

Cron exercise.

In Linux/UNIX, tasks can be configured to run automatically on a specified date and time. This can be accomplished with **cron**, **at** and **batch**.

At will run a command at a specified time, once.

Batch will run a command at a specified time, but only if the load of the machine drops below 0.8, or the value specified in the invocation of **atd**.

Cron is started at boottime.

To check whether cron is running:

List the processes and filter out cron.

```
root ~# ps -ef|grep cron|grep -v grep
root 375 1 0 10:31 ? 00:00:00 /usr/sbin/cron -f
```

Use systemctl to check the status of cron

```
root ~# systemctl status cron
```

To stop cron:

```
[root@vm12 ~]# systemctl stop crond
```

To start cron:

```
[root@vm12 ~]# systemctl start crond
```

Scheduled tasks can be started on the basis of 5 fields that specify the when.

"minutes" "hours-days of month" " months of year" and " days of week" .

Notation:

Any value: *

List separator: ,

Range of values: -

Step values: /

Some examples:

```
0 10 * * *
```

On the hour at 10 o'clock in the morning, every day of the month every month of the year, every day of the week.

```
*/5 * * * *
```

Every 5 minutes.

```
0,30 * * * *
```

Every half hour.

You can allow or deny users to use cron. Every user that is allowed to run cron, will have a personal cron table that is stored in /var/spool/cron/.

To list your cron entries use the following command:

```
root ~# crontab -l
```

To edit your cronfile, use crontab -e.

```
root ~# crontab -e
```

To deny users, add the username to /etc/cron.deny
You can also allow users by adding them to /etc/cron.allow

```
[root@vm12 ~]# echo "linuser" >> /etc/cron.deny  
[root@vm12 ~]# su linuser
```

```
[linuser@vm12 root]$ crontab -e  
You (linuser) are not allowed to use this program (crontab)  
See crontab(1) for more information
```

A working example:

1. Create a script that writes the date and time to a file in /tmp

```
[root@vm12 ~]# mkdir -p /opt/scripts  
  
[root@vm12 ~]# echo '#!/usr/bin/bash' > /opt/scripts/check_cron.sh  
[root@vm12 ~]# echo 'date > /tmp/check_cron' >> /opt/scripts/check_cron.sh  
[root@vm12 ~]# chmod +x /opt/scripts/check_cron.sh
```

2. Create a cron entry that runs this script every 5 minutes.

```
[root@vm12 ~]# crontab -e  
*/5 * * * * /opt/scripts/check_cron.sh  
:wq!
```

3. Check the contents of the file after some 5 minutes.

```
[root@vm12 ~]# cat /tmp/check_cron  
Mon Jan 29 07:10:01 EST 2018
```