

VE482 Lab 2 Report

Minix 3

- In Minix 3, how to manage software, i.e. install, remove, update, etc.?

```
pkgin update # update list of available packages
pkgin install [package name] # install package
pkgin upgrade # upgrade main packages to newer versions
pkgin remove [package name] # remove package
```

- What is the purpose of the commands `ifconfig`, `adduser`, and `passwd`?

`ifconfig`: initialize a TCP/IP device setting the IP address and/or netmask and report the address and netmask set

`adduser`: add a user to the system

`passwd`: modify a user's password

Working on a remote server

- What is the default SSH port?

The default SSH port is 22.

- List and explain the role of each the file in the `$HOME/.ssh` directory.

```
ls ~/.ssh
# output
config id_rsa id_rsa.pub known_hosts
```

`config`: config file of SSH

`id_rsa`: private key

`id_rsa.pub`: public key

`known_hosts`: the SSH server logged before

- Briefly explain how key-only authentication works in SSH.

First send the pair of key generated by SSH client to the server. The SSH server then add the key to the authorized hosts list. Next time when connecting to the server, the server will use public key cryptography to verify the authority.

Basic git

- Search the use of the following git commands:

- `help`: display help information about git
- `init`: create an empty repository or reinitialize one
- `checkout`: switch branches or restore working tree files
- `branch`: list, create, or delete branches

- `push`: update remote refs along with associated objects
- `pull`: fetch from and integrate with another repository or a local branch
- `merge`: join two or more development histories together
- `add`: add file contents to the index
- `diff`: show changes between commits
- `tag`: create, list, delete or verify a tag object signed with GPG
- `log`: show commit logs
- `fetch`: download objects and refs from another repository
- `commit`: record changes to the repository
- `clone`: clone a repository into a new directory
- `reset`: reset current HEAD to the specified state