

Deliverable 1

Tutorial can be found [here](#)

Concepts I don't understand:

- **Web Server:** is a computer in which it accepts request via **Hypertext Protocol (HTTP)** or **Hypertext Protocol Secure(HTTPS)** by using a software and hardware.
- **Apache:** An open-source software where it grants permission for the user to deploy their web server.
- **Web server ports:** A network connection used to exchange information from a web server to a web client.
- **Firewall:** A network security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules.
- **Netfilter Firewall:** Provides the functionality required for directing packets through a network and prohibiting packets from reaching sensitive locations within a network.
- **Uncomplicated Firewall (UFW):** A program that can manage a netfilter firewall to be easy to use.
- **init system:** Create processes from script that are store in a directory called `/etc/inittab` to initialize the system. The first process of to start when a computer boots up and runs until the system shut down.
- **Virtual Hosts:** Is a method where the user can have multiple domain names in the same server.
- **systemd:** A software suite that provides an array of systems components for Linux opertating system. An init system used to bootstrap user space and manage user processes.

What is a web server? Hardware and software side

Hardware A web sever is a computer that stores web server software and websites's components. Some of this website's component are *Hypertext Markup Language (HTML)*, *images*, *Cascading Style Sheet (CSS)* and *JavaScript(JS)*. It can also connect and support physical data interchange with other devices that are connected to the web too.

Software A web server includes several parts that control how web users access hosted files. An HTTP server is a software that can understand *URLs(web address)* and *HTTP(the protocol your browser uses to view webpages)*. In order to access the HTTP server the user should input the domain name of the website. This websites it stores and it delivers the content that the host websites have to the end of the user's device.

What are some different web server applications?

Apache



- Easy Scripting through Lua
- Available on all platforms - Linux, Windows, MacOS, and other platform
- Default server for all CPanel shared hosting, effortless to set up and change sites

NGINX



- Support for uwsgi, SCGI, and other server protocols, with caching.
- Best-in-the-class file handling, load balancing, and reverse proxy capabilities
- Access control, error redirection, etc.

Caddy



- No dependencies (it's a Golang-compiled binary codebase that doesn't depend on any underlying system libraries)
- HTTPS enabled by default. Don't need to do anything for installing or renewing SSL certificates.
- Serves static files in the current directory by default.

What is virtualization?

Virtualization uses a software in which it can run by its own operating system and can be created over a computer hardware that would allow the same elements a physical computer. Some of this physical elements would be memory, processors, storage and more.

What is virtualbox?

A virtualbox is virtualization tool for x86 and x86-64 hardware. Allows administrators and users to run multiple guest of operating system in the same host.

What is a virtual machine?

A virtual machine is a computer that can be access through any destination by a software application which does not have to have a physical desktop but it has the same implementation as a physical computer.

What is Ubuntu Server?

Ubuntu Server is a tailored for network and service that is capable of running simple files server while operating with a 50,000 node cloud. Ubuntu Server is different then Ubuntu Desktop due to the reason that it lacks from a *Graphical User Interface (GUI)*.

What is a firewall?

Firewall is known as a *network security system* that can monitor any network traffic, either outgoing or incoming and also block packets depending of the security rules.

What is SSH?

Secure Shell is a network that grant particular system administrator to a user and it secures the accessing of a computer when using an unsecured network. The SSH also provides an encrypted data communication between two computer that are connected by an open network.