Homework 1

Daniil Pakhomov

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1 Question 1

1.1 Task

How large is the system's root drive, mounted on "/"?

1.2 Answer

After running the **df -h** command we get the following output:

```
Filesystem      Size  Used Avail Use% Mounted on
udev            489M     0  489M   0% /dev
tmpfs           100M  4.3M   95M   5% /run
/dev/xvda1      7.8G  968M  6.4G  13% /
tmpfs           496M     0  496M   0% /dev/shm
tmpfs           5.0M     0  5.0M   0% /run/lock
tmpfs           496M     0  496M   0% /sys/fs/cgroup
tmpfs           100M     0  100M   0% /run/user/1000
```

Here we can see that partition called **/dev/xvda1** is mounted on /. We can also see that its size of the partition is **7.8G**.

To get the size capacity of the whole device **/dev/xvda** we run **sudo fdisk -l /dev/xvda** and get the following output:

```
Disk /dev/xvda: 8 GiB, 8589934592 bytes, 16777216 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x00000000

Device     Boot Start      End  Sectors Size Id Type
/dev/xvda1 *    16065 16777182 16761118   8G 83 Linux
```

So, the final answer is **8 GiB**, which is exactly the space amount that we allocated during the creation of our instance on Amazon AWS.

2 Question 2

2.1 Task

How much memory does the system have?

2.2 Answer

Depending on what type of memory the question is being asked: the memory capacity of the partition of the system's drive or the physical memory (RAM). The answer for the first question can be found in the previous answer **7.8 GiB**. To get to know how much physical memory (RAM) we have, we run **free -h** and get the following ouput:

```
              total        used        free      shared  buff/cache   available
Mem:           990M         62M        433M         13M        495M        877M
Swap:            0B          0B          0B
```

We can see that the amount of the physical memory (RAM) is **990M**.

3 Question 3

3.1 Task

How much memory is being used?

3.2 Answer

Once again, depending on the question, we have **968M** used from the main partition and **62M** of the RAM.

4 Question 4

4.1 Task

What linux kernel version are you running?

4.2 Answer

To get the kernel version and release we run **uname -rv** and get the following output:

```
4.4.0-59-generic #80-Ubuntu SMP Fri Jan 6 17:47:47 UTC 2017
```

First goes the release and then version.

5 Question 4

5.1 Task

What is the MAC address of the Ethernet card?

5.2 Answer

We run the following command **ifconfig eth0** to get the MAC address of the default ethernet adapter:

```
eth0      Link encap:Ethernet  HWaddr 12:2e:74:24:96:94
          inet addr:10.0.238.54  Bcast:10.0.255.255  Mask:255.255.0.0
          inet6 addr: fe80::102e:74ff:fe24:9694/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:9001  Metric:1
          RX packets:8821 errors:0 dropped:0 overruns:0 frame:0
          TX packets:14200 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:5551248 (5.5 MB)  TX bytes:4128724 (4.1 MB)
```

From the output we can see that our Hardware Address is **12:2e:74:24:96:94**.

6 Question 5

6.1 Task

What is the last message in the log file where system messages/errors would be found? Where is this file located?

6.2 Answer

Most system logs go into **/var/log**. More specifically, **cat /var/log/messages** displays last system messages/errors.