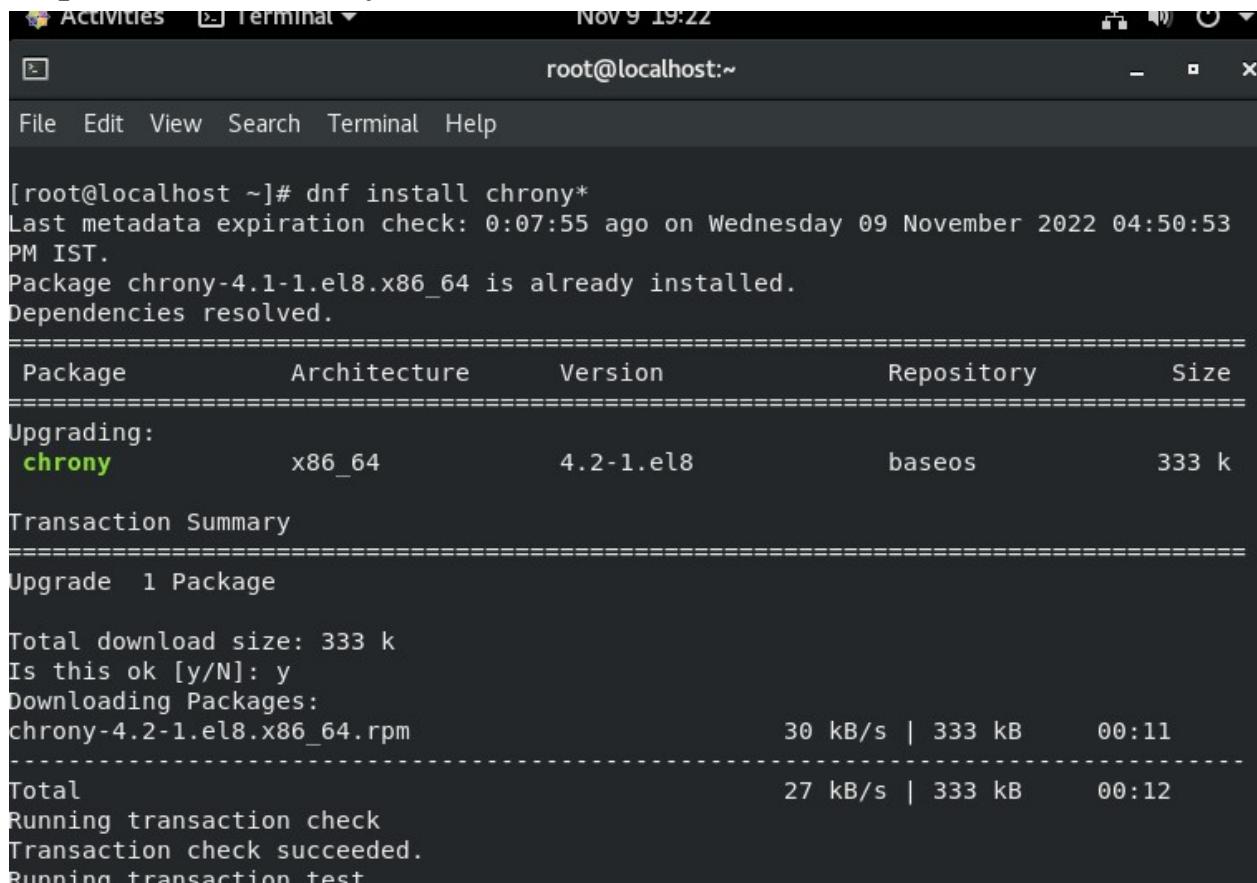


## Assignments:08

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

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

Step-1:- install chrony



The screenshot shows a terminal window titled 'Activities Terminal' with the date and time 'Nov 9 19:22'. The window title bar also shows 'root@localhost:~'. The terminal window has a dark background and light-colored text. It displays the command 'dnf install chrony\*' followed by its output. The output shows that the package 'chrony-4.1.1.el8.x86\_64' is already installed, dependencies are resolved, and it is upgrading to version 4.2.1.el8. The transaction summary shows one package being upgraded from x86\_64 to x86\_64. The download size is 333 k, and the transaction took approximately 00:12. The transaction check succeeded.

```
[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 preset: enabled)
  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: enabled)
  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=exited, status=0/SUCCESS)
  Process: 8217 ExecStart=/usr/sbin/chronyd $OPTIONS (code=exited, status=0/SUCCESS)
  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: enabled)
  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=exited, status=0/SUCCESS)
  Process: 8402 ExecStartPost=/usr/libexec/chrony-helper update-daemon (code=exited, status=0/SUCCESS)
  Process: 8396 ExecStart=/usr/sbin/chronyd $OPTIONS (code=exited, status=0/SUCCESS)
  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 +/- 10000000.0
Nov 09 17:18:26 localhost.localdomain chronyd[8488]: Using right/UTC timezone to obtain time
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
=====
[root@localhost ~]# chronyc clients
Hostname          NTP   Drop Int IntL Last      Cmd   Drop Int  Last
=====
[root@localhost ~]# chronyc sources
MS Name/IP address      Stratum Poll Reach LastRx Last sample
=====
^? 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 clients
Hostname          NTP   Drop Int IntL Last      Cmd   Drop Int  Last
=====
192.168.3.109          8    0    1    -    15      0    0    -    -
[root@localhost ~]#
```