

## Module 2 Glossary: Web Infrastructure Basics and Terminology

Term	Definition
Application Programming Interfaces (APIs)	Intermediaries facilitate communication between web applications and external data or services, enabling the integration of functionalities from other sources.
Authoritative Name Server	A DNS server that holds the authoritative DNS records for a specific domain, including IP address information.
Client Routing	The process of directing incoming HTTP requests to the appropriate module or application on the web server to handle the specific request.
Client-Server Model	An architectural pattern where clients (e.g., web browsers) request services or data from servers, which process these requests and send back responses.
Cloud Computing	The delivery of computing services (including storage, processing, and networking) over the internet eliminating the need for local storage and processing.
Cloud Hosting	A web hosting service that uses interconnected distributed servers instead of a single physical server.
Cookies	Small text files stored by websites for session management and personalization.
Dedicated Server Hosting	A web hosting service that provides maximum control and resources, ideal for large businesses, e-commerce sites, and those handling sensitive data.
DNS (Domain Name System)	A system that translates human-readable domain names into machine-readable IP addresses, allowing web browsers to locate and connect to websites.
DNS Resolver	A component in the DNS infrastructure that converts domain names into IP addresses and communicates with DNS servers to resolve DNS queries.
Edge Computing	A computing paradigm where data processing occurs closer to the data source (e.g., IoT devices) to reduce latency and improve response times.
Encryption	The process of securing data by converting it into a code that can only be deciphered with the appropriate decryption key.
Hybrid Cloud	A cloud architecture combines public and private cloud resources, offering scalability and control.
Microservices	An architectural approach that breaks down applications into smaller, independent services, facilitating concurrent development and improving efficiency.
Port Number	A numeric identifier is assigned to a specific process or service on a computer or server used for communication over the network.
Queuing Algorithms	Methods or strategies used to manage and control the order in which tasks, processes, or requests are processed in a queue.
Recursive Resolution	A DNS resolution process where the DNS resolver queries multiple DNS servers, including root and TLD servers, to ultimately obtain the IP address for a domain.
Rendering Engines	Software components in web browsers that interpret HTML, CSS, and JavaScript code to display web content.
Root Servers	The top-level servers in the DNS hierarchy that maintain information about top-level domain names (e.g., .com, .net, .org).
Secure Shell (SSH)	A widely used protocol for secure remote communication between computers, providing authentication and encrypted data transfer.
Serverless Architecture	An architecture that simplifies server management by relying on platforms like AWS Lambda, Azure Functions, and Google Cloud Functions to handle backend tasks, allowing developers to focus on writing code.
Serverless Computing	A cloud computing model where developers focus on writing code, and the cloud provider manages infrastructure, reducing operational overhead.
Server-side Scripting Languages	Programming languages (e.g., PHP, Python, Ruby) used on web servers to generate dynamic content for web pages.
Server-side Storage	Storing data on remote servers managed by external providers.
Shared Hosting	A web hosting service involves hosting multiple websites on a single server and sharing resources.
Simple Mail Transfer Protocol (SMTP)	An internet protocol responsible for transmitting emails from one mail server to another and routing outgoing emails.
Single-Page Applications (SPAs)	Web applications that dynamically update content on a single page to provide smoother and more responsive user interactions. Frameworks like AngularJS, ReactJS, and Ember.js are commonly used for SPAs.
SSL (Secure Sockets Layer)	A cryptographic protocol that provides secure communication over the internet, often used in HTTPS connections.
Tabbed Browsing	A browser feature that allows users to open multiple web pages in separate tabs within a single browser window for efficient navigation.
Templating Engines	Tools or frameworks used in server-side scripting to separate logic and presentation in web page development, allowing dynamic content generation.
TLS (Transport Layer Security)	A successor to SSL, TLS is a cryptographic protocol that ensures secure data exchange in HTTPS connections.
Top-Level Domain (TLD) Servers	DNS servers responsible for specific domain extensions (e.g., .com) and provide information about authoritative name servers for those domains.
Utility Computing	A concept that laid the groundwork for cloud computing involving sharing computing resources among users.
Virtual Hosting	A method of hosting multiple websites or domains on a single physical server, often distinguished by domain names or IP addresses.
Virtual Private Server (VPS) Hosting	A web hosting service that partitions a physical server into multiple virtual servers, each operating independently.
Web Hosting	The process of renting server space and resources from a provider to store website files and data, making websites accessible online.
Web Server Configuration	The process of setting up parameters and options for a web server to optimize its functionality.



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