Basic Terminology

What is a web server?

A **web server** is software that delivers web pages to users by handling HTTP requests from clients like browsers.

What is Apache?

Apache is a widely used open-source web server application. It's known for its flexibility, supports various modules, and runs on multiple operating systems. It's part of the Apache Software Foundation and has been a go-to choice for serving websites for decades.

What are some example web server applications?

Application Name	License	Project's Website
Apache HTTP Server	Apache License 2.0	Apache
Nginx	2-clause BSD license	Nginx
Lighttpd	BSD license	Lighttpd

Apache HTTP Server

As stated above, **Apache** is one of the most common web servers. It's reliable, customizable, and supports features like URL rewriting, load balancing, and virtual hosts.

Nginx

Nginx is a lightweight and super fast web server that is often used as a reverse proxy or load balancer in high-traffic environments.

Lighttpd

Lighttpd is designed to be secure, fast, and lightweight. It's great for serving static content and works well on low-resource systems.

What is virtualization?

Virtualization is the process of running multiple operating systems on a single physical machine by using software to simulate hardware environments.

What is VirtualBox?

VirtualBox is a free and open-source virtualization tool developed by Oracle. It lets users run different OSes in virtual machines on their computer.

What is a virtual machine?

A **virtual machine** (VM) is a software-based emulation of a physical computer. It runs an OS and applications like a normal computer but inside a host system.

What is Ubuntu Server?

Ubuntu Server is a Linux distribution designed for servers. It's open-source, stable, and commonly used for hosting websites, cloud services, and more.

What is a firewall?

A **firewall** is a security system that controls incoming and outgoing network traffic. It helps block unauthorized access while allowing legitimate communication.

What is SSH?

SSH (Secure Shell) is a protocol used to securely connect to remote machines. It encrypts all data, making remote administration safe over networks.

Other Relevant Concepts

- **Systemd**

Systemd is the default system and service manager for many Linux distributions. It handles boot processes, service management, and system logging.

- **Systemctl**

Systemctl is the command-line tool used to interact with systemd. You can start, stop, enable, or check the status of services with it.

- **Virtual hosts**

Virtual hosts allow a web server to host multiple websites on a single machine. Each site can have its own domain and settings, even if they share the same IP.

- **Log file**

A **log file** records events that happen on a system or application. Web server logs, for example, keep track of page requests, errors, and other activity.