

# How to configure the time and NTP on a Linux system

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## Configuring the Time and NTP on a UNAVCO Linux Field Computer

Configure time and check that ntpd is running before deploying a newly-installed Fedora system to the field. Change the system time to UTC time by issuing the following command at the command line:

```
[root@hostname]# cp -p /usr/share/zoneinfo/UTC /etc/localtime
```

If the time is not exact, get it close to the actual time by setting the approximate current time with the following command, where M=Month, D=day, h=hour, m=minutes, Y=year, s=seconds:

```
[root@hostname]# date --utc MMDDhhmmYYYY.ss
```

Synchronize the hardware clock with the system clock by issuing:

```
[root@hostname]# hwclock -systohc
```

To maintain the computer's timing, run the service 'ntpd' in the background. To check if ntpd is running, run:

```
[root@hostname]# chkconfig --list | grep on | grep ntpd
```

A result of :

```
ntpd 0:off 1:off 2:off 3:on 4:on 5:on 6:off
```

indicates that ntpd is indeed running in the background. If you don't see this, ntpd is not running and you will either have to activate it or install it. To check if ntp is installed you can run the following command:

```
[root@hostname]# rpm -aq | grep ntp
```

A result of:

```
ntp-4.2.4p2-1.fc6
```

indicates that ntp is installed and the ntpd service just needs to be started. Before doing so, edit the file /etc/ntp.conf. This file specifies to ntpd which time server to synchronize with. For example, if UNAVCO's time server is at xx.yy.zz.nn, enter the following to get ntpd to synchronize the new system's time with the UNAVCO time server:

```
restrict xx.yy.zz.nn mask 255.255.255.0 nomodify notrap server xx.yy.zz.nn
```

/etc/ntp.conf. Then, run the following command to make sure ntpd runs in the background and automatically synchronizes with UNAVCO's time server:

```
[root@hostname]# chkconfig --level 345 ntpd on
```

Make sure that ntpd is synchronizing with the following command:

```
[root@hostname]# ntpq -c pe
```

This command gives you an output of the form:

remote	refid	st	t	when	poll	reach	delay	offset	jitter
*time-a.ti	132.163.4	2	u	192	1024	377	.659	-0.517	3.265
mefreq.bl	.101								
drdoc.gov									
+time-b.ti	132.163.4	2	u	174	1024	377	67.478	11.482t	1.770
mefreq.bl	.102								
drdoc.gov									
LOCAL(0)	LOCAL(0)	10	1	43	64	377	0.000	0.000t	0.004

Nonzero values for the "jitter" column is a good indication that ntpd is communicating with your time servers.

Online URL:

<https://kb.unavco.org/article/how-to-configure-the-time-and-ntp-on-a-linux-system-259.html>