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Cloud Computing.

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.

How it is work in nutshell:

- Infrastructure: cloud computing depends on remote network Servers hosted on internet for store, manage, and proces the data.

- On-Demand Access: Users can access cloud Services and resources based on-demand They can Scale up or down the without having to invest for physical hardware.

- Types of Service: cloud computing offers various benefits such as cost Saving, Scalability, reliability and accessibility it reduce capital expenditures, improves efficiency.

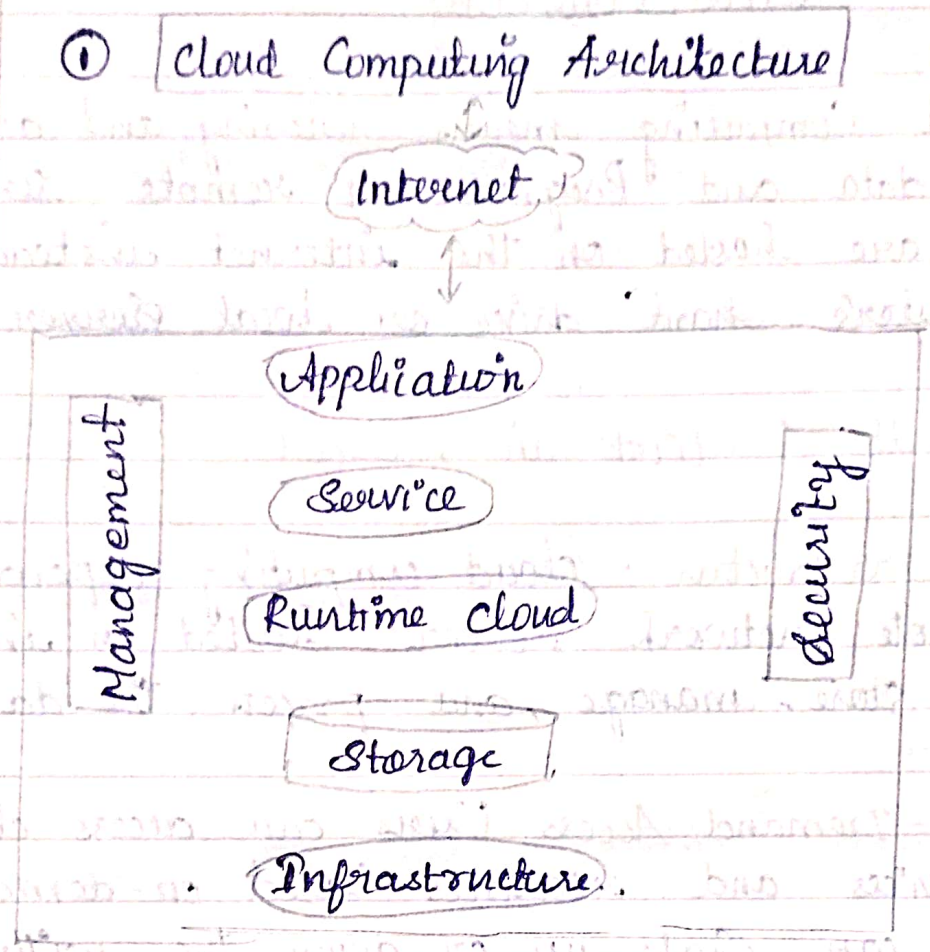
Architecture of cloud Computing:

1. Front end (Fat-client, Thin client).

2. Back-end platforms (Servers, Storage)

3. Cloud-based delivery and a network (Internet, Intranet, Intercloud).

① Cloud Computing Architecture — Front End



1. Front End (User Interaction Enhancement)

The User Interface of Cloud Computing Consists of 2 sections of clients. The Thin clients are the ones that use web browsers facilitating Portable and lightweight accessibilities and others are known as Fat clients that use many functionalities for offering a strong user experience.

2. Back-end Platforms (Cloud Computing Engine).

The Core of cloud Computing is made at platforms with several Servers of Storage and processing Computing. Management of Applications logic is managed through Servers and effective data handling is

Provided by Storage.

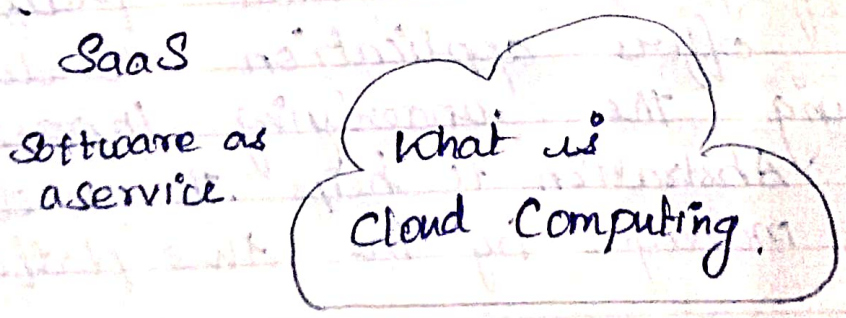
3. cloud - Based Delivery and Network.

On-demand access to the computer and resources is provided over the Internet, Intranet, and Intercloud. The Internet comes with global accessibility, the Intranet helps in Internal Communications of the Services within the Organizations and the Intercloud enable Interoperability across various cloud Service.

Types of cloud Computing:

1. Infrastructure as a Service (IaaS)
2. platform as a Service (PaaS).
3. Software as a Service (SaaS)
4. Function as a service (FaaS).

Types of Cloud Computing Services.



1. Infrastructure as a Service (Iaas)

• Flexibility and Control: Iaas comes up with providing virtualized Computing resources such as VMs, Storage, and networks facilitating users with control over the Operating System and applications.

• Reducing Expenses of Hardware: Iaas Provides bussiness cost savings with the elimination of physical infrastructure investments making it cost-effective.

• Scalability of Resources: The cloud provides in scaling of hardware resources up or down as per demand facilitating optimal performance with cost efficiency.

2. platform as a Service (Paas).

• Simplifying the Development: platform as a Service offers application development by keeping the underlying Infrastructure as an Abstration. It helps the developers to Completely managed by the Aws platform.

• Enhancing Efficiency and productivity: Paas lower the Management of Infrastructure complexity, speeding up the Execution time and bringing the updates quickly to market by Streamlining the development Proces.

• Automation of Scaling: Management of resource Scaling, guaranteening the Program's workload efficiency is ensured by PaaS.

3. SaaS (Software as a Service)

• Collaboration And Accessibility: Software as a Service (SaaS) helps users to easily access applications without having the requirement of local installations. it is fully managed by the AWS Software working as a service over the internet encouraging effortless cooperation and ease of access.

• Automation of Updates: SaaS providers manage the handling of software maintenance with automatic latest update ensuring users gain experience with the lastest features and Security patches.

• Cost Efficiency: SaaS act as a cost-effective solution by reducing the overhead of IT support by eliminating the need for individu Software licenses.

4. Function as a Service (Faas)

• Event-Driven Execution: Faas helps in the maintenance of Servers and infrastructure making users worry about it. Faas Facilitates the developers to run code as a response to the events.

• Cost Efficiency: Faas facilitates cost efficiency by coming up with the Principle "Pay as Per you Run" For the Computing resources used.

• Scalability and Agility: Serverless Architecture Scale effortlessly in handing the workloads promoting agility in development and deployment.

Top leading Cloud Computing Companies.

Company	CloudserviceName	Key Offerings
Amazon	AWS	Compute, Storage, AI/ML, Databases, Networking.
Microsoft	Asure	cloud computing, AI, Analytics, Hybrid cloud.
google	google cloud platform	AI/ML, Big data,
Alibaba	Alibaba cloud	IaaS, AI, Big data.
Oracle	Oracle cloud	Databases, SaaS, PaaS
IBM	IBM cloud	AI, Quantum Computing
Salesforce	Salesforce cloud	CRM, SaaS, AI, Analytics
Tencent	Tencent cloud	AI, gaming cloud, IoT.