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Tutorials

- [How to Sync Linux Time With NTP Server - Make Tech Easier](#)

Chrony

Built-in on CentOS/RedHat

- [CHAPTER 18. CONFIGURING NTP USING THE CHRONY SUITE](#)
- [CentOS / RHEL 7 : Configuring NTP using chrony](#)
- [How do I check Linux system's current NTP configuration](#)

Install

```
yum install chrony
```

Config: /etc/chrony.conf

```
# NTP Public Servers for Taiwan
server tw.pool.ntp.org
server time.stdtime.gov.tw
server clock.stdtime.gov.tw
server jp.pool.ntp.org

# Allow NTP client access from local network.
#allow 192.168.0.0/16
```

Starting

```
systemctl start chronyd
```

Verify

```
[root@localhost ~]# chronyc tracking
Reference ID      : 7A75FDF6 (static.home.twn.sciuridae.cloud)
Stratum          : 3
Ref time (UTC)   : Sun Aug 16 03:35:36 2020
System time      : 0.000073180 seconds slow of NTP time
Last offset      : -0.001259724 seconds
RMS offset       : 0.001259724 seconds
Frequency        : 21.057 ppm slow
Residual freq    : -0.000 ppm
Skew             : 28.166 ppm
Root delay       : 0.032856792 seconds
Root dispersion  : 0.002069760 seconds
Update interval  : 64.3 seconds
Leap status      : Normal    <===
```

```
[root@tpemimtst99 ~]# timedatectl
          Local time: Tue 2021-05-25 09:09:09 CST
          Universal time: Tue 2021-05-25 01:09:09 UTC
            RTC time: Tue 2021-05-25 01:09:09
            Time zone: Asia/Taipei (CST, +0800)
System clock synchronized: yes    <===
          NTP service: active
          RTC in local TZ: no
```

```
[root@tpemimtst99 ~]# chronyc sources
210 Number of sources = 1
MS Name/IP address          Stratum Poll Reach LastRx Last sample
=====
^* 192.168.21.86             3 10 377 754 +1543ns[+4123ns] +/- 63ms
```

systemd-timesyncd

Build-in on Ubuntu

- [Control your computer time and date with systemd](#)

Installation

```
sudo apt install systemd-timesyncd
```

The configuration file for systemd-timesyncd is `/etc/systemd/timesyncd.conf`.

```
[Time]
#NTP=
#FallbackNTP=0.debian.pool.ntp.org 1.debian.pool.ntp.org 2.debian.pool.ntp.org
3.debian.pool.ntp.org
#RootDistanceMaxSec=5
#PollIntervalMinSec=32
#PollIntervalMaxSec=2048
```

Specify the time server as follows

```
NTP=<your-time-server-ip>
```

Start timesync

```
systemctl enable systemd-timesyncd.service
systemctl start systemd-timesyncd.service
```

timedatectl

```
# See the information of the datetime
sudo timedatectl
    Local time: Mon 2021-11-01 14:37:09 UTC
    Universal time: Mon 2021-11-01 14:37:09 UTC
    RTC time: Mon 2021-11-01 14:37:10
    Time zone: UTC (UTC, +0000)
System clock synchronized: yes
    NTP service: active <====
    RTC in local TZ: no

# List timezones supported
sudo timedatectl list-timezones

# Change the system's timezone
sudo timedatectl set-timezone Asia/Taipei

# Check the status
sudo timedatectl timesync-status
    Server: 91.189.91.157 (ntp.ubuntu.com)
```

```
Poll interval: 17min 4s (min: 32s; max 34min 8s)
```

```
Leap: normal
```

```
Version: 4
```

```
Stratum: 2
```

```
Reference: 11FD227B
```

```
Precision: 1us (-24)
```

```
Root distance: 72.295ms (max: 5s)
```

```
Offset: +5.311ms
```

```
Delay: 67.290ms
```

```
Jitter: 2.211ms
```

```
Packet count: 6
```

```
Frequency: +17.421ppm
```

ntpd

Install

```
# Ubuntu  
sudo apt install ntp
```

```
vi /etc/ntp.conf
```

```
#pool 0.ubuntu.pool.ntp.org iburst  
#pool 1.ubuntu.pool.ntp.org iburst  
#pool 2.ubuntu.pool.ntp.org iburst  
#pool 3.ubuntu.pool.ntp.org iburst  
  
# Use Ubuntu's ntp server as a fallback.  
#pool ntp.ubuntu.com  
  
# Added the local time server  
server 192.168.21.86 prefer iburst
```

Restart the ntpd

```
# Ubuntu 16.04  
systemctl stop ntp  
systemctl start ntp  
  
# Check the timeserver
```

```
ntpq -p
```

```
remote          refid          st t when poll reach  delay  offset  jitter
=====
0.ubuntu.pool.n .POOL.         16 p  - 64  0  0.000  0.000  0.000
1.ubuntu.pool.n .POOL.         16 p  - 64  0  0.000  0.000  0.000
2.ubuntu.pool.n .POOL.         16 p  - 64  0  0.000  0.000  0.000
3.ubuntu.pool.n .POOL.         16 p  - 64  0  0.000  0.000  0.000
ntp.ubuntu.com  .POOL.         16 p  - 64  0  0.000  0.000  0.000
+eterna.binary.n 216.218.192.202 2 u  32 64  3 45.986 -0.081  0.021
+pacific.latt.ne 193.187.181.6   3 u  30 64  3  8.205  1.151  0.026
-mis.wci.com     216.218.192.202 2 u  32 64  3 37.928  4.692  0.176
-europa.ellipse. 209.180.247.49  2 u  31 64  3 51.792  4.175  0.027
#38.229.56.9     172.16.21.35   2 u  30 64  3 68.917 -4.451  0.190
#time.richiemcin 97.183.206.88   2 u  29 64  3 69.281 -3.073  0.248
*t1.time.gq1.yah 208.71.46.33    2 u  30 64  3 31.630 -0.081  0.011
-lofn.fancube.co 220.181.254.66  2 u  30 64  3 37.871 -1.088  0.009
#2606:6680:8:1:: 107.46.198.112  2 u  26 64  3 198.284 66.201  0.061
-titan.crash-ove 129.7.1.66      2 u  30 64  3 32.708 -1.474  0.200
-2620:1d5:100:43 47.187.174.51   2 u  29 64  3 70.418  0.592  0.197
 2001:67c:1560:8 17.253.34.123   2 u  32 64  3 133.490 -2.818  0.030
#38.229.57.9     172.16.21.35   2 u  30 64  3 177.896  4.081  6.291
#ntp2i.versadns. 217.180.209.214 2 u  28 64  3  62.795 -2.897  0.017
-104.194.8.227   192.12.19.20    2 u  25 64  3  0.979 -0.737  0.029
-pacific.latt.ne 193.187.181.6   3 u  26 64  3  8.770  1.212  0.050
 2001:67c:1560:8 17.253.34.123   2 u  33 64  3 133.602 -2.792  0.007
```

Change Timezone

RedHat 7+

```
timedatectl
timedatectl list-timezones
timedatectl set-timezone Asia/Taipei
```

CentOS 6

```
# List of timezone
ls /usr/share/zoneinfo
```

```
# Check the current timezone set
cat /etc/sysconfig/clock
```

Edit: /etc/sysconfig/clock

```
ZONE="Asia/Taipei"
UTC=true
```

Localtime

```
mv /etc/localtime /etc/localtime.bak
ln -sf /usr/share/zoneinfo/Asia/Taipei /etc/localtime
```

Debian 13

```
sudo timedatectl set-timezone Asia/Taipei
```

Manually Set the date-time

```
date -s "6 April 2023 15:11:00"
```

Revision #27

Created 2020-06-03 12:48:57 CST by A-Lang (Admin)

Updated 2026-06-09 14:49:14 CST by A-Lang (Admin)