

Lecture 103

Date: 29/9/2024 Lecture 102 Day: Monday
Project.

In this lecture we discuss
sol the Lecture 100.

Create a card?

In Lecture 102 we create Twitter card

x — x — x — x — x

Lecture 103?

What is Hosting?

Where to host?

Which hosting?

Q103 what is Hosting?

Hosting refers to the server
of providing storage space
and access for website and
web application on servers that
are connected to the Internet.
When you create a website
or a web application, all the
files, database and other content
associated with it need to
be stored somewhere so the
user can access them over
the Internet!

Hosting companies offer server space, bandwidth, and other resources needed to store and serve your website to visitors.

There are various types of hosting services available, including shared hosting, VPS (Virtual private Server), hosting, dedicated hosting, cloud hosting, and more.

Each types of Hosting has its own advantages, and is suitable for different kind of websites, and application based on factors like traffic volume, performance requirement, scalability and budget.

Types of Hosting -

- ① Shared Hosting: Your website shares resource with other website. It's cost-effective for small website with low to moderate traffic.
→ multiple website share resource (such as CPU, RAM and disk space) on a single server.

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Pros: It's affordable, making it suitable for small projects and beginners. Hosting provider manages server maintenance and security.

Cons → Limited resource and potential performance issues due to sharing with other websites. Less control compared to other hosting types.

② VPS Hosting → virtual private server hosting offers a dedicated portion of a server's resources giving more control and performance. compared to shared hosting.

⇒ VPS hosting divides a physical server into multiple virtual servers each with its own dedicated resources.

Pros: More resources and control compared to shared hosting. Scalable, allowing you to upgrade ~~rate~~ resource as needed. Offers better performance and reliability.

Dedicated Hosting, you have an entire server dedicated to your website, providing maximum control, performance and security. It's suitable for large websites with high traffic.

With dedicated hosting, you have an entire physical server dedicated to your website, providing maximum performance, control and security.

Pros => Full access to server resource and configuration. Ideal for large websites with high traffic or resource-intensive applications.

Cons => Expensive compared to shared and VPS hosting. Requires technical expertise for server management and maintenance.

Cloud Hosting your website files are hosted on a network of interconnected servers offering scalability, flexibility and high availability.

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- Cloud hosting utilizes a network of virtual servers to host websites, allowing resources to be scaled up or down as needed.

Pros: high scalability and flexibility, pay-as-you-go pricing model, allowing you to pay for resources you use; high availability and read reliability.

Cons: can be more complex to set up and managed compared to traditional hosting. Cost can vary depending on resource usage.

⑤ Managed WordPress Hosting:

Hosting optimized specifically for WordPress website offering features like automatic update, enhanced security and performance optimization.

⇒ Managed WordPress hosting is optimized specifically for WordPress website.

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PROS => Easy to use, with specific optimization managed by the hosting provider reducing the need for technical maintenance.

CONS => Limited to WordPress website. Can be more expensive than traditional hosting plans.

Each type of hosting has its own advantage and is suitable for different kind of website and application based on factors like traffic volume, performance requirement, scalability and budget. It's essential to access your need and carefully consider which types of hosting best fit your requirements.

Factors to consider when choosing a Hosting provider

① Reliability => Looks for hosting provider with a good uptime track to ensure your website is consistently accessible.

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- (2) performance \Rightarrow choose a hosting plan with sufficient resources to handle your website traffic and ensure fast loading times.
- (3) scalability \Rightarrow consider whether the hosting provider offers scalability options to accommodate your website's growth.
- (4) security \Rightarrow look for features like SSL and certificates, firewalls, and regular backups to protect your website from security threats.
- (5) support \Rightarrow check the quality and availability of customer support especially if you're not familiar with managing servers.

Popular Hosting providers:

- (1) Bluehost: offer a range of hosting options with a focus on WordPress hosting.
- (2) HostGator: provides shared

VPS, and dedicated hosting plan with affordable pricing.

SiteGround => Known for its reliable hosting and excellent customer support.

Amazon web services (AWS) offer cloud hosting services with high scalability and flexibility.

Digital Ocean => provide cloud hosting with a simple and developer - friend interface.

② Google cloud platform

When choosing a hosting provider consider your website specific need , budget and technical expertise . It is essential to research and compare different hosting option to find the best fit for your requirement.

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What is Domain?

In the context of websites, a domain refers to the unique name that identifies a website on the internet. It's the address that users type into their web browser to access a particular website.

For example: In the domain name "google.com", "google" is name of the website and ".com" is the top-level domain (TLD). The combination of the website name and the TLD forms forms the complete domain name.

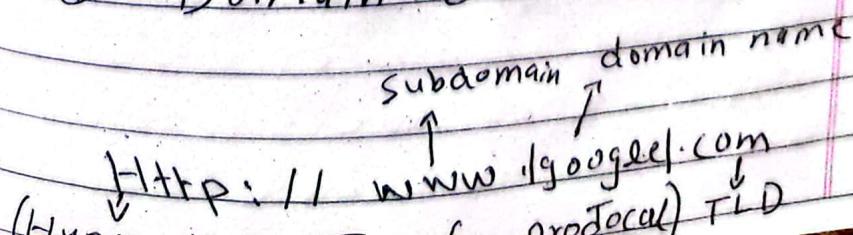
Domain are used to navigate the internet and access specific website. They provide a human readable way to locate and identify web resources. Additionally domain can be registered through domain registrars and they must be renewed periodically to maintain ownership.

Domain Registration and Domain Hosting.

Domain Registration => This refers to the process of purchasing and registering a unique domain name of a website. Domain registration is typically done through domain registrar companies accredited by the Internet Corporation for Assigned Name and Number (ICANN) or other national authorities to sell and manage domain names. Some well-known domain you obtain the exclusive right to use that domain name for a specified period (usually one year but it can be longer) as long as you continue to renew it.

Company to sell Domain

- ① godaddy
- ② Google Domain
- ③ Namecheap
- ④ Domain.com



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② Domain Hosting:

This refers to the service of hosting the files and data of a website on a server connected to the Internet. Web hosting companies provide server services and related services to store website files, ensure website availability and manage website resources.

In summary domain registration involves obtaining the right to use a specific domain name, while domain hosting involves storing web file and data on server connected to the internet.

While some companies offer both domain registration and hosting services they are distinct services that can also be provided by separate companies.

Note: If you only have a domain without hosting your website will not be accessible on the internet.

So even if you have a domain name registered without hosting there's nowhere for your website to live, and therefore it won't be visible online. You need both a domain and hosting to have a functional website.

Q In domain is serve my personal computer is hosting?

Yes you can technically host a website on your personal computer by using it as a server.

However there are several important considerations and challenges to be aware of.

① Performance and Reliability: personal computer are not designed or optimized for hosting website. They may lack the necessary hardware and software infrastructure to efficiently serve web content to visitor. Additionally, personal internet connection typically have limited bandwidth and may not be able to handle large amount of traffic.

② Security: Hosting a website on a personal computer expose it security risk. Personal computer may not have the robust security measure and protection web that professional web hosting services offer. This could make your website vulnerable to cyberattack and unauthorized access.

③ Uptime: Personal computer are typically not designed for continuous operation and may experience downtime due to maintenance, update

or technical issues, professional web hosting services offer better uptime guarantees and technical support to ensure (II) Terms and Services.

Over all while it's technically possible to host a website on your personal computer it's generally not recommended due to performance, security.

It's usually better to use a professional web hosting service that is specifically designed for hosting website.

Note = In the lecture 103 and 104, is about how to host.

In this lecture the show practical host the website but I have no money that way I can't buy a hosting.

Date: 01/05/2024 Lecture 109 Day: Wed

How to use Ubuntu.

Difference Between Ubuntu and Linux and Unix.

We know about Ubuntu because sometime we buy Ubuntu machine for hosting.

What is Ubuntu?

Ubuntu is a popular open-source operating system based on the Linux kernel. It is widely used for personal computers, servers, and cloud computing. Ubuntu is known for its ease of use, regular updates, and strong focus on usability and accessibility.

Key features and characteristics of Ubuntu include:

- ① Open Source: Ubuntu is distributed under an open source license, which means that its source code is freely available for anyone to view, modify, and distribute.

Ubuntu offers both desktop and server edition. The desktop version is designed for personal computers and includes a graphical user interface (GUI), along with its Desktop versions.

The Desktop version of Ubuntu is designed for personal computing use. It includes a graphical user interface (GUI) that allows users to interact with the operating system using a mouse, keyboard and monitor.

Ubuntu Desktop comes pre-installed with a variety of software applications suitable for everyday tasks such as web browsing, email, word processing, multimedia playback, and more.

Ubuntu Desktop is suitable for home users, students, professionals and anyone who needs an easy-to-use and feature-rich operating system for personal computing.

What is Server version.

- The Server version of Ubuntu is optimized for use in server environments such as data center, cloud computing platform and enterprise network.

- Ubuntu Server does not include a graphical desktop environment by default. Instead, it is typically installed and managed using a Command-line Interface (CLI) or accessed remotely via SSH (Secure^{Shell})

- Ubuntu Server is designed to provide a stable, secure and efficient platform for running server applications and services such as Web server (Apache, Nginx), database server (MySQL, PostgreSQL), file server, email servers, Virtualization hosts and more.

- It offers features and tools for server management, monitoring, security and scalability, making it suitable for hosting websites.

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deploying web application, managing database and running other server workloads.

Package Management:
Ubuntu uses the Debian package management system which makes it easy to install, update, and remove software packages. Users can install software from the Ubuntu repositories using the apt package manager or via graphical management tools like Ubuntu Software Center or Synaptic Package Manager.

Community and Support:

Regular Releases:

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Difference Between Linux and Ubuntu.

① Linux →

- Linux refers to the open-source Unix-like operating system Kernel originally created by Linus Torvalds in 1991.

The Linux Kernel is the core component of many operating systems including Ubuntu.

• Linux is free and open-source software, meaning that its source code is available for anyone to view, modify, and distribute under the term of variety various open-source licenses.

• Linux is highly customizable and widely used across a variety of devices and platforms including server, desktop computer, embedded system, mobile device and more.

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various distribution (often referred to as "distros") package along with the Linux kernel and additional software and utilities to create complete system for specific purposes and audiences.

2 Ubuntu =>

Ubuntu is one of the most popular Linux distribution based on the Linux and the Debian GNU/Linux distribution. It was released in 2004 by Canonical, Ltd.

Ubuntu aims to provide an easy-to-use free, and open-source operating system for personal computer, server and cloud computing environments.

Ubuntu comes in several editions, including Ubuntu Desktop, Ubuntu Server, Ubuntu Core (for IoT devices) and various official Flavors (Kubuntu, Xubuntu, Lubuntu) that ... environment

Ubuntu emphasizes usability, regular update, security and community involvement. It offers a wide range of pre-installed software, graphical tool and utilities to support both Desktop and server user.

In summary Linux is the Kernel at the core of many operating system while Ubuntu is a specific Linux distribution based on the Linux kernel and the Debian GNU/Linux distribution. Ubuntu is designed to be user-friendly and versatile catering to both desktop and server use cases, while Linux is a whole encompasses a broader ecosystem and distribution.

How to install Ubuntu:

There is two way to use Ubuntu. ① use in virtualBox
② you can also run in PC.

To learn Ubuntu we can install virtualBox.

Steps To install Ubuntu

- ① Download VirtualBox
- ② Download Ubuntu 18 Desktop
- ③ Install Virtual Box and create New Machine:
- ④ After creating machine click on start
- ⑤ Then you can install Ubuntu with choice of Install directly or Try.

How to use Ubuntu

- ① Explore the Desktop Environment.

Ubuntu typically uses the GNOME desktop environment by default. Take some time to explore the interface, learn how to navigate menus, launch application and manage windows.

- ② Terminal Basics: The Terminal is a powerful tool for interacting with Ubuntu's command-line interface (CLI). Learn some basic commands for navigating the mounting the file commands

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managing files and directories
and performing common tasks

Here are a few commands to
get you started:

- ls : List file and directories in the current location.
- cd : change directory ; you can use the cd command to switch which directory you're currently working in most common Linux distribution as well as in Ubuntu.
- mkdir : Create a new directory means a folder.
- touch : Create a new file.
- cp : Copy file and directories.
- mv : Move or rename file and directories.
- rm : Remove file and directories.
- Sudo : Execute a command with superuser (administrator) privileges.

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③ Package Management: Ubuntu uses the APT (Advanced Package Tool) package management system to install, update and remove software packages. Learn How to use APT to install new software from the ubuntu repositories.

syntax:

Sudo apt install package name