

# Deliverable 1

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## Concepts I don't Understand

- **Apache HTTP Server**- An open-source web server software developed and maintained by the Apache Software Foundation. Apache HTTP Server is cross-platform and can run on various operating systems, including Linux, Unix, Windows, and more.
- **UFW**- Uncomplicated Firewall is a user-friendly command-line interface for managing iptables and it is designed to simplify the process of configuring and managing a firewall on Linux systems.
- **Port 80**- The default port for serving web pages, and it used by web servers to listen for incoming HTTP requests from web clients, such as web browsers.

## What is a web server? Hardware and software side

- When it comes to the hardware side, a web server is a computer that stores web server software and a website's component files (for example, HTML documents, images, CSS stylesheets, and JavaScript files). A web server connects to the Internet and supports physical data interchange with other devices connected to the web.
- When it comes to the software side, a web server includes several parts that control how web users access hosted files. At a minimum, this is an HTTP server. An HTTP server is software that understands URLs (web addresses) and HTTP (the protocol your browser uses to view webpages). An HTTP server can be accessed through the domain names of the websites it stores, and it delivers the content of these hosted websites to the end user's device.

## What are some different web server applications?

- Apache HTTP Server (Apache)
    - One of the most widely used open-source web servers. It's known for its flexibility, robustness, and extensive module support. Apache is often used in combination with the Linux operating system.
  - Nginx
    - It's a high-performance, open-source web server known for its efficiency in handling concurrent connections. Nginx is often used as a reverse proxy server, load balancer, and for serving static content.
  - Microsoft Internet Information Services (IIS)\ul>  - Developed by Microsoft, IIS is a web server for Windows Server operating systems. It is tightly integrated with other Microsoft technologies and is commonly used for hosting ASP.NET applications.
- LiteSpeed Web Server
  - A commercial web server known for its high performance and security features. It is designed to be a drop-in replacement for Apache and is often used in shared hosting environments.
- Caddy
  - An open-source, cross-platform web server written in Go. Caddy is known for its ease of use, automatic HTTPS configuration, and support for HTTP/2. It's suitable for small to medium-sized websites.
- Cherokee

- An open-source web server that is lightweight and fast. Cherokee focuses on being user-friendly with a web-based user interface for configuration.

## What is virtualization?

Virtualization is the replication of hardware to simulate a virtual machine inside a physical machine. The two general types of virtualization are the server-side and client-side.

## What is virtualbox?

VirtualBox is a powerful types 2 virtualization product for enterprise as well as home use. It is an open source software under the GPL version 2 and it runs on Windows, Linux, Macintosh, and Solaris.

## What is a virtual machine?

A virtual machine (VM) is a software-based emulation of a physical computer. It runs an operating system (OS) and applications just like a physical machine, but it operates within a host system.

## What is Ubuntu Server?

Ubuntu Server is a part of the larger set of Ubuntu products and operating system. Ubuntu server is a specific addition that differs a little bit from Ubuntu desktop, in order to facilitate installation on servers.

## What is a firewall?

A firewall is a network security device or software that monitors, filters, and controls incoming and outgoing network traffic based on predetermined security rules. Firewalls establish a barrier between a trusted internal network and untrusted external networks, help prevent unauthorized access, protect against cyber threats, and control the flow of data.

## What is SSH?

SSH, also known as Secure Shell or Secure Socket Shell, is a network protocol that gives users, particularly system administrators, a secure way to access a computer over an unsecured network.