Deliverable 1

> Tutorial can be found [here] (https://www.digitalocean.com/community/tutorials/how-to-install-the-apache-web-server-on-ubuntu-22-04)

Concepts I Don't Understand:

- Apache : A web server software that is responsible for accepting HTTP requests from visitors and sending them back the requested information in the form of web pages.
- UFW Firewall : A frontend for iptables and is particularly well-suited for host-based firewalls.
- SSL : a standard security technology for establishing an encrypted link between a server and a client —typically a web server (website) and a browser, or a mail server and a mail client (e.g., Outlook).
- DocumentRoot : The folder where the website files for a domain name are stored.
- ServerAdmin : The contact address that the server includes in any error messages it returns to the client.

Questions

What is a web server? Hardware and software side

A web server on the hardware side is a computer that stores web server software and a website's component files. Now on the software side, a web server includes several parts that control how web users access hosted files.

What are some different web server applications?

Types of server applications:

Application Name	license
Example 1	Nginx
Example 2	Lighthttpd
Example 3	OpenLiteSpeed
Example 4	Cherokee

Nginx

NGINX is open source software for web serving, reverse proxying, caching, load balancing, media streaming, and more. It started out as a web server designed for maximum performance and stability. In addition to its HTTP server capabilities, NGINX can also function as a proxy server for email (IMAP, POP3, and SMTP) and a reverse proxy and load balancer for HTTP, TCP, and UDP servers.

Lighttpd

Lighttpd, is pronounced as "lighty". It is an open-source web server optimized for speed-critical environments while remaining standards-compliant, secure, and flexible. It's designed to be lightweight and have a small memory footprint, making it particularly suited for servers suffering from load problems and memory leaks.
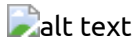
OpenLiteSpeed

OpenLiteSpeed is the Open Source edition of LiteSpeed Web Server Enterprise. It contains all of the

essential features, including HTTP/3 support. OLS provides enormous scalability, and an accelerated hosting platform for WordPress.

Cherokee

![alt text]

Cherokee is an open-source cross-platform web server that runs on Linux, BSD variants, Solaris, OS X, and Windows. It is a lightweight,high-performance web server/reverse proxy licensed under the GNU General Public License. Its goal is to be fast and fully functional yet still light. Major features of Cherokee include a graphical administration interface named cherokee-admin, and a modular light-weight design.

What is virtualization?

Virtualization is technology that you can use to create virtual representations of servers, storage, networks, and other physical machines.

What is virtualbox?

VirtualBox is primarily used for testing software, running multiple operating systems simultaneously, and creating isolated environments for development and experimentation.

What is a virtual machine?

A virtual machine is the virtualization or emulation of a computer system. Virtual machines are based on computer architectures and provide the functionality of a physical computer.

What is Ubuntu Server?

Ubuntu Server is a part of the larger set of Ubuntu products and operating system developed by Canonical Ltd. 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 that monitors and filters incoming and outgoing network traffic based on an organization's previously established security policies.

What is SSH?

SSH, Secure Shell or Secure Socket Shell, is a network protocol that gives users a secure way to access a computer over unsecured networks. It was created to replace insecure terminal emulation or login programs.