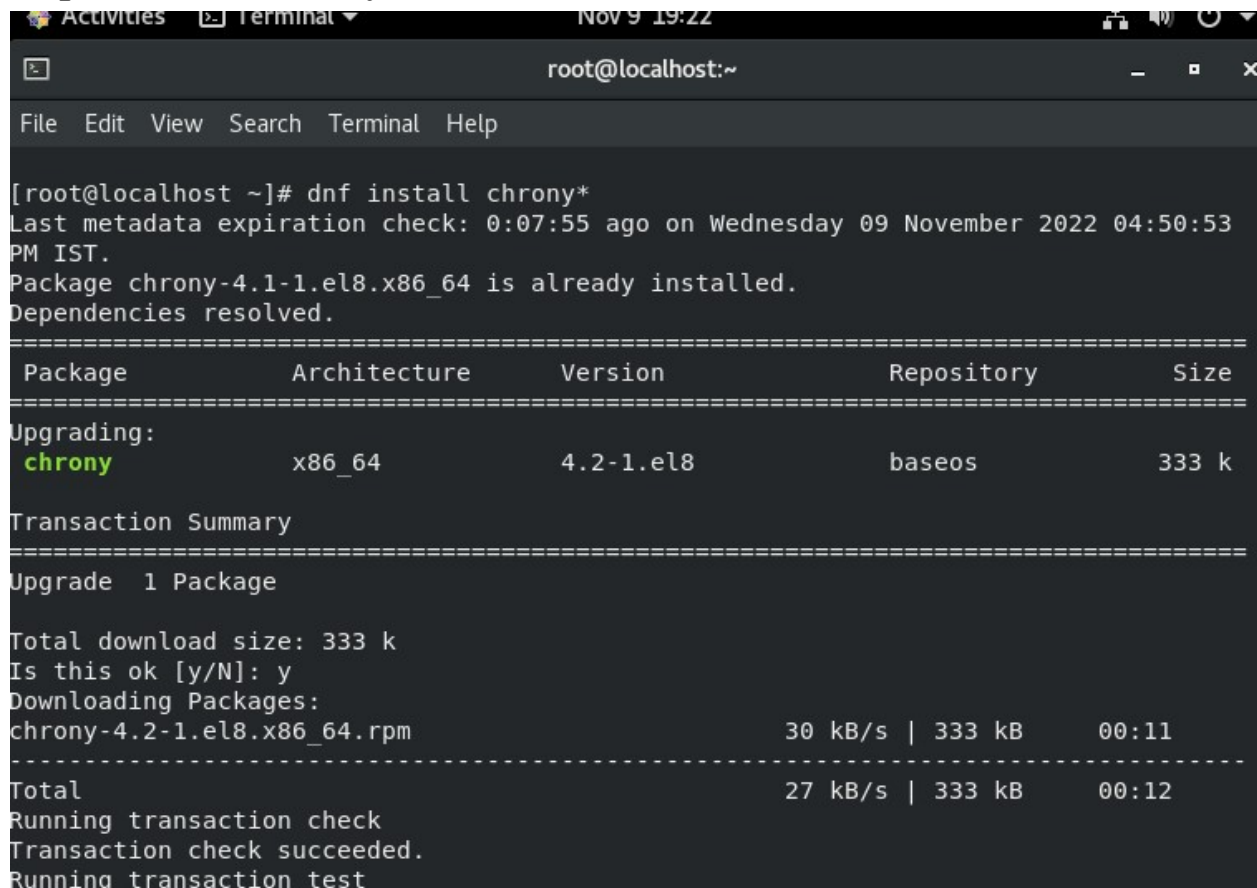


Assignments:08

Module:- COSA(NTP) Name:- Prithviraj Nikam

Configure NTP server and Client use pool "ntp.cdac.in" in the ntp server

Step-1:- install chrony



```
[root@localhost ~]# dnf install chrony*
Last metadata expiration check: 0:07:55 ago on Wednesday 09 November 2022 04:50:53 PM IST.
Package chrony-4.1-1.el8.x86_64 is already installed.
Dependencies resolved.
=====
Package                Architecture      Version           Repository        Size
=====
Upgrading:
chrony                  x86_64            4.2-1.el8         baseos             333 k
Transaction Summary
=====
Upgrade 1 Package

Total download size: 333 k
Is this ok [y/N]: y
Downloading Packages:
chrony-4.2-1.el8.x86_64.rpm                30 kB/s | 333 kB    00:11
-----
Total                                      27 kB/s | 333 kB    00:12
Running transaction check
Transaction check succeeded.
Running transaction test
```

Step -2:- check status chronyd

```
Activities Terminal Nov 9 19:23
root@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; disabled; vendor prese>
   Active: inactive (dead)
     Docs: man:chronyd(8)
           man:chrony.conf(5)

[root@localhost ~]# systemctl enable --now chronyd
Created symlink /etc/systemd/system/multi-user.target.wants/chronyd.service → /usr/
lib/systemd/system/chronyd.service.
[root@localhost ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled; vendor preset>
   Active: active (running) since Wed 2022-11-09 17:00:58 IST; 25s ago
     Docs: man:chronyd(8)
           man:chrony.conf(5)
  Process: 8221 ExecStartPost=/usr/libexec/chrony-helper update-daemon (code=exite>
  Process: 8217 ExecStart=/usr/sbin/chronyd $OPTIONS (code=exited, status=0/SUCCE>
 Main PID: 8219 (chronyd)
    Tasks: 1 (limit: 61100)
   Memory: 900.0K
    CGroup: /system.slice/chronyd.service
            └─8219 /usr/sbin/chronyd

Nov 09 17:00:57 localhost.localdomain systemd[1]: Starting NTP client/server...
```

Step-3:- run timedatectl

```
Activities Terminal Nov 9 19:23
root@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# timedatectl
      Local time: Wed 2022-11-09 17:03:17 IST
      Universal time: Wed 2022-11-09 11:33:17 UTC
           RTC time: Wed 2022-11-09 11:33:17
       Time zone: Asia/Kolkata (IST, +0530)
System clock synchronized: no
      NTP service: active
      RTC in local TZ: no
[root@localhost ~]# vi /etc/chrony.conf
[root@localhost ~]# systemctl restart chronyd
[root@localhost ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled; vendor preset>
   Active: active (running) since Wed 2022-11-09 17:13:49 IST; 1min 48s ago
     Docs: man:chronyd(8)
           man:chrony.conf(5)
  Process: 8391 ExecStopPost=/usr/libexec/chrony-helper remove-daemon-state (code=>
  Process: 8402 ExecStartPost=/usr/libexec/chrony-helper update-daemon (code=exite>
  Process: 8396 ExecStart=/usr/sbin/chronyd $OPTIONS (code=exited, status=0/SUCCE>
 Main PID: 8400 (chronyd)
    Tasks: 1 (limit: 61100)
   Memory: 956.0K
    CGroup: /system.slice/chronyd.service
            └─8400 /usr/sbin/chronyd
```

Step-4:- config the crony file

```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# vi /etc/chrony.conf  
[root@localhost ~]# systemctl restart chronyd  
[root@localhost ~]# systemctl status chronyd  
● chronyd.service - NTP client/server  
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled; vendor preset=enabled)  
   Active: active (running) since Wed 2022-11-09 17:18:26 IST; 4s ago  
     Docs: man:chronyd(8)  
           man:chrony.conf(5)  
   Process: 8480 ExecStopPost=/usr/libexec/chrony-helper remove-daemon-state (code=exited, status=0/SUCCESS)  
   Process: 8490 ExecStartPost=/usr/libexec/chrony-helper update-daemon (code=exited, status=0/SUCCESS)  
   Process: 8485 ExecStart=/usr/sbin/chronyd $OPTIONS (code=exited, status=0/SUCCESS)  
 Main PID: 8488 (chronyd)  
    Tasks: 1 (limit: 61100)  
   Memory: 968.0K  
    CGroup: /system.slice/chronyd.service  
            └─8488 /usr/sbin/chronyd  
  
Nov 09 17:18:26 localhost.localdomain systemd[1]: Starting NTP client/server...  
Nov 09 17:18:26 localhost.localdomain chronyd[8488]: chronyd version 4.2 starting  
Nov 09 17:18:26 localhost.localdomain chronyd[8488]: Frequency 0.000 +/- 1000000.0  
Nov 09 17:18:26 localhost.localdomain chronyd[8488]: Using right/UTC timezone to o  
Nov 09 17:18:26 localhost.localdomain systemd[1]: Started NTP client/server.  
  
[root@localhost ~]# firewall-cmd --permanent --add-service=ntp --zone=public  
Firewalld is not running
```

Step-5:- To set Ntp firewall

```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# firewall-cmd --permanent --add-service=ntp --zone=public  
Firewalld is not running  
[root@localhost ~]# firewall-cmd --reload  
Firewalld is not running  
[root@localhost ~]# systemctl start firewalld  
[root@localhost ~]# firewall-cmd --permanent --add-service=ntp --zone=public  
success  
[root@localhost ~]# firewall-cmd --reload  
success  
[root@localhost ~]# vi /etc/chrony.conf  
[root@localhost ~]# systemctl restart chronyd  
[root@localhost ~]# systemctl stop firewalld  
[root@localhost ~]# iptables -F  
[root@localhost ~]# ifconfig  
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 192.168.3.58 netmask 255.255.255.0 broadcast 192.168.3.255  
    inet6 fe80::a00:27ff:fe7e:411 prefixlen 64 scopeid 0x20<link>  
    ether 08:00:27:7e:04:11 txqueuelen 1000 (Ethernet)  
    RX packets 43486 bytes 8299979 (7.9 MiB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 889 bytes 79827 (77.9 KiB)  
    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
```


Step-6:-stop firewall run ifconfig

```
root@localhost:~  
File Edit View Search Terminal Help  
root@localhost ~]# vi /etc/chrony.conf  
root@localhost ~]# vi /etc/chrony.conf  
root@localhost ~]# systemctl restart chronyd  
root@localhost ~]# systemctl stop firewalld  
root@localhost ~]# ifconfig  
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 192.168.3.58 netmask 255.255.255.0 broadcast 192.168.3.255  
    inet6 fe80::a00:27ff:fe7e:411 prefixlen 64 scopeid 0x20<link>  
    ether 08:00:27:7e:04:11 txqueuelen 1000 (Ethernet)  
    RX packets 44675 bytes 8544670 (8.1 MiB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 927 bytes 83063 (81.1 KiB)  
    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 24 bytes 2040 (1.9 KiB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 24 bytes 2040 (1.9 KiB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
virbr0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
```

Step-7:- Run chrony clients and services

```
[root@localhost ~]# iptables -F  
[root@localhost ~]# chronyc clients  
Hostname NTP Drop Int IntL Last Cmd Drop Int Last  
=====
```

Hostname	NTP	Drop	Int	IntL	Last	Cmd	Drop	Int	Last
time.cloudflare.com	0	7	0	-	+0ns[+0ns]	+/ -	0ns		
any.time.nl	0	7	0	-	+0ns[+0ns]	+/ -	0ns		
static.15.192.216.95.cli>	0	6	0	-	+0ns[+0ns]	+/ -	0ns		
139.59.15.185	0	6	0	-	+0ns[+0ns]	+/ -	0ns		
ntp5.mum-in.hosts.301-mo>	0	7	0	-	+0ns[+0ns]	+/ -	0ns		
129.154.46.154	0	6	0	-	+0ns[+0ns]	+/ -	0ns		
ntp.qntmnet.com	0	6	0	-	+0ns[+0ns]	+/ -	0ns		
103.134.252.11	0	7	0	-	+0ns[+0ns]	+/ -	0ns		
mail.cdacgist.in	0	7	0	-	+0ns[+0ns]	+/ -	0ns		

```
[root@localhost ~]# chronyc sources  
MS Name/IP address Stratum Poll Reach LastRx Last sample  
=====
```

MS Name/IP address	Stratum	Poll	Reach	LastRx	Last sample
time.cloudflare.com	0	7	0	-	+0ns[+0ns]
any.time.nl	0	7	0	-	+0ns[+0ns]
static.15.192.216.95.cli>	0	6	0	-	+0ns[+0ns]
139.59.15.185	0	6	0	-	+0ns[+0ns]
ntp5.mum-in.hosts.301-mo>	0	7	0	-	+0ns[+0ns]
129.154.46.154	0	6	0	-	+0ns[+0ns]
ntp.qntmnet.com	0	6	0	-	+0ns[+0ns]
103.134.252.11	0	7	0	-	+0ns[+0ns]
mail.cdacgist.in	0	7	0	-	+0ns[+0ns]

```
[root@localhost ~]# chronyc clients  
Hostname NTP Drop Int IntL Last Cmd Drop Int Last  
=====
```

Hostname	NTP	Drop	Int	IntL	Last	Cmd	Drop	Int	Last
192.168.3.109	8	0	1	-	15	0	0	-	-

```
[root@localhost ~]#
```