Experiment No. 5

Aim: To study and Implement Storage as a Service using OwnCloud/ AWS S3, Glaciers/ Azure Storage.

Objective: Understand the concept of SaaS and implement using Own Cloud which gives universal access to files through a web interface.

Theory:

- SaaS is defined as the software distribution model deployed on the internet in which a cloud service provider provides applications.
- It is also known as "on-demand software" or "pay-as-you-go application". Here the customer licenses their product via SaaS-providers.
- SaaS market is a rapid-growing one, and with this fast-growing service, SaaS will soon become an active cloud service technology for every organization and company.
- In SaaS, the software & the applications associated with it are centrally located on the cloud server. Users can access them via a thin client connecting application, i.e., using a web browser.
- The SaaS provides various applications such as: CRM applications, Solution to Human Resource (HR), Pre-existing Billing & Invoicing systems, Other daily usable application suites.
- Advantages of SaaS
    - Easy to buy: SaaS's cost is based on monthly or yearly fees allowing new organizations to access the world of business at a low-cost, at least lesser than licensed application.
    - Minimization of Hardware Requirement: All SaaS software is hosted remotely & so there is no or lesser need for hardware for the organizations.
    - Special Software: No special software versions are required, as all the users will use the same software version. SaaS reduces IT costs by outsourcing hardware & software maintenance.
    - Low Maintenance: SaaS removes the daily problem of installing, maintaining, and updating software. The set-up cost of SaaS is also less in comparison to enterprise software.
- Disadvantages of SaaS
    - Latency factor: comes due to a variable distance of data between the cloud & the end-user, and hence a possibility of latency may arise while interacting with applications.
    - Internet Connection: is a major issue. Without an internet connection, SaaS applications are unusable.
    - Switching between SaaS vendors in case of any change is very difficult.
    - The SaaS cloud service is not very secure as in-house deployment.

Steps:

Step-1: click on create bucket

Step-2: Give Bucket name & select region for storage

Step-3: Keep object ownership setting as ACLs Disabled as by-default

Step-4: Disable block all public access checkbox

Step-5: Select the checkbox for Turning off block all public access might result in this bucket and the objects within becoming public

Step-6: Keep bucket versioning as disabled and add tags if required.

Step-7: Keep default encryption disabled and click on create bucket button

You can now see the successful creation of your bucket

Step-8: now click on the bucket that you have created

Step-9: You can either create a folder here or upload an existing file in the bucket

Step-10: now click on upload button and click on add files button browse your local machine and select which file you need to upload on S3 next click on upload button at bottom right end

Now you can check the upload status screen

Now click on close button

Step-11: Select properties and scroll down to Static website hosting option which is disabled now click on Edit option on right side

Step-12: Enable the radio button and specify the file name in Index document which you have added in S3

Scroll down and save the changes at bottom right

Step-13: Click on Permissions Tab

Step-14: In bucket policy click on Edit option

Step 15- after clicking on edit button paste the following code in bucket policy

```
{
    "Version": "2012-10-17",
    "Statement": [
```

```
{ "Sid": "PublicReadGetObject",
"Effect": "Allow",
 "Principal": "*",
 "Action": [
        "s3:GetObject"
         ],
         "Resource": [
                "arn:aws:s3:::Bucket-Name/*"
                ]
        }
]
}
```

Note-Make sure that you add your bucket name in the code above

Scroll down and click on Save Changes button

Step-16: open your html file and click on Object URL

Step-17: Now for delete files click on checkbox of your file and then click on Delete Button.

Write permanently delete and click on delete object button

Now click on close button

Step-18: now come to Amazon S3 tab and select your bucket and then click on delete button

Write down your bucket name in delete bucket tab and click on delete button at bottom right

You can see that the bucket is deleted.

Output/Observation: