

## **M01TU01: Final Exam (Theory) Help**

### **Practical Exercise 1**

- a) Read:
- Before starting
  - What is a virtual machine?
  - What are virtual machines used for?
  - What is the VirtualBox Extension Pack?
  - What are the VirtualBox GuestAdditions?
- b) What is a software package, package manager, software repository?
- c) Meaning of aptitude update
- d) Meaning of aptitude upgrade
- e) File sources.list

### **Practical Exercise 2**

- a) Directory
- b) Directory tree
- c) Linux directory structure
- d) Important files and directories

Read Documentation → The Linux directory structure. Important files and their paths. Command tree → Point a) What is a directory?

Read Documentation → The Linux directory structure. Important files and their paths. Command tree → Point b) What is a directory tree?

Read Documentation → The Linux directory structure. Important files and their paths. Command tree → Point c) The Linux directory structure and important files paths.

### **Practical Exercise 3**

- a) IP, Mask, Router, DNS, MAC
- b) DHCP vs Static Configuration
- c) /etc/resolv.conf
- d) Network Manager
- e) What is the purpose of ip, ifconfig, route and ping
- f) Working with ping

### **Practical Exercise 4**

- a) Size disk prefixes
- b) What is a partition?
- c) GPT and MBR partition tables
- d) What is GParted?
- e) Disk device files. Disk device files and numbers. SATA (sata0, sata1..)
- f) fdisk vs mkfs vs mount
- g) sudo

### **Practical Exercise 5**

- a) Introduction
- b) Traditional Linux access permissions: owner, group, others, rwx
- c) symbolic vs numeric.
- d) Recursion
- e) Default file and directory permissions and umask
- f) Writing proper sentences about permissions

### **Practical Exercise 6**

- a) Users and groups
- b) /etc/passwd, /etc/shadow, /etc/group
- c) Features of users and groups
- d) Options of useradd and userdel
- e) Enable/Disable account

### **Practical Exercise 7**

- a) Basic ideas.
- b) Signals (3.1)
- c) Nice value. Nice vs renice (4 → First two paragraphs)

### **Practical Exercise 8**

- a) What is a server (or daemon)?
- b) Suspending and hibernating the system

### **Practical Exercise 9**

- a) Image
- b) Container
- c) Virtual Machine vs Container
- d) Docker Hub
- e) Dockerfile and image