Network Design & Management (IE 3010)
3rd Year, 1st Semester

Assignment

Mail Server/Client Management

Submitted to

Sri Lanka Institute of Information Technology

IT18107692

N.K Madanayake

In partial fulfillment of the requirements for the

Bachelor of Science Special Honors Degree in Information Technology

2020.05.02

Table of content

Declaration

I certify that this report does not incorporate without acknowledgement, any material previously submitted for a degree or diploma in any university, and to the best of my knowledge and belief it does not contain any material previously published or written by another person, except where due reference is made in text.

Installing & configuring DHCP

- Installing DHCP in centos

#yum install -y dhcp

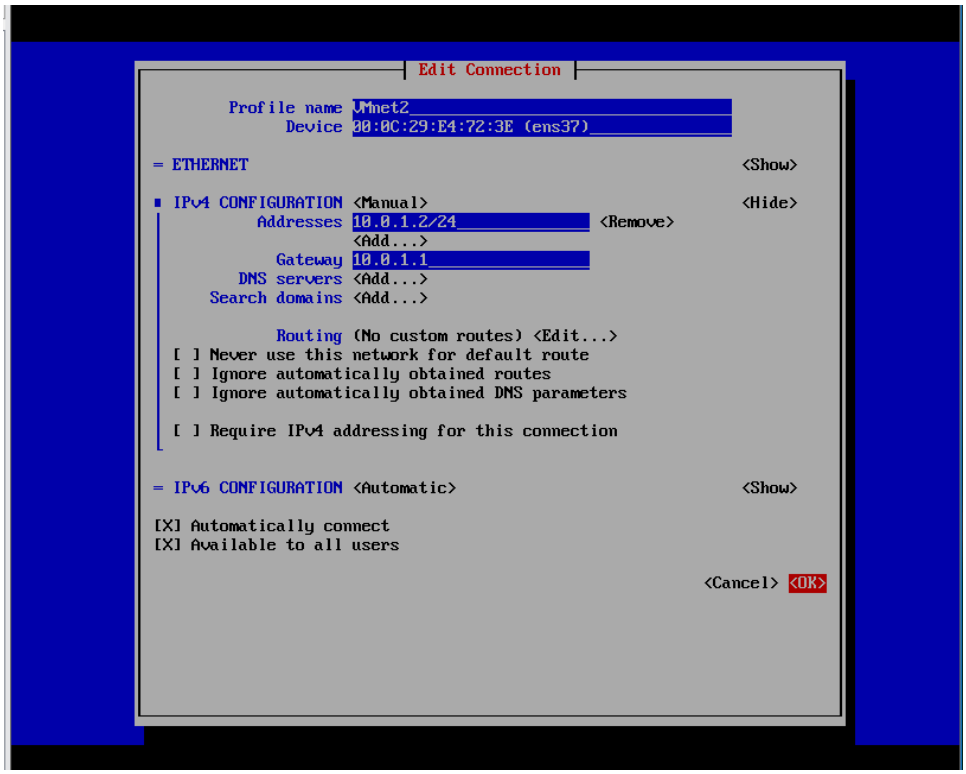

Figure 1

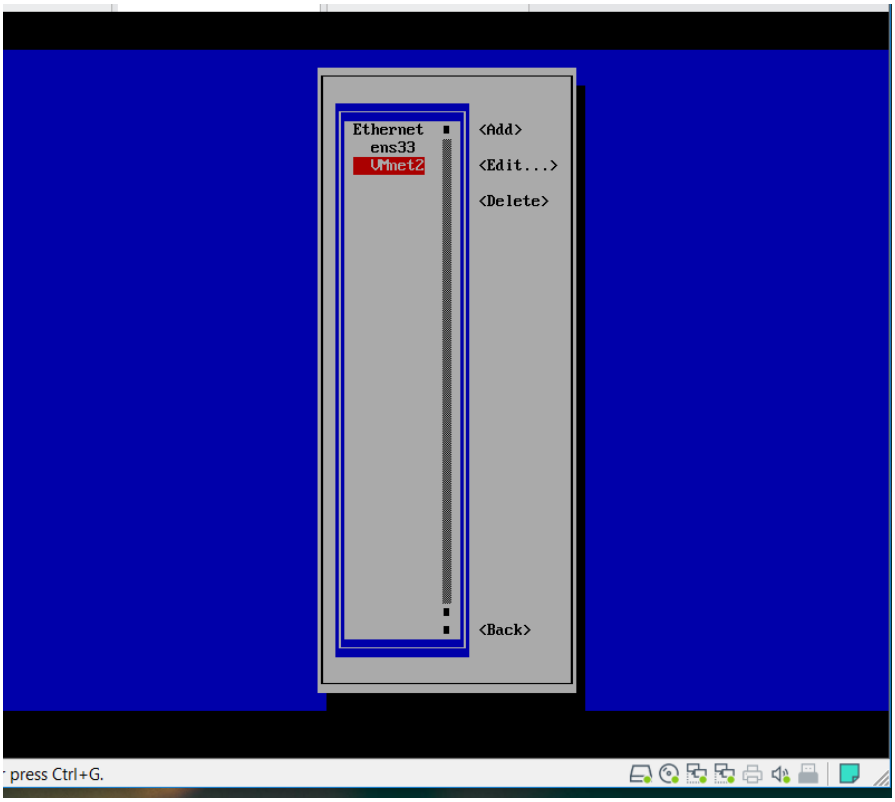

Figure 2

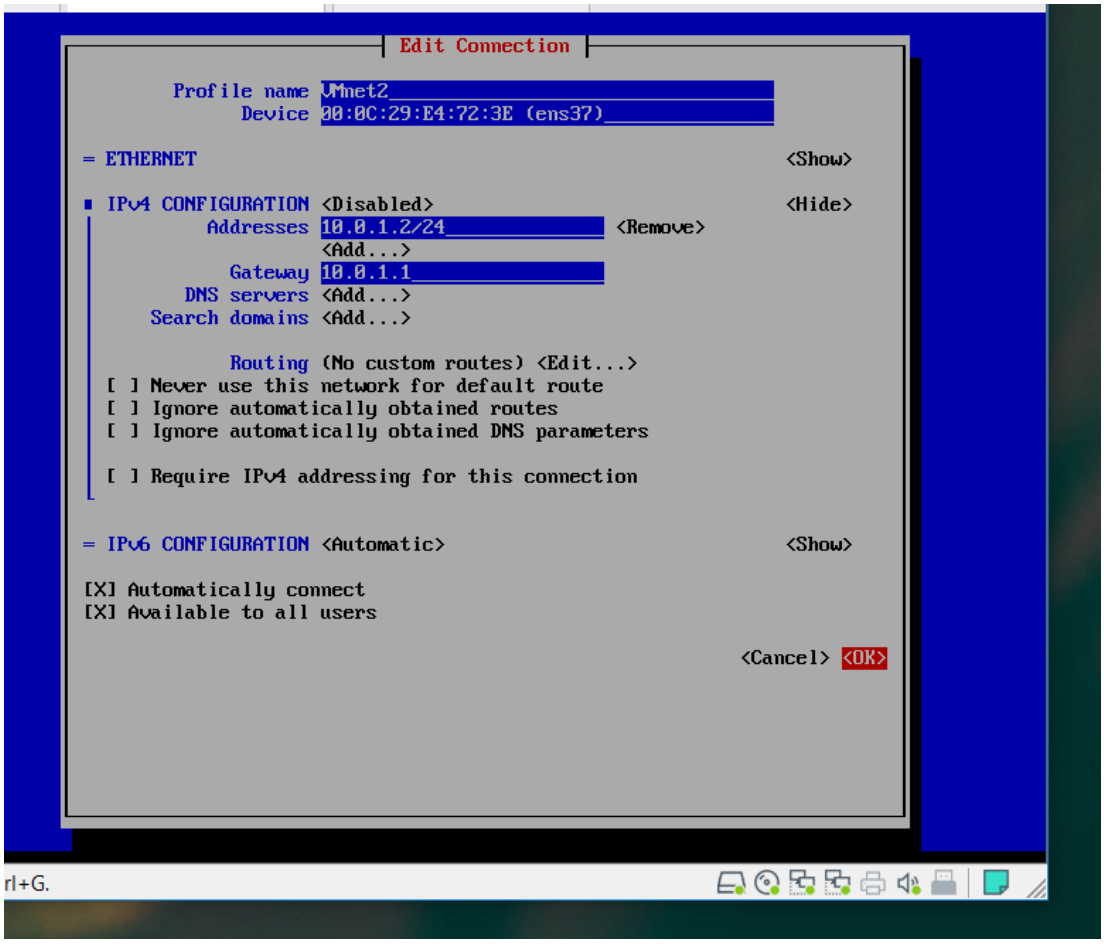
Edit Connection
Profile name VMnet2
Device 00:0C:29:E4:72:3E (ens37)
= ETHERNET <Show>
IPv4 CONFIGURATION <Disabled> <Hide>
Addresses 10.0.1.2/24 <Remove>
<Add...>
Gateway 10.0.1.1
DNS servers <Add...>
Search domains <Add...>
Routing (No custom routes) <Edit...>
[ ] Never use this network for default route
[ ] Ignore automatically obtained routes
[ ] Ignore automatically obtained DNS parameters
[ ] Require IPv4 addressing for this connection
= IPv6 CONFIGURATION <Automatic> <Show>
[X] Automatically connect
[X] Available to all users
<Cancel> <OK>
rl+G.

Figure 3

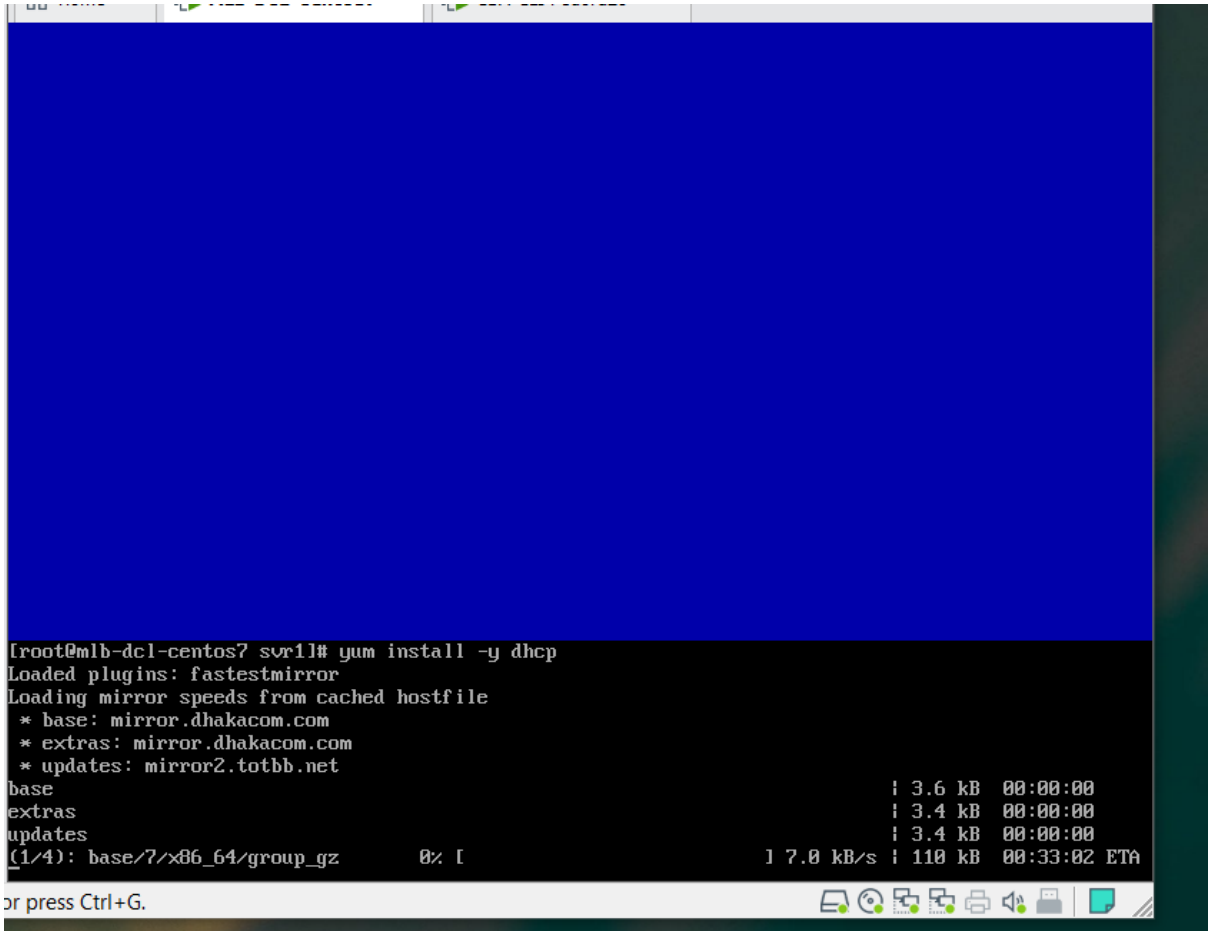
[root@mlb-dcl-centos7 svr1]# yum install -y dhcp
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: mirror.dhakacom.com
 * extras: mirror.dhakacom.com
 * updates: mirror2.totbb.net
base | 3.6 kB 00:00:00
extras | 3.4 kB 00:00:00
updates | 3.4 kB 00:00:00
(1/4): base/7/x86_64/group_gz 0% [ ] 7.0 kB/s | 110 kB 00:33:02 ETA
or press Ctrl+G.

Figure 4

- Configuring DHCP settings

Now need to mention the interface details, which is going to be the DHCP interface

That for edit file /etc/sysconfig/dhcpd

vi/etc/sysconfig/dhcpd

Now assign the network interface

To do that DHCPDARGS

DHCPDARGS=ens33

After that save and close the file.

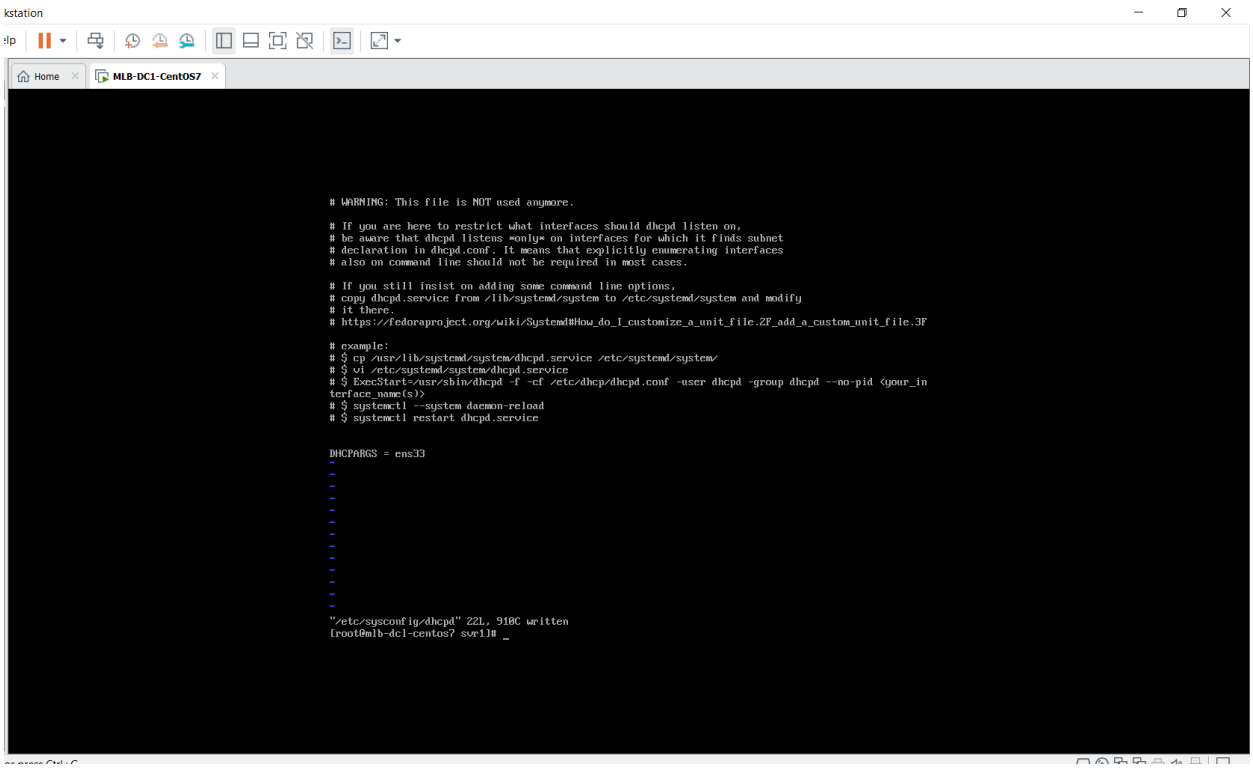

Figure 5

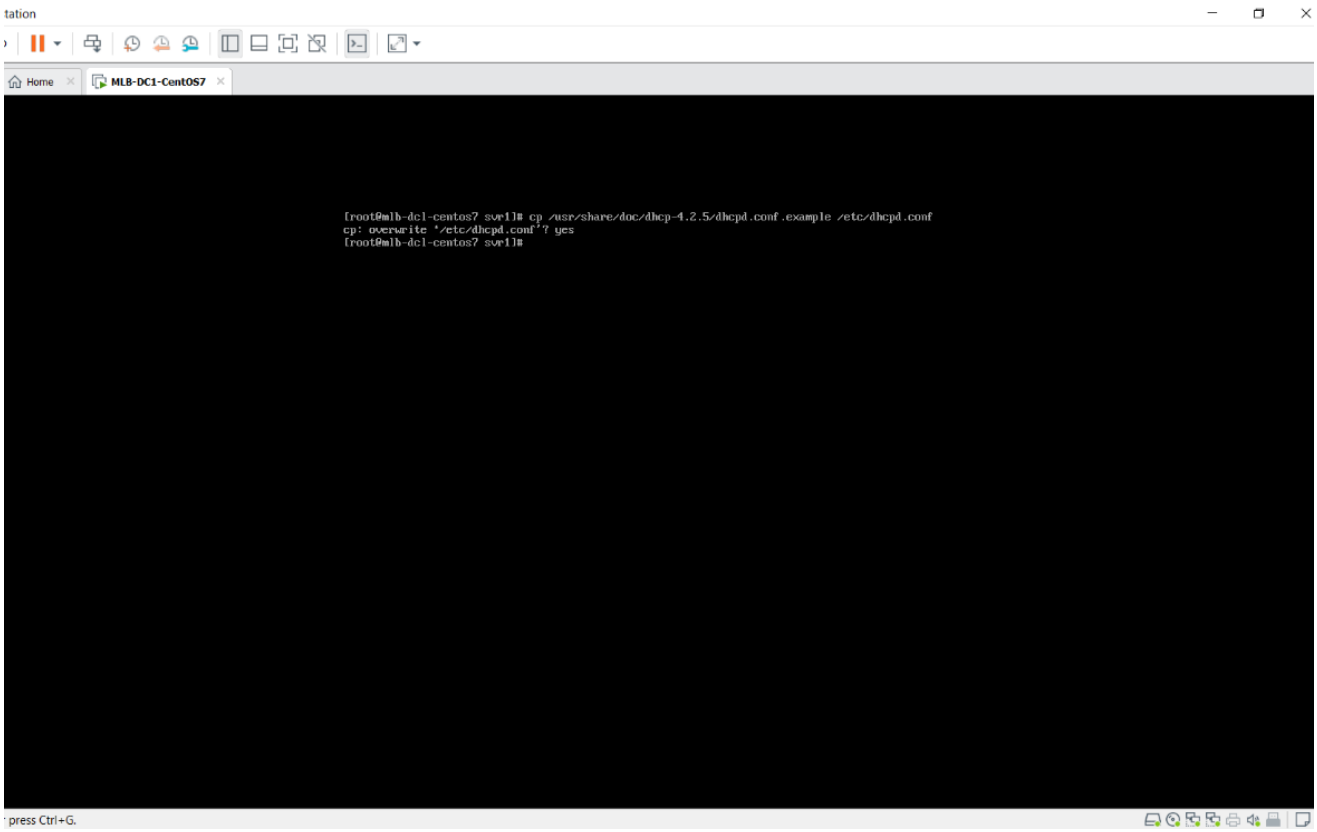

Figure 6

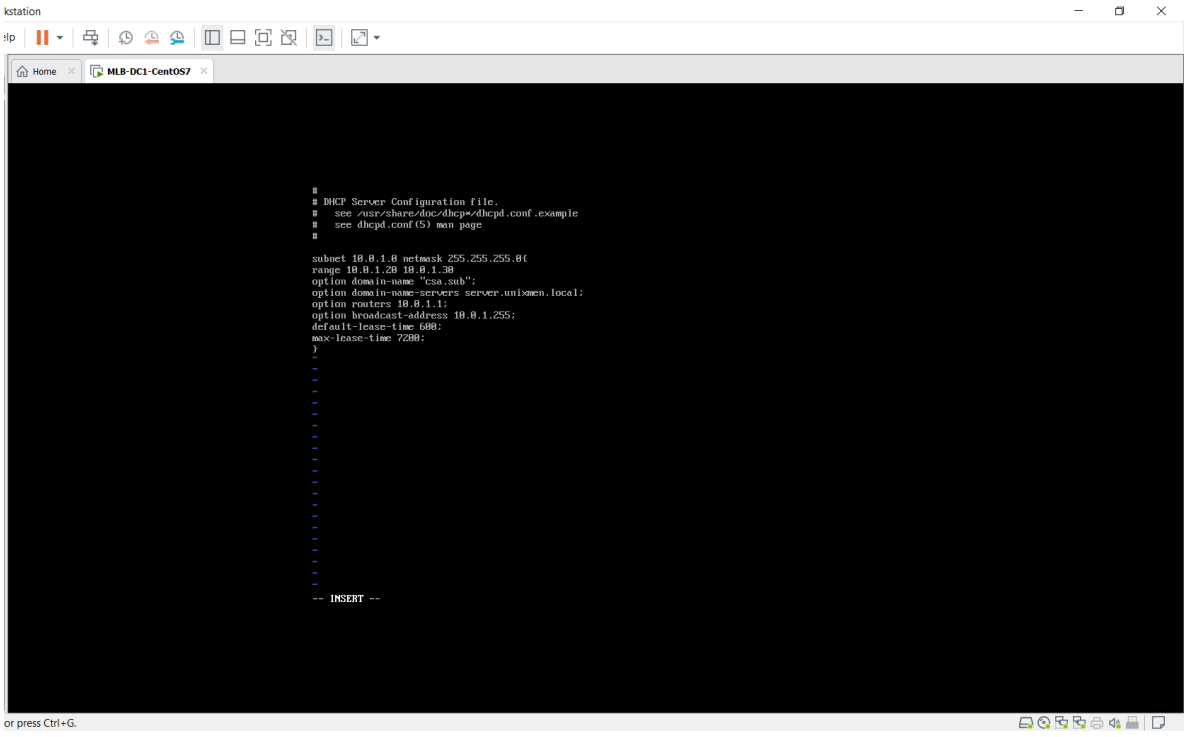

Figure 7

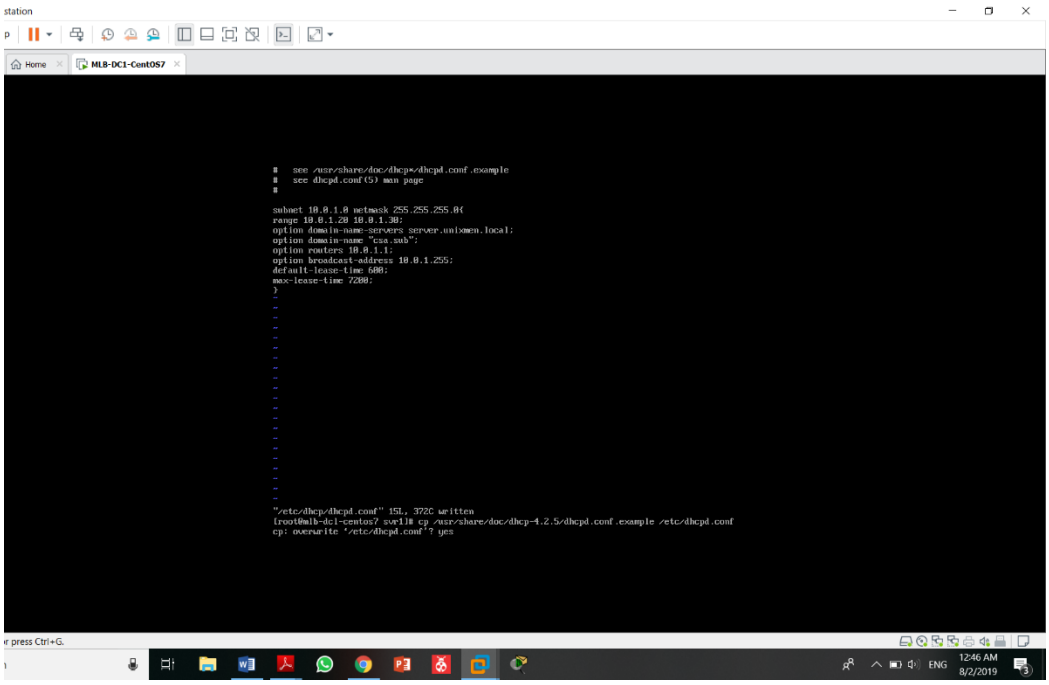

Figure 8

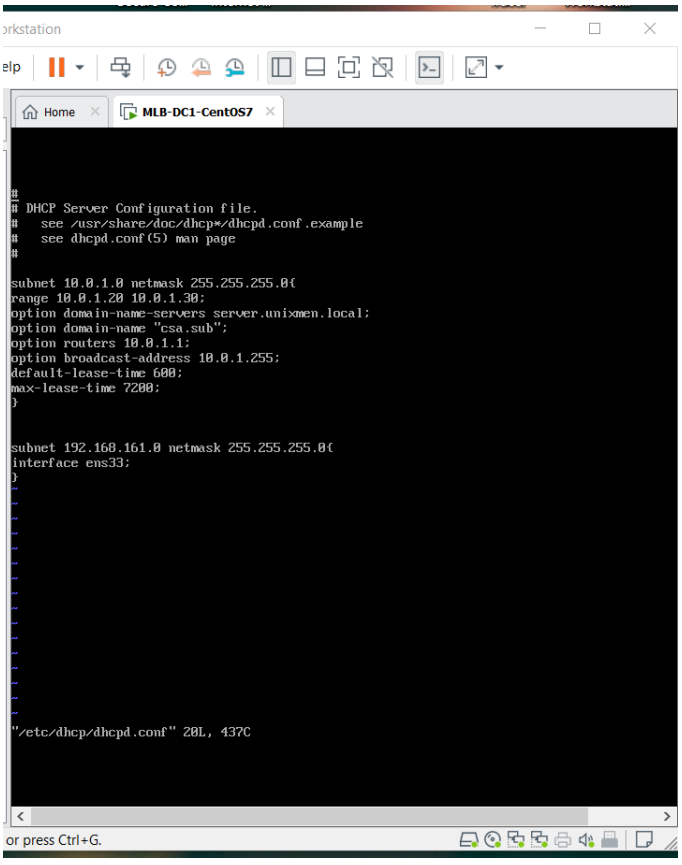

Figure 9

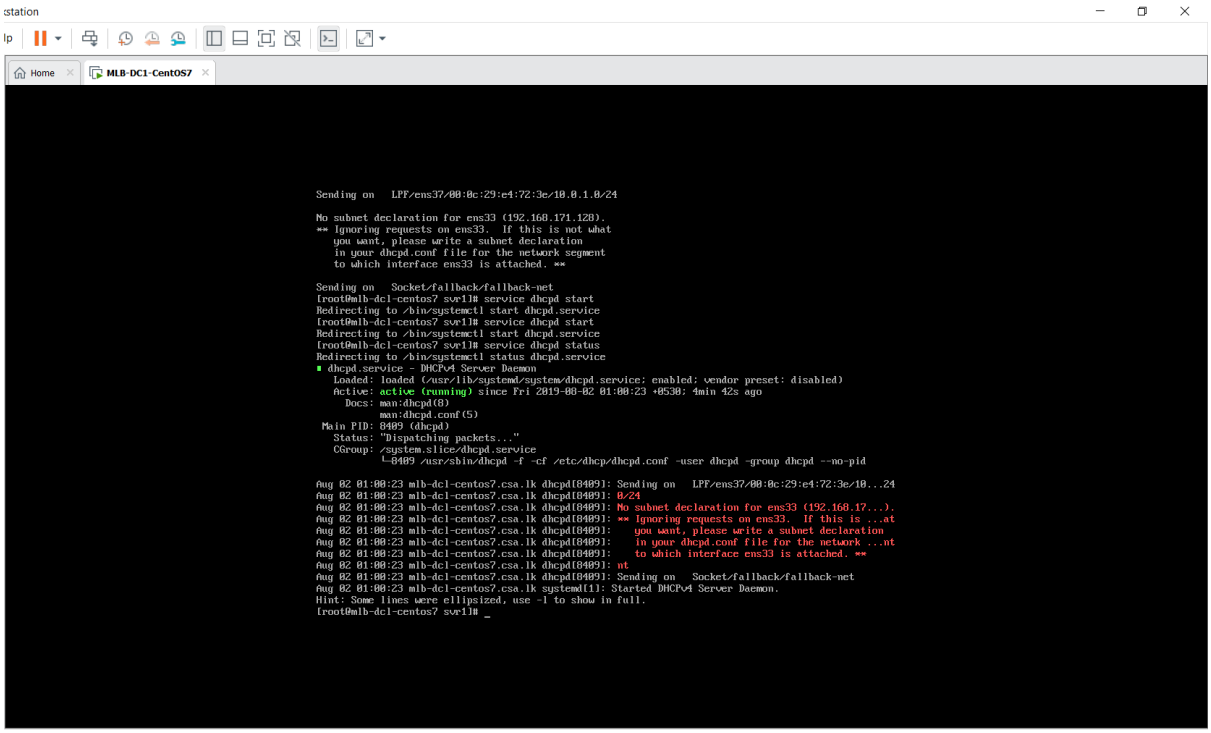
station
Home
MLB-DC1-CentOS7
Sending on LPF/ens37/00:0c:29:e4:72:3e/10.0.1.0/24
No subnet declaration for ens33 (192.168.171.128).
** Ignoring requests on ens33. If this is not what
you want, please write a subnet declaration
in your dhcpd.conf file for the network segment
to which interface ens33 is attached. **
Sending on Socket/fallback/fallback-net
[root@mlb-dc1-centos7 svr1]# service dhcpd start
Redirecting to /bin/systemctl start dhcpd.service
[root@mlb-dc1-centos7 svr1]# service dhcpd start
Redirecting to /bin/systemctl start dhcpd.service
[root@mlb-dc1-centos7 svr1]# service dhcpd status
Redirecting to /bin/systemctl status dhcpd.service
dhcpd.service - DHCPv4 Server Daemon
Loaded: loaded (/usr/lib/systemd/system/dhcpd.service; enabled; vendor preset: disabled)
Active: active (running) since Fri 2019-08-02 01:00:23 +0530; 4min 42s ago
Docs: man:dhcpd(8)
man:dhcpd.conf(5)
Main PID: 8409 (dhcpd)
Status: "Dispatching packets..."
CGroup: /system.slice/dhcpd.service
└─8409 /usr/sbin/dhcpd -f -cf /etc/dhcp/dhcpd.conf -user dhcpd -group dhcpd --no-pid
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk dhcpd[8409]: Sending on LPF/ens37/00:0c:29:e4:72:3e/10...24
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk dhcpd[8409]: 0/24
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk dhcpd[8409]: No subnet declaration for ens33 (192.168.17...).
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk dhcpd[8409]: ** Ignoring requests on ens33. If this is ...at
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk dhcpd[8409]: you want, please write a subnet declaration
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk dhcpd[8409]: in your dhcpd.conf file for the network ...nt
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk dhcpd[8409]: to which interface ens33 is attached. **
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk dhcpd[8409]: nt
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk dhcpd[8409]: Sending on Socket/fallback/fallback-net
Aug 02 01:00:23 mlb-dc1-centos7.csa.lk systemd[1]: Started DHCPv4 Server Daemon.
Hint: Some lines were ellipsized, use -l to show in full.
[root@mlb-dc1-centos7 svr1]#

Figure 10

Installing and configuring DNS

In DNS domain names are translated into ip address. Ping command I used to obtain existing internet domains. the ping command is usually used as a simple way to verify that a computer can communicate over the network with another computer or device.

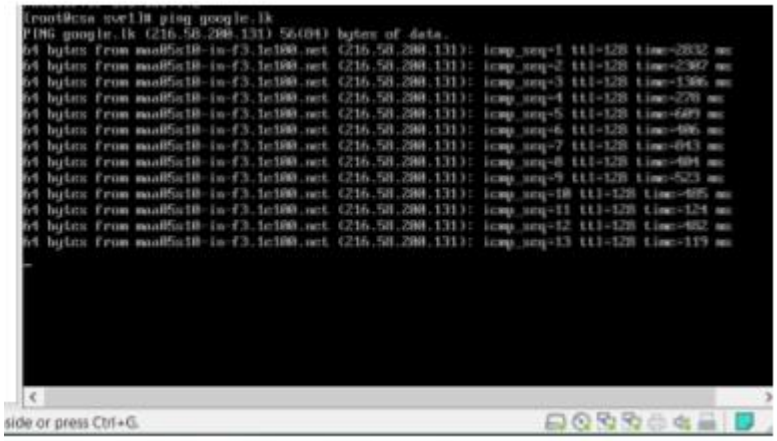

Figure11

Ping command is used with google.lk & yahoo.com & both are successfully

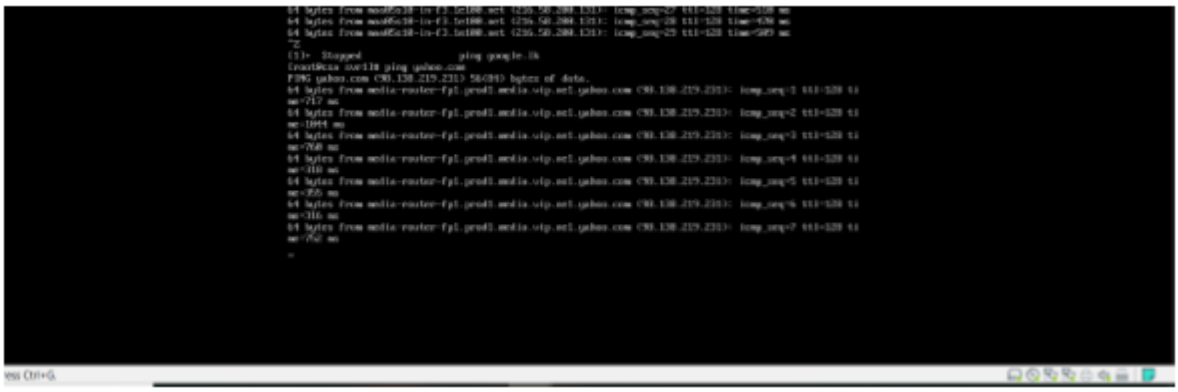

Figure 12

Before installing DNS , BIND must be installed on centos. Its is done with command $yum install -y bind*BIND is an open source software that enables you to publish your Domain name system (DNS) information on the Internet and resolve DNS queries for your user.

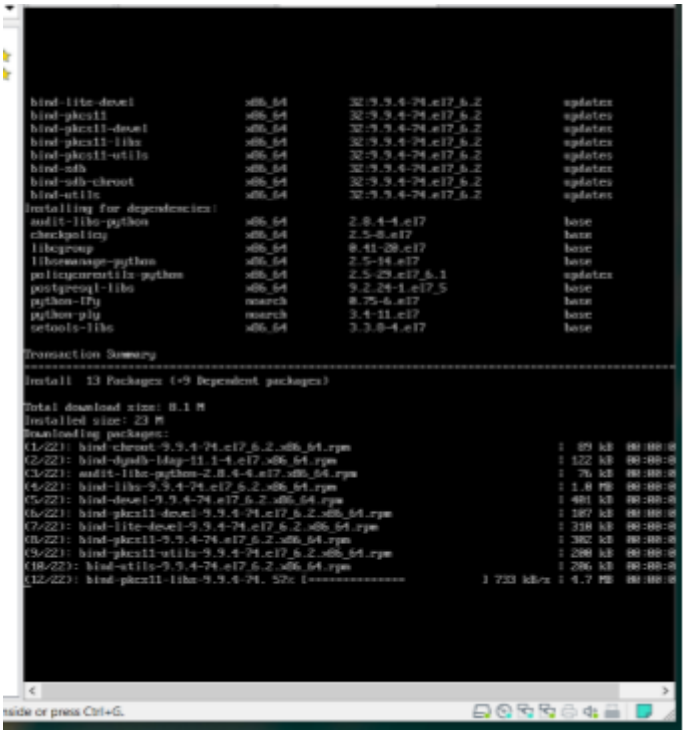

Figure 13

After installing BIND, DNS is started

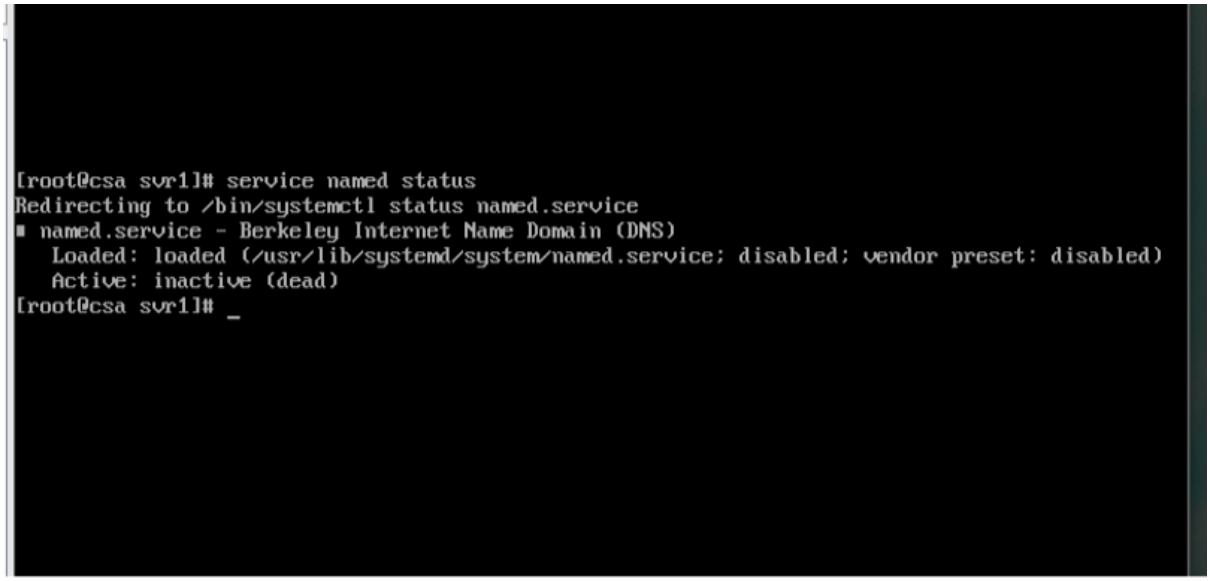

Figure 14

Then the status of DNS is checked.

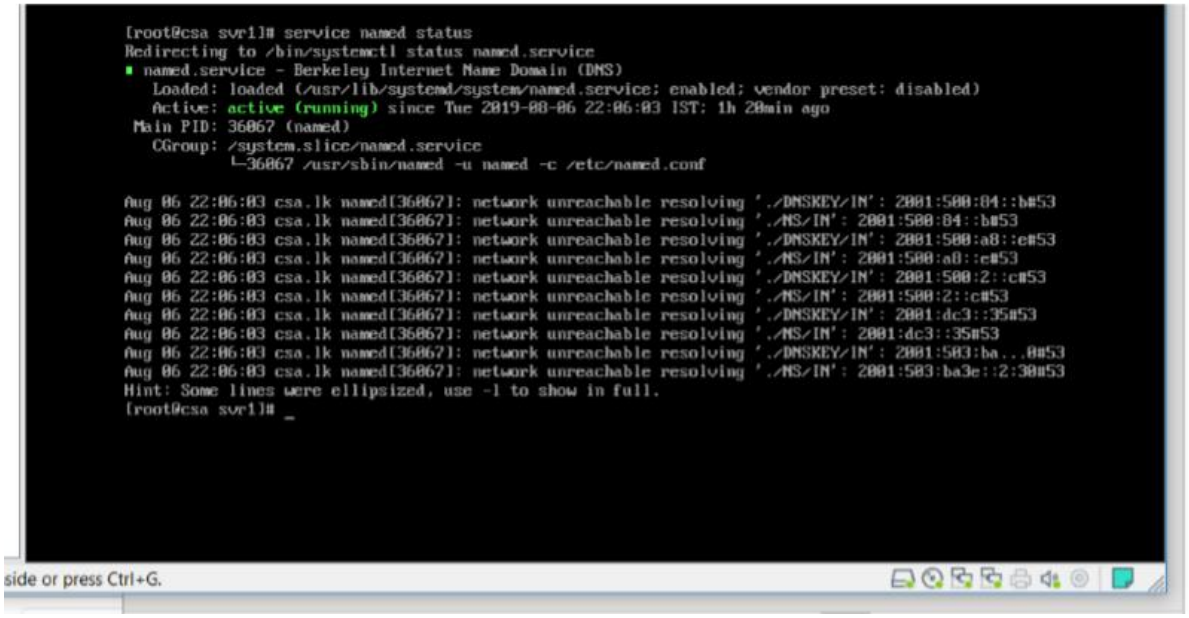

Figure 15

The check the configurations in configuration file.

Figure16

Then Dig command is used to query DNS in Linux. Is used for querying DNS server for various DNS record and useful in troubleshooting DNS problems, dig command can be used to perform different types of DNS lookups in Linux

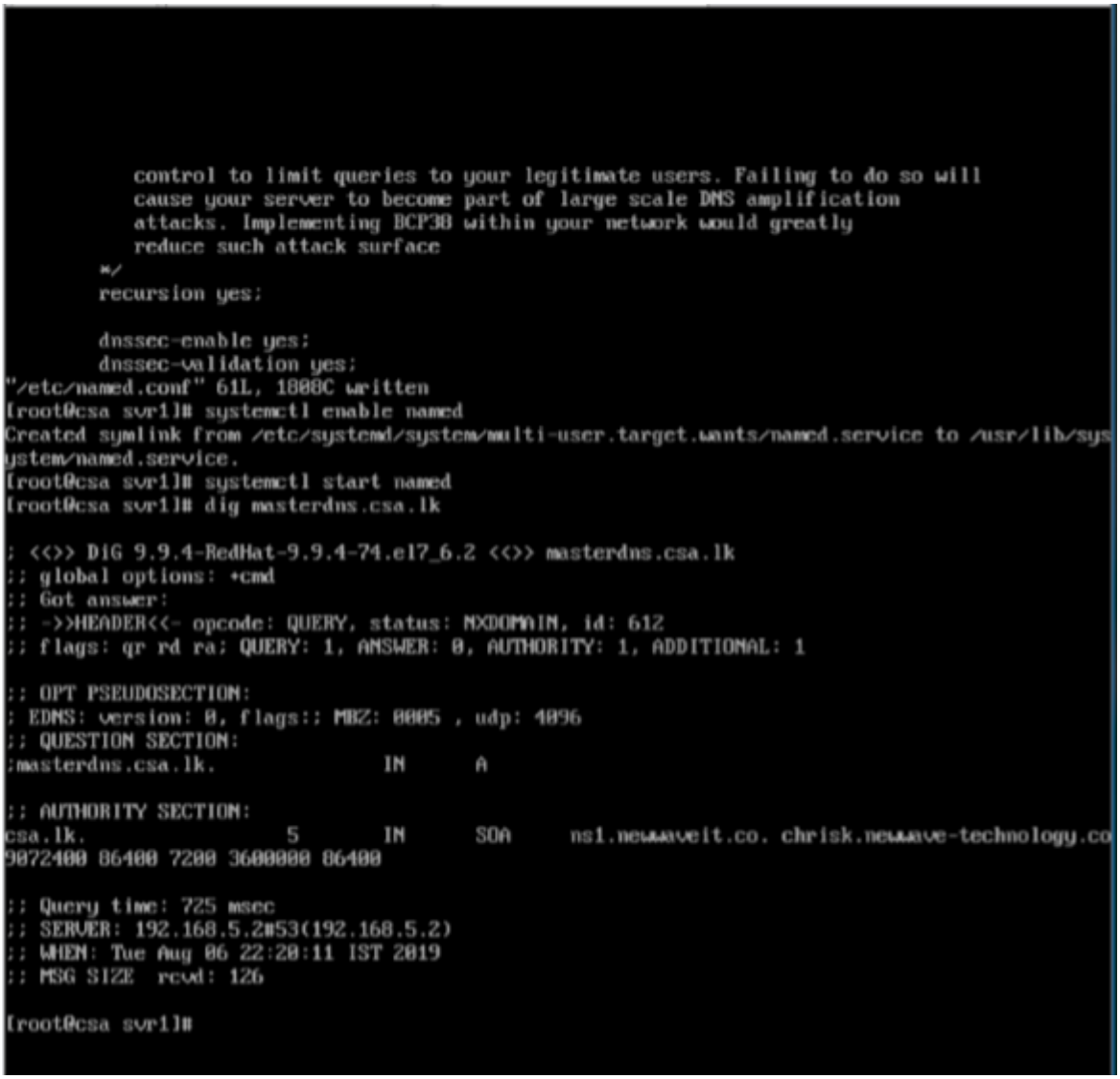

Figure 17

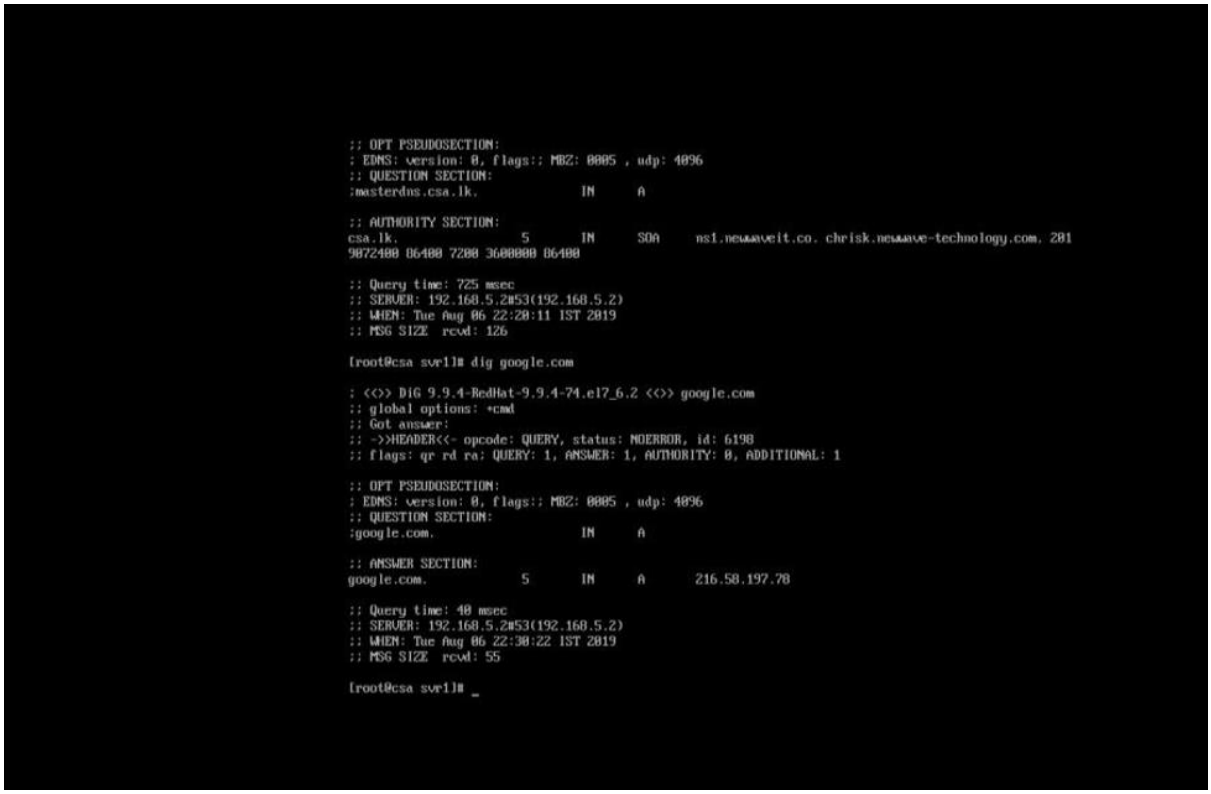
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; MBZ: 0005 , udp: 4096
;; QUESTION SECTION:
;masterdns.csa.lk.		IN	A
;; AUTHORITY SECTION:
csa.lk.		5	IN	SOA	ns1.newwaveit.co. chrisk.newwave-technology.com. 201
9072400 86400 7200 3600000 86400
;; Query time: 725 msec
;; SERVER: 192.168.5.2#53(192.168.5.2)
;; WHEN: Tue Aug 06 22:20:11 IST 2019
;; MSG SIZE rcvd: 126
[root@csa svr1]# dig google.com
; <<>> DiG 9.9.4-RedHat-9.9.4-74.el7_6.2 <<>> google.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 6198
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; MBZ: 0005 , udp: 4096
;; QUESTION SECTION:
;google.com.		IN	A
;; ANSWER SECTION:
google.com.		5	IN	A	216.58.197.78
;; Query time: 48 msec
;; SERVER: 192.168.5.2#53(192.168.5.2)
;; WHEN: Tue Aug 06 22:30:22 IST 2019
;; MSG SIZE rcvd: 55
[root@csa svr1]# _

Figure 18

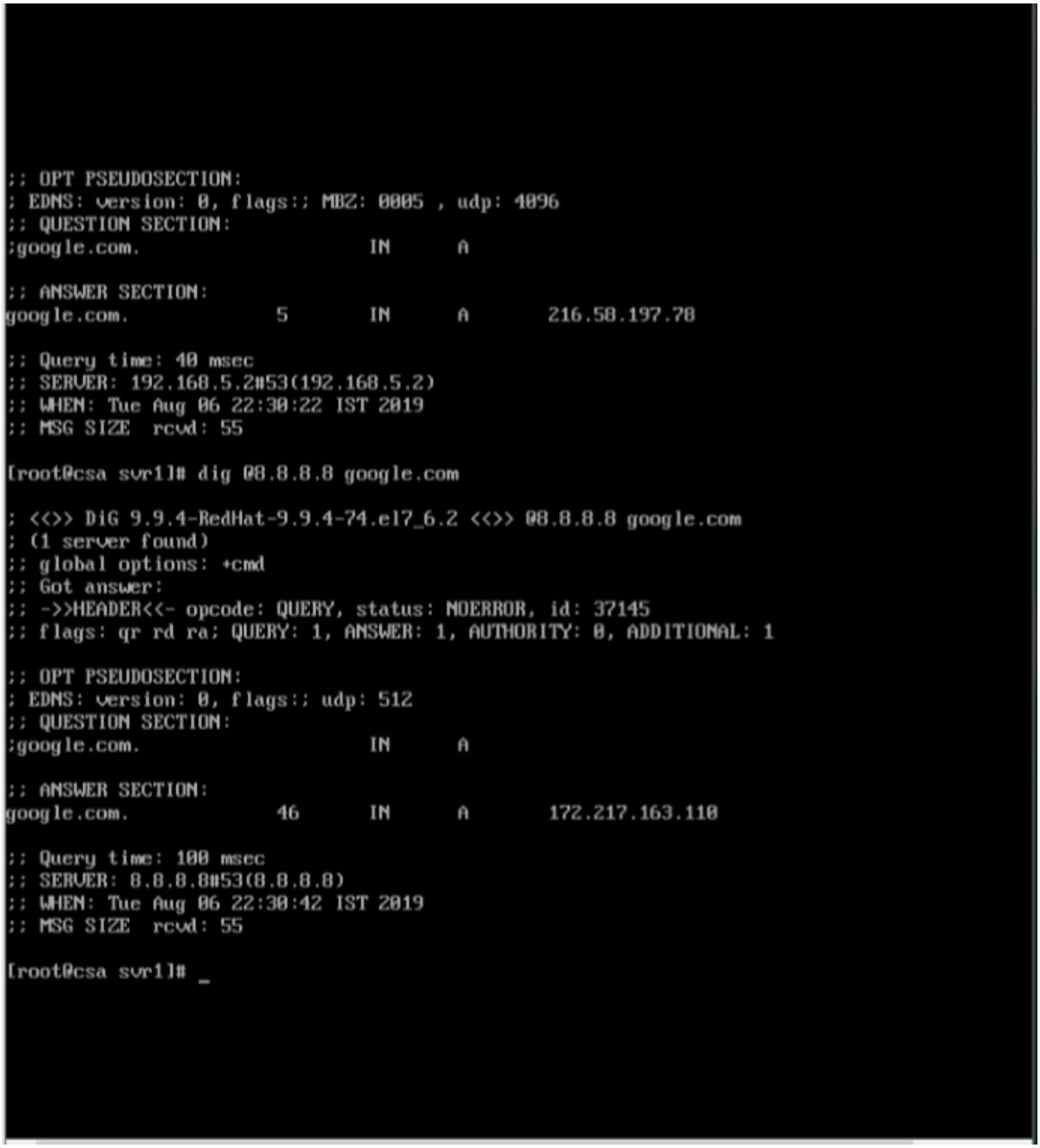
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; MBZ: 0005 , udp: 4096
;; QUESTION SECTION:
;google.com. IN A
;; ANSWER SECTION:
google.com. 5 IN A 216.58.197.78
;; Query time: 40 msec
;; SERVER: 192.168.5.2#53(192.168.5.2)
;; WHEN: Tue Aug 06 22:30:22 IST 2019
;; MSG SIZE rcvd: 55
[root@csa svr1]# dig @8.8.8.8 google.com
; <<>> DiG 9.9.4-RedHat-9.9.4-74.el7_6.2 <<>> @8.8.8.8 google.com
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 37145
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;google.com. IN A
;; ANSWER SECTION:
google.com. 46 IN A 172.217.163.110
;; Query time: 100 msec
;; SERVER: 8.8.8.8#53(8.8.8.8)
;; WHEN: Tue Aug 06 22:30:42 IST 2019
;; MSG SIZE rcvd: 55
[root@csa svr1]# _

Figure 19

Configure Zimbra Mail server

Connect Lan and Internet connected Interface and check connection using **ping 8.8.8.8** .

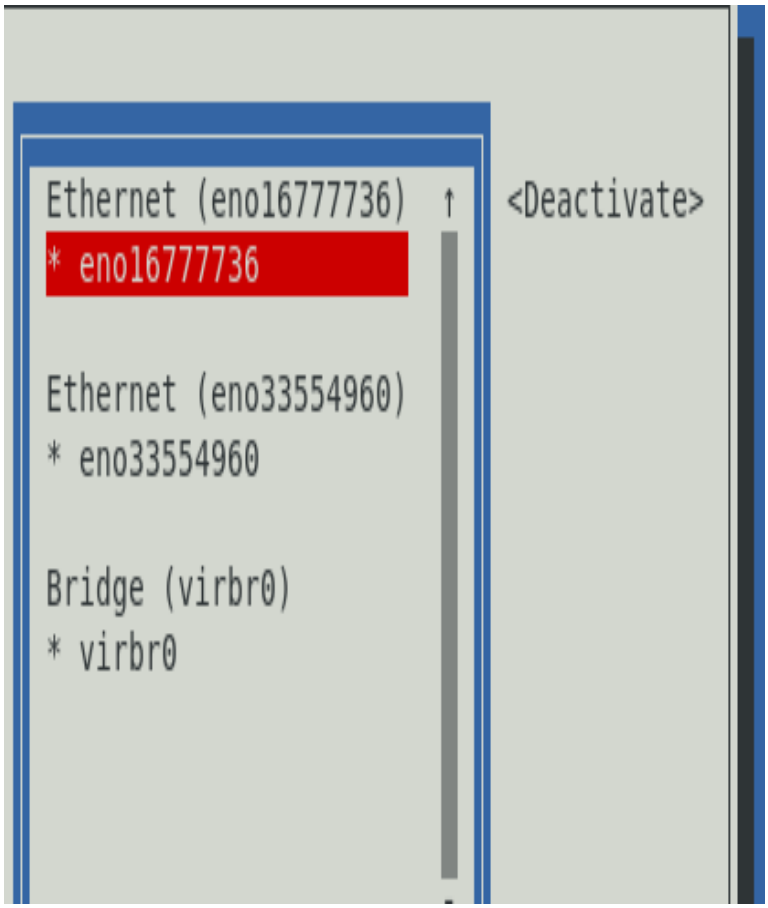

Figure 20

Install Packages using **Yum -y install <<pckage-name _space_ package-name>>**

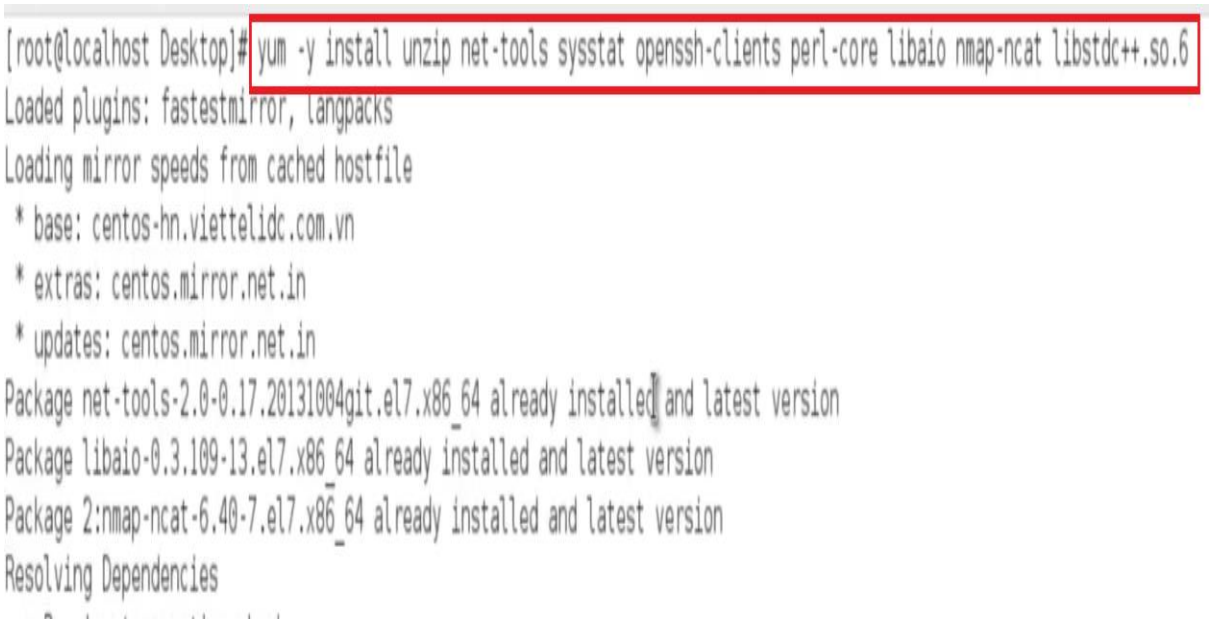

Figure 21

Disable SEL inux mode Temper

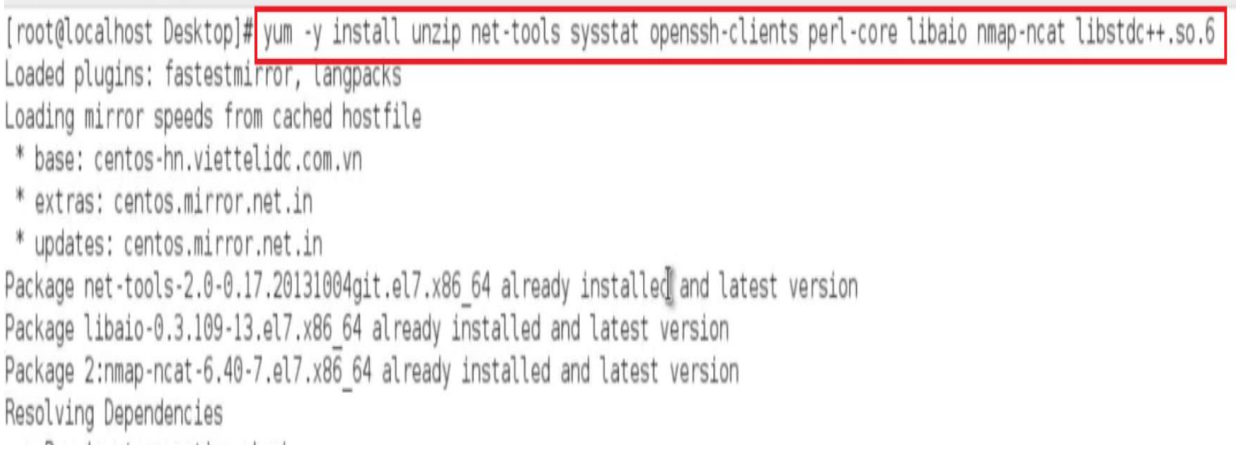

Figure 22

Remove Centos default MTA (postfix) using Yum disable postfix [disable if its enabled] & Yum remove postfix

After that go to the https://www.zimbra.com/downloads/zimbra-desktop/ & download Zimbra tar package

Download folder and copy that package to that your floder ,after that open terminal and go to the local and extract that package

Go inside the package and extract location and run **install.sh** file

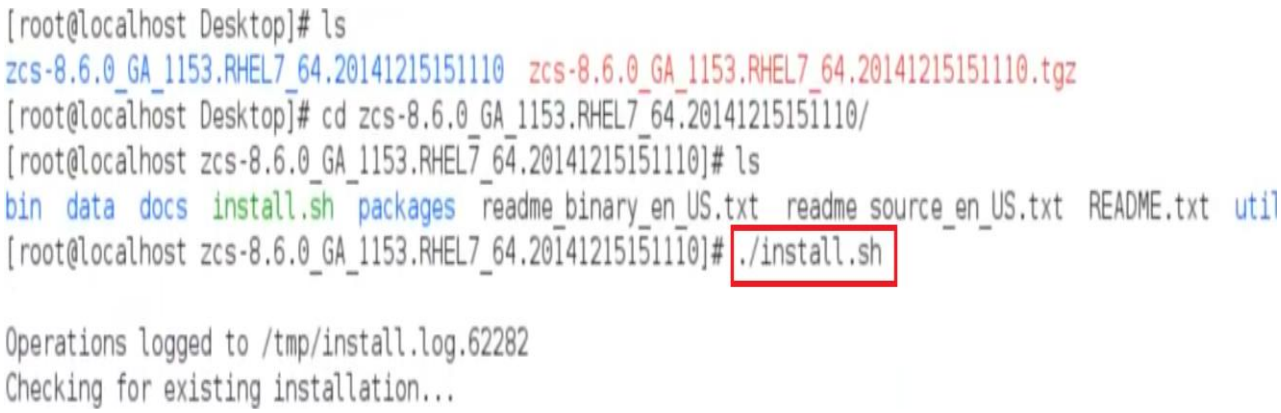

Figure 23

Give all permission to install all packages as “YES”

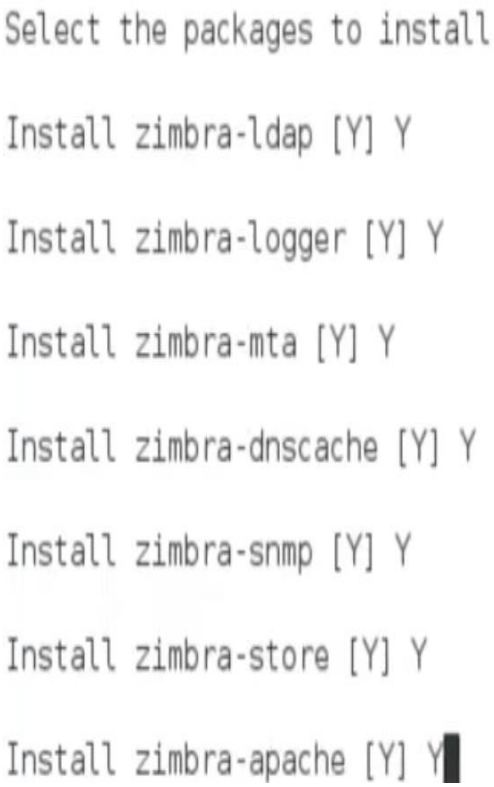

Figure 24

Do not change the host name and domain name after that set admin password for Zimbra

Figure 25

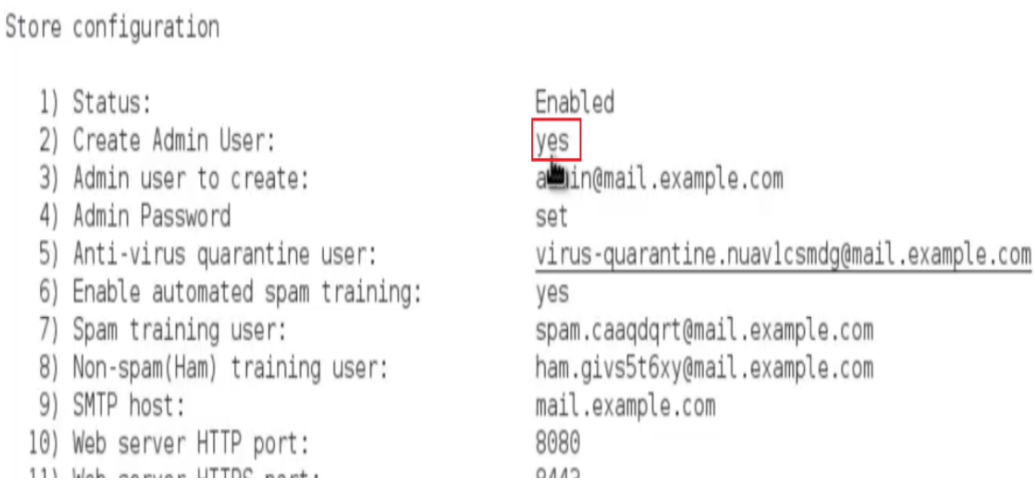

Figure 26

After the Installation go to the admin page of the Zimbra using browser https://10.0.1.2:7071 & create user and login to that user using https://10.0.1.2

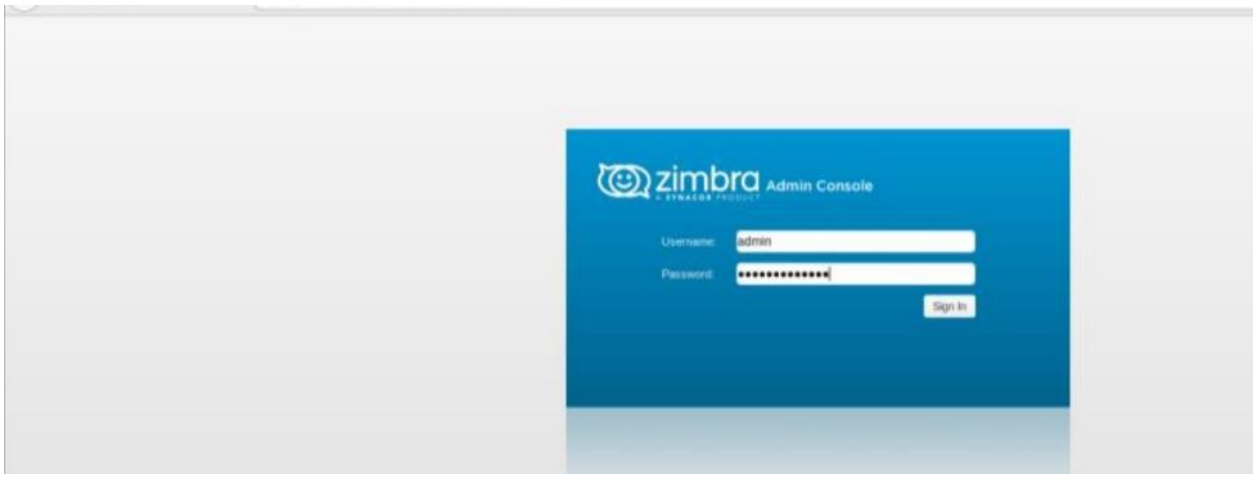

Figure 27

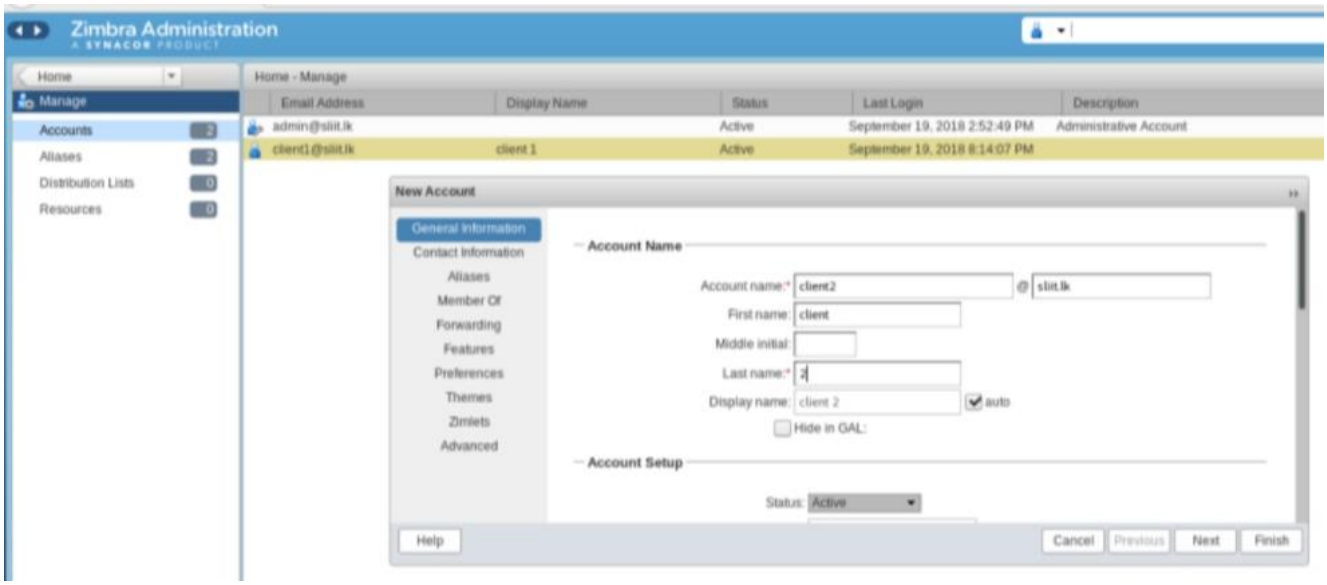

Figure 28

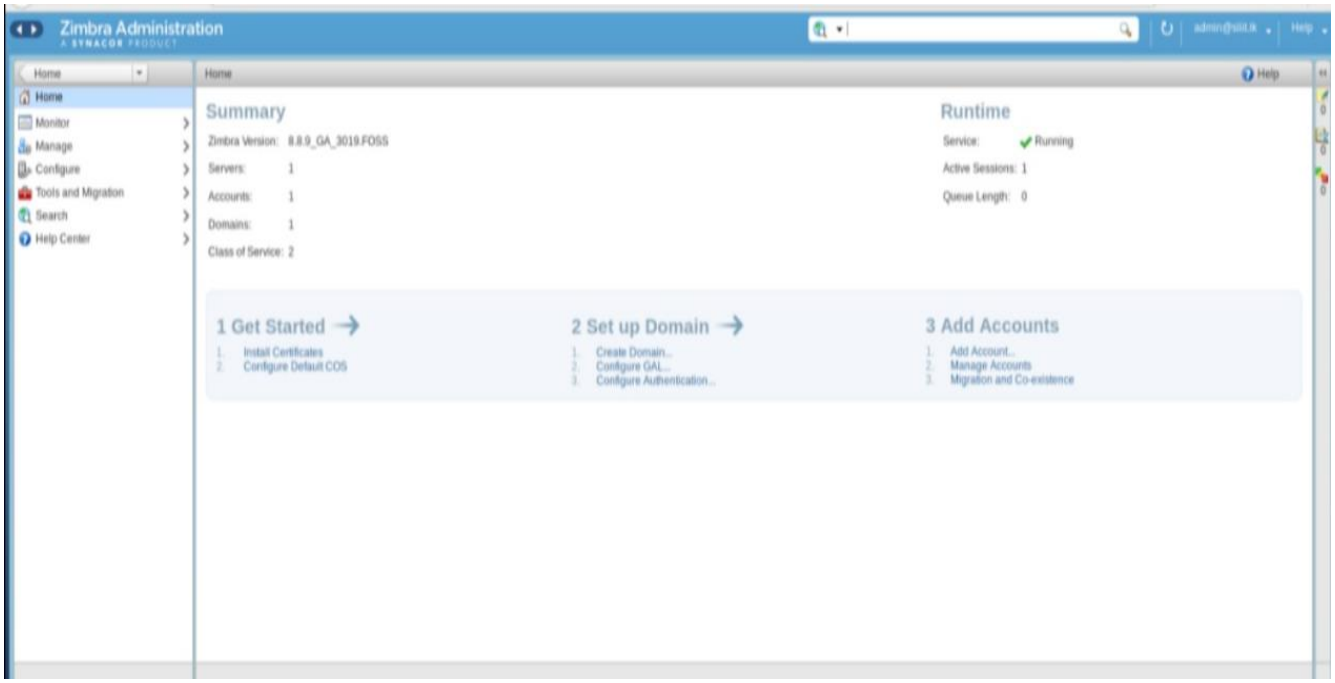

Figure 29

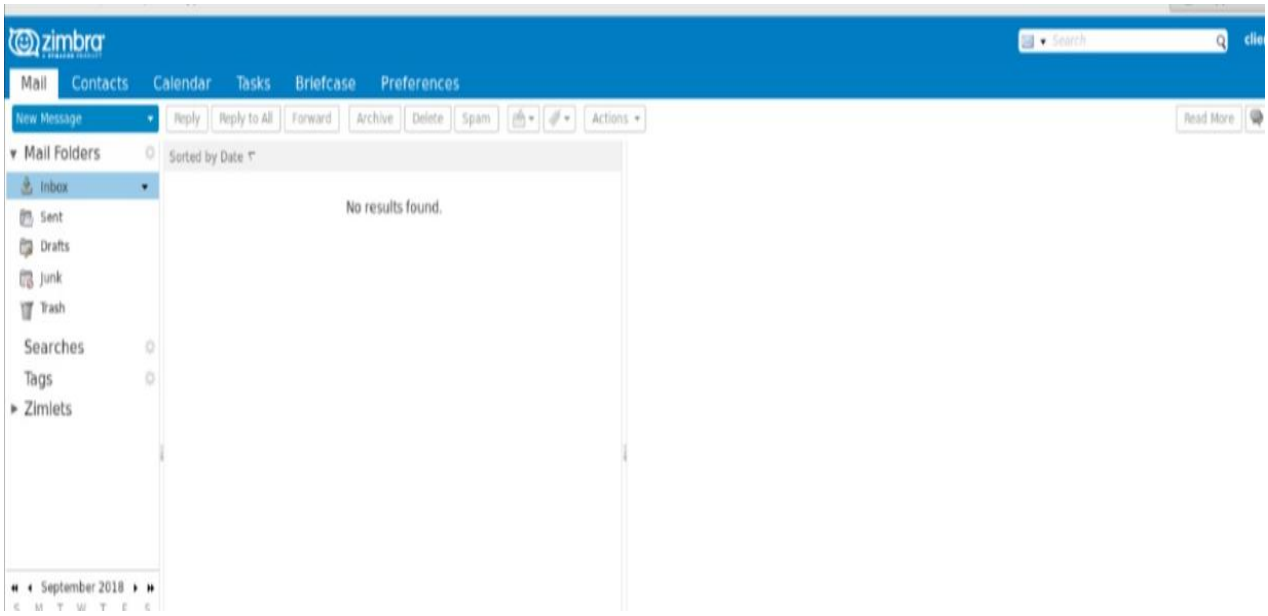
zimbra
Mail
Contacts
Calendar
Tasks
Briefcase
Preferences
New Message
Reply
Reply to All
Forward
Archive
Delete
Spam
Actions
Read More
Mail Folders
Inbox
Sent
Drafts
Junk
Trash
Searches
Tags
Zimlets
Sorted by Date
No results found.
September 2018

Figure 30

References

- https://www.tecmint.com/install-dhcp-server-in-centos-rhel-fedora/.
- https://www.itzgeek.com/how-tos/linux/ubuntu-how-tos/install-and-configure-dhcp-server-on-centos-7-ubuntu-14-04.html
- https://www.digitalocean.com/community/tutorials/how-to-configure-bind-as-a-private-network-dns-server-on-centos-7
- https://www.tecmint.com/install-zimbra-collaboration-suite-on-centos-rhel/