

Abdullah
ÇAY

Bash and Linux - Conclusion and Examination (EN)

60 minutes Normal



DataScientest • com

Introduction to Linux

Conclusion and examination

Conclusion

In this lesson, we have seen how to perform a lot of different things on a Linux system. There are still a lot of things to be done but this will cover 99% of what we have to do in the other lessons.

Examination

The examination for this course is a simple practical work that will combine all what we have learnt.

Preparation

First we need to download an archive https://dst-de.s3.eu-west-3.amazonaws.com/bash_fr/api.tar using `wget`:

Download this archive and expand it using `tar`

Show / Hide solution

```
1 # downloading the archive
2 wget --no-cache \
3 https://dst-de.s3.eu-west-3.amazonaws.com
4 /bash_fr/api.tar \
5 -O ~/api.tar
6
7 # expanding the archive
8 tar xvf ~/api.tar
9
10 # changing rights
11 chmod u+x ./api
12
13 # launching the API
14 ./api
```

This script has launched an API (Application Programming Interface) that gives you the number of sales of graphics cards if queried with HTTP.

For example, to get the price of an `rtx3060`, you can run the following command:

```
1 | curl -X GET http://0.0.0.0:5000/rtx3060
```

Open a new console and run this command

Content of the exam

1. Create a directory called `exambash_NAME` by replacing `NAME` with your last name
2. Inside this directory, create a file called `exam.sh` whose rights are `-rwx---r-x`
3. This script should contain a function and a loop to query the information on `rtx3060`, `rtx3070`, `rtx3080`, `rtx3090`, `rx6700`
4. This script should write the date and the number sales of every graphics card in a `sales.txt`
5. This script should be run every minute using a Cron Job whose expression should be in a `cron.txt` file

Your folders should have the following files:

```
1 exambash_NAME/exam.sh
2 exambash_NAME/sales.txt
3 exambash_NAME/cron.txt
```

And your `sales.txt` should look like this

Machine status



Ubuntu Server 18.04 LTS

SSD Volume Type

64-bit x86

Online

34,255,44.65

Connect

Reset

Stop

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```
3 | rtx3070:20
4 | rtx3080:20
5 | rtx3090:2
6 | rx6700:12
7 | Thu Apr 1 00:06:01 UTC 2021
8 | rtx3060:6
9 | rtx3070:15
10 | rtx3080:15
11 | rtx3090:1
12 | rx6700:15
```

Once this is done, you can create an archive `exam_bash_NAME.tar` using `tar`.

To export the file from the virtual machine, you can use your **local machine** and the `scp` command: in the same folder where you are used to perform `ssh` connections, you can copy a distant file and paste it locally:

```
1 | scp -i "data_engineering_machine.pem"
  | ubuntu@your_machine_ip:/path
  | /to/exam_bash_NAME.tar .
```

Once you have downloaded the file on your local machine, you can send it to Daniel support on Slack !

Good Luck !

Validate