Prac 9 | Storage as a service. A003

① Storage as a service S3 :

S(3) simple storage service is a scalable object storage service offered by aws designed for storing & retrieving any amount of data from anywhere on web. its known for its durability, scalability & performance

Benefits: ① cost effective : Pay-as-you-go pricing model with no upfront costs.

Multiple storage classes help optimise costs based on access patterns.

② easy integration integrates with a wide range of AWS & 3rd party applications facilitating diverse & complex workflows.

Key features: ① scalability : automatically scales storage capability to accomodate data needs without user intervention.

② Scalable & durable : S3 is designed to provide 99.9_ _ 9 (11,9's) durability ensuring data is safe & ensure 99.99% availability.

③ storage classes: - standard (general purpose)
- intelligent tiering
- standard IA (infrequent access)
- one zone - AI
- glacier
- deep glacier archive.

④ Security : supports server side encryption (SSE) with AWS manage keys, logging & monitoring tracks access & usage with cloudtrail & access logs

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[2] S3 use cases :-

S3 offers versatile & scalable storage sol suitable for a variety of use cases.

① Backup & Restore : it provides highly durable storage that's ideal to back critical data.

② Data backup & archive : S3 is commonly used for data backup & long term archiving due to durability & reliability.

③ content distribution : it can be used to store static content like image, videos & downloadable files. Content can be distributed globally to users through amazon cloudfront, a content delivery network.

④ Data Lakes : its a foundational component of data lake structures. it allows institutions to store structured & unstructured data facilitating data processing.

⑤ Big data : S3 is commonly used to store big data in its raw form for big data & analytics pipelines. it serves as landing zone for data before processing it with tools like apache spark, etc.

(3) Steps for S3 :-

(1) Create AWS account.

(2) access AWS management console. - log in
- navigate to S3.

(3) create S3 bucket :- create & configure bucket.
- set policy & configurations

(4) upload objects.

(5) manage & organise data.

(6) setup data management policies.

(7) monitor & optimise.

(8) configure security.

(9) integrate with other services.