1)Задание 1


```
Connection closed by 217.71.138.1 port 44556

C:\Windows\system32>ssh eltex-pg1-v5@217.71.138.1 -p 44556
eltex-pg1-v5@217.71.138.1's password:
Linux eltex-2025-summer 6.1.0-40-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.153-1 (2025-09-20) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu Oct  9 17:42:12 2025 from 217.71.131.234
eltex-pg1-v5@eltex-2025-summer:~$
```

Команда W


```
eltex-pg1-v5@eltex-2025-summer:~$ w
 17:58:36 up  2:20, 36 users,  load average: 0.05, 0.05, 0.02
USER       TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
tech       pts/0    37.193.179.176   15:39    1:17m  0.02s  0.02s sshd: tech [priv]
eltex-pg pts/2     217.71.131.234    17:26    1:40   0.02s  0.02s -bash
eltex-pg pts/3     178.130.143.197   17:28    30:27  0.00s  ?     -bash
eltex-pg pts/4     89.113.140.71     17:57    20.00s 0.01s  0.01s -bash
eltex-pg pts/5     176.59.145.254    17:30    28:10  0.00s  ?     -bash
eltex-pg pts/8     178.178.206.36    17:46    1:31   0.01s  ?     screen -S top
eltex-pg pts/9     217.71.131.234    17:43    37.00s 0.00s  ?     screen
eltex-pg pts/10    217.71.139.234    17:34    8:28   0.00s  ?     screen
eltex-pg pts/11    217.71.131.234    17:34    3.00s  0.01s  ?     screen -r top
eltex-pg pts/13    217.71.131.234    17:53    2:27   0.00s  ?     screen
eltex-pg pts/15    :pts/25:S.1       17:48    4.00s  0.20s  0.20s top
eltex-pg pts/17    91.79.222.224     17:38    20:28  0.00s  ?     -bash
eltex-pg pts/18    178.178.206.36    17:38    20:31  0.00s  ?     -bash
eltex-pg pts/19    89.113.141.142    17:38    4:52   0.01s  ?     screen
eltex-pg pts/20    176.59.146.129    17:38    20:21  0.00s  ?     -bash
eltex-pg pts/21    217.71.139.234    17:38    10:13  0.01s  0.01s -bash
eltex-pg pts/22    :pts/42:S.0       17:58    34.00s 0.00s  ?     SCREEN -S first -d -m
eltex-pg pts/23    217.71.131.237    17:39    26.00s 0.00s  ?     -bash
eltex-pg pts/24    :pts/10:S.0       17:49    8:25   0.00s  ?     SCREEN
eltex-pg pts/25    217.71.131.234    17:39    4.00s  0.01s  ?     screen
eltex-pg pts/28    176.59.145.254    17:43    45.00s 0.00s  ?     screen
eltex-pg pts/29    :pts/25:S.0       17:43    6:13   0.00s  0.09s SCREEN
eltex-pg pts/31    :pts/28:S.0       17:44    45.00s 0.01s  0.03s SCREEN
eltex-pg pts/32    :pts/19:S.0       17:48    4:52   0.00s  ?     SCREEN
eltex-pg pts/33    217.71.131.237    17:45    5.00s  0.01s  ?     screen
eltex-pg pts/38    176.59.146.129    17:50    20.00s 0.01s  ?     screen -r session1
eltex-pg pts/40    217.71.131.237    17:52    1:17   0.00s  ?     screen
eltex-pg pts/42    :pts/9:S.0        17:51    37.00s 0.01s  ?     screen -r first
eltex-pg pts/43    :pts/38:S.0       17:53    24.00s 0.00s  0.19s SCREEN -S session1
eltex-pg pts/44    :pts/33:S.0       17:52    5.00s  0.10s  0.10s w
eltex-pg pts/47    :pts/13:S.0       17:53    2:27   0.00s  ?     SCREEN
eltex-pg pts/48    :pts/8:S.0        17:55    1:31   0.09s  0.09s top
eltex-pg pts/46    217.71.139.234    17:55    1:01   0.01s  0.01s -bash
eltex-pg pts/49    :pts/40:S.0       17:56    1:17   0.00s  ?     SCREEN
eltex-pg pts/51    :pts/11:S.0       17:56    3.00s  0.00s  ?     SCREEN -S top -d -m
eltex-pg pts/53    :pts/40:S.1       17:57    1:17   0.00s  ?     /usr/bin/bash
eltex-pg1-v5@eltex-2025-summer:~$
```

Screen -ls


```
eltex-pg1-v5@eltex-2025-summer:~$ screen -ls
There are screens on:
        3377.top        (10/09/2025 05:56:31 PM)        (Attached)
        3087.pts-33.eltex-2025-summer  (10/09/2025 05:52:12 PM)        (Attached)
2 Sockets in /run/screen/S-eltex-pg1-v5.
eltex-pg1-v5@eltex-2025-summer:~$
```

Назвали сессию top

eltex-pg1-v5@eltex-2025-summer: ~

```
top - 18:01:51 up  2:24, 59 users,  load average: 0.08, 0.04, 0.01
Tasks: 312 total,   1 running, 307 sleeping,   4 stopped,   0 zombie
%Cpu(s):  0.1 us,  0.2 sy,  0.0 ni, 98.2 id,  1.4 wa,  0.0 hi,  0.1 si,  0.0 st
MiB Mem :   3914.7 total,   3324.0 free,    607.0 used,    197.5 buff/cache
MiB Swap:    976.0 total,    976.0 free,      0.0 used.   3307.7 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
    214 root      20   0       0      0      0 S   0.3   0.0   0:00.03 jbd2/dm-0-8
    896 root      20   0       0      0      0 I   0.3   0.0   0:00.14 kworker/u8:4-events_unbound
   3301 eltex-p+  20   0   11632   5420   3268 S   0.3   0.1   0:00.58 top
   3509 eltex-p+  20   0   11660   5340   3184 S   0.3   0.1   0:00.14 top
      1 root      20   0  168244  12852   9184 S   0.0   0.3   0:00.68 systemd
      2 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kthreadd
      3 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_gp
      4 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 rcu_par_gp
      5 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 slub_flushwq
      6 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 netns
     10 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
     11 root      20   0       0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_kthread
     12 root      20   0       0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_rude_kthread
     13 root      20   0       0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_trace_kthread
     14 root      20   0       0      0      0 S   0.0   0.0   0:00.02 ksoftirqd/0
     15 root      20   0       0      0      0 I   0.0   0.0   0:00.10 rcu_preempt
     16 root      rt   0       0      0      0 S   0.0   0.0   0:00.02 migration/0
     18 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/0
     19 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/1
     20 root      rt   0       0      0      0 S   0.0   0.0   0:00.23 migration/1
     21 root      20   0       0      0      0 S   0.0   0.0   0:00.01 ksoftirqd/1
     23 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/1:0H-events_highpri
     24 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/2
     25 root      rt   0       0      0      0 S   0.0   0.0   0:00.23 migration/2
     26 root      20   0       0      0      0 S   0.0   0.0   0:00.01 ksoftirqd/2
     28 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/2:0H-events_highpri
     29 root      20   0       0      0      0 S   0.0   0.0   0:00.00 cpuhp/3
     30 root      rt   0       0      0      0 S   0.0   0.0   0:00.23 migration/3
     31 root      20   0       0      0      0 S   0.0   0.0   0:00.02 ksoftirqd/3
     33 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/3:0H-events_highpri
     38 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kdevtmpfs
     39 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 inet_frag_wq
     40 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kauditd
     41 root      20   0       0      0      0 S   0.0   0.0   0:00.00 khungtaskd
     42 root      20   0       0      0      0 S   0.0   0.0   0:00.00 oom_reaper
     43 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 writeback
     44 root      20   0       0      0      0 S   0.0   0.0   0:00.12 kcompactd0
     45 root      25   5       0      0      0 S   0.0   0.0   0:00.00 ksmd
     47 root      39  19       0      0      0 S   0.0   0.0   0:00.07 khugepaged
     48 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kintegrityd
     49 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kblockd
     50 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 blkcg_punt_bio
     51 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 tpm_dev_wq
     52 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 edac-poller
     53 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 devfreq_wq
     54 root       0 -20       0      0      0 I   0.0   0.0   0:00.01 kworker/1:1H-kblockd
     55 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kswapd0
     61 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kthrotld
     63 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 acpi_thermal_pm
     66 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 mld
     67 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 ipv6_addrconf
     72 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kstrp
     77 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 zswap-shrink
     78 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/u9:0
    123 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/3:1H-kblockd
    133 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/0:1H-kblockd
```

```
eltex-pg1-v5@eltex-2025-summer:~$ screen -ls
There is a screen on:
        3087.pts-33.eltex-2025-summer   (10/09/2025 05:52:11 PM)        (Attached)
1 Socket in /run/screen/S-eltex-pg1-v5.
eltex-pg1-v5@eltex-2025-summer:~$
```

0 Отчет – команды и результаты в файле pdf.

1

Подключитесь к серверу для выполнения практических работ, используя клиент для протокола ssh: ssh, putty, smartty (попробуйте их все и остановитесь на наиболее удобном для вас).

2

Запустите новую сессию утилиты screen, с именем по умолчанию, посмотрите список подключенных пользователей командой w, отключитесь от сессии.

```
eltex-pg1-v5@eltex-2025-summer:~$ w
 18:35:29 up  2:57, 30 users,  load average: 0.00, 0.05, 0.02
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
tech     pts/0    37.193.179.176   15:39    1:54m  0.02s  0.02s sshd: tech [priv]
eltex-pg pts/2    217.71.131.237   18:30   31.00s  0.00s  ?     -bash
eltex-pg pts/3    178.130.143.197  17:28    1:07m  0.00s  ?     -bash
eltex-pg pts/4    217.71.131.234   18:29    4.00s  0.01s  0.01s -bash
eltex-pg pts/5    176.59.145.254   17:30    1:05m  0.00s  ?     -bash
eltex-pg pts/6    185.210.141.98   18:34    1.00s  0.00s  ?     screen -r vi
eltex-pg pts/8    217.71.131.234   18:28    2:49   0.01s  0.01s -bash
eltex-pg pts/9    217.71.131.234   17:43   24:46   0.01s  ?     screen -r top
eltex-pg pts/10   176.59.145.254   18:34    4.00s  0.01s  0.01s -bash
eltex-pg pts/11   :pts/86:S.0      18:20   10:01   0.00s  ?     SCREEN -S Top -d -m
eltex-pg pts/17   91.79.222.224    17:38   57:20   0.00s  ?     -bash
eltex-pg pts/18   178.178.206.36   17:38   57:23   0.00s  ?     -bash
eltex-pg pts/19   :pts/6:S.0       18:34    1.00s  0.02s  0.02s vi report_part1.txt
eltex-pg pts/20   176.59.146.129   17:38   57:13   0.00s  ?     -bash
eltex-pg pts/22   :pts/42:S.0      17:59   34:09   0.21s  0.03s SCREEN -S top -d -m
eltex-pg pts/23   :pts/9:S.0       18:04   24:46   0.00s  0.02s SCREEN -S top -d -m
eltex-pg pts/28   176.59.145.254   17:43    8:17   0.01s  ?     screen -dr top
eltex-pg pts/33   217.71.131.237   17:45    1.00s  0.18s  0.07s w
eltex-pg pts/40   217.71.131.237   17:52    1:57   0.00s  ?     -bash
eltex-pg pts/41   :pts/28:S.0      18:22   21:21   1.66s  1.66s top
eltex-pg pts/43   :pts/46:S.1      18:33    9.00s  0.00s  ?     /usr/bin/bash
eltex-pg pts/46   217.71.139.234   17:55    9.00s  0.01s  ?     screen -r
eltex-pg pts/79   89.113.140.71    18:12    9.00s  0.01s  ?     screen -r whoami_part2
eltex-pg pts/80   :pts/28:S.1      18:24    8:17   0.00s  ?     /usr/bin/bash
eltex-pg pts/83   178.178.206.36   18:29   17.00s  0.03s  0.03s -bash
eltex-pg pts/86   :pts/90:S.0      18:11   10:01   0.00s  ?     screen -r Top
eltex-pg pts/88   :pts/9:S.1       18:05   29:37   0.71s  0.71s watch /usr/bin/vmstat
eltex-pg pts/90   :pts/74:S.0      18:05   10:01   0.00s  ?     screen -S top
eltex-pg pts/105  :pts/79:S.0      18:28    9.00s  0.02s  0.01s SCREEN -S whoami_part2
eltex-pg pts/112  176.59.146.129   18:18    4:33   0.01s  0.01s -bash
eltex-pg1-v5@eltex-2025-summer:~$
eltex-pg pts/112  176.59.146.129   18:18
eltex-pg1-v5@eltex-2025-summer:~$
logout
There are stopped jobs.
eltex-pg1-v5@eltex-2025-summer:~$ s
```

3

Запустите отсоединенную сессию утилиты screen, при этом запустите в этой сессии команду top. Назовите сессию именем «top».

4

Получите список сессий, созданных утилитой screen.

```
[detached from 28542.top]
eltex-pg1-v5@eltex-2025-summer:~$ [detached from 28542.top]
eltex-pg1-v5@eltex-2025-summer:~$ screen -ls
There are screens on:
        28542.top       (10/09/2025 06:33:19 PM)        (Detached)
        3087.pts-33.eltex-2025-summer   (10/09/2025 05:52:11 PM)        (Detached)
2 Sockets in /run/screen/S-eltex-pg1-v5.
eltex-pg1-v5@eltex-2025-summer:~$ S
```

5

Подсоединитесь к сессии top.

6

Создайте еще одно окно в сессии top.
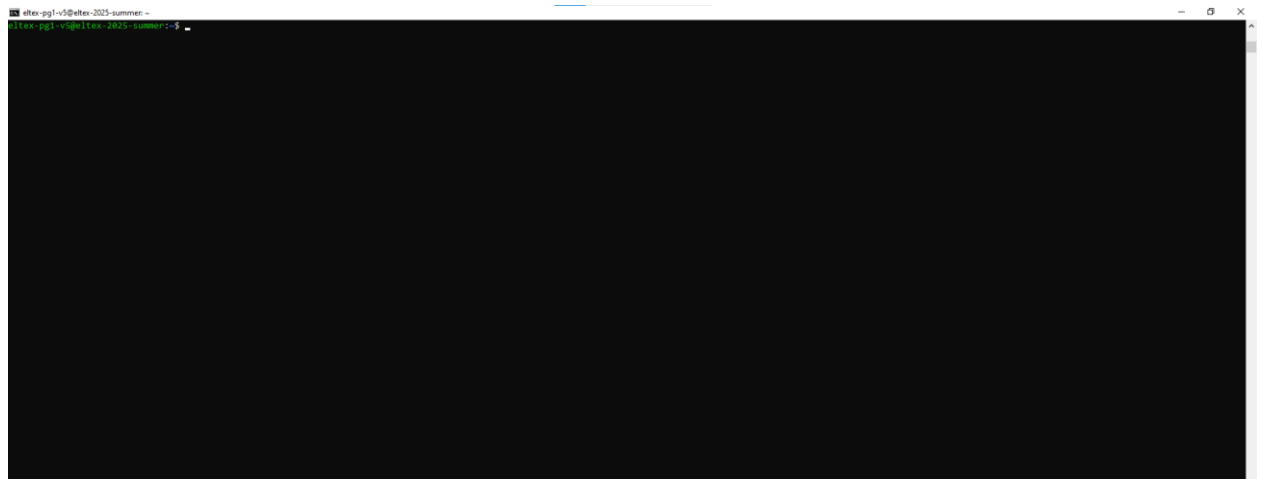
7

В созданном окне выполните команду:

8

watch /usr/bin/vmstat

9

Получите список окон.

10.Переименуйте второе окно как «vmstat».


```
eltex-pg1-v5@eltex-2025-summer: ~
Every 2.0s: /usr/bin/vmstat

procs -----------memory---------- ---swap-- -----io---- -system-- ------cpu-----
 r  b   swpd   free   buff  cache   si   so    bi    bo   in   cs us sy id wa st
 1  0      0 3302876  25136 189032    0    0     2     4   36   42  0  0 99  0  0
```

```
Set window's title to: vmstat
```

11.Перейдите в окно, в котором работает top.


```
[detached from 28542.top]
[detached from 28542.top]
eltex-pg1-v5@eltex-2025-summer:~$
```

12.Отсоединитесь от сессии top.

13.Запустите новую сессию и запустите в окне команду:


```
eltex-pg1-v5@eltex-2025-summer:~$ screen -r virepo
[detached from 40283.vireport]
[detached from 40283.vireport]
eltex-pg1-v5@eltex-2025-summer:~$ logout
There are stopped jobs.
eltex-pg1-v5@eltex-2025-summer:~$
```

vi report_part1.txt

14 Отсоединитесь от сессии и получите список сессий.

15)

```
eltex-pg1-v5@eltex-2025-summer:~$ logout
There are stopped jobs.
eltex-pg1-v5@eltex-2025-summer:~$ exit
logout
Connection to 217.71.138.1 closed.

C:\Windows\system32>ssh eltex-pg1-v5@217.71.138.1 -p 44556
eltex-pg1-v5@217.71.138.1's password:
Linux eltex-2025-summer 6.1.0-40-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.153-1 (2025-09-20) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Thu Oct  9 17:45:11 2025 from 217.71.131.237
eltex-pg1-v5@eltex-2025-summer:~$ screen -ls
There are screens on:
        40283.vireport  (10/09/2025 06:49:30 PM)        (Detached)
        28542.top       (10/09/2025 06:33:19 PM)        (Detached)
        3087.pts-33.eltex-2025-summer   (10/09/2025 05:52:11 PM)        (Detached)
3 Sockets in /run/screen/S-eltex-pg1-v5.
eltex-pg1-v5@eltex-2025-summer:~$
```

16)

17)

eltex-pg1-v5@eltex-2025-summer: ~

```
Варвянский Даниил Анатольевич часть 1 модуль 1 успешно завершена 19:00 09.10.2025
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
"report_part1.txt" [New] 1L, 136B written
eltex-pg1-v5@eltex-2025-summer:~$
```

18)

```
eltex-pg1-v5@eltex-2025-summer:~$ screen -r vireport
[detached from 40283.vireport]
[detached from 40283.vireport]
eltex-pg1-v5@eltex-2025-summer:~$ screen -X -S 40283.vireport quit
eltex-pg1-v5@eltex-2025-summer:~$ screen -X -S 28542.top quit
eltex-pg1-v5@eltex-2025-summer:~$ screen =ls
[screen is terminating]
eltex-pg1-v5@eltex-2025-summer:~$ screen -ls
There is a screen on:
        3087.pts-33.eltex-2025-summer   (10/09/2025 05:52:11 PM)        (Detached)
1 Socket in /run/screen/S-eltex-pg1-v5.
eltex-pg1-v5@eltex-2025-summer:~$ screen -X -S 3087.pts-33.eltex-2025-summer quit
eltex-pg1-v5@eltex-2025-summer:~$ screen -ls
No Sockets found in /run/screen/S-eltex-pg1-v5.

eltex-pg1-v5@eltex-2025-summer:~$ _
```

```
3 Sockets in /run/screen/S-eltex-pg1-v5.
eltex-pg1-v5@eltex-2025-summer:~$ screen -r vireport
[detached from 40283.vireport]
[detached from 40283.vireport]
eltex-pg1-v5@eltex-2025-summer:~$ screen -X -S 40283.vireport quit
eltex-pg1-v5@eltex-2025-summer:~$ screen -X -S 28542.top quit
eltex-pg1-v5@eltex-2025-summer:~$ screen =ls
[screen is terminating]
eltex-pg1-v5@eltex-2025-summer:~$ screen -ls
There is a screen on:
        3087.pts-33.eltex-2025-summer   (10/09/2025 05:52:11 PM)        (Detached)
1 Socket in /run/screen/S-eltex-pg1-v5.
eltex-pg1-v5@eltex-2025-summer:~$ screen -X -S 3087.pts-33.eltex-2025-summer quit
eltex-pg1-v5@eltex-2025-summer:~$ _
```