CHAPTER 8 – INFORMATION STORAGE IN CLOUD COMPUTING

AGENDA

1. Storage as a Service
2. Storage Providers- Amazon Simple Storage Service- Nirvanix- Google BigtableDatastore- MobileMe- Live Mesh
3. Storage Security
4. Merits and Demerits of Storage

Professor Dr. Sudan Jha

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STAAS

- SaaS provides on-demand access to data storage and management services.

- Users can store, manage, and access data over the internet.

- Elimination of the need for physical storage infrastructure.

5 features to look for in on-premises STaaS

Pay-as-you-go, consumption-based pricing with metered services

Flexible capacity with reserved storage based on pay-for-use pricing

Simplified procurement, deployment and maintenance operations

Pricing and service options to support business requirements

Vendor service-level agreements and guarantees to meet customer expectations

- **StAAS**

- One of the most amazing services of cloud computing service for providing Cyber Storage or Online Remote Storage.

- This remains independent of the Client system and the platform it uses.

- This is a business model where large companies rent space in their storage infrastructure to a smaller company or individual.

CHARACTERISTICS OF STAAS

- **Scalability:** Easily adjust storage capacity as needed.

- **Elasticity:** Automatically scale up or down based on demand.

- **Pay-per-use model:** Pay only for the storage you use.

SCALABILITY, ELASTICITY

- **Scalability in STaaS** means the ability to increase or decrease storage capacity as needed.

- Beneficial for businesses experiencing growth or fluctuating storage needs.

- **For example,** during peak seasons, an e-commerce company can scale up its storage to handle increased data from transactions and scale down during off-peak periods.

- **Elasticity** refers to the ability of a STaaS system to automatically adjust storage resources based on current demand.

- This dynamic scaling ensures that your storage infrastructure can handle sudden spikes in data without manual intervention.

- **For instance**, a streaming service can automatically allocate more storage during a major live event and reduce it once the event is over."

PAY-PER-USE MODEL

The **pay-per-use model** in **STaaS** allows businesses to pay only for the storage they consume.

This model provides significant cost savings and financial efficiency, especially for businesses with variable storage needs.

For instance, startups can benefit from this model by paying for minimal storage initially and scaling up as their data grows."

WHY STAAS?

A good alternative for a small or midsize business that lacks the capital budget and/or personnel to implement and maintain their own storage infrastructure.

This is also a way to mitigate risks in disaster recovery, provide long-term retention of records and enhance both business continuity and availability.

CONTINUED:

- Gives the assurance of the following things that are of utmost importance:

  - **1. Security:** You would want to make sure that the data is in a secure environment, more secure than you can do yourself.

  - **2. Cost Effectiveness :** The service provider must be able to do the handling job at a lower cost than you.

  - **3. Service Developer :** The data that you are about to share goes to a trusted source and who takes reliability and gives assurance of the data as and when required.

CHALLENGES *CONTINUED*

- Risks of data breaches

- Unauthorized access

- Data Governance

- Managing data across platforms

- Departmental data management complexities

Professor Dr. Sudan Jha

TYPES OF STORAGE

1. Object storage
2. Block storage

OBJECT STORAGE

- • This is the kind of storage where client only can store its data like Doc, PDF, text, etc. • You cannot change filesystem if the provided storage and also you cannot create any partitions. • Type of data storage typically used in SAN(Storage Area Network) environments where dta is stored in volumes, also referred to as blocks. • Each block acts as an individual hard drive and is configured by the storage administrator.

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