

What is Cloud Computing?

Cloud computing is the on-demand delivery of computing power, storage, databases, and other IT resources through a cloud platform, typically accessed over the internet. It allows users and businesses to access and utilise these resources without the need for physical infrastructure or management.

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Benefits of Cloud Computing

Cost Savings

Cloud computing eliminates the need for upfront hardware and software investments, lowering IT costs and allowing businesses to pay only for what they use.

Scalability

Cloud services can be easily scaled up or down to meet changing business demands, providing flexibility and responsiveness.

Accessibility

Cloud-based applications and data can be accessed from anywhere with an internet connection, enabling remote and mobile work.

Cloud Service Providers

1 Amazon Web Services (AWS)

The largest and most comprehensive cloud platform, offering a wide range of services and global infrastructure.

3

Google Cloud Platform

A suite of cloud computing services that leverage Google's expertise in search, analytics, and machine learning.

2

Microsoft Azure

A growing cloud platform that integrates well with Microsoft's suite of products and services.

4

IBM Cloud

A comprehensive cloud platform that caters to enterprise-level customers with advanced security and compliance features.

Cloud Computing

Security

Data Encryption

Cloud providers use advanced encryption techniques to protect data in transit and at rest.

Access Control

Robust identity and access management systems ensure only authorised users can access cloud resources.

Compliance

Cloud providers adhere to industry-standard security and compliance regulations to safeguard sensitive data.

Disaster Recovery

Cloud platforms offer built-in disaster recovery and business continuity capabilities to ensure data and service availability.

Challenges of Cloud Adoption



1 Data Sovereignty

Concerns around the physical location of data and compliance with local regulations.

2

Security Concerns

Perceived risks around data breaches, despite cloud providers' robust security measures.

3

Legacy Infrastructure

Difficulties in integrating cloud services with existing on-premises systems and processes.

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Cloud Computing

Trends



Multi-Cloud

The use of multiple cloud service providers to leverage their unique capabilities and avoid vendor lock-in.

Edge Computing

The processing of data closer to the source, reducing latency and improving responsiveness.

AI in the Cloud

The integration of cloud computing with artificial intelligence and machine learning technologies.

Automation

The use of automated tools and processes to manage and optimise cloud infrastructure and services.



The Future of Cloud Computing

Increased Adoption

1

Cloud computing will continue to see widespread adoption across industries, driven by its benefits.

2

Emerging Technologies

The integration of cloud with emerging technologies like 5G, IoT, and quantum computing will unlock new possibilities.

3

Sustainability

Cloud providers will focus on reducing the environmental impact of their services through renewable energy and efficient infrastructure.



Conclusion

Cloud computing has transformed the way businesses and individuals access and utilise technology. As the industry continues to evolve, the future of cloud computing holds immense potential, with advancements in security, sustainability, and the integration of emerging technologies. The versatility and scalability of cloud solutions will ensure their continued growth and relevance in the years to come.