



# Cloud vs On-Premises Hosting

# Cloud Hosting Overview: Characteristics and Benefits

Cloud hosting relies on remote servers accessible via the internet, managed by third-party providers. Key benefits include:

- Scalability: Easily adjust resources based on demand.
- Cost-Effective: Pay-as-you-go pricing reduces upfront investments.
- Automatic Updates: Providers ensure regular updates and maintenance.
- Accessibility: Access from anywhere with an internet connection.
- Overall, cloud hosting is ideal for businesses that require flexibility and quick deployment.



# On-Premises Hosting Overview: Characteristics and Benefits

On-premises hosting involves local servers maintained within an organization's facilities. Key benefits include:

- Control: Organizations have complete control over their data and infrastructure.
- Security: Sensitive data can be kept within the organization's premises.
- Customization: Tailor hardware and software to specific business needs.
- While on-premises hosting offers robust security, it may require significant upfront costs and ongoing maintenance.



# Cloud vs On-Premises Hosting

Feature	Cloud Hosting	On-Premises Hosting
<b>Definition</b>	Hosting applications, data, and services on servers managed by a cloud provider over the internet.	Hosting applications, data, and services on servers physically located within an organization's premises.
<b>Infrastructure Ownership</b>	Owned and managed by cloud provider (AWS, Azure, GCP, etc.).	Owned and managed by the organization itself.
<b>Cost</b>	Pay-as-you-go; less upfront cost.	High upfront cost for hardware, software, and maintenance.
<b>Scalability</b>	Easily scalable; resources can be adjusted dynamically.	Limited scalability; adding resources requires physical hardware.
<b>Maintenance</b>	Provider manages maintenance, updates, and security.	Organization handles maintenance, updates, and security.
<b>Accessibility</b>	Accessible from anywhere via internet.	Typically accessible within company network; remote access requires VPN.
<b>Examples</b>	Google Drive, AWS EC2, Microsoft 365	Internal servers for ERP, CRM, or file storage



# Hosting Techniques

# Understanding IaaS: Infrastructure as a Service

## VIRTUALIZED HARDWARE RESOURCES

Flexible and scalable solutions

## USER CONTROL OVER OS

Customization and management  
options

## POPULAR IAAS PROVIDERS

Examples include Amazon and Azure



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# Understanding Platform as a Service (PaaS)

## MANAGED APP DEVELOPMENT PLATFORM

Simplifies development complexity

## STREAMLINED DEPLOYMENT SOLUTIONS

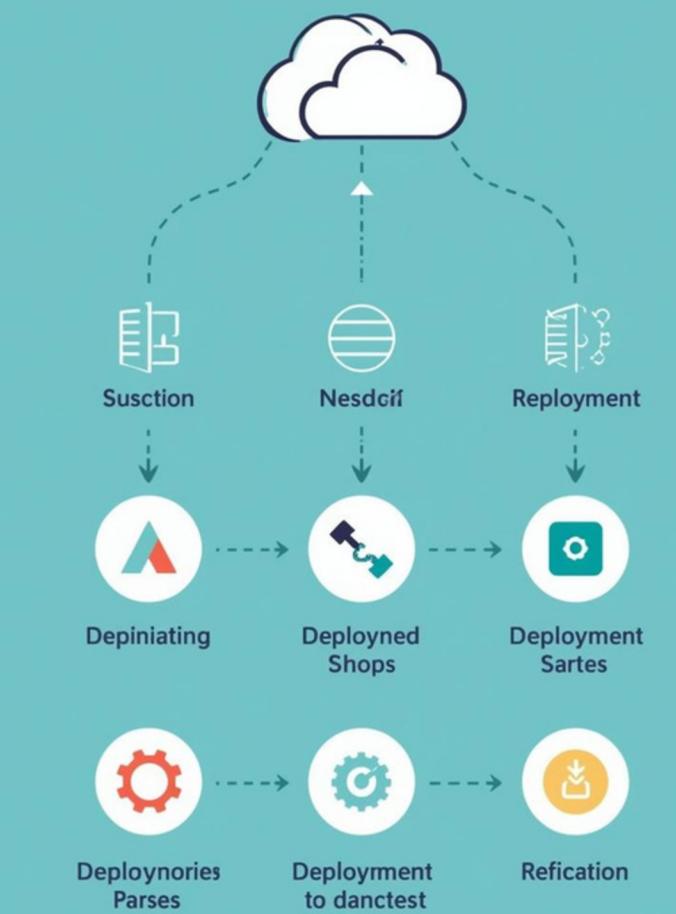
Accelerates application launch speed

## FLEXIBLE DEVELOPMENT ENVIRONMENTS

Supports diverse application needs



## Deployment Pipeline



# Understanding Software as a Service (SaaS)

## FULLY MANAGED SOFTWARE ACCESS

No installation required

## AUTOMATIC UPDATES INCLUDED

Always up-to-date

## ACCESSIBLE ANYWHERE

Browser-based convenience



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# IaaS vs PaaS vs SaaS

Hosting Type	Definition	Examples	Use Case
<b>IaaS (Infrastructure as a Service)</b>	Provides virtualized computing resources over the internet. Users manage apps, data, and OS; provider manages servers, storage, networking.	AWS EC2, Google Compute Engine, Microsoft Azure VMs	A company needs virtual servers without buying hardware.
<b>PaaS (Platform as a Service)</b>	Provides a platform to develop, run, and manage applications without managing infrastructure.	Heroku, Google App Engine, Azure App Services	Developers want to build apps without managing servers/databases.
<b>SaaS (Software as a Service)</b>	Software delivered over the internet on a subscription basis. Provider manages everything.	Gmail, Microsoft 365, Salesforce	Teams using email, collaboration, or CRM software without installing it locally.