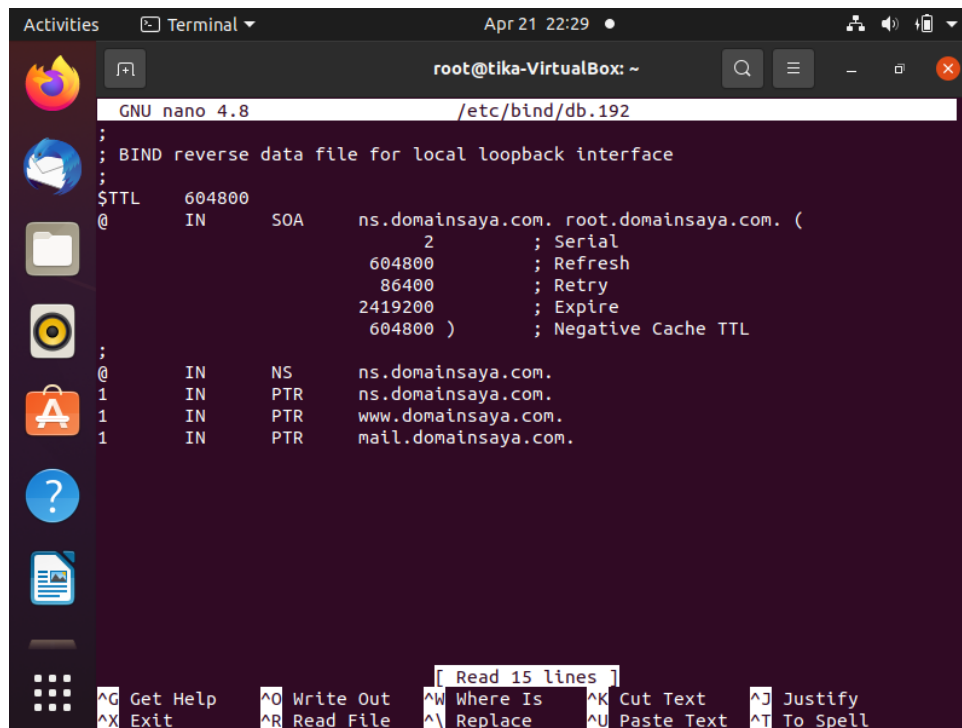
// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

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

zone "22.168.192.in-addr.arpa" {
    type master;
    file "/etc/bind/db.192";
};
```

The bottom status bar shows: [ Read 19 lines ] and keyboard shortcuts: ^G Get Help, ^O Write Out, ^W Where Is, ^K Cut Text, ^J Justify, ^X Exit, ^R Read File, ^\_ Replace, ^U Paste Text, ^T To Spell.

- edit pada *file* bind/db.192

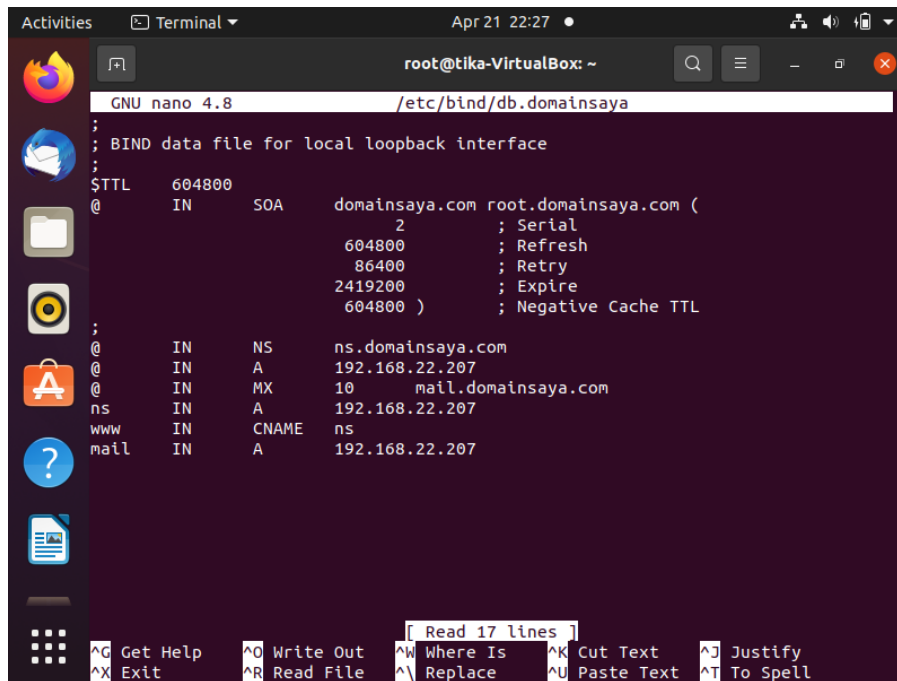


A terminal window titled 'root@tika-VirtualBox: ~' showing the GNU nano 4.8 editor editing the file /etc/bind/db.192. The editor displays the following configuration:

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

The bottom status bar shows: [ Read 15 lines ] and keyboard shortcuts: ^G Get Help, ^O Write Out, ^W Where Is, ^K Cut Text, ^J Justify, ^X Exit, ^R Read File, ^\_ Replace, ^U Paste Text, ^T To Spell.

- Edit pada *file* bind/db.domainsaya

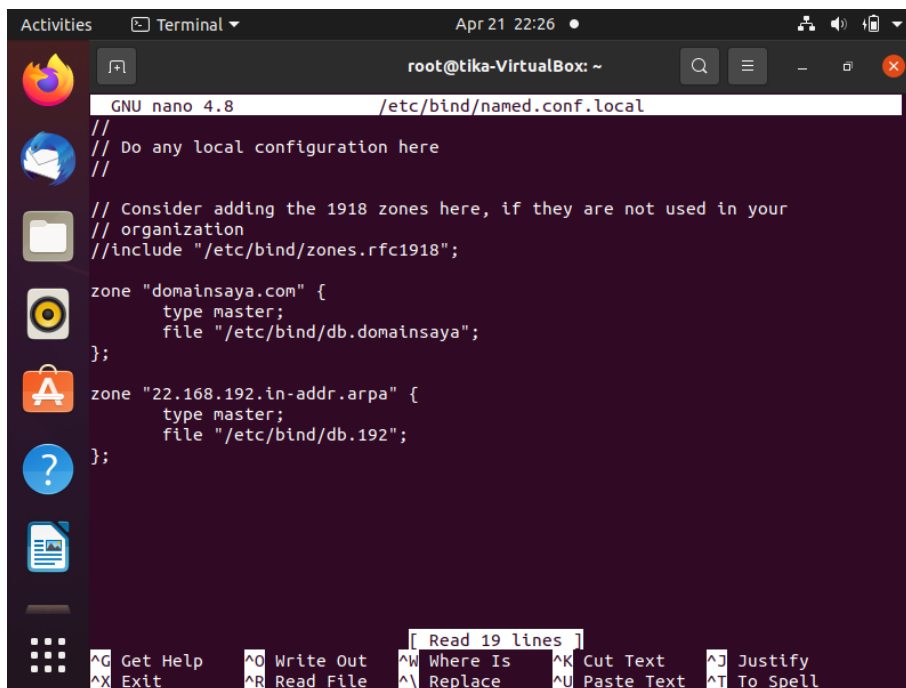


```

GNU nano 4.8 /etc/bind/db.domainsaya
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      domainsaya.com root.domainsaya.com (
                        2      ; Serial
                        604800 ; Refresh
                        86400  ; Retry
                        2419200; Expire
                        604800 ) ; Negative Cache TTL
;
@         IN      NS       ns.domainsaya.com
@         IN      A        192.168.22.207
@         IN      MX       10 mail.domainsaya.com
ns        IN      A        192.168.22.207
www       IN      CNAME     ns
mail      IN      A        192.168.22.207

```

- konfigurasi pada *file* bind/named.conf.local



```

GNU nano 4.8 /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 "domainsaya.com" {
    type master;
    file "/etc/bind/db.domainsaya";
};

zone "22.168.192.in-addr.arpa" {
    type master;
    file "/etc/bind/db.192";
};

```

- *client* berhasil mendapatkan layanan DNS dari *server* menggunakan perintah nslookup

Activities Terminal Apr 21 22:18

root@tika-VirtualBox: /home/tika

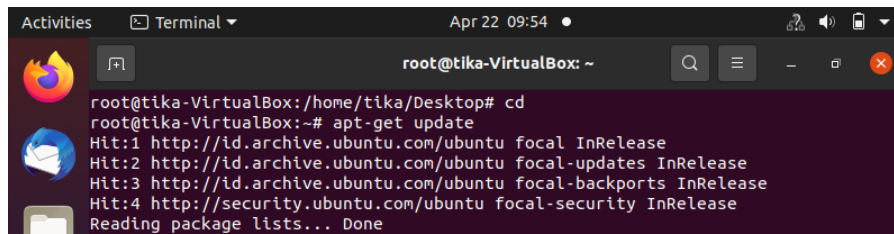
```
tika@tika-VirtualBox:~$ sudo su
[sudo] password for tika:
root@tika-VirtualBox:/home/tika# nslookup domainsaya.com
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
Name:   domainsaya.com
Address: 192.168.22.207

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

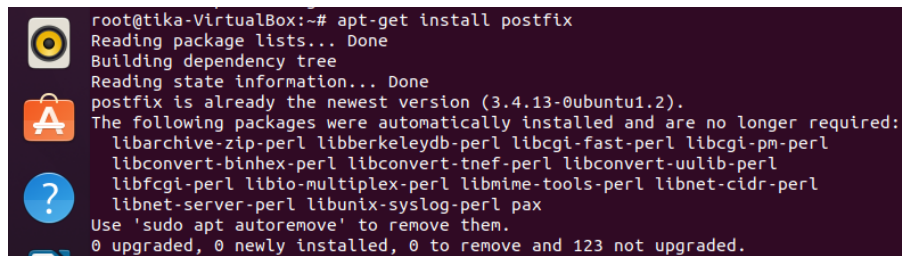
## STEP 2 : INSTALASI dan KONFIGURASI POSTFIX

- apt-get update



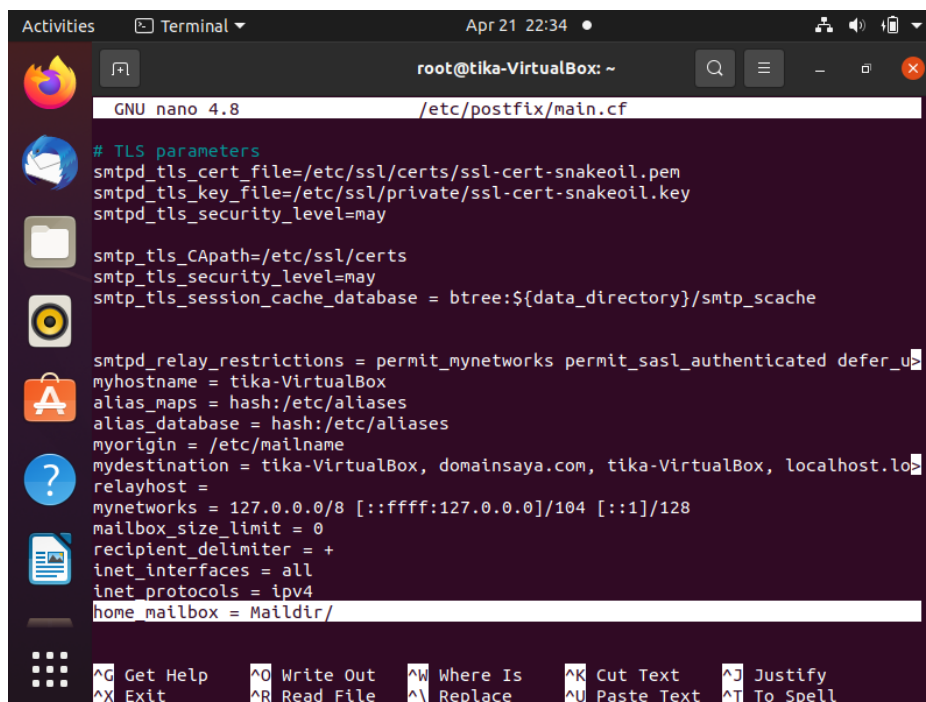
```
root@tika-VirtualBox:/home/tika/Desktop# cd
root@tika-VirtualBox:~# apt-get update
Hit:1 http://id.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://id.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://id.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu focal-security InRelease
Reading package lists... Done
```

- apt-get install postfix



```
root@tika-VirtualBox:~# apt-get install postfix
Reading package lists... Done
Building dependency tree
Reading state information... Done
postfix is already the newest version (3.4.13-0ubuntu1.2).
The following packages were automatically installed and are no longer required:
  libarchive-zip-perl libberkeleydb-perl libcgi-fast-perl libcgi-pm-perl
  libconvert-binx-perl libconvert-tnef-perl libconvert-uulib-perl
  libfcgi-perl libio-multiplex-perl libmime-tools-perl libnet-cidr-perl
  libnet-server-perl libunix-syslog-perl pax
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 123 not upgraded.
```

- Edit file main.cf pada postfix `nano /etc/postfix/main.cf`



```
GNU nano 4.8 /etc/postfix/main.cf

# TLS parameters
smtpd_tls_cert_file=/etc/ssl/certs/ssl-cert-snakeoil.pem
smtpd_tls_key_file=/etc/ssl/private/ssl-cert-snakeoil.key
smtpd_tls_security_level=may

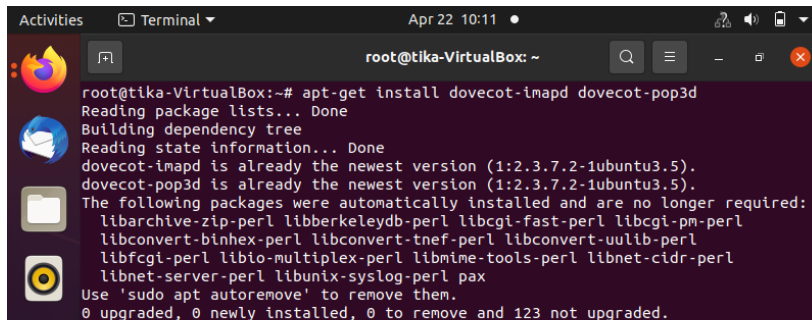
smtp_tls_CApath=/etc/ssl/certs
smtp_tls_security_level=may
smtp_tls_session_cache_database = btree:${data_directory}/smtp_scache

smtpd_relay_restrictions = permit_mynetworks permit_sasl_authenticated defer_u_
myhostname = tika-VirtualBox
alias_maps = hash:/etc/aliases
alias_database = hash:/etc/aliases
myorigin = /etc/mailname
mydestination = tika-VirtualBox, domainsaya.com, tika-VirtualBox, localhost.lo
relayhost =
mynetworks = 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128
mailbox_size_limit = 0
recipient_delimiter = +
inet_interfaces = all
inet_protocols = ipv4
home_mailbox = Maildir/

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

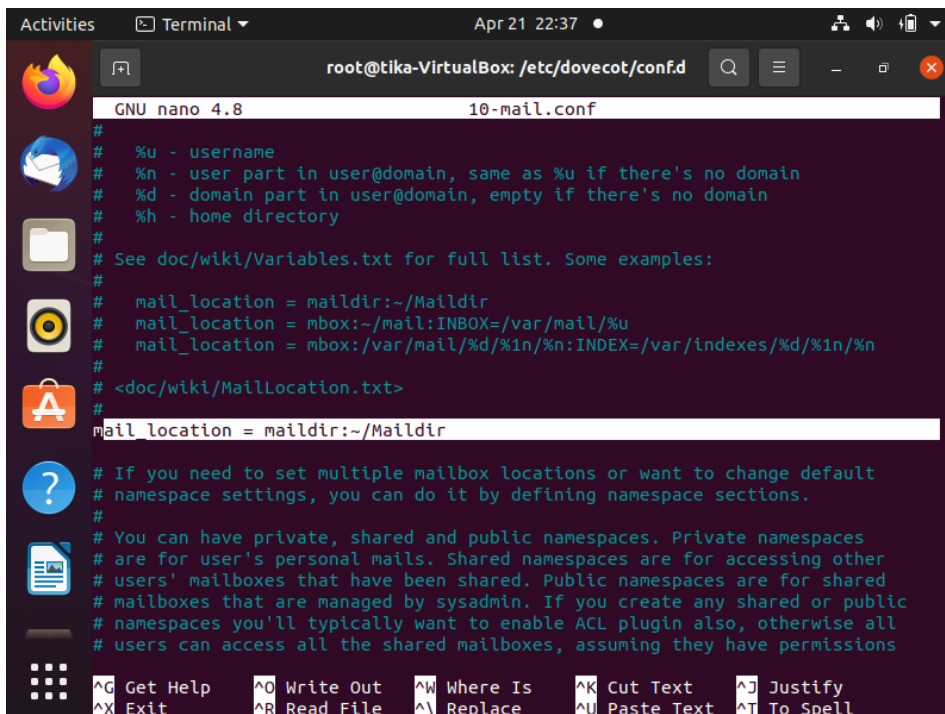
### STEP 3 : INSTALASI dan KONFIGURASI DOVECOT

- apt-get install dovecot-imapd dovecot-pop3d



```
root@tika-VirtualBox:~# apt-get install dovecot-imapd dovecot-pop3d
Reading package lists... Done
Building dependency tree
Reading state information... Done
dovecot-imapd is already the newest version (1:2.3.7.2-1ubuntu3.5).
dovecot-pop3d is already the newest version (1:2.3.7.2-1ubuntu3.5).
The following packages were automatically installed and are no longer required:
  libarchive-zip-perl libberkeleydb-perl libcgi-fast-perl libcgi-pm-perl
  libconvert-binhex-perl libconvert-tnef-perl libconvert-uulib-perl
  libfcgi-perl libio-multiplex-perl libmime-tools-perl libnet-cidr-perl
  libnet-server-perl libunix-syslog-perl pax
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 123 not upgraded.
```

- konfigurasi SASL yang berhubungan dengan postfix pada file /etc/dovecot/conf.d/10-mail.conf



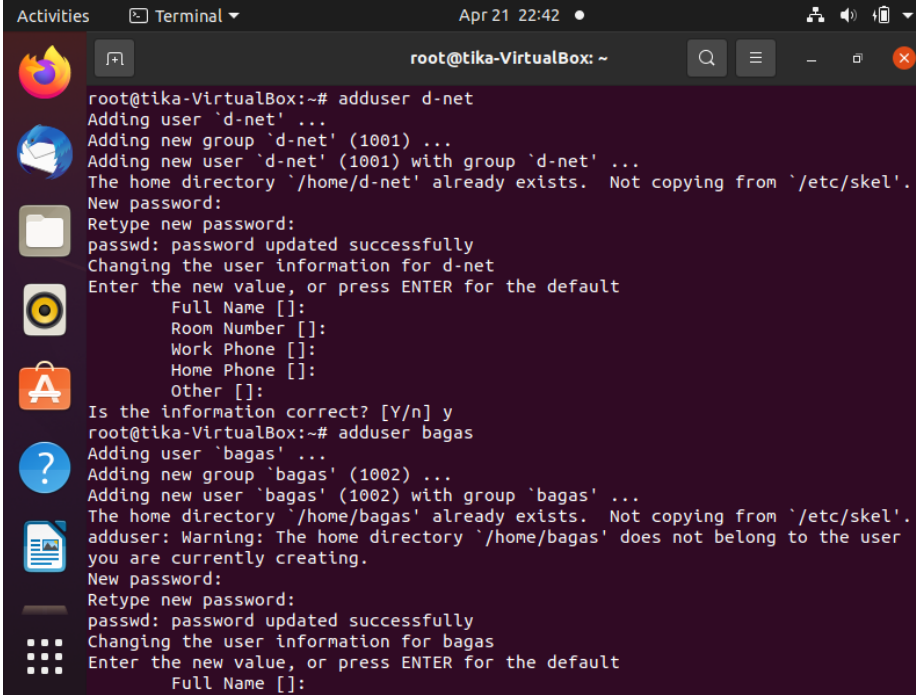
```
GNU nano 4.8 10-mail.conf
#
# %u - username
# %n - user part in user@domain, same as %u if there's no domain
# %d - domain part in user@domain, empty if there's no domain
# %h - home directory
#
# See doc/wiki/Variables.txt for full list. Some examples:
#
# mail_location = maildir:~/Maildir
# mail_location = mbox:~/mail:INBOX=/var/mail/%u
# mail_location = mbox:/var/mail/%d/%1n/%n:INDEX=/var/indexes/%d/%1n/%n
#
# <doc/wiki/MailLocation.txt>
#
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
# namespaces you'll typically want to enable ACL plugin also, otherwise all
# users can access all the shared mailboxes, assuming they have permissions

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

## STEP 4 : MEMBUAT USER,MENGIRIM dan MENERIMA EMAIL

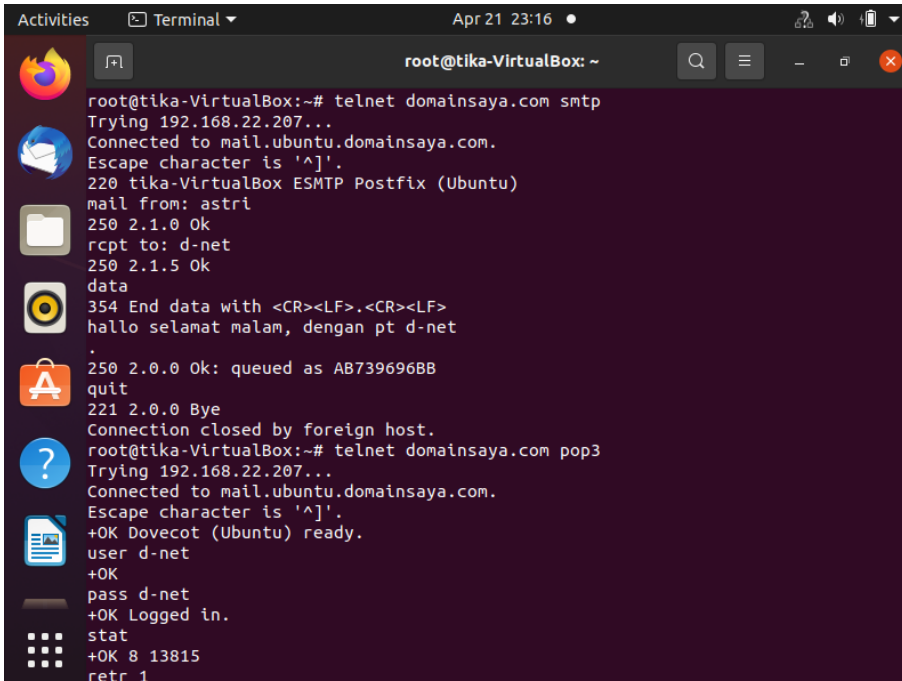
- Membuat user



A terminal window titled 'root@tika-VirtualBox: ~' showing the execution of the 'adduser' command for two users. The first user is 'd-net' with UID 1001. The second user is 'bagas' with UID 1002. The terminal shows prompts for password, full name, room number, work phone, and home phone. The 'bagas' user creation includes a warning about the home directory not belonging to the user.

```
root@tika-VirtualBox:~# adduser d-net
Adding user `d-net' ...
Adding new group `d-net' (1001) ...
Adding new user `d-net' (1001) with group `d-net' ...
The home directory `/home/d-net' already exists. Not copying from `/etc/skel'.
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for d-net
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@tika-VirtualBox:~# adduser bagas
Adding user `bagas' ...
Adding new group `bagas' (1002) ...
Adding new user `bagas' (1002) with group `bagas' ...
The home directory `/home/bagas' already exists. Not copying from `/etc/skel'.
adduser: Warning: The home directory `/home/bagas' does not belong to the user
you are currently creating.
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for bagas
Enter the new value, or press ENTER for the default
Full Name []:
```

- Mengirim dan menerima pesan



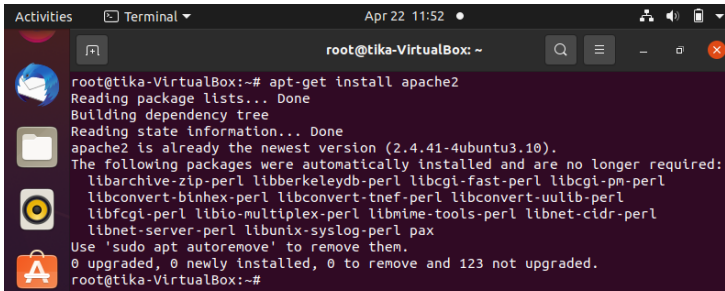
A terminal window titled 'root@tika-VirtualBox: ~' showing email operations using telnet. It connects to 'domainsaya.com' on port 25 for SMTP and port 110 for POP3. The SMTP session shows sending an email from 'astri' to 'd-net' with the subject 'hallo selamat malam, dengan pt d-net'. The POP3 session shows logging in as 'd-net' and retrieving the first message.

```
root@tika-VirtualBox:~# telnet domainsaya.com smtp
Trying 192.168.22.207...
Connected to mail.ubuntu.domainsaya.com.
Escape character is '^]'.
220 tika-VirtualBox ESMTTP Postfix (Ubuntu)
mail from: astri
250 2.1.0 Ok
rcpt to: d-net
250 2.1.5 Ok
data
354 End data with <CR><LF>.<CR><LF>
hallo selamat malam, dengan pt d-net
.
250 2.0.0 Ok: queued as AB739696BB
quit
221 2.0.0 Bye
Connection closed by foreign host.
root@tika-VirtualBox:~# telnet domainsaya.com pop3
Trying 192.168.22.207...
Connected to mail.ubuntu.domainsaya.com.
Escape character is '^]'.
+OK Dovecot (Ubuntu) ready.
user d-net
+OK
pass d-net
+OK Logged in.
stat
+OK 8 13815
retr 1
```



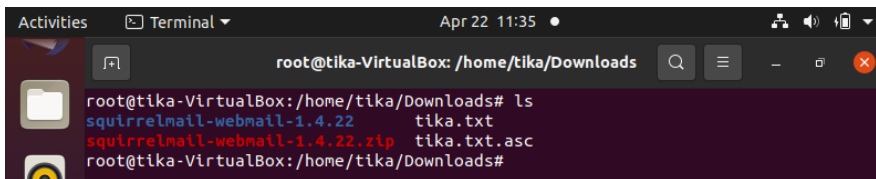
## STEP 5: INSTALL DAN KONFIGURASI WEBMAIL MENGGUNAKAN SQUIRRELMAIL

- apt-get install apache2



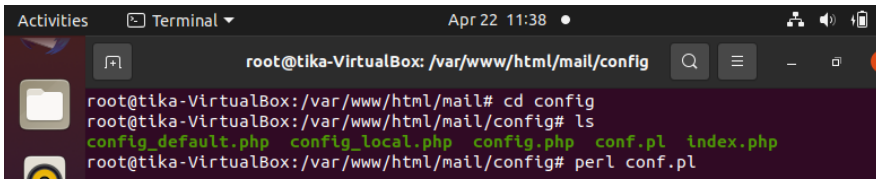
```
root@tika-VirtualBox:~# apt-get install apache2
Reading package lists... Done
Building dependency tree
Reading state information... Done
apache2 is already the newest version (2.4.41-4ubuntu3.10).
The following packages were automatically installed and are no longer required:
 libarchive-zip-perl libberkeleydb-perl libcgi-fast-perl libcgi-pm-perl
 libconvert-binx-perl libconvert-tnef-perl libconvert-uulib-perl
 libfcgi-perl libio-multiplex-perl libmime-tools-perl libnet-cidr-perl
 libnet-server-perl libunix-syslog-perl pax
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 123 not upgraded.
root@tika-VirtualBox:~#
```

- file squirrelmail yang telah di download dan di unzip



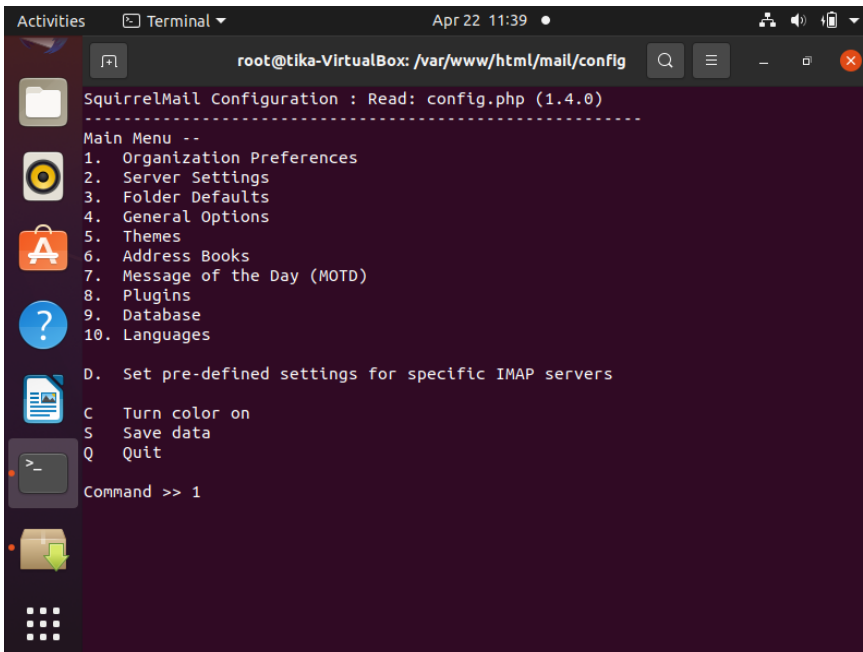
```
root@tika-VirtualBox:/home/tika/Downloads# ls
squirrelmail-webmail-1.4.22  tika.txt
squirrelmail-webmail-1.4.22.zip  tika.txt.asc
root@tika-VirtualBox:/home/tika/Downloads#
```

- Untuk konfigurasi, masuk pada direktori seperti dibawah ini



```
root@tika-VirtualBox:/var/www/html/mail# cd config
root@tika-VirtualBox:/var/www/html/mail/config# ls
config_default.php  config_local.php  config.php  conf.pl  index.php
root@tika-VirtualBox:/var/www/html/mail/config# perl conf.pl
```

- Ubah beberapa file , sebagai berikut (organization name , domain)



```
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 >> 1
```

```
Activities Terminal Apr 22 11:39
root@tika-VirtualBox: /var/www/html/mail/config

SquirrelMail Configuration : Read: config.php (1.4.0)
-----
Organization Preferences
1. Organization Name      : d-net
2. Organization Logo      : ../images/sm_logo.png
3. Org. Logo Width/Height : (308/111)
4. Organization Title     : SquirrelMail $version
5. Signout Page           :
6. Top Frame              : _top
7. Provider link          : http://squirrelmail.org/
8. Provider name          : SquirrelMail

R Return to Main Menu
C Turn color on
S Save data
Q Quit

Command >>
```

```
Activities Terminal Apr 22 11:43
root@tika-VirtualBox: /var/www/html/mail/config

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

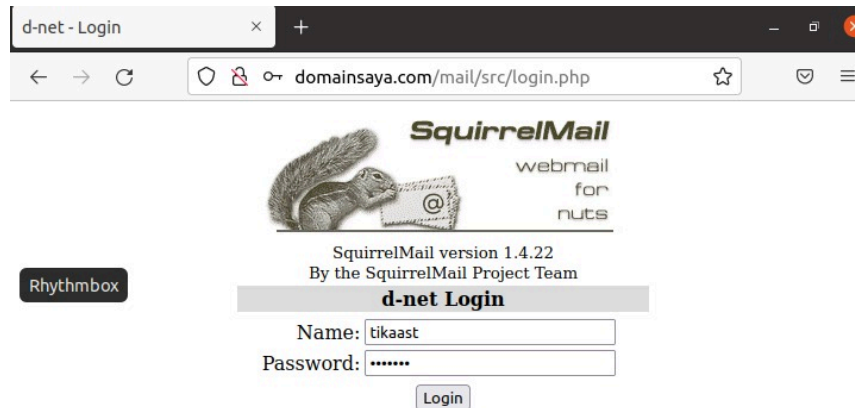
Command >> 4
```

```
Activities Terminal Apr 22 11:40
root@tika-VirtualBox: /var/www/html/mail/config
SquirrelMail Configuration : Read: config.php (1.4.0)
-----
Server Settings
General
-----
1. Domain : domainsaya.com
2. Invert Time : false
3. Sendmail or SMTP : SMTP
A. Update IMAP Settings : localhost:143 (other)
B. Update SMTP Settings : localhost:25
R Return to Main Menu
C Turn color on
S Save data
Q Quit
? Command >>
```

Ubah no 1,2 dan 11 seperti berikut

```
Activities Terminal Apr 22 11:44
root@tika-VirtualBox: /var/www/html/mail/config
-----
General Options
1. Data Directory : /var/www/html/mail/data/
2. Attachment Directory : /var/www/html/mail/attach/
3. Directory Hash Level : 0
4. Default Left Size : 150
5. Usernames in Lowercase : false
6. Allow use of priority : true
7. Hide SM attributions : false
8. Allow use of receipts : true
9. Allow editing of identity : true
   Allow editing of name : true
   Remove username from header : false
10. Allow server thread sort : false
11. Allow server-side sorting : true
12. Allow server charset search : true
13. Enable UID support : true
14. PHP session name : SQMSESSID
15. Location base :
16. Only secure cookies if poss. : true
17. Disable secure forms : false
18. Page referral requirement :
R Return to Main Menu
C Turn color on
S Save data
Q Quit
? Command >>
```

- Coba masuk pada firefox , lalu ketikan domainsaya.com/mail dan coba login dengan user dan password yang telah dibuat sebelumnya

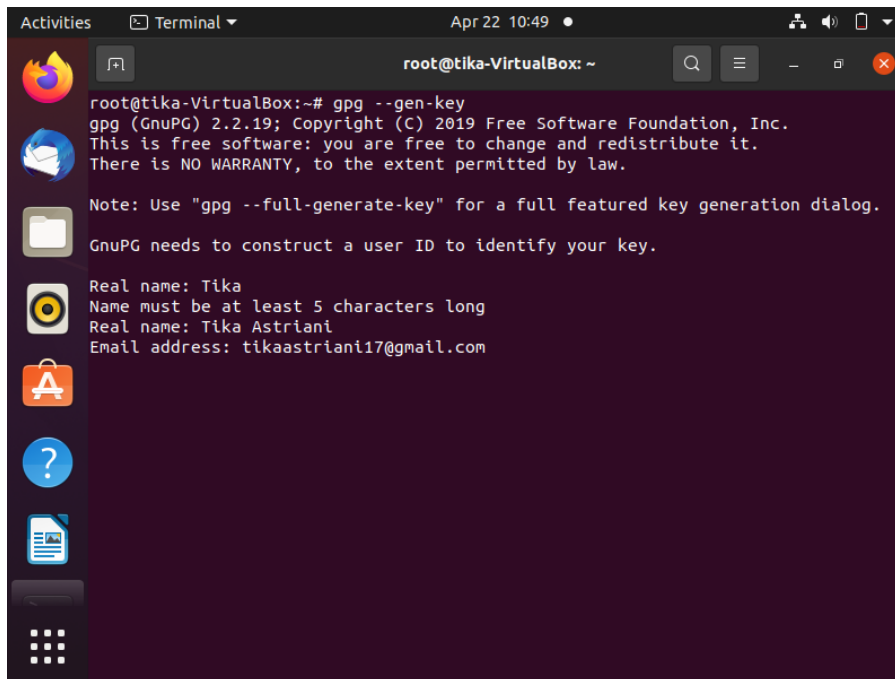


## STEP 6 : INSTALL dan KONFIGURASI SECURITY MAIL SERVER

- apt-get install gnupg2

```
Activities Terminal Apr 22 10:47 root@tika-VirtualBox: ~
root@tika-VirtualBox:~# apt-get install gnupg2
Reading package lists... Done
Building dependency tree
Reading state information... Done
gnupg2 is already the newest version (2.2.19-3ubuntu2.1).
The following packages were automatically installed and are no longer required:
  libarchive-zip-perl libberkeleydb-perl libcgi-fast-perl libcgi-pm-perl
  libconvert-binx-perl libconvert-tnef-perl libconvert-uulib-perl
  libfcgi-perl libio-multiplex-perl libmime-tools-perl libnet-cidr-perl
  libnet-server-perl libunix-syslog-perl pax
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 123 not upgraded.
root@tika-VirtualBox:~#
```

- `gpg --gen-key`



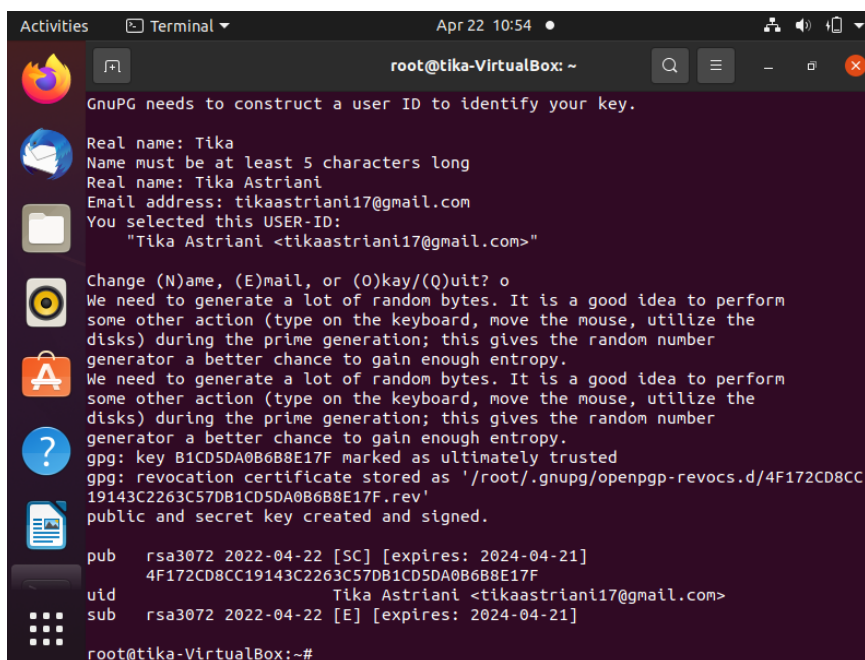
```

root@tika-VirtualBox:~# gpg --gen-key
gpg (GnuPG) 2.2.19; Copyright (C) 2019 Free Software Foundation, Inc.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Note: Use "gpg --full-generate-key" for a full featured key generation dialog.
GnuPG needs to construct a user ID to identify your key.

Real name: Tika
Name must be at least 5 characters long
Real name: Tika Astriani
Email address: tikaastriani17@gmail.com
  
```

- Konfigurasi untuk use ID , Real name, Email Address,lalu tekan o



```

GnuPG needs to construct a user ID to identify your key.

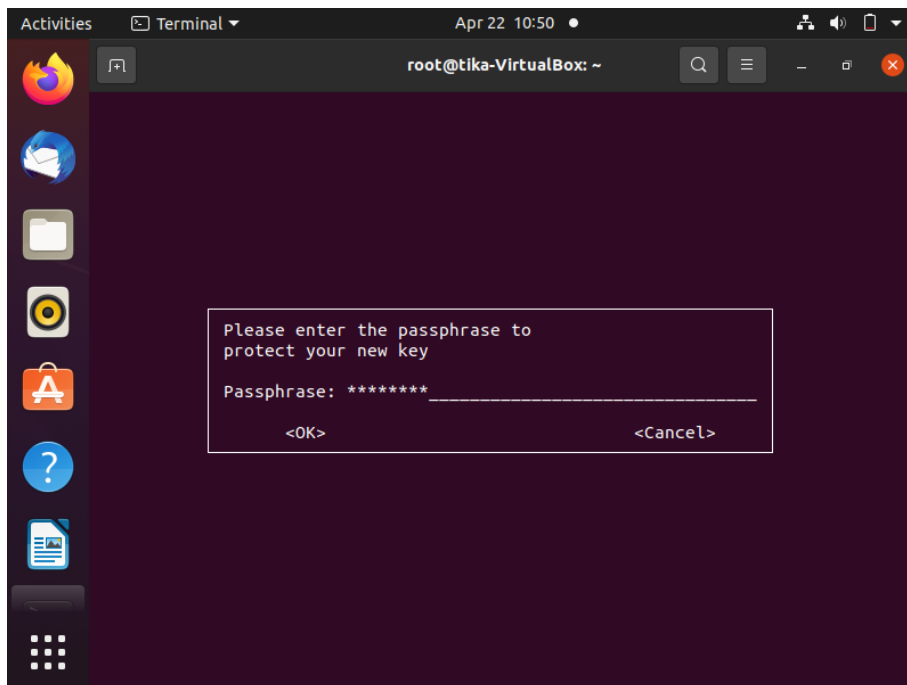
Real name: Tika
Name must be at least 5 characters long
Real name: Tika Astriani
Email address: tikaastriani17@gmail.com
You selected this USER-ID:
  "Tika Astriani <tikaastriani17@gmail.com>"

Change (N)ame, (E)mail, or (O)kay/(Q)uit? o
We need to generate a lot of random bytes. It is a good idea to perform
some other action (type on the keyboard, move the mouse, utilize the
disks) during the prime generation; this gives the random number
generator a better chance to gain enough entropy.
We need to generate a lot of random bytes. It is a good idea to perform
some other action (type on the keyboard, move the mouse, utilize the
disks) during the prime generation; this gives the random number
generator a better chance to gain enough entropy.
gpg: key B1CD5DA0B6B8E17F marked as ultimately trusted
gpg: revocation certificate stored as '/root/.gnupg/openpgp-revocs.d/4F172CD8CC
19143C2263C57DB1CD5DA0B6B8E17F.rev'
public and secret key created and signed.

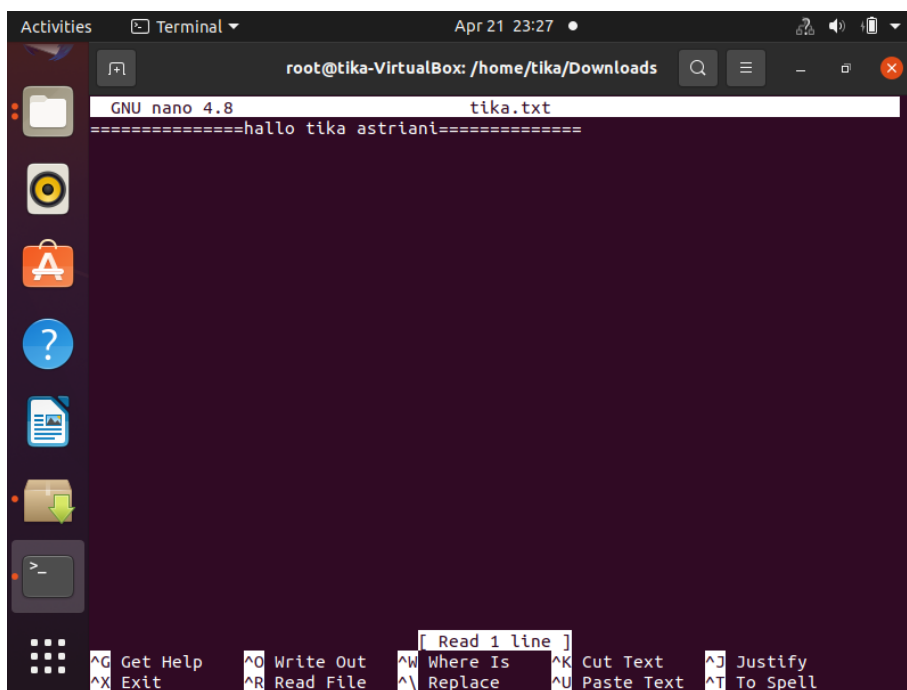
pub  rsa3072 2022-04-22 [SC] [expires: 2024-04-21]
     4F172CD8CC19143C2263C57DB1CD5DA0B6B8E17F
uid                Tika Astriani <tikaastriani17@gmail.com>
sub  rsa3072 2022-04-22 [E] [expires: 2024-04-21]

root@tika-VirtualBox:~#
  
```

- Lalu akan muncul tampilan Protect your new key isikan sesuai dengan keinginan lalu OK



- nano tika.txt isikan pesan lalu simpan dengan ctrl+x



- Encrypt pesan tika.txt dan cek hasilnya menjadi tika.txt.asc

```
Activities Terminal Apr 21 23:28
root@tika-VirtualBox: /home/tika/Downloads

root@tika-VirtualBox:~# cd tika
bash: cd: tika: No such file or directory
root@tika-VirtualBox:~# cd /home
root@tika-VirtualBox:/home# ls
astri bagas d-net tika tikaast
root@tika-VirtualBox:/home# cd /tika
bash: cd: /tika: No such file or directory
root@tika-VirtualBox:/home# cd tika
root@tika-VirtualBox:/home/tika# cd Downloads
root@tika-VirtualBox:/home/tika/Downloads# LS
LS: command not found
root@tika-VirtualBox:/home/tika/Downloads# ls
mail2.txt.asc mail.txt mail.txt.asc squirrelmail-webmail-1.4.22.zip
root@tika-VirtualBox:/home/tika/Downloads# nano /tika.txt
root@tika-VirtualBox:/home/tika/Downloads# nano /tika.txt
root@tika-VirtualBox:/home/tika/Downloads# LS
LS: command not found
root@tika-VirtualBox:/home/tika/Downloads# ls
squirrelmail-webmail-1.4.22.zip
root@tika-VirtualBox:/home/tika/Downloads# nano /tika.txt
root@tika-VirtualBox:/home/tika/Downloads# nano tika.txt
root@tika-VirtualBox:/home/tika/Downloads# ls
squirrelmail-webmail-1.4.22.zip tika.txt
root@tika-VirtualBox:/home/tika/Downloads# nano tika.txt
root@tika-VirtualBox:/home/tika/Downloads# nano tika.txt
root@tika-VirtualBox:/home/tika/Downloads# gpg --encrypt -r tika -a tika.txt
root@tika-VirtualBox:/home/tika/Downloads# ls
squirrelmail-webmail-1.4.22.zip tika.txt tika.txt.asc
root@tika-VirtualBox:/home/tika/Downloads#
```

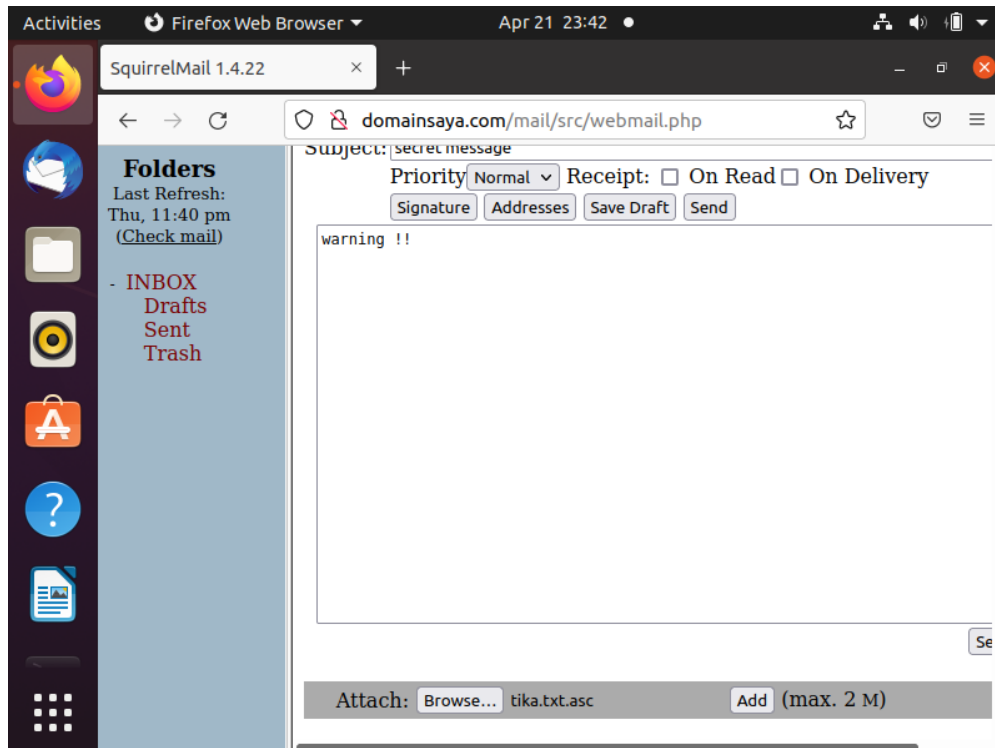
- Melihat pesan yang berhasil di encrypt

```
Activities Text Editor Apr 21 23:44
tika.txt.asc [Read-Only]
/tmp/mozilla_tika0

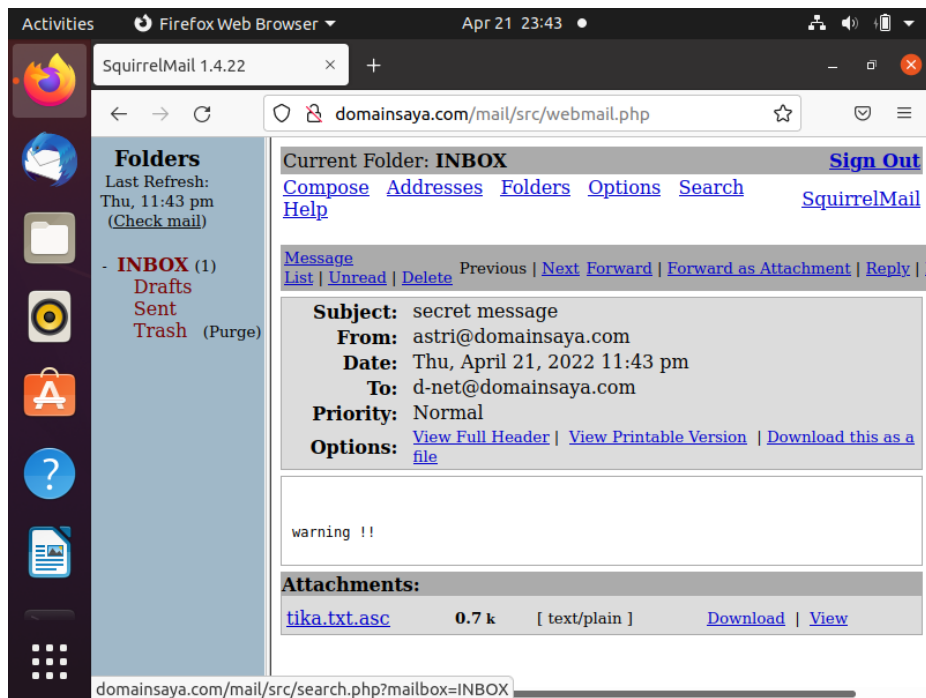
1 -----BEGIN PGP MESSAGE-----
2
3 hQGMaw2HhAxLtPcpAQv/c1Ij7LCFeteyNQ4jh3PlsTufIhParQAqPpDNR3uSt/iu
4 op883WdgI2kJDlorQSzXGDma3QrfQbmMTHQLzBZEN+/ahmyej9NTV1QMuhcpqZ2J
5 REoTI8HeHMzonZY3tmJwHZKZoLa/ZdjyXc jycZcWdBA00TNL5Hj969AxNKeAe978
6 75ppATj6gDH7l6ponoGEj7vHvLSUPE3CbpRaspj3t0v2Av+8fAfjU4Dw1gZsyyRO
7 D7Mse1ELkDrKmAhrrnW2ZaYhww5g3W+9fsdBBdAz2M9n8JZ+Mxz5kB+6lNj80BK6S
8 /6fz7CHoHMegz1ZPBZK/Uv0/yopjHOYGmh7ufuzwA4JLUuMV8ZnXIg0UI4v44gE0
9 jUxndo/TXGeffbp9mit4a56XLY1WMq/gs0ppqidknghSLOWq0rVvwawSYtqp1kMk
10 cNGtSLt7PSPk5gMP2H1AMPck50mvY+hi8jG81APTIqltaxwc5NFRMSECqItrnC/
11 8qCPgPVTp0XaqIR+Mij00loB3036UKi0eckce2mES4Vlf0QGcxAjf8i4T9n+JaSj
12 A8dV7ZGsVHRtTU0uLnVLDlWtB8AezBhKXkLtD+lCVw2mSA13vika5gku6lflke0k
13 VOYitX7EZvuw4us=
14 =3h5P
15 -----END PGP MESSAGE-----

Plain Text Tab Width: 8 Ln 1, Col 1 INS
```

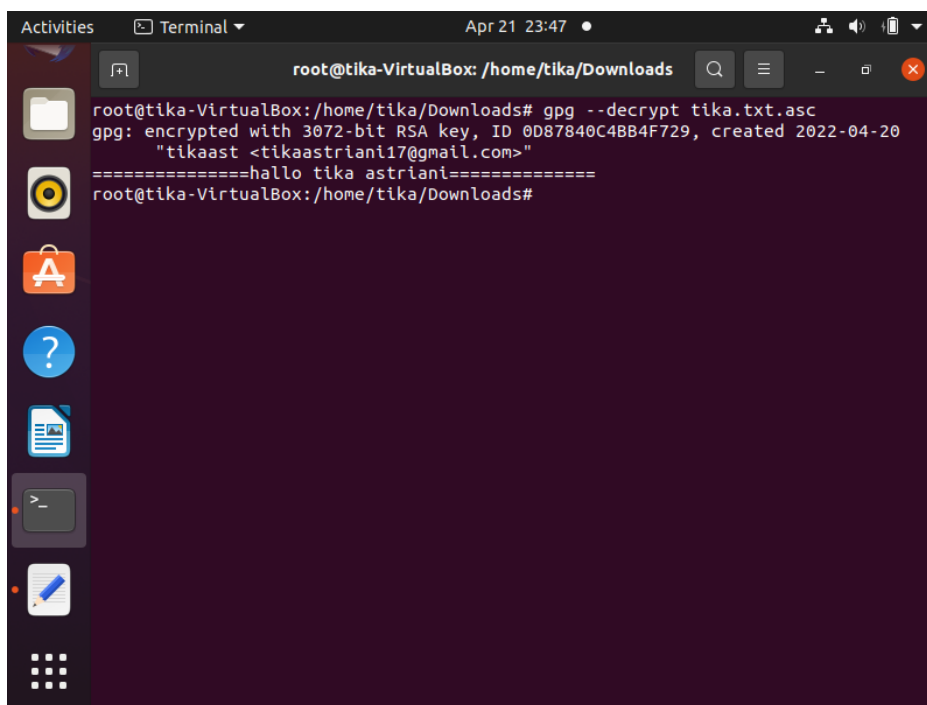
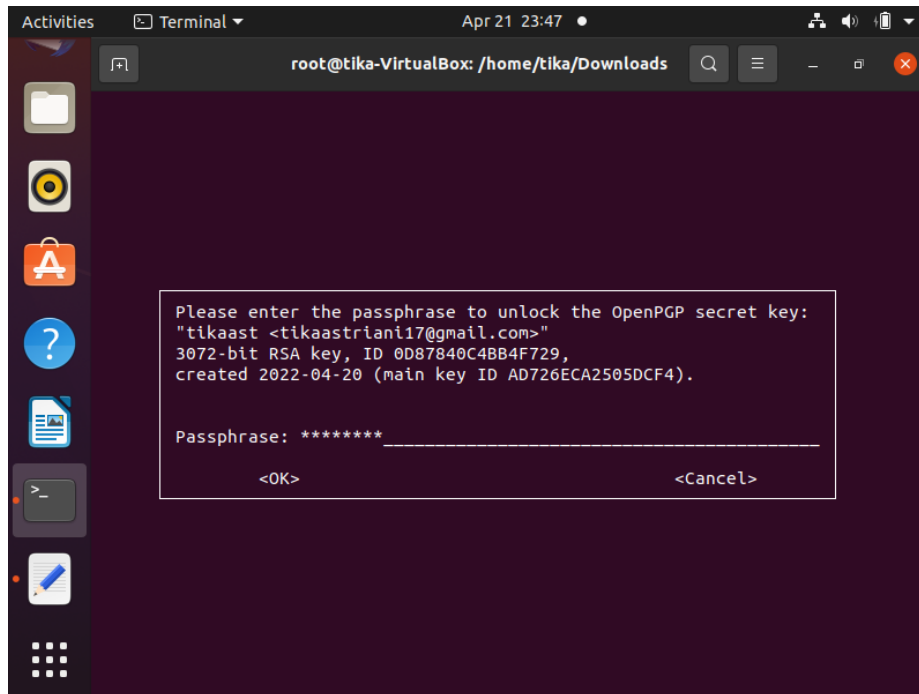
- Mengirimkan pesan yang sudah di encrypt



- Menerima encrypt pesan dan mendownloadnya , setelah itu decrypt pesan yang sudah di download dan lihat isi pesan tersebut.

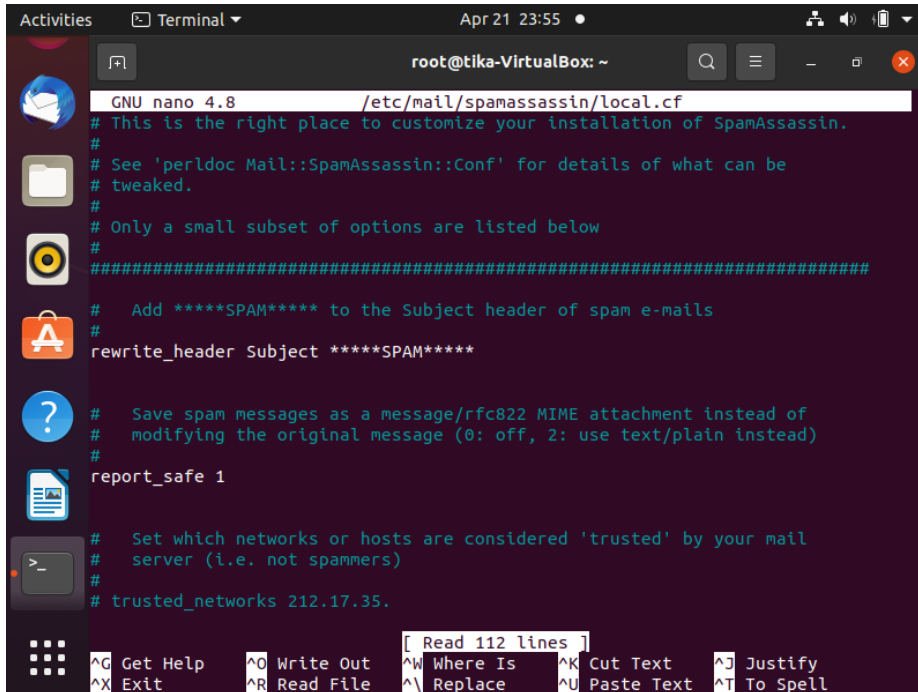






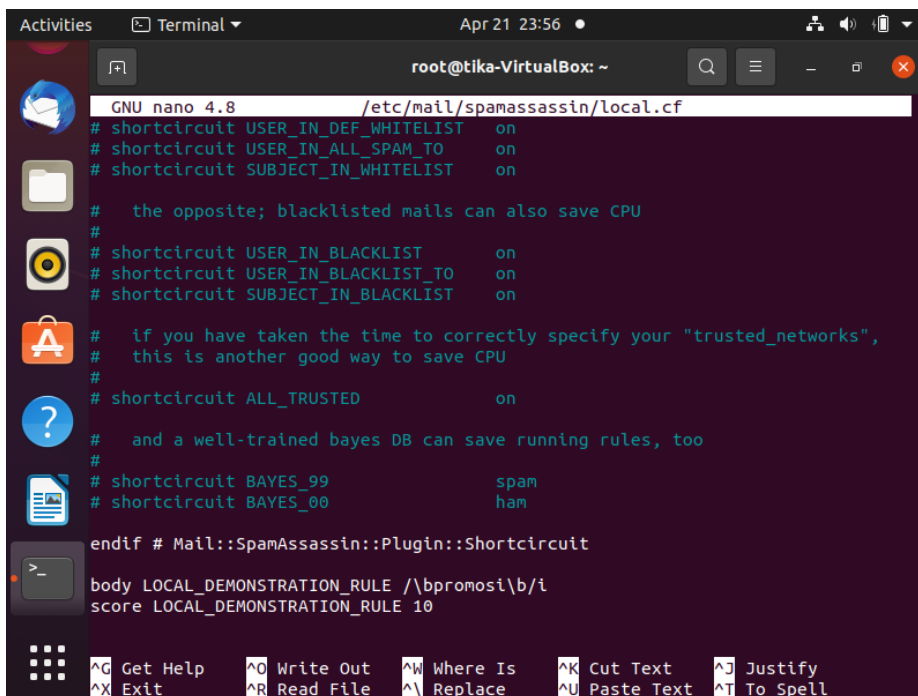
## STEP 7: INSTALL ANTI SPAM MENGGUNAKAN SPAMASAASSIN

- apt-get install spamassassin spamc
- nano /etc/mail/spamssassin/local.cf hapus tanda # pada rewrite , report\_safe lalu simpan



```
GNU nano 4.8 /etc/mail/spamassassin/local.cf
# This is the right place to customize your installation of SpamAssassin.
#
# See 'perldoc Mail::SpamAssassin::Conf' for details of what can be
# tweaked.
#
# Only a small subset of options are listed below
#####
# Add *****SPAM***** to the Subject header of spam e-mails
#
rewrite_header Subject *****SPAM*****
#
# Save spam messages as a message/rfc822 MIME attachment instead of
# modifying the original message (0: off, 2: use text/plain instead)
#
report_safe 1
#
# Set which networks or hosts are considered 'trusted' by your mail
# server (i.e. not spammers)
#
# trusted_networks 212.17.35.
[ Read 112 lines ]
^G Get Help      ^O Write Out    ^W Where Is     ^K Cut Text     ^J Justify
^X Exit          ^R Read File    ^_ Replace       ^U Paste Text   ^T To Spell
```

- Tambahkan seperti gambar di bawah ini , agar setiap kalimat yang mengandung kata 'promosi' dianggap sebagai spam



```
GNU nano 4.8 /etc/mail/spamassassin/local.cf
# shortcircuit USER_IN_DEF_WHITELIST      on
# shortcircuit USER_IN_ALL_SPAM_TO        on
# shortcircuit SUBJECT_IN_WHITELIST        on
#
# the opposite; blacklisted mails can also save CPU
#
# shortcircuit USER_IN_BLACKLIST           on
# shortcircuit USER_IN_BLACKLIST_TO        on
# shortcircuit SUBJECT_IN_BLACKLIST         on
#
# if you have taken the time to correctly specify your "trusted_networks",
# this is another good way to save CPU
#
# shortcircuit ALL_TRUSTED                  on
#
# and a well-trained bayes DB can save running rules, too
#
# shortcircuit BAYES_99                     spam
# shortcircuit BAYES_00                     ham
endif # Mail::SpamAssassin::Plugin::Shortcircuit

body LOCAL_DEMONSTRATION_RULE /\bpromosi\b/i
score LOCAL_DEMONSTRATION_RULE 10
^G Get Help      ^O Write Out    ^W Where Is     ^K Cut Text     ^J Justify
^X Exit          ^R Read File    ^_ Replace       ^U Paste Text   ^T To Spell
```

- Contoh email yang mengandung kata `promosi`

The screenshot shows a webmail interface in a browser. The address bar displays `domainsaya.com/mail/src/webmail.php`. On the left, a sidebar lists folders: **Folders**, Last Refresh: Thu, 2:17 am (Check mail), **INBOX (2)**, Drafts, Sent, and Trash. The main content area shows email headers for a message with subject **\*\*\*\*\*SPAM\*\*\*\*\* email cek**, from **bagas@domainsaya.com**, dated **Thu, April 21, 2022 2:16 am**, to **d-net@domainsaya.com**, and priority **Normal**. Options include [View Full Header](#), [View Printable Version](#), and [Download this as a file](#). The email body contains a spam detection notice from "tika-VirtualBox" and a content preview: "Selamat malam , saya ingin promosi produk terbaru yaitu s parFUM". Below this, content analysis details show a score of 9.0 points (5.0 required) and a table of rules.

pts	rule name	description
-1.0	ALL_TRUSTED	Passed through trusted hosts only via SMTP
10	LOCAL_DEMONSTRATION_RULE	BODY: No description available.

