

WORKSHOP ADMINISTRASI JARINGAN

PERTEMUAN 2 MINGGU 2

Dns bind9 dan dnsmasq



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TEKNIK INFORMATIKA

POLITEKNIK ELEKTRONIKA NEGERI SURABAYA

PENS PSDKU SUMENEP

D3 TEKNIK INFORMATIKA

BIND9

1. Langkah pertama adalah mengupdate Debian, dengan menegtik apt update setelah itu apt upgrade

```
root@vrayoga:~# apt update
vrayoga@vrayoga:~$ su - root
Password:
root@vrayoga:~# apt update
Hit:1 http://security.debian.org/debian-security bookworm-security InRelease
Hit:2 http://deb.debian.org/debian bookworm InRelease
Hit:3 http://deb.debian.org/debian bookworm-updates InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
root@vrayoga:~# apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@vrayoga:~# ss
```

2. Setelah itu kita download bind9 juga

```
root@vrayoga:~# apt install bind9 bind9-utils bind9-doc dnsutils
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  bind-doc resolvconf ufw
The following NEW packages will be installed:
  bind9 bind9-doc bind9-utils dnsutils
0 upgraded, 4 newly installed, 0 to remove and 0 not upgraded.
Need to get 4,611 kB of archives.
After this operation, 9,962 kB of additional disk space will be used.
Get:1 http://security.debian.org/debian-security bookworm-security/main amd64 bind9-util
s amd64 1:9.18.24-1 [408 kB]
Get:2 http://security.debian.org/debian-security bookworm-security/main amd64 bind9 amd6
4 1:9.18.24-1 [496 kB]
Get:3 http://security.debian.org/debian-security bookworm-security/main amd64 bind9-doc
```

3. Setelah mendownload mari kita liat versi bind9 dengan menuliskan named -v

```
root@vrayoga:~# named -v
BIND 9.18.24-1-Debian (Extended Support Version) <id:>
root@vrayoga:~#
```

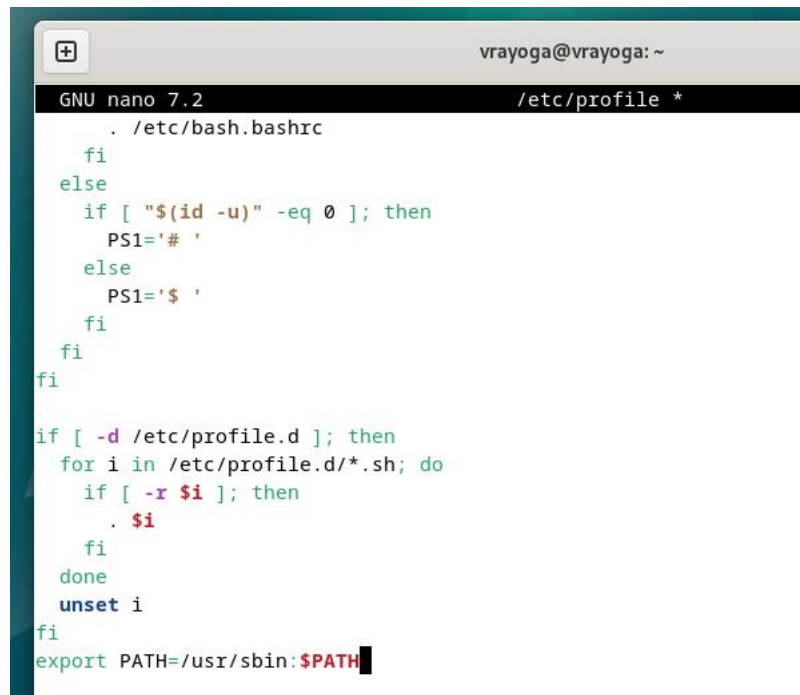
4. Lalu kita cek file environment, karena di usr/bin tidak ada hasil path maka kita akan tambahkan

```
root@vrayoga:~# echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
root@vrayoga:~#
```

5. Untuk menambahkan folder path kita masuk ke nano /etc/ profile,lalu akan muncul seperti ini.lalu kalian scroll ke bawah dan tambahkan path seperti ini.

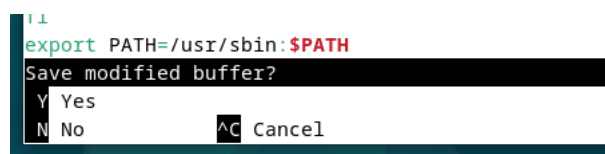
Ini kode untuk masuk ke folder profile

```
root@vrayoga:~# nano /etc/profile
root@vrayoga:~#
```



```
GNU nano 7.2 /etc/profile *
. /etc/bash.bashrc
fi
else
if [ "${id -u}" -eq 0 ]; then
PS1='# '
else
PS1='$ '
fi
fi
fi
if [ -d /etc/profile.d ]; then
for i in /etc/profile.d/*.sh; do
if [ -r $i ]; then
. $i
fi
done
unset i
fi
export PATH=/usr/sbin:$PATH
```

untuk menyimpan ctrl + x dan keluar y



```
export PATH=/usr/sbin:$PATH
Save modified buffer?
Y Yes
N No ^C Cancel
```

6. Untuk aktivasi perubahan profile
root@vrayoga:~# source /etc/profile
root@vrayoga:~#
7. Lalu kita liat variable pathnya,hasilnya seperti ini

```
root@vrayoga:~# echo $PATH
/usr/sbin:/usr/local/sbin:/usr/sbin:/usr/bin:/sbin:/bin
root@vrayoga:~#
```

8. Kita masuk kedalam bind lalu kita liat apa saja didalam bind tersebut.

```
root@vrayoga:~# cd /etc/bind
root@vrayoga:/etc/bind# ls
bind.keys  db.255  named.conf  named.conf.options
db.0       db.empty  named.conf.default-zones  rndc.key
db.127     db.local  named.conf.local  zones.rfc1918
root@vrayoga:/etc/bind#
```

9. Copy db.local menjadi db.ns1.yoga.edu. File db.local adalah file untuk forward mapping ,lalu Copy db.127 menjadi db.rev.ns1.yoga.edu. File db.127 adalah file untuk reverse mapping

```
root@vrayoga:/etc/bind# cp db.local db.ns1.yoga.edu
root@vrayoga:/etc/bind# cp db.127 db.rev.ns1.yoga.edu
root@vrayoga:/etc/bind#
```

10. Lalu copy juga Copy file named.conf.local menjadi named.conf.local.orig, setelah itu kita akan melihat semua file hasil copy an tersebut. kita lakukan pengcopyan apabila error kita sudah punya backupan

```
root@vrayoga:/etc/bind# cp named.conf.local named.conf.orig
root@vrayoga:/etc/bind# ls
bind.keys  db.255      db.ns1.yoga.edu      named.conf.default-zones  named.conf.orig
db.0       db.empty   db.rev.ns1.yoga.edu  named.conf.local          rndc.key
db.127     db.local   named.conf            named.conf.options        zones.rfc1918
root@vrayoga:/etc/bind#
```

11. Lalu kita cek ip kita dengan mengetik ip addr

```
root@vrayoga:/etc/bind# ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default 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 noprefixroute
        valid_lft forever preferred_lft forever
2: ens33: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 00:0c:29:89:56:e2 brd ff:ff:ff:ff:ff:ff
    altname enp2s1
    inet 192.168.209.130/24 brd 192.168.209.255 scope global dynamic noprefixroute ens33
        valid_lft 1248sec preferred_lft 1248sec
    inet6 fe80::20c:29ff:fe89:56e2/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
root@vrayoga:/etc/bind#
```

12. Lalu kita konfigurasi named.conf dengan cara mengetik seperti berikut

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

13. Setelah itu kita isi dalam named.conf seperti ini.setelah seperti ini kita tekan ctrl + x lalu save

```
GNU nano 7.2      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 "yoga.edu"{
    type master;
    file "/etc/bind/db.ns1.yoga.edu";
    allow-query {any;};
};

zone "209.168.192.in-addr.arpa"{
    type master;
    file "/etc/bind/db.rev.ns1.yoga.edu";
};
```

14. Setelah itu kita masuk kedalam isi rev yoga edu,dengan mengetik nano db.ns1.yoga.edu.Untuk didalamnya kita kasih seperti ini(untuk menulis ip setiap computer berbeda harap cek terlebih dahulu dengan mengetik ip addr)

```
GNU nano 7.2      db.ns1.yoga.edu *
```

```
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ns1.yoga.edu. hostmaster.yoga.edu. (
                        2      ; Serial
                        604800 ; Refresh
                        86400  ; Retry
                        2419200 ; Expire
                        604800 ) ; Negative Cache TTL
;
@         IN      NS       ns1.yoga.edu.
ns1       IN      A        192.168.209.130
www       IN      A        192.168.209.130
ftp       IN      A        192.168.209.130
blog     IN      CNAME     www
@         IN      AAAA     ::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
```

15. Setelah itu kita masuk kedalam folder rev yoga edu

```
root@vrayoga:/etc/bind# nano db.rev.ns1.yoga.edu
```

```
GNU nano 7.2 db.ns1.yoga.edu *
;
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      ns1.yoga.edu. hostmaster.yoga.edu. (
                        2      ; Serial
                        604800 ; Refresh
                        86400  ; Retry
                        2419200 ; Expire
                        604800 ) ; Negative Cache TTL
;
@         IN      NS       ns1.yoga.edu.
ns1       IN      A        192.168.209.130
www       IN      A        192.168.209.130
ftp       IN      A        192.168.209.131
blog     IN      CNAME     www
@         IN      AAAA     ::1
```

16. Setelah itu kita liat konfigurasi hasilnya,jika seperti gambar dibawah maka berhasil

```
root@vrayoga:/etc/bind# named-checkconf
root@vrayoga:/etc/bind# named-checkzone yoga.edu /etc/bind/db.ns1.yoga.edu
zone yoga.edu/IN: loaded serial 2
OK
root@vrayoga:/etc/bind# named-checkzone yoga.edu /etc/bind/db.rev.ns1.yoga.edu
zone yoga.edu/IN: loaded serial 1
OK
root@vrayoga:/etc/bind#
```

17. Lalu masuk kedalam nano /etc/resolv.conf.lalu edit dalamnya seperti ini(untuk bagian nameserver menyesuaikan dengan computer kalian)

```
GNU nano 7.2 /etc/resolv.conf *
# Generated by NetworkManager
#search localdomain
search yoga.edu
#nameserver 192.168.209.2
nameserver 192.168.209.130
```

18. Lalu kita restart bind terlebih dahulu

```
root@vrayoga:/etc/bind# nano /etc/resolv.conf
root@vrayoga:/etc/bind# systemctl restart bind9
root@vrayoga:/etc/bind# sys
```

19. Jika mengalami error seperti ini

```
root@vrayoga:/etc/bind# systemctl status bind9
● named.service - BIND Domain Name Server
   Loaded: loaded (/lib/systemd/system/named.service; enabled; preset: enabled)
   Active: active (running) since Mon 2024-03-04 17:32:49 WIB; 14s ago
     Docs: man:named(8)
    Main PID: 3656 (named)
      Status: "running"
        Tasks: 6 (limit: 4590)
      Memory: 47.0M
         CPU: 70ms
    CGroup: /system.slice/named.service
            └─3656 /usr/sbin/named -f -u bind

Mar 04 17:32:49 vrayoga named[3656]: network unreachable resolving './DNSKEY/IN'
Mar 04 17:32:49 vrayoga named[3656]: network unreachable resolving './NS/IN': 2>
Mar 04 17:32:49 vrayoga named[3656]: network unreachable resolving './DNSKEY/IN'
Mar 04 17:32:49 vrayoga named[3656]: network unreachable resolving './NS/IN': 2>
Mar 04 17:32:49 vrayoga named[3656]: network unreachable resolving './DNSKEY/IN'
Mar 04 17:32:49 vrayoga named[3656]: network unreachable resolving './NS/IN': 2>
Mar 04 17:32:49 vrayoga named[3656]: network unreachable resolving './DNSKEY/IN'
```

Kalian cukup masuk kedalam

```
root@vrayoga:/etc/bind# nano /etc/default/named
```

Ubah settingan yang awalnya no menjadi yes.dan dibagian option tambahkan -4,lalu save seperti biasa

```
vrayoga@vrayoga: ~
GNU nano 7.2 /etc/default/named
#
# run resolvconf?
RESOLVCONF=yes
# startup options for the server
OPTIONS="-4 -u bind"
```

20. Lalu coba restart lalu jalankan jika berhasil tampilan akan seperti ini.untuk restart tekan tombol systemctl restart bind9,seandainya untuk tes konfigurasi dns systemctl status bind9

```
root@vrayoga:/etc/bind# systemctl status bind9
● named.service - BIND Domain Name Server
   Loaded: loaded (/lib/systemd/system/named.service; enabled; preset: enabled)
   Active: active (running) since Sat 2024-03-02 23:53:21 WIB; 4s ago
     Docs: man:named(8)
    Main PID: 3872 (named)
      Status: "running"
        Tasks: 6 (limit: 2252)
      Memory: 46.7M
         CPU: 79ms
    CGroup: /system.slice/named.service
            └─3872 /usr/sbin/named -f -4 -u bind

Mar 02 23:53:21 vrayoga named[3872]: zone 220.168.192.in-addr.arpa/IN: loaded serial 1
Mar 02 23:53:21 vrayoga named[3872]: all zones loaded
Mar 02 23:53:21 vrayoga named[3872]: running
Mar 02 23:53:21 vrayoga systemd[1]: Started named.service - BIND Domain Name Server.
Mar 02 23:53:21 vrayoga named[3872]: managed-keys-zone: Key 20326 for zone . is now tru>
Mar 02 23:53:21 vrayoga named[3872]: resolver priming query complete: success
Mar 02 23:53:21 vrayoga named[3872]: checkhints: b.root-servers.net/A (170.247.170.2) m>
Mar 02 23:53:21 vrayoga named[3872]: checkhints: b.root-servers.net/A (199.9.14.201) ex>
Mar 02 23:53:21 vrayoga named[3872]: checkhints: b.root-servers.net/AAAA (2801:1b8:10:>
Mar 02 23:53:21 vrayoga named[3872]: checkhints: b.root-servers.net/AAAA (2001:500:200:>
lines 1-22/22 (END)
```

21. Lalu kita cek nslookup kita hasilnya seperti berikut

```
vrayoga@vrayoga: ~  
^C  
root@vrayoga:/etc/bind# nslookup ns1.yoga.edu  
Server:          192.168.209.130  
Address:         192.168.209.130#53  
  
Name:   ns1.yoga.edu  
Address: 192.168.209.130  
  
root@vrayoga:/etc/bind# nslookup ftp.yoga.edu  
Server:          192.168.209.130  
Address:         192.168.209.130#53  
  
Name:   ftp.yoga.edu  
Address: 192.168.209.131  
  
root@vrayoga:/etc/bind# nslookup blog.yoga.edu  
Server:          192.168.209.130  
Address:         192.168.209.130#53  
  
blog.yoga.edu canonical name = www.yoga.edu.  
Name:   www.yoga.edu  
Address: 192.168.209.130  
  
root@vrayoga:/etc/bind# dig www.yoga.edu  
  
; <<>> DiG 9.18.24-1-Debian <<>> www.yoga.edu  
;; global options: +cmd  
;; Got answer:  
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 54526  
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1  
  
;; OPT PSEUDOSECTION:  
; EDNS: version: 0, flags:; udp: 1232  
; COOKIE: f2552fe5f4a9a0ff0100000065e5ab00cf9dcb7d38ec8441 (good)  
;; QUESTION SECTION:  
;www.yoga.edu.                IN      A  
  
;; ANSWER SECTION:  
www.yoga.edu.                 604800 IN      A      192.168.209.130  
  
;; Query time: 0 msec  
;; SERVER: 192.168.209.130#53(192.168.209.130) (UDP)  
;; WHEN: Mon Mar 04 18:05:36 WIB 2024  
;; MSG SIZE rcvd: 85
```



```

root@vrayoga:/etc/bind# ss -nlptu | grep 53
udp    UNCONN 0      0      192.168.209.130:53      0.0.0.0:*    users: (("named",pid=3
872,fd=32))
udp    UNCONN 0      0      192.168.209.130:53      0.0.0.0:*    users: (("named",pid=3
872,fd=31))
udp    UNCONN 0      0      127.0.0.1:53            0.0.0.0:*    users: (("named",pid=3
872,fd=26))
udp    UNCONN 0      0      127.0.0.1:53            0.0.0.0:*    users: (("named",pid=3
872,fd=25))
udp    UNCONN 0      0      0.0.0.0:5353            0.0.0.0:*    users: (("avahi-daemon
",pid=519,fd=12))
udp    UNCONN 0      0      [::]:5353               [::]:*       users: (("avahi-daemon
",pid=519,fd=13))
tcp    LISTEN 0      5      127.0.0.1:953           0.0.0.0:*    users: (("named",pid=3
872,fd=35))
tcp    LISTEN 0      5      127.0.0.1:953           0.0.0.0:*    users: (("named",pid=3
872,fd=24))
tcp    LISTEN 0      10     192.168.209.130:53      0.0.0.0:*    users: (("named",pid=3
872,fd=34))
tcp    LISTEN 0      10     192.168.209.130:53      0.0.0.0:*    users: (("named",pid=3
872,fd=33))
tcp    LISTEN 0      10     127.0.0.1:53            0.0.0.0:*    users: (("named",pid=3
872,fd=29))

```

DNSMASQ

1. Pertama kita stop terlebih dahulu bind9 jika kalian tidak keluar dari terminal
root@vrayoga:/etc/bind# systemctl stop bind9
2. Pertama masuk nano /etc/resolv.conf lalu ubah domain seperti semula agar bisa terkoneksi ke dalam internet

```
GNU nano 7.2 /etc/resolv.conf *
# Generated by NetworkManager
search localdomain
#search yoga.edu
nameserver 192.168.209.2
#nameserver 192.168.209.130
```

3. Setelah itu kita keluar dari etc lalu kita melakukan instalasi dnsmasq

```
valid_etc forever prechecked_etc forever
root@vrayoga:/etc# cd
root@vrayoga:~# apt update
Hit:1 http://deb.debian.org/debian bookworm InRelease
Hit:2 http://security.debian.org/debian-security bookworm-security InRelease
Hit:3 http://deb.debian.org/debian bookworm-updates InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
root@vrayoga:~# apt install dnsmasq
```

Untuk instalasi dnsmasq typo ini yang benar

```
valid_etc forever prechecked_etc forever
root@vrayoga:~# apt install dnsmasq
Reading package lists... Done
Building dependency tree... Done
```

4. Jika tampilan seperti ini tampilan dnsmasq, maka dns tersebut berhasil hidup

```
root@vrayoga:~# systemctl status dnsmasq
● dnsmasq.service - dnsmasq - A lightweight DHCP and caching DNS server
   Loaded: loaded (/lib/systemd/system/dnsmasq.service; enabled; preset: enabled)
   Active: active (running) since Sun 2024-03-03 00:14:52 WIB; 9s ago
     Process: 4579 ExecStartPre=/etc/init.d/dnsmasq checkconfig (code=exited, status=0/SUCCESS)
     Process: 4587 ExecStart=/etc/init.d/dnsmasq systemd-exec (code=exited, status=0/SUCCESS)
     Process: 4598 ExecStartPost=/etc/init.d/dnsmasq systemd-start-resolvconf (code=exited, sta>
   Main PID: 4597 (dnsmasq)
      Tasks: 1 (limit: 2252)
     Memory: 2.4M
        CPU: 60ms
    CGroup: /system.slice/dnsmasq.service
           └─4597 /usr/sbin/dnsmasq -x /run/dnsmasq/dnsmasq.pid -u dnsmasq -7 /etc/dnsmasq.d>

Mar 03 00:14:52 vrayoga systemd[1]: Starting dnsmasq.service - dnsmasq - A lightweight DHCP an>
Mar 03 00:14:52 vrayoga dnsmasq[4597]: started, version 2.89 cachesize 150
Mar 03 00:14:52 vrayoga dnsmasq[4597]: DNS service limited to local subnets
Mar 03 00:14:52 vrayoga dnsmasq[4597]: compile time options: IPv6 GNU-getopt DBus no-UBus i18n>
Mar 03 00:14:52 vrayoga dnsmasq[4597]: reading /etc/resolv.conf
Mar 03 00:14:52 vrayoga dnsmasq[4597]: using nameserver 192.168.209.2#53
Mar 03 00:14:52 vrayoga dnsmasq[4597]: read /etc/hosts - 8 names
Mar 03 00:14:52 vrayoga systemd[1]: Started dnsmasq.service - dnsmasq - A lightweight DHCP and>
lines 1-21/21 (END)
```

5. Setelah berhasil copy agar ada backupn bila terjadi error. lalu hasilnya seperti ini jika berhasil

```
root@vrayoga:~# cp /etc/dnsmasq.conf /etc/dnsmasq.conf.orig
```

6. Lanjut kita edit dnsmasq nya, dengan masuk menggunakan nano /etc/dnsmasq.conf. lalu untuk mencari agar kalian tidak report report scroll pencet ctrl+ w, fungsinya mempercepat pencarian

```
GNU nano 7.2 /etc/dnsmasq.conf
# Listen on this specific port instead of the standard DNS port
# (53). Setting this to zero completely disables DNS function,
# leaving only DHCP and/or TFTP.
#port=5353
port=53

# The following two options make you a better netizen, since they
# tell dnsmasq to filter out queries which the public DNS cannot
# answer, and which load the servers (especially the root servers)
# unnecessarily. If you have a dial-on-demand link they also stop
# these requests from bringing up the link unnecessarily.

# Never forward plain names (without a dot or domain part)
domain-needed
# Never forward addresses in the non-routed address spaces.
bogus-priv

# Uncomment these to enable DNSSEC validation and caching:
# (Requires dnsmasq to be built with DNSSEC option.)
```

```
# then the MAC address, the IP address and finally the hostname
# if there is one.
#dhcp-script=/bin/echo

# Set the cachesize here.
#cache-size=150
cache-size=1000

# If you want to disable negative caching, uncomment this.
#no-negcache
```

```
GNU nano 7.2 /etc/dnsmasq.conf
# and this sets the source (ie local) address used to talk to
# 10.1.2.3 to 192.168.1.1 port 55 (there must be an interface with that
# IP on the machine, obviously).
# server=10.1.2.3@192.168.1.1#55

# If you want dnsmasq to change uid and gid to something other
# than the default, edit the following lines.
#user=
#group=

# If you want dnsmasq to listen for DHCP and DNS requests only on
# specified interfaces (and the loopback) give the name of the
# interface (eg eth0) here.
# Repeat the line for more than one interface.
#interface=
# Or you can specify which interface _not_ to listen on
#except-interface=
# Or which to listen on by address (remember to include 127.0.0.1 if
# you use this.)
listen-address=127.0.0.1,192.168.209.130
```

7. Lalu kita setting host server

```
root@vrayoga: ~# nano /etc/dnsmasq.conf
root@vrayoga: ~# nano /etc/hosts
```

```
vrayoga@vrayoga: ~
GNU nano 7.2 /etc/hosts *
127.0.0.1 localhost
127.0.1.1 vrayoga.vrayoga.net vrayoga

192.168.209.130 yoga.edu
192.168.209.130 www.yoga.edu
192.168.209.130 ns1.yoga.edu
192.168.209.130 blog.yoga.edu
192.168.209.131 ftp.yoga.edu

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

8. Lalu kita masuk lagi kedalam resolv.conf,lalu ubah

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

```

+
vrayoga@vrayoga: ~
GNU nano 7.2 /etc/resolv.conf *
# Generated by NetworkManager
#search localdomain
search yoga.edu
nameserver 192.168.209.2
nameserver 192.168.209.130

```

9. Setelah itu kita restart dnsmasq nya,lalu kita testing dnsmasq nya

```
root@vrayoga:~# nano /etc/resolv.conf
root@vrayoga:~# systemctl restart dnsmasq
root@vrayoga:~# dnsmasq --test
dnsmasq: syntax check OK.
root@vrayoga:~#
```

10. Setelah itu kita jalankan dengan ketik seperti dibawah

```

dnsmasq: syntax check OK.
root@vrayoga:~# systemctl restart dnsmasq
root@vrayoga:~# systemctl status dnsmasq
• dnsmasq.service - dnsmasq - A lightweight DHCP and caching DNS server
  Loaded: loaded (/lib/systemd/system/dnsmasq.service; enabled; preset: enabled)
  Active: active (running) since Sun 2024-03-03 00:41:33 WIB; 10s ago
  Process: 4700 ExecStartPre=/etc/init.d/dnsmasq checkconfig (code=exited, status=0/SUCCESS)
  Process: 4708 ExecStart=/etc/init.d/dnsmasq systemd-exec (code=exited, status=0/SUCCESS)
  Process: 4717 ExecStartPost=/etc/init.d/dnsmasq systemd-start-resolvconf (code=exited, sta>
  Main PID: 4716 (dnsmasq)
  Tasks: 1 (limit: 2252)
  Memory: 812.0K
  CPU: 54ms
  CGroup: /system.slice/dnsmasq.service
          └─4716 /usr/sbin/dnsmasq -x /run/dnsmasq/dnsmasq.pid -u dnsmasq -7 /etc/dnsmasq.d>

Mar 03 00:41:33 vrayoga systemd[1]: Starting dnsmasq.service - dnsmasq - A lightweight DHCP an>
Mar 03 00:41:33 vrayoga dnsmasq[4716]: started, version 2.89 cachesize 1000
Mar 03 00:41:33 vrayoga dnsmasq[4716]: compile time options: IPv6 GNU-getopt DBus no-UBus i18n>
Mar 03 00:41:33 vrayoga dnsmasq[4716]: reading /etc/resolv.conf
Mar 03 00:41:33 vrayoga dnsmasq[4716]: ignoring nameserver 192.168.209.130 - local interface
Mar 03 00:41:33 vrayoga dnsmasq[4716]: read /etc/hosts - 13 names
Mar 03 00:41:33 vrayoga systemd[1]: Started dnsmasq.service - dnsmasq - A lightweight DHCP and>
lines 1-20/20 (END)

```

11. Cek port dns 53

```
root@vrayoga:~# ss -an | grep LISTEN
```

```
.0:*
tcp  LISTEN 0      32          0.0.0.0:53          0.0.0
.0:*
tcp  LISTEN 0      32          [::]:53            [::
:]:*
tcp  LISTEN 0     128        [::]:631           [::
:]:*
root@vrayoga:~#
```

12. Tes nslookup

```
root@vrayoga:/etc/bind# nslookup ns1.yoga.edu
Server:      192.168.209.130
Address:     192.168.209.130#53

Name:   ns1.yoga.edu
Address: 192.168.209.130

root@vrayoga:/etc/bind# nslookup www.yoga.edu
Server:      192.168.209.130
Address:     192.168.209.130#53

Name:   www.yoga.edu
Address: 192.168.209.130

root@vrayoga:/etc/bind# nslookup ftp.yoga.edu
Server:      192.168.209.130
Address:     192.168.209.130#53

Name:   ftp.yoga.edu
Address: 192.168.209.131
```

Tes dig

```
root@vrayoga:/etc/bind# dig ns1.yoga.edu

; <<>> DiG 9.18.24-1-Debian <<>> ns1.yoga.edu
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 49423
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;ns1.yoga.edu.                IN      A

;; ANSWER SECTION:
ns1.yoga.edu.                 0       IN      A      192.168.209.130

;; Query time: 0 msec
;; SERVER: 192.168.209.130#53(192.168.209.130) (UDP)
;; WHEN: Mon Mar 04 18:19:30 WIB 2024
;; MSG SIZE rcvd: 57

root@vrayoga:/etc/bind#
```

