

Install and Configure DNS server (Recursive Resolver)

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Requirements

1. Internet Connection(LAN)
2. Root User
3. IP address of Linux (192.168.1.14)
4. Bind Software

Steps for Installation

1. Install the bind software by writing this command

```
root@server:~  
[root@server ~]# dnf -y install bind  
Updating Subscription Management repositories.  
Unable to read consumer identity  
  
This system is not registered with an entitlement server. You can use "rhc" or "  
subscription-manager" to register.  
  
CentOS Stream 9 - BaseOS          1.6 kB/s | 5.1 kB      00:03  
CentOS Stream 9 - BaseOS          1.4 MB/s | 8.3 MB      00:05  
CentOS Stream 9 - AppStream       4.6 kB/s | 5.2 kB      00:01  
CentOS Stream 9 - AppStream       1.4 MB/s | 21 MB       00:14  
CentOS Stream 9 - Extras packages 6.4 kB/s | 8.2 kB      00:01  
Dependencies resolved.  
=====
```

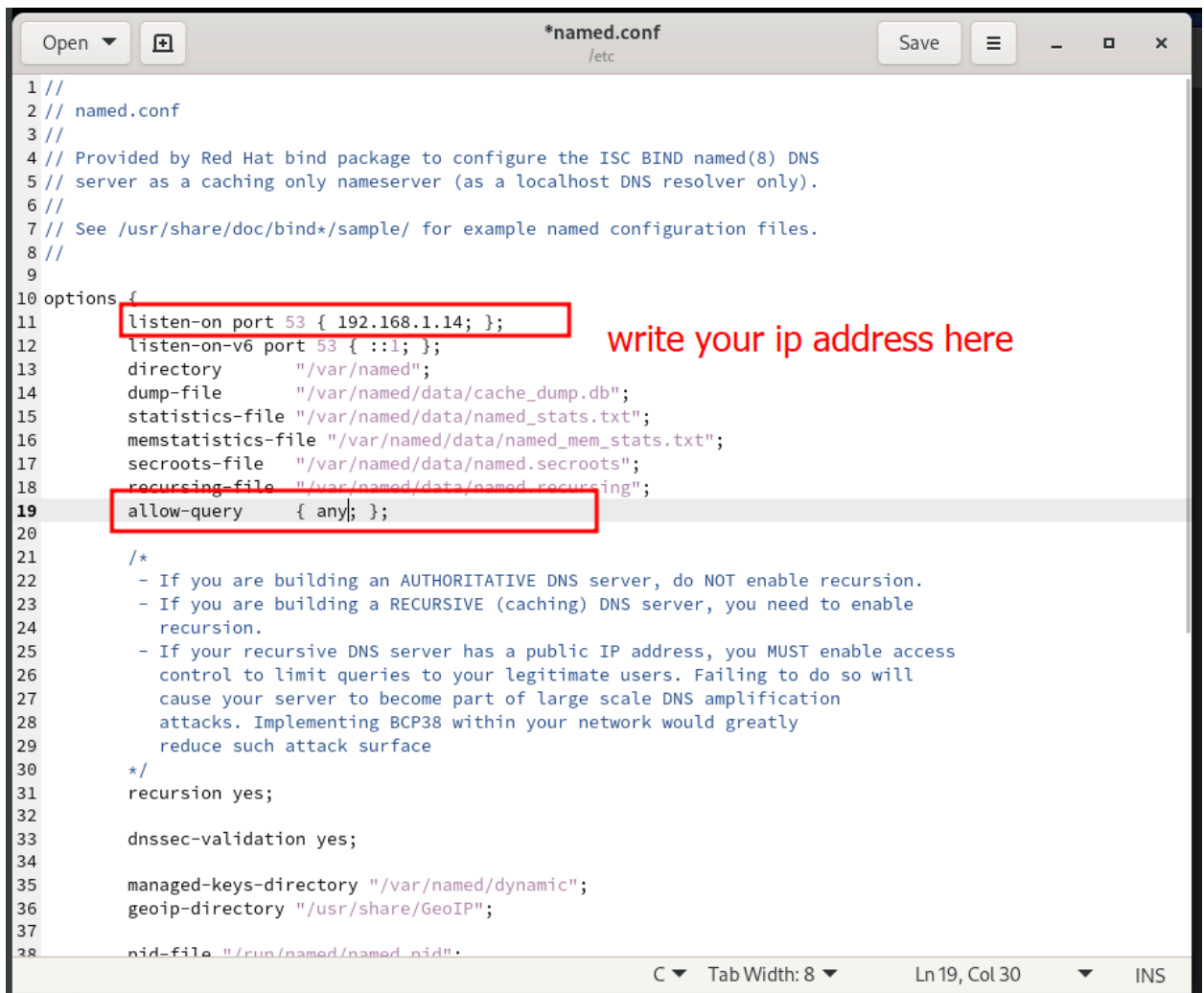
Package	Arch	Version	Repository	Size
Installing:				
bind	x86_64	32:9.16.23-24.el9	appstream	505 k
Installing dependencies:				
bind-dnssec-doc	noarch	32:9.16.23-24.el9	appstream	46 k
python3-bind	noarch	32:9.16.23-24.el9	appstream	68 k
python3-ply	noarch	3.11-14.el9	baseos	106 k
Installing weak dependencies:				
bind-dnssec-utils	x86_64	32:9.16.23-24.el9	appstream	118 k

2. Configure Bind as recursive resolve

After writing this command save the file

```
root@server: /etc/named
[root@server named]# gedit /etc/named.conf
```

Edit this in your gedit and save



```
*named.conf
/etc

1 //
2 // named.conf
3 //
4 // Provided by Red Hat bind package to configure the ISC BIND named(8) DNS
5 // server as a caching only nameserver (as a localhost DNS resolver only).
6 //
7 // See /usr/share/doc/bind*/sample/ for example named configuration files.
8 //
9
10 options {
11     listen-on port 53 { 192.168.1.14; };
12     listen-on-v6 port 53 { ::1; };
13     directory "/var/named";
14     dump-file "/var/named/data/cache_dump.db";
15     statistics-file "/var/named/data/named_stats.txt";
16     memstatistics-file "/var/named/data/named_mem_stats.txt";
17     secroots-file "/var/named/data/named.secroots";
18     recursing-file "/var/named/data/named.recursing";
19     allow-query { any; };
20
21     /*
22      - If you are building an AUTHORITATIVE DNS server, do NOT enable recursion.
23      - If you are building a RECURSIVE (caching) DNS server, you need to enable
24        recursion.
25      - If your recursive DNS server has a public IP address, you MUST enable access
26        control to limit queries to your legitimate users. Failing to do so will
27        cause your server to become part of large scale DNS amplification
28        attacks. Implementing BCP38 within your network would greatly
29        reduce such attack surface
30     */
31     recursion yes;
32
33     dnssec-validation yes;
34
35     managed-keys-directory "/var/named/dynamic";
36     geoip-directory "/usr/share/GeoIP";
37
38     pid-file "/run/named/named.pid";
```

write your ip address here

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3. Start DNS server by writing this command

```
[root@server named]# systemctl start named
```

You can see the status it is active

```

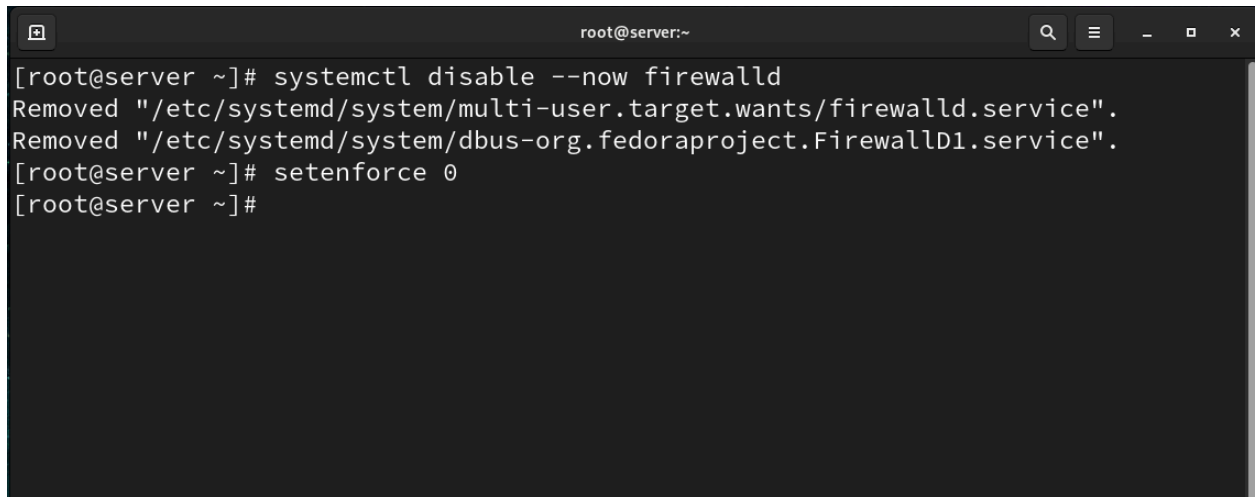
root@server:~ — systemctl status named
[root@server ~]# systemctl status named
● named.service - Berkeley Internet Name Domain (DNS)
   Loaded: loaded (/usr/lib/systemd/system/named.service; disabled; preset: d>
   Active: active (running) since Wed 2024-10-02 09:43:13 IST; 1min 11s ago
   Process: 3896 ExecStartPre=/bin/bash -c if [ ! "$DISABLE_ZONE_CHECKING" == >
   Process: 3899 ExecStart=/usr/sbin/named -u named -c ${NAMEDCONF} $OPTIONS (>
   Main PID: 3900 (named)
      Tasks: 26 (limit: 23032)
     Memory: 48.2M
        CPU: 300ms
    CGroup: /system.slice/named.service
            └─3900 /usr/sbin/named -u named -c /etc/named.conf

Oct 02 09:43:13 server named[3900]: zone 1.0.0.127.in-addr.arpa/IN: loaded seri>
Oct 02 09:43:13 server named[3900]: zone 0.in-addr.arpa/IN: loaded serial 0
Oct 02 09:43:13 server named[3900]: zone localhost.localdomain/IN: loaded seria>
Oct 02 09:43:13 server named[3900]: zone 1.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.>
Oct 02 09:43:13 server named[3900]: zone localhost/IN: loaded serial 0
Oct 02 09:43:13 server named[3900]: all zones loaded
Oct 02 09:43:13 server named[3900]: running
Oct 02 09:43:13 server systemd[1]: Started Berkeley Internet Name Domain (DNS).
Oct 02 09:43:23 server named[3900]: managed-keys-zone: Unable to fetch DNSKEY s>
Oct 02 09:43:23 server named[3900]: resolver priming query complete

lines 1-22/22 (END)

```

4. Disable firewall and set enforce as 0 in selinux



```
root@server:~  
[root@server ~]# systemctl disable --now firewalld  
Removed "/etc/systemd/system/multi-user.target.wants/firewalld.service".  
Removed "/etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service".  
[root@server ~]# setenforce 0  
[root@server ~]#
```