

DOKUMENTASI LINUX UBUNTU 24.04 LTS



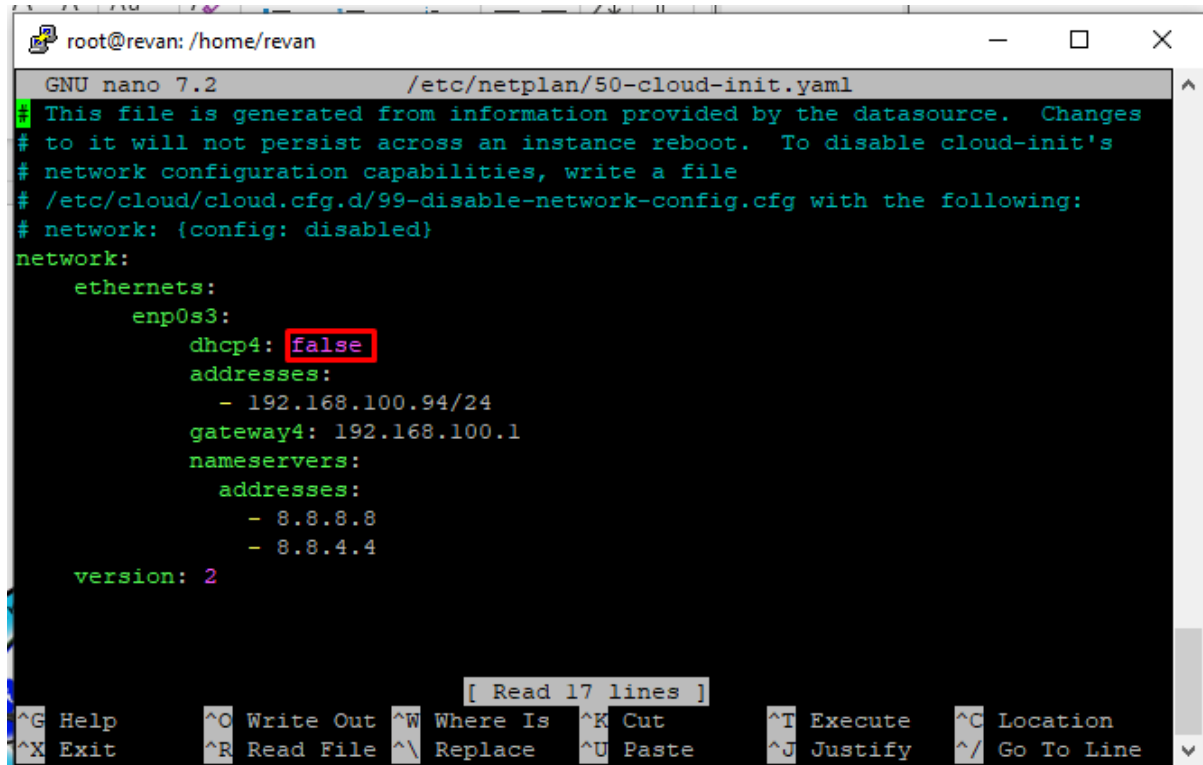
Disusun oleh:
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LULUSAN SMK NEGERI MANDIRI 36 JAKARTA
JURUSAN TEKNIK KOMPUTER JARINGAN
TAHUN 2024/2025

BAB PEMBAHASAN

1 Setup IP Addressing

Karena alamat *ip server* sebelumnya ini menggunakan *ip dhcp* maka disini akan diubah menjadi static ip, di *ubuntu* versi 24.04 ini kita masuk kedalam menu */etc/netplan/50-cloud-init.yaml*, di menu inilah kita dapat mengatur *ip static*, *dns*, *gateway* yang disesuaikan dengan *network ip* yang tersedia.



```
root@revan: /home/revan
GNU nano 7.2 /etc/netplan/50-cloud-init.yaml
# This file is generated from information provided by the datasource.  Changes
# to it will not persist across an instance reboot.  To disable cloud-init's
# network configuration capabilities, write a file
# /etc/cloud/cloud.cfg.d/99-disable-network-config.cfg with the following:
# network: {config: disabled}
network:
  ethernets:
    enp0s3:
      dhcp4: false
      addresses:
        - 192.168.100.94/24
      gateway4: 192.168.100.1
      nameservers:
        addresses:
          - 8.8.8.8
          - 8.8.4.4
  version: 2

[ Read 17 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 Web-server (apache2)

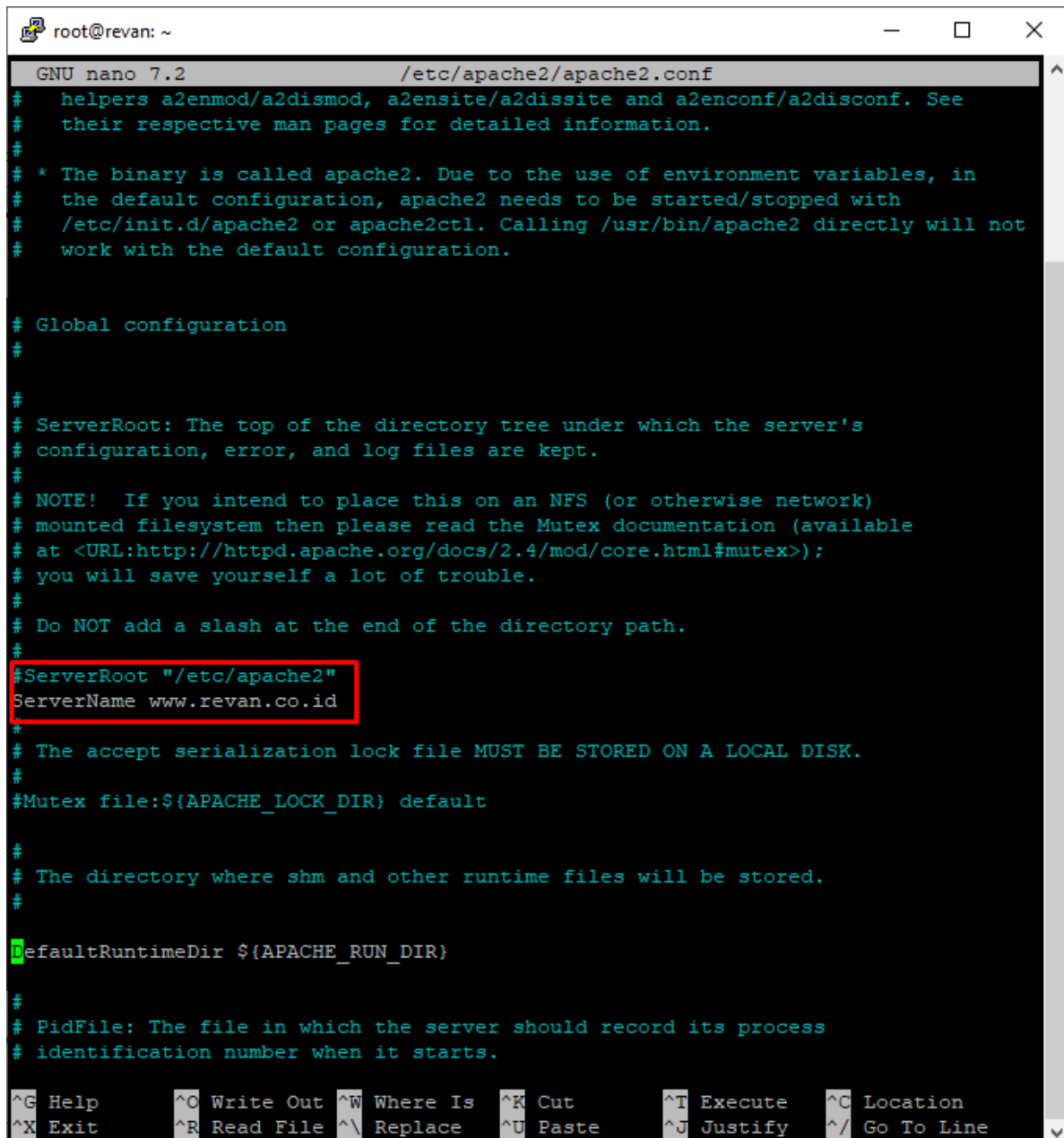
Install Service of apache2

```
root@revan: ~  
root@revan:/var/www/revan.co.id# cd  
root@revan:~# apt -y install apache2  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
apache2 is already the newest version (2.4.58-lubuntu8.6).  
0 upgraded, 0 newly installed, 0 to remove and 163 not upgraded.  
root@revan:~#
```

Masuk ke dalam menu dengan perintah `nano /etc/apache2/conf-enabled/security.conf`

```
GNU nano 7.2 /etc/apache2/conf-enabled/security.conf  
# Changing the following options will not really affect the security of the  
# server, but might make attacks slightly more difficult in some cases.  
#  
# ServerTokens  
# This directive configures what you return as the Server HTTP response  
# Header. The default is 'Full' which sends information about the OS-Type  
# and compiled in modules.  
# Set to one of: Full | OS | Minimal | Minor | Major | Prod  
# where Full conveys the most information, and Prod the least.  
#ServerTokens Minimal  
ServerTokens Prod  
#ServerTokens Full  
#  
# Optionally add a line containing the server version and virtual host  
# name to server-generated pages (internal error documents, FTP directory  
# listings, mod_status and mod_info output etc., but not CGI generated  
# documents or Custom error documents).  
# Set to "EMail" to also include a mailto: link to the ServerAdmin.  
# Set to one of: On | Off | EMail  
#ServerSignature Off  
ServerSignature On  
#  
# Allow TRACE method  
#  
# Set to "extended" to also reflect the request body (only for testing and  
# diagnostic purposes).  
#  
# Set to one of: On | Off | extended  
TraceEnable Off  
#TraceEnable On  
#  
# Forbid access to version control directories  
#  
# If you use version control systems in your document root, you should  
# probably deny access to their directories.  
[ Read 58 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
```

Masukkan perintah `nano /etc/apache2/apache2.conf` untuk mengubah nama server yang kita inginkan `www.revan.co.id`



```
GNU nano 7.2 /etc/apache2/apache2.conf
# helpers a2enmod/a2dismod, a2ensite/a2dissite and a2enconf/a2disconf. See
# their respective man pages for detailed information.
#
# * The binary is called apache2. Due to the use of environment variables, in
# the default configuration, apache2 needs to be started/stopped with
# /etc/init.d/apache2 or apache2ctl. Calling /usr/bin/apache2 directly will not
# work with the default configuration.

# Global configuration
#
#
# ServerRoot: The top of the directory tree under which the server's
# configuration, error, and log files are kept.
#
# NOTE! If you intend to place this on an NFS (or otherwise network)
# mounted filesystem then please read the Mutex documentation (available
# at <URL:http://httpd.apache.org/docs/2.4/mod/core.html#mutex>);
# you will save yourself a lot of trouble.
#
# Do NOT add a slash at the end of the directory path.
#
#ServerRoot "/etc/apache2"
ServerName www.revan.co.id
#
# The accept serialization lock file MUST BE STORED ON A LOCAL DISK.
#
#Mutex file:${APACHE_LOCK_DIR} default
#
# The directory where shm and other runtime files will be stored.
#

DefaultRuntimeDir ${APACHE_RUN_DIR}

#
# PidFile: The file in which the server should record its process
# identification number when it starts.
```

Lalu masuk kedalam menu tersebut dan buatlah sesuai gambar



```
GNU nano 7.2 /etc/apache2/sites-enabled/revan.co.id.conf
<VirtualHost *:80>
    DocumentRoot /var/www/revan.co.id
    ServerName www.revan.co.id
    ServerAdmin webmaster@revan.co.id
    ErrorLog /var/log/apache2/revan.co.id.error.log
    CustomLog /var/log/apache2/revan.co.id.access.log combined
</VirtualHost>
```

Permission /sites-available/revan.co.id agar terbaca oleh systemctl apache2, dan permission file index.html

```
root@revan: /var/www/revan.co.id
html revan.co.id
root@revan:/var/www# cd html/
root@revan:/var/www/html# ls -la
total 20
drwxr-xr-x 2 root root 4096 Jun  4 09:47 .
drwxr-xr-x 4 root root 4096 Jun  4 13:56 ..
-rw-r--r-- 1 root root 10671 Jun  4 09:47 index.html
root@revan:/var/www/html# cd ..
root@revan:/var/www# ls
html revan.co.id
root@revan:/var/www# cd revan.co.id/
root@revan:/var/www/revan.co.id# ls
index.html
root@revan:/var/www/revan.co.id# chown -R apache:apache /var/www/revan.co.id/
chown: invalid user: 'apache:apache'
root@revan:/var/www/revan.co.id# chown -R www-data:www-data /var/www/revan.co.id/
root@revan:/var/www/revan.co.id# ls -la
total 12
drwxr-xr-x 2 www-data www-data 4096 Jun  4 13:59 .
drwxr-xr-x 4 root      root      4096 Jun  4 13:56 ..
-rw-r--r-- 1 www-data www-data 142 Jun  4 13:59 index.html
root@revan:/var/www/revan.co.id# chmod 600 index.html
root@revan:/var/www/revan.co.id#
```

Lalu restart service apache2

```
root@revan: ~
root@revan:/var/www/revan.co.id# cd
root@revan:~# apt -y install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.58-1ubuntu8.6).
0 upgraded, 0 newly installed, 0 to remove and 163 not upgraded.
root@revan:~# nano /etc/apache2/conf-enabled/security.conf
root@revan:~# nano /etc/apache2/apache2.conf
root@revan:~# cd /var/www/revan.co.id/
root@revan:/var/www/revan.co.id# ls
index.html
root@revan:/var/www/revan.co.id# nano index.html
root@revan:/var/www/revan.co.id# cd
root@revan:~# nano /etc/apache2/sites-enabled/revan.co.id.conf
root@revan:~# systemctl restart apache2
root@revan:~#
```

3 DNS Service

Install service yang akan kita butuhkan di ubuntu ini yakni *bind9*

```
root@revan: /home/revan
just raised the bar for easy, resilient and secure K8s cluster deployment.

https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

168 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Wed Jun  4 11:46:14 2025 from 192.168.100.179
revan@revan:~$ sudo su
[sudo] password for revan:
root@revan:/home/revan#
root@revan:/home/revan# apt -y install bind9
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
bind9 is already the newest version (1:9.18.30-0ubuntu0.24.04.2).
0 upgraded, 0 newly installed, 0 to remove and 163 not upgraded.
root@revan:/home/revan#
```

Atur dan buat *zone internal network* sesuaikan dengan nama *domain* yang kita tentukan dan *ip server* itu sendiri, dengan masuk ke menu */etc/bind/named.conf.local*

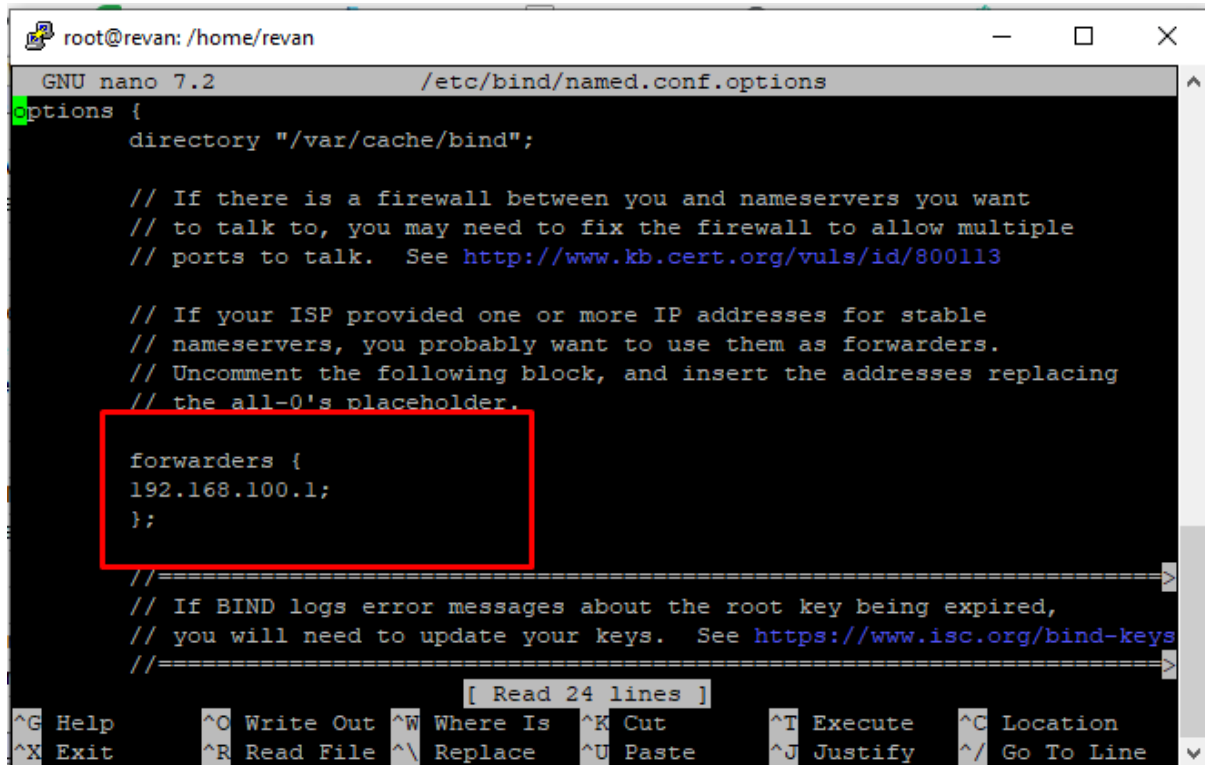
```
GNU nano 7.2 /etc/bind/named.conf.local
//
// Do any local configuration here
//
// Consider adding the 1918 zones here, if they are not used in your
// organization
//include "/etc/bind/zones.rfc1918";

zone "revan.co.id" {
    type master;
    file "/etc/bind/db.revan";
};

zone "94.100.168.192" {
    type master;
    file "/etc/bind/db.10";
};

[ Read 17 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
```

Pada bagian *zone external network* masuk ke menu */etc/bind/named.conf.options* untuk mengubah *ip* yang semulanya 0.0.0.0 menjadi Alamat *dns server network*



```
root@revan: /home/revan
GNU nano 7.2 /etc/bind/named.conf.options
options {
    directory "/var/cache/bind";

    // If there is a firewall between you and nameservers you want
    // to talk to, you may need to fix the firewall to allow multiple
    // ports to talk.  See http://www.kb.cert.org/vuls/id/800113

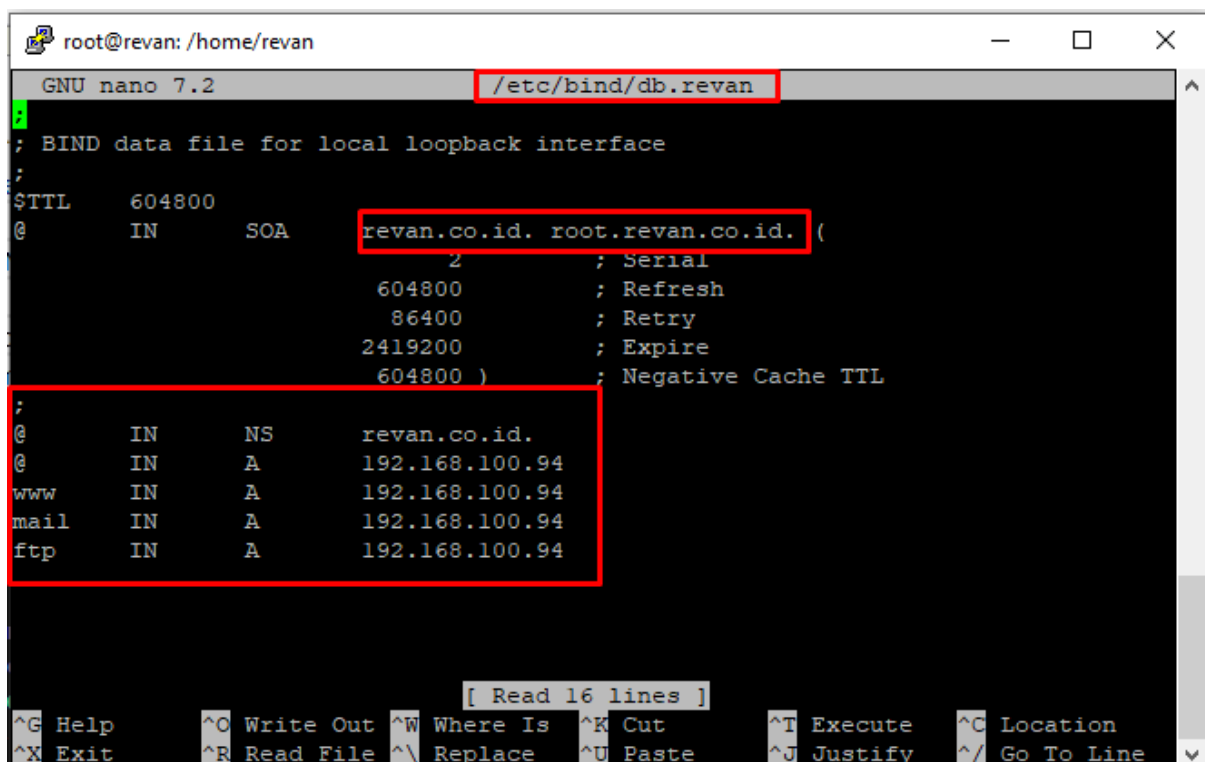
    // If your ISP provided one or more IP addresses for stable
    // nameservers, you probably want to use them as forwarders.
    // Uncomment the following block, and insert the addresses replacing
    // the all-0's placeholder.

    forwarders {
        192.168.100.1;
    };

    //=====
    // If BIND logs error messages about the root key being expired,
    // you will need to update your keys.  See https://www.isc.org/bind-keys
    //=====

[ Read 24 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
```

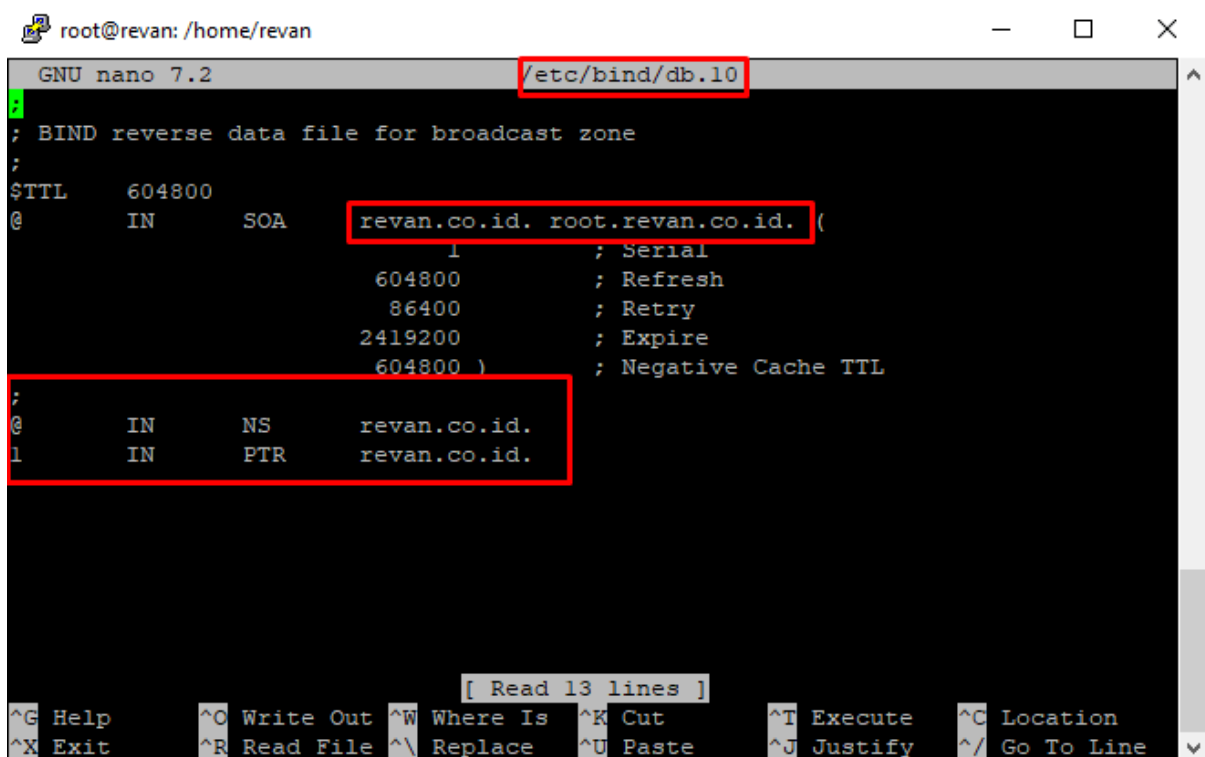
Masuk pada bagian *zone files*, masuk pada menu */etc/bind/* kemudian *copy file* yang tadinya *db.255* ubah ke nama baru *db.revan* , kemudian ubah yang terdapat *local.host*. ubah menjadi nama domain yang kita tentukan misal *revan.co.id*. Kemudian tambahkan *ip* yang akan kita gunakan pada *dns service* ini kemudian tambahkan sejumlah *service dns record*.



```
root@revan: /home/revan
GNU nano 7.2 /etc/bind/db.revan
; BIND data file for local loopback interface
;
$TTL      604800
@         IN      SOA      revan.co.id. root.revan.co.id. (
                                2      ; Serial
                                604800  ; Refresh
                                86400   ; Retry
                                2419200 ; Expire
                                604800 ) ; Negative Cache TTL
;
@         IN      NS       revan.co.id.
@         IN      A        192.168.100.94
www       IN      A        192.168.100.94
mail      IN      A        192.168.100.94
ftp       IN      A        192.168.100.94

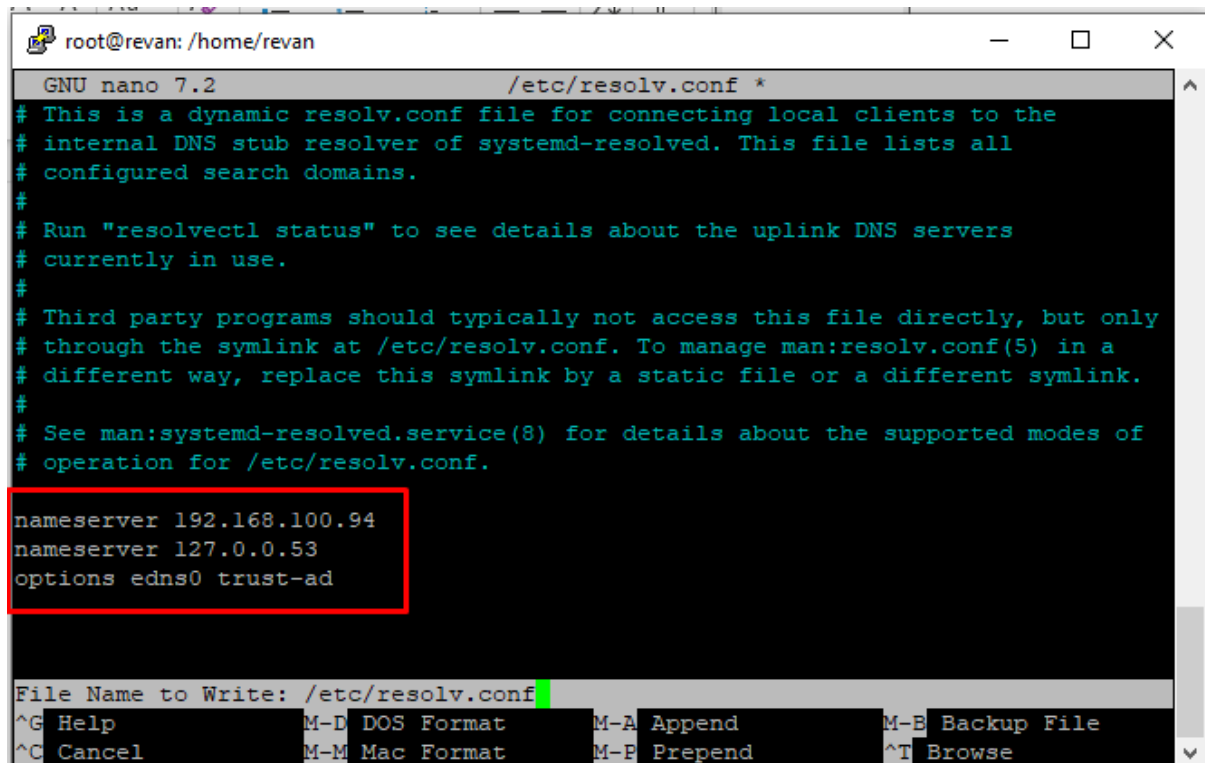
[ Read 16 lines ]
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location
^X Exit      ^R Read File ^\ Replace   ^U Paste     ^J Justify   ^_ Go To Line
```

Masih pada bagian *zone files* kita copy file **db.255** menjadi **db.10** inilah yang akan kita gunakan dalam *dns service* ini, masuk ke menu **/etc/bind/db.10** kemudian ubah yang terdapat **local.host** menjadi nama *domain* yang akan kita gunakan.



```
GNU nano 7.2 /etc/bind/db.10
;
; BIND reverse data file for broadcast zone
;
$TTL      604800
@         IN      SOA      revan.co.id. root.revan.co.id. (
                                1          ; Serial
                                604800     ; Refresh
                                86400      ; Retry
                                2419200    ; Expire
                                604800 )   ; Negative Cache TTL
;
@         IN      NS       revan.co.id.
1         IN      PTR      revan.co.id.
```

Lalu pada menu **/etc/resolv.conf** tambahkan *ip server* .



```
GNU nano 7.2 /etc/resolv.conf *
# 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 should typically 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 192.168.100.94
nameserver 127.0.0.53
options edns0 trust-ad
```


Lalu *restart service dns* dengan perintah *systemctl restart bind9*

```
root@revan: /home/revan
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NXDOMAIN, id: 28333
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;revan.co.id.                IN      A

;; Query time: 98 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Thu Jun 05 09:24:47 UTC 2025
;; MSG SIZE rcvd: 40

root@revan:/home/revan# nano /etc/resolv.conf
root@revan:/home/revan# systemctl restart bind9
root@revan:/home/revan# dig revan.co.id

; <<>> DiG 9.18.30-0ubuntu0.24.04.2-Ubuntu <<>> revan.co.id
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 63916
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1
```

Lalu ujicoba tes nama *domain* yang telah dibuat dengan perintah *dig "namadomain"*, jika tampil jawaban dengan nama *domain* dan Alamat *ip* yang dibuat tadi maka *dns service* yang kita jalankan sudah berhasil.

```
root@revan: /home/revan
root@revan:/home/revan# systemctl restart bind9
root@revan:/home/revan# dig revan.co.id

; <<>> DiG 9.18.30-0ubuntu0.24.04.2-Ubuntu <<>> revan.co.id
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 63916
;; flags: qr aa rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
; COOKIE: d532529f8cb04b400100000068416292866ae5e7148a4564 (good)
;; QUESTION SECTION:
;revan.co.id.                IN      A

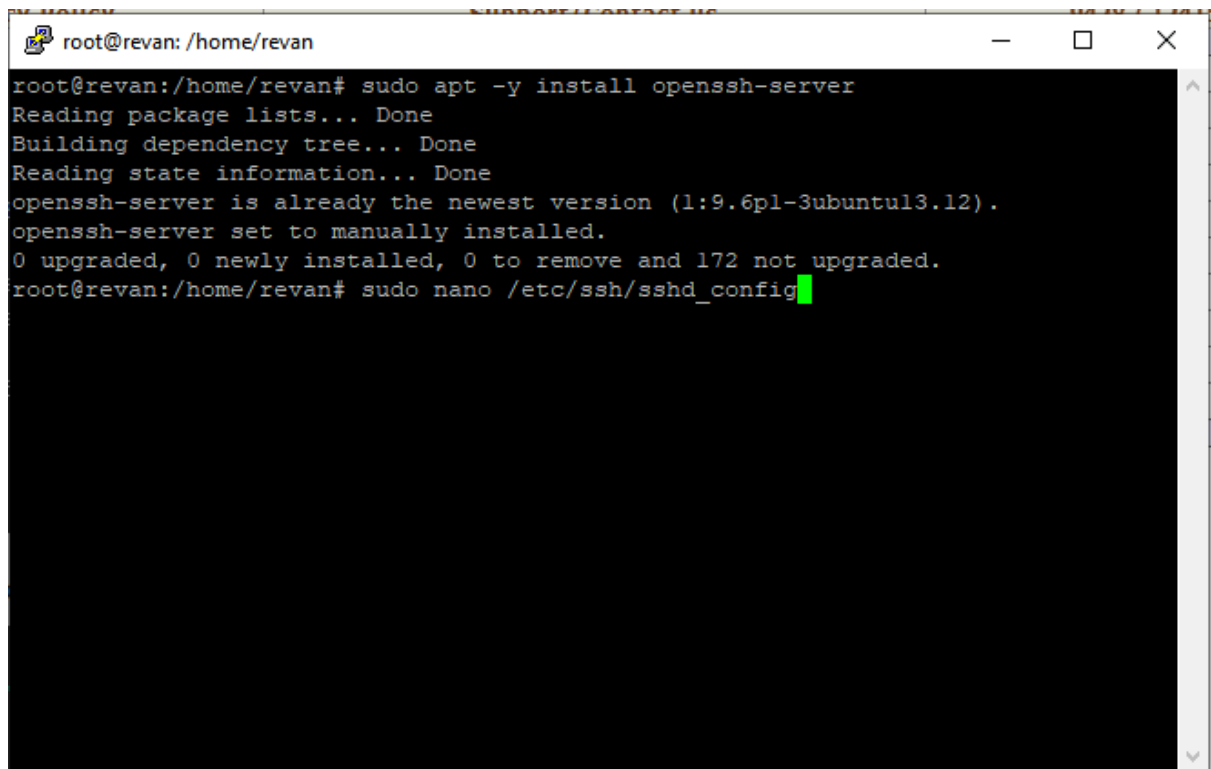
;; ANSWER SECTION:
revan.co.id.                 604800  IN      A      192.168.100.94

;; Query time: 1 msec
;; SERVER: 192.168.100.94#53(192.168.100.94) (UDP)
;; WHEN: Thu Jun 05 09:25:38 UTC 2025
;; MSG SIZE rcvd: 84

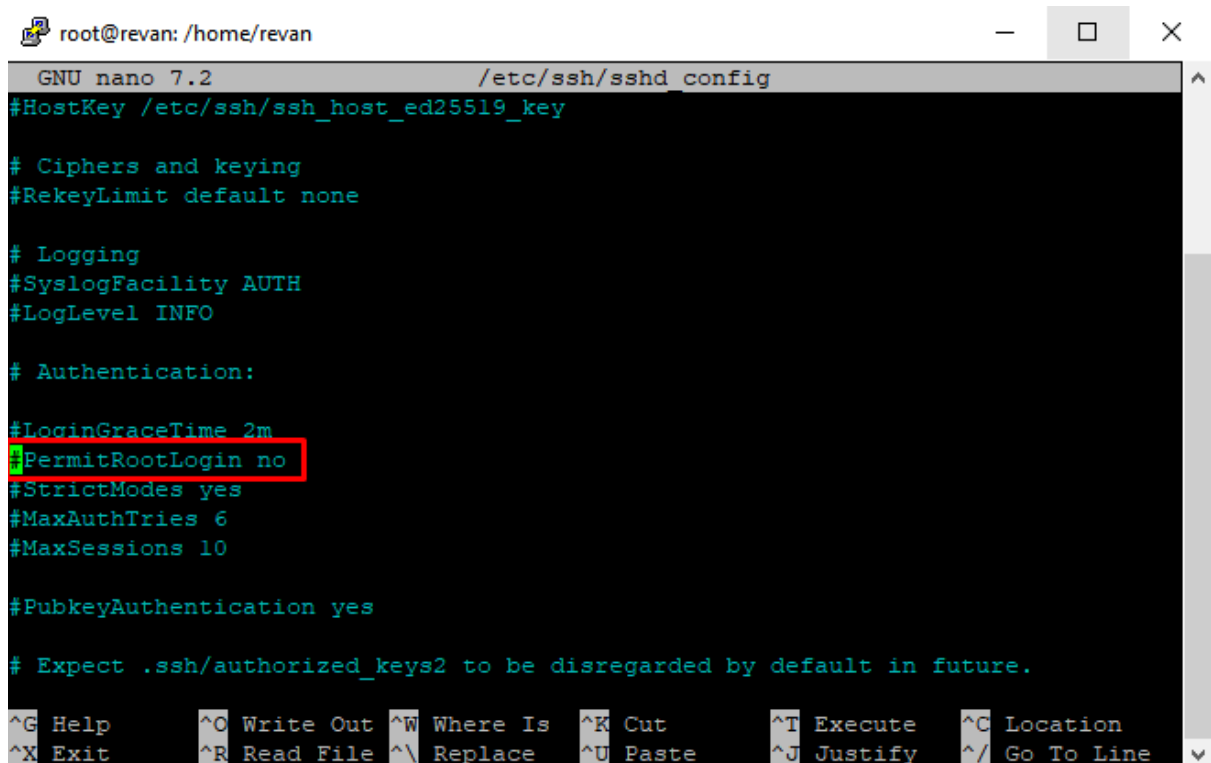
root@revan:/home/revan#
```

4 SSH Server

Pada bagian ini kita akan menginstall *service ssh* yang tujuannya agar bisa *remote server* yang dibuat dari jarak jauh dengan menggunakan Alamat *IP Server* melalui protocol *ssh* dengan cara masukan *command apt -y install open-sshserver* , kemudian masuk ke menu *nano /etc/ssh/sshd_config*, lalu ubah pada line yang bertuliskan *permitrootlogin* tambahkan *no*.



```
root@revan: /home/revan
root@revan:/home/revan# sudo apt -y install openssh-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:9.6p1-3ubuntu13.12).
openssh-server set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 172 not upgraded.
root@revan:/home/revan# sudo nano /etc/ssh/sshd_config
```



```
GNU nano 7.2 /etc/ssh/sshd_config
#HostKey /etc/ssh/ssh_host_ed25519_key

# Ciphers and keying
#RekeyLimit default none

# Logging
#SyslogFacility AUTH
#LogLevel INFO

# Authentication:

#LoginGraceTime 2m
#PermitRootLogin no
#StrictModes yes
#MaxAuthTries 6
#MaxSessions 10

#PubkeyAuthentication yes

# Expect .ssh/authorized_keys2 to be disregarded by default in future.

^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
```