**Network Configuration and SSH**

The **net-tools** package which contains ifconfig might not be installed by default in some Linux distributions, to install it: **sudo apt install net-tools**

**Part 1: Network Configuration**

Tasks:

1. Display all network interfaces in the machine.

Command: ip a OR ip addr show OR ifconfig

1. Assign a static IP to the second network interface, in both virtual machines.

File to edit: iface ens38 inet static

1. Make sure both virtual machines can communicate with others by using the Ping command.

Command: ping vm

1. Ping from the second virtual machine (Ubuntu Desktop) to the first virtual machine (Ubuntu server).

Ping ipaddress

1. Use the **netstat** command in Ubuntu server to display the status of the network connection.

*Self-check:*

* *How to disable a network interface?*

*Ifconfig name down*

* *How to enable a network interface?*

*if config name up*

* *How to restart network service?*

*systemctl restart networking.service*

**Part 2: SSH**

1. Power on Ubuntu server and Ubuntu Desktop.
2. Configure both virtual machines to use static IP in the network 192.168.55.0.

iface ubuntu inet static

*Self-check:*

* *How to change the host name permanently? What are the files to be edited?*

*// hostnamectl set-hostname new\_name*

1. Check if SSH server is running.

Command: service ssh status

1. Configure SSH server to listen to port 10022.

Ssh -p 10022 username@hostname

*Self-check:*

* *How to display the port that SSH server listen to?*

*Netstat -tulpn | grep ssh*

1. Create a new user (user name = **st\_mgr**) in both machines, assigned that user to **st\_group**.

Commands:

Usermod -g st\_group st\_mgr

1. Perform necessary configurations to allow **st\_mgr** to login to server via SSH with key authentication.

Ssh-keygen

Ssh-copy-id -I ~/ .ssh/id\_rsa.pub st\_mgr

Nano ~/ .ssh/ config

Host host\_name

Hostname actual\_h\_name

Port port\_number

User st\_mgr

1. Configure SSH server to allow only user **st\_mgr** and user group **st\_adm** to login via SSH.

File to edit:

AllowUsers user st\_mgr

AllowGroups admins st\_adm