

Homework_Lesson5_Report

Домашнее задание №4

Цель: получить практический опыт установки пакетов с помощью сторонних репозиториев и пакетного менеджера. Научиться выполнять задачи автоматизации с помощью Bash.

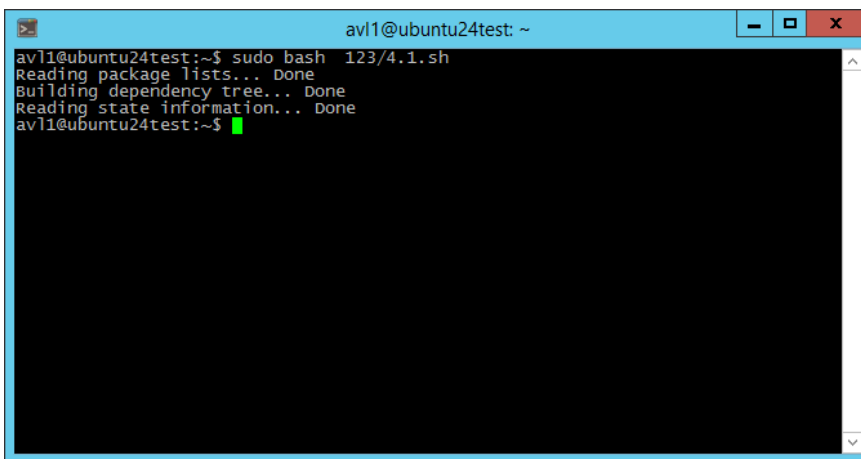
Задание 1 — добавить в cron скрипт/команду, которая будет очищать кэш apt (кэшируемые пакеты, пакеты, которые не могут быть загружены) раз в месяц в 16 часов.

Опционально:

Задание 2 — в соответствии с нижеуказанным примером, запустить демон nodejs-приложения через systemd.

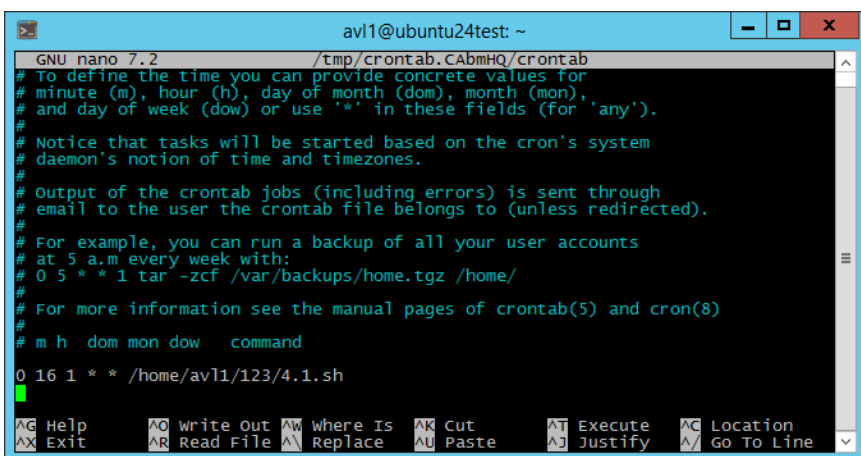
Задание 1.

Пишем скрипт. И проверяем его работоспособность. Для очистки используем команды apt clean, apt autoclean.



```
av11@ubuntu24test: ~  
av11@ubuntu24test:~$ sudo bash 123/4.1.sh  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
av11@ubuntu24test:~$
```

Добавляем в cron наш скрипт.



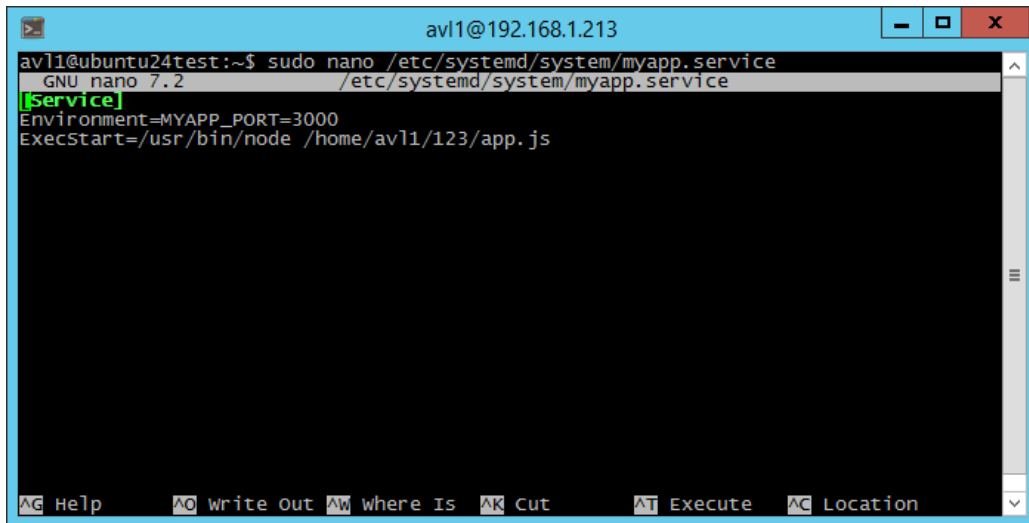
```
GNU nano 7.2 /tmp/crontab.CABmHQ/crontab  
# To define the time you can provide concrete values for  
# minute (m), hour (h), day of month (dom), month (mon),  
# and day of week (dow) or use '*' in these fields (for 'any').  
#  
# Notice that tasks will be started based on the cron's system  
# daemon's notion of time and timezones.  
#  
# Output of the crontab jobs (including errors) is sent through  
# email to the user the crontab file belongs to (unless redirected).  
#  
# For example, you can run a backup of all your user accounts  
# at 5 a.m every week with:  
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/  
#  
# For more information see the manual pages of crontab(5) and cron(8)  
# m h dom mon dow  command  
0 16 1 * * /home/av11/123/4.1.sh
```

Это значит, что 1 числа в 16 часов 0 минут будет выполняться скрипт по введенному пути.

Задание 2.

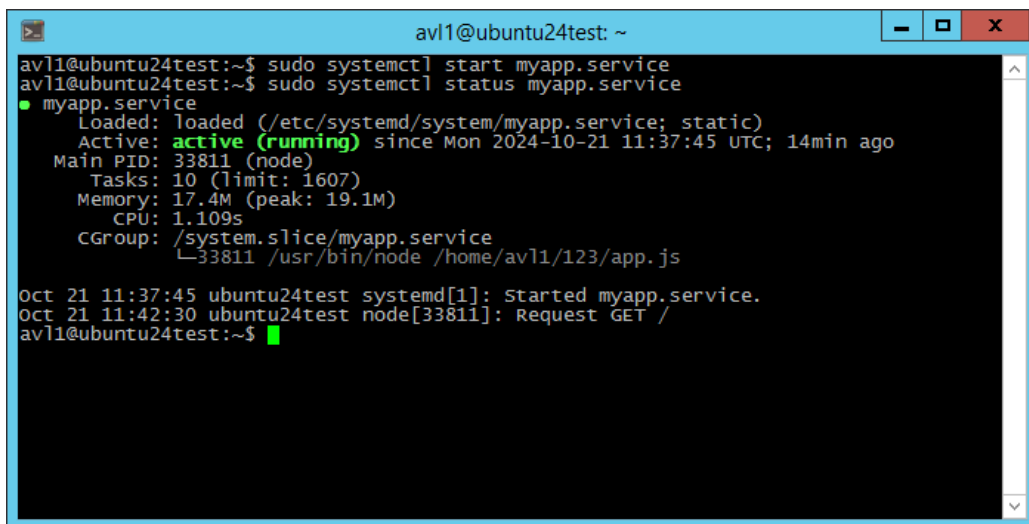
Создаем файл app.js и вставляем в него код из примера.

Создаем свой юнит в /etc/systemd/system/myapp.service.



```
av11@192.168.1.213
av11@ubuntu24test:~$ sudo nano /etc/systemd/system/myapp.service
GNU nano 7.2 /etc/systemd/system/myapp.service
[Service]
Environment=MYAPP_PORT=3000
ExecStart=/usr/bin/node /home/av11/123/app.js
```

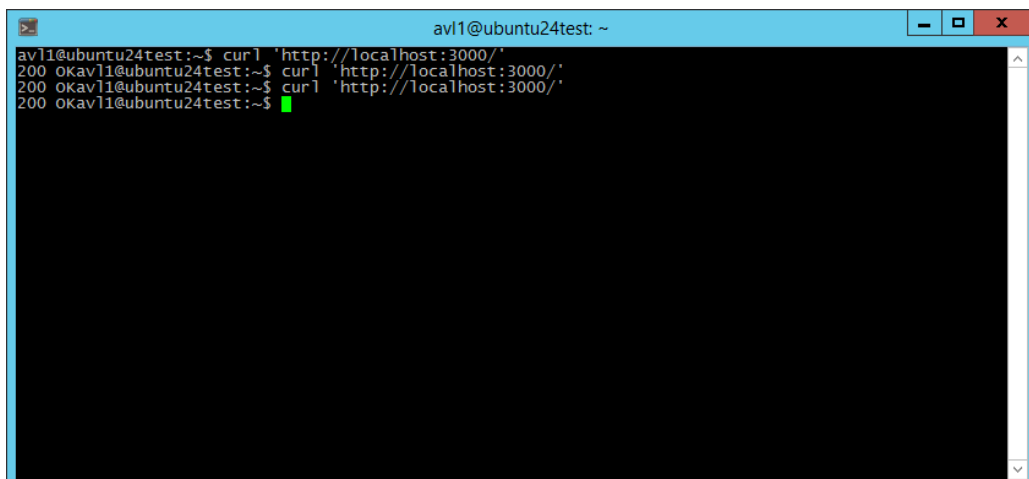
Запускаем сервис и проверяем его статус.



```
av11@ubuntu24test: ~
av11@ubuntu24test:~$ sudo systemctl start myapp.service
av11@ubuntu24test:~$ sudo systemctl status myapp.service
● myapp.service
   Loaded: loaded (/etc/systemd/system/myapp.service; static)
   Active: active (running) since Mon 2024-10-21 11:37:45 UTC; 14min ago
     Main PID: 33811 (node)
        Tasks: 10 (limit: 1607)
      Memory: 17.4M (peak: 19.1M)
         CPU: 1.109s
    CGroup: /system.slice/myapp.service
            └─33811 /usr/bin/node /home/av11/123/app.js

Oct 21 11:37:45 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:42:30 ubuntu24test node[33811]: Request GET /
av11@ubuntu24test:~$
```

Проверим работоспособность через curl. Прилетает ответ 200 ОК значит все хорошо.



```
av11@ubuntu24test: ~
av11@ubuntu24test:~$ curl 'http://localhost:3000/'
200 okav11@ubuntu24test:~$ curl 'http://localhost:3000/'
200 okav11@ubuntu24test:~$ curl 'http://localhost:3000/'
200 okav11@ubuntu24test:~$
```

Добавим в юнит параметр для перезагрузки демона. Теперь вручную остановим процесс. И проверим что бы он перезапустился.

```
av11@ubuntu24test: ~  
av11@ubuntu24test:~$ sudo systemctl status myapp.service  
● myapp.service  
   Loaded: loaded (/etc/systemd/system/myapp.service; static)  
   Active: active (running) since Mon 2024-10-21 12:00:01 UTC; 56s ago  
     Main PID: 34219 (node)  
       Tasks: 10 (limit: 1607)  
    Memory: 12.0M (peak: 15.1M)  
       CPU: 665ms  
     CGroup: /system.slice/myapp.service  
             └─34219 /usr/bin/node /home/av11/123/app.js  
  
Oct 21 12:00:01 ubuntu24test systemd[1]: myapp.service: Scheduled restart job, restart counter is at 0  
Oct 21 12:00:01 ubuntu24test systemd[1]: Started myapp.service.  
av11@ubuntu24test:~$ sudo kill 34219  
av11@ubuntu24test:~$ sudo systemctl status myapp.service  
● myapp.service  
   Loaded: loaded (/etc/systemd/system/myapp.service; static)  
   Active: active (running) since Mon 2024-10-21 12:01:08 UTC; 13s ago  
     Main PID: 34250 (node)  
       Tasks: 10 (limit: 1607)  
    Memory: 13.2M (peak: 15.0M)  
       CPU: 698ms  
     CGroup: /system.slice/myapp.service  
             └─34250 /usr/bin/node /home/av11/123/app.js  
  
Oct 21 12:01:08 ubuntu24test systemd[1]: myapp.service: Scheduled restart job, restart counter is at 0  
Oct 21 12:01:08 ubuntu24test systemd[1]: Started myapp.service.
```

Добавим пользователя и группу которые будут от которого будет запускаться процесс. А также внесем параметры что бы логи писались /var/log/syslog.

```
GNU nano 7.2 /etc/systemd/system/myapp.service  
[Service]  
Environment=MYAPP_PORT=3000  
User=av11  
Group=av11  
ExecStart=/usr/bin/node /home/av11/123/app.js  
Restart=always  
StandardOutput=syslog  
StandardError=syslog  
SyslogIdentifier=myapp  
  
␣ Help  ␣ Write Out  ␣ Where Is  ␣ Read 9 lines  ␣ Cut  ␣ Execute  ␣ Location  ␣ Undo  
␣ Exit  ␣ Read File  ␣ Replace  ␣ Paste  ␣ Justify  ␣ Go To Line  ␣ Redo
```

Создаем файл /etc/rsyslog.d/100-myapp.conf что бы логи в syslog не сохранялось несколько одинаковых сообщений в одно.

```
av11@ubuntu24test: ~  
av11@ubuntu24test:~$ sudo nano /etc/rsyslog.d/100-myapp.conf  
GNU nano 7.2 /etc/rsyslog.d/100-myapp.conf *  
$RepeatedMsgReduction off  
if $programname == 'myapp' then -/var/log/myapp/debug.log
```

Посмотрим логи нашего серфиса.

```
avi1@ubuntu24test: ~
Oct 21 11:25:29 ubuntu24test systemd[1]: /etc/systemd/system/myapp.service:2: Assignment outside of section. Ignoring.
Oct 21 11:25:29 ubuntu24test systemd[1]: myapp.service: Service has no ExecStart=, ExecStop=, or SuccessAction=, Refusing.
Oct 21 11:27:05 ubuntu24test systemd[1]: /etc/systemd/system/myapp.service:1: Assignment outside of section. Ignoring.
Oct 21 11:27:05 ubuntu24test systemd[1]: /etc/systemd/system/myapp.service:2: Assignment outside of section. Ignoring.
Oct 21 11:27:05 ubuntu24test systemd[1]: myapp.service: Service has no ExecStart=, ExecStop=, or SuccessAction=, Refusing.
Oct 21 11:27:24 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:27:24 ubuntu24test systemd[1]: myapp.service: Main process exited, code=exited, status=203/EXEC
Oct 21 11:27:24 ubuntu24test systemd[1]: myapp.service: Failed with result 'exit-code'.
Oct 21 11:28:10 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:28:10 ubuntu24test systemd[1]: myapp.service: Main process exited, code=exited, status=203/EXEC
Oct 21 11:28:10 ubuntu24test systemd[1]: myapp.service: Failed with result 'exit-code'.
Oct 21 11:29:01 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:29:01 ubuntu24test systemd[1]: myapp.service: Main process exited, code=exited, status=203/EXEC
Oct 21 11:29:01 ubuntu24test systemd[1]: myapp.service: Failed with result 'exit-code'.
Oct 21 11:29:18 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:29:18 ubuntu24test systemd[1]: myapp.service: Main process exited, code=exited, status=203/EXEC
Oct 21 11:29:18 ubuntu24test systemd[1]: myapp.service: Failed with result 'exit-code'.
Oct 21 11:31:05 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:31:05 ubuntu24test systemd[1]: myapp.service: Main process exited, code=exited, status=203/EXEC
Oct 21 11:31:05 ubuntu24test systemd[1]: myapp.service: Failed with result 'exit-code'.
Oct 21 11:35:32 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:35:32 ubuntu24test systemd[1]: myapp.service: Main process exited, code=exited, status=203/EXEC
Oct 21 11:35:32 ubuntu24test systemd[1]: myapp.service: Failed with result 'exit-code'.
Oct 21 11:37:34 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:37:34 ubuntu24test systemd[1]: myapp.service: Main process exited, code=exited, status=203/EXEC
Oct 21 11:37:34 ubuntu24test systemd[1]: myapp.service: Failed with result 'exit-code'.
Oct 21 11:37:45 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:42:30 ubuntu24test node[33811]: Request GET /
Oct 21 11:54:44 ubuntu24test systemd[1]: Stopping myapp.service...
Oct 21 11:56:54 ubuntu24test systemd[1]: myapp.service: Deactivated successfully.
Oct 21 11:56:54 ubuntu24test systemd[1]: Stopped myapp.service.
Oct 21 11:56:54 ubuntu24test systemd[1]: myapp.service: Consumed 1.127s CPU time, 19.1M memory peak, 0B memory swap peak.
Oct 21 11:57:16 ubuntu24test systemd[1]: Started myapp.service.
Oct 21 11:57:53 ubuntu24test systemd[1]: myapp.service: Deactivated successfully.
Oct 21 11:57:53 ubuntu24test systemd[1]: myapp.service: Scheduled restart job, restart counter is at 1.
Oct 21 11:57:53 ubuntu24test systemd[1]: Started myapp.service.
avi1@ubuntu24test:~$
```