

**2011**

**Exercise for Networking (10 points)**

Please save all the output files of the tasks to the directory *exercises/network* in your CBWE home directory.

1. Please determine the MAC address of the ethernet interface of the Linux workstation assigned to you (see appendix). Use the */sbin/ifconfig* command for this.

- Please create a screen shot about the terminal window and save it as: **network-1-mac.jpg** .

(1 point)

2. Invoke the command *traceroute* to find the route to the host assigned to you (see appendix).

- Please create a screen shot about the output in the terminal window and your desktop and save it as **network-2-trace.jpg** .

(1 point)

3. Write a *bash* script to determine how many hops are on the route to the given host. Save this script as **trace-script.sh** . (For the host see the appendix.)

To the script:

use the *traceroute* command and output redirection to create the temporary file **traceroute-temp.txt** .

Read this file into the shell, and count the the number of hops (it is your choise, how to count the hops). Print the number of hops as the output of the script ( e.g. " **NN** hops to the host **HOST**" ).

(4 points)

4. Make a portscan from otter.risc.uni-linz.ac.at by means of *gnome-nettool* to the Linux workstation assigned to your (see appendix).

- please create a screen shot about the output: **netscreen-5-scan.jpg**.  
(one or two screenshots according the length of the output)

(1 point)

5. Select the following services from the `/etc/services` file: `www`, `smtp`, `pop`, `ssh`, `https` using the `grep`, `egrep` command in a terminal window.

- create a full screen shoot (terminal window with the output and your photos) and save it as  
**network-services.jpg**

(1 point)

6. Make in a terminal window a *telnet* connection to the RISC web server and get the file `proba.txt` in the http conversation. Create a full screenshot as above and save it as **telnet-2-www.jpg** .

(2 point)

Dealine: December 18<sup>th</sup> , 2011.

Appendix:

computers to use for this exercise:

	Task 1,4	Task 2,3
You-Sheng	gorilla	www.bme.hu
Ismael	gonzales	www.ifwp.net
Georg	hades	en.wikipedia.org
Daniel	fennek	<a href="http://www.wwf.at">www.wwf.at</a>
Gábor	narwal	<a href="http://www.photo.net">www.photo.net</a>
Hassan	seal	www.orf.at