Создание баш скрипта для вывода загрузки CPU

```bash
#!/bin/bash
while :
do
        CPU_NOW=($(head -n 1 /proc/stat))
        CPU_USED_PARAM="${CPU_NOW[@]:1:3}"
        CPU_USED_NOW=$((${CPU_USED_PARAM// /+}))
        CPU_TOTAL_PARAM="${CPU_NOW[@]:1:4}"
        CPU_TOTAL_NOW=$((${CPU_TOTAL_PARAM// /+}))

        CPU_USED=$((CPU_USED_NOW - CPU_USED_TEMP))
        CPU_TOTAL=$((CPU_TOTAL_NOW - CPU_TOTAL_TEMP))

        CPU_LOAD=$((100 * CPU_USED / CPU_TOTAL))

        CPU_USED_TEMP=$CPU_USED_NOW
        CPU_TOTAL_TEMP=$CPU_TOTAL_NOW

        echo "CPU load: $CPU_LOAD%"
        echo "<center><h1>CPU load: $CPU_LOAD%</h1></center>" > /var/www/html/cpuLoad.html
        sleep 1
done
```

https://i-08f0a1119b61cb599.ddns.net/cpuLoad.html

CPU load: 27%

Создание службы для запуска данного скрипта

```
 1    [Unit]
 2    Description=CPU load
 3    After=network.target
 4    StartLimitIntervalSec=0
 5
 6    [Service]
 7    Type=simple
 8    Restart=always
 9    RestartSec=1
10    User=ubuntu
11    ExecStart=/home/ubuntu/loadCPU.sh
12
13    [Install]
14    WantedBy=multi-user.target
```

```
ubuntu@ip-172-31-46-52:~$ sudo systemctl status cpu
● cpu.service - CPU load
     Loaded: loaded (/etc/systemd/system/cpu.service; enabled; vendor preset: enabled)
     Active: active (running) since Sat 2022-12-10 18:36:53 UTC; 10min ago
   Main PID: 6550 (loadCPU.sh)
      Tasks: 2 (limit: 1143)
     Memory: 840.0K
        CPU: 1.660s
     CGroup: /system.slice/_cpu.service
             ├─6550 /bin/bash /home/ubuntu/loadCPU.sh
             └─8258 sleep 1

Dec 10 18:47:20 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
Dec 10 18:47:21 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
Dec 10 18:47:22 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
Dec 10 18:47:23 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
Dec 10 18:47:24 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
Dec 10 18:47:25 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
Dec 10 18:47:26 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
Dec 10 18:47:27 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
Dec 10 18:47:28 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
Dec 10 18:47:29 ip-172-31-46-52 loadCPU.sh[6550]: CPU load: 0%
ubuntu@ip-172-31-46-52:~$
```

Баш скрипт для создания логов

```bash
1   #!/bin/bash
2   while :
3   do
4           DATE=$(date +"%H:%M:%S %d-%m-%Y")
5           LOG_SIZE=$(stat -c %s /var/log/nginx/nginx.log)
6
7           cat /var/log/nginx/nginx-access.log /var/log/nginx/nginx-error.log > /var/log/nginx/nginx.log
8           awk '$9 ~/^4/' /var/log/nginx/nginx.log > /var/log/nginx/nginx-400.log
9           awk '$9 ~/^5/' /var/log/nginx/nginx.log > /var/log/nginx/nginx-500.log
10
11          if [ $LOG_SIZE -gt 300 ]
12          then
13                  > /var/log/nginx/nginx.log
14                  echo "[$DATE] File (/var/log/nginx/nginx.log) has been successfully cleaned" >> /var/log/nginx/nginx-clear.log
15          fi
16          sleep 5
17  done
```

Создание службы для запуска данного скрипта

```
1    [Unit]
2    Description=Nginx log
3    After=network.target
4    StartLimitIntervalSec=0
5
6    [Service]
7    Type=simple
8    Restart=always
9    RestartSec=1
10   User=ubuntu
11   ExecStart=/home/ubuntu/nginxLog.sh
12
13   [Install]
14   WantedBy=multi-user.target
```

Демонстрация автоматического перезапуска службы после убийства демона

```
ubuntu@ip-172-31-46-52:~$ sudo systemctl status nlog
● nlog.service - Nginx log
     Loaded: loaded (/etc/systemd/system/nlog.service; enabled; vendor preset: enabled)
     Active: active (running) since Mon 2022-12-12 16:39:34 UTC; 2min 26s ago
   Main PID: 69179 (nginxLog.sh)
      Tasks: 2 (limit: 1143)
     Memory: 596.0K
        CPU: 251ms
     CGroup: /system.slice/nlog.service
             ├─69179 /bin/bash /home/ubuntu/nginxLog.sh
             └─69659 sleep 5

Dec 12 16:39:34 ip-172-31-46-52 systemd[1]: nlog.service: Scheduled restart job, restart counter is at 1.
Dec 12 16:39:34 ip-172-31-46-52 systemd[1]: Stopped Nginx log.
Dec 12 16:39:34 ip-172-31-46-52 systemd[1]: Started Nginx log.
ubuntu@ip-172-31-46-52:~$ kill 69179
ubuntu@ip-172-31-46-52:~$ sudo systemctl status nlog
● nlog.service - Nginx log
     Loaded: loaded (/etc/systemd/system/nlog.service; enabled; vendor preset: enabled)
     Active: active (running) since Mon 2022-12-12 16:42:14 UTC; 882ms ago
   Main PID: 69705 (nginxLog.sh)
      Tasks: 2 (limit: 1143)
     Memory: 580.0K
        CPU: 11ms
     CGroup: /system.slice/nlog.service
             ├─69705 /bin/bash /home/ubuntu/nginxLog.sh
             └─69711 sleep 5

Dec 12 16:42:14 ip-172-31-46-52 systemd[1]: nlog.service: Scheduled restart job, restart counter is at 2.
Dec 12 16:42:14 ip-172-31-46-52 systemd[1]: Stopped Nginx log.
Dec 12 16:42:14 ip-172-31-46-52 systemd[1]: Started Nginx log.
ubuntu@ip-172-31-46-52:~$ 
```