

Introduction to Cloud Computing

➤ An Overview of the Future of IT Infrastructure






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What is Cloud Computing?

➤ Definition:

Cloud Computing is the **delivery of IT services over the internet** on a pay-as-you-go basis. It includes servers, storage, databases, networking, software, and more.

Key Features of Cloud Computing

-  **On-Demand Self-Service** – Users can get computing resources without human help.
-  **Broad Network Access** – Available from anywhere, anytime.
-  **Resource Pooling** – Shared infrastructure serving multiple users.
-  **Rapid Elasticity** – Automatically scale resources as needed.
-  **Measured Service** – Pay only for what you use.





Benefits of Cloud Computing

- ✓ **Cost-Effective** – No need for expensive hardware.
- ↻ **Scalability** – Easily increase or decrease resources.
- 🔒 **Security** – Advanced data protection and backup.
- ↺ **Disaster Recovery** – Quick recovery of data.
- □ **Easy Maintenance** – Automatic updates and patching.

Cloud Service Models

- □ **IaaS (Infrastructure as a Service)** – Virtual machines, storage, networks (e.g., AWS EC2).
- □ **PaaS (Platform as a Service)** – App development environment e.g., Google App Engine).
- 📺 **SaaS (Software as a Service)** – Ready-to-use software (e.g., Gmail, Office 365).





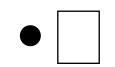
Cloud Deployment Models

-  **Public Cloud** – Open to everyone (e.g., AWS, Azure).
-  **Private Cloud** – For a single organization.
-  **Hybrid Cloud** – Combination of public and private.
-  **Community Cloud** – Shared between organizations.

Popular Cloud Providers

-  **Amazon Web Services (AWS)**
-  **Microsoft Azure**
-  **Google Cloud Platform (GCP)**
-  **IBM Cloud**
-  **Oracle Cloud**

Applications of Cloud Computing

-  Data Storage and Backup
-  Big Data Analytics
-  Software Development and Testing
-  Game Streaming and Hosting
-  Artificial Intelligence and Machine Learning







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Challenges in Cloud Computing

-  Data Privacy and Security
-  Downtime and Service Reliability
-  Compliance and Legal Issues
-  Cost Management

Conclusion

➤ Cloud computing is **transforming how we use technology**, offering powerful, scalable, and cost-effective solutions for individuals and organizations alike.

It's the **backbone of modern IT infrastructure**

Thank You