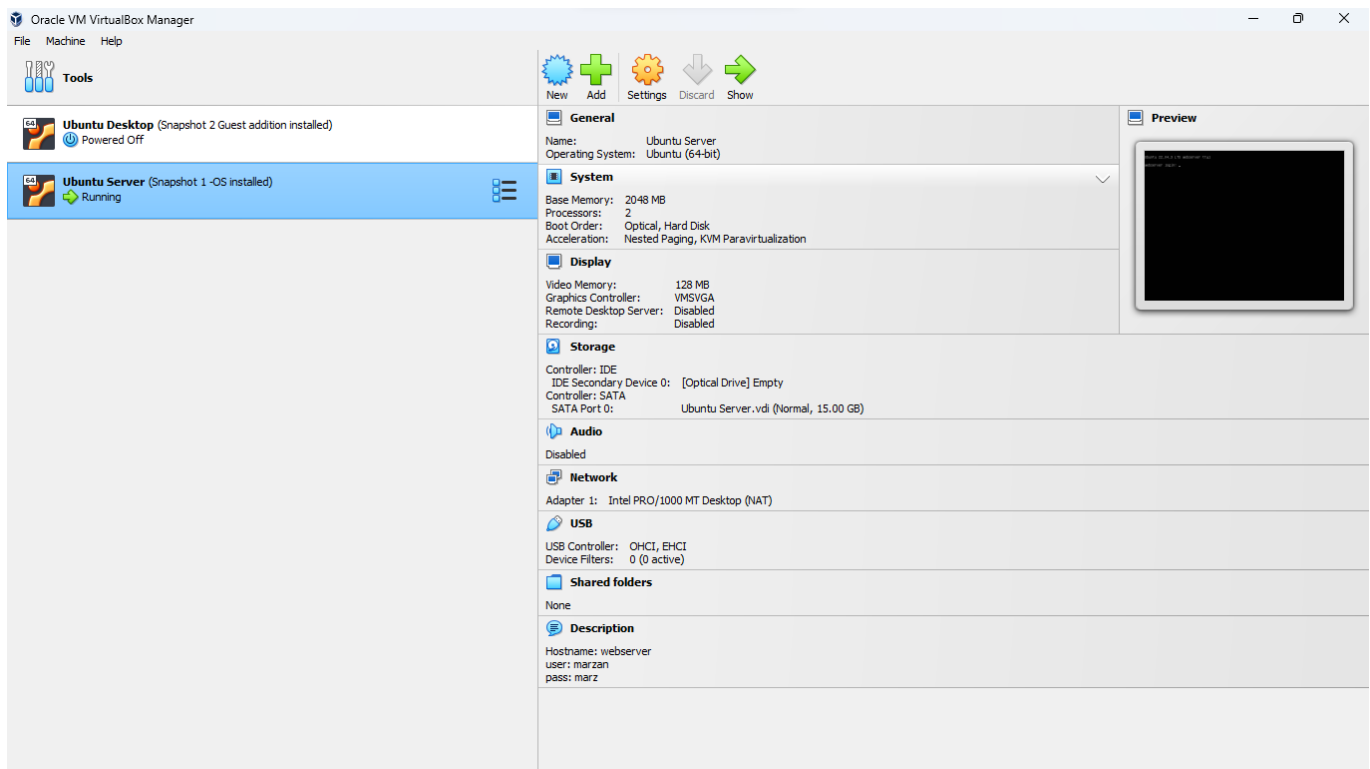
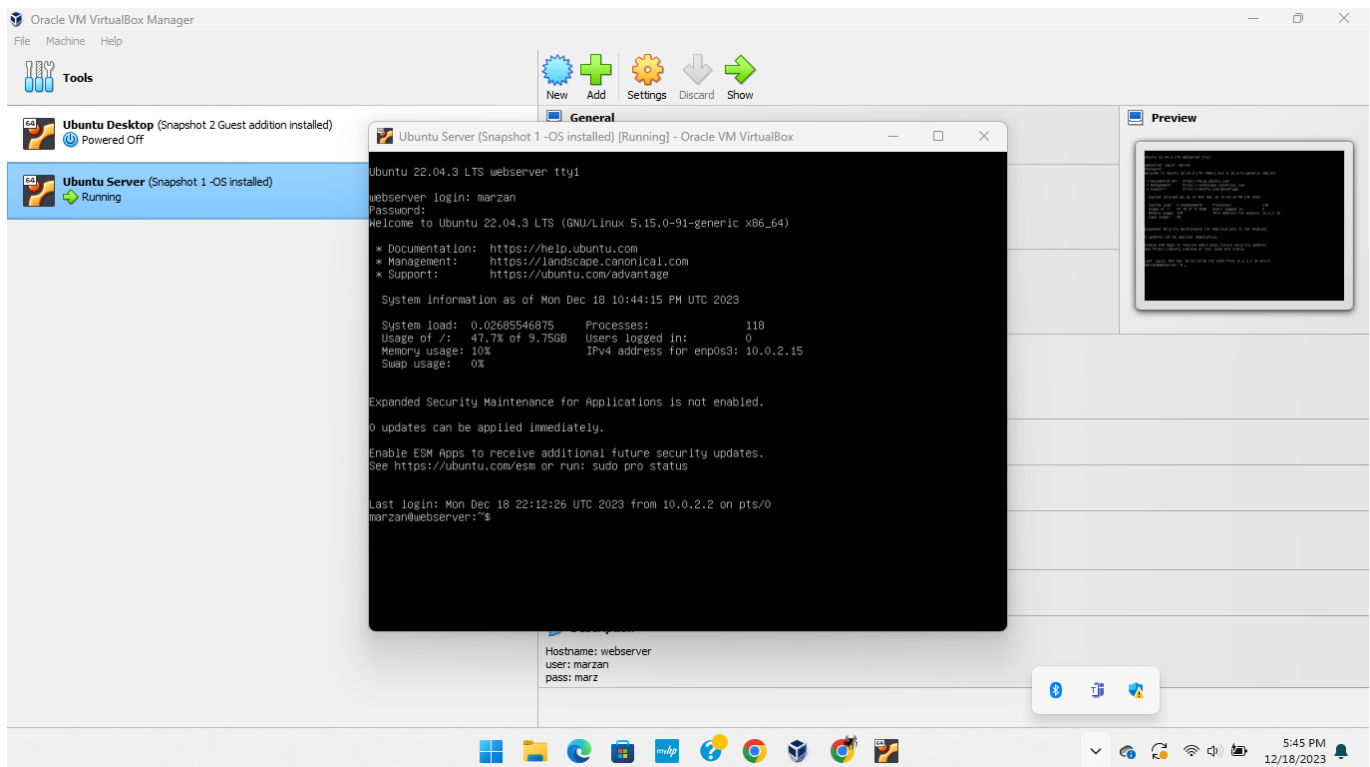


# Deliverable 2

## What are the server hardware specifications (virtual machine settings)?



## What is Ubuntu server log in screen?



## What is the IP address of your Ubuntu Server Virtual Machine?

The IP address of the Ubuntu Server Virtual Machine is 10.0.2.15

## How do you enable the Ubuntu Firewall?

To enable the Ubuntu Firewall use the command `sudo ufw enable`.

## How do you check if the Ubuntu Firewall is running?

To check if the Ubuntu Firewall is running `sudo ufw status`.

## How do you disable the Ubuntu Firewall?

To disable the Ubuntu Firewall use the command `sudo ufw disable`

## How do you add Apache to the Firewall?

To add Apache to the Firewall use the command `sudo ufw allow 'apache'`

## What is the command you used to install Apache?

Use the command `sudo apt install apache2` to install apache.

## What is the command you use to check if Apache is running?

Use the command `systemctl status apache2 --no-pager` to check if Apache is running.

## What is the command you use to stop Apache?

Use the command `sudo systemctl stop apache2 --no-pager`.

## What is the command you use to restart Apache?

Use the command `sudo systemctl restart apache2 --no-pager`.

## What is the command used to test Apache configuration?

`sudo apache2ctl configtest` to test apache configuration.

## What is the command used to check the installed version of Apache?

`apachectl -v` use the command to check the installed version of Apache .

## What are the most common commands to troubleshoot Apache errors? Provide a brief description of each command.

`systemctl` - Used to control and interact with Linux services via the `systemd` service manager. `journalctl` - Used to query and view the logs that are generated by `systemd`. `apachectl` - When troubleshooting, this command is used to check Apache's configuration.

## Which are Apache Log Files, and what are they used for? Provide examples and screenshots.

**Access Log** The access log contains information about requests coming into the web server. This information can include what pages people are viewing, the success status of requests, and how long the server took to respond. Here's an example of a typical access log entry:

```
10.185.248.71 - - [09/Jan/2015:19:12:06 +0000] 808840 "GET /inventoryService/inventory/purchaseItem?userId=20253471&itemId=23434300 HTTP/1.1" 500 17 "-" "Apache-HttpClient/4.2.6 (java 1.5)"
```

**Error Log** The error log contains information about errors the web server encountered when processing requests, such as missing files. It also includes diagnostic information about the server itself. Here's an example error log:

```
[Thu Mar 13 19:04:13 2014] [error] [client 50.0.134.125] File does not exist: /var/www/favicon.ico
```