

# What is a web server?

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- **Definition**
  - A web server is software that receives HTTP/HTTPS requests from clients and serves web content such as web pages, images, and data.
- **Example**
  - Apache HTTP Server is a commonly used web server software.

## Different web server applications

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- **Apache HTTP Server**
  - **Definition**
    - An open-source web server developed by the Apache Software Foundation.
  - **Website / Download**
    - <https://httpd.apache.org>
  - **Operating Systems**
    - Linux, Windows, macOS
  - **Latest Version**
    - Latest stable version available on the Apache website
- **Nginx**
  - **Definition**
    - A high-performance web server and reverse proxy server.
  - **Website / Download**
    - <https://nginx.org>
  - **Operating Systems**
    - Linux, Windows, macOS
  - **Latest Version**
    - Latest stable version available on the Nginx website
- **Microsoft IIS**
  - **Definition**
    - A web server developed by Microsoft for hosting websites and web applications.
  - **Website / Download**
    - Included with Windows Server
  - **Operating Systems**
    - Windows
  - **Latest Version**
    - Latest version included with supported Windows Server releases

## What is virtualization?

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- **Definition**
  - Virtualization is the process of creating virtual versions of hardware, operating systems, storage, or network resources.

# What is VirtualBox?

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- **Definition**
  - VirtualBox is a free, open-source virtualization software that allows users to run multiple operating systems on a single physical computer.
- **Website**
  - <https://www.virtualbox.org>

# What is a virtual machine?

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- **Definition**
  - A virtual machine is a software-based computer that runs an operating system and applications as if it were a physical machine.

# Host machine and guest machine

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- **Host machine**
  - The physical computer that runs the virtualization software.
- **Guest machine**
  - The virtual computer running inside the host machine.

# What is Debian?

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- **Definition**
  - Debian is a free and open-source Linux distribution known for its stability and security.

# What is a firewall?

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- **Definition**
  - A firewall is a security system that monitors and controls incoming and outgoing network traffic based on predefined rules.

# What is SSH?

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- **Definition**
  - SSH (Secure Shell) is a network protocol used to securely access and manage remote computers over a network.

# What is an IP Address?

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- **Definition**

- An IP address is a unique numerical identifier assigned to a device on a network so it can communicate with other devices.

## What is a network mask?

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- **Definition**

- A network mask, also called a subnet mask, divides an IP address into network and host portions.

## What is a port?

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- **Definition**

- A port is a numbered communication endpoint used to identify specific services or applications on a computer.

## What is port forwarding?

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- **Definition**

- Port forwarding is a technique that redirects network traffic from one port to a specific device or service on a network.

## What is localhost?

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- **Definition**

- Localhost refers to the local computer and is used to test network services on the same machine.

## What does 127.0.0.1 represent?

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- **Definition**

- 127.0.0.1 is the loopback IP address that always refers to the local machine.

## What is Git?

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- **Definition**

- Git is a distributed version control system used to track changes in source code during development.

## What is GitHub?

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- **Definition**

- GitHub is a web-based platform that hosts Git repositories and allows collaboration and version control.