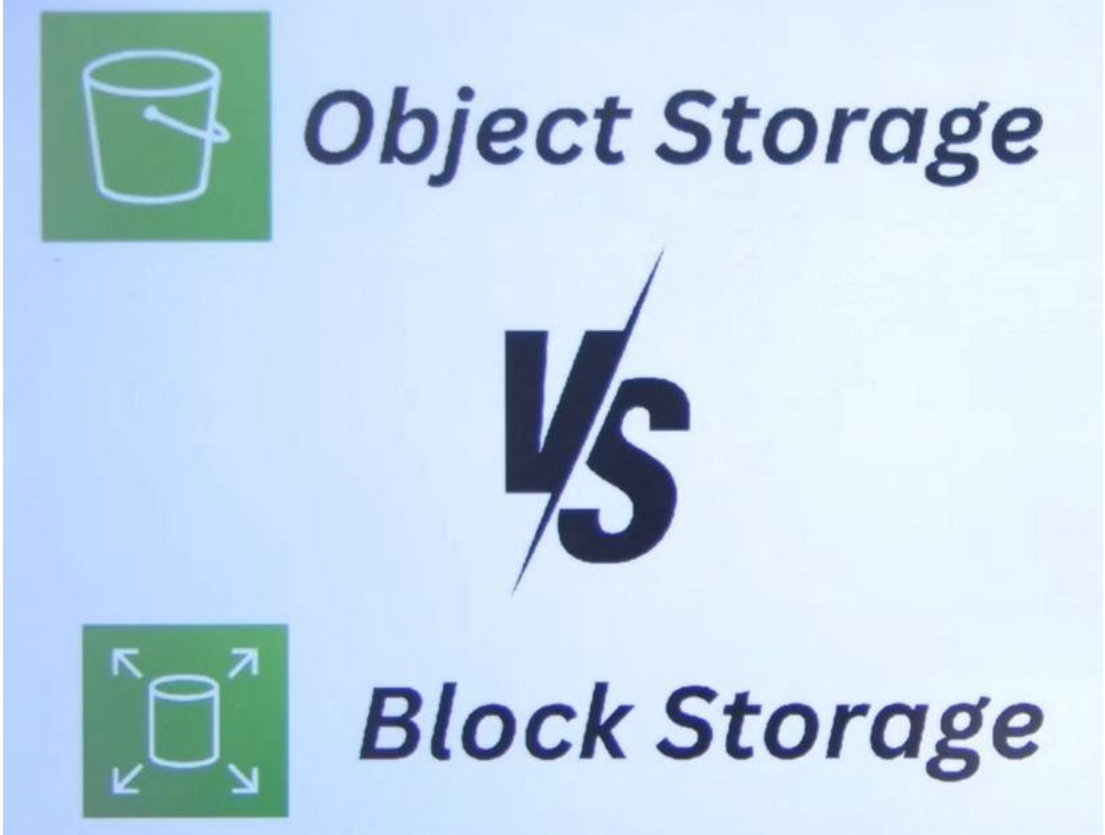
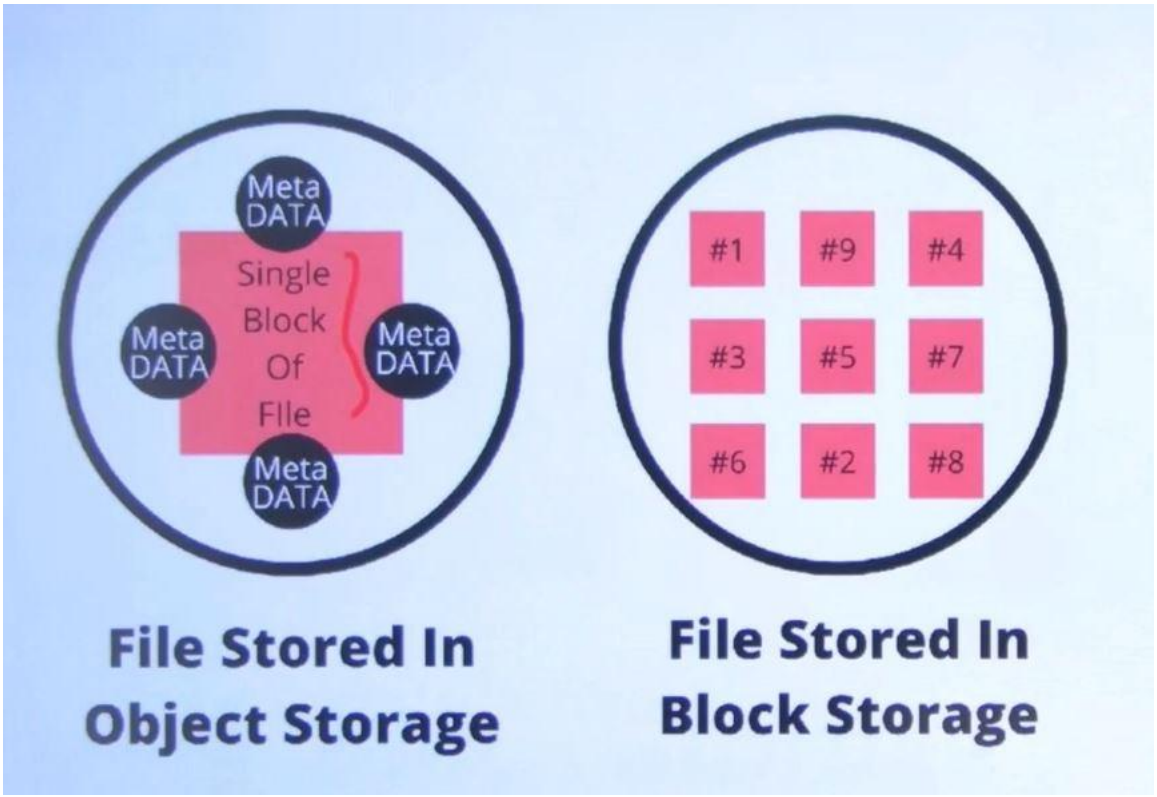
Object Storage

Object storage is a method of storing data as distinct objects, each with its own identifier and metadata, in a flat environment for scalable and easy access.





Advantages Object Storage

- *Object storage saves data as objects. Each object is stored separately and independently.*
- *Every object includes the data itself, a unique ID to find it easily, and metadata which is additional information about the data.*
- *Each object can be accessed directly via its unique ID, allowing for quick retrieval of data from anywhere.*
- *It's great for storing large amounts of unstructured data like photos, videos, and documents, especially when you need to access them over the internet.*

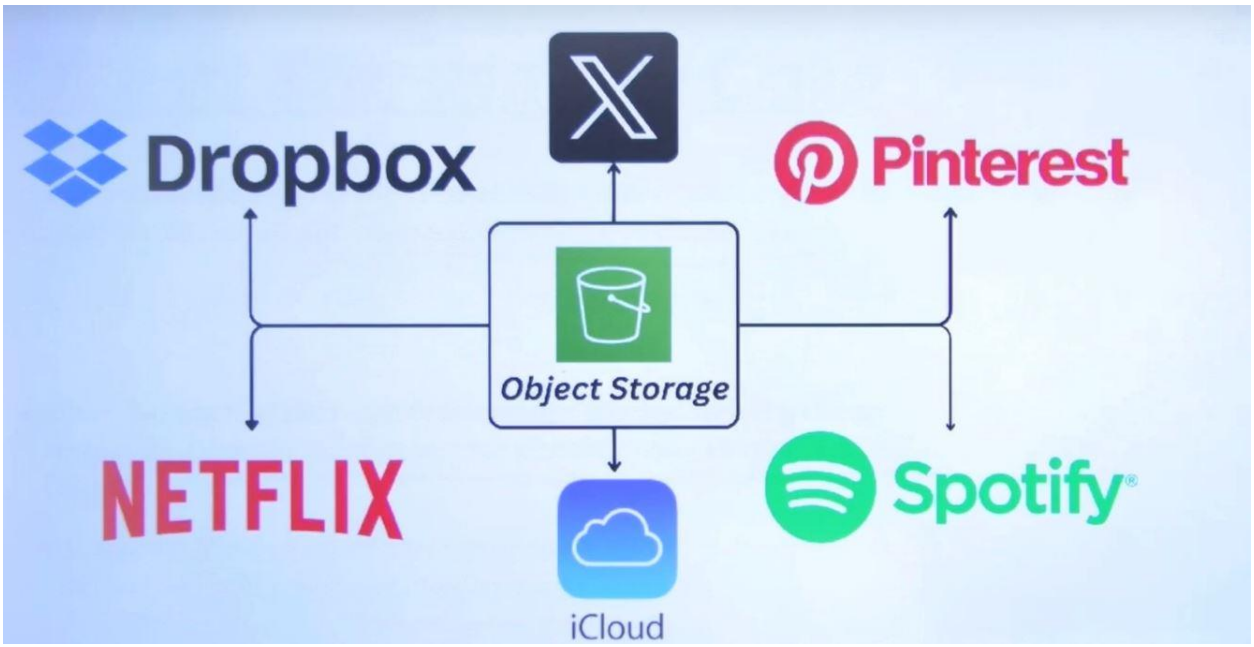
Thickness

Disadvantages Object Storage

- Object storage often has higher latency than block or file storage due to its reliance on HTTP calls for data access.
- It can be inefficient for managing a large number of small files because the metadata overhead can disproportionately consume storage space.
- Object storage is not optimized for frequent data modifications, requiring complete object rewrites rather than partial updates.
- Some older applications may not be directly compatible with object storage, necessitating additional integration work.

Object Storage Use Case

- Perfect for keeping big files like photos, videos, and large documents, which don't fit well in traditional databases.
- Ideal for backups and storing old data because it can handle lots of information without costing too much
- Great for sharing files worldwide easily, like in content delivery networks, because you can access files from anywhere using the internet.
- Supports the growth of modern apps by allowing more data to be added smoothly, without making things complex.



Features

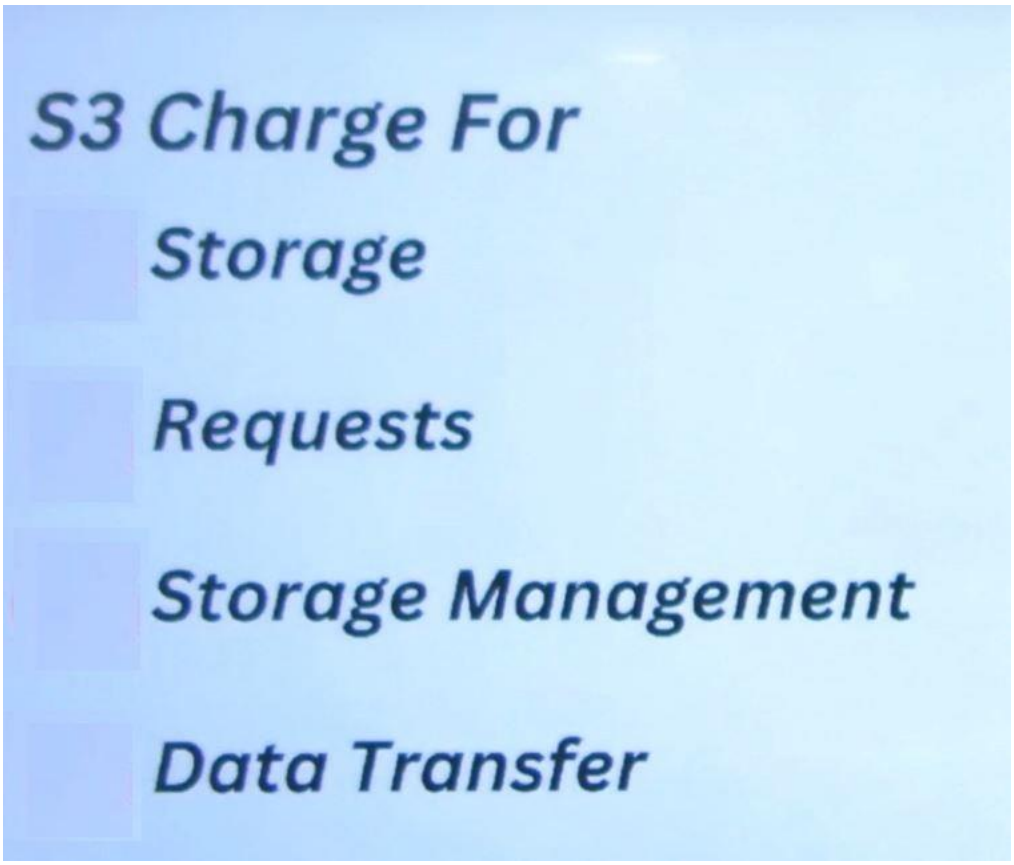
- 99.9% availability Availability
- 99.999999999% durability (Remember 11 x 9s)
- Files can be from 0 Bytes to 5 TB.
- Virtually unlimited storage
- Versioning

Features

- Storage Classes
- Lifecycle Management
- Encryption
- Event Notifications
- Management & Monitoring Tools

Data Consistency Model For S3

- Read after Write consistency for PUTS of new Objects
- Eventual Consistency for overwrite PUTS and DELETES (can take some time to propagate)


S3 Charge For
Storage
Requests
Storage Management
Data Transfer

S3 is suitable to store

- Images | PDFs | Videos
- Backup & Archive
- Static Web Hosting
- Big Data Analytics
- Log Storage

S3 is Not suitable to store

- Amazon S3 is not suitable for storing data that requires low-latency access, frequent updates, or transactional support, such as active databases or real-time processing systems

Bucket Name Rules

- Globally unique
- 3 and 63 characters long
- consist only lowercase, numbers, dots & hyphens (-)
- Must begin and end with a letter or number
- Must not be formatted as an IP address