Practical 6

Setting Up DNS

DNS Server Configuration

1) Check IP address of your server

```
[root@localhost ~]# ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.0.100  netmask 255.0.0.0  broadcast 10.255.255.255
        inet6 fe80::20c:29ff:feaf:d3cb  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:af:d3:cb  txqueuelen 1000  (Ethernet)
        RX packets 6113  bytes 413059 (403.3 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 125  bytes 18956 (18.5 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

2) In Server Machine give **#rpm -q bind** command to check whether bind package is available.

```
[root@localhost ~]# rpm -q bind
bind-9.9.4-50.el7.x86_64
```

3) Change directory to /etc. Copy the contents of named.conf file to named.conf.backup Open the named.conf using vi editor.

```
[root@localhost ~]# cd /etc
[root@localhost etc]# cp named.conf named.conf.backup
[root@localhost etc]# vi named.conf
```

4) Make changes as shown below and Add the zone for student.com as shown below.

```
12 options {
13      ➜ listen-on port 53 { 10.0.0.100; };
14        listen-on-v6 port 53 { ::1; };
15        directory       "/var/named";
16        dump-file       "/var/named/data/ca
17        statistics-file "/var/named/data/na
18        memstatistics-file "/var/named/data
19      ➜ allow-query     { any; };
20
```

```
zone "." IN {
        type hint;
        file "named.ca";
};

zone "student.com" IN {
        type master;
        file "zone.student.com";
};
```

Press **esc :wq** to save and exit from vi editor.

5) Change directory using cd /var/named. List down the contents of named directory. Create zone.student.com using command vi zone.student.com

```
[root@localhost etc]# cd /var/named
[root@localhost named]# vi zone.student.com
```

6) Go Insert Mode and type the following lines in vi editor and save the file.

```
$TTL 1M
@       IN      SOA     tyit.student.com.       root.tyit.studet.com. (
                        12345;
                        1H;
                        15M;
                        1D;
                        5M );
@       IN      NS      tyit.student.com.
tyit.student.com.       IN      A       10.0.0.100
www.student.com.        IN      A       10.0.0.101
ftp.student.com.        IN      A       10.0.0.102
```

7) Now restart named service, check its status and disable firewall.

```
[root@localhost named]# service named restart
Redirecting to /bin/systemctl restart named.service
[root@localhost named]# service named status
Redirecting to /bin/systemctl status named.service
● named.service - Berkeley Internet Name Domain (DNS)
   Loaded: loaded (/usr/lib/systemd/system/named.service; disabled; vendor preset: disabled)
   Active: active (running) since Sun 2024-09-22 12:01:00 IST; 17s ago
  Process: 6260 ExecStart=/usr/sbin/named -u named -c ${NAMEDCONF} $OPTIONS (code=exited, st
  Process: 6258 ExecStartPre=/bin/bash -c if [ ! "$DISABLE_ZONE_CHECKING" == "yes" ]; then /
CONF"; else echo "Checking of zone files is disabled"; fi (code=exited, status=0/SUCCESS)
[root@localhost named]# systemctl stop firewalld
```

8) Our DNS server is ready

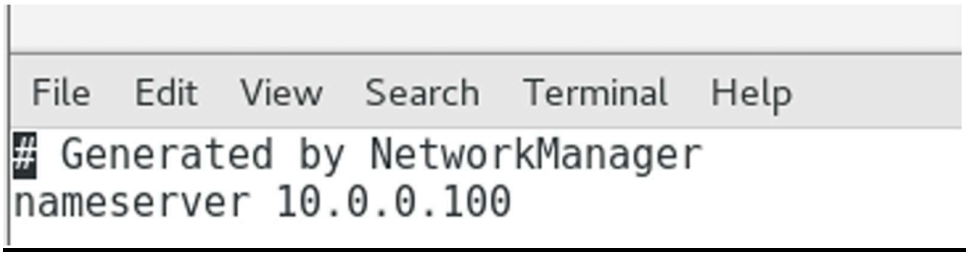
DNS Client Configuration

1) Check network configuration

```
[root@localhost ~]# ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.0.50  netmask 255.0.0.0  broadcast 10.255.255.255
        inet6 fe80::20c:29ff:feb7:ad5f  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:b7:ad:5f  txqueuelen 1000  (Ethernet)
        RX packets 1144  bytes 106271 (103.7 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 117  bytes 9966 (9.7 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

2) Go to client machine and give the command **#vi /etc/resolv.conf** and make the changes in the file.

```
[root@localhost ~]# vi /etc/resolv.conf
```



Press **esc :wq** to save and exit from vi editor.

3) Check your DNS server with **#ns lookup** command.

```
[root@localhost ~]# nslookup www.student.com
Server:         10.0.0.100
Address:        10.0.0.100#53

Name:   www.student.com
Address: 10.0.0.101
```

4) Use dig command

#dig ftp student.com