

# Operating System

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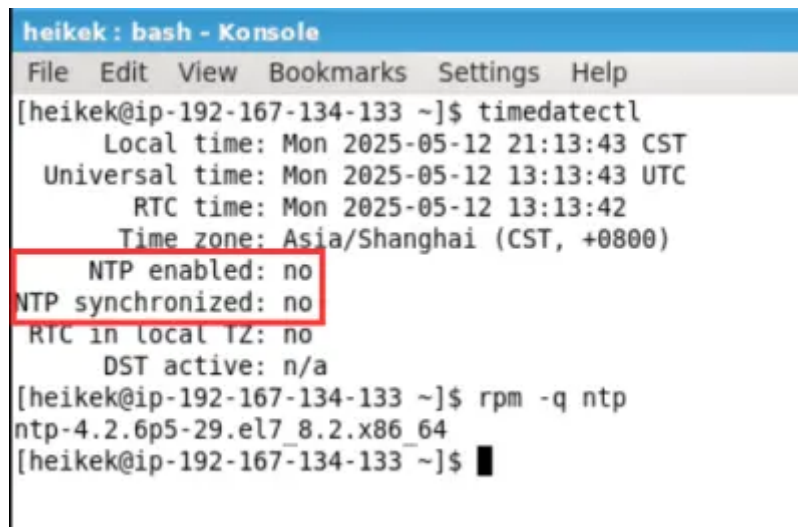
## How to check if the system is synchronized?

On RHEL7 the time synchronization is done via **ntp** and on RHEL9 via **chrony**. For license checkout either the license server(s) and the clients need to be synchronized timely.

Please check with

```
timedatectl
```

if the system is **synchronized**.



```
heikek : bash - Konsole
File Edit View Bookmarks Settings Help
[heikek@ip-192-167-134-133 ~]$ timedatectl
    Local time: Mon 2025-05-12 21:13:43 CST
    Universal time: Mon 2025-05-12 13:13:43 UTC
    RTC time: Mon 2025-05-12 13:13:42
    Time zone: Asia/Shanghai (CST, +0800)
    NTP enabled: no
    NTP synchronized: no
    RTC in local TZ: no
    DST active: n/a
[heikek@ip-192-167-134-133 ~]$ rpm -q ntp
ntp-4.2.6p5-29.el7_8.2.x86_64
[heikek@ip-192-167-134-133 ~]$
```

*timedatectl output*

In the screenshot above the system is not configured for time synchronization and **ntp** is disabled.

## How to configure RHEL7 with ntp?

**Note:** In general customer IT is responsible to set up the time synchronization. The information below is just for your convenience, but is not part of GLPT support.

## Prerequisite:

You need a reliable time server.

Steps to be checked:

1. Check if **ntp** is installed with

```
rpm -q ntp
```

If it is not installed, you can try to get it with

```
sudo yum install ntp
```

2. open `/etc/ntp.conf` with an editor (you need editing permissions or `sudo` rights)  
Here you can add the NTP server with adding the line  
server hostname `iburst`

### Example:

```
server time.google.com iburst
```

3. Check if **ntp** service is enabled / started with

```
systemctl status ntpd
```

### ***If it is not started / enabled***

1. Enable **ntp** service for being started with a reboot:

```
sudo systemctl enable ntpd
```

2. Start **ntp** service with

```
sudo systemctl start ntpd
```

4. Check the time synchronization:

```
sudo ntpq -p
```

The **ntpq** command queries the **ntp** servers defined and you get with **option -p** a table back with statistics.

5. Check with `timedatectl`, if **ntp** is enabled and synchronized.

***If ntp is still not enabled***, use:

```
sudo timedatectl set-ntp true
```

```
sudo systemctl start ntpd
```

Wait a minute and check with `timedatectl` again.

## Addition from user experience

From user experience: even with configuring, enabling and starting the **ntp** daemon the synchronization status was still no (because the time servers configured had an offset). Using

```
sudo systemctl stop ntpd  
  
sudo ntpd -gq  
  
sudo systemctl start ntpd
```

helped here. The options are for (see also <https://www.tekopolis.com/sync-ntp-immediately-linux/>)

1. **option -q**: overrides the built in sanity check of 1000s. If the system time is over 1000s off from the configured server time, the ntpd process would quit otherwise.
2. **option -q**: for quitting the daemon after the clock has been set

## How to configure RHEL9 with chrony?

**Note:** In general customer IT is responsible to set up the time synchronization. The information below is just for your convenience, but is not part of GLPT support.

### Prerequisite:

You need a reliable time server.

Steps to be checked:

1. Check if `chrony` is installed with  
`rpm -q chrony`

**If it is not installed**, you can try to install it with

```
sudo yum install chrony
```

2. open `/etc/chrony.conf` with an editor (you need editing permissions or sudo rights)  
Here you can add the time server with adding the line

```
server hostname iburst
```

### Example:

```
server time.google.com iburst
```

3. Check if `chrony` service is enabled / started with  
`systemctl status chronyd`

### **If it is not started / enabled**

1. Enable `chrony` service for being started with a reboot:

```
sudo systemctl enable chronyd
```

2. Start `chronyd` service with

```
sudo systemctl start chronyd
```

4. Check with `timedatectl`, if `chrony` is enabled and synchronized.

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