// WEB ENGINEERING FUNDAMENTALS — PDF 08

What Is Web Hosting?

A complete beginner's guide to where websites actually live — and how to choose the right home for yours.

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Inside this guide

01 — INTRODUCTION

A beautiful house still needs land to stand on

People know its address, but the house itself must exist somewhere. The same idea applies to websites.

A domain name is the address people use to find your website. A website is the collection of files that make up your application. Web hosting is the place where those files are stored so anyone on the internet can access them.

// A COMMON MISCONCEPTION

Many beginners think buying a domain name automatically creates a website. It does not. A domain is simply an address — your website still needs a computer connected to the internet that stores your files and serves them to visitors. That computer is a web server, and the service that provides it is web hosting.

02 — WHAT IS WEB HOSTING?

A service that stores your files on a server connected to the internet

Whenever someone visits your website, the hosting server sends the required files to the visitor's browser. Those files may include:

- HTML
- CSS
- JavaScript
- Images
- Videos
- Fonts
- PDFs
- Backend applications

```
// WITHOUT HOSTING
```

Your website exists only on your own computer. Nobody else can access it.

03 — WHY IS WEB HOSTING IMPORTANT?

Hosting is what keeps your website online, always

HOSTING MAKES YOUR SITE

— Available 24 hours a day
— Accessible from anywhere
— Reliable
— Secure
— Scalable as traffic grows

WITHOUT HOSTING

— Visitors cannot access your website
— Search engines cannot index your pages
— Your application cannot run continuously

04 — HOW WEB HOSTING WORKS

The bridge between your files and your visitors

1. You upload your website files to a hosting provider.
2. The hosting provider stores those files on a web server.
3. Your domain name points to that server using DNS.
4. A visitor enters your domain into a browser.
5. DNS finds your hosting server.
6. The browser sends an HTTP request.
7. The server returns the requested files.
8. The browser renders the website.

05 — WEBSITE VS DOMAIN VS HOSTING

Three concepts beginners constantly confuse

WEBSITE

The actual product you build

— Pages

— Code

— Images

— Databases

— Backend logic

DOMAIN

The address people type

haas.dev

HOSTING

The computer or cloud server where your website is stored

website

= house

domain

= home address

hosting

= the land the house is built on

You need all three for a public website.

06 — TYPES OF WEB HOSTING

Different websites, different hosting needs

SHARED HOSTING

Multiple sites, one server

+ Inexpensive, beginner friendly, easy to manage

– Slower under heavy traffic, fewer resources

Best for: personal blogs, portfolios, small business sites

VPS HOSTING

One server, split into virtual servers

+ Better performance, more control, scalable

Best for: growing businesses, medium traffic websites

06 — TYPES OF WEB HOSTING (CONTINUED)

Dedicated and cloud hosting

DEDICATED HOSTING

One whole server, one customer

+ Maximum performance, full control, highest flexibility

– Expensive, requires technical knowledge

Best for: enterprise applications, high traffic platforms

CLOUD HOSTING

Runs across multiple cloud servers

+ Highly scalable, reliable, handles traffic spikes, pay for what you use

Examples: AWS, Google Cloud, Microsoft Azure

Cloud hosting is now one of the most popular choices for modern applications.

06 — TYPES OF WEB HOSTING (CONTINUED)

Serverless hosting

Developers deploy applications without managing servers directly. The cloud provider automatically handles infrastructure, scaling, and maintenance.

// EXAMPLES

Vercel, Netlify, Cloudflare Workers. This model is becoming increasingly popular for frontend applications and APIs.

07 — HOW TO CHOOSE THE RIGHT HOSTING

Ask yourself these questions

- **Simple portfolio?** Choose shared hosting.
- **Growing startup?** Choose VPS or cloud hosting.
- **Large enterprise application?** Choose cloud infrastructure or dedicated servers.

07 — HOW TO CHOOSE THE RIGHT HOSTING (CONTINUED)

Two more questions worth asking

HOW MUCH TRAFFIC?

The more visitors you have, the more resources your hosting needs.

WILL IT GROW?

Choose a hosting solution that allows easy upgrades. Planning ahead saves time later.

08 — FREE HOSTING VS PAID HOSTING

Fine for learning, risky for production

FREE HOSTING

+ No cost, perfect for learning, quick deployment

− Limited resources, fewer customization options, not ideal for business

PAID HOSTING

+ Better performance, customer support, higher security, professional features

Paid hosting is the better choice for production websites.

09 — WHAT HAPPENS AFTER YOU BUY HOSTING?

Buying hosting is only the beginning

1. Upload your website
2. Configure DNS
3. Connect your domain
4. Install an SSL certificate
5. Test your website
6. Deploy updates when needed

// ONGOING RESPONSIBILITY

Hosting providers supply the infrastructure, but developers are responsible for deploying and maintaining their applications.

10 — REAL-WORLD EXAMPLES

Three projects, three hosting decisions

PERSONAL PORTFOLIO

Hosting: Vercel or Netlify

Reason: Fast deployment for static websites.

E-COMMERCE WEBSITE

Hosting: Cloud hosting

Reason: Needs scalability, databases, and backend services.

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Deployed on Vercel, allowing fast global delivery, automatic deployments, and simplified hosting management.

11 — COMMON BEGINNER MISTAKES

Where most beginners get stuck

- × Thinking hosting and domain names are the same thing.
- × Buying a domain without purchasing hosting.
- × Choosing the cheapest hosting without considering future growth.
- × Ignoring backups.
- × Assuming hosting providers automatically secure applications.
- × Thinking hosting is a one-time task instead of an ongoing responsibility.

12 — PRACTICAL ACTION PLAN

Investigate three popular websites

For each one, answer where it's likely hosted, whether it uses shared, cloud, or dedicated hosting, and why that choice makes sense. Then decide which hosting type you'd choose for your first personal project.

13 — KEY TAKEAWAYS

What to carry forward

- Web hosting stores website files on internet-connected servers.
- Every public website requires hosting.
- Domains help users find websites.
- DNS connects domains to hosting servers.
- Different hosting solutions serve different project sizes.
- Modern applications increasingly use cloud and serverless hosting.

// THE TAKEAWAY

Domain, hosting, DNS — three separate purchases, three separate responsibilities. All three have to work together for a site to go live.

// 14 — SUMMARY PAGE

Cheat sheet

The whole guide, compressed to eight lines.

hosting
Stores website files

domain
The website address

website
Contains your code

dns
Connects domains to hosting servers

shared hosting
Beginner friendly

cloud hosting
Scales automatically

serverless
Reduces infrastructure management

hosting
Makes websites accessible worldwide

// 15 — HOSTING DECISION FRAMEWORK

Match the project to the platform

choose shared hosting if

Small and simple

✔ Small websites · ✔ Blogs · ✔ Portfolios

choose cloud hosting if

Business-critical and growing

✔ Business websites · ✔ APIs · ✔ SaaS applications · ✔ Growing startups

choose serverless hosting if

Modern and frontend-first

✔ Frontend frameworks · ✔ Static websites · ✔ Modern JavaScript applications · ✔ Automatic deployments matter

// 16 — RELATED RESOURCES

Keep going

why read it

What Is a Website?

Build the foundation for understanding what is actually being hosted.

why read it

What Is a Domain Name?

Learn how users find your website before hosting delivers it.

why read it

What Is DNS?

Understand how browsers locate your hosting server.

why read it

HTTP vs HTTPS

Learn how browsers communicate with hosting servers securely.

why read it

How Browsers Work

Discover what happens after hosting sends files to the browser.

// 17 — RECOMMENDED NEXT LEARNING PATH

Where to go from here

1. What Is a Website?
2. Website vs Web Application
3. How the Internet Works
4. What Happens When You Type a URL?
5. HTTP vs HTTPS
6. What Is a Domain Name?
7. What Is DNS?
8. **What Is Web Hosting? — you are here**
9. How Browsers Work

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Engineering mindset over syntax memorization. Learn to think like a systems builder, one fundamental at a time.

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