

Lecture 2 Introduction to Linux Notes

1. What is an Operating System?

An operating system is the software that manages hardware and software resources of a computer.

2. What is a kernel?

The kernel is the core component of an operating system. It manages system resources, including memory, CPU, and input/output devices, and acts as a bridge between hardware and software.

3. Which other parts aside from the kernel identify an OS?

kernel includes system libraries, system utilities, and a shell to interact with the system.

4. What is linux?

Linux is a unix-like operating system popular in academic and business environments. Linux consists of kernel, libraries, and utilities that make up the entire operating system.

5. What is a linux distribution?

its an operating system that runs in the linux kernel.

6. List at least 4 linux characteristics:

open source software, free of charge, unix tools and highly scalable

7. What is Ubuntu?

A linux distribution, freely available with both community and professional support.

8. What is Debian?

debian is an all-volunteer organization dedicated to developing free software and promoting the ideals of the free software community.

9. List and define the different types of licensing agreements

open source, close source, freeware, shareware, free software

10. What is Free Software? Define the 4 freedoms.

freedom 0: use the software for any purpose
freedom 1: examine the source code and modify it as you see fit
freedom 2: redistribute the software
freedom 3: redistribute your modified software

11. What is virtualization?

virtualization is defined as creating virtual version of something.

12. List 3 benefits of virtualization

Allows running multiple OSs on one machine without dual booting, allows applications to be tested before installing them on host machine, can be used to keep legacy applications sandboxed and running past their end of life and it allows programs coded for one type of hardware or operating system to work on another that its not designed to work on.

13. What is a hypervisor? Include definitions of the 2 types

A hypervisor, also known as a virtual machine manager (VMM), is software that creates and runs virtual machines (VMs) by partitioning hardware resources.

14. What is the difference between Guest OS and Host OS?

Guest OS is the operating system running within a virtual machine and Host OS is the operating system running on the physical machine that hosts the virtual machines.

15. What is virtualbox?

VirtualBox is an open-source Type 2 hypervisor that allows users to create and run virtual machines on their computer. It supports multiple operating systems and is known for its ease of use and cross-platform compatibility.