

ОТЧЁТ
ПРАКТИЧЕСКОЕ ЗАДАНИЕ № 1

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Новосибирск, 2025

Задания. Раздел 1

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-pg2-v13@eltex-2025-summer:~$ w
19:26:54 up 3:49, 51 users, load average: 0.01, 0.03, 0.00
USER      TTY      FROM          LOGIN@      IDLE        JCPU   PCPU WHAT
tech      pts/0    37.193.179.176 15:39       2:45m      0.02s   0.02s sshd: tech [pri
eltex-pg  pts/2    :pts/43:S.0    18:38       39:10      0.00s   0.02s SCREEN -S n -d
eltex-pg  pts/3    178.130.143.197 17:28       1:58m      0.00s   ?      -bash
eltex-pg  pts/4    217.71.131.237 19:22       3:00s      0.01s   0.01s -bash
eltex-pg  pts/5    176.59.145.254 17:30       1:56m      0.00s   ?      -bash
eltex-pg  pts/6    185.210.141.99 18:34       49:55      0.01s   0.01s -bash
eltex-pg  pts/7    217.71.139.234 19:17       11:00s     0.01s   ?      screen
eltex-pg  pts/8    217.71.131.234 18:28       43:58      0.01s   ?      screen -S whoam
eltex-pg  pts/9    217.71.131.234 17:43       1:16m      0.01s   ?      screen -r top
eltex-pg  pts/10   176.59.145.254 18:46       37:34      0.01s   0.01s -bash
eltex-pg  pts/15   90.189.209.31  19:08       18:46      0.01s   0.01s -bash
eltex-pg  pts/17   91.79.222.224  17:38       1:48m      0.00s   ?      -bash
eltex-pg  pts/18   178.178.206.36 17:38       1:48m      0.00s   ?      -bash
eltex-pg  pts/20   176.59.146.129 17:38       1:48m      0.00s   ?      -bash
eltex-pg  pts/22   :pts/42:S.0    17:59       1:25m      0.21s   0.03s SCREEN -S top -
eltex-pg  pts/23   :pts/9:S.0     18:04       1:16m      0.00s   0.05s SCREEN -S top -
eltex-pg  pts/28   :pts/29:S.0    19:26       1:00s      0.08s   0.08s w
eltex-pg  pts/29   217.71.131.237 19:10       6:00s      0.01s   ?      screen
eltex-pg  pts/31   89.113.137.168 19:19       3:01      0.01s   0.01s -bash
eltex-pg  pts/32   89.113.141.142 18:48       35:50      0.00s   ?      -bash
eltex-pg  pts/36   :pts/40:S.0    18:35       42:54      0.00s   ?      screen -r
eltex-pg  pts/40   217.71.131.237 17:52       41:34      0.00s   ?      screen -S top
eltex-pg  pts/44   217.71.139.234 19:20       6:00s      0.01s   ?      screen
eltex-pg  pts/45   217.71.139.234 19:20       6:00s      0.01s   ?      screen
eltex-pg  pts/47   217.71.139.234 19:21       12:00s     0.00s   ?      screen
eltex-pg  pts/48   217.71.139.234 19:21       1:42      0.01s   0.01s -bash
eltex-pg  pts/46   217.71.131.237 19:21       11:00s     0.01s   0.01s -bash
eltex-pg  pts/49   :pts/36:S.0    18:44       1:29m      0.00s   0.37s SCREEN
eltex-pg  pts/51   :pts/44:S.1    19:24       6:00s      0.00s   ?      screen -S top
eltex-pg  pts/52   :pts/8:S.0     18:42       43:58      0.00s   ?      SCREEN -S whoam
eltex-pg  pts/53   :pts/36:S.1    18:44       1:26m      0.00s   ?      /usr/bin/bash
eltex-pg  pts/55   :pts/7:S.0     19:24       22:00s     0.00s   ?      SCREEN
eltex-pg  pts/56   :pts/44:S.2    19:24       2:24      0.00s   ?      /usr/bin/bash
eltex-pg  pts/57   :pts/40:S.2    18:45       41:29      0.00s   ?      /usr/bin/bash
eltex-pg  pts/60   178.178.206.36 18:44       38:06      0.00s   ?      screen -S whoam
eltex-pg  pts/61   :pts/47:S.0    19:25       12:00s     0.00s   ?      SCREEN
eltex-pg  pts/62   :pts/60:S.0    18:45       38:06      0.01s   ?      SCREEN -S whoam
eltex-pg  pts/63   :pts/40:S.1    18:45       41:34      0.00s   ?      /usr/bin/bash
eltex-pg  pts/64   :pts/45:S.0    19:26       6:00s      0.00s   0.01s SCREEN
eltex-pg  pts/65   :pts/41:S.0    19:26       8:00s      0.01s   ?      SCREEN -S 123
eltex-pg  pts/66   :pts/51:S.0    19:26       6:00s      0.00s   ?      SCREEN -S top
eltex-pg  pts/50   :pts/44:S.0    19:22       2:48      0.00s   ?      SCREEN
eltex-pg  pts/67   :pts/47:S.1    19:26       8:00s      0.00s   ?      /usr/bin/bash
eltex-pg  pts/72   :pts/36:S.2    18:44       1:25m      0.00s   ?      /usr/bin/bash
eltex-pg  pts/73   :pts/36:S.3    18:44       1:24m      0.00s   ?      /usr/bin/bash
eltex-pg  pts/77   :pts/36:S.4    18:44       57:08      0.00s   ?      /usr/bin/bash
eltex-pg  pts/82   :pts/36:S.5    18:44       1:17m      0.00s   ?      /usr/bin/bash
eltex-pg  pts/83   178.178.206.36 18:29       45:02      0.05s   0.05s -bash
eltex-pg  pts/88   :pts/9:S.1     18:05       1:21m      2.03s   2.03s watch /usr/bin/
eltex-pg  pts/110  :pts/36:S.6    18:44       1:03m      5.84s   5.84s top
eltex-pg  pts/116  :pts/36:S.7    18:44       59:02      4.38s   4.38s top
eltex-pg2-v13@eltex-2025-summer:~$
```

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.

```
eltex-pg2-vl3@eltex-2025-summer:~$ screen -ls
```

There are screens on:

72464.top	(10/09/2025 07:56:48 PM)	(Attached)
68854.pts-90.eltex-2025-summer	(10/09/2025 07:51:48 PM)	(Detached)
63734.pts-90.eltex-2025-summer	(10/09/2025 07:45:18 PM)	(Detached)
60915.pts-90.eltex-2025-summer	(10/09/2025 07:41:25 PM)	(Detached)
54620.pts-29.eltex-2025-summer	(10/09/2025 07:26:43 PM)	(Detached)

5 Sockets in /run/screen/S-eltex-pg2-vl3.

```
eltex-pg2-vl3@eltex-2025-summer:~$ screen
```

5 Подсоединитесь к сессии top.

```
eltex-pg2-v13@eltex-2025-summer: ~  
top - 20:00:48 up 4:23, 80 users, load average: 1.02, 0.50, 0.25  
Tasks: 556 total, 1 running, 544 sleeping, 11 stopped, 0 zombie  
%Cpu(s): 0.5 us, 0.6 sy, 0.0 ni, 98.2 id, 0.8 wa, 0.0 hi, 0.0 si, 0.0 st  
MiB Mem : 3914.7 total, 1735.3 free, 1734.2 used, 671.8 buff/cache  
MiB Swap: 976.0 total, 976.0 free, 0.0 used. 2180.5 avail Mem  


| PID   | USER     | PR | NI  | VIRT   | RES   | SHR  | S | %CPU | %MEM | TIME+   | COMMAND                     |
|-------|----------|----|-----|--------|-------|------|---|------|------|---------|-----------------------------|
| 74757 | eltex-p+ | 20 | 0   | 18008  | 6884  | 5012 | S | 0.7  | 0.2  | 0:00.02 | sshd                        |
| 5436  | eltex-p+ | 20 | 0   | 11652  | 5480  | 3332 | S | 0.3  | 0.1  | 0:09.01 | top                         |
| 9084  | eltex-p+ | 20 | 0   | 11640  | 5464  | 3316 | S | 0.3  | 0.1  | 0:08.75 | top                         |
| 12808 | eltex-p+ | 20 | 0   | 11644  | 5492  | 3344 | S | 0.3  | 0.1  | 0:09.10 | top                         |
| 62484 | eltex-p+ | 20 | 0   | 11624  | 5496  | 3344 | S | 0.3  | 0.1  | 0:01.69 | top                         |
| 64603 | eltex-p+ | 20 | 0   | 11708  | 5388  | 3240 | S | 0.3  | 0.1  | 0:01.45 | top                         |
| 65929 | root     | 20 | 0   | 0      | 0     | 0    | I | 0.3  | 0.0  | 0:00.14 | kworker/u8:3-events_unbound |
| 68021 | eltex-p+ | 20 | 0   | 11640  | 5548  | 3404 | S | 0.3  | 0.1  | 0:01.01 | top                         |
| 68306 | eltex-p+ | 20 | 0   | 11640  | 5396  | 3244 | S | 0.3  | 0.1  | 0:01.02 | top                         |
| 68354 | eltex-p+ | 20 | 0   | 11800  | 5452  | 3308 | S | 0.3  | 0.1  | 0:01.03 | top                         |
| 69852 | eltex-p+ | 20 | 0   | 11640  | 5376  | 3220 | S | 0.3  | 0.1  | 0:00.80 | top                         |
| 70642 | eltex-p+ | 20 | 0   | 11772  | 5456  | 3304 | S | 0.3  | 0.1  | 0:00.75 | top                         |
| 72996 | eltex-p+ | 20 | 0   | 11652  | 5412  | 3260 | S | 0.3  | 0.1  | 0:00.75 | top                         |
| 1     | root     | 20 | 0   | 168828 | 13300 | 9184 | S | 0.0  | 0.3  | 0:01.26 | 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  | 0:00.14 | ksoftirqd/0                 |
| 15    | root     | 20 | 0   | 0      | 0     | 0    | I | 0.0  | 0.0  | 0:01.39 | rcu_preempt                 |
| 16    | root     | rt | 0   | 0      | 0     | 0    | S | 0.0  | 0.0  | 0:00.04 | 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  | 0:00.25 | migration/1                 |
| 21    | root     | 20 | 0   | 0      | 0     | 0    | S | 0.0  | 0.0  | 0:00.12 | 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  | 0:00.25 | migration/2                 |
| 26    | root     | 20 | 0   | 0      | 0     | 0    | S | 0.0  | 0.0  | 0:00.13 | 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  | 0:00.25 | migration/3                 |
| 31    | root     | 20 | 0   | 0      | 0     | 0    | S | 0.0  | 0.0  | 0:00.14 | 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  | 0:00.22 | 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  | 0:00.20 | 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  | 0:00.03 | kworker/1:1H-kblockd        |


```

6. Создайте еще одно окно в сессии top.

7. В созданном окне выполните команду:

8. watch /usr/bin/vmstat

```
eltex-pg2-v13@eltex-2025-summer: ~  
Every 2.0s: /usr/bin/vmstat                               eltex-2025-summer: Thu Oct  9 20:15:22 2025  
  
procs -----memory----- ---swap-- ----io---- -system-- -----cpu-----  
r  b   swpd   free   buff  cache   si   so    bi    bo   in   cs us sy id wa st  
3  0       0 1729312 40252 654508    0    0     2    11  338  621  1  1 98  0  0
```

9 Получите список окон.

10.Переименуйте второе окно как «vmstat».

11.Перейдите в окно, в котором работает top.

12.Отсоединитесь от сессии top.

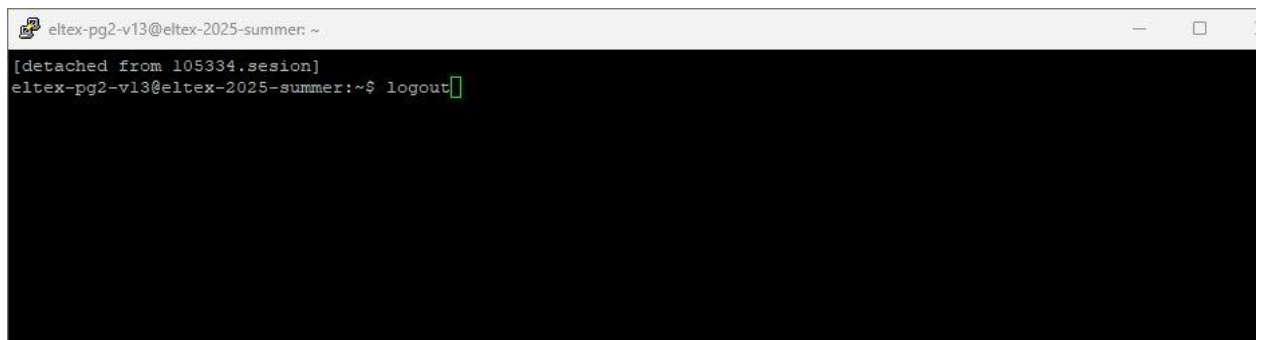
13.Запустите новую сессию и запустите в окне команду:

vi report_part1.txt

```
eltex-pg2-v13@eltex-2025-summer: ~  
Суханов Станислав Евгеньевич 1 модуля 1 успешно завершена 9.10.2025 20:42  
  
-- INSERT --
```

14 Отсоединитесь от сессии и получите список сессий.

15 Отключитесь от сервера, используя команду logout или комбинацию клавиш Ctrl+D

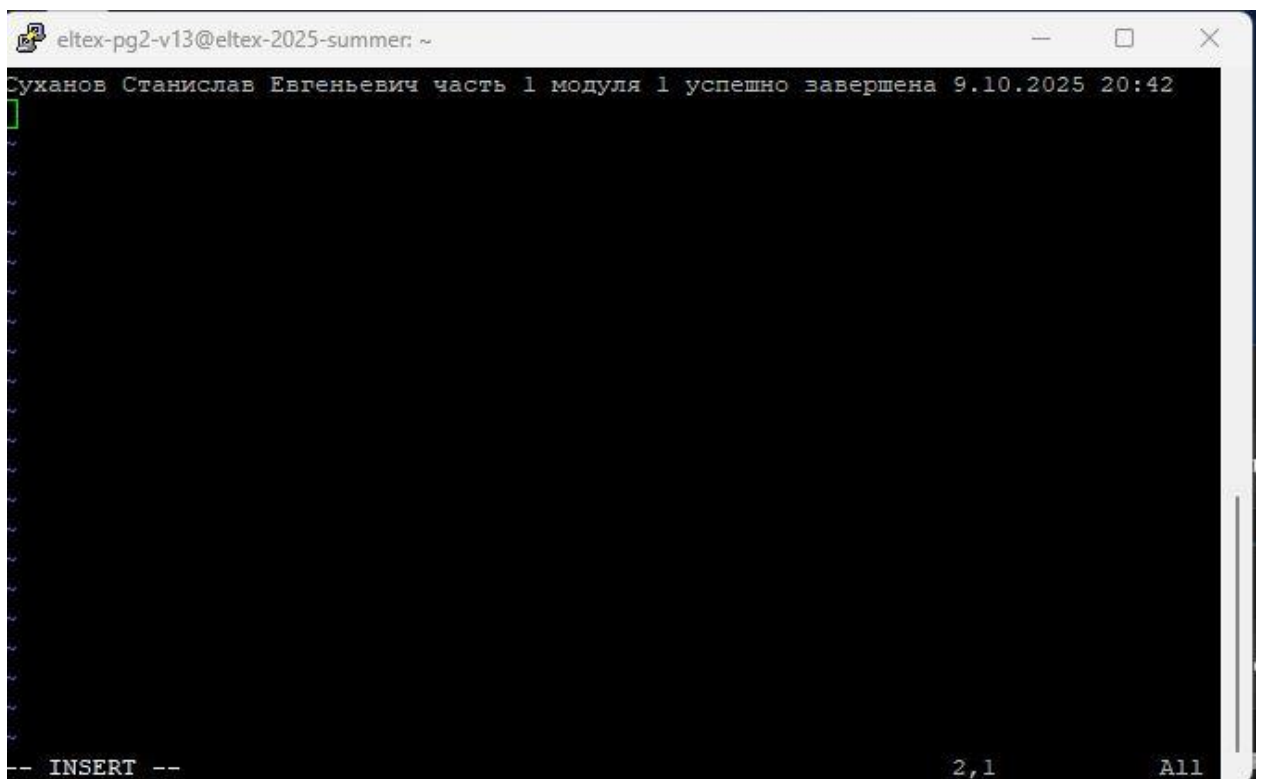


```
eltex-pg2-v13@eltex-2025-summer: ~  
[detached from 105334.session]  
eltex-pg2-v13@eltex-2025-summer:~$ logout
```

16 Подключитесь к серверу (как в п.1), и получите список сессий screen

17 Подключитесь к сессии с редактором и запишите в файл

"ФИО часть 1 модуля 1 успешно завершена дата и время"



```
eltex-pg2-v13@eltex-2025-summer: ~  
Суханов Станислав Евгеньевич часть 1 модуля 1 успешно завершена 9.10.2025 20:42  
-- INSERT --
```

18 Закройте редактор, сохранив файл и закройте все сессии screen.