

# Introduction of Cloud Computing

## Week 5 Assignment

# Steps for Creating Cloud Storage on IBM

## Step=1

The screenshot displays the IBM Cloud Catalog interface. At the top, the navigation bar includes the IBM Cloud logo, a search bar with the text "Search resources and products...", and links for "Catalog", "Manage", and "Kundan Kumar's Account". Below the navigation bar, the main content area is titled "Catalog" and features a search bar with the text "object". A dropdown menu lists search results: "Object Storage", "MinIO", "FileMage Gateway", "Databases for PostgreSQL", "Data Engine (previously SQL Query)", and "Block Storage Snapshots for VPC". To the right of the search results, there is a large illustration of a cloud storage facility with a building, a crane, and a person. Below the illustration, there are three product cards: "AnonTech ViziVault Platform" by Anon Technology, Inc., "Anycloud Backup for 365" by any.cloud A/S, and "Enterprise applications (3)". The "AnonTech ViziVault Platform" card describes a service for managing personal information as-a-service safely and in compliance with data privacy regulations. The "Anycloud Backup for 365" card describes a partner-ready SaaS offering of data protection and restore. The "Enterprise applications (3)" card describes a service for customizing Spark runtimes to satisfy application requirements. The interface also includes a "Sell on IBM Cloud" link and a "Catalog settings" link.

IBM Cloud

Search resources and products...

Catalog Manage Kundan Kumar's Account

Sell on IBM Cloud Catalog settings

### Catalog

object

- Object Storage
- MinIO
- FileMage Gateway
- Databases for PostgreSQL
- Data Engine (previously SQL Query)
- Block Storage Snapshots for VPC

Enterprise applications (3)

AI / Machine Learning (22)

Analytics (14)

Databases (22)

Developer tools (18)

**AnonTech ViziVault Platform**  
By Anon Technology, Inc.

Manage personal information as-a-service safely, securely, and in compliance with data privacy regulations using ViziVault

Lite • Free • HIPAA Enabled • IAM-enabled • Third party supported

**Anycloud Backup for 365**  
By any.cloud A/S

Anycloud Backup for 365 is a partner-ready SaaS offering of data protection and is created to safely backup data and restore.

IAM-enabled • Third party supported

# Step-2

IBM Cloud

Search resources and products...

Catalog

Manage

Kundan Kumar's Account

Create

About

Choose an Infrastructure

IBM Cloud

Create, manage, and access your storage in globally available data center locations. Public cloud environments are designed for high durability, resiliency and security. IBM-managed infrastructure automatically scales to businesses needs.

Satellite

Utilize infrastructure from on-premise data centers, at other cloud providers, or in edge networks as a Satellite location to IBM Cloud. Deploy, manage and control app workloads with IBM Cloud Object Storage on client-managed infrastructure.

Select a pricing plan

Displayed prices do not include tax. Monthly prices shown are for country or region:United States

Plan	Features	Pricing
Lite	<div>Lite plan instance is free to use for Storage capacity up to 25 GB per month. Lite plan instance is used for trial, and can be easily upgraded to Standard plan for unlimited scalability and full functionality.</div> <div>Only one Lite plan instance is allowed per account. The Lite plan instance includes up to 25 GB of storage capacity; 2,000 Class A (PUT, COPY, POST, and LIST) requests; 20,000 Class B (GET and all others) requests; 10 GB of data retrieval; 5GB of egress (public outbound bandwidth) each month. These thresholds apply to the aggregate total across all storage class buckets. Lite plan services are deleted after 30 days of inactivity.</div>	Free

Summary

Cloud Object Storage

Region: Global

Plan: Lite

Service name: Cloud Object Storage-22


Resource group: Default

Create

Add to estimate

View terms

# Step-3


Cloud Object Storage


Instances ^

Cloud Object Storage-22

Integrations

Endpoints

Documentation 

Billing 

## Cloud Object Storage

**An enterprise cloud object storage solution**


Welcome to your new IBM® Cloud Object Storage service! It provides unstructured data storage for cloud applications. To get started - create a bucket, upload objects and set up access policies to allow other users to work with your data.

[Learn More](#)[Take a guided tutorial](#)

Overview

Create bucket

Access Management



# Step-4



## Cloud Object Storage

### Instances



Cloud Object Storage-22

### Integrations

### Endpoints

### Documentation



### Billing



## Create bucket

Get started by creating a bucket to store unstructured data. A bucket is a storage resource available in IBM Cloud Object Storage service. The bucket can be used to organize objects (storage data) along with their metadata. Create a custom bucket of your own, or choose from our pre-defined configurations.

### Custom bucket

#### Customize your bucket

Create a bucket by selecting bucket configurations that meet your object storage needs.



### Predefined buckets

#### Quickly get started

Create a Smart Tier storage class bucket in a region close to you and a service credential to connect your application.

Show more



#### Archive your data

Create a Smart Tier storage class bucket in a region close to you with an archive rule and a service credential to connect your application.

Show more



#### Host a static website

Create a Smart Tier storage class bucket in a region close to you with static web hosting configuration and a service credential to connect your application.

Show more



# Step-5

☰

IBM Cloud

Search resources and products...

🔍

Catalog

Manage ▾

Kundan Kumar's Account

?

📅

📊

🔔

👤

☰

Cloud Object Storage

Instances ▾

Cloud Object Storage-22

Integrations

Endpoints

Documentation 📄

Billing 📄

● Create bucket with credentials

○ Upload files (objects)  
Optional

○ Test your bucket  
Optional

Create bucket with credentials

[View bucket details](#) >

Create a Smart Tier storage class bucket in a region close to you and a service credential to connect your application

Unique bucket name [View naming rules](#)

cloud-object-storage-cos-standard-bqn

Cancel

Next →

Bucket details

×

Quick start bucket presets

Bucket name

cloud-object-storage-cos-standard-bqn

Resiliency

Regional

Location

jp-tok

Storage class

Smart Tier

Service credentials


Service credential

cloud-object-storage-cos-standard-bqn

Role

Writer

# Step-6

 Cloud Object Storage

Instances ^

Cloud Object Storage-22

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Endpoints

Documentation ↗

Billing ↗

✓ Create bucket with credentials

● Upload files (objects)  
Optional

○ Test your bucket  
Optional

Upload files (objects) [View bucket details](#) >

Optional

Upload files (objects) to your Standard bucket. This is an optional step that can also be completed at a later time.

Upload

The size of each file (object) cannot be larger than 200MB for standard uploads.

[See file \(object\) and folder guidelines](#)

Drag and drop files (objects) here or click to upload

View bucket configuration

Next →

Bucket details ×

Quick start bucket presets

Bucket name

cloud-object-storage-cos-standard-bqn

Resiliency

Regional

Location

jp-tok

Storage class

Smart Tier

Service credentials


Service credential

cloud-object-storage-cos-standard-bqn

Role

Writer

# Step-7

 Cloud Object Storage

Instances ^

Cloud Object Storage-22

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Endpoints

Documentation ↗

Billing ↗

✓ Create bucket with credentials

✓ Upload files (objects)  
Optional

● Test your bucket  
Optional

Test your bucket [View bucket details](#) >

Optional

Copy the sample JS script below to your local machine to automate the upload and download files (objects) to your account. Modify the code to fit your needs. [Learn more](#)

Node.js script to upload a file (object) to the created bucket

Bucket details ×

Quick start bucket presets

Bucket name

cloud-object-storage-cos-standard-bqn

Resiliency

Regional

Location

jp-tok

Storage class

Smart Tier

Service credentials

Service credential

cloud-object-storage-cos-standard-bqn

Role

Writer



# Step-8

The screenshot displays the IBM Cloud console interface for setting up Cloud Object Storage. The left sidebar contains navigation links: Cloud Object Storage, Instances, Integrations, Endpoints, Documentation, and Billing. The main content area shows a progress bar with three steps: 'Create bucket with credentials' (completed), 'Upload files (objects)' (optional, completed), and 'Test your bucket' (optional, active). Below the progress bar, the 'Test your bucket' section is highlighted, featuring a 'View bucket details' link. The instructions state: 'Copy the sample JS script below to your local machine to automate the upload and download files (objects) to your account. Modify the code to fit your needs. [Learn more](#)'. A code block for a Node.js script is provided, but its content is obscured by a large grey rectangle. The right sidebar, titled 'Bucket details', lists the following information: Bucket name (cloud-object-storage-cos-standard-bqn), Resiliency (Regional), Location (jp-tok), Storage class (Smart Tier), Service credentials (cloud-object-storage-cos-standard-bqn), and Role (Writer). The bottom of the console asks, 'Want to see more scripts?'.

IBM Cloud

Search resources and products...

Catalog Manage Kundan Kumar's Account

Cloud Object Storage

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Create bucket with credentials

Upload files (objects) Optional

Test your bucket Optional

Test your bucket

View bucket details

Optional

Copy the sample JS script below to your local machine to automate the upload and download files (objects) to your account. Modify the code to fit your needs. [Learn more](#)

Node.js script to upload a file (object) to the created bucket

Want to see more scripts?

Bucket details

Quick start bucket presets

Bucket name

cloud-object-storage-cos-standard-bqn

Resiliency

Regional

Location

jp-tok

Storage class

Smart Tier

Service credentials

Service credential

cloud-object-storage-cos-standard-bqn

Role

Writer

# Step-9

IBM Cloud

Cloud Object Storage

Instances

Cloud Object Storage-22

Integrations

Endpoints

Documentation

Billing

Search resources and products...

Catalog Manage Kundan Kumar's Account

Instances / Cloud Object Storage-22

Details Actions...

Buckets Service credentials Instance Usage Plan

Search

Create bucket +

Name	Public access ⓘ	Location ⓘ	Storage class	Created
<a href="#">cloud-object-storage-cos-standard-bqn</a>	No	jp-tok	Smart Tier	2023-08-27 10:40 AM

# Step-10

The screenshot displays the IBM Cloud console interface. On the left is a dark sidebar with navigation links: Cloud Object Storage, Instances (expanded), Cloud Object Storage-22 (selected), Integrations, Endpoints, Documentation, and Billing. The main content area has a top navigation bar with a search bar, 'Catalog', 'Manage', and the user's account 'Kundan Kumar's Account'. Below this, the breadcrumb 'Instances / Cloud Object Storage-22 /' is followed by the instance name 'cloud-object-storage-cos-standard-bqn'. To the right of the name are links for 'Transfers' and 'Details', and an 'Actions...' dropdown menu. A tabbed interface shows 'Objects' as the active tab, with 'Configuration' and 'Permissions' as alternatives. A message states: 'If you're seeing more usage than expected, versions count towards your usage or you may have incomplete uploads [Learn more](#)'. Below this is a sub-path 'cloud-obj...andard-bqn /'. A table header is visible with columns: Object name, Archived (with an info icon), Size, and Last modified. Above the table is a search bar labeled 'Prefix filter' and an 'Upload' button. The table body is currently empty.

IBM Cloud

Search resources and products...

Catalog Manage Kundan Kumar's Account

Cloud Object Storage

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Instances / Cloud Object Storage-22 /

cloud-object-storage-cos-standard-bqn

Transfers Details Actions...

Objects Configuration Permissions

If you're seeing more usage than expected, versions count towards your usage or you may have incomplete uploads [Learn more](#)

cloud-obj...andard-bqn /

Prefix filter

Upload

<input type="checkbox"/>	Object name	Archived ⓘ	Size	Last modified
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# Step-11

The screenshot displays the IBM Cloud console interface for managing Cloud Object Storage. The left sidebar shows the navigation menu with options like Cloud Object Storage, Instances, Integrations, Endpoints, Documentation, and Billing. The main content area is titled 'cloud-object-storage-cos-standard-bqn' and has tabs for Objects, Configuration, and Permissions. The 'Objects' tab is active, showing a list of objects with columns for Object name and Archived status. Below the list, there is a section for uploading files, which includes a text area for a prefix filter, a dashed box for dragging and dropping files, and buttons for 'Upload files' and 'Upload folders'. A summary bar indicates '1 objects | 2.0 KB' and shows a file named 'index.ht...' with a size of '2.0 KB'. At the bottom right, there are 'Cancel' and 'Upload' buttons.

IBM Cloud

Search resources and products...

Catalog Manage Kundan Kumar's Account

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Instances / Cloud Object Storage-22 /

cloud-object-storage-cos-standard-bqn

Objects Configuration Permissions

If you're seeing more usage than expected, versions count towards your usage or you may have incomplete uploads.

cloud-obj...andard-bqn /

Prefix filter

Object name Archived

Objects

Drag and drop files (objects) to upload. An object is your data in fixed form.

Aspera high-speed transfer

No size limit - Recommended for video and audio files, or any large files and folders. Installation required.

[Install Aspera](#)

**Upload files (objects)**

Files with duplicated names are replaced. Exclude personal information such as name or address. No special characters: /\"?:\*<>|

Drag and drop files and folders or click to upload

Upload files

Upload folders

**1 objects | 2.0 KB**

index.ht... 2.0 KB

Organize your objects (advanced)

Cancel Upload

# Step-12

IBM Cloud

Search resources and products...

Catalog Manage Kundan Kumar's Account

Cloud Object Storage

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Instances / Cloud Object Storage-22 / cloud-object-storage-cos-standard-bqn

Objects Configuration Permissions

If you're seeing more usage than expected, versions count towards your usage or you may have incomplete uploads.

cloud-obj...andard-bqn /

Prefix filter

<input type="checkbox"/>	Object name	Archived ⓘ	Size	Last modified
<input type="checkbox"/>	 index.html		2.0 KB	2023-08-27 10:45 AM

Drag and drop files (objects) here or click to upload

Transfers

Upload success  
index.html

2023-08-27 10:45 AM

Upload (1 objects) Delete Complete

# Step-13

IBM Cloud

Search resources and products...

Catalog Manage Kundan Kumar's Account

Cloud Object Storage

Instances

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Bucket access policies

Manage access to this bucket by creating IAM policies for users and service IDs. Users and service IDs must also have an instance level viewer role (or higher) to use the console or to list buckets using the REST API.

Access policies

Public access

**Warning:**  
Granting Public access to this bucket will allow anyone to access the bucket.  
To revoke public access, remove the "Public access" policy from this bucket within [Access groups](#)

[Learn more](#) ×

Status: **Disabled**

Role for this bucket:

Content Reader

As a Content Reader, one can read and list objects in the bucket.

Create access policy

Context-based restrictions

Firewall (legacy)

# Step-14

