

Lab Gerenciamento de Processos e Cron

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1. Conectando na EC2

```
vinic@Vinicius_Aoki MINGW64 /c/SPTech/SO nuvem/Chaves
$ ssh -i "primeira_chave.pem" ubuntu@ec2-54-87-51-41.compute-1.amazonaws.com
The authenticity of host 'ec2-54-87-51-41.compute-1.amazonaws.com (54.87.51.41)'
can't be established.
ED25519 key fingerprint is SHA256:SxQS3CtRdUk5FiKdFMq7ndRmKwrwUDvzn8g/hReIvOw.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-87-51-41.compute-1.amazonaws.com' (ED25519) t
o the list of known hosts.
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1024-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Wed Mar  5 08:40:08 UTC 2025

System load:  1.35      Processes:           27
Usage of /home: unknown  Users logged in:     0
Memory usage:  5%      IPv4 address for eth0: 10.10.10.2
Swap usage:    0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

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

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-30-178:~$ |
```

2. Enviando o .jar para a EC2

```
vinic@Vinicius_Aoki MINGW64 /c/SPTech/SO nuvem/Chaves
$ scp -i primeira_chave.pem TimeLogger.jar ubuntu@54.87.51.41:/home/ubuntu/
The authenticity of host '54.87.51.41 (54.87.51.41)' can't be established.
ED25519 key fingerprint is SHA256:SxQS3CtRdUk5FiKdFMq7ndRmKwrwUDvzn8g/hReIvOw.
This host key is known by the following other names/addresses:
  ~/.ssh/known_hosts:26: ec2-54-87-51-41.compute-1.amazonaws.com
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '54.87.51.41' (ED25519) to the list of known hosts.
TimeLogger.jar

vinic@Vinicius_Aoki MINGW64 /c/SPTech/SO nuvem/Chaves
$ |
```

```
ubuntu@ip-172-31-30-178:~$ ls
TimeLogger.jar
ubuntu@ip-172-31-30-178:~$ |
```

3. Atualizando pacotes

```
ubuntu@ip-172-31-30-178:~$ sudo apt update && sudo apt upgrade -y
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [741 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328 B]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [991 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main Translation-en [219 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [151 kB]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 c-n-f Metadata [13.5 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1052 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [265 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [367 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 c-n-f Metadata [26.0 kB]
```

4. Instalando o Java na EC2

```
ubuntu@ip-172-31-30-178:~$ sudo apt install openjdk-21-jdk
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  adwaita-icon-theme alsa-topology-conf alsa-ucm-conf at-spi2-common at-spi2-core ca-certificates-java dconf-gsettings-backend dconf-service fontconfig
  fontconfig-config fonts-dejavu-core fonts-dejavu-extra fonts-dejavu-mono gsettings-desktop-schemas gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme
  java-common libasound2-data libasound2t64 libatk-bridge2.0-0t64 libatk-wrapper-java libatk-wrapper-java-jni libatk1.0-0t64 libatspi2.0-0t64 libavahi-client3
  libavahi-common-data libavahi-common3 libcairo-gobject2 libcairo2 libcolorim2 libcupscpp1 libdatrie1 libdconf1 libdeflate0 libdrm-amdgpu1 libdrm-intel1
  libdrm-nouveau2 libdrm-radeon1 libepoxy0 libfontconfig1 libgbml libgdk-pixbuf-2.0-0 libgdk-pixbuf2.0-bin libgdk-pixbuf2.0-common libgif7 libgl1 libgl1-amd-dri
  libgl1-mesa-dri libglapi-mesa libglvnd0 libglx-mesa0 libglx0 libgraphite2-3 libgtk-3-0t64 libgtk-3-bin libgtk-3-common libharfbuzz0b libice-dev libice6 libjbig0
  libjpeg-turbo8 libjpeg8 liblcms2-2 liblerc4 libllvml9 libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpciaccess0 libpcsclite1 libpixman-1-0
  libpthread-stubs0-dev librsvg2-2 librsvg2-common libsharpyuv0 libsm-dev libsm6 libthai-data libthai0 libtiff6 libvulkan1 libwayland-client0 libwayland-cursor0
  libwayland-egl1 libwayland-server0 libwebp7 libx11-dev libx11-xcb1 libxau-dev libxau7 libxcb-dri2-0 libxcb-dri3-0 libxcb-glx0 libxcb-present0 libxcb-randr0
  libxcb-render0 libxcb-shape0 libxcb-shm0 libxcb-sync1 libxcb-xfixes0 libxcb1-dev libxcomposite1 libxcursor1 libxdamage1 libxdmcp-dev libxf86vm1 libxf86vm1 mesa-libgallium
  libxinerama1 libxkbfile1 libxmu6 libxmu0 libxrandr2 libxrender1 libxshmfence1 libxt-dev libxt6t64 libxtst6 libxv1 libxxf86dgal libxxf86vm1 mesa-libgallium
  mesa-vulkan-drivers openjdk-21-jdk-headless openjdk-21-jre openjdk-21-jre-headless session-migration ubuntu-mono x11-common x11-utils x11proto-dev xorg-sgml-doctools
  xtrans-dev
Suggested packages:
  default-jre alsa-utils libasound2-plugins colord cups-common gvfs libice-doc liblcms2-utils pcsd librsvg2-bin libsm-doc libx11-doc libxcb-doc libxt-doc
  openjdk-21-demo openjdk-21-source visualvm libnss-mdns fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei | fonts-wqy-zenhei fonts-indic mesa-utils
Recommended packages:
  libutl
The following NEW packages will be installed:
  adwaita-icon-theme alsa-topology-conf alsa-ucm-conf at-spi2-common at-spi2-core ca-certificates-java dconf-gsettings-backend dconf-service fontconfig
  fontconfig-config fonts-dejavu-core fonts-dejavu-extra fonts-dejavu-mono gsettings-desktop-schemas gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme
  java-common libasound2-data libasound2t64 libatk-bridge2.0-0t64 libatk-wrapper-java libatk-wrapper-java-jni libatk1.0-0t64 libatspi2.0-0t64 libavahi-client3
  libavahi-common-data libavahi-common3 libcairo-gobject2 libcairo2 libcolorim2 libcupscpp1 libdatrie1 libdconf1 libdeflate0 libdrm-amdgpu1 libdrm-intel1
  libdrm-nouveau2 libdrm-radeon1 libepoxy0 libfontconfig1 libgbml libgdk-pixbuf-2.0-0 libgdk-pixbuf2.0-bin libgdk-pixbuf2.0-common libgif7 libgl1 libgl1-amd-dri
  libgl1-mesa-dri libglapi-mesa libglvnd0 libglx-mesa0 libglx0 libgraphite2-3 libgtk-3-0t64 libgtk-3-bin libgtk-3-common libharfbuzz0b libice-dev libice6 libjbig0
  libjpeg-turbo8 libjpeg8 liblcms2-2 liblerc4 libllvml9 libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpciaccess0 libpcsclite1 libpixman-1-0
  libpthread-stubs0-dev librsvg2-2 librsvg2-common libsharpyuv0 libsm-dev libsm6 libthai-data libthai0 libtiff6 libvulkan1 libwayland-client0 libwayland-cursor0
  libwayland-egl1 libwayland-server0 libwebp7 libx11-dev libx11-xcb1 libxau-dev libxau7 libxcb-dri2-0 libxcb-dri3-0 libxcb-glx0 libxcb-present0 libxcb-randr0
  libxcb-render0 libxcb-shape0 libxcb-shm0 libxcb-sync1 libxcb-xfixes0 libxcb1-dev libxcomposite1 libxcursor1 libxdamage1 libxdmcp-dev libxf86vm1 libxf86vm1 mesa-libgallium
  libxinerama1 libxkbfile1 libxmu6 libxmu0 libxrandr2 libxrender1 libxshmfence1 libxt-dev libxt6t64 libxtst6 libxv1 libxxf86dgal libxxf86vm1 mesa-libgallium
  mesa-vulkan-drivers openjdk-21-jdk-headless openjdk-21-jre openjdk-21-jre-headless session-migration ubuntu-mono x11-common x11-utils x11proto-dev xorg-sgml-doctools
  xtrans-dev
Need to get 210 MB of archives.
After this operation, 667 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libgdk-pixbuf2.0-common all 2.42.10-dfs-3ubuntu3.1 [8024 B]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libjpeg-turbo8 amd64 2.1.5-2ubuntu2 [150 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libjpeg8 amd64 8c-2ubuntu1 [2148 B]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libdeflate0 amd64 1.19-1build1 [43.9 kB]
```

5. Verificando o uso de processos da EC2

```
ubuntu@ip-172-31-30-178:~$ top
top - 12:44:04 up 9 min, 1 user, load average: 0.43, 0.40, 0.20
Tasks: 105 total, 1 running, 104 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0 us, 0.0 sy, 0.0 ni, 95.5 id, 0.0 wa, 0.0 hi, 0.0 si, 4.5 st
MiB Mem : 957.4 total, 183.1 free, 384.9 used, 569.8 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used, 572.5 avail Mem
```

| PID | USER | PR | NI | VIRT | RES | SHR | S | %CPU | %MEM | TIME+ | COMMAND |
|-----|------|-----|-----|-------|-------|------|---|------|------|---------|--------------------------------------|
| 1 | root | 20 | 0 | 22564 | 13824 | 9600 | S | 0.0 | 1.4 | 0:04.68 | systemd |
| 2 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | kthreadd |
| 3 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | pool_workqueue_release |
| 4 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-rcu_g |
| 5 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-rcu_p |
| 6 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-slub_ |
| 7 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-netns |
| 8 | root | 20 | 0 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.03 | kworker/0:0-events |
| 10 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/0:0H-events_highpri |
| 12 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-mm_pe |
| 13 | root | 20 | 0 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | rcu_tasks_rude_kthread |
| 14 | root | 20 | 0 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | rcu_tasks_trace_kthread |
| 15 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.32 | ksoftirqd/0 |
| 16 | root | 20 | 0 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.30 | rcu_sched |
| 17 | root | rt | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | migration/0 |
| 18 | root | -51 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | idle_inject/0 |
| 19 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | cpuhp/0 |
| 20 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | kdevtmpfs |
| 21 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-inet_ |
| 22 | root | 20 | 0 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.06 | kworker/u30:1-flush-202:0 |
| 23 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | kauditd |
| 24 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | khungtaskd |
| 25 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | oom_reaper |
| 26 | root | 20 | 0 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.27 | kworker/u30:2-events_power_efficient |
| 27 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-write |
| 28 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.05 | kcompactd0 |
| 29 | root | 25 | 5 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | ksmd |
| 30 | root | 39 | 19 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | khugepaged |
| 31 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-kinte |
| 32 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-kbloc |
| 33 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-blkcg |
| 34 | root | -51 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | irq/9-acpi |
| 35 | root | 20 | 0 | 0 | 0 | 0 | S | 0.0 | 0.0 | 0:00.00 | xen-balloon |
| 36 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-tpm_d |
| 37 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-ata_s |
| 38 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-md |
| 39 | root | 0 | -20 | 0 | 0 | 0 | I | 0.0 | 0.0 | 0:00.00 | kworker/R-md_bi |

6. Informação de processos

```
ubuntu@ip-172-31-30-178:~$ ps
PID TTY          TIME CMD
 1162 pts/0        00:00:00 bash
 18001 pts/0        00:00:00 ps
ubuntu@ip-172-31-30-178:~$
```

7. ps -aux

```
ubuntu@ip-172-31-30-178:~$ ps -aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1   0.7  1.4 22564 13824 ?        Ss   12:34   0:04 /usr/lib/systemd/systemd --system --deserialize=29
root         2   0.0  0.0      0     0 ?        S    12:34   0:00 [kthreadd]
root         3   0.0  0.0      0     0 ?        S    12:34   0:00 [pool_workqueue_release]
root         4   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-rcu_g]
root         5   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-rcu_p]
root         6   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-slab]
root         7   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-netns]
root         8   0.0  0.0      0     0 ?        I    12:34   0:00 [kworker/0:0-events]
root        10   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/0:0H-events_highpri]
root        12   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-mm_pe]
root        13   0.0  0.0      0     0 ?        I    12:34   0:00 [rcu_tasks_rude_kthread]
root        14   0.0  0.0      0     0 ?        I    12:34   0:00 [rcu_tasks_trace_kthread]
root        15   0.0  0.0      0     0 ?        S    12:34   0:00 [ksoftirqd/0]
root        16   0.0  0.0      0     0 ?        I    12:34   0:00 [rcu_sched]
root        17   0.0  0.0      0     0 ?        S    12:34   0:00 [migration/0]
root        18   0.0  0.0      0     0 ?        S    12:34   0:00 [idle_inject/0]
root        19   0.0  0.0      0     0 ?        S    12:34   0:00 [cpuhp/0]
root        20   0.0  0.0      0     0 ?        S    12:34   0:00 [kdevtmpfs]
root        21   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-inet_]
root        22   0.0  0.0      0     0 ?        I    12:34   0:00 [kworker/u30:1-flush-202:0]
root        23   0.0  0.0      0     0 ?        S    12:34   0:00 [kauditd]
root        24   0.0  0.0      0     0 ?        S    12:34   0:00 [khungtaskd]
root        25   0.0  0.0      0     0 ?        S    12:34   0:00 [oom_reaper]
root        26   0.0  0.0      0     0 ?        I    12:34   0:00 [kworker/u30:2-events_power_efficient]
root        27   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-write]
root        28   0.0  0.0      0     0 ?        S    12:34   0:00 [kcompactd0]
root        29   0.0  0.0      0     0 ?        SN   12:34   0:00 [ksmd]
root        30   0.0  0.0      0     0 ?        SN   12:34   0:00 [khugepaged]
root        31   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-kint]
root        32   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-kbloc]
root        33   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-blkcg]
root        34   0.0  0.0      0     0 ?        S    12:34   0:00 [irq/9-acpi]
root        35   0.0  0.0      0     0 ?        S    12:34   0:00 [xen-balloon]
root        36   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-tpm_d]
root        37   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-ata_s]
root        38   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-md]
root        39   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-md_bi]
root        40   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-edac-]
root        41   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/R-devfr]
root        42   0.0  0.0      0     0 ?        S    12:34   0:00 [watchdogd]
root        43   0.0  0.0      0     0 ?        I<   12:34   0:00 [kworker/0:1H-kblockd]
root        44   0.0  0.0      0     0 ?        S    12:34   0:00 [kswapd0]
```

8. Verificando o crontab

```
ubuntu@ip-172-31-30-178:~$ crontab -l
no crontab for ubuntu
ubuntu@ip-172-31-30-178:~$
```

9. Alterando o crontab

```
GNU nano 7.2
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# 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
1 * * * * /home/ubuntu/TimeLogger.jar
```

10. Verificando se crontab foi alterado

```
ubuntu@ip-172-31-30-178:~$ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# 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
1 * * * * /home/ubuntu/TimeLogger.jar
ubuntu@ip-172-31-30-178:~$
```