

Problem Sheet #5

Problem 5.1: *secure shell*

(1+4+3+2 = 10 points)

The SSH protocol and the open SSH implementation are very powerful tools. Study the SSH documentation (or search the web) and answer the following questions.

- a) What is an SSH subsystem?
- b) What does the following open ssh configuration of user joe do? Explain the effect of each line in your own words.

```
Host          *
ControlMaster auto
ControlPath   /users/joe/.ssh/%r%h:%p
ControlPersist 10m
```

- c) What is the effect and purpose of the following command?

```
ssh -nNT -L 8888:ieeexplore.ieee.org:80 joe@server.com
```

How many TCP connections are involved and what are their endpoints? Which TCP connection carries encrypted traffic, which TCP connection will carry plaintext? In which situations is this useful?

- d) What is an SSH agent? What is the effect of the `-A` option in the following shell command? In which situations is this useful?

```
ssh -A joe@server.com
```