

## Lab 2

- 1- Check the present value of `/proc/sys/net/ipv4/icmp_echo_ignore_all`
  - 2- It should be 0, change it to 1 which will prevent other hosts from successfully pinging your host while not affecting your ability to ping them.
  - 3- Try to ping your colleague, let your colleague try to ping your host.
  - 4- Reboot and try the last step. What happened? Why?
  - 5- Edit `/etc/sysctl.conf` and put the following line at the bottom:  
`net.ipv4.icmp_echo_ignore_all=1`
  - 6- Execute `sysctl -p` command.
  - 7- Check the value of `/proc/sys/net/ipv4/icmp_echo_ignore_all`.
  - 8- Use `fdisk -l` to locate information about the partition sizes.
  - 9- Use `fdisk` to add a new logical partition that is 1GB in size.
  - 10- Did the kernel feel the changes? Display the content of `/proc/partitions` file? What did you notice? How to overcome that?
  - 11- Make a new ext2 file system on the new logical partition you just created.
- Bonus: Try creating the ext2 filesystem with 2k blocks and one inode per every 4k (two blocks) of filesystem.
- 12- Create a directory, name it `/data`.
  - 13- Add a label to the new filesystem, name it `data`.
  - 14- Add a new entry to `/etc/fstab` for the new filesystem using the label you just create.
  - 15- Mount the new filesystem.
  - 16- Display your swap size.
  - 17- Create a swap file of size 512MB.
  - 18- Add the swap file to the virtual memory of the system.
  - 19- Display the swap size