



Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

Experiment No. 5

Aim: To study and Implement Storage as a Service using AWS S3.

Theory:

Storage as a Service (SaaS) is the practice of using public cloud storage resources to store your data. Using SaaS is more cost efficient than building private storage infrastructure, especially when you can match data types to cloud storage offerings.

Storage as a Service or STaaS is cloud storage that you rent from a Cloud Service Provider (CSP) and that provides basic ways to access that storage. Enterprises, small and medium businesses, home offices, and individuals can use the cloud for multimedia storage, data repositories, data backup and recovery, and disaster recovery. There are also higher-tier managed services that build on top of STaaS, such as Database as a Service, in which you can write data into tables that are hosted through CSP resources.

The key benefit to STaaS is that you are offloading the cost and effort to manage data storage infrastructure and technology to a third-party CSP. This makes it much more effective to scale up storage resources without investing in new hardware or taking on configuration costs. You can also respond to changing market conditions faster. With just a few clicks you can rent terabytes or more of storage, and you don't have to spin up new storage appliances on your own.

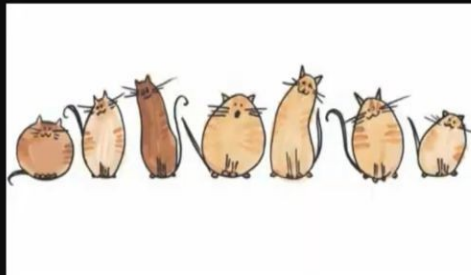
AWS S3:

Amazon Simple Storage Service (Amazon S3) is an object storage service offering industry-leading scalability, data availability, security, and performance. Customers of all sizes and industries can store and protect any amount of data for virtually any use case, such as data lakes, cloud-native applications, and mobile apps. With cost-effective storage classes and easy-to-use management features, you can optimize costs, organize data, and configure fine-tuned access controls to meet specific business, organizational, and compliance requirements.





Output:





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The screenshot shows the AWS S3 console interface. At the top, there's a search bar and navigation tabs. Below, the 'Objects (3)' section displays a table of objects. The table has columns for Name, Type, Version ID, Last modified, Size, and Storage class. The objects listed are:

Name	Type	Version ID	Last modified	Size	Storage class
abcd.jpg	Delete marker	wNsfAmM.t01H5ziO.EDulUXwDrDkLzb_	March 21, 2024, 15:14:18 (UTC+05:30)	0 B	-
abcd.jpg	jpg	null	March 21, 2024, 14:58:47 (UTC+05:30)	26.0 KB	Standard
efg.jpg	jpg	null	March 21, 2024, 15:09:54 (UTC+05:30)	37.0 KB	Standard

This is another screenshot of the AWS S3 console, showing the same bucket and objects as the previous one. The interface and data are identical.

Conclusion: Amazon S3 (Simple Storage Service) is a cloud-based storage service by Amazon Web Services (AWS). It operates on a simple web services interface, allowing users to store and retrieve data from anywhere on the web. S3 organizes data into "buckets," which are similar to folders, and each bucket can store an unlimited amount of data. Users can upload objects (files) to S3 using the AWS Management Console, CLI (Command Line Interface), or SDKs (Software Development Kits). S3 provides high durability, scalability, and availability by storing data across multiple servers and data centers.