

# Лабораторная работа №8

## Планировщики событий

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## Цель работы

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Освоить работу с планировщиками событий cron и at в Linux, научиться создавать, редактировать и контролировать задания по расписанию.

## Планирование задач с помощью cron

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# Проверка службы crond

```
root@aanovikova:/home/aanovikova#
root@aanovikova:/home/aanovikova# systemctl status crond -l
● crond.service - Command Scheduler
   Loaded: loaded (/usr/lib/systemd/system/crond.service; enabled; preset: enabled)
   Active: active (running) since Mon 2025-10-06 13:52:49 MSK; 2min 14s ago
     Invocation: 062608adc3084f979d352b1d156c4c63
       Main PID: 1203 (crond)
         Tasks: 1 (limit: 24779)
        Memory: 1M (peak: 1.1M)
           CPU: 4ms
        CGroup: /system.slice/crond.service
               └─1203 /usr/sbin/crond -n

Oct 06 13:52:49 aanovikova.localdomain systemd[1]: Started crond.service - Command Scheduler.
Oct 06 13:52:49 aanovikova.localdomain crond[1203]: (CRON) STARTUP (1.7.0)
Oct 06 13:52:49 aanovikova.localdomain crond[1203]: (CRON) INFO (Syslog will be used instead of sendma>
Oct 06 13:52:49 aanovikova.localdomain crond[1203]: (CRON) INFO (RANDOM_DELAY will be scaled with fact>
Oct 06 13:52:49 aanovikova.localdomain crond[1203]: (CRON) INFO (running with inotify support)
root@aanovikova:/home/aanovikova# cat /etc/crontab
SHELL=/bin/bash
PATH=/sbin:/bin:/usr/sbin:/usr/bin
MAILTO=root

# For details see man 4 crontabs

# Example of job definition:
# .----- minute (0 - 59)
# | .----- hour (0 - 23)
# | | .----- day of month (1 - 31)
# | | | .----- month (1 - 12) OR jan,feb,mar,apr ...
# | | | | .---- day of week (0 - 6) (Sunday=0 or 7) OR sun,mon,tue,wed,thu,fri,sat
# | | | | |
# * * * * * user-name  command to be executed

root@aanovikova:/home/aanovikova#
```

```
root@aanovikova:/home/aanovikova#  
root@aanovikova:/home/aanovikova# crontab -l  
no crontab for root  
root@aanovikova:/home/aanovikova# crontab -e  
no crontab for root - using an empty one  
crontab: installing new crontab  
root@aanovikova:/home/aanovikova# crontab -l  
*/1 * * * * logger This message is written from root cron  
root@aanovikova:/home/aanovikova# grep written /var/log/messages  
root@aanovikova:/home/aanovikova# grep written /var/log/messages  
Oct 6 13:59:01 aanovikova root[4326]: This message is written from root cron  
Oct 6 14:00:01 aanovikova root[4446]: This message is written from root cron  
Oct 6 14:01:01 aanovikova root[4591]: This message is written from root cron  
Oct 6 14:02:01 aanovikova root[4716]: This message is written from root cron  
root@aanovikova:/home/aanovikova#
```

Рис. 2: Создание задания cron

```
root@aanovikova:/home/aanovikova#  
root@aanovikova:/home/aanovikova# crontab -e  
crontab: installing new crontab  
Backup of root's previous crontab saved to /root/.cache/crontab/crontab.bak  
root@aanovikova:/home/aanovikova# crontab -l  
0 */1 * * 1-5 logger This message is written from root cron  
root@aanovikova:/home/aanovikova#
```

Рис. 3: Редактирование расписания root cron



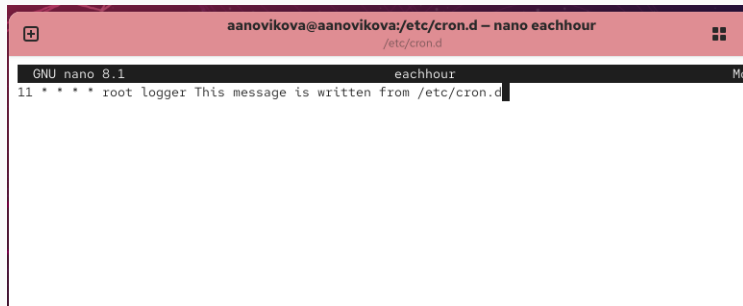
```
aanovikova@aanovikova:/etc/cron.hourly – nano eachhour
/etc/cron.hourly

GNU nano 8.1                                eachhour
#!/bin/sh
logger This message is written at $(date)
```

Рис. 4: Создание скрипта eachhour



## Задания в /etc/cron.d



The screenshot shows a terminal window with the nano text editor. The title bar at the top reads "aanovikova@aanovikova:/etc/cron.d – nano eachhour". The editor's status bar at the top shows "GNU nano 8.1" on the left, "eachhour" in the center, and "Mo" on the right. The main text area contains a single line: "11 \* \* \* \* root logger This message is written from /etc/cron.d". The cursor is positioned at the end of this line.

```
aanovikova@aanovikova:/etc/cron.d – nano eachhour
GNU nano 8.1                                eachhour                                Mo
11 * * * * root logger This message is written from /etc/cron.d
```

Рис. 5: Создание задания в /etc/cron.d

```
root@aanovikova:/etc/cron.d#  
root@aanovikova:/etc/cron.d# systemctl status atd  
● atd.service - Deferred execution scheduler  
   Loaded: loaded (/usr/lib/systemd/system/atd.service; enabled; preset: enabled)  
   Active: active (running) since Mon 2025-10-06 13:52:49 MSK; 13min ago  
  Invocation: 7d61b0db61654b67be3f00426cc5e89d  
     Docs: man:atd(8)  
   Main PID: 1201 (atd)  
      Tasks: 1 (limit: 24779)  
    Memory: 324K (peak: 1.1M)  
       CPU: 2ms  
    CGroup: /system.slice/atd.service  
            └─1201 /usr/sbin/atd -f  
  
Oct 06 13:52:49 aanovikova.localdomain systemd[1]: Started atd.service - Deferred execution scheduler.  
Oct 06 13:52:49 aanovikova.localdomain (atd)[1201]: atd.service: Referenced but unset environment vari  
root@aanovikova:/etc/cron.d# at 14:10  
warning: commands will be executed using /bin/sh  
at Mon Oct  6 14:10:00 2025  
at> logger message from at  
at> <EOT>  
job 1 at Mon Oct  6 14:10:00 2025  
root@aanovikova:/etc/cron.d# atq  
1      Mon Oct  6 14:10:00 2025 a root  
root@aanovikova:/etc/cron.d# grep 'from at' /var/log/messages  
root@aanovikova:/etc/cron.d# grep 'from at' /var/log/messages  
Oct  6 14:10:00 aanovikova root[6037]: message from at  
root@aanovikova:/etc/cron.d#
```

Рис. 6: Проверка статуса службы atd

## Итоги работы

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- Изучены планировщики cron и at.
- Настроены периодические и однократные задания.
- Освоена работа с /etc/cron.hourly и /etc/cron.d.
- Получены навыки автоматизации системных процессов.