

Job Scheduling



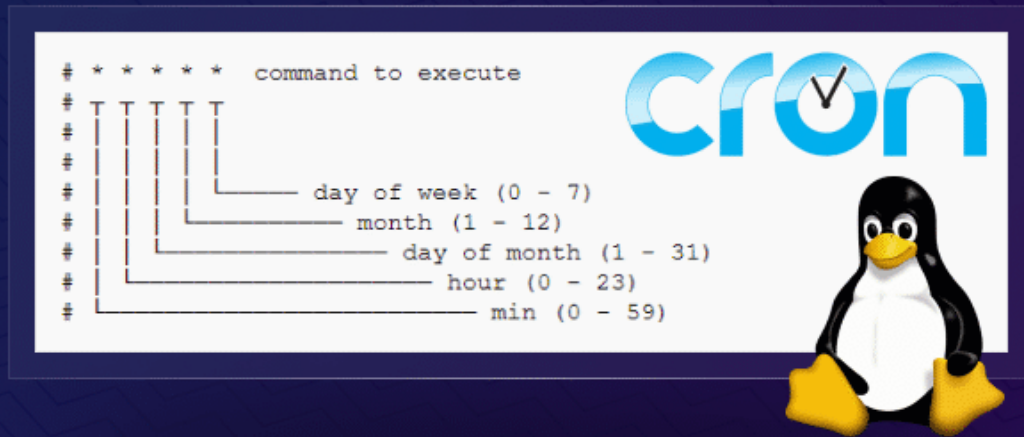
What does Job Scheduling mean in Linux?

Job scheduling is a feature of Linux operating systems that allows users to schedule tasks to run automatically at specified times or intervals. This is done using a daemon called cron, which runs in the background and executes tasks based on entries in a configuration file called crontab. It's help to get backup of files and directories.

There is few methods in Linux to Schedule Job

- **Crontab** : which is short for cron table, is a file containing the schedule of various cron entries that should be run at specified times. Another way of describing crontab is as a utility that enables tasks to run automatically at regular intervals in the background by the cron daemon. A cron job is a command run by the cron daemon at regularly scheduled intervals. To submit a cron job, specify the crontab command with the -e flag. The crontab command invokes an editing session that allows you to create a crontab file. In a cron tab there are 5 expression denotes by using * .
- **Cronjob Syntax** :

Cron Job Linux

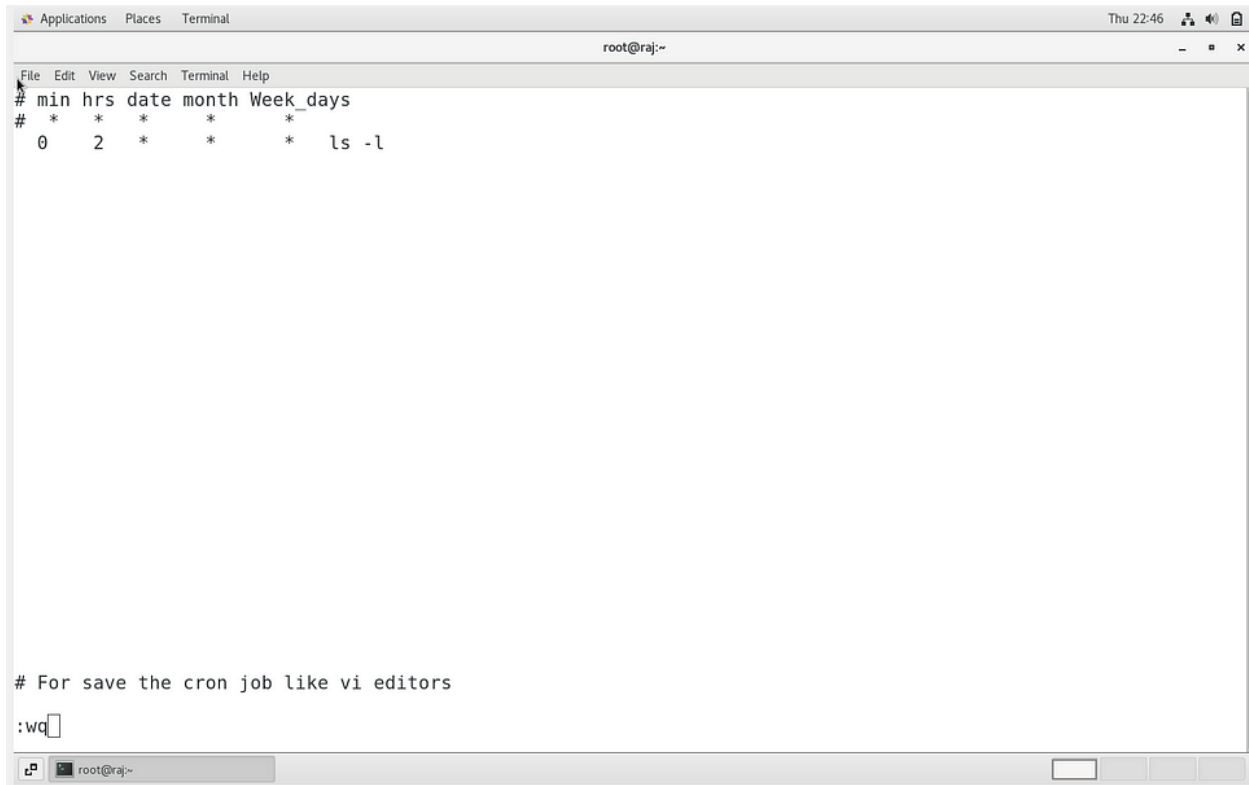


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There is Few option in Crontab Command

1. **crontab -e** : It is help to create or modify cronjobs
2. **crontab -l** : It use for list cronjobs
3. **crontab -r** : It use for remove all cronjobs

Example of crontab command in Linux: Suppose you want to schedule a job that will run the `ls -l` command every day at 2 PM, you can use the crontab command as follows. follow the bellow steps is run `crontab -e` command then open vi file editor tab as follow as



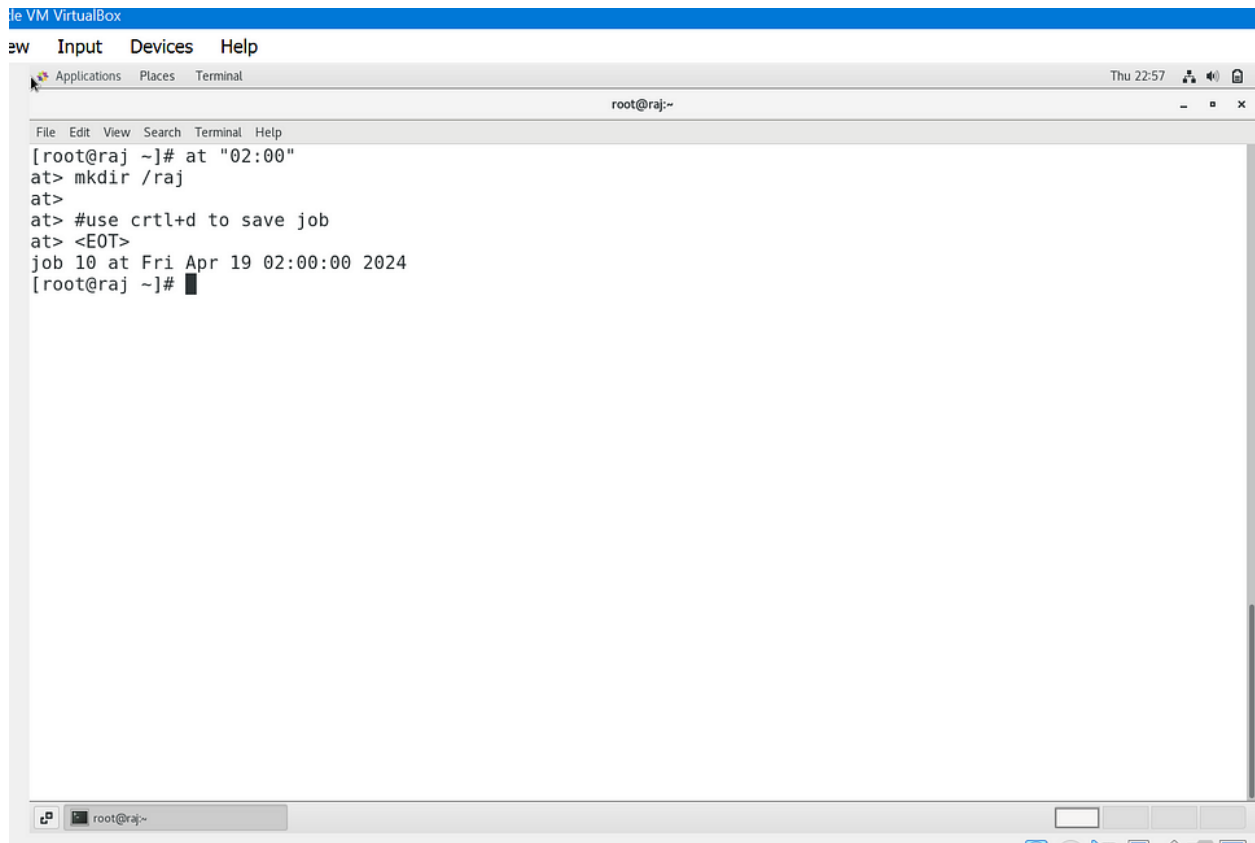
The screenshot shows a terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (root@raj:~). The terminal content is as follows:

```
# min hrs date month Week_days
# * * * * *
0 2 * * * ls -l
```

Below the cron job entry, there is a comment and a prompt:

```
# For save the cron job like vi editors
:wq
```

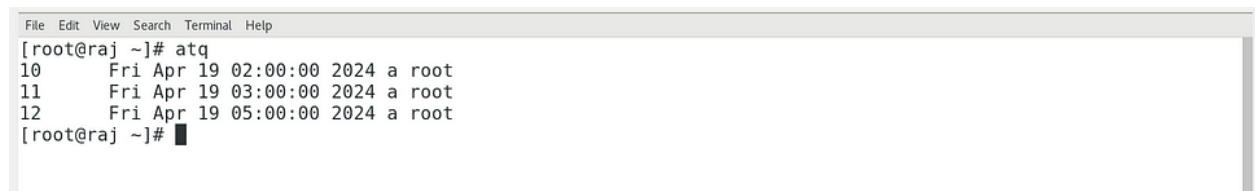
- **at** : at is single time execution command. at command Queue a task in "/var/spool/at " directory and execute when it's schedule time. After execution the task is autoremove from queue
- Example of at command : Suppose if you want to schedule a job at 2 PM, you can use the 'at' command as follows



The screenshot shows a terminal window titled 'root@raj:~' within a VirtualBox environment. The terminal output is as follows:

```
[root@raj ~]# at "02:00"
at> mkdir /raj
at>
at> #use ctrl+d to save job
at> <EOT>
job 10 at Fri Apr 19 02:00:00 2024
[root@raj ~]#
```

- **atq** — atq command use for list all jobs with job number scheduled by at command



The screenshot shows a terminal window titled 'root@raj:~' with the following output:

```
[root@raj ~]# atq
10      Fri Apr 19 02:00:00 2024 a root
11      Fri Apr 19 03:00:00 2024 a root
12      Fri Apr 19 05:00:00 2024 a root
[root@raj ~]#
```

- **atrm** — this command use for remove jobs by using there job id. Use of atrm command as follows

```
atrm 10
```