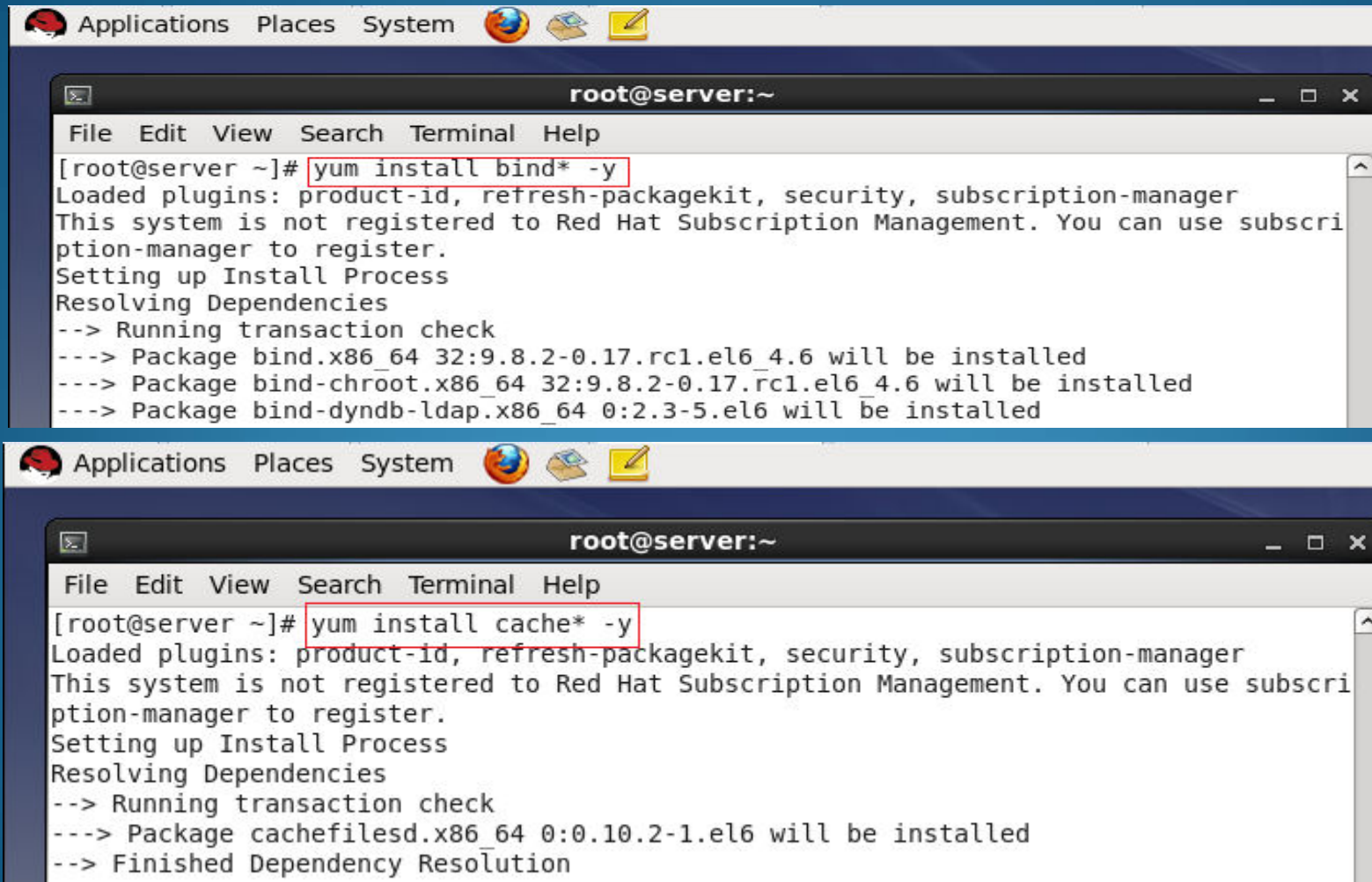# DNS Configuration

- Domain Name Service (DNS) is an internet service that maps IP addresses to fully qualified domain names (FQDN) and vice versa.
- A DNS server, or name server, is used to resolve an IP address to a hostname or vice versa.
- The entire hostname with its domain such as ***server.training.com*** is called a fully qualified domain name (FQDN). The right-most part of the FQDN such as .com or .net is called the ***top level domain,*** with the remaining parts of the FQDN, which are separated by periods, being sub-domains

# Profile for DNS Server

- Usage                              : To resolve IP into hostname  and  vice-versa

- Package                          : bind, caching-name

- Script                             : /etc/init.d/named

- Port                               : 53

- Configuration file        : /etc/named.conf

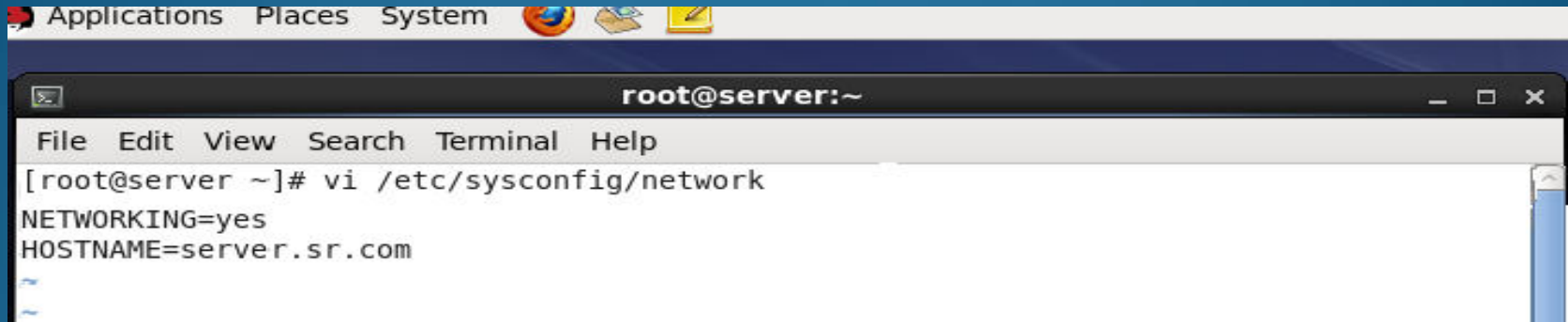- Document root             : /var/named

- Daemon                        : named

# Configuration of DNS server

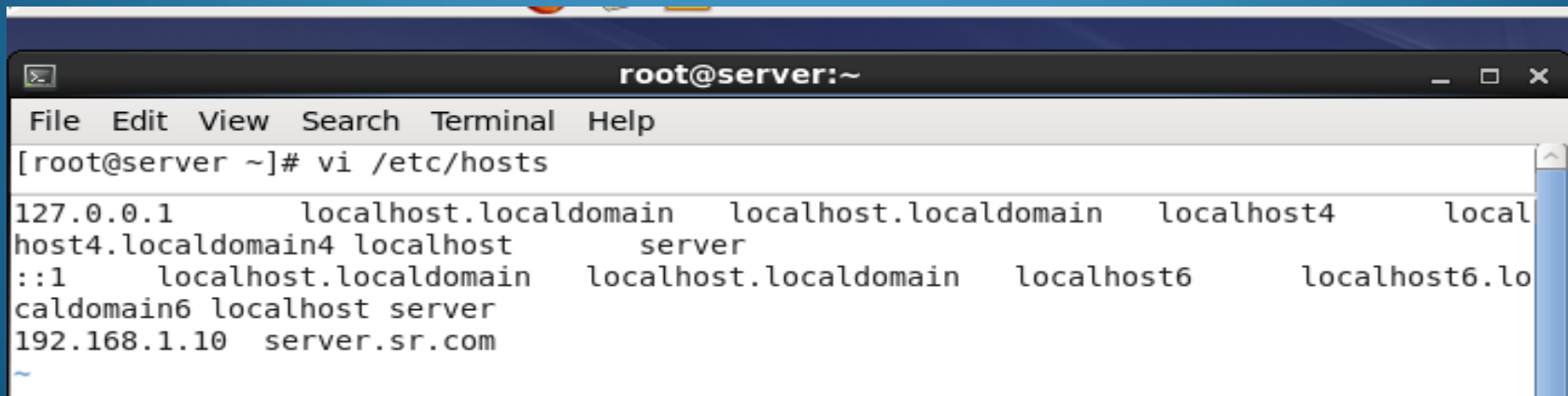- Install the required package for DNS

- Change the hostname by adding fully qualified domain name
  #hostname server.sr.com(where sr.com is the FQDN) and make it permanent in
  /etc/sysconfig/network file.

Applications  Places  System

root@server:~

File  Edit  View  Search  Terminal  Help

```
[root@server ~]# vi /etc/sysconfig/network
NETWORKING=yes
HOSTNAME=server.sr.com
~
~
```
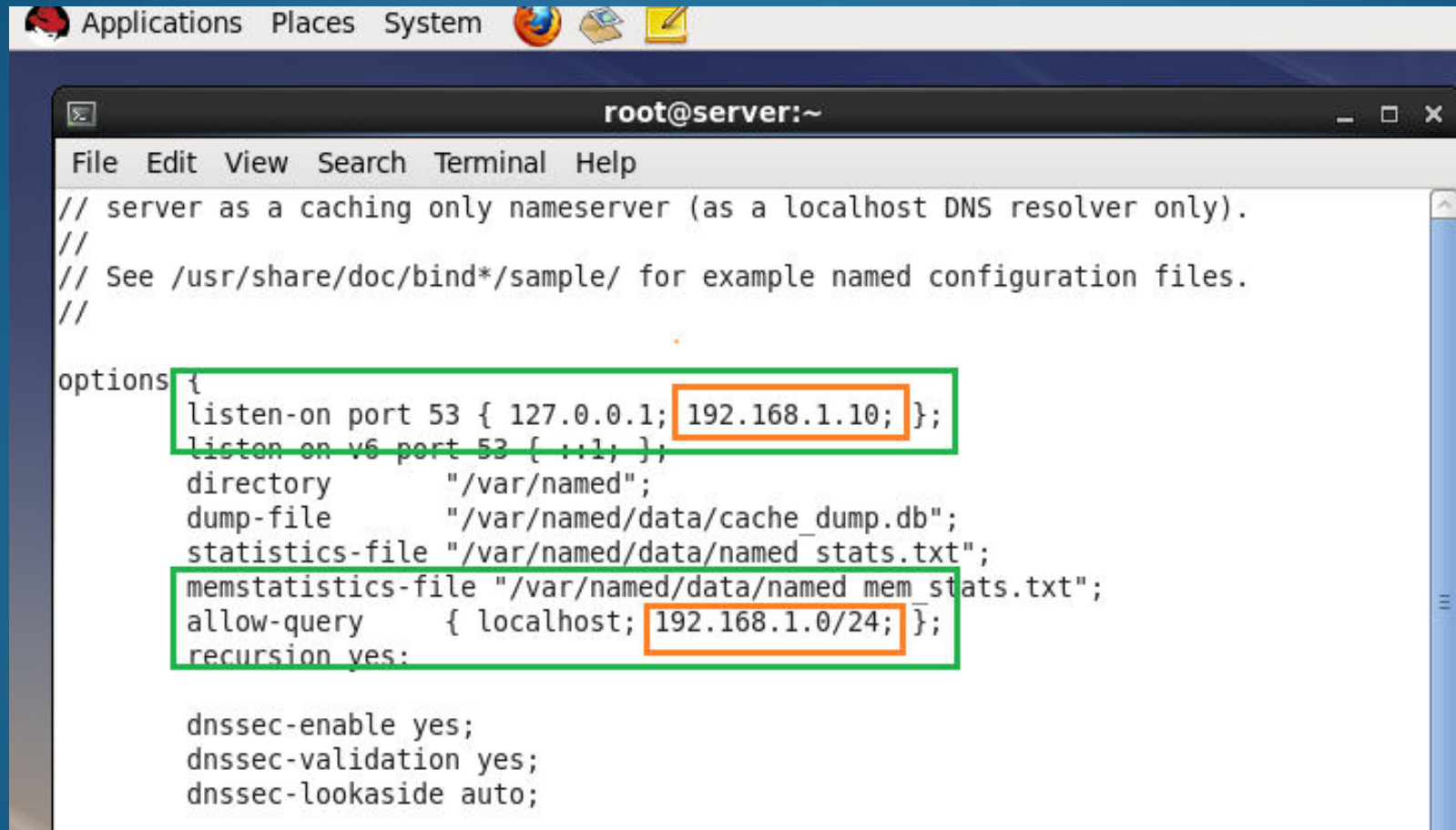
Update the /etc/hosts file with the server's ip address, and change the
hostname with fuly qualified domain name.

root@server:~

File  Edit  View  Search  Terminal  Help

```
[root@server ~]# vi /etc/hosts

127.0.0.1        localhost.localdomain    localhost.localdomain    localhost4       local
host4.localdomain4 localhost       server
::1      localhost.localdomain    localhost.localdomain    localhost6       localhost6.lo
caldomain6 localhost server
192.168.1.10  server.sr.com
~
```

- Edit the configuration file /etc/named.conf file with server's IP address and network range for clients.
- #vi /etc/named.conf

- Edit the zone configuration file i.e. /etc/named.rfc1912.zones and the details of the zones i.e. forward lookup zone and reverse lookup zones Copy the following 11 lines and paste it at the end of the line and edit them.
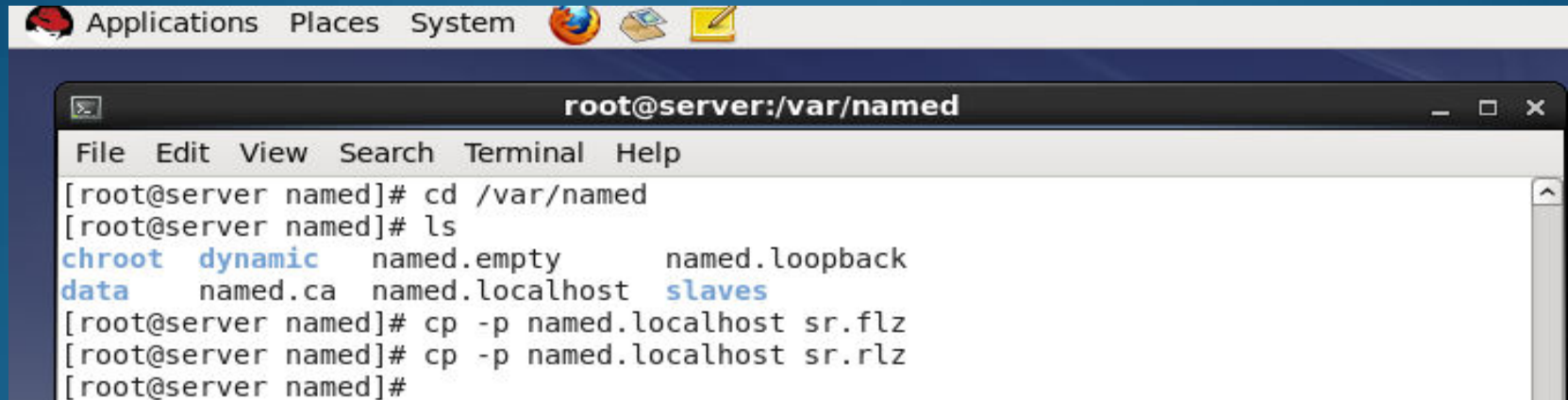


Where "sr.com" is the name of our domain
And "1.168.192.in-addr.arpa" is the reverse order of our domain network.
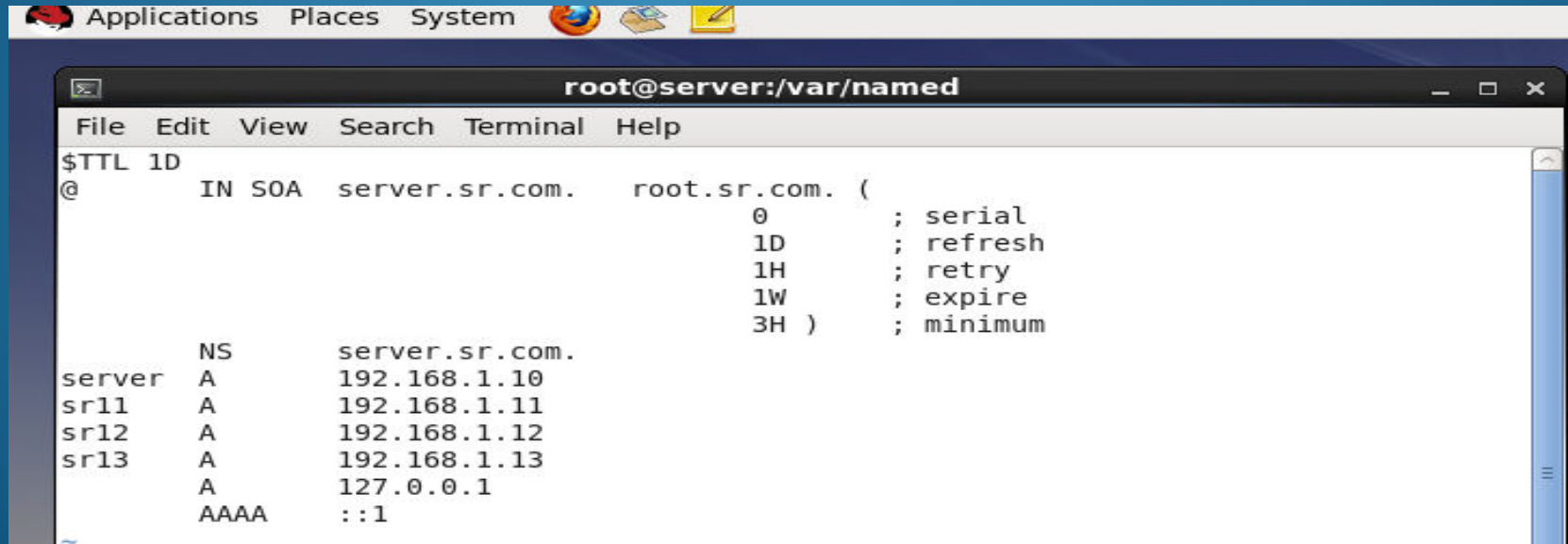
- Navigate to /var/named directory and create a forward and reverse zone files.
- Now copy the named.localhost file with its permissions as sr.flz and sr.rlz and edit it.

```
root@server:/var/named
File  Edit  View  Search  Terminal  Help
[root@server named]# cd /var/named
[root@server named]# ls
chroot  dynamic     named.empty       named.loopback
data       named.ca  named.localhost  slaves
[root@server named]# cp -p named.localhost sr.flz
[root@server named]# cp -p named.localhost sr.rlz
[root@server named]#
```

Edit sr.flz file as follows
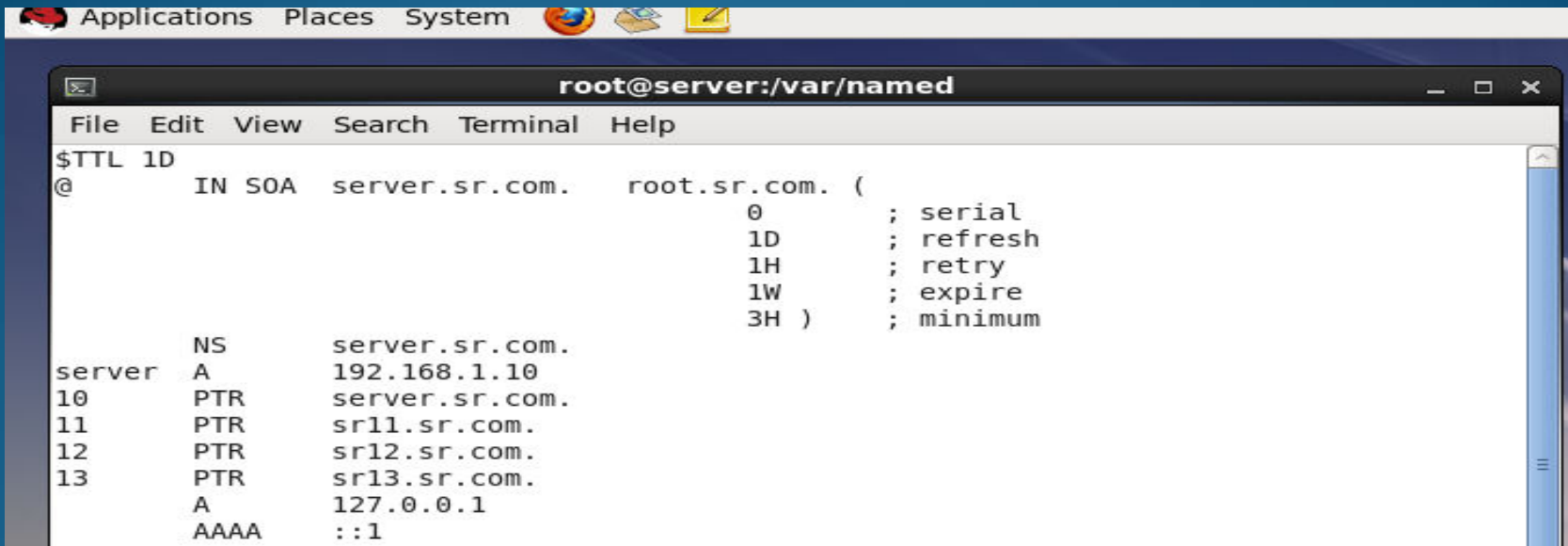
```
root@server:/var/named
File  Edit  View  Search  Terminal  Help
$TTL 1D
@        IN SOA   server.sr.com.      root.sr.com. (
                                           0         ; serial
                                           1D        ; refresh
                                           1H        ; retry
                                           1W        ; expire
                                           3H )      ; minimum
         NS       server.sr.com.
server   A        192.168.1.10
sr11     A        192.168.1.11
sr12     A        192.168.1.12
sr13     A        192.168.1.13
         A        127.0.0.1
         AAAA     ::1
~
```

- Edit sr.rlz file as follows
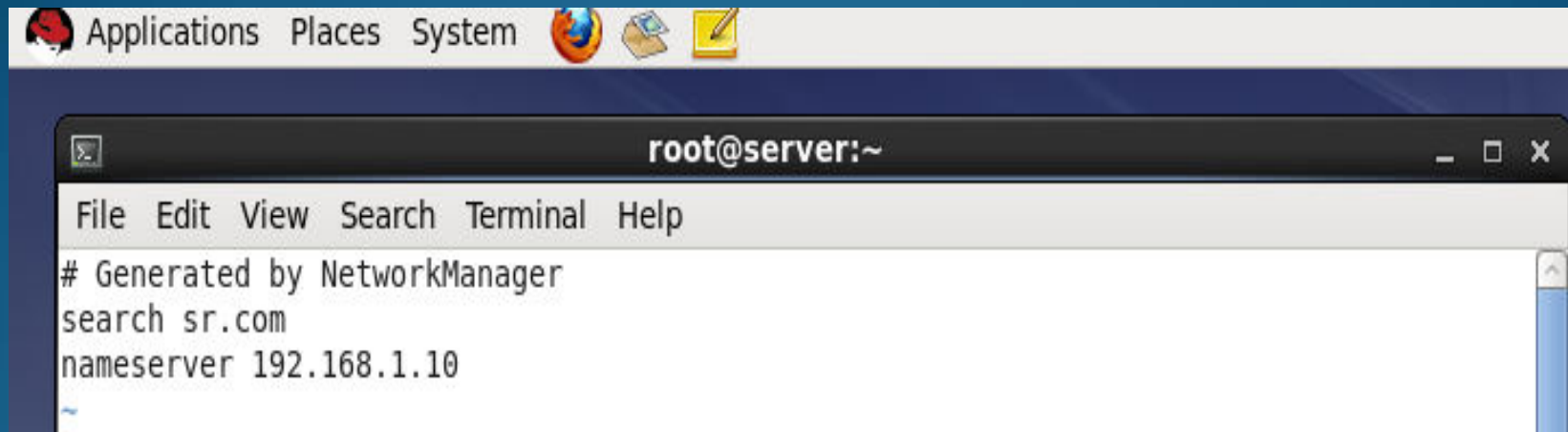


Check zone files are consistent or not by using the command

#named-checkzone <domainname> zone file
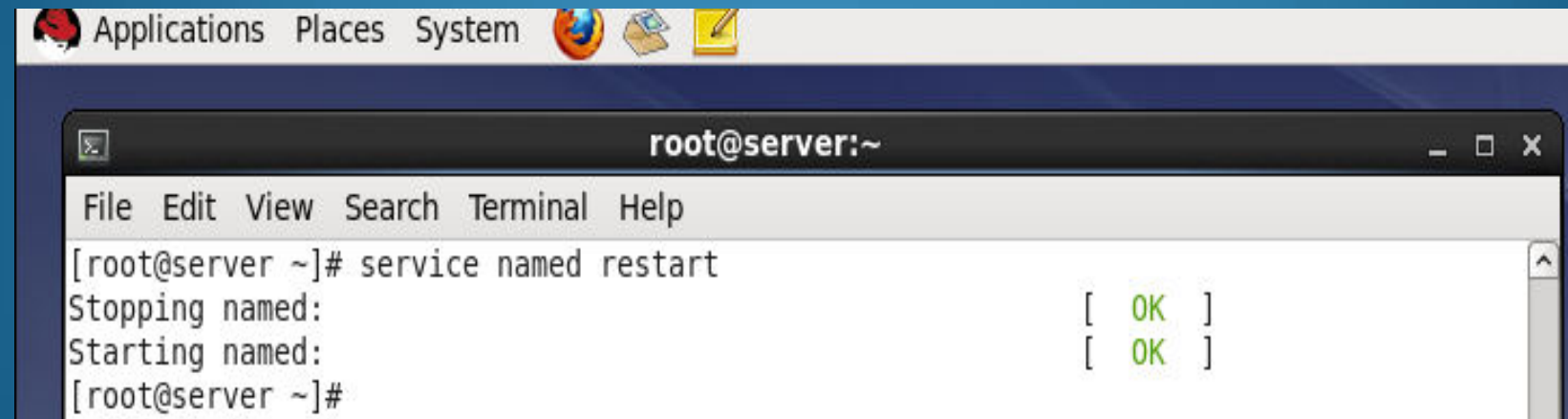
- Add the address of DNS server in /etc/resolv.conf



- Restart the named services
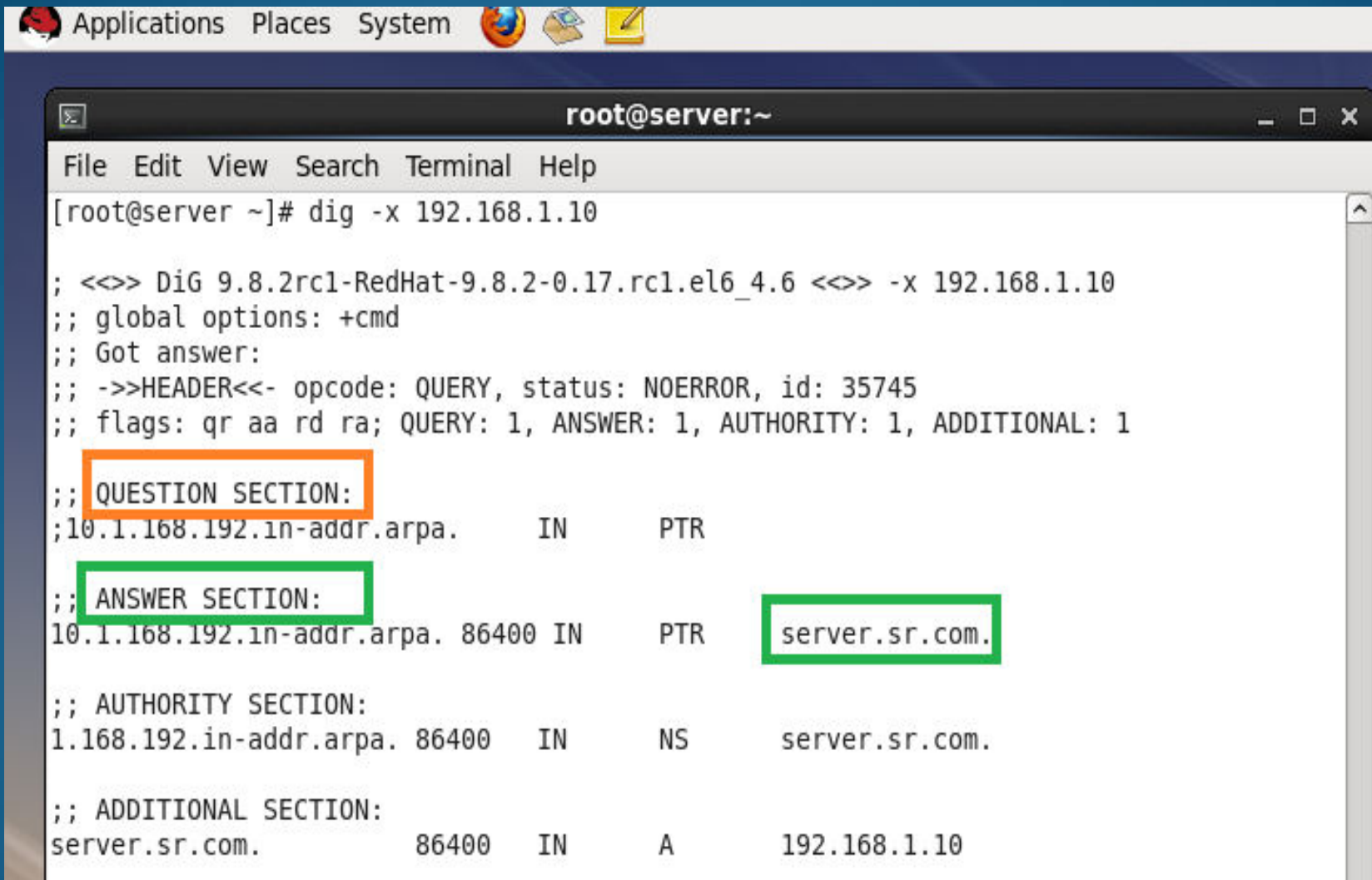
- Now we have done with DNS server configuration, check whether it is resolving IP to hostname and hostname to IP by different commands.
- Check with giving hostname of server

- Check with giving IP of hostname

- Check the DNS resolution with host command for both server as well as clients
- #host <hostname>
- #host sr11
- Using host command with IP address of server as well as client
- #host 192.168.1.11

- Using nslookup command to check the DNS resolution
- #nslookup sr11
- Check with the IP addresses
- #nslookup 192.168.1.11
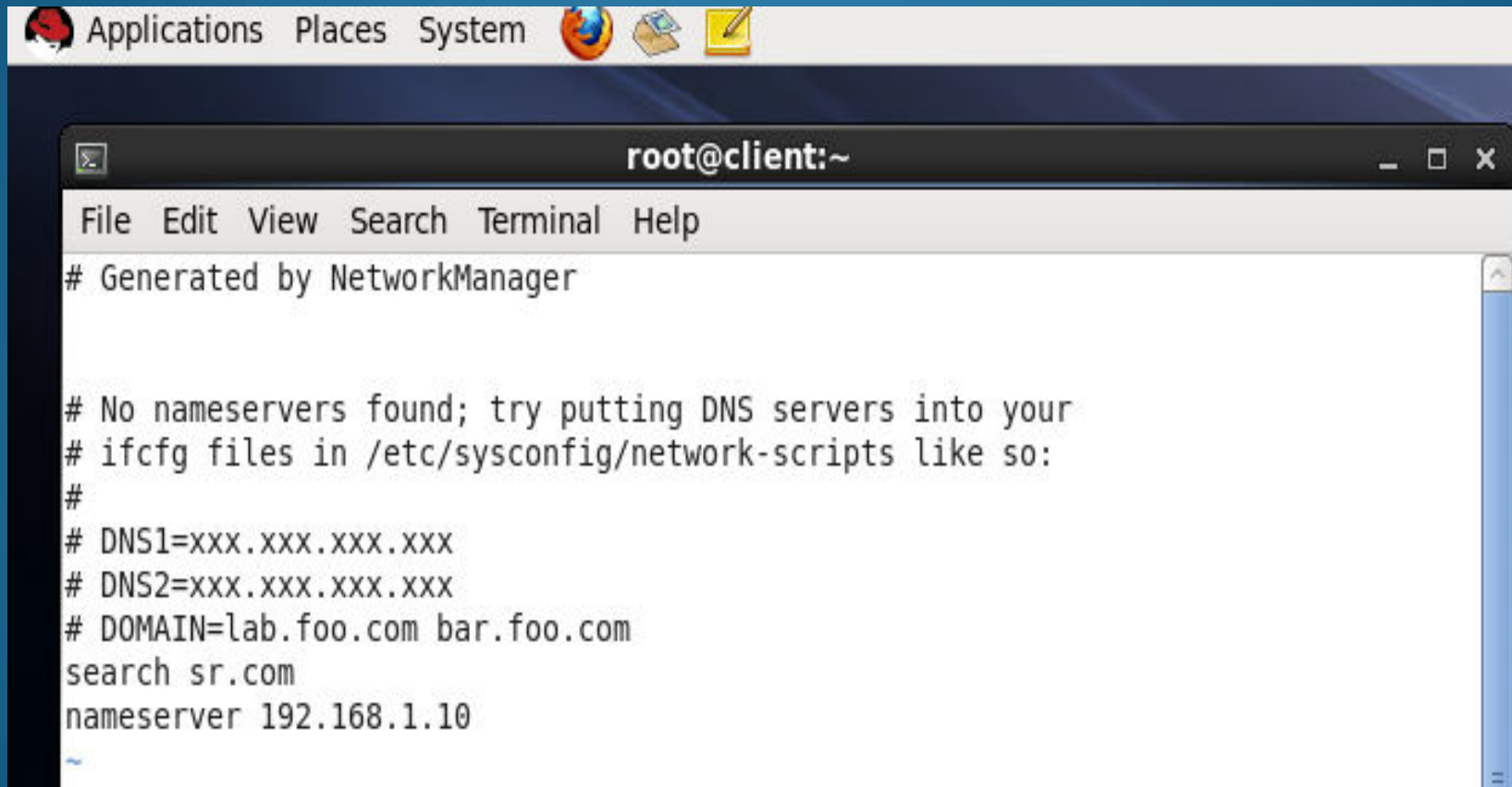
# Client side configuration for DNS

- Log into client machine and add the DNS server's information in /etc/resolv.conf file

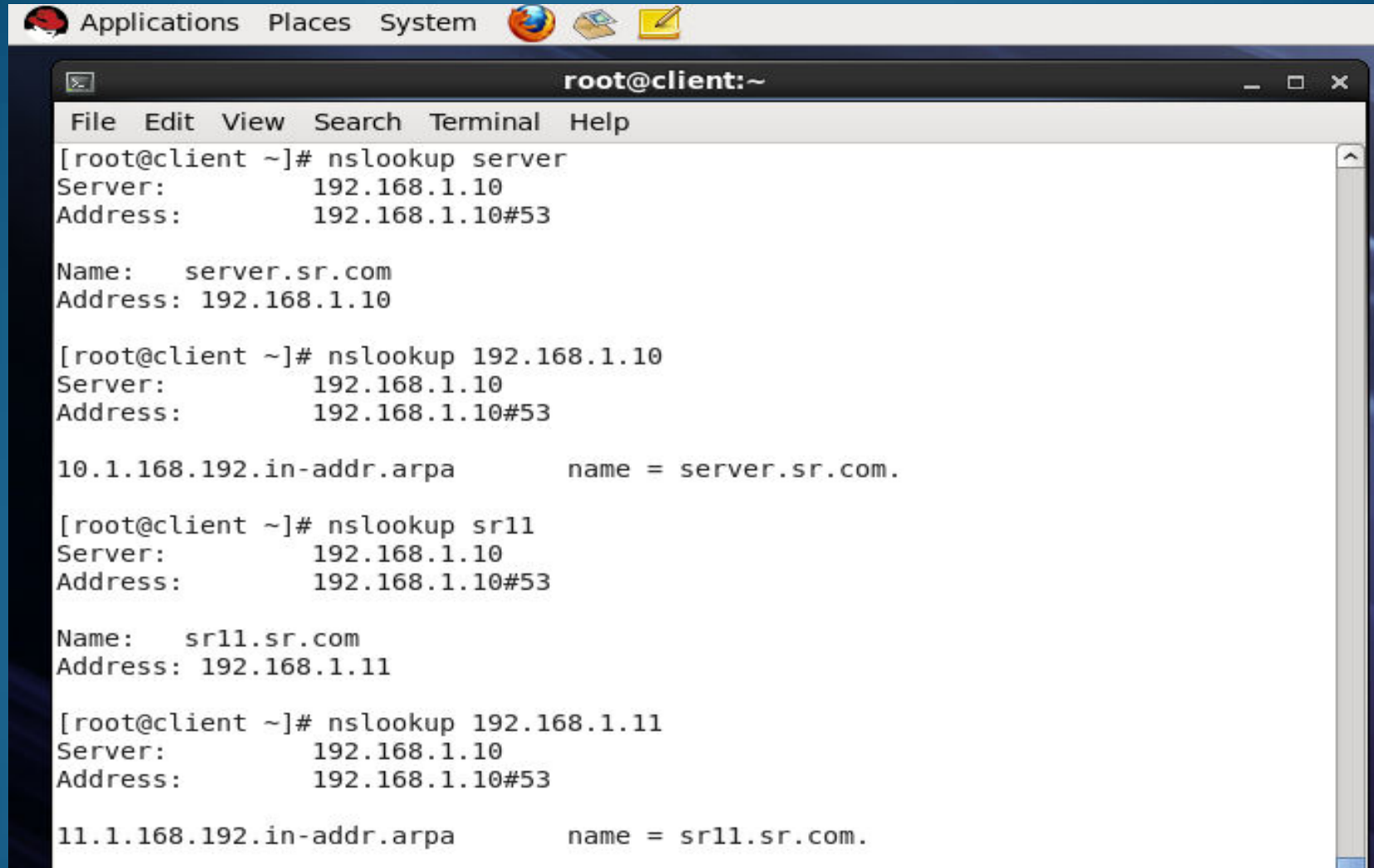- Now check with any of the options used previously like dig, host or nslookup for DNS resolution