



# SNS COLLEGE OF ENGINEERING



Kurumbapalayam(Po), Coimbatore – 641 107

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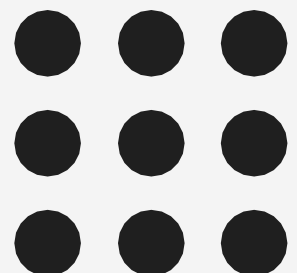
## Department of Information Technology

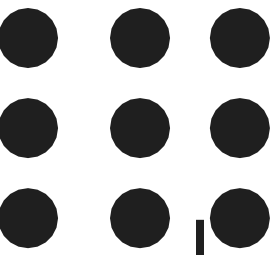
Course Name – CS8791 Cloud Computing

IV Year / VII Semester

Unit 3 – Cloud Architecture, Services and Storage

Topic 9 – STaaS Service Providers, S3





## Advantages of Cloud Storage

Key advantages to STaaS in the enterprise include the following:

- Storage costs - Personnel, hardware and physical storage space expenses are reduced.
- Disaster recovery - Having multiple copies of data stored in different locations can better enable disaster recovery measures.
- Scalability - With most public cloud services, users only pay for the resources that they use.
- Syncing - Files can be automatically synced across multiple devices.
- Security - Security can be both an advantage and a disadvantage, as security methods may change per vendor. Data tends to be encrypted during transmission and while at rest.



## Disadvantages of Cloud Storage

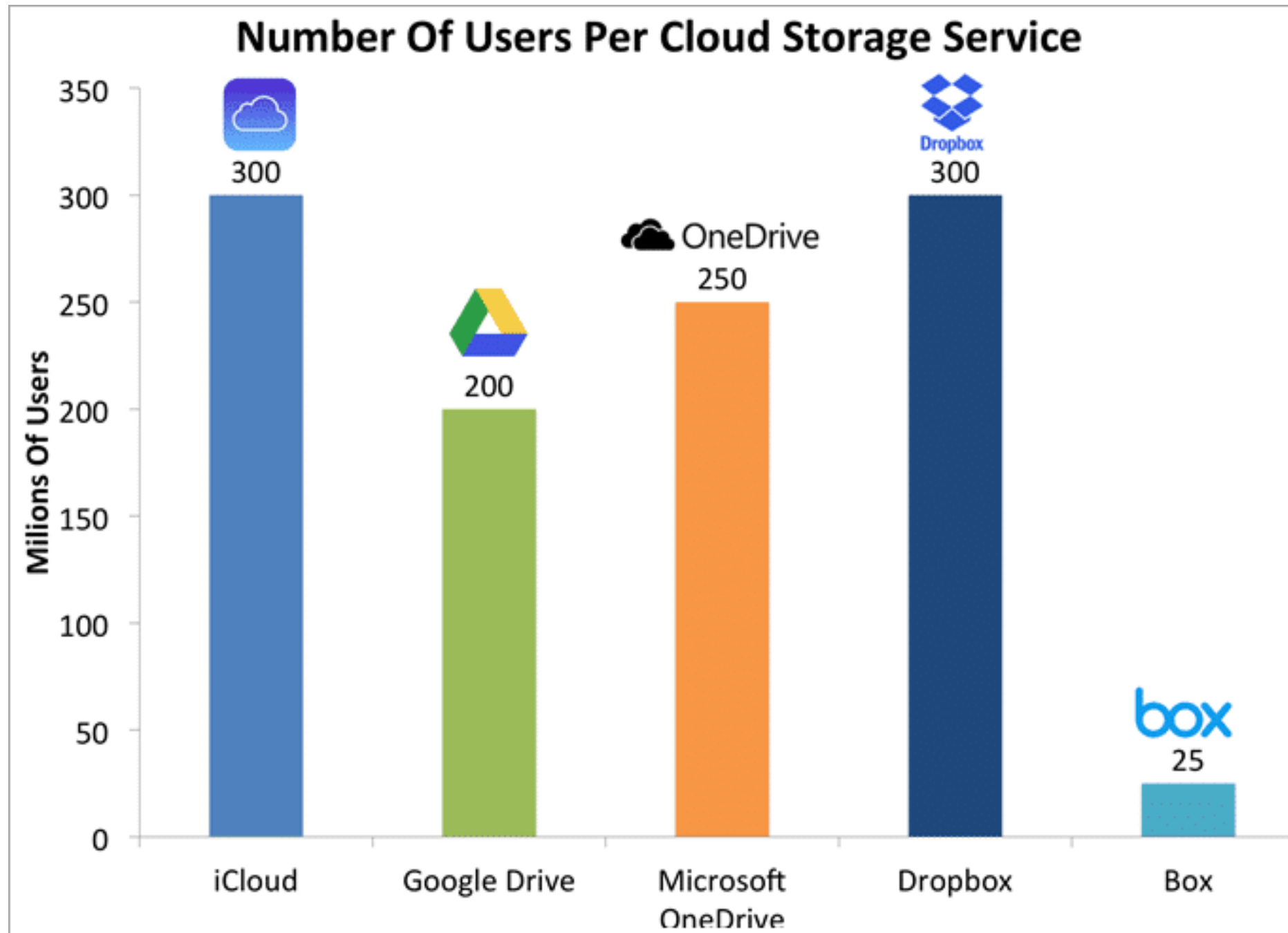
### Disadvantages of STaaS:

- Security - Users may end up transferring business-sensitive or mission-critical data to the cloud, which makes it important to choose a service provider that's reliable.
- Potential storage costs - If bandwidth limitations are exceeded, these could be expensive.
- Potential downtimes - Vendors may go through periods of downtime where the service is not available, which can be trouble for mission-critical data.
- Limited customization - Since the cloud infrastructure is owned and managed by the service provider, it is less customizable.
- Potential for vendor lock-in - It may be difficult to migrate from one service to another.

## Cloud Storage Providers

Popular Cloud Storage Providers for General Public

- iCloud
- Google Drive
- Microsoft OneDrive
- Dropbox
- Box
- SkyDrive
- Sugarsync
- pCloud



## Cloud Storage Providers

Popular Cloud Storage Providers - Enterprise Level

- Dell EMC
- Hewlett Packard Enterprise (HPE),
- NetApp
- IBM
- Amazon Web Services (AWS)
- Microsoft Azure
- Google Cloud
- Oracle cloud



DELL EMC



Azure



NetApp™



IBM



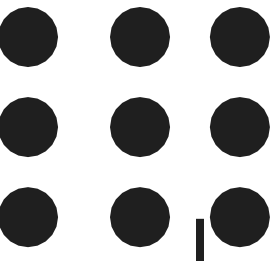
ORACLE®  
CLOUD



Google Cloud



amazon  
web services

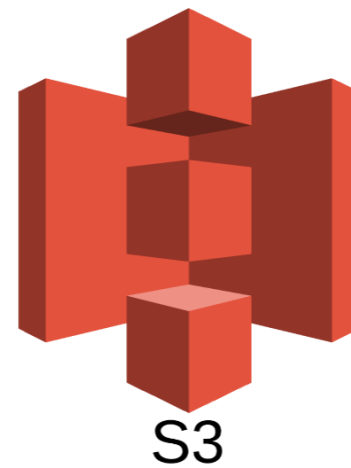


## S3 – Simple Storage Service

- Amazon S3 (Simple Storage Service) is a web service offered by Amazon Web Services.
- Amazon S3 provides object storage through web services interfaces.
- S3 provides comprehensive security and compliance capabilities that meet even the most stringent regulatory requirements.
- It gives customers flexibility in the way they manage data for cost optimization, access control, and compliance.
- S3 is the only cloud storage solution with query-in-place functionality, allowing you to run powerful analytics directly on your data at rest in S3.

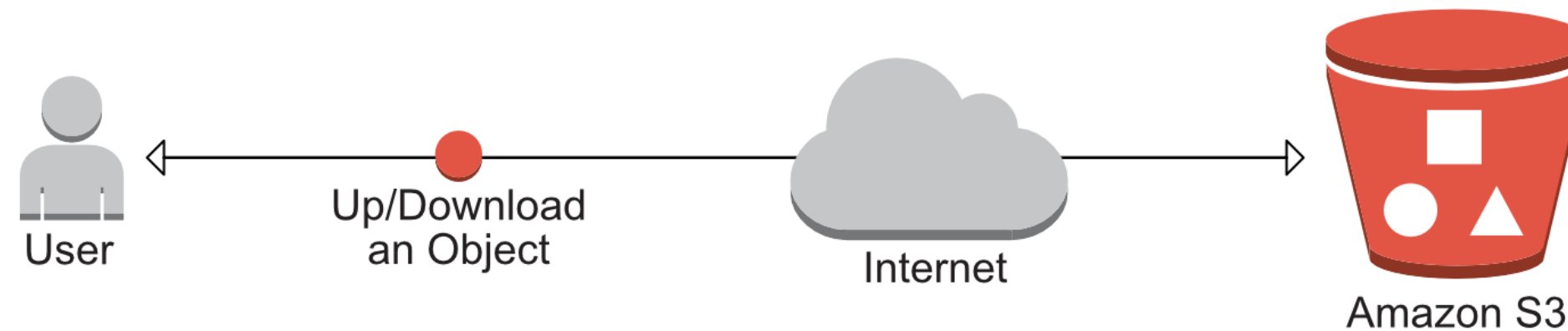
## S3 – Simple Storage Service

- According to Amazon, S3’s design aims to provide
  - scalability,
  - high availability, and
  - low latency at commodity costs.
- S3 stores arbitrary objects (computer files) up to 5 terabytes in size, each accompanied by up to 2 kilobytes of metadata.
- Objects are organized into buckets (each owned by an Amazon Web Services account), and identified within each bucket by a unique, user assigned key.



## S3 – Simple Storage Service

- S3 is Secure because AWS provides:  
Encryption to the data that you store. It can happen in two ways:  
Client Side Encryption  
Server Side Encryption
- Multiple copies are maintained to enable regeneration of data in case of data corruption
- Versioning, wherein each edit is archived for a potential retrieval.







## S3 – Simple Storage Service

S3 is Durable because:

It regularly verifies the integrity of data stored using checksums e.g. if S3 detects there is any corruption in data, it is immediately repaired with the help of replicated data.

Even while storing or retrieving data, it checks incoming network traffic for any corrupted data packets.

S3 is Highly Scalable, since it automatically scales your storage according to your requirement and you only pay for the storage you use.



**THANK YOU**