

# Sprawozdanie BI laboratorium 8 Krzysztof Zarębski 93073

## Zadanie 8.1

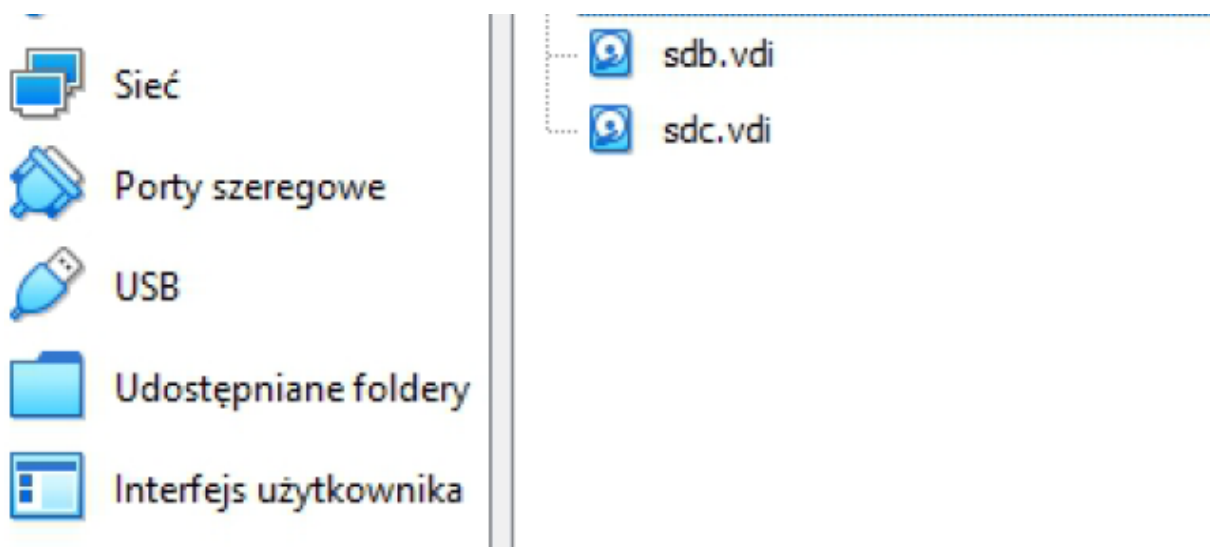
Ustawiłem 2 maszyny tak, aby pingowały się wzajemnie.

```
rtt min/avg/max/mdev = 0.016/0.018/0.020/0.002 ms
student@KZarebski:~$ ping 10.0.10.6
PING 10.0.10.6 (10.0.10.6) 56(84) bytes of data.
64 bytes from 10.0.10.6: icmp_seq=1 ttl=64 time=0.419 ms
64 bytes from 10.0.10.6: icmp_seq=2 ttl=64 time=0.464 ms
64 bytes from 10.0.10.6: icmp_seq=3 ttl=64 time=0.403 ms
64 bytes from 10.0.10.6: icmp_seq=4 ttl=64 time=0.384 ms
64 bytes from 10.0.10.6: icmp_seq=5 ttl=64 time=0.427 ms
64 bytes from 10.0.10.6: icmp_seq=6 ttl=64 time=0.454 ms
64 bytes from 10.0.10.6: icmp_seq=7 ttl=64 time=0.358 ms
^C
--- 10.0.10.6 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 613ms
rtt min/avg/max/mdev = 0.358/0.415/0.464/0.034 ms
```

```
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

student@KZarebski2:~$ ping 10.0.10.7
PING 10.0.10.7 (10.0.10.7) 56(84) bytes of data.
64 bytes from 10.0.10.7: icmp_seq=1 ttl=64 time=0.729 ms
64 bytes from 10.0.10.7: icmp_seq=2 ttl=64 time=0.443 ms
64 bytes from 10.0.10.7: icmp_seq=3 ttl=64 time=0.385 ms
64 bytes from 10.0.10.7: icmp_seq=4 ttl=64 time=0.479 ms
^C
--- 10.0.10.7 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 306ms
rtt min/avg/max/mdev = 0.385/0.509/0.729/0.131 ms
```

Dla KZarebski2 zrobiłem 2 dyski *sdb* i *sdc*



Dyski są widoczne.

```
student@KZarebski2:~$ sudo ls /dev/sd*
[sudo] password for student:
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5 /dev/sdb /dev/sdc
student@KZarebski2:~$
```

## Instalacja *mdadm*

```
student@KZarebski2:~$ sudo apt-get install mdadm
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following package was automatically installed and is no longer required:
  liblvm9
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  finalrd
Suggested packages:
  default-mta | mail-transport-agent dracut-core
The following NEW packages will be installed:
  finalrd mdadm
0 upgraded, 2 newly installed, 0 to remove and 138 not upgraded.
Need to get 424 kB of archives.
After this operation, 1 295 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://pl.archive.ubuntu.com/ubuntu focal-updates/main amd64 finalrd all 6-ubuntu20.04.1 [6 852 B]
Get:2 http://pl.archive.ubuntu.com/ubuntu focal-updates/main amd64 mdadm amd64 4.1-Subuntu1.2 [417 kB]
Fetched 424 kB in 0s (1 733 kB/s)
Preconfiguring packages ...
Selecting previously unselected package finalrd.
(Reading database ... 221325 files and directories currently installed.)
Preparing to unpack .../finalrd_6-ubuntu20.04.1_all.deb ...
Unpacking finalrd (6-ubuntu20.04.1) ...
Selecting previously unselected package mdadm.
Preparing to unpack .../mdadm_4.1-Subuntu1.2_amd64.deb ...
Unpacking mdadm (4.1-Subuntu1.2) ...
Setting up finalrd (6-ubuntu20.04.1) ...
Created symlink /etc/systemd/system/sysinit.target.wants/finalrd.service → /lib/systemd/system/finalrd.service.
Setting up mdadm (4.1-Subuntu1.2) ...
Generating mdadm.conf... done.
update-initramfs: deferring update (trigger activated)
Sourcing file /etc/default/grub
Sourcing file /etc/default/grub.d/init-select.cfg
Generating grub configuration file ...
Found linux image: /boot/vmlinuz-5.4.0-66-generic
Found initrd image: /boot/initrd.img-5.4.0-66-generic
Found linux image: /boot/vmlinuz-5.4.0-65-generic
Found initrd image: /boot/initrd.img-5.4.0-65-generic
Found memtest86+ image: /boot/memtest86+.elf
Found memtest86+ image: /boot/memtest86+.bin
done
Created symlink /etc/systemd/system/mdmonitor.service.wants/mdcheck_continue.timer → /lib/systemd/system/mdcheck_continue.timer.
Created symlink /etc/systemd/system/mdmonitor.service.wants/mdcheck_start.timer → /lib/systemd/system/mdcheck_start.timer.
Created symlink /etc/systemd/system/mdmonitor.service.wants/mdmonitor-oneshot.timer → /lib/systemd/system/mdmonitor-oneshot.timer.
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for initramfs-tools (0.136ubuntu6.3) ...
update-initramfs: Generating /boot/initrd.img-5.4.0-66-generic
student@KZarebski2:~$
```

Tworzenie partycji na obu dyskach:

```
Disk /dev/sdb: 100 MiB, 104857600 bytes, 204800 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/sdc: 104 MiB, 109051904 bytes, 212992 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

```
The partition table has been altered.  
Calling ioctl() to re-read partition table.  
Syncing disks.
```

```
student@KZarebski2:~$
```

```
Created a new partition 1 of type 'Linux' and of size 103 MiB.
```

```
Command (m for help): w  
The partition table has been altered.  
Calling ioctl() to re-read partition table.  
Syncing disks.
```

```
student@KZarebski2:~$
```

Tworzenie macierzy RAID1:

```
student@KZarebski2:~$ sudo mdadm --create /dev/md1 --level=raid1 --raid-devices=2 /dev/sdb1 /dev/sdc1  
mdadm: Note: this array has metadata at the start and  
may not be suitable as a boot device. If you plan to  
store '/boot' on this device please ensure that  
your boot-loader understands md/v1.x metadata, or use  
--metadata=0.90  
mdadm: largest drive (/dev/sdc1) exceeds size (100352K) by more than 1%  
Continue creating array? y  
mdadm: Defaulting to version 1.2 metadata  
mdadm: array /dev/md1 started.  
student@KZarebski2:~$
```

```
mdadm: array /dev/md1 started.  
student@KZarebski2:~$ sudo mdadm --query --detail /dev/md1  
/dev/md1:  
    Version : 1.2  
    Creation Time : Sat May 8 18:47:21 2021  
    Raid Level : raid1  
    Array Size : 100352 (98.00 MiB 102.76 MB)  
    Used Dev Size : 100352 (98.00 MiB 102.76 MB)  
    Raid Devices : 2  
    Total Devices : 2  
    Persistence : Superblock is persistent  
  
    Update Time : Sat May 8 18:47:22 2021  
    State : clean  
    Active Devices : 2  
    Working Devices : 2  
    Failed Devices : 0  
    Spare Devices : 0  
  
Consistency Policy : resync  
  
    Name : KZarebski2:1 (local to host KZarebski2)  
    UUID : e17dd70b:721da616:9984aac1:015c7d1d  
    Events : 17  
  
    Number Major Minor RaidDevice State  
    0      8      17        0      active sync  /dev/sdb1  
    1      8      33        1      active sync  /dev/sdc1  
student@KZarebski2:~$
```

Format macierzy:

```
student@KZarebski2:~$ sudo mkfs.ext4 /dev/md1
mke2fs 1.45.5 (07-Jan-2020)
Creating filesystem with 25088 4k blocks and 25088 inodes

Allocating group tables: done
Writing inode tables: done
Creating journal (1024 blocks): done
Writing superblocks and filesystem accounting information: done

student@KZarebski2:~$
```

```
Command (m for help): p
Disk /dev/sdb: 100 MiB, 104857600 bytes, 204800 sectors
Disk model: VBOX HARDDISK
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: 0xfc945abc
```

Device	Boot	Start	End	Sectors	Size	Id	Type
/dev/sdb1		2048	204799	202752	99M	83	Linux

```
Command (m for help):
```

```
student@KZarebski2:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            1,9G   0    1,9G   0% /dev
tmpfs           394M   1,2M  393M   1% /run
/dev/sda5       12G    9,3G  1,5G  87% /
tmpfs           2,0G   0    2,0G   0% /dev/shm
tmpfs           5,0M   4,0K  5,0M   1% /run/lock
tmpfs           2,0G   0    2,0G   0% /sys/fs/cgroup
/dev/loop0      56M    56M   0 100% /snap/core18/1988
/dev/loop2      62M    62M   0 100% /snap/core20/975
/dev/loop3      18M    18M   0 100% /snap/gedit/605
/dev/loop4      23M    23M   0 100% /snap/okteta/15
/dev/loop1      56M    56M   0 100% /snap/core18/1997
/dev/loop5     163M   163M   0 100% /snap/gnome-3-28-1804/145
/dev/loop6     324M   324M   0 100% /snap/kde-frameworks-5-qt-5-15-core20/14
/dev/loop7      2,3M   2,3M   0 100% /snap/okteta/11
/dev/loop8      33M    33M   0 100% /snap/snapd/11107
/dev/loop9      65M    65M   0 100% /snap/gtk-common-themes/1514
/dev/loop10     18M    18M   0 100% /snap/gedit/626
/dev/loop11     66M    66M   0 100% /snap/gtk-common-themes/1515
/dev/loop12     33M    33M   0 100% /snap/snapd/11588
/dev/loop13    261M   261M   0 100% /snap/kde-frameworks-5-core18/32
/dev/sda1       511M   4,0K  511M   1% /boot/efi
tmpfs           394M   12K  394M   1% /run/user/1000
```

W tym momencie powinienem mieć *filesystem* */dev/md127* i adres */dev/macraid1*. Nie pokazało się to, a przy okazji przy dysku w ustawieniach VM *sdc* pojawił się wykrzyknik. Dalej nie mogłem kontynuować.

## Zadanie 8.2


Przez ten błąd z dyskiem kubuntu nie widzi dysku *sdd*. Nie mogłem dalej zrobić zadania.


```
student@KZarebski2:~$ sudo fdisk /dev/sdd
[sudo] password for student:


Welcome to fdisk (util-linux 2.34).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.


fdisk: cannot open /dev/sdd: No such file or directory
student@KZarebski2:~$ sudo ls /dev/sd*
/dev/sda /dev/sda1 /dev/sda2 /dev/sda5 /dev/sdb /dev/sdb1 /dev/sdc /dev/sdc1
student@KZarebski2:~$
```


## Sklonuj BI\_Kubuntu2 - Ustawienia


 Ogólne


 System


 Ekran


 **Pamięć**

 Dźwięk

 Sieć


 Porty szeregowo


 USB


 Udostępniane foldery





### Pamięć

Storage Devices

 Kontroler: IDE

-  Brak

 **Kontroler: SATA**

-  Sklonuj BI\_Kubuntu2-disk1.
-  sdb.vdi
-  sdd.vdi
-  sdc.vdi