

Assignments:09

Module:- COSA(DNS Server)

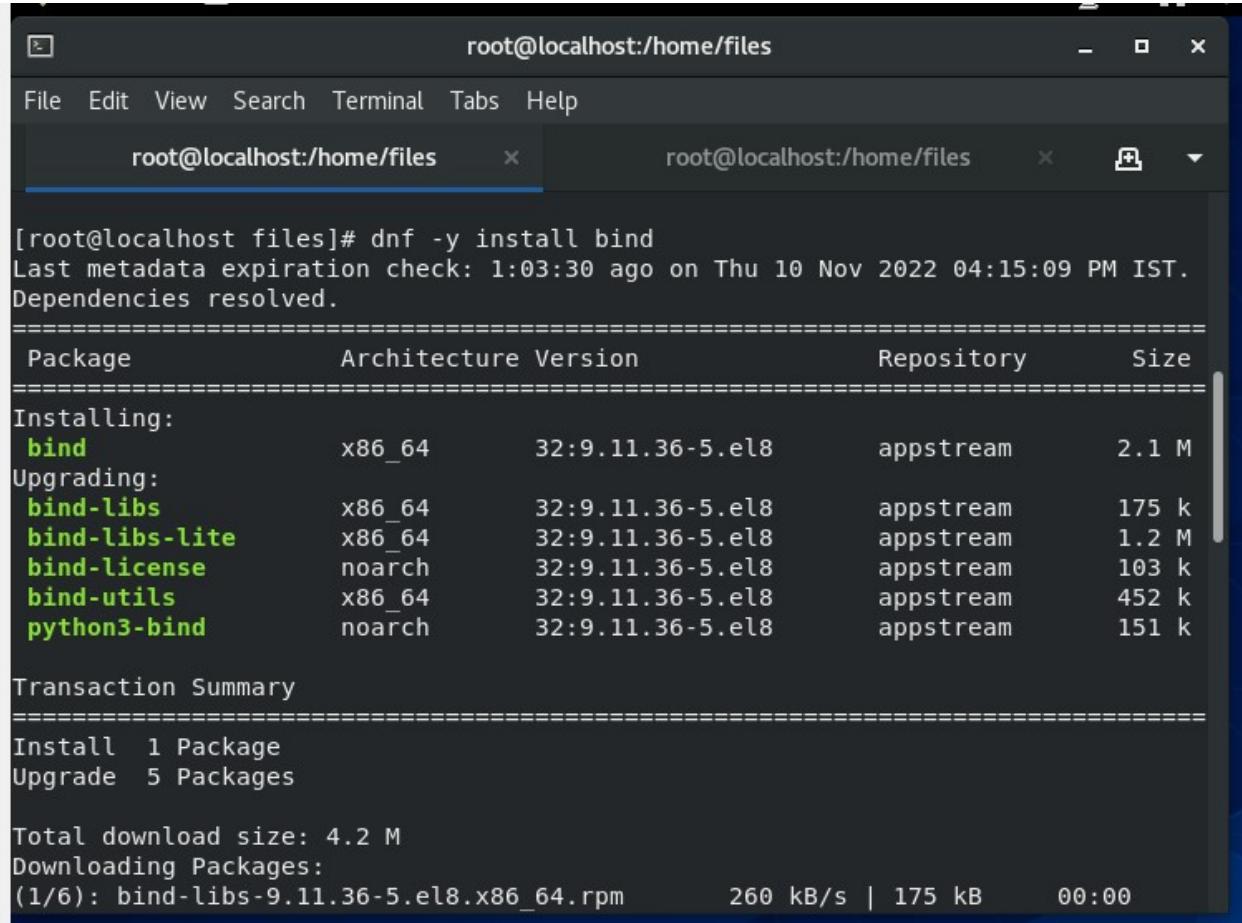
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Lab Assignment :-

4. Install recursive DNS server on your system and use nslookup command to find out the IP address of following domain names:
www.cisco.in, cisco.com, cisco.in, iisc.ernet.in, www.iisc.ernet.in.
find out the DNS servers for following domain :
cdac.in,cisco.com,nitk.ac.in,google.in

SERVER

Step-1:- install the dns server at use bind command



```
[root@localhost files]# dnf -y install bind
Last metadata expiration check: 1:03:30 ago on Thu 10 Nov 2022 04:15:09 PM IST.
Dependencies resolved.
=====
 Package           Architecture Version      Repository   Size
=====
 Installing:
  bind              x86_64        32:9.11.36-5.el8    appstream  2.1 M
 Upgrading:
  bind-libs          x86_64        32:9.11.36-5.el8    appstream  175 k
  bind-libs-lite     x86_64        32:9.11.36-5.el8    appstream  1.2 M
  bind-license        noarch       32:9.11.36-5.el8    appstream  103 k
  bind-utils          x86_64        32:9.11.36-5.el8    appstream  452 k
  python3-bind        noarch       32:9.11.36-5.el8    appstream  151 k

Transaction Summary
=====
Install 1 Package
Upgrade 5 Packages

Total download size: 4.2 M
Downloading Packages:
(1/6): bind-libs-9.11.36-5.el8.x86_64.rpm  260 kB/s | 175 kB  00:00
```

Step-2:- configure DNS server

```
// Provided by Red Hat bind package to configure the ISC BIND named(8) DNS
// server as a caching only nameserver (as a localhost DNS resolver only).
//
// See /usr/share/doc/bind*/sample/ for example named configuration files.
//

options {
    listen-on port 53 { 192.168.3.47; };
//    listen-on-v6 port 53 { ::1; };
    directory      "/var/named";
    dump-file      "/var/named/data/cache_dump.db";
    statistics-file "/var/named/data/named_stats.txt";
    memstatistics-file "/var/named/data/named_mem_stats.txt";
    secroots-file  "/var/named/data/named.secroots";
    recursing-file "/var/named/data/named.recurse";
    allow-query     { any; };

    /*
     * - If you are building an AUTHORITATIVE DNS server, do NOT enable recursion.
     * - If you are building a RECURSIVE (caching) DNS server, you need to enable recursion.
     */
-- INSERT --
```

Step-3:- to configuration fore error

```
[root@localhost files]# vi /etc/named.conf
[root@localhost files]# named-checkconf /etc/named.conf
bash: named-checkconf: command not found...
[root@localhost files]# named-checkconf /etc/named.conf
[root@localhost files]#
```

Step-4:- start DNS server

```
root@localhost:~# systemctl start named
root@localhost:~# systemctl status named
● named.service - Berkeley Internet Name Domain (DNS)
   Loaded: loaded (/usr/lib/systemd/system/named.service; disabled; vendor pres>
   Active: active (running) since Thu 2022-11-10 17:23:45 IST; 12s ago
     Process: 28050 ExecStart=/usr/sbin/named -u named -c ${NAMEDCONF} $OPTIONS (c>
     Process: 28047 ExecStartPre=/bin/bash -c if [ ! "$DISABLE_ZONE_CHECKING" == ">
Main PID: 28052 (named)
   Tasks: 4 (limit: 12262)
      Memory: 15.6M
        CGroup: /system.slice/named.service
                  └─28052 /usr/sbin/named -u named -c /etc/named.conf

Nov 10 17:23:45 localhost.localdomain named[28052]: network unreachable resolv>
Nov 10 17:23:45 localhost.localdomain named[28052]: managed-keys-zone: Key 2032>
Nov 10 17:23:45 localhost.localdomain named[28052]: resolver priming query comp>
ines 1-21/21 (END)
```

Step-5:-check UDP status using netstate command

```
root@localhost:~# netstat -puna|more
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address          Foreign Address        State
PID/Program name
udp        0      0 192.168.3.47:53          0.0.0.0:*
28052/named
udp        0      0 192.168.122.1:53          0.0.0.0:*
1263/dnsmasq
udp        0      0 0.0.0.0:67          0.0.0.0:*
1263/dnsmasq
udp        0      0 192.168.3.47:68          192.168.1.3:67        ESTABLISHED
843/NetworkManager
udp        0      0 0.0.0.0:111          0.0.0.0:*
1/systemd
udp        0      0 0.0.0.0:123          0.0.0.0:*
693/chrony
udp        0      0 0.0.0.0:5353          0.0.0.0:*
685/avahi-daemon: r
udp        0      0 127.0.0.1:323          0.0.0.0:*
693/chrony
udp        0      0 0.0.0.0:58063          0.0.0.0:*
685/avahi-daemon: r
udp6       0      0 :::53          :::*
28052/named
```

Step-6:- stop firewalld service

```
[root@localhost files]# systemctl stop firewalld  
[root@localhost files]# iptables -F  
[root@localhost files]# setenforce 0  
[root@localhost files]#
```

Client

Step-1:- go to client side on command prompt

```
Command Prompt - nslookup  
Microsoft Windows [Version 10.0.19044.2130]  
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\CDAC>nslookup  
Default Server: stuns.blr1.cdac.in  
Address: 192.168.1.3  
  
> server 192.168.3.47  
Default Server: [192.168.3.47]  
Address: 192.168.3.47  
  
>
```

Step-2:- And check following domain name

```
c:\ Command Prompt - nslookup  
Non-authoritative answer:  
Name: www.cisco.in  
Address: 72.163.4.154  
  
> www.iisc.ernet.in  
Server: [192.168.3.47]  
Address: 192.168.3.47  
  
Non-authoritative answer:  
Name: www.iisc.ernet.in  
Address: 20.192.9.200  
  
> cisco.com  
Server: [192.168.3.47]  
Address: 192.168.3.47  
  
Non-authoritative answer:  
Name: cisco.com  
Addresses: 2001:420:1101:1::185  
72.163.4.185  
  
> cisco.in  
Server: [192.168.3.47]  
Address: 192.168.3.47  
  
Non-authoritative answer:  
Name: cisco.in  
Address: 72.163.4.154  
  
>
```