



# The Internet

A few basic terms you should know

# Domain Name

- A **domain name** is a unique name that identifies an internet resource such as a website.
- A domain name represents an Internet Protocol (IP) resource.
- Any name registered in the Domain Name System (DNS) is a domain name.

# IP Address

- An **Internet Protocol address** (IP address) is a numerical label assigned to each device (e.g., computer, printer) participating in a computer network that uses the Internet Protocol for communication.
- Consists of four decimal numbers, each ranging from 0 to 255, separated by dots, e.g., 172.16.254.1.
- Your website's domain name has a unique IP address!

# Subdomain

- In the Domain Name System (DNS) hierarchy, a **subdomain** is a domain that is part of a larger domain.
- For example, `west.example.com` and `east.example.com` are subdomains of the `example.com` domain, which in turn is a subdomain of the `com` top-level domain (TLD).

# DNS

- The **Domain Name System** (DNS) is a hierarchical distributed naming system for computers, services, or any resource connected to the Internet or a private network. It associates various information with domain names assigned to each of the participating entities. Most prominently, it translates domain names, which can be easily memorized by humans, to the numerical **IP addresses** needed for the purpose of computer services and devices worldwide. The Domain Name System is an essential component of the functionality of most Internet services because it is **the Internet's primary directory service**.

# TLD

- A **top-level domain** (TLD) is one of the domains at the highest level in the hierarchical Domain Name System of the Internet.
- **Generic top-level domains** (formerly Categories) initially consisted of **GOV, EDU, COM, MIL, ORG, and NET**. More generic TLDs have been added, such as info.
- **Country-code top-level domains** (ccTLD): Two-letter domains established for countries or territories. With some historical exceptions, the code for any territory is the same as its two-letter ISO 3166 code. Not common in the US.

# DNS Explained

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# TCP

- The **Transmission Control Protocol** (TCP) is one of the core protocols of the Internet protocol suite (IP), and is so common that the entire suite is often called **TCP/IP**.

# FTP

- The **File Transfer Protocol** (FTP) is a standard network protocol used to transfer computer files from one host to another host over a TCP-based network, such as the Internet.

# Web Server

- The primary function of a web server is to store, process and deliver web pages to clients. The communication between client and server takes place using the **Hypertext Transfer Protocol** (HTTP). Pages delivered are most frequently HTML documents, which may include images, style sheets and scripts in addition to text content.
- Web servers also support server-side scripting using **Active Server Pages** (ASP), **PHP**, or other scripting languages. Usually, this function is used to generate HTML documents dynamically ("on-the-fly") as opposed to returning static documents.
- Most common web servers are **Apache** (Linux) and **IIS** (Windows). Apache runs on Windows also.

# HTML

- HTML or **HyperText Markup Language** is the standard markup language used to create Web pages.
- A Web browser can read HTML files and compose them into visible or audible Web pages. The browser does not display the HTML tags and scripts, but uses them to interpret the content of the page. HTML describes the structure of a Website semantically along with cues for presentation, making it a markup language, rather than a programming language.

# XHTML

- **eXtensible Hypertext Markup Language** (XHTML) is a family of XML markup languages that mirror or extend versions of the widely used **Hypertext Markup Language** (HTML), the language in which Web pages are formulated.
- HTML 4
- XHTML 1.0
- HTML 5

# CSS

- **Cascading Style Sheets** (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language.
- Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

# JavaScript

- **JavaScript** is a dynamic computer programming language. It is most commonly used as part of web browsers, whose implementations allow **client-side** scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed.

# PHP

- **PHP** is a **server-side** scripting language designed for web development but also used as a general-purpose programming language.
- While PHP originally stood for Personal Home Page, it now stands for **PHP: Hypertext Preprocessor**
- PHP code can be simply mixed with HTML code, or it can be used in combination with various templating engines and web frameworks.

# LAMP

- **LAMP** is an acronym for a software bundle consisting of: **Linux**, the **Apache** HTTP Server, the **MySQL** relational database management system, and the **PHP** programming language.
- **WAMP** is the the Windows variation.

# How Websites Work

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