الكلية الجامعية للعلوم التطبيقية
University College of Applied Sciences
Leader of Innovation رائـــــدة الإبـــــداع

Cloud Computing

Lecture 1

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Outlines :

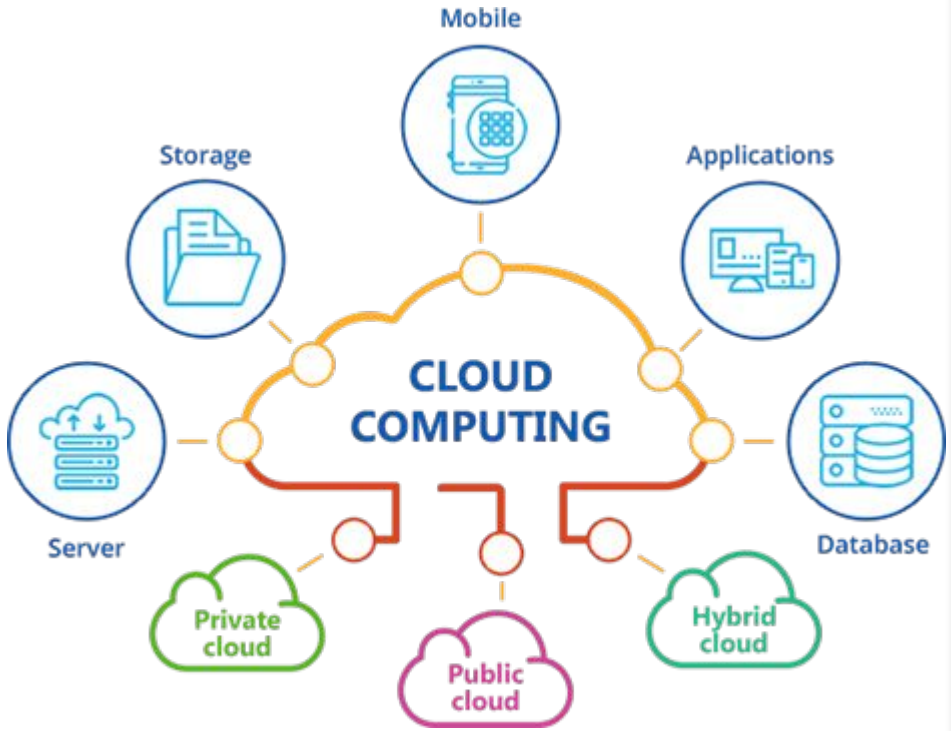
- ✔ What is Cloud Computing?
- ✔ Advantages of Cloud
- ✔ Cloud Service Models
- ✔ Deployment Methods
- ✔ Examples of companies providing cloud services
- ✔ Google Services
- ✔ What is Virtualization In Cloud Computing?
- ✔ Cloud Security

What is Cloud Computing ??

Cloud computing is Internet-based computing, whereby shared resources, software and information are provided to computers and other devices on-demand, like the electricity grid.

OR

Cloud Computing means storing and accessing the data and programs on remote servers that are hosted on the internet instead of the computer's hard drive or local server.



Advantages of Cloud Computing

Cost Efficiency
Enormous space availability

High Speed
Faster deployment of services in fewer clicks

Sporadic Batch Processing
Adds or subtracts resources and services as per requirements

Data Backup and Recovery
Easy to get backup and recovery

Strategic Edge
Deploys in-demand applications to get a strategic edge over other companies

Excellent Accessibility
Accesses information anytime anywhere

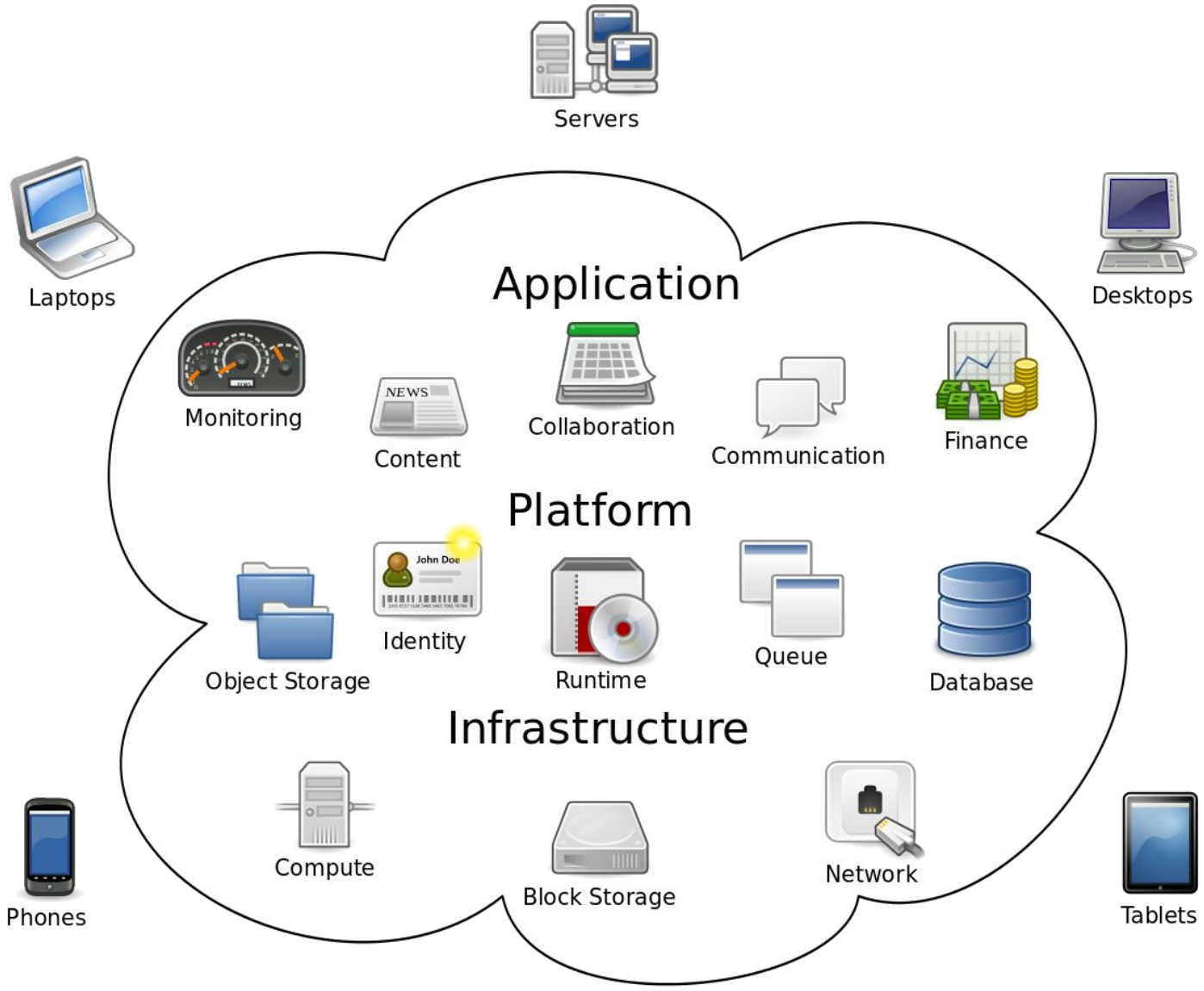
Manageability
Eliminates IT infrastructure needs

IntelliPaat

Cloud Service Models:

The cloud service models are as follows:

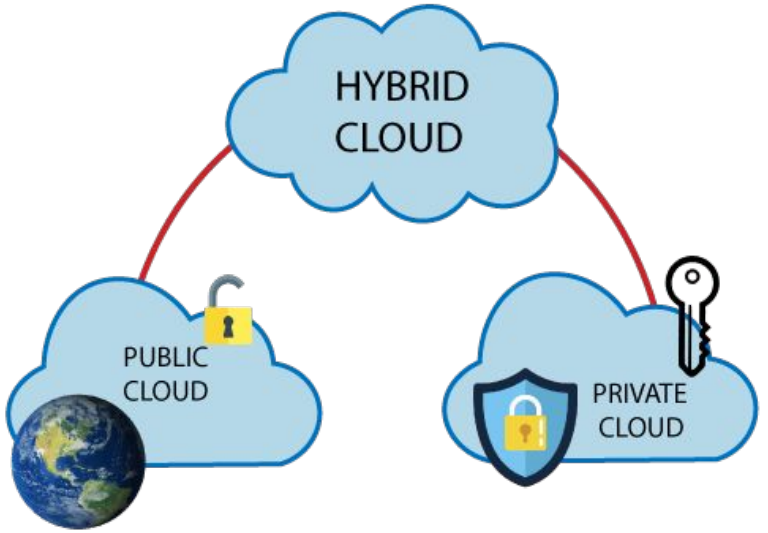
- ✔ **Cloud Software as a Service (SaaS) —**Use provider's applications over a network.
- ✔ **Cloud Platform as a Service (PaaS)** —Deploy customer-created applications to a cloud.
- ✔ **Cloud Infrastructure as a Service (IaaS)** —Rent processing, storage, network capacity, and other fundamental computing resources.



Cloud computing

Deployment Methods

- Private cloud
- Public cloud
- Hybrid cloud



Examples of companies providing cloud services :

- Google Cloud — is a suite of public cloud computing services offered by Google. The platform includes a range of hosted services for compute, storage and application development that run on Google hardware..

https://cloud.google.com

- Microsoft Azure — is a cloud computing service created by Microsoft for building, testing, deploying, and managing applications and services through Microsoft-managed data centers , examples of services in Azure Computer services, Identity, Storage services, Data management and etc…..

https://azure.microsoft.com/en-us/

Cont .....

- Salesforce.com — Runs its application set for its customers in a cloud, and its Force.com and Vmforce.com products provide developers with platforms to build customized cloud services.

- Amazon Web Services (AWS) — is a subsidiary of Amazon providing on-demand cloud computing platforms and APIs to individuals, companies, and governments, on a metered pay-as-you-go basis, services in AWS included Amazon S3 cloud storage, SQS, and EC2.

https://aws.amazon.com

How access to services in cloud company ?

- Go to the website of the company.
- Find the products and services offered by this company.
- To Know more details about the existing services, click on the service and read more about it.
- To use these services, we create an account with this company.

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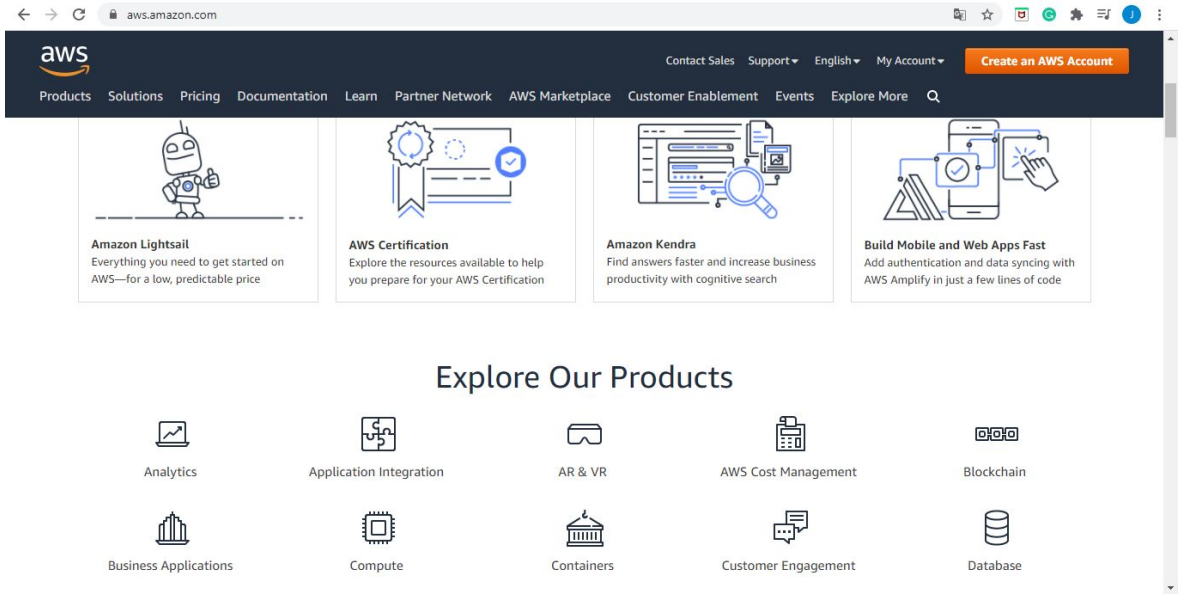
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Add authentication and data syncing with AWS Amplify in just a few lines of code
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Blockchain
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Database

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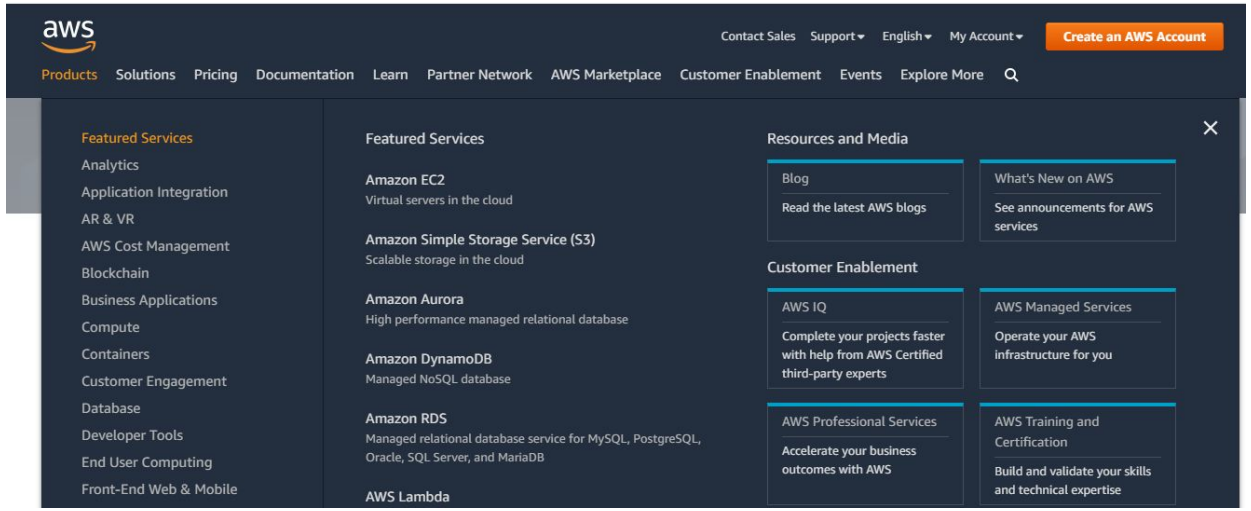
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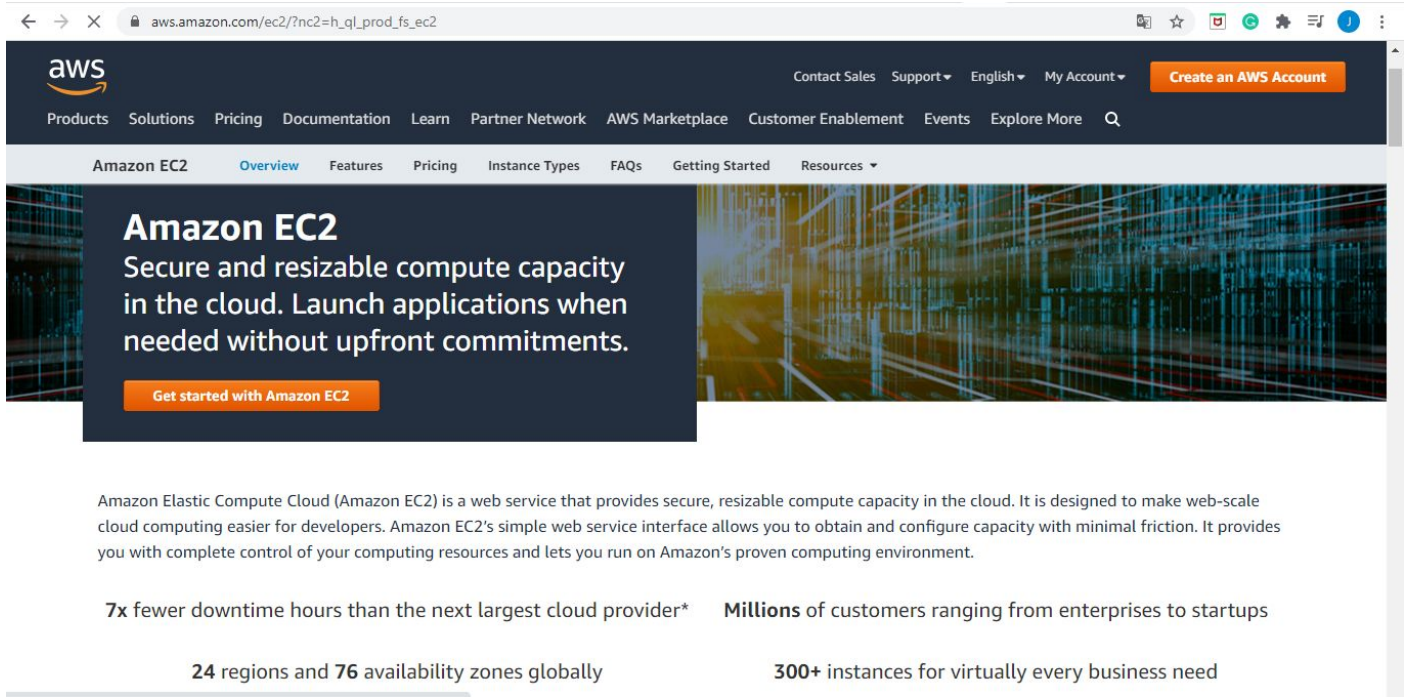
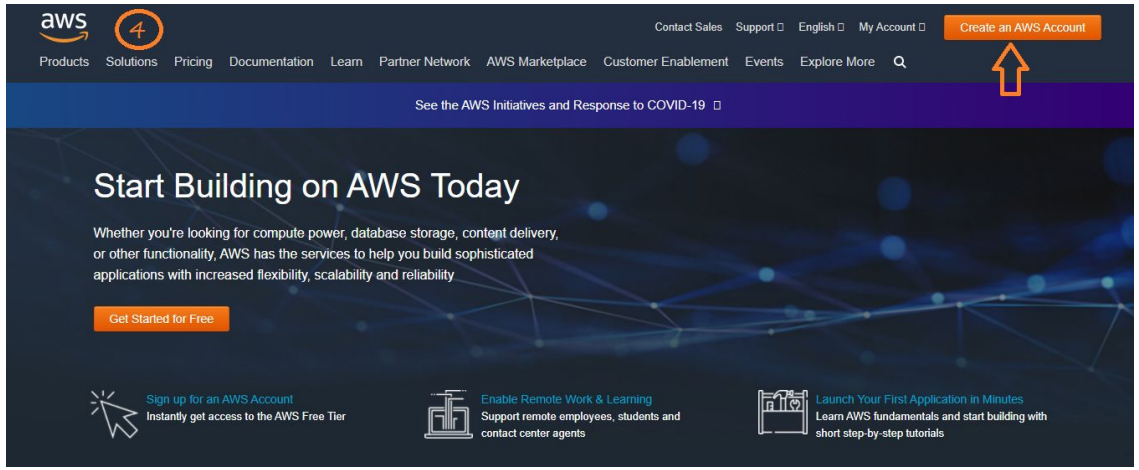
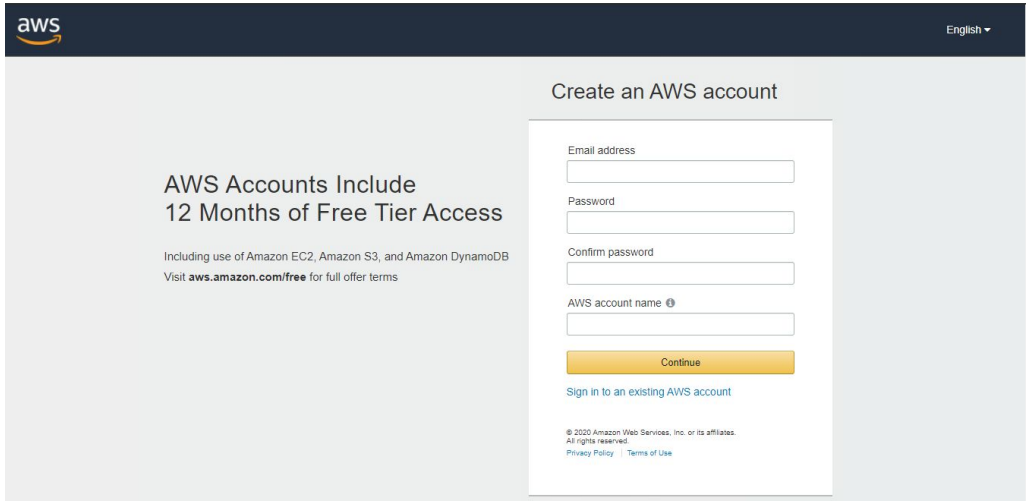
AWS Marketplace
Customer Enablement
Events
Explore More
Featured Services
Analytics
Application Integration
AR & VR
AWS Cost Management
Blockchain
Business Applications
Compute
Containers
Customer Engagement
Database
Developer Tools
End User Computing
Front-End Web & Mobile
Featured Services
Amazon EC2
Virtual servers in the cloud
Amazon Simple Storage Service (S3)
Scalable storage in the cloud
Amazon Aurora
High performance managed relational database
Amazon DynamoDB
Managed NoSQL database
Amazon RDS
Managed relational database service for MySQL, PostgreSQL, Oracle, SQL Server, and MariaDB
AWS Lambda
Resources and Media
Blog
Read the latest AWS blogs
What's New on AWS
See announcements for AWS services
Customer Enablement
AWS IQ
Complete your projects faster with help from AWS Certified third-party experts
AWS Managed Services
Operate your AWS infrastructure for you
AWS Professional Services
Accelerate your business outcomes with AWS
AWS Training and Certification
Build and validate your skills and technical expertise

3.



Notes: AWS give a free account for 12 months





Google Services :

- Google Ads
- Google Alerts
- Google Classroom
- Google Calendar
- Google Contacts
- Google Play
- Google Photos
- Google News
- Google Maps
- Google Drive
- Google Meet
- Gmail
- Google Search
- Google Cloud
- Google Store
- YouTube
- Google Translate
- Google Sites
- Google Scholar
- Google Plus
- Google Docs
- Google slides
- Google sheets

What is Virtualization In Cloud Computing?

- Virtualization is the software technology that helps in providing the logical isolation of physical resources. Creating logical isolation of physical resources such as RAM, CPU, and Storage.. over the cloud is known as Virtualization in Cloud Computing.

Cloud Security

- Data Encryption: Encryption is essential for securing data stored in the cloud. It ensures that data remains unreadable to unauthorized users even if it is intercepted.

- Access Control: Implementing strict access controls and authentication mechanisms helps ensure that only authorized users can access sensitive data and resources in the cloud.

- Multi-Factor Authentication (MFA): MFA adds an extra layer of security by requiring users to provide multiple forms of verification, such as passwords, biometrics, or security tokens, before gaining access to cloud services.