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## What is web Hosting?

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Web hosting is a service that provides storage for the files that make up your website and the software, physical hardware, and network infrastructure that makes your website available to others on the internet. Web hosting...

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Web hosting is a service that provides storage for the files that make up your website and the software, physical hardware, and network infrastructure that makes your website available to others on the internet <sup>1</sup>. Web hosting service providers offer a variety of hosting options, ranging from inexpensive shared hosting to more expensive dedicated servers <sup>1</sup>.

Web hosting works by storing your website's files on a server that is continuously powered on and connected to the internet <sup>2</sup>. When a user enters your website's URL into their browser, the browser translates the domain name into an IP address and sends a request to the web server hosting your site <sup>2</sup>. The server then locates the necessary files and transfers them to the user's browser to load the requested web page <sup>2</sup>.

There are several types of web hosting services <sup>3</sup> <sup>4</sup>:

- Shared hosting: Your website shares a server with many other sites. It's the least expensive option but provides
  fewer resources and less control <sup>1 3</sup>.
- Virtual Private Server (VPS) hosting: Your site gets its own dedicated virtual server, sharing hardware with fewer sites. It offers more resources and control than shared hosting <sup>1 3</sup>.
- **Dedicated servers**: You get an entire physical server to yourself. It provides the most resources and control but is the most expensive option <sup>3</sup>.
- Cloud hosting: Your site is hosted on a cluster of servers. It scales automatically as your needs change and offers
  high availability and flexibility 4.

Choosing a web hosting provider requires considering factors like your website's needs, budget, technical expertise, and desired features <sup>2</sup>. Paid hosting offers benefits like better uptime, speed, support, and security compared to free hosting options <sup>2</sup>.



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# HOW DOES WEB HOSTING WORK?







There are several main types of web hosting services:

#### **Shared Hosting**

- Multiple websites share a single server, reducing costs but also resources
- · Best for small websites and blogs with low traffic
- Easiest to set up and use, with limited customization options 1 2 3

#### VPS (Virtual Private Server) Hosting

Provides a dedicated virtual

- Offers more flexibility and control than shared hosting
- Suitable for websites with growing traffic and resource needs
- Requires more technical expertise to manage

#### **Dedicated Server Hosting**

Provides an entire physical server dedicated to a single website

Offers maximum control, resources, and customization

Best for high-traffic websites and resource intens

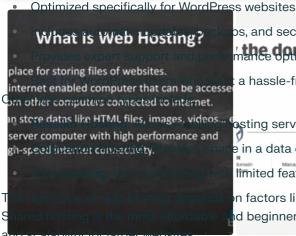
Most expensive option and requires advanced technical skills

## **Joud Hosting**

- Utilizes a network of servers to provide scalable resources
- Allows websites to automatically scale up or down as needed
- **are nosted on serve**Offers high availability and redundancy

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The Internet makes it all possible Managed WordPress Hosting



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a hassle-free hosting experience 2

osting services to others

e in a data center for your own servers limited features, best for small projects

n factors like your website's needs, traffi nd beginner-friendly, while dedicated and

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Web Server - A computer that retains information for at allows others to view

Web Host - A company that maintains servers that allow u

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## Answer

Here are some budget-friendly options for hosting a full-stack project:

#### Virtual Private Server (VPS) Hosting

- Provides a dedicated virtual server with guaranteed resources
- Offers more flexibility and co
- Suitable for websites with gi

• Examples include DigitalOcean, Linode, and Vultr which start around \$5/month 20

#### Heroku

- · Offers a free tier with some limitations
- · Easy to use with automatic deployments from Git
- · Supports multiple languages and frameworks
- Provides a simple way to host a full-stack app on a budget <sup>3</sup> <sup>9</sup>

#### Railway

- Allows buying credits instead of a monthly subscription
- · Can run servers, databases, and connect to frontend hosts like Vercel
- Inexpensive for simple projects, around \$0.40/month

#### Netlify

- · Best for hosting static websites and frontend apps
- Offers a generous free tier with 100GB bandwidth
- Integrates well with Git for easy deployments <sup>3</sup> <sup>©</sup>

#### **AWS**

- Can be very cheap for low-traffic apps, around \$0.50/month
- · Requires more setup and technical expertise
- Offers a wide range of services to build a full-stack app

Other options include Render, Fly.io, and self-hosting on a VPS. The right choice depends on your specific needs, budget, and technical expertise. Heroku and Netlify are great for beginners, while VPS and AWS offer more flexibility and control for experienced developers

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## Explain the technical way of web hosting.

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## **Answer**

Web hosting involves storing a website's files on a server that is continuously powered on and connected to the internet. When a user enters a website's URL into their browser, the browser sends a request to the web server hosting that site. The server then locates the necessary files and transfers them to the user's browser to load the requested web page.

Here's a technical explanation of how web hosting works:

#### Server Hardware

- Web hosts use physical servers, which are powerful computers designed to run 24/7
- Servers have high-capacity hard drives for storing website files and databases
- They also have fast processors, large amounts of RAM, and reliable network connections

#### **Operating System**

- · Servers run an operating system like Linux or Windows
- · The OS manages the server's resources and allows it to communicate with the internet

#### Web Server Software

- Web server software like Apache or Nginx is installed on the server
- This software listens for incoming requests from web browsers
- When a request is received, the walk as the beautiful and and them beautiful the browner.

#### Website Files

- A website consists of HTML, CSS, JavaScript, images, videos, and other files
- These files are uploaded to the server using FTP, SFTP, or the hosting provider's control panel
- The web server stores these files in a specific directory on the server

#### Domain Name System (DNS)

- When a user enters a domain name like "example.com" into their browser, the browser needs to know which server
  to send the request to
- DNS servers translate domain names into IP addresses, which are used to route requests to the correct server
- The hosting provider configures the DNS settings to point the domain to the server hosting the website

#### Serving Web Pages

- When a user enters a website's URL, the browser sends a request to the server hosting that site
- The web server software receives the request, locates the requested files, and sends them back to the browser
- The browser then renders the HTML, applies the CSS styles, and executes any JavaScript to display the web page to the user

This is a simplified explanation of how web hosting works under the hood. In reality, web hosts use advanced technologies like load balancing, caching, and content delivery networks to optimize performance and handle high traffic loads.

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What are the main differences between shared and dedicated hosting		+
How does a content management system (CMS) integrate with web hos	ting	+
What are the security measures web hosting providers typically implem	ent	+