IQRO

Konfigurasi DNS Server & Mail Server Multiple Domain
 1. **DNS Server**
    a. **Instalasi DNS**
       1. Masuk mode sudo terlebih dahulu

```
student@debian:~$ sudo su
root@debian:/home/student#
```

       2. Lakukan apt update

```
root@debian:/home/student# apt-get update
Hit:1 http://kebo.pens.ac.id/debian bullseye InRelease
Hit:2 http://kebo.pens.ac.id/debian bullseye-updates InRelease
Hit:3 http://security.debian.org/debian-security bullseye-security InRelease
Reading package lists... Done
root@debian:/home/student#
```

       3. Instalasi Package DNS Server

```
root@debian:/home/student# apt-get install bind9 dnsutils -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bind9-utils python3-ply
Suggested packages:
  bind-doc resolvconf ufw python-ply-doc
The following NEW packages will be installed:
  bind9 bind9-utils dnsutils python3-ply
0 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
Need to get 1,246 kB of archives.
```

    b. **Konfigurasi DNS**
       1. Masuk mode sudo terlebih dahulu

```
student@debian:~$ sudo su
root@debian:/home/student#
```

       2. Buka direktori /etc/bind

```
root@debian:/home/student# cd /etc/bind
root@debian:/etc/bind#
```

3. Misal domain yang akan kita konfigurasi adalah : **namaorang.com** dan **sayaorang.com**

Buka file **named.conf.local** pada direktori **/etc/bind**

```
root@debian:/etc/bind# nano named.conf.local
root@debian:/etc/bind#
```

```
  GNU nano 5.4                    /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 "namaorang.com" {
        type master;
        file "/var/cache/bind/namaorang.com.db";
};

zone "sayaorang.com" {
        type master;
        file "/var/cache/bind/sayaorang.com.db";
};


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

Lalu untuk menyimpan dengan **CTRL + X** lalu **Y** lalu **Enter**.

4. Copy **Record Resource** pada Direktori **/etc/bind** ke Direktori **/var/cache/bind/**

* Contoh nama domain disini **namaorang.com** dan **sayaorang.com** sesuaikan dengan soal *

```
root@debian:/etc/bind# cp db.local /var/cache/bind/namaorang.com.db
root@debian:/etc/bind# cp db.local /var/cache/bind/sayaorang.com.db
root@debian:/etc/bind#
```

5. Konfigurasi **Record Resource** yang telah di copy pada direktori **/var/cache/bind/**

```
root@debian:/etc/bind# nano /var/cache/bind/namaorang.com.db
```

a. **Sebelum Konfigurasi :**

```
  GNU nano 5.4              /var/cache/bind/namaorang.com.db
;
; BIND data file for local loopback interface
;
$TTL    604800
@       IN      SOA     localhost. root.localhost. (
                              2         ; Serial
                         604800         ; Refresh
                          86400         ; Retry
                        2419200         ; Expire
                         604800 )       ; Negative Cache TTL
;
@       IN      NS      localhost.
@       IN      A       127.0.0.1
@       IN      AAAA    ::1




                         [ Read 14 lines ]
^G Help      ^O Write Out ^W Where Is ^K Cut       ^T Execute  ^C Location
^X Exit      ^R Read File ^\ Replace  ^U Paste     ^J Justify  ^_ Go To Line
```

b. **Sesudah Konfigurasi :**

```
  GNU nano 5.4              /var/cache/bind/namaorang.com.db *
;
; BIND data file for local loopback interface
;
$TTL    604800
@       IN      SOA     namaorang.com. root.namaorang.com. (
                              2         ; Serial
                         604800         ; Refresh
                          86400         ; Retry
                        2419200         ; Expire
                         604800 )       ; Negative Cache TTL
;
@       IN      NS      namaorang.com.
@       IN      A       10.121.1.1
@       IN      AAAA    ::1
@       IN      MX      10 mail.namaorang.com.
mail    IN      A       10.121.1.1




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

Pastikan nama domain paling akhir terdapat **Titik (.)**

 * Jangan lupa konfigurasi domain kedua cara sama seperti diatas *

Lalu untuk menyimpan dengan **CTRL + X** lalu **Y** lalu **Enter**.

IP **10.121.1.1** didapat dari mana ? Sesuaikan komputer masing-masing. Untuk melihat konfigurasi IP di Komputer dengan cara **ip a** di terminal

```
student@debian:~$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state
t qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc
roup default qlen 1000
    link/ether 00:0c:29:25:24:c1 brd ff:ff:ff:ff:ff:ff
    altname enp2s1
    inet 192.168.127.128/24 brd 192.168.127.255 scope globa
te ens33
       valid_lft 1331sec preferred_lft 1331sec
    inet6 fe80::20c:29ff:fe25:24c1/64 scope link noprefixro
       valid_lft forever preferred_lft forever
3: ens34: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc
roup default qlen 1000
    link/ether 00:0c:29:25:24:cb brd ff:ff:ff:ff:ff:ff
    altname enp2s2
    inet 10.121.1.1/24 brd 10.121.1.255 scope global ens34
       valid_lft forever preferred_lft forever
    inet6 fe80::20c:29ff:fe25:24cb/64 scope link
```

6. Setelah konfigurasi selesai **restart** service **bind9**

```
root@debian:/etc/bind# systemctl restart bind9
root@debian:/etc/bind#
```

7. Ganti **nameserver** terlebih dahulu pada file **/etc/resolv.conf**

```
root@debian:/etc/bind# nano /etc/resolv.conf
```

    a. Sebelum Konfigurasi :

```
  GNU nano 5.4                        /etc/resolv.conf
# Generated by NetworkManager
search localdomain
nameserver 192.168.127.2
```

PERINGATAN : Catat **nameserver** lama terlebih dahulu agar saat instalasi paket selanjutnya yang membutuhkan internet tetap dapat terhubung

    b. Sesudah Konfigurasi :

```
  GNU nano 5.4                        /etc/resolv.conf *
nameserver 10.121.1.1
```

Sesuaikan IP yang telah dikonfigurasi pada file **Record Resource**
Lalu untuk menyimpan dengan **CTRL + X** lalu **Y** lalu **Enter**.

c. **Uji Coba DNS**
   1. Uji coba DNS Server dengan **nslookup**

```
root@debian:/etc/bind# nslookup namaorang.com
Server:         10.121.1.1
Address:        10.121.1.1#53

Name:    namaorang.com
Address: 10.121.1.1
Name:    namaorang.com
Address: ::1

root@debian:/etc/bind# nslookup sayaorang.com
Server:         10.121.1.1
Address:        10.121.1.1#53

Name:    sayaorang.com
Address: 10.121.1.1
Name:    sayaorang.com
Address: ::1
```

Jika tampilan seperti diatas maka dipastikan berhasil men-konfigurasi DNS Server. Pastikan server dan address pada **kasus kali ini** sama dengan yang dikonfigurasi pada **Record Resource**

2. Mail Server dengan Multiple Domain
    a. Instalasi Mail Server
        1. Masuk mode sudo terlebih dahulu

```
student@debian:~$ sudo su
root@debian:/home/student#
```

        2. Jangan lupa mengembalikan **nameserver** lama yang telah anda catat pada file **/etc/resolv.conf** agar dapat terhubung ke internet

```
  GNU nano 5.4                        /etc/resolv.conf *
nameserver 192.168.127.2
```

        3. Lakukan apt update

```
root@debian:/home/student# apt-get update
Hit:1 http://kebo.pens.ac.id/debian bullseye InRelease
Hit:2 http://kebo.pens.ac.id/debian bullseye-updates InRelease
Hit:3 http://security.debian.org/debian-security bullseye-security InRelease
Reading package lists... Done
root@debian:/home/student#
```

        4. Instalasi Package Mail Server & Dependency lainnya

```
root@debian:/home/student# apt-get install postfix courier-imap mariadb-server roundcube -y
```

Jika Muncul Pesan Seperti Dibawah **No**

```
Package configuration




                    ┤ Configuring courier-base ├
   Courier uses several configuration files in /etc/courier. Some of these files can be
   replaced by a subdirectory whose contents are concatenated and treated as a single,
   consolidated, configuration file.

   The web-based administration provided by the courier-webadmin package relies on
   configuration directories instead of configuration files. If you agree, any
   directories needed for the web-based administration tool will be created unless
   there is already a plain file in place.

   Create directories for web-based administration?

                        <Yes>                            <No>
```
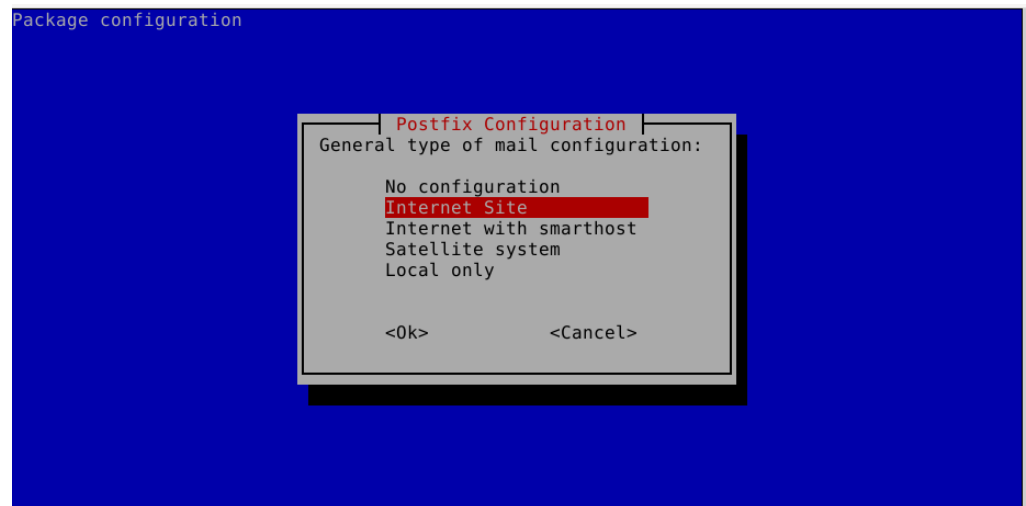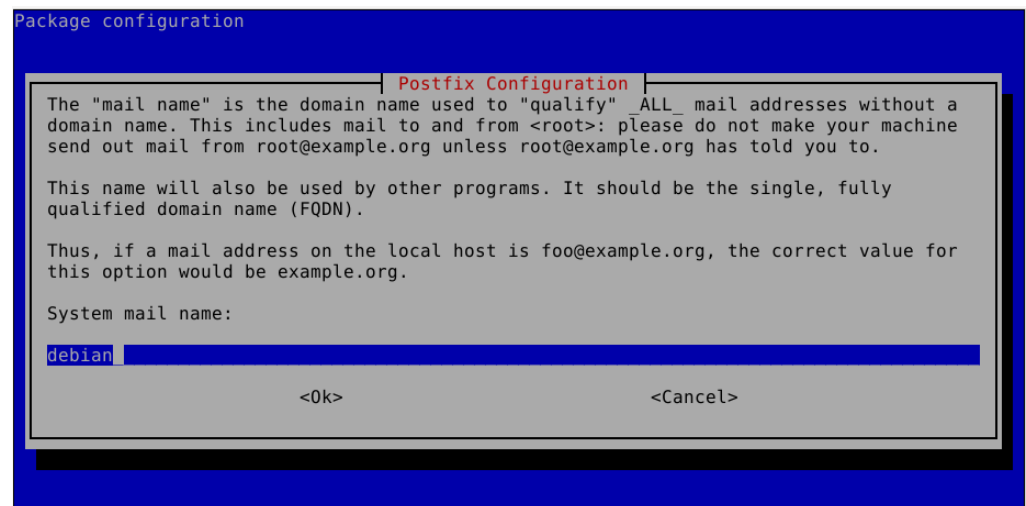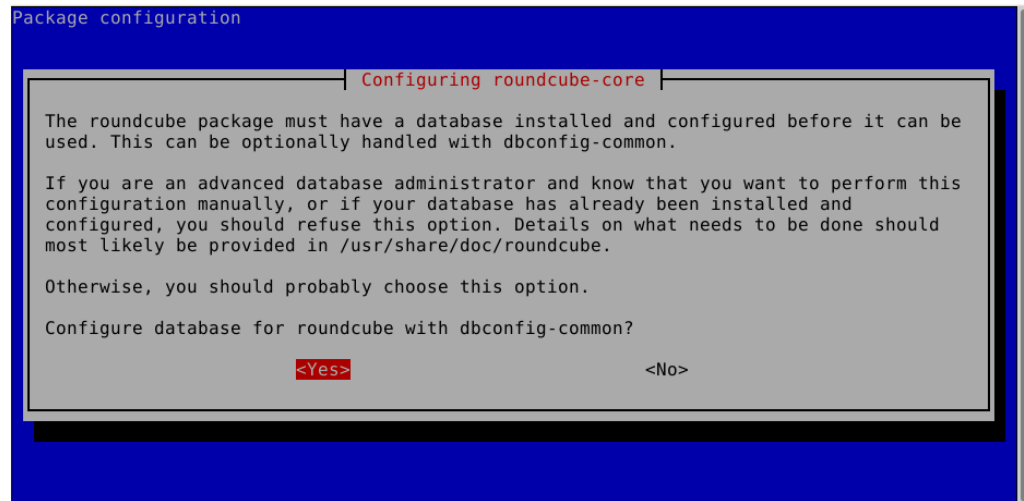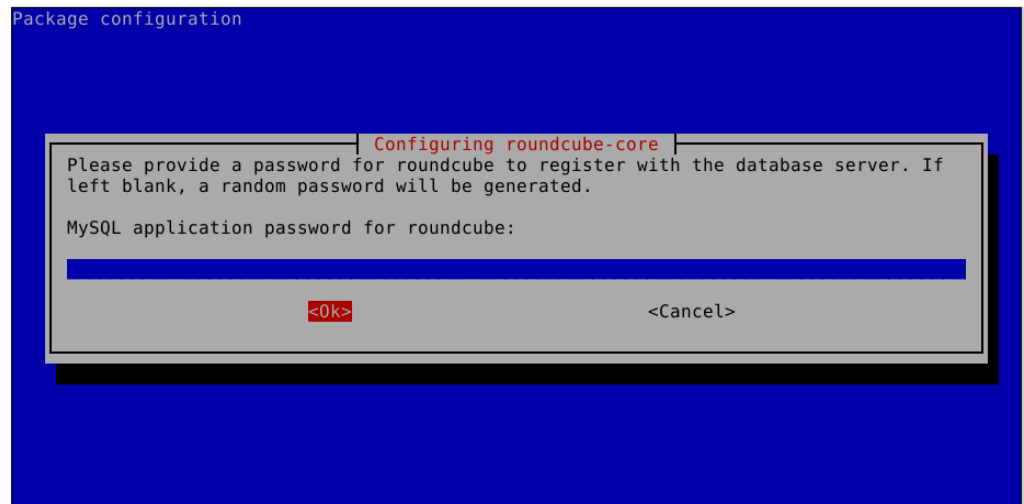
Jika Muncul Pesan Seperti Dibawah Pilih **Internet Only**

```
Package configuration




                  ┤ Postfix Configuration ├
            General type of mail configuration:

                    No configuration
                    Internet Site
                    Internet with smarthost
                    Satellite system
                    Local only


                    <Ok>           <Cancel>

```

Tidak usah diganti langsung **Enter**

```
Package configuration

                        ┤ Postfix Configuration ├
        The "mail name" is the domain name used to "qualify" _ALL_ mail addresses without a
        domain name. This includes mail to and from <root>: please do not make your machine
        send out mail from root@example.org unless root@example.org has told you to.

        This name will also be used by other programs. It should be the single, fully
        qualified domain name (FQDN).

        Thus, if a mail address on the local host is foo@example.org, the correct value for
        this option would be example.org.

        System mail name:

        debian

                        <Ok>                          <Cancel>

```

Pilih **Yes**


```
Package configuration

┌───────────────────┤ Configuring roundcube-core ├───────────────────┐
│                                                                     │
│ The roundcube package must have a database installed and configured │
│ before it can be used. This can be optionally handled with          │
│ dbconfig-common.                                                    │
│                                                                     │
│ If you are an advanced database administrator and know that you     │
│ want to perform this configuration manually, or if your database    │
│ has already been installed and configured, you should refuse this   │
│ option. Details on what needs to be done should most likely be      │
│ provided in /usr/share/doc/roundcube.                               │
│                                                                     │
│ Otherwise, you should probably choose this option.                  │
│                                                                     │
│ Configure database for roundcube with dbconfig-common?              │
│                                                                     │
│            <Yes>                              <No>                   │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

Kosongi lalu pilih **OK**


```
Package configuration

┌───────────────────┤ Configuring roundcube-core ├───────────────────┐
│ Please provide a password for roundcube to register with the        │
│ database server. If left blank, a random password will be generated.│
│                                                                     │
│ MySQL application password for roundcube:                           │
│                                                                     │
│ _____ │
│                                                                     │
│            <Ok>                             <Cancel>                 │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

b. Konfigurasi Mail Server
1. Buka konfigurasi postfix terletak di **/etc/postfix/main.cf**


```
  GNU nano 5.4                    /etc/postfix/main.cf
# See /usr/share/postfix/main.cf.dist for a commented, more complete version


# Debian specific:  Specifying a file name will cause the first
# line of that file to be used as the name.  The Debian default
# is /etc/mailname.
#myorigin = /etc/mailname

smtpd_banner = $myhostname ESMTP $mail_name (Debian/GNU)
biff = no

# appending .domain is the MUA's job.
append_dot_mydomain = no

# Uncomment the next line to generate "delayed mail" warnings
#delay_warning_time = 4h

readme_directory = no

# See http://www.postfix.org/COMPATIBILITY_README.html -- default to 2 on
                         [ Read 46 lines ]
^G Help        ^O Write Out   ^W Where Is    ^K Cut         ^T Execute    ^C Location
^X Exit        ^R Read File   ^\ Replace     ^U Paste       ^J Justify    ^  Go To Line
```

2. Scroll ke bagian paling bawah seperti gambar dibawah

3. Pada paling bawah tambahi konfigurasi **home_mailbox dan mailbox_command**

4. Pada bagian mydestination tambahkan domain ke 1 dan domain ke 2

5. Pada bagian myhostname ganti menjadi domain ke 1

```
  GNU nano 5.4                              /etc/postfix/main.cf *

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_unauth_destination
myhostname = namaorang.com
alias_maps = hash:/etc/aliases
alias_database = hash:/etc/aliases
mydestination = $myhostname, debian, localhost.localdomain, , localhost, namaorang.com, sayaorang.com
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 = all
home_mailbox = Maildir/
mailbox_command =
```

6. Tambahkan pada baris paling bawah untuk **virtual_alias_maps** dan **virtual_alias_domains**. Pada **virtual_alias_domains** tambahkan semua domain anda

```
  GNU nano 5.4                              /etc/postfix/main.cf *
smtp_tls_security_level=may
smtp_tls_session_cache_database = btree:${data_directory}/smtp_scache


smtpd_relay_restrictions = permit_mynetworks permit_sasl_authenticated defer_unauth_destination
myhostname = namaorang.com
alias_maps = hash:/etc/aliases
alias_database = hash:/etc/aliases
mydestination = $myhostname, debian, localhost.localdomain, , localhost, namaorang.com, sayaorang.com
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 = all
home_mailbox = Maildir/
mailbox_command =
virtual_alias_maps = hash:/etc/postfix/virtual
virtual_alias_domains = namaorang.com, sayaorang.com
```

Lalu untuk menyimpan dengan **CTRL + X** lalu **Y** lalu **Enter**.

7. Setelah itu buka direktori **/etc/skel** dan buat folder Maildir dengan menggunakan perintah **maildirmake Maildir**

```
root@debian:~# cd /etc/skel/
root@debian:/etc/skel# maildirmake Maildir
root@debian:/etc/skel#
```

8. Buat user baru dengan perintah **adduser namauserbaru**. Contoh disini menggunakan user baru dengan nama **bintang** dan **rezeka**

```
root@debian:~# adduser bintang
Adding user `bintang' ...
Adding new group `bintang' (1001) ...
Adding new user `bintang' (1001) with group `bintang' ...
Creating home directory `/home/bintang' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for bintang
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@debian:~# adduser rezeka
Adding user `rezeka' ...
Adding new group `rezeka' (1002) ...
Adding new user `rezeka' (1002) with group `rezeka' ...
Creating home directory `/home/rezeka' ...
Copying files from `/etc/skel' ...
New password:
```

9. Setelah itu lanjut konfigurasi mapping untuk postfix agar bisa untuk multiple domain. Disini user bintang akan mendapatkan domain namaorang.com dan rezeka akan mendapatkan domain sayaorang.com. Jadi jika dijadikan email seperti ini : **bintang@namaorang.com** dan **rezeka@sayaorang.com**

10. Buka file **/etc/postfix/virtual** dan maka isi nya kosong

```
  GNU nano 5.4                        /etc/postfix/virtual *




```

11. Setelah itu isi kan berpola silang atau X domain 1 untuk user 2 dan domain 2 untuk user 1 seperti dibawah ini

```
  GNU nano 5.4                        /etc/postfix/virtual *
info@namaorang.com rezeka
info@sayaorang.com bintang
```

Lalu untuk menyimpan dengan **CTRL + X** lalu **Y** lalu **Enter**.

12. Setelah itu konfigurasi roundcube dan buka file
    /etc/roundcube/apache.conf setelah itu hapus pada baris ke 3 tanda #

Lalu untuk menyimpan dengan **CTRL + X** lalu **Y** lalu **Enter**.

13. Setelah itu buka file konfigurasi roundcube yaitu
    /etc/roundcube/config.inc.php setelah itu cari bagian **default_host** dan
    kosongi seperti gambar dibawah ini

14. Selanjutnya cari bagian **smtp_port**, **smtp_host**, dan **smtp_password** sesuaikan seperti gambar dibawah

```
  GNU nano 5.4                              /etc/roundcube/config.inc.php *
// %t - hostname without the first part
// %d - domain (http hostname $_SERVER['HTTP_HOST'] without the first part)
// %z - IMAP domain (IMAP hostname without the first part)
// For example %n = mail.domain.tld, %t = domain.tld
$config['smtp_server'] = 'localhost';

// SMTP port. Use 25 for cleartext, 465 for Implicit TLS, or 587 for STARTTLS (default)
$config['smtp_port'] = 25;  ⟵

// SMTP username (if required) if you use %u as the username Roundcube
// will use the current username for login
$config['smtp_user'] = '';  ⟵

// SMTP password (if required) if you use %p as the password Roundcube
// will use the current user's password for login
$config['smtp_pass'] = '';  ⟵

// provide an URL where a user can get support for this Roundcube installation
// PLEASE DO NOT LINK TO THE ROUNDCUBE.NET WEBSITE HERE!
$config['support_url'] = '';
```

Lalu untuk menyimpan dengan **CTRL + X** lalu **Y** lalu **Enter**.

15. Setelah itu restart konfigurasi untuk apache2, mysql-server dan postfix

```
root@debian:~# systemctl restart apache2
root@debian:~# systemctl restart postfix
root@debian:~# systemctl restart mariadb
```

16. Jangan lupa lakukan **postmap /etc/postfix/virtual** agar postfix membuat mapping untuk domain user dan lakukan **postfix reload**

```
root@debian:~# postmap /etc/postfix/virtual
root@debian:~# postfix reload
postfix/postfix-script: refreshing the Postfix mail system
root@debian:~#
```

17. Kembalikan konfigurasi **nameserver** pada file **/etc/resolv.conf** dan sesuaikan IP yang dikonfigurasi pada DNS Server diatas / seperti konfigurasi dns pada bagian nameserver

```
root@debian:~# nano /etc/resolv.conf
```

```
  GNU nano 5.4                              /etc/resolv.conf *
nameserver 10.121.1.1
```

Disini komputer saya menggunakan IP **10.121.1.1**
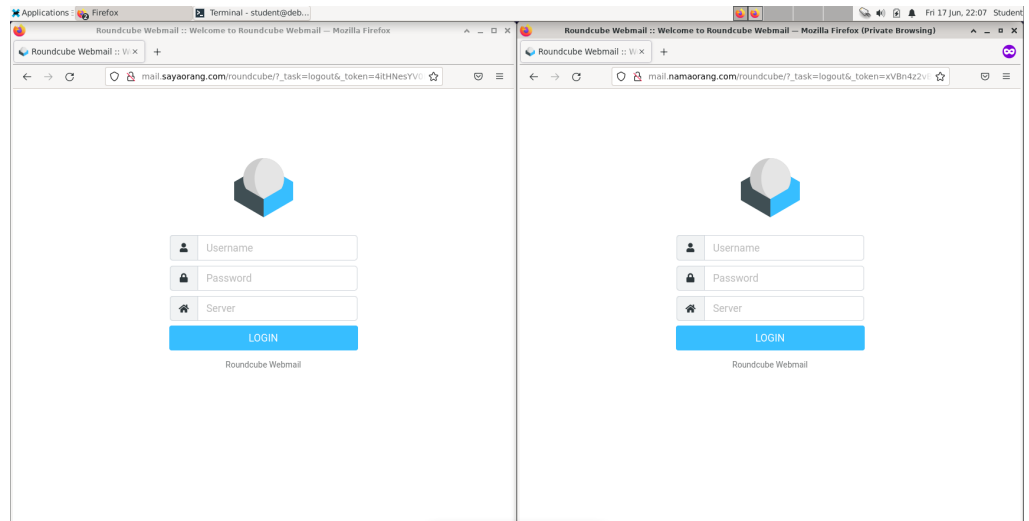Lalu untuk menyimpan dengan **CTRL + X** lalu **Y** lalu **Enter**.

c. Uji Coba Mail Server

1. Buka Browser Pada Linux anda dan ketikkan domain yang telah anda konfigurasi pada DNS Server.
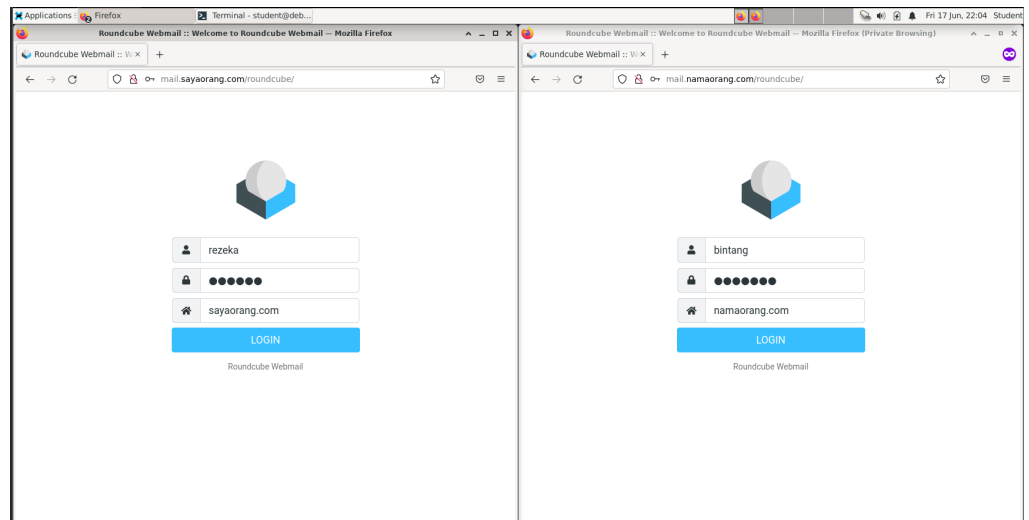
   Contoh pada konfigurasi DNS Server diatas :

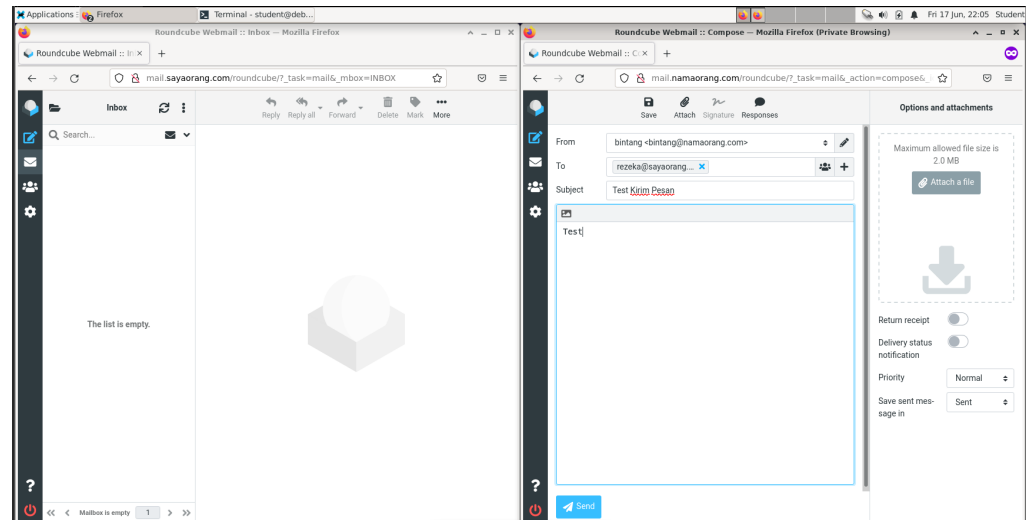   **mail.sayaorang.com/roundcube** dan **mail.namaorang.com/roundcube**

2. Buka 2 tab yang 1 tab browser original dan tab 2 browser mode penyamaran (mode incognito) dan buka masing masing domain seperti contoh diatas

3. Pada domain **sayaorang.com** masukkan user **rezeka** dan domain **namaorang.com** masukkan user **bintang**

4. Uji coba kirim pesan ke email yang berbeda domain

5. Dan refresh inbox pada email tertuju maka selamat email sudah masuk