

Assignments:08

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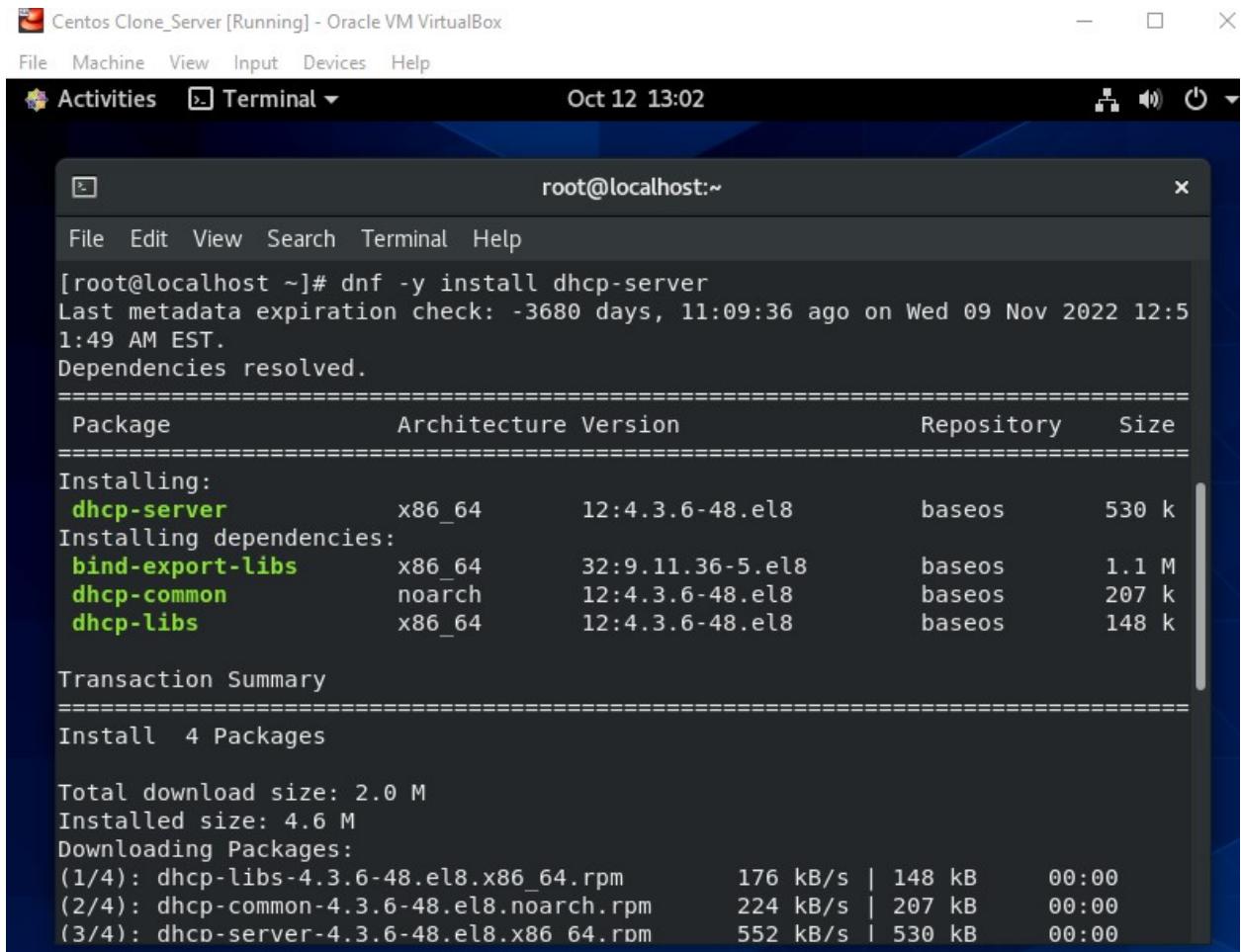
Lab Assignment :-

Configure DHCP server through your Centos-8 (VM machine)

SERVER:-

Step-1:- Install DHCP server

Cmd:- # dnf -y install dhcp-server

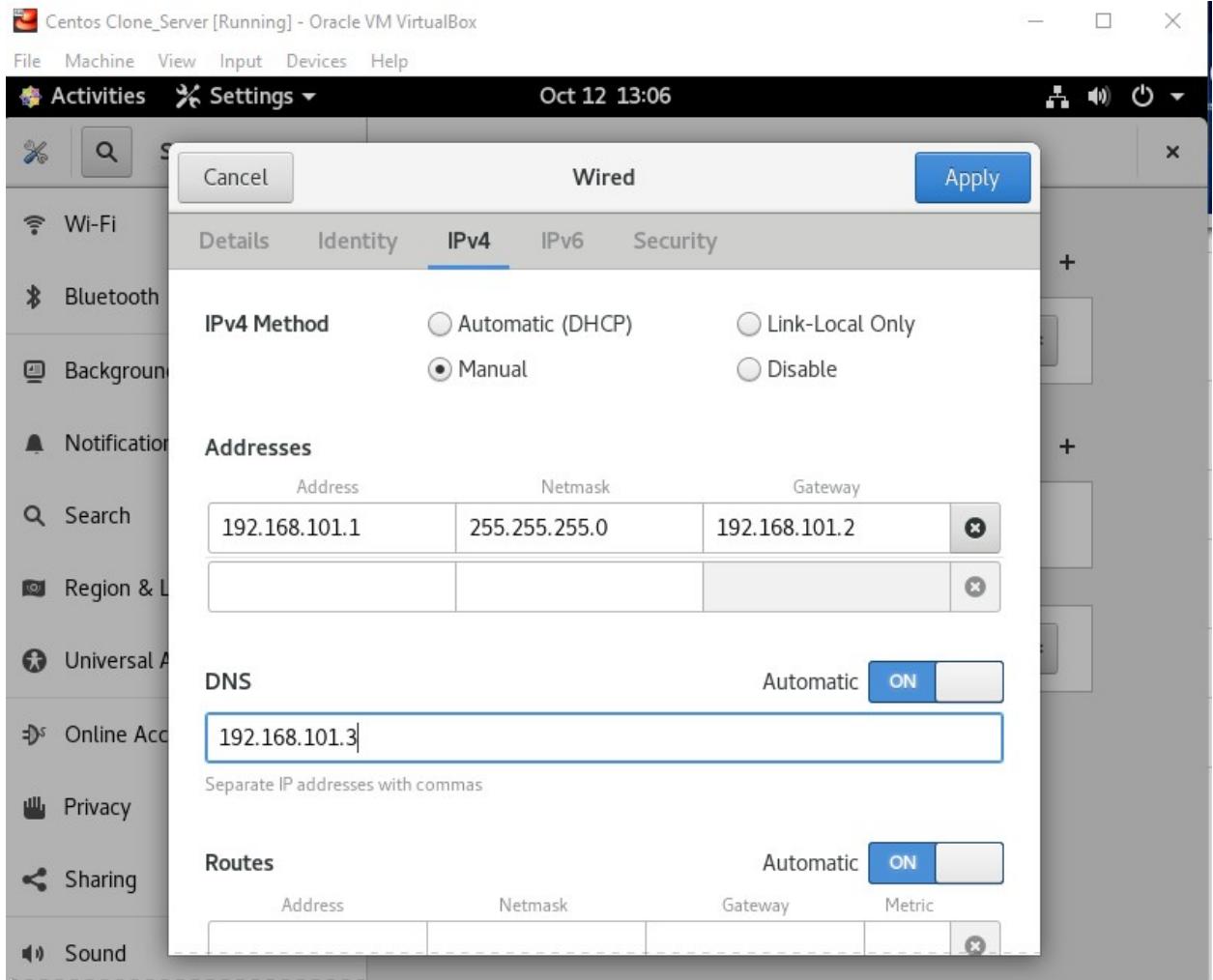


The screenshot shows a terminal window titled 'root@localhost:~' running on a Centos Clone_Server [Running] - Oracle VM VirtualBox. The terminal displays the command 'dnf -y install dhcp-server' being run by a root user. The output shows the dependencies being resolved and the packages being installed. The transaction summary indicates 4 packages will be installed, totaling 2.0 M download size and 4.6 M installed size. The download progress for three packages is shown at 00:00.

```
[root@localhost ~]# dnf -y install dhcp-server
Last metadata expiration check: -3680 days, 11:09:36 ago on Wed 09 Nov 2022 12:51:49 AM EST.
Dependencies resolved.
=====
 Package           Architecture Version      Repository  Size
 =====
 Installing:
  dhcp-server      x86_64        12:4.3.6-48.el8   baseos     530 k
 Installing dependencies:
  bind-export-libs  x86_64        32:9.11.36-5.el8  baseos     1.1 M
  dhcp-common       noarch       12:4.3.6-48.el8   baseos     207 k
  dhcp-libs         x86_64        12:4.3.6-48.el8   baseos     148 k
 Transaction Summary
 =====
 Install 4 Packages

 Total download size: 2.0 M
 Installed size: 4.6 M
 Downloading Packages:
 (1/4): dhcp-libs-4.3.6-48.el8.x86_64.rpm          176 kB/s | 148 kB    00:00
 (2/4): dhcp-common-4.3.6-48.el8.noarch.rpm        224 kB/s | 207 kB    00:00
 (3/4): dhcp-server-4.3.6-48.el8.x86_64.rpm        552 kB/s | 530 kB    00:00
```

Step-2:- configure Static ip address on DHCP server



Step -3:-Configure DHCP Server

```
root@localhost:~
```

File Edit View Search Terminal Tabs Help

root@localhost:~

```
#  
# DHCP Server Configuration file.  
#   see /usr/share/doc/dhcp-server/dhcpd.conf.example  
#   see dhcpcd.conf(5) man page  
  
#  
  
subnet 192.168.101.0 netmask 255.255.255.0{  
    range 192.168.101.4 192.168.101.203;  
    option routers 192.168.101.2;  
    domain-name-servers 192.168.101.3;  
    default-lease-time 600;  
    max-lease-time 7200;  
    option broadcast-address 192.168.101.255;  
}  
~  
~  
~  
~  
~  
~  
~  
~  
-- INSERT --
```

```
root@localhost:~
```

File Edit View Search Terminal Tabs Help

root@localhost:~

```
# No service will be given on this subnet, but declaring it helps the  
# DHCP server to understand the network topology.  
  
subnet 10.152.187.0 netmask 255.255.255.0 {  
}  
  
# This is a very basic subnet declaration.  
  
subnet 10.254.239.0 netmask 255.255.255.224 {  
    range 10.254.239.10 10.254.239.20;  
    option routers rtr-239-0-1.example.org, rtr-239-0-2.example.org;  
}  
  
# This declaration allows BOOTP clients to get dynamic addresses,  
# which we don't really recommend.  
  
subnet 10.254.239.32 netmask 255.255.255.224 {  
    range dynamic-bootp 10.254.239.40 10.254.239.60;  
    option broadcast-address 10.254.239.31;  
    option routers rtr-239-32-1.example.org;  
}
```

Step-4:- restart DHCP service

```
[root@localhost ~]# vi /etc/dhcp/dhcpcd.conf
[root@localhost ~]# systemctl restart dhcpcd.service
[root@localhost ~]# systemctl status dhcpcd.service
● dhcpcd.service - DHCPv4 Server Daemon
   Loaded: loaded (/usr/lib/systemd/system/dhcpcd.service; disabled; vendor pres>
   Active: active (running) since Fri 2012-10-12 13:28:10 EDT; 43s ago
     Docs: man:dhcpcd(8)
           man:dhcpcd.conf(5)
 Main PID: 37024 (dhcpcd)
   Status: "Dispatching packets..."
    Tasks: 1 (limit: 11222)
   Memory: 4.9M
      CGrou: /system.slice/dhcpcd.service
              └─37024 /usr/sbin/dhcpcd -f -cf /etc/dhcp/dhcpcd.conf -user dhcpcd -gro>

Oct 12 13:28:10 localhost.localdomain dhcpcd[37024]: ** Ignoring requests on vir>
Oct 12 13:28:10 localhost.localdomain dhcpcd[37024]:      you want, please write a>
Oct 12 13:28:10 localhost.localdomain dhcpcd[37024]:      in your dhcpcd.conf file >
Oct 12 13:28:10 localhost.localdomain dhcpcd[37024]:      to which interface virbr>
Oct 12 13:28:10 localhost.localdomain dhcpcd[37024]:      Listening on LPF/enp0s3/08:>
Oct 12 13:28:10 localhost.localdomain dhcpcd[37024]: Sending on   LPF/enp0s3/08:>
Oct 12 13:28:10 localhost.localdomain dhcpcd[37024]: Sending on   Socket/fallback>
Oct 12 13:28:10 localhost.localdomain dhcpcd[37024]: Server starting service.
```

Step-5:- check DHCP service status

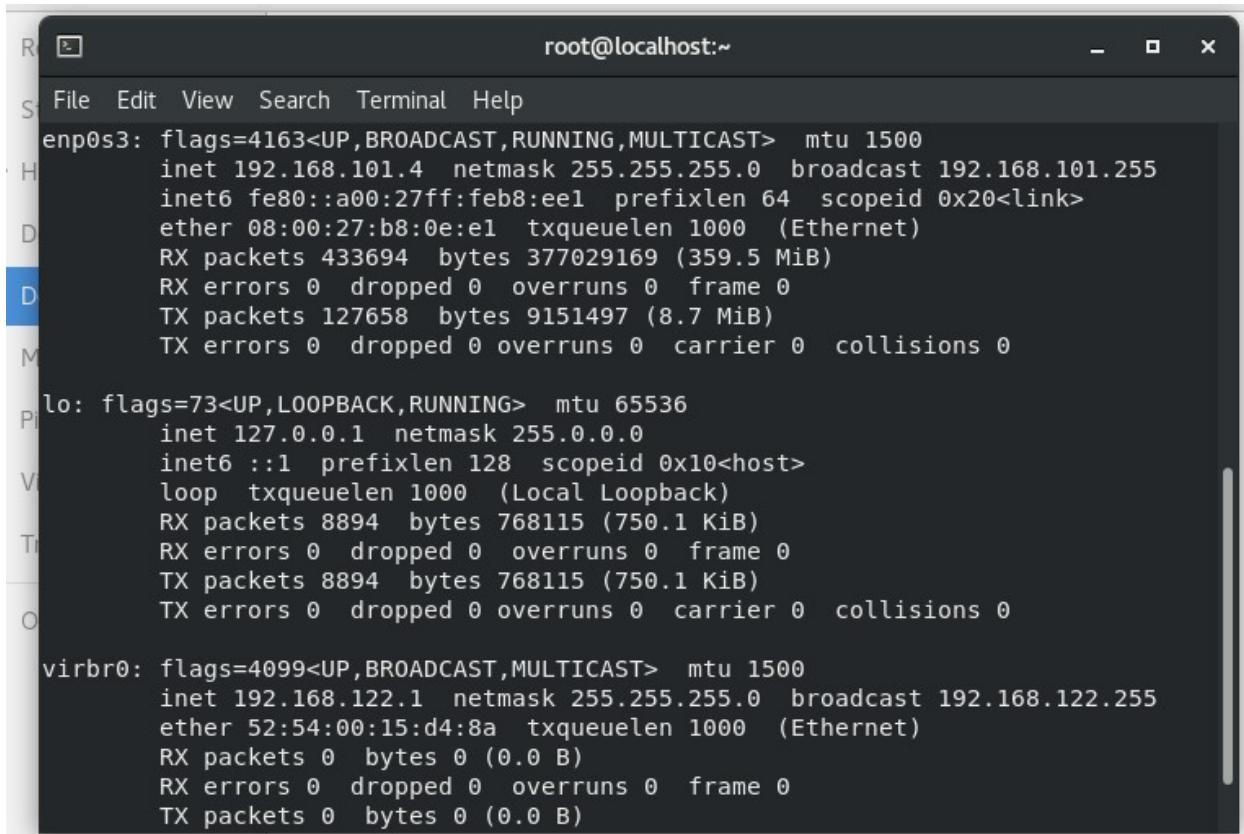
```
root@localhost:~
```

Active Internet connections (servers and established)					
Proto	Recv-Q	Send-Q	Local Address	Foreign Address	State
PID/Program name					
udp	0	0	192.168.122.1:53	0.0.0.0:*	
1599/dnsmasq	0	0	0.0.0.0:67	0.0.0.0:*	
37024/dhcpcd	0	0	0.0.0.0:67	0.0.0.0:*	
1599/dnsmasq	0	0	0.0.0.0:111	0.0.0.0:*	
1/systemd	0	0	0.0.0.0:50336	0.0.0.0:*	
795/avahi-daemon: r	0	0	0.0.0.0:5353	0.0.0.0:*	
795/avahi-daemon: r	0	0	127.0.0.1:323	0.0.0.0:*	
34406/chronyd	0	0	:::43947	:::*	
795/avahi-daemon: r	0	0	:::111	:::*	
1/systemd	0	0	:::5353	:::*	
795/avahi-daemon: r	0	0			

```
--More--
```

Client:-

Step-1:- to check DHCP connection



The screenshot shows a terminal window titled "root@localhost:~". The window contains a list of network interfaces and their statistics. The interfaces listed are enp0s3, lo, and virbr0. The output for each interface includes its flags, MTU, IP address, subnet mask, broadcast address, MAC address, and various counters for received and transmitted packets, bytes, errors, dropped packets, overruns, frame errors, carrier status, and collisions.

```
root@localhost:~  
File Edit View Terminal Help  
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
        inet 192.168.101.4 netmask 255.255.255.0 broadcast 192.168.101.255  
        inet6 fe80::a00:27ff:feb8:ee1 prefixlen 64 scopeid 0x20<link>  
          ether 08:00:27:b8:0e:e1 txqueuelen 1000  (Ethernet)  
            RX packets 433694 bytes 377029169 (359.5 MiB)  
            RX errors 0 dropped 0 overruns 0 frame 0  
            TX packets 127658 bytes 9151497 (8.7 MiB)  
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536  
      inet 127.0.0.1 netmask 255.0.0.0  
      inet6 ::1 prefixlen 128 scopeid 0x10<host>  
        loop txqueuelen 1000  (Local Loopback)  
          RX packets 8894 bytes 768115 (750.1 KiB)  
          RX errors 0 dropped 0 overruns 0 frame 0  
          TX packets 8894 bytes 768115 (750.1 KiB)  
          TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
virbr0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500  
      inet 192.168.122.1 netmask 255.255.255.0 broadcast 192.168.122.255  
        ether 52:54:00:15:d4:8a txqueuelen 1000  (Ethernet)  
          RX packets 0 bytes 0 (0.0 B)  
          RX errors 0 dropped 0 overruns 0 frame 0  
          TX packets 0 bytes 0 (0.0 B)
```