Class 28

**Storage:** Storage is one of the core services

S3 - Simple Storage service -> is object storage like google drive (it won’t have file system) and this is the

First service in AWS, we can save any type of files like logs, Sql backups, websites, AMI/Snapshots

EFS -> Elastic file system -> giving access to different users to exchange data, which is on Linux machine

To access multiple Linux machines for single storage (we call it as “Network File System”)

FSx -> File system X to integrate windows with Active Directory

S3 Glacier -> Used for “Data Archiving” (old important data but doesn’t use daily)

Storage Gateway -> Used to move Data from your DC to AWS S3

AWS Backup -> Back up data from EFS, FSx, SGW (storage gateway), EC2, EBS

1, **S3**

Store the data in buckets, and bucket name should be unique like email-id, url in all over the world

For eg:

S3 -> Create bucket -> if we give “Bucket name “apple it says “Bucket name already exists”

If you want to delete bucket first empty the bucket and delete

I want to create unique name and deploy a server in s3 and use S3 as website

**Lab:**

🡺Use these navigation s3 Route53 Godady Ec2 instanse

i, s3 -> Create bucket -> Bucket name-> dheerajpalvai.xyz (this bucket name not there in world)

www.dheerajpalvai.xyz (this bucket name also not there in world)

ii, Route 53 ->Hosted zones ->Create hosted zone -> dheerajpalvai.xyz -> copy NS DNS servers

iii, godaddy.com -> my products -> DNS -> paste NS DNS servers

i, s3 -> Create bucket -> Bucket name-> dheerajpalvai.xyz -> if we go to bucket

**[Overview] [Properties] [Permissions] [Management] [Access points]**

* **[Properties]**: if we come to properties, we can see Versioning

1. **Versioning**-> is like a backup, if we “Enable Versioning”, we can take last day data and make it current

Like every day a copy of file will take backup, next day if we do and change on file and if it is corrupted then we can take the cope of yesterday’s file and work on it.

**TEST VERSIONING:** to Backup file

We can check with an example:

**[Overview]**: -> Upload -> Add files -> testfile.txt ->upload

(do some changes in file and again upload)

(again, do some changes in file and again upload)

(here one person deleted data in file and uploaded, now file size become zero)

* **Note**: file size can be maximum 5TB

**[Overview]**:

🡪If we click on that file by default ever file has URL

**Object URL**

<https://s3.amazonaws.com/dheerajpalvai.xyz/testVersigningfile.txt>

🡪 if we click on URL, we can data by default, it says “AccessDenied”

🡪 click on file and “Make Public” -> to make public go back to file location go to [Permissions]

**[Permissions]**: -> **Block *all* public access -> edit-> uncheck ->save** now go to

**[Overview]**: -> click on file and “Make Public” -> now click on file you can see data,

Here the data is empty because we deleted,

* Now how to get previous data

**[Overview]**: click on file -> now see file name and latest version -> testVersigningfile.txt Latest version

Click on “Latest Version” and select previous file before update file -> “Make Public” -> click URL

We can see previous file

Now come to -> [Overview] -> Versions [Hide / Show] -> click on Show -> select latest and delete it

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* **[Properties]**: if we come to properties, we can see Static website hosting

1. **Static website hosting-**> we can create our bucket as website

**TEST Static website hosting:** This is to host website

For that go to <https://github.com/mavrick202/dockertest1> and download code to test

Keep these files



Edit index.html -> delete <h1>DevOps & Kubernetes are fun if we mix with Cloud$$$....!!!</h1>

-> Write <h1>Welcome to AWSB26</h1>

<h1>Home-Page</h1>

**Save**

And make another error.html file-> for that ->

Edit index.html -> delete <h1>Home-Page</h1> -> write <h1>Error-Page</h1> ->

**save as error.html**

Now upload all 4 files in Bucket -> **[Overview]**: -> Upload -> Add files -> One Zone-IA (cheaper storage because Availability Zones are >=1 only)

Select all files -> Actions -> make public

* Here in **Set properties** we have 7 storage classes

Storage class

Intelligent-Tiering

Standard-IA

One Zone-IA

Glacier

Glacier Deep Archive

Reduced Redundancy (Not recommended)

* Here we discuss with Storage’s Availability & Duration

Availability (working of s3 console website) (99.9%)

Durability (How much time s3 console website work) (99.99999999999%) they will give this much

accurate because it will be in >= 3 Availability zones

for percentage accuracy you can check <https://en.wikipedia.org/wiki/High_availability>

* **[Properties]**: click on “Static website hosting”

Use this bucket to host a website

Index document: index.html

Error document: error.html

Save

Now go to

Amazon S3 -> [www.dheerajpalvai.xyz](http://www.dheerajpalvai.xyz) -> **[Properties]**: click on “Static website hosting”

Redirect requests

Target bucket or domain: dheerajpalvai.xyz

Save

1. **Server access logging:** This is to save created log files when bucket is hosted as a website and

Who are accessing our website, their IP addresses stored here.

**TEST Server access logging:**

For that Go to

i, s3 -> Create bucket -> Bucket name-> dheerajpalvai-log.files (this bucket name not there in world)

Amazon S3 -> dheerajpalvai-log.files -> **[Permissions] ->** Access Control List ->

S3 log delivery group: Log Delivery

Access to the objects:

List objects

Write objects

Access to this bucket's ACL:

Read bucket permissions

Write bucket permissions

i, Amazon S3 -> [www.dheerajpalvai.xyz](http://www.dheerajpalvai.xyz) -> **[Properties]**: click on “Server access logging”

Enable logging

Target bucket: dheerajpalvai-log.files

Target prefix: S3 logs

i, Amazon S3 -> [dheerajpalvai.xyz](http://www.dheerajpalvai.xyz) -> **[Properties]**: click on “Server access logging”

Enable logging

Target bucket: dheerajpalvai-log.files

Target prefix: S3 logs

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1. **Object-level logging:** this contain logs of who are changing permissions buckets (that is stored in

CloueTrial)

1. **Default encryption:** To encrypt data of your files

ii, Route 53 -> Hosted zones -> dheerajpalvai.xyz -> Create record

www

Value/Route traffic to: Alias to S3 website endpoint

US East

choose s3 bucket: s3-website-us-east-1.amazonaws.com

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ii, Route 53 -> Hosted zones -> dheerajpalvai.xyz -> Create record

[empty- don’t give anything]

Value/Route traffic to: Alias to S3 website endpoint

US East

choose s3 bucket: s3-website-us-east-1.amazonaws.com

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