SISTEM TERDISTRIBUSI

“Konfigurasi server DNS dan client”

Disusun oleh :

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PROGRAM STUDI SISTEM KOMPUTER

FAKULTAS ILMU KOMPUTER

UNIVERSITAS SRIWIJAYA

PALEMBANG

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1.Jakankan perintah berikut untuk install bind9

- **apt install bind9**

```
root@fitri-virtual-machine:/home/fitri# apt install bind9
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
bind9 is already the newest version (1:9.18.18-0ubuntu0.22.04.2).
0 upgraded, 0 newly installed, 0 to remove and 85 not upgraded.
root@fitri-virtual-machine:/home/fitri#
```

Jika status firewall pada server aktif maka silahkan di Allow pada port 53 dengan perintah

- **ufw allow 53**

```
root@fitri-virtual-machine:/home/fitri# ufw allow 53
Help
ng adding existing rule
ng adding existing rule (v6)
root@fitri-virtual-machine:/home/fitri#
```

2.Konfigurasi Network Interface

Sebelumnya kita konfigurasi IP Address secara Static, Resolv.conf dan hosts seperti dibawah ini.

- **nano /etc/netplan/00-installer-config.yaml**

```
root@fitri-virtual-machine:/home/fitri# nano /etc/netplan/00-installer-config.ya
ml
```

Konfigurasi interface

```
 GNU nano 6.2          /etc/netplan/00-installer-config.yaml
# This is the network config written by 'subiquity'
# This is the network config written by 'subiquity'
network:
  ethernets:
    enp0s3:
      dhcp4: false
      addresses: [192.168.178.137/24]
      gateway4: 192.168.178.255
      nameservers:
        search: [fitri.com]
        addresses: [192.168.178.137, 192.168.178.255]
  version: 2
LibreOffice Writer
                        [ Read 12 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
```

Konfigurasi Resolv.conf

- **nano /etc/resolv.conf**

```
nameserver 192.168.178.137
nameserver 192.168.178.255
options edns0 trust-ad
search fitri.com
```

Konfigurasi Hosts

- **nano /etc/hosts**

```
  GNU nano 6.2                                  /etc/
127.0.0.1       localhost
127.0.1.1       fitri-virtual-machine

192.168.178.137 fitri.com
```

3. Konfigurasi DNS Server

- **nano /etc/bind/named.conf.local**

Pada bagian ini BIND9 akan dikonfigurasi sebagai server utama dengan contoh nama domain menggunakan nama aspal.com. rekan-rekan cukup menganti fitri.com dengan FQDN (Fully Qualified Domain Name)

```
root@fitri-virtual-machine:/home/fitri# cp /etc/bind/db.local /etc/bind/db.fitri
root@fitri-virtual-machine:/home/fitri#
```

```
  GNU nano 6.2                  /etc/bind/named.conf.local *
// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";
zone "fitri.com" {
        type master;
        file "/etc/bind/db.fitri";
};

2.in-addr.arpa" {
ter;
        file "/etc/bind/db.192";
};
```

LibreOffice Writer

selanjutnya gunakan file zone yang sudah ada sebagai template untuk membuat file /etc/bind/db.fitri

- **cp /etc/bind/db.local /etc/bind/db.fitri**

edit seperti dibawah ini. Untuk Coomon Record Types

```
root@fitri-virtual-machine:/home/fitri# nano /etc/bind/db.fitri
```

root@fitri-virtual-machine: /home/fitri

```
  GNU nano 6.2                      /etc/bind/db.fitri
;
; 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
```

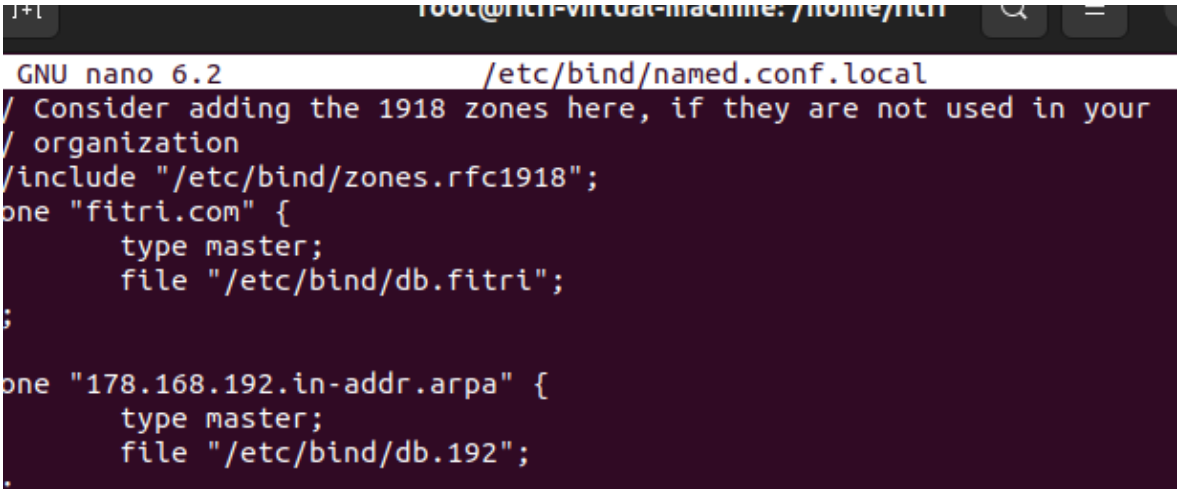
Rhythmbox

Simpan perubahan lalu restart service BIND9

- **systemctl restart bind9.service**

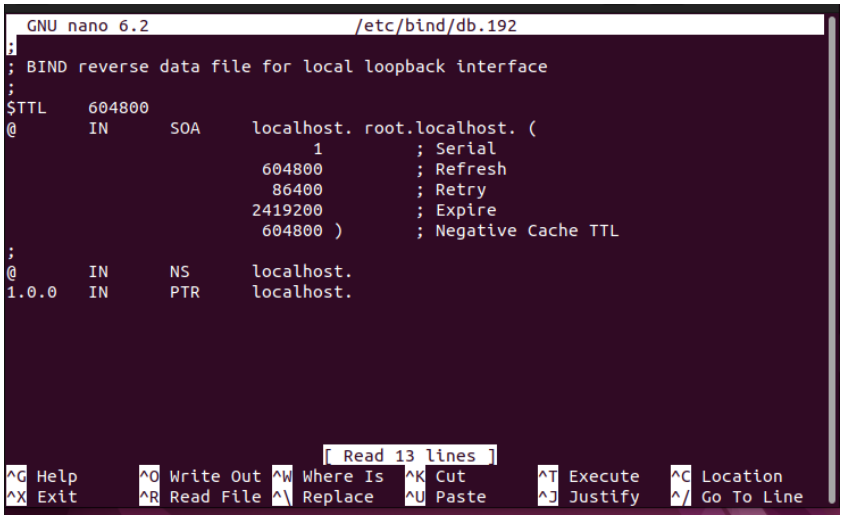
Selanjutnya kita akan membuat Reverse zone file. Reverse zone perlu ditambahkan untuk memungkinkan DNS untuk me resolv dari IP Address ke nama domain. Edit file /etc/bind/named.conf.local lalu Tambahkan script dibawah ini.

- **nano /etc/bind/named.conf.local**
- **nano /etc/bind/named.conf.local**



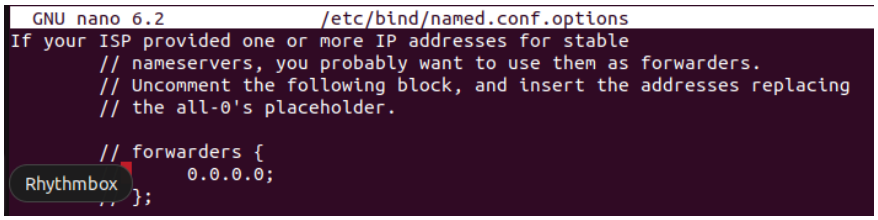
Selanjutnya buat file /etc/bind/db.192

- **cp /etc/bind/db.127 /etc/bind/db.192**
- **nano /etc/bind/db.192**



Simpan perubahan lalu restart service BIND9

- **systemctl restart bind9.service**
- **nano /etc/bind/named.conf.options**



Simpan perubahan lalu restart service BIND9

- **systemctl restart bind9.service**

4. Pengetesan

pengkonfigurasian ip pada pc client disini saya menggunakan windows sebagai client

```
C:\Users\LENOVO>ping 192.168.178.137

Pinging 192.168.178.137 with 32 bytes of data:
Reply from 192.168.178.137: bytes=32 time=3ms TTL=64
Reply from 192.168.178.137: bytes=32 time=1ms TTL=64
Reply from 192.168.178.137: bytes=32 time=1ms TTL=64
Reply from 192.168.178.137: bytes=32 time=1ms TTL=64

Ping statistics for 192.168.178.137:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 3ms, Average = 1ms

C:\Users\LENOVO>ping www.fitri.com

Pinging www.fitri.com [13.248.169.48] with 32 bytes of data:
Reply from 13.248.169.48: bytes=32 time=19ms TTL=249
Reply from 13.248.169.48: bytes=32 time=14ms TTL=249
Reply from 13.248.169.48: bytes=32 time=14ms TTL=249
Reply from 13.248.169.48: bytes=32 time=14ms TTL=249

Ping statistics for 13.248.169.48:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 14ms, Maximum = 19ms, Average = 15ms

C:\Users\LENOVO>
```

Telihat disana saat pengetesan ping pada ip 192.168.178.137 bisa. Ping pada situs www.fitri.com pun selesai dan pc client pun terhubung