A **server** is simply a computer (physical or virtual) that provides resources, data, services, or programs to other computers (called clients) over a network. Servers come in many types depending on what they serve.

🔑 Types of Servers

1. 🌐 Web Server

- **Purpose**: Hosts websites and delivers web pages to clients via HTTP/HTTPS.
- **Examples**: Apache HTTP Server, Nginx, Microsoft IIS.
- **Use Case**: When you type a URL in your browser, the web server provides the requested page.

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2. 📧 Mail Server

- **Purpose**: Handles sending, receiving, and storing emails.
- **Protocols Used**: SMTP (send), IMAP & POP3 (receive).
- **Examples**: Microsoft Exchange, Postfix, Gmail servers.
- **Use Case**: Manages corporate or personal email communications.

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3. 📂 File Server

- **Purpose**: Stores and manages files so users on the network can access, share, and update them.
- **Examples**: Windows File Server, Samba.
- **Use Case**: Centralized file sharing in companies.

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4. 🗄️ Database Server

- **Purpose**: Provides database services and responds to queries from client applications.
- **Examples**: MySQL, PostgreSQL, Oracle Database, Microsoft SQL Server.
- **Use Case**: Backend for apps like banking, e-commerce, or mobile apps.

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5. 🛠️ Application Server

- **Purpose**: Hosts and runs applications for users (middleware between DB & clients).
- **Examples**: WebLogic, JBoss, Apache Tomcat.
- **Use Case**: Online shopping carts, enterprise apps.

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6. 🎮 Game Server

- **Purpose**: Hosts multiplayer online games and synchronizes game data between players.
- **Examples**: Minecraft servers, Fortnite servers.
- **Use Case**: Multiplayer gaming environments.

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7. 🛡️ Proxy Server

- **Purpose**: Acts as a gateway between client and other servers; improves security, hides identity, and sometimes caches content.
- **Examples**: Squid Proxy, HAProxy.
- **Use Case**: Anonymous browsing, corporate firewalls.

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8. 🔐 DNS Server (Domain Name System)

- **Purpose**: Translates human-readable domain names into IP addresses.
- **Examples**: BIND, Google DNS (8.8.8.8).
- **Use Case**: When you enter google.com, DNS finds its IP.

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9. 📞 FTP Server (File Transfer Protocol)

- **Purpose**: Allows uploading/downloading of files using FTP/SFTP.
- **Examples**: vsftpd, FileZilla Server.
- **Use Case**: Web developers uploading website files.

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10. 🖥️ Virtual/Cloud Server

- **Purpose**: Virtual servers hosted in the cloud for flexibility and scalability.
- **Examples**: AWS EC2, Microsoft Azure VM, Google Compute Engine.
- **Use Case**: On-demand hosting for apps & services.

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11. 🎥 Media/Streaming Server

- **Purpose**: Stores and streams audio/video content to clients.
- **Examples**: Plex, Wowza, YouTube servers.
- **Use Case**: Netflix, Spotify, YouTube.

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12. 🧩 Print Server

- **Purpose**: Manages print jobs from multiple users to a shared printer.

- **Use Case**: Corporate office printers.

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13. 🔒 Authentication Server

- **Purpose**: Verifies user credentials and manages authentication.
- **Examples**: LDAP server, Active Directory.
- **Use Case**: Logging into company systems securely.

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14. 🌍 FTP/Remote Access Servers

- **Purpose**: Allow remote login and control of servers.
- **Examples**: SSH servers (OpenSSH).
- **Use Case**: System admins accessing servers remotely.

🗒️ Summary (At a Glance)

Server Type	Purpose
Web Server	Deliver websites
Mail Server	Manage email
File Server	Share/store files

Database Server	Provide database access
Application Server	Run applications
Game Server	Host multiplayer games
Proxy Server	Gateway & security
DNS Server	Resolve domain names
FTP Server	File transfer
Cloud/Virtual Server	Scalable hosting
Media Server	Stream content
Print Server	Manage printers
Authentication Server	Verify users
Remote Access Server	Remote login
