#### **NTP (Network Time Protocol)**

NTP is a protocol which runs over port 123 UDP.

Internet is complusary

NTP synchronize clients time and date with a master server.

The NTP package is no longer supported in RHEL 8 Chrony is default NTP client as well as an NTP sever on REDHAT 8.

In the world of NTP, stratum levels define the distance from the reference clock. A reference clock is a stratum-0 device that is assumed to be accurate and has little or no delay associated with it.

The NTP Stratum model is a representation of the hierarchy of time servers in an NTP network, where the Stratum level (0-15) indicates the device's distance to the reference clock. Stratum 0 means a device is directly connected to e.g., a GPS antenna.

```
Install chrony
[root@vivek ~] # dnf install chrony -y
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered to Red Hat Subscription Management. You can use su
bscription-manager to register.
Last metadata expiration check: 12:53:26 ago on Thu 24 Feb 2022 10:25:54 AM EST.
Package chrony-3.5-1.el8.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
```

#### Firewall port enable

```
[root@vivek /]# firewall-cmd --permanent --add-service=ntp
success
[root@vivek /]# firewall-cmd --reload
success
[root@vivek /]#
```

### **Configuration file change**

```
[root@vivek /] # vim /etc/chrony.conf
```

allow configuration directive and uncomment it and set its value to the network or subnet address from which the clients are allowed to connect

```
# Allow NTP client access from local network.
#allow 192.168.0.0/16
allow 192.168.254.139/2<mark>4</mark>
```

# restart the chronyd service configuration to apply the recent changes [root@vivek /]# systemctl restart chronyd

[root@wivek /]# 5y5

#### Port verifies in server

14414/chronyd

#### Firewall side port check enable or not

```
[root@vivek ~] # firewall-cmd --permanent --add-port=123/udp
success
[root@vivek ~] # firewall-cmd --reload
success
[root@vivek ~] # firewall-cmd --list-all
public (active)
    target: default
    icmp-block-inversion: no
    interfaces: ens160
    sources:
    services: cockpit dhcpv6-client ftp mountd nfs ntp rpc-bind ssh
    ports: 21/tcp 20/tcp 64000-64321/tcp 514/tcp 514/udp 123/udp
    protocols:
    masquerade: no
    forward-ports:
    source-ports:
    icmp-blocks:
    rich publics:
```

## **Chrony checked shrink or not**

#### Client side install application

```
[root@pooja ~] # yum install chrony -y
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered to Red Hat Subscription Management. You can use su bscription-manager to register.
Repository rhel8 is listed more than once in the configuration
Repository baseos is listed more than once in the configuration
Last metadata expiration check: 0:33:02 ago on Thursday 24 February 2022 11:18:1
4 PM EST.
Package chrony-3.5-1.el8.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
```

#### start, enable and verify the chronyd service status

```
[root@pooja ~]# vim /etc/chrony.conf
[root@pooja ~]# vim /etc/chrony.conf
```

#### default NTP servers specified as the value of the server directive

#### root@client:~

```
# Use public servers from the pool.ntp.org project.
# Please consider joining the pool (http://www.pool.ntp.org/join.html).
pool 2.rhel.pool.ntp.org iburst
server 192.168.254.133 iburst prefer
```

```
restart the chronyd service configurations
[root@pooja ~]# systemctl restart chronyd
```

```
Date and time changed locally

[root@pooja ~]# date -s "Thu Feb 25 10:00:58 EST 2022"

Fri Feb 25 10:00:58 EST 2022

[root@pooja ~]#

[root@pooja ~]# date

Fri Feb 25 10:01:01 EST 2022

[root@pooja ~]#
```

#### **Check server-side date and time**

```
[root@vivek ~]# date
Fri Feb 25 11:12:56 EST 2022
[root@vivek ~]#
```

```
[root@pooja ~] # systemctl restart chronyd
```

#### root@client:~

## On the server, run the following command to display information about NTP clients assessing the NTP server

```
Chronyc packeage status

[root@vivek ~] # chronyc serverstats

NTP packets received : 3

NTP packets dropped : 0

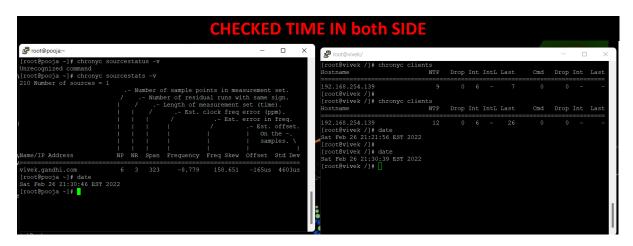
Command packets received : 3

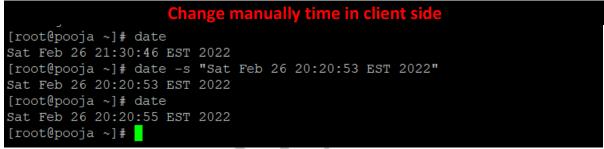
Command packets dropped : 0

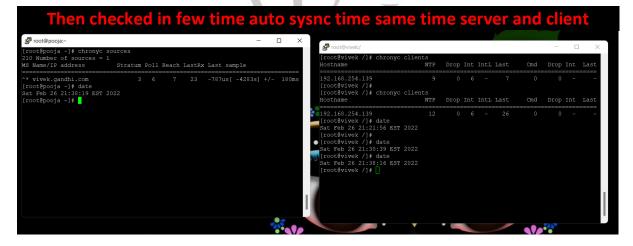
Client log records dropped : 0

[root@vivek ~] #
```

#### **TASK AUTO CHANGE TIME BOTH TIME SAME AUTOMATIC**







Task completed...