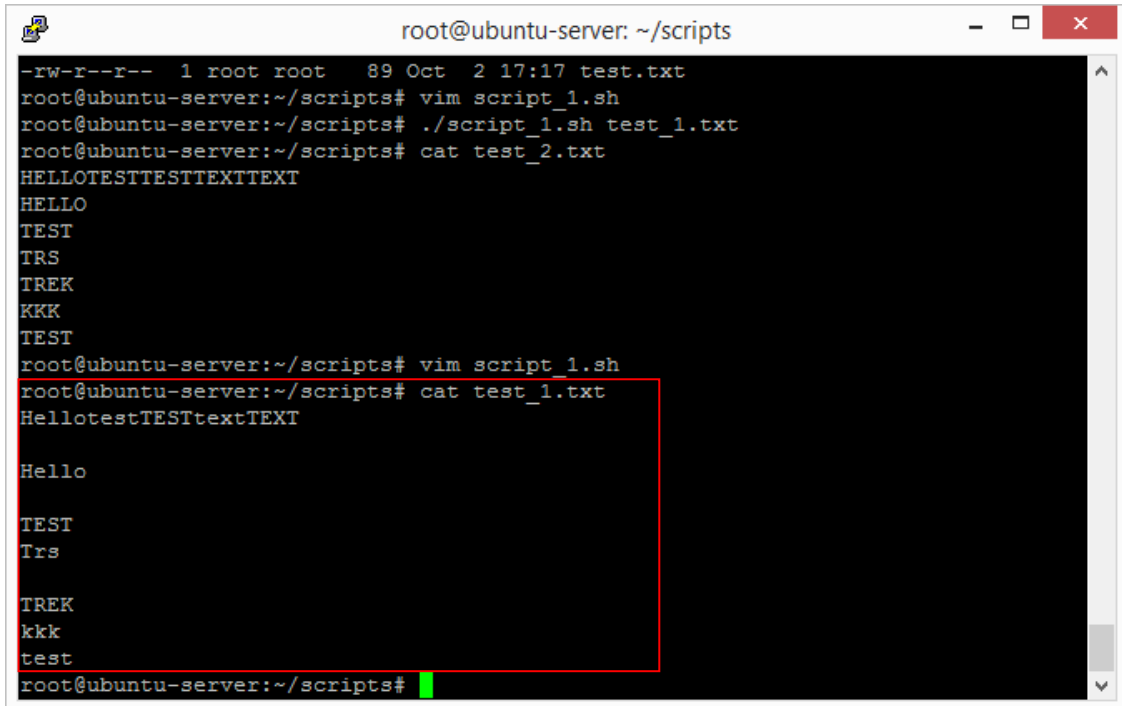


Практическое задание по уроку №6 «Введение в скрипты bash. Планировщики задач crontab и at»

1. Написать скрипт, который удаляет из текстового файла пустые строки и заменяет маленькие символы на большие. Воспользуйтесь tr или SED

Решение

- Создадим файл с произвольным наполнением test_1.txt. Просмотрим его содержимое с помощью команды cat test_1.txt

A terminal window titled 'root@ubuntu-server: ~/scripts' with standard window controls. It shows the following commands and output:

```
-rw-r--r-- 1 root root 89 Oct 2 17:17 test.txt
root@ubuntu-server:~/scripts# vim script_1.sh
root@ubuntu-server:~/scripts# ./script_1.sh test_1.txt
root@ubuntu-server:~/scripts# cat test_2.txt
HELLOTESTTESTTEXTTEXT
HELLO
TEST
TRS
TREK
KKK
TEST
root@ubuntu-server:~/scripts# vim script_1.sh
root@ubuntu-server:~/scripts# cat test_1.txt
HellotestTESTtextTEXT

Hello

TEST
Trs

TREK
kkk
test
root@ubuntu-server:~/scripts#
```

A red rectangle highlights the output of the 'cat test_1.txt' command, showing the result of the script's transformations on the original file's content.

- Напишем скрипт для удаления пустых строк и замены нижнего регистра на верхний

```

root@ubuntu-server: ~/scripts
#!/bin/bash

#присваиваем переменной а первый аргумент (файл)
a=$1

#для удаления пустых строк используем редактор sed
#для поиска пустой строки ^$ (началась и сразу закончилась)
#после выполнения записываем результат работы в файл temp
sed '/^$/d' $a > temp

#tr-translate. Меняем маленькие символы на большие
#работаем с файлом temp
#по итогу все изменения записываем в файл test_2.txt
tr [:lower:] [:upper:] < temp > test_2.txt

#после получения файла test_2.txt удаляем файл temp
rm temp

#выведем информацию для пользователя (просмотр результата по запросу)
echo 'Изменения записаны в файл test_2.txt'
echo 'Для просмотра введите cat test_2.txt'

"script_1.sh" 27L, 1195C 23,128-69 Bot

```

Используем редактор sed для удаления пустых строк и команду tr для перевода из нижнего регистра в верхний

- Запустим скрипт с помощью команды ./script_1.sh test_1.txt (файл test_1.txt передается в скрипт в качестве аргумента)

```

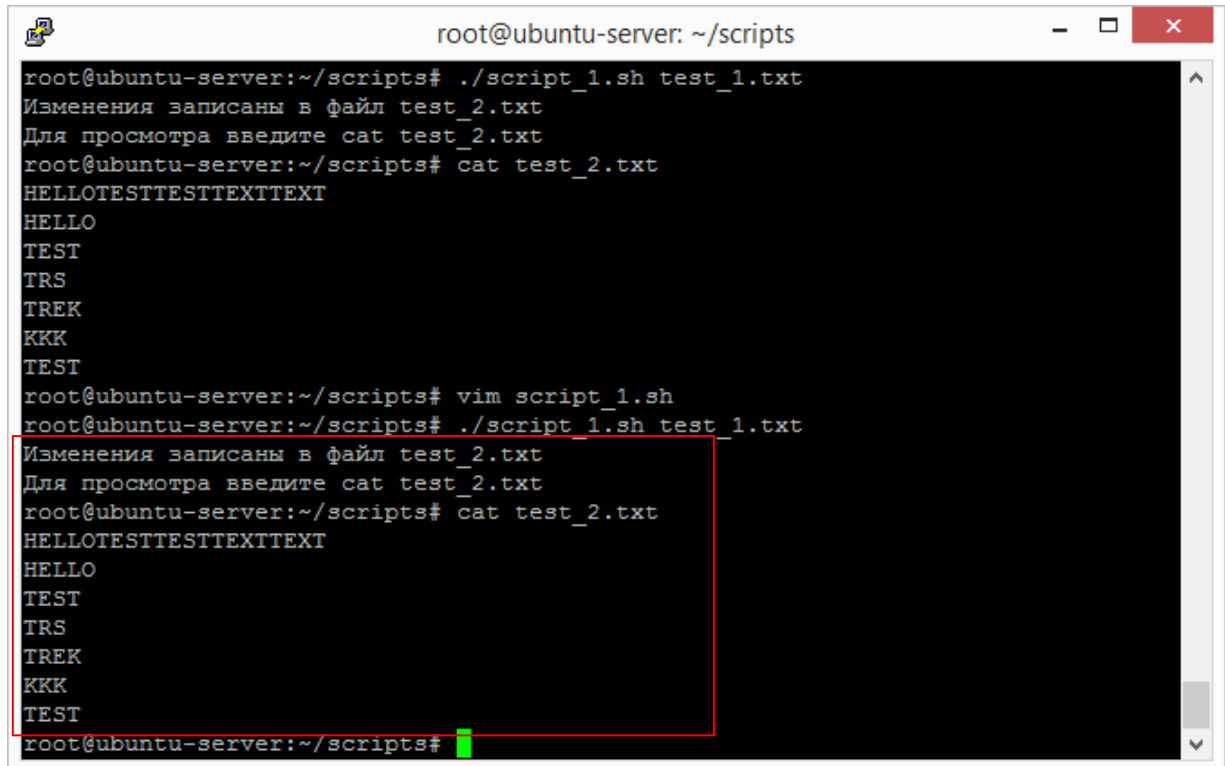
root@ubuntu-server: ~/scripts
Hello

TEST
Trs

TREK
kkk
test
root@ubuntu-server:~/scripts# vim script_1.sh
root@ubuntu-server:~/scripts# ./script_1.sh test_1.txt
root@ubuntu-server:~/scripts# vim script_1.sh
root@ubuntu-server:~/scripts# ./script_1.sh test_1.txt
Изменения записаны в файл test_2.txt
Для просмотра введите cat test_2.txt
root@ubuntu-server:~/scripts# cat test_2.txt
HELLOTESTTESTTEXTTEXT
HELLO
TEST
TRS
TREK
KKK
TEST
root@ubuntu-server:~/scripts# vim script_1.sh
root@ubuntu-server:~/scripts# ./script_1.sh test_1.txt

```

- Проверим результат работы скрипта. Все отредактировано должным образом



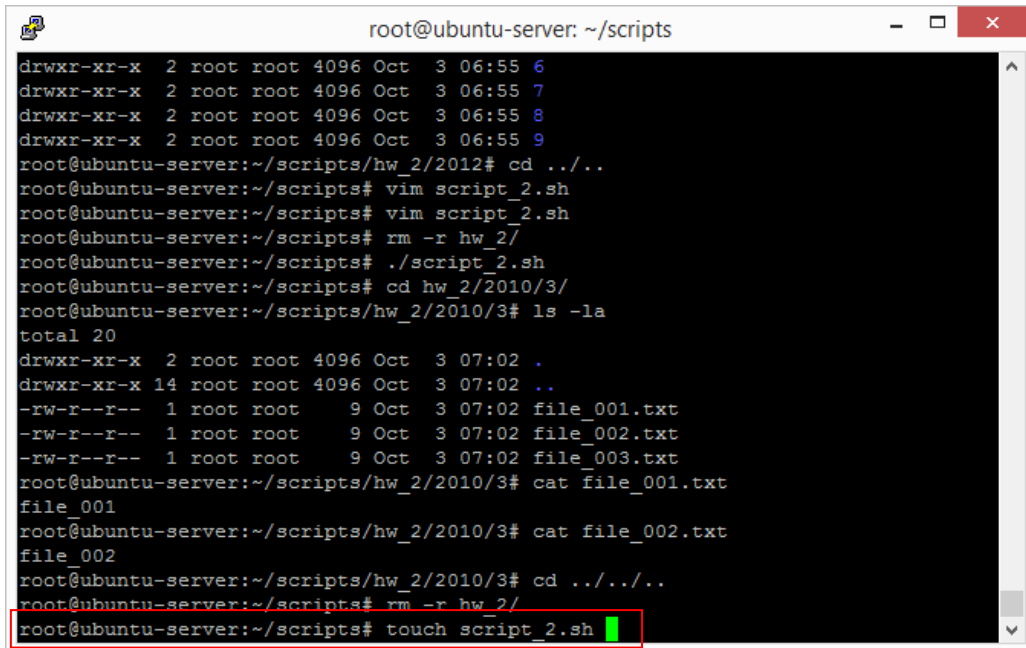
A terminal window titled "root@ubuntu-server: ~/scripts" with standard window controls. The terminal shows the execution of a script that appends content to "test_2.txt" and then displays the file's contents. The content of "test_2.txt" is: HELLOTESTTESTTEXTTEXT, HELLO, TEST, TRS, TREK, KKK, TEST. The user then edits "script_1.sh" with vim and runs it again, which appends the same content to "test_2.txt". A red rectangle highlights the second execution of the script and the resulting file content. A green cursor is visible at the end of the last command line.

```
root@ubuntu-server:~/scripts# ./script_1.sh test_1.txt
Изменения записаны в файл test_2.txt
Для просмотра введите cat test_2.txt
root@ubuntu-server:~/scripts# cat test_2.txt
HELLOTESTTESTTEXTTEXT
HELLO
TEST
TRS
TREK
KKK
TEST
root@ubuntu-server:~/scripts# vim script_1.sh
root@ubuntu-server:~/scripts# ./script_1.sh test_1.txt
Изменения записаны в файл test_2.txt
Для просмотра введите cat test_2.txt
root@ubuntu-server:~/scripts# cat test_2.txt
HELLOTESTTESTTEXTTEXT
HELLO
TEST
TRS
TREK
KKK
TEST
root@ubuntu-server:~/scripts#
```

2. Создать однострочный скрипт, который создаст директории для нескольких годов (2010–2017), в них — поддиректории для месяцев (от 01 до 12), и в каждый из них запишет несколько файлов с произвольными записями. Например, 001.txt, содержащий текст «Файл 001», 002.txt с текстом «Файл 002» и т. д.

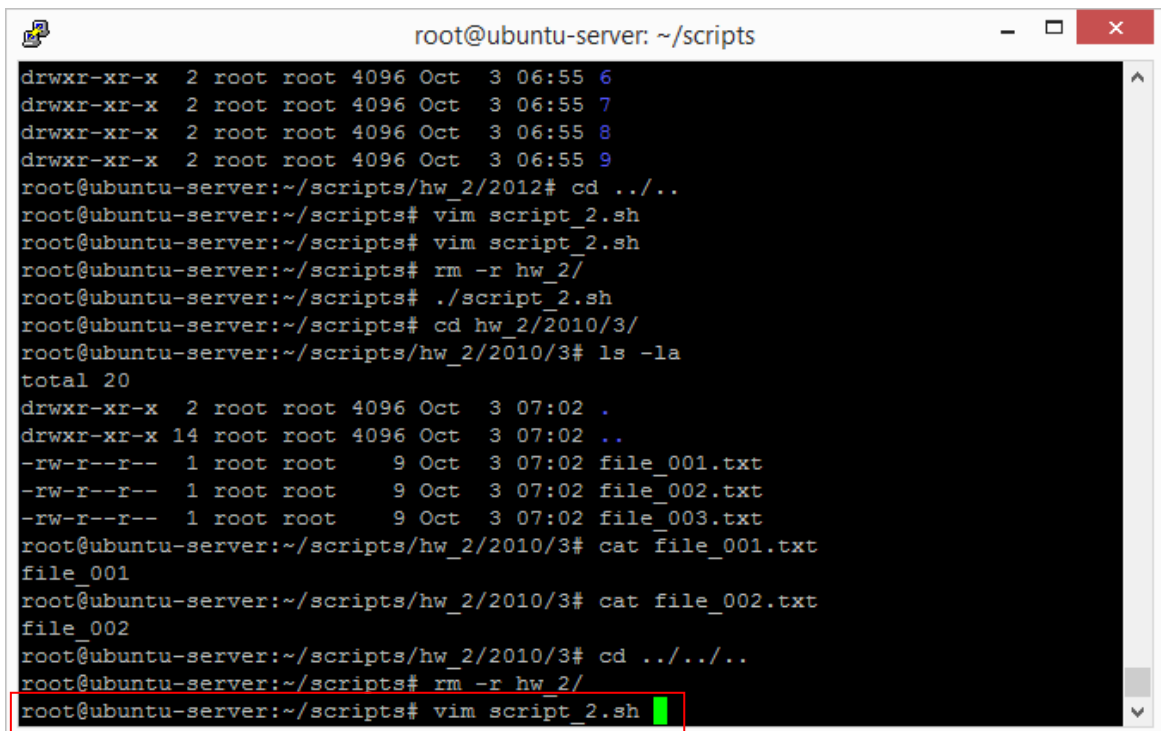
Решение

- Создадим файл script_2.sh для записи в него скрипта



```
root@ubuntu-server: ~/scripts
drwxr-xr-x 2 root root 4096 Oct  3 06:55 6
drwxr-xr-x 2 root root 4096 Oct  3 06:55 7
drwxr-xr-x 2 root root 4096 Oct  3 06:55 8
drwxr-xr-x 2 root root 4096 Oct  3 06:55 9
root@ubuntu-server:~/scripts/hw_2/2012# cd ../../
root@ubuntu-server:~/scripts# vim script_2.sh
root@ubuntu-server:~/scripts# vim script_2.sh
root@ubuntu-server:~/scripts# rm -r hw_2/
root@ubuntu-server:~/scripts# ./script_2.sh
root@ubuntu-server:~/scripts# cd hw_2/2010/3/
root@ubuntu-server:~/scripts/hw_2/2010/3# ls -la
total 20
drwxr-xr-x 2 root root 4096 Oct  3 07:02 .
drwxr-xr-x 14 root root 4096 Oct  3 07:02 ..
-rw-r--r-- 1 root root  9 Oct  3 07:02 file_001.txt
-rw-r--r-- 1 root root  9 Oct  3 07:02 file_002.txt
-rw-r--r-- 1 root root  9 Oct  3 07:02 file_003.txt
root@ubuntu-server:~/scripts/hw_2/2010/3# cat file_001.txt
file_001
root@ubuntu-server:~/scripts/hw_2/2010/3# cat file_002.txt
file_002
root@ubuntu-server:~/scripts/hw_2/2010/3# cd ../../../../
root@ubuntu-server:~/scripts# rm -r hw_2/
root@ubuntu-server:~/scripts# touch script_2.sh
```

- Откроем на редактирование данный файл с помощью vim



```
root@ubuntu-server: ~/scripts
drwxr-xr-x 2 root root 4096 Oct  3 06:55 6
drwxr-xr-x 2 root root 4096 Oct  3 06:55 7
drwxr-xr-x 2 root root 4096 Oct  3 06:55 8
drwxr-xr-x 2 root root 4096 Oct  3 06:55 9
root@ubuntu-server:~/scripts/hw_2/2012# cd ../../
root@ubuntu-server:~/scripts# vim script_2.sh
root@ubuntu-server:~/scripts# vim script_2.sh
root@ubuntu-server:~/scripts# rm -r hw_2/
root@ubuntu-server:~/scripts# ./script_2.sh
root@ubuntu-server:~/scripts# cd hw_2/2010/3/
root@ubuntu-server:~/scripts/hw_2/2010/3# ls -la
total 20
drwxr-xr-x 2 root root 4096 Oct  3 07:02 .
drwxr-xr-x 14 root root 4096 Oct  3 07:02 ..
-rw-r--r-- 1 root root  9 Oct  3 07:02 file_001.txt
-rw-r--r-- 1 root root  9 Oct  3 07:02 file_002.txt
-rw-r--r-- 1 root root  9 Oct  3 07:02 file_003.txt
root@ubuntu-server:~/scripts/hw_2/2010/3# cat file_001.txt
file_001
root@ubuntu-server:~/scripts/hw_2/2010/3# cat file_002.txt
file_002
root@ubuntu-server:~/scripts/hw_2/2010/3# cd ../../../../
root@ubuntu-server:~/scripts# rm -r hw_2/
root@ubuntu-server:~/scripts# vim script_2.sh
```

- Пропишем скрипт для выполнения задания. С помощью цикла for..do создаем сначала основные директории (2010..2017), затем в них поддиректории по месяцам (1..12) и в каждой поддиректории создаем по три файла с произвольным наполнением

```

root@ubuntu-server: ~/scripts
#2 Создание директорий и поддиректорий с файлами

#прописываем шебанг
#!/bin/bash

#создаем директорию, в которой будет все размешено и переходим в нее
mkdir hw_2
cd hw_2

#используем цикл for для создания директорий, поддиректорий, файлов
for i in {2010..2017}
do
    mkdir $i
    cd $i
    for j in {1..12}
    do
        mkdir $j
        cd $j
        for n in {1..3}
        do
            touch file_00$n.txt
            echo file_00$n > file_00$n.txt
        done
        cd ..
    done
    cd ..
done
"script_2.sh" 27L, 603C
27,4 All

```

- Запускаем скрипт

```

root@ubuntu-server: ~/scripts
drwxr-xr-x  2 root root 4096 Oct  3 06:55 7
drwxr-xr-x  2 root root 4096 Oct  3 06:55 8
drwxr-xr-x  2 root root 4096 Oct  3 06:55 9
root@ubuntu-server:~/scripts/hw_2/2012# cd ../../
root@ubuntu-server:~/scripts# vim script_2.sh
root@ubuntu-server:~/scripts# vim script_2.sh
root@ubuntu-server:~/scripts# rm -r hw_2/
root@ubuntu-server:~/scripts# ./script_2.sh
root@ubuntu-server:~/scripts# cd hw_2/2010/3/
root@ubuntu-server:~/scripts/hw_2/2010/3# ls -la
total 20
drwxr-xr-x  2 root root 4096 Oct  3 07:02 .
drwxr-xr-x 14 root root 4096 Oct  3 07:02 ..
-rw-r--r--  1 root root    9 Oct  3 07:02 file_001.txt
-rw-r--r--  1 root root    9 Oct  3 07:02 file_002.txt
-rw-r--r--  1 root root    9 Oct  3 07:02 file_003.txt
root@ubuntu-server:~/scripts/hw_2/2010/3# cat file_001.txt
file_001
root@ubuntu-server:~/scripts/hw_2/2010/3# cat file_002.txt
file_002
root@ubuntu-server:~/scripts/hw_2/2010/3# cd ../../../../
root@ubuntu-server:~/scripts# rm -r hw_2/
root@ubuntu-server:~/scripts# vim script_2.sh
root@ubuntu-server:~/scripts# ./script_2.sh

```

- Удостоверяемся, что были созданы все директории от 2010 до 2017

```

root@ubuntu-server: ~/scripts/hw_2
-rw-r--r-- 1 root root 9 Oct 3 07:02 file_002.txt
-rw-r--r-- 1 root root 9 Oct 3 07:02 file_003.txt
root@ubuntu-server:~/scripts/hw_2/2010/3# cat file_001.txt
file_001
root@ubuntu-server:~/scripts/hw_2/2010/3# cat file_002.txt
file_002
root@ubuntu-server:~/scripts/hw_2/2010/3# cd ../../..
root@ubuntu-server:~/scripts# rm -r hw_2/
root@ubuntu-server:~/scripts# vim script_2.sh
root@ubuntu-server:~/scripts# ./script_2.sh
root@ubuntu-server:~/scripts# cd hw_2/
root@ubuntu-server:~/scripts/hw_2# ls -la
total 40
drwxr-xr-x 10 root root 4096 Oct 3 07:04 .
drwxr-xr-x 3 root root 4096 Oct 3 07:04 ..
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2010
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2011
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2012
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2013
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2014
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2015
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2016
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2017
root@ubuntu-server:~/scripts/hw_2#

```

- Удостоверяемся, что в каждой директории были созданы поддиректории от 1 до 12

```

root@ubuntu-server: ~/scripts/hw_2/2010
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2012
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2013
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2014
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2015
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2016
drwxr-xr-x 14 root root 4096 Oct 3 07:04 2017
root@ubuntu-server:~/scripts/hw_2# cd 2010
root@ubuntu-server:~/scripts/hw_2/2010# ls -la
total 56
drwxr-xr-x 14 root root 4096 Oct 3 07:04 .
drwxr-xr-x 10 root root 4096 Oct 3 07:04 ..
drwxr-xr-x 2 root root 4096 Oct 3 07:04 1
drwxr-xr-x 2 root root 4096 Oct 3 07:04 10
drwxr-xr-x 2 root root 4096 Oct 3 07:04 11
drwxr-xr-x 2 root root 4096 Oct 3 07:04 12
drwxr-xr-x 2 root root 4096 Oct 3 07:04 2
drwxr-xr-x 2 root root 4096 Oct 3 07:04 3
drwxr-xr-x 2 root root 4096 Oct 3 07:04 4
drwxr-xr-x 2 root root 4096 Oct 3 07:04 5
drwxr-xr-x 2 root root 4096 Oct 3 07:04 6
drwxr-xr-x 2 root root 4096 Oct 3 07:04 7
drwxr-xr-x 2 root root 4096 Oct 3 07:04 8
drwxr-xr-x 2 root root 4096 Oct 3 07:04 9
root@ubuntu-server:~/scripts/hw_2/2010#

```

- Удостоверяемся, что в каждой директории были созданы файлы с наполнением

```
root@ubuntu-server: ~/scripts/hw_2/2010/1
total 56
drwxr-xr-x 14 root root 4096 Oct  3 07:04 .
drwxr-xr-x 10 root root 4096 Oct  3 07:04 ..
drwxr-xr-x  2 root root 4096 Oct  3 07:04 1
drwxr-xr-x  2 root root 4096 Oct  3 07:04 10
drwxr-xr-x  2 root root 4096 Oct  3 07:04 11
drwxr-xr-x  2 root root 4096 Oct  3 07:04 12
drwxr-xr-x  2 root root 4096 Oct  3 07:04 2
drwxr-xr-x  2 root root 4096 Oct  3 07:04 3
drwxr-xr-x  2 root root 4096 Oct  3 07:04 4
drwxr-xr-x  2 root root 4096 Oct  3 07:04 5
drwxr-xr-x  2 root root 4096 Oct  3 07:04 6
drwxr-xr-x  2 root root 4096 Oct  3 07:04 7
drwxr-xr-x  2 root root 4096 Oct  3 07:04 8
drwxr-xr-x  2 root root 4096 Oct  3 07:04 9
root@ubuntu-server:~/scripts/hw_2/2010# cd 1
root@ubuntu-server:~/scripts/hw_2/2010/1# ls -la
total 20
drwxr-xr-x  2 root root 4096 Oct  3 07:04 .
drwxr-xr-x 14 root root 4096 Oct  3 07:04 ..
-rw-r--r--  1 root root    9 Oct  3 07:04 file_001.txt
-rw-r--r--  1 root root    9 Oct  3 07:04 file_002.txt
-rw-r--r--  1 root root    9 Oct  3 07:04 file_003.txt
root@ubuntu-server:~/scripts/hw_2/2010/1#
```

```
root@ubuntu-server: ~/scripts/hw_2/2010/1
drwxr-xr-x 10 root root 4096 Oct  3 07:04 ..
drwxr-xr-x  2 root root 4096 Oct  3 07:04 1
drwxr-xr-x  2 root root 4096 Oct  3 07:04 10
drwxr-xr-x  2 root root 4096 Oct  3 07:04 11
drwxr-xr-x  2 root root 4096 Oct  3 07:04 12
drwxr-xr-x  2 root root 4096 Oct  3 07:04 2
drwxr-xr-x  2 root root 4096 Oct  3 07:04 3
drwxr-xr-x  2 root root 4096 Oct  3 07:04 4
drwxr-xr-x  2 root root 4096 Oct  3 07:04 5
drwxr-xr-x  2 root root 4096 Oct  3 07:04 6
drwxr-xr-x  2 root root 4096 Oct  3 07:04 7
drwxr-xr-x  2 root root 4096 Oct  3 07:04 8
drwxr-xr-x  2 root root 4096 Oct  3 07:04 9
root@ubuntu-server:~/scripts/hw_2/2010# cd 1
root@ubuntu-server:~/scripts/hw_2/2010/1# ls -la
total 20
drwxr-xr-x  2 root root 4096 Oct  3 07:04 .
drwxr-xr-x 14 root root 4096 Oct  3 07:04 ..
-rw-r--r--  1 root root    9 Oct  3 07:04 file_001.txt
-rw-r--r--  1 root root    9 Oct  3 07:04 file_002.txt
-rw-r--r--  1 root root    9 Oct  3 07:04 file_003.txt
root@ubuntu-server:~/scripts/hw_2/2010/1# cat file_001.txt
file_001
root@ubuntu-server:~/scripts/hw_2/2010/1#
```


- Проверяем работу скрипта для директории hw_2

```

root@ubuntu-server: ~/scripts
access rights: drwxr-xr-x
access rights: drwxr-xr-x
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
access rights: total
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
access rights: drwxr-xr-x
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
./script_3.sh: line 8: unic: command not found
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
      8 access rights: drwxr-xr-x
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
      8 access rights: drwxr-xr-x
root@ubuntu-server:~/scripts#

```

- Проверяем работу скрипта для директории /root/

```

root@ubuntu-server: ~/scripts
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
access rights: drwxr-xr-x
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
access rights: drwxr-xr-x
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
./script_3.sh: line 8: unic: command not found
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
      8 access rights: drwxr-xr-x
root@ubuntu-server:~/scripts# vim script_3.sh
root@ubuntu-server:~/scripts# ./script_3.sh hw_2
      8 access rights: drwxr-xr-x
root@ubuntu-server:~/scripts# ./script_3.sh /root/
      4 access rights: drwxr-xr-x
      1 access rights: lrwxrwxrwx
      8 access rights: -rw-r--r--
      1 access rights: -rwxr-xr-x
root@ubuntu-server:~/scripts#

```

4. Используя grep, проанализировать файл /var/log/syslog, отобразив события на своё усмотрение

Решение

- Создадим файл script_4.sh и добавим права на выполнение. Откроем его в редакторе vim

```
root@ubuntu-server: ~/scripts
8 access rights: drwxr-xr-x
root@ubuntu-server:~/scripts# ./script_3.sh /root/
4 access rights: drwxr-xr-x
1 access rights: lrwxrwxrwx
8 access rights: -rw-r--r--
1 access rights: -rwxr-xr-x
root@ubuntu-server:~/scripts# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:0d:90:17 brd ff:ff:ff:ff:ff:ff
    inet 192.168.0.19/24 brd 192.168.0.255 scope global dynamic enp0s3
        valid_lft 8289sec preferred_lft 8289sec
    inet6 fe80::a00:27ff:fe0d:9017/64 scope link
        valid_lft forever preferred_lft forever
root@ubuntu-server:~/scripts# cd ..
root@ubuntu-server:~# less /var/log/syslog
root@ubuntu-server:~# less /var/log/syslog
root@ubuntu-server:~# cd scripts/
root@ubuntu-server:~/scripts# touch script_4.sh
root@ubuntu-server:~/scripts# chmod u+x script_4.sh
root@ubuntu-server:~/scripts# vim script_4.sh
```

- Запишем простой скрипт поиска слова systemd

```
root@ubuntu-server: ~/scripts
#4 Используя grep, проанализировать файл /var/log/syslog (на свое усмотрение)

#!/bin/bash

a=$1

grep -ir systemd $a

-- INSERT --
7,1 All
```

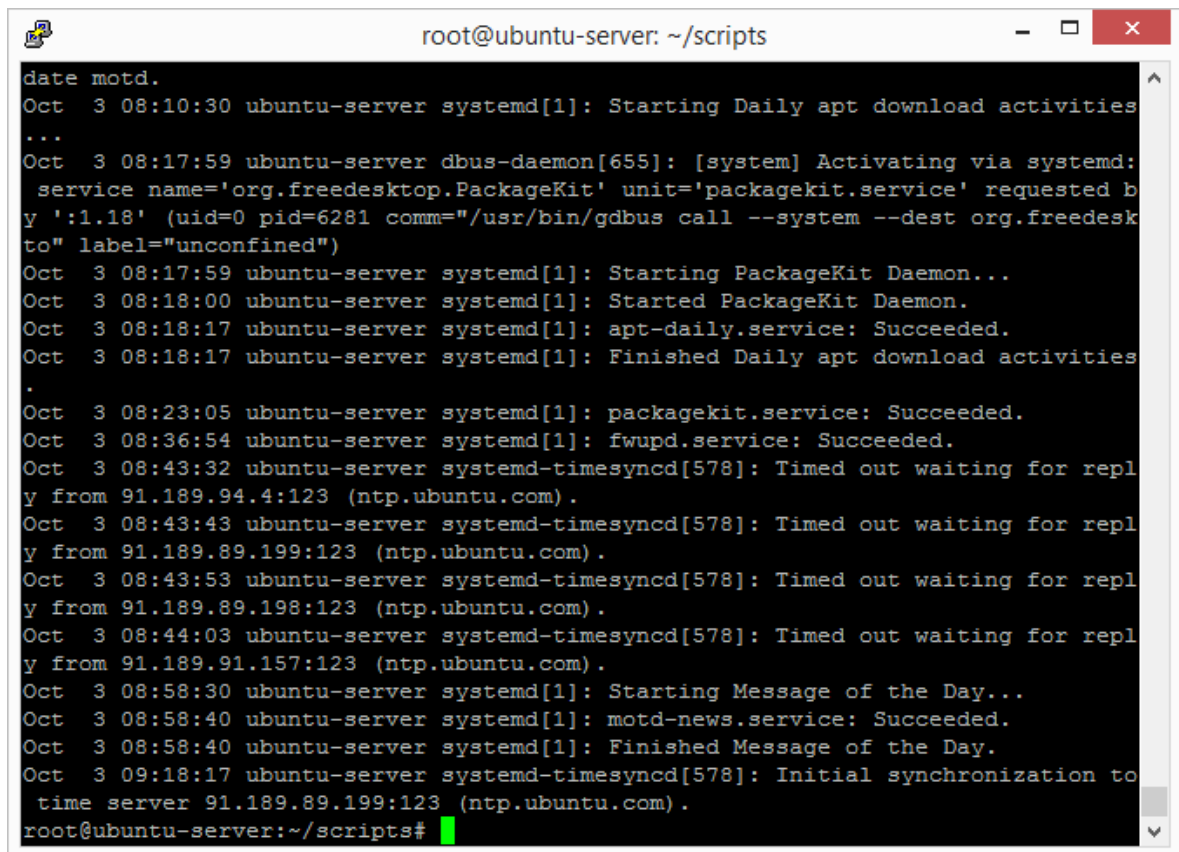
- С помощью less /var/log/syslog посмотрим содержимое файла syslog

```
root@ubuntu-server: ~  
Oct 3 03:32:57 ubuntu-server rsyslogd: [origin software="rsyslogd" swVersion="8  
.2001.0" x-pid="670" x-info="https://www.rsyslog.com"] rsyslogd was HUPed  
Oct 3 03:32:57 ubuntu-server systemd[1]: Started OpenBSD Secure Shell server.  
Oct 3 03:32:59 ubuntu-server networkd-dispatcher[667]: No valid path found for  
iwconfig  
Oct 3 03:32:59 ubuntu-server systemd[1]: Started Dispatcher daemon for systemd-  
networkd.  
Oct 3 03:33:00 ubuntu-server systemd[1]: logrotate.service: Succeeded.  
Oct 3 03:33:00 ubuntu-server systemd[1]: Finished Rotate log files.  
Oct 3 03:33:00 ubuntu-server systemd[1]: Starting Online ext4 Metadata Check fo  
r All Filesystems...  
Oct 3 03:33:00 ubuntu-server systemd[1]: e2scrub_all.service: Succeeded.  
Oct 3 03:33:00 ubuntu-server systemd[1]: Finished Online ext4 Metadata Check fo  
r All Filesystems.  
Oct 3 03:33:00 ubuntu-server systemd[1]: dmesg.service: Succeeded.  
Oct 3 03:33:01 ubuntu-server dbus-daemon[655]: [system] Activating via systemd:  
service name='org.freedesktop.PolicyKit1' unit='polkit.service' requested by '  
1.5' (uid=0 pid=650 comm="/usr/lib/accountsservice/accounts-daemon " label="unco  
nfinied")  
Oct 3 03:33:01 ubuntu-server systemd[1]: Starting Authorization Manager...  
Oct 3 03:33:01 ubuntu-server polkitd[780]: started daemon version 0.105 using a  
authority implementation 'local' version '0.105'  
Oct 3 03:33:01 ubuntu-server dbus-daemon[655]: [system] Successfully activated  
service 'org.freedesktop.PolicyKit1'  
Oct 3 03:33:01 ubuntu-server systemd[1]: Started Authorization Manager.  
Oct 3 03:33:01 ubuntu-server accounts-daemon[650]: started daemon version 0.6.5  
5  
/var/log/syslog
```

- Воспользуемся скриптом script_4.sh для вывода необходимой информации

```
root@ubuntu-server: ~/scripts  
Oct 3 08:10:30 ubuntu-server systemd[1]: Starting Daily apt download activities  
...  
Oct 3 08:17:59 ubuntu-server dbus-daemon[655]: [system] Activating via systemd:  
service name='org.freedesktop.PackageKit' unit='packagekit.service' requested b  
y '1.18' (uid=0 pid=6281 comm="/usr/bin/gdbus call --system --dest org.freedesk  
to" label="unconfined")  
Oct 3 08:17:59 ubuntu-server systemd[1]: Starting PackageKit Daemon...  
Oct 3 08:18:00 ubuntu-server systemd[1]: Started PackageKit Daemon.  
Oct 3 08:18:17 ubuntu-server systemd[1]: apt-daily.service: Succeeded.  
Oct 3 08:18:17 ubuntu-server systemd[1]: Finished Daily apt download activities  
.  
Oct 3 08:23:05 ubuntu-server systemd[1]: packagekit.service: Succeeded.  
Oct 3 08:36:54 ubuntu-server systemd[1]: fwupd.service: Succeeded.  
Oct 3 08:43:32 ubuntu-server systemd-timesyncd[578]: Timed out waiting for repl  
y from 91.189.94.4:123 (ntp.ubuntu.com).  
Oct 3 08:43:43 ubuntu-server systemd-timesyncd[578]: Timed out waiting for repl  
y from 91.189.89.199:123 (ntp.ubuntu.com).  
Oct 3 08:43:53 ubuntu-server systemd-timesyncd[578]: Timed out waiting for repl  
y from 91.189.89.198:123 (ntp.ubuntu.com).  
Oct 3 08:44:03 ubuntu-server systemd-timesyncd[578]: Timed out waiting for repl  
y from 91.189.91.157:123 (ntp.ubuntu.com).  
Oct 3 08:58:30 ubuntu-server systemd[1]: Starting Message of the Day...  
Oct 3 08:58:40 ubuntu-server systemd[1]: motd-news.service: Succeeded.  
Oct 3 08:58:40 ubuntu-server systemd[1]: Finished Message of the Day.  
Oct 3 09:18:17 ubuntu-server systemd-timesyncd[578]: Initial synchronization to  
time server 91.189.89.199:123 (ntp.ubuntu.com).  
root@ubuntu-server:~/scripts# vim script_4.sh  
root@ubuntu-server:~/scripts# ./script_4.sh /var/log/syslog
```

- В результате получили только те строки, в которых содержится слово systemd

A terminal window titled 'root@ubuntu-server: ~/scripts' with standard window controls. It displays a series of log messages from the systemd journal, filtered to show only entries containing the word 'systemd'. The logs include timestamps, hostnames, and process names, detailing the startup of various services like PackageKit, apt-daily, and fwupd, as well as network synchronization attempts.

```
date motd.
Oct  3 08:10:30 ubuntu-server systemd[1]: Starting Daily apt download activities
...
Oct  3 08:17:59 ubuntu-server dbus-daemon[655]: [system] Activating via systemd:
service name='org.freedesktop.PackageKit' unit='packagekit.service' requested b
y ':1.18' (uid=0 pid=6281 comm="/usr/bin/gdbus call --system --dest org.freedesk
to" label="unconfined")
Oct  3 08:17:59 ubuntu-server systemd[1]: Starting PackageKit Daemon...
Oct  3 08:18:00 ubuntu-server systemd[1]: Started PackageKit Daemon.
Oct  3 08:18:17 ubuntu-server systemd[1]: apt-daily.service: Succeeded.
Oct  3 08:18:17 ubuntu-server systemd[1]: Finished Daily apt download activities
.
Oct  3 08:23:05 ubuntu-server systemd[1]: packagekit.service: Succeeded.
Oct  3 08:36:54 ubuntu-server systemd[1]: fwupd.service: Succeeded.
Oct  3 08:43:32 ubuntu-server systemd-timesyncd[578]: Timed out waiting for repl
y from 91.189.94.4:123 (ntp.ubuntu.com).
Oct  3 08:43:43 ubuntu-server systemd-timesyncd[578]: Timed out waiting for repl
y from 91.189.89.199:123 (ntp.ubuntu.com).
Oct  3 08:43:53 ubuntu-server systemd-timesyncd[578]: Timed out waiting for repl
y from 91.189.89.198:123 (ntp.ubuntu.com).
Oct  3 08:44:03 ubuntu-server systemd-timesyncd[578]: Timed out waiting for repl
y from 91.189.91.157:123 (ntp.ubuntu.com).
Oct  3 08:58:30 ubuntu-server systemd[1]: Starting Message of the Day...
Oct  3 08:58:40 ubuntu-server systemd[1]: motd-news.service: Succeeded.
Oct  3 08:58:40 ubuntu-server systemd[1]: Finished Message of the Day.
Oct  3 09:18:17 ubuntu-server systemd-timesyncd[578]: Initial synchronization to
time server 91.189.89.199:123 (ntp.ubuntu.com).
root@ubuntu-server:~/scripts#
```

```

root@ubuntu-server: ~/scripts
Usage of /:    65.0% of 6.82GB    Users logged in:    0
Memory usage: 20%                IPv4 address for enp0s3: 192.168.0.19
Swap usage:   0%

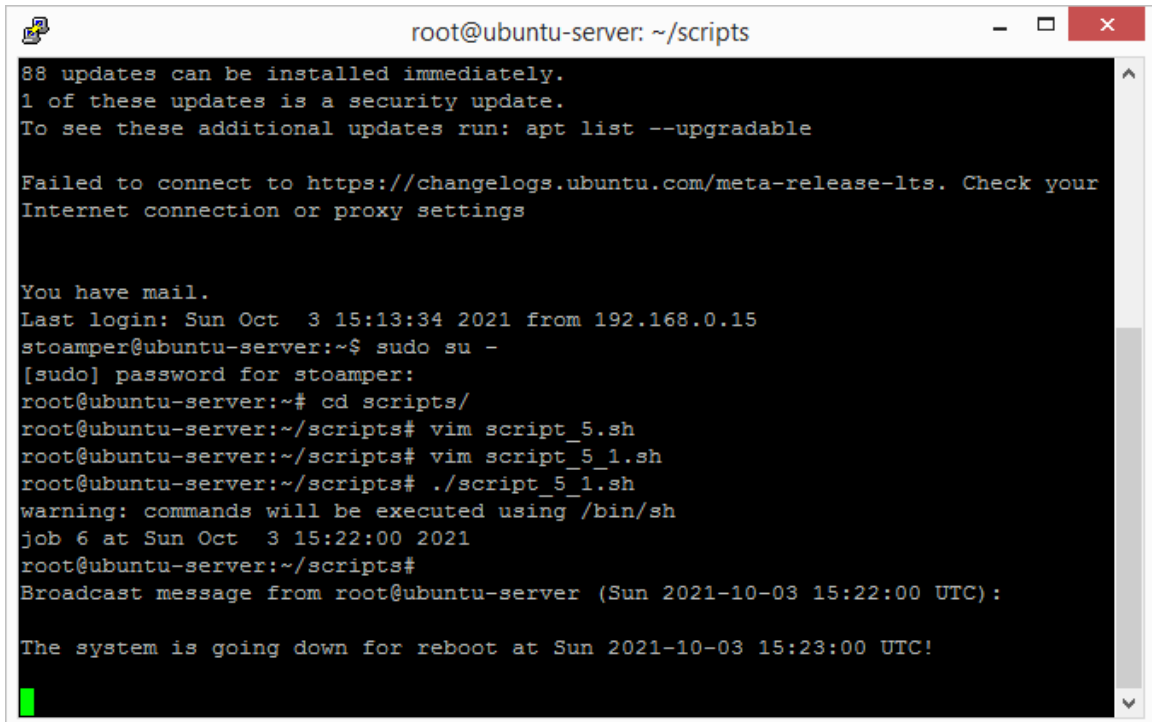
88 updates can be installed immediately.
1 of these updates is a security update.
To see these additional updates run: apt list --upgradable

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your
Internet connection or proxy settings

You have mail.
Last login: Sun Oct  3 15:13:34 2021 from 192.168.0.15
stoamper@ubuntu-server:~$ sudo su -
[sudo] password for stoamper:
root@ubuntu-server:~# cd scripts/
root@ubuntu-server:~/scripts# vim script_5.sh
root@ubuntu-server:~/scripts# vim script_5_1.sh
root@ubuntu-server:~/scripts# ./script_5_1.sh
warning: commands will be executed using /bin/sh
job 6 at Sun Oct  3 15:22:00 2021
root@ubuntu-server:~/scripts#

```

- Получим следующее сообщение (задание создано)



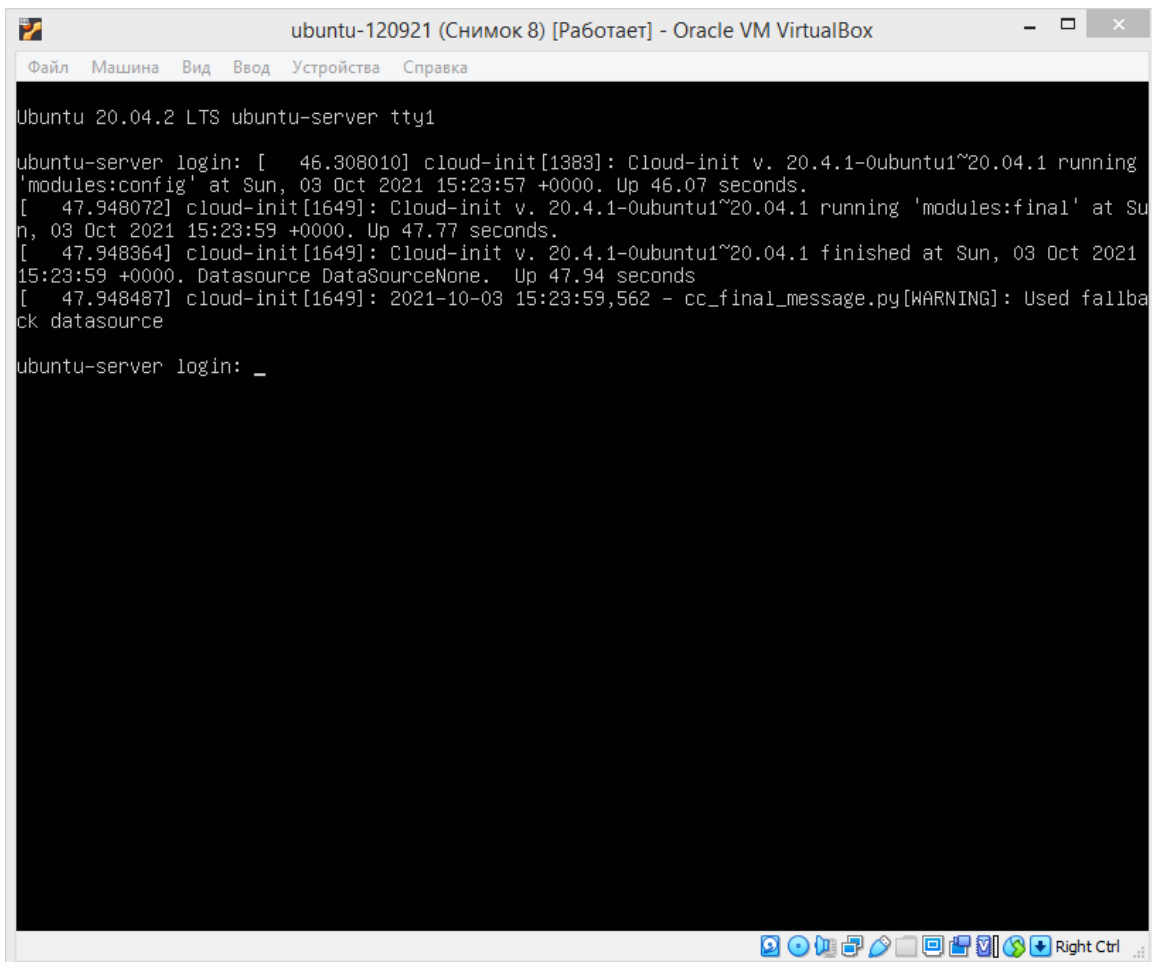
```
root@ubuntu-server: ~/scripts
88 updates can be installed immediately.
1 of these updates is a security update.
To see these additional updates run: apt list --upgradable

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your
Internet connection or proxy settings

You have mail.
Last login: Sun Oct  3 15:13:34 2021 from 192.168.0.15
stoamper@ubuntu-server:~$ sudo su -
[sudo] password for stoamper:
root@ubuntu-server:~# cd scripts/
root@ubuntu-server:~/scripts# vim script_5.sh
root@ubuntu-server:~/scripts# vim script_5_1.sh
root@ubuntu-server:~/scripts# ./script_5_1.sh
warning: commands will be executed using /bin/sh
job 6 at Sun Oct  3 15:22:00 2021
root@ubuntu-server:~/scripts#
Broadcast message from root@ubuntu-server (Sun 2021-10-03 15:22:00 UTC):

The system is going down for reboot at Sun 2021-10-03 15:23:00 UTC!
```

- Система перезагружена



```
ubuntu-120921 (Снимок 8) [Работает] - Oracle VM VirtualBox
Файл  Машина  Вид  Ввод  Устройства  Справка

Ubuntu 20.04.2 LTS ubuntu-server tty1

ubuntu-server login: [  46.308010] cloud-init[1383]: Cloud-init v. 20.4.1-0ubuntu1~20.04.1 running
'modules:config' at Sun, 03 Oct 2021 15:23:57 +0000. Up 46.07 seconds.
[  47.948072] cloud-init[1649]: Cloud-init v. 20.4.1-0ubuntu1~20.04.1 running 'modules:final' at Su
n, 03 Oct 2021 15:23:59 +0000. Up 47.77 seconds.
[  47.948364] cloud-init[1649]: Cloud-init v. 20.4.1-0ubuntu1~20.04.1 finished at Sun, 03 Oct 2021
15:23:59 +0000. Datasource DataSourceNone. Up 47.94 seconds
[  47.948487] cloud-init[1649]: 2021-10-03 15:23:59,562 - cc_final_message.py[WARNING]: Used fallba
ck datasource

ubuntu-server login: _
```

6. Написать скрипт, делающий архивную копию каталога etc, и прописать задание в crontab

Решение

- Создадим файл `script_6.sh` и добавим права на выполнение

```

root@ubuntu-server: ~/scripts

System information as of Sun 03 Oct 2021 03:31:28 PM UTC

System load: 0.03          Processes:           117
Usage of /: 65.0% of 6.82GB Users logged in:      1
Memory usage: 21%         IPv4 address for enp0s3: 192.168.0.19
Swap usage: 0%

88 updates can be installed immediately.
1 of these updates is a security update.
To see these additional updates run: apt list --upgradable

Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your
Internet connection or proxy settings

You have mail.
Last login: Sun Oct  3 15:30:38 2021
stoamper@ubuntu-server:~$ sudo su -
[sudo] password for stoamper:
root@ubuntu-server:~# cd scripts/
root@ubuntu-server:~/scripts# touch script_6.sh
root@ubuntu-server:~/scripts# chmod u+x script_6.sh
root@ubuntu-server:~/scripts#

```

- Открыв `script_6.sh` через `vim` запишем в него скрипт, согласно которому будет делаться архивная копия директории `/etc`

[illegible]

- Пробуем выполнить script_6.sh. Архивная копия была создана

```
root@ubuntu-server: ~/scripts
/etc/NetworkManager/
/etc/NetworkManager/dispatcher.d/
/etc/NetworkManager/dispatcher.d/hook-network-manager
/etc/rc4.d/
/etc/rc4.d/S01rsyslog
/etc/rc4.d/S01plymouth
/etc/rc4.d/S01ssh
/etc/rc4.d/S01console-setup.sh
/etc/rc4.d/S01atopacct
/etc/rc4.d/S01irqbalance
/etc/rc4.d/S01multipath-tools
/etc/rc4.d/S01atop
/etc/rc4.d/S01grub-common
/etc/rc4.d/S01dbus
/etc/rc4.d/S01lvm2-lvmpolld
/etc/rc4.d/S01atd
/etc/rc4.d/S01open-vm-tools
/etc/rc4.d/S01postfix
/etc/rc4.d/S01uuidd
/etc/rc4.d/S01cron
/etc/rc4.d/S01unattended-upgrades
/etc/rc4.d/S01rsync
/etc/rc4.d/S01appport
root@ubuntu-server:~/scripts# ./script_6.sh
```

- При попытке создать задачу на выполнение заданного скрипта в определенное время (crontab) выходит **ошибка**

```
root@ubuntu-server: ~/scripts
/etc/NetworkManager/dispatcher.d/hook-network-manager
/etc/rc4.d/
/etc/rc4.d/S01rsyslog
/etc/rc4.d/S01plymouth
/etc/rc4.d/S01ssh
/etc/rc4.d/S01console-setup.sh
/etc/rc4.d/S01atopacct
/etc/rc4.d/S01irqbalance
/etc/rc4.d/S01multipath-tools
/etc/rc4.d/S01atop
/etc/rc4.d/S01grub-common
/etc/rc4.d/S01dbus
/etc/rc4.d/S01lvm2-lvmpolld
/etc/rc4.d/S01atd
/etc/rc4.d/S01open-vm-tools
/etc/rc4.d/S01postfix
/etc/rc4.d/S01uuidd
/etc/rc4.d/S01cron
/etc/rc4.d/S01unattended-upgrades
/etc/rc4.d/S01rsync
/etc/rc4.d/S01appport
root@ubuntu-server:~/scripts# * * 1 * 1 ./script_6.sh
archive_etc.tar: command not found
root@ubuntu-server:~/scripts#
```

- [illegible]

- ```

root@ubuntu-server: ~/scripts
/etc/rc4.d/S01console-setup.sh
/etc/rc4.d/S01atopacct
/etc/rc4.d/S01irqbalance
/etc/rc4.d/S01multipath-tools
/etc/rc4.d/S01atop
/etc/rc4.d/S01grub-common
/etc/rc4.d/S01dbus
/etc/rc4.d/S01lvmd2-lvmpolld
/etc/rc4.d/S01atd
/etc/rc4.d/S01open-vm-tools
/etc/rc4.d/S01postfix
/etc/rc4.d/S01uuidd
/etc/rc4.d/S01cron
/etc/rc4.d/S01unattended-upgrades
/etc/rc4.d/S01rsync
/etc/rc4.d/S01appport
root@ubuntu-server:~/scripts# * * 1 * 1 ./script_6.sh
archive_etc.tar: command not found
root@ubuntu-server:~/scripts# vim script 9.sh
root@ubuntu-server:~/scripts# ./script_9.sh
tar: warning: commands will be executed using /bin/sh
Removing leading `/' from member names
job 9 at Sun Oct 3 17:20:00 2021
root@ubuntu-server:~/scripts#

```

- Убеждаемся, что файл был создан

```
root@ubuntu-server: ~/scripts
/etc/rc4.d/S01apport
root@ubuntu-server:~/scripts# * * 1 * 1 ./script_6.sh
archive_etc.tar: command not found
root@ubuntu-server:~/scripts# vim script_9.sh
root@ubuntu-server:~/scripts# ./script_9.sh
tar: warning: commands will be executed using /bin/sh
Removing leading '/' from member names
job 9 at Sun Oct 3 17:20:00 2021
root@ubuntu-server:~/scripts# ls -la
total 48668
drwxr-xr-x 3 root root 4096 Oct 3 17:20 .
drwx----- 10 root root 4096 Oct 3 17:20 ..
-rw-r--r-- 1 root root 5734400 Oct 3 17:19 archive_etc.tar
-rw-r--r-- 1 root root 1603222 Oct 3 17:20 archive_etc.tar.bz2
-rw-r--r-- 1 root root 12288000 Oct 3 17:06 archive.tar.bz2
-rw-r--r-- 1 root root 6144000 Oct 3 16:49 archive_test.tar
-rw-r--r-- 1 root root 6430461 Oct 3 17:08 arrrrr.tar
-rw-r--r-- 1 root root 17530743 Oct 3 17:16 arrrrr.tar.bz2
drwxr-xr-x 10 root root 4096 Oct 3 08:09 hw_2
-rwxr--r-- 1 root root 1195 Oct 3 04:51 script_1.sh
-rwxr--r-- 1 root root 603 Oct 3 07:02 script_2.sh
-rwxr--r-- 1 root root 320 Oct 3 08:44 script_3.sh
-rwxr--r-- 1 root root 161 Oct 3 09:45 script_4.sh
-rwxr--r-- 1 root root 120 Oct 3 15:14 script_5_1.sh
```