



Amazon
S3

Project Title

A

PROJECT REPORT

**Submitted in partial fulfillment for the award of degree of M.Sc. IT IMS & Cloud Technology
by**

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Under the guidance of

Guide Name



GUJARAT UNIVERSITY

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Certificate

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This is to certify that Mr. / Ms. Balvant Vishwakarma of M.Sc. IT IMS and Cloud Technology Semester – 3, has duly completed his/her Term Work for the semester ending in , in the subject of Project towards partial fulfillment of his/her Degree of Master program.

Date of Submission Mentor (s)



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Balvant Vishwakarma
202332300040



ui

12/30/2024

"Secure Data Storage and Access Control with Amazon S3"

IMS&CLOUD TECHNOLOGY



Amazon
S3

Acknowledgments

I would like to express my sincere gratitude to everyone who contributed to the successful completion of this project. Secure Data Storage and Access Control with Amazon S3".

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Finally, I am forever grateful to my family and friends for their constant support and encouragement, which motivated me to complete this project with dedication and determination.

Thank you all for your contributions and support.





Key Components:

1. S3 Bucket:

Acts as a storage solution for data objects.

Supports versioning and lifecycle policies for data management.

2. Authorized User Access:

Implements bucket policies or Identity and Access Management (IAM) roles/policies.

Restricts access to specific users or groups, ensuring secure data handling.



3. S3 Bucket Lifecycle:



Automates data movement and cost management.

Includes rules for transitioning objects to lower-cost storage classes (e.g., Glacier) or deleting them after a specified time.

4. Lambda Function:

Serverless compute service triggered by events in the S3 bucket.

Updates or modifies bucket policies dynamically based on events or conditions.

Example use cases:

Adjust permissions when new files are uploaded. Notify users or admins of policy changes.

5. S3 Bucket Policy:

JSON-based policy to define fine-grained access control.

Works alongside Lambda to dynamically enforce security and compliance requirements.



Example Workflow:

- 1. User Access: Authorized users can upload/download files based on IAM or bucket policies.**



2. Lifecycle Management: Files older than a threshold are transitioned to a cheaper storage class or deleted.

3. Policy Enforcement via Lambda:

A new user uploads a file, triggering a Lambda function.

The Lambda function updates the bucket policy to allow/restrict access for specific users or groups.

This setup ensures robust data security, automated cost control, and dynamic policy management. Would you like help detailing the implementation?



- **Table Of Content**

- **Introduction**

- **Literature Review**

- **Methodology**

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- **Conclusion**



Introduction

Amazon Simple Storage Service (S3) is a fundamental component of AWS cloud infrastructure, providing scalable object storage with robust security features. This analysis focuses on the implementation of access control mechanisms and security protocols within an S3 architecture, specifically examining the relationships between users, policies, and resources within the ap-south-1 region.



Literature Review

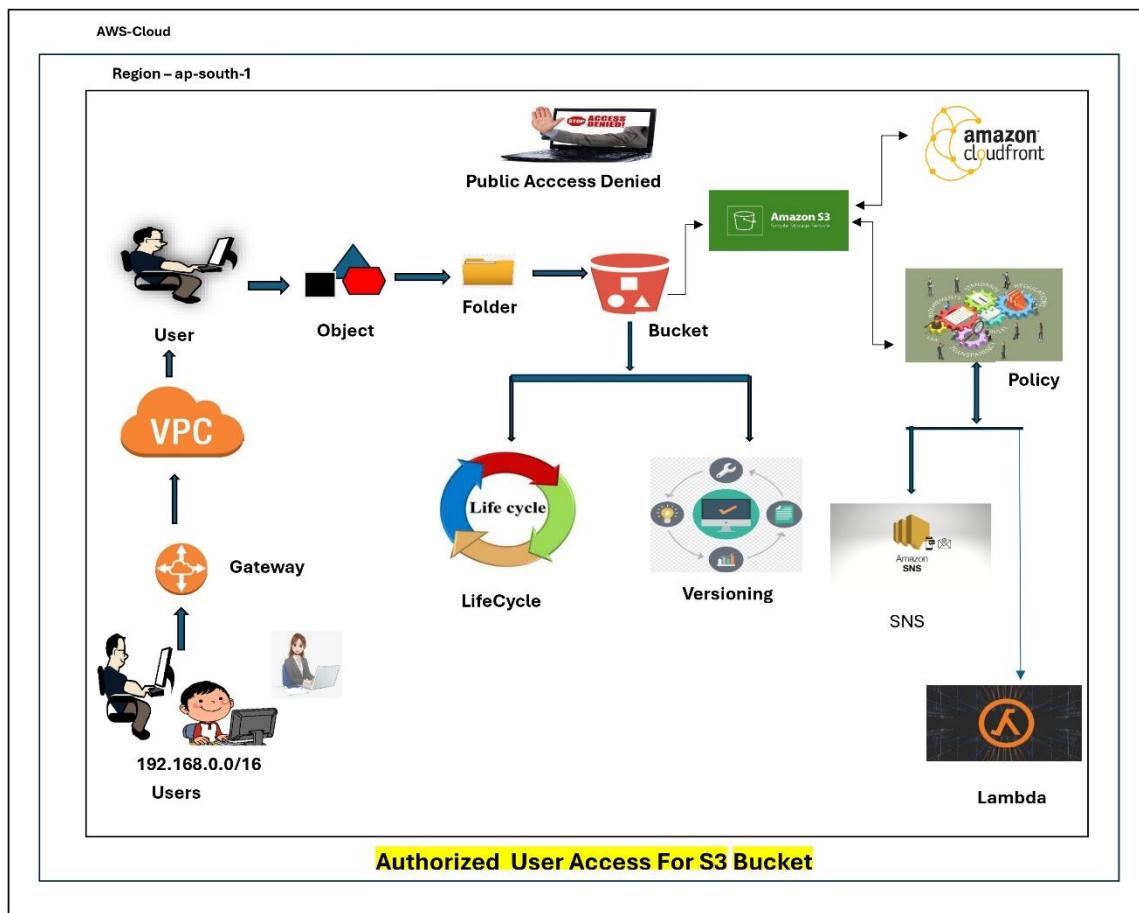
The current body of knowledge regarding AWS S3 security encompasses several key areas:

- **AWS S3 bucket policies and access control mechanisms**
- **Identity and Access Management (IAM) integration**
- **VPC endpoint security and private network access**
- **Lifecycle management for object storage**
- **Versioning systems for data protection**
- **Aws Lambda Function Trigger On S3 Bucket**
- **Regional deployment considerations**



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- System Design And Architecture





Creating VPC (Virtual Privet Cloud)

The screenshot shows the AWS VPC console interface. On the left, there's a navigation sidebar with sections like 'VPC dashboard', 'Virtual private cloud' (which is expanded to show 'Your VPCs', 'Subnets', 'Route tables', etc.), and 'Security'. The main area displays a table titled 'Your VPCs (1/2) Info' with two entries:

| Name | VPC ID | State | Block Public... | IPv4 CIDR |
|-------------------|------------------------------|------------------|-----------------|-----------------------|
| - | vpc-0b484ed4702531e5b | Available | Off | 172.31.0.0/16 |
| My-Project | vpc-05bd374b936795954 | Available | Off | 192.168.0.0/16 |

Below this, a specific VPC named 'vpc-05bd374b936795954 / My-Project' is selected. The 'Details' tab is active, showing the following information:

| | | | |
|-------------------------------|------------------|--------------------------|-------------------------|
| VPC ID: vpc-05bd374b936795954 | State: Available | Block Public Access: Off | DNS hostnames: Disabled |
|-------------------------------|------------------|--------------------------|-------------------------|

The bottom of the screen shows the Windows taskbar with various pinned icons.

This screenshot shows the detailed configuration page for the 'vpc-05bd374b936795954 / My-Project' VPC. The 'Details' tab is still active, displaying the following configuration:

| | | | |
|---|---|---|---|
| VPC ID: vpc-05bd374b936795954 | State: Available | Block Public Access: Off | DNS hostnames: Disabled |
| DNS resolution: Enabled | Tenancy: default | DHCP option set: dopt-0c7f8b0809d6533b8 | Main route table: rtb-0f538f9c1c98e6c0f |
| Main network ACL: acl-0ce16fcc46e61c1a2 | Default VPC: No | IPv4 CIDR: 192.168.0.0/16 | IPv6 pool: - |
| IPv6 CIDR (Network border group): - | Network Address Usage metrics: Disabled | Route 53 Resolver DNS Firewall rule groups: - | Owner ID: 039612886733 |

Below the details, the 'CIDRs' tab is selected, showing the IPv4 CIDR configuration:

| Address family | CIDR | Status |
|----------------|----------------|------------|
| IPv4 | 192.168.0.0/16 | Associated |

The bottom of the screen shows the Windows taskbar with various pinned icons.



➤ Creating Three private Subnets

subnet-07e249ba5a7730d7b / User-1

| Details | | Actions | |
|----------------------------|--------------------------|-------------------------------|---|
| Subnet ID | subnet-07e249ba5a7730d7b | Subnet ARN | arn:aws:ec2:ap-south-1:039612886733:subnet/subnet-07e249ba5a7730d7b |
| IPv4 CIDR | 192.168.1.0/24 | State | Available |
| Availability Zone | ap-south-1a | IPv6 CIDR | - |
| Route table | rtb-0f538f9c1c98e6c0f | Network border group | ap-south-1 |
| Auto-assign IPv6 address | No | Default subnet | No |
| IPv4 CIDR reservations | - | Customer-owned IPv4 pool | - |
| Resource name DNS A record | Disabled | IPv6-only | No |
| | | DNS64 | Disabled |
| | | Resource name DNS AAAA record | |

subnet-02e47d36143ab4609 / User-2

| Details | | Actions | |
|----------------------------|--------------------------|-------------------------------|---|
| Subnet ID | subnet-02e47d36143ab4609 | Subnet ARN | arn:aws:ec2:ap-south-1:039612886733:subnet/subnet-02e47d36143ab4609 |
| IPv4 CIDR | 192.168.2.0/24 | State | Available |
| Availability Zone | ap-south-1a | IPv6 CIDR | - |
| Route table | rtb-0f538f9c1c98e6c0f | Network border group | ap-south-1 |
| Auto-assign IPv6 address | No | Default subnet | No |
| IPv4 CIDR reservations | - | Customer-owned IPv4 pool | - |
| Resource name DNS A record | Disabled | IPv6-only | No |
| | | DNS64 | Disabled |
| | | Resource name DNS AAAA record | |



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The screenshot shows the AWS VPC Subnets console. On the left, there's a sidebar with 'VPC dashboard' and sections for 'Virtual private cloud' (Your VPCs, Subnets, Route tables, Internet gateways, Egress-only internet gateways, DHCP option sets, Elastic IPs, Managed prefix lists, NAT gateways, Peering connections) and 'Security' (Network ACLs). The main panel displays the details of a specific subnet:

| Details | |
|---|---|
| Subnet ID | subnet-05feb82942d8540b0 |
| IPv4 CIDR | 192.168.3.0/24 |
| Availability Zone | ap-south-1 |
| Route table | rtb-0f538f9c1c98e6c0f |
| Auto-assign IPv6 address | No |
| IPv4 CIDR reservations | - |
| Resource name DNS A record | Disabled |
| Subnet ARN | arn:aws:ec2:ap-south-1:039612886733:subnet/subnet-05feb82942d8540b0 |
| Available IPv4 addresses | 251 |
| Availability Zone ID | aps1-az1 |
| Network ACL | acl-0ce16fcc46e61c1a2 |
| Auto-assign customer-owned IPv4 address | No |
| IPv6 CIDR reservations | - |
| Resource name DNS AAAA record | Disabled |
| State | Available |
| IPv6 CIDR | - |
| Network border group | ap-south-1 |
| Default subnet | No |
| Customer-owned IPv4 pool | - |
| IPv6-only | No |
| DNS64 | Disabled |
| Owner | 039612886733 |
| Block Public Access | Off |
| IPv6 CIDR association ID | - |
| VPC | vpc-05bd374b936795954 My-Project |
| Auto-assign public IPv4 address | No |
| Outpost ID | - |
| Hostname type | IP name |

➤ Creating three Route and connected with Subnets

The screenshot shows the AWS VPC Route Tables console. On the left, there's a sidebar with 'VPC dashboard' and sections for 'Virtual private cloud' (Your VPCs, Subnets, Route tables, Internet gateways, Egress-only internet gateways, DHCP option sets, Elastic IPs, Managed prefix lists, NAT gateways, Peering connections) and 'Security' (Network ACLs). The main panel displays the details of a specific route table:

| Details | |
|------------------------------|------------------------------------|
| Route table ID | rtb-0f538f9c1c98e6c0f |
| Main | Yes |
| VPC | vpc-05bd374b936795954 My-Project |
| Owner ID | 039612886733 |
| Explicit subnet associations | subnet-07e249ba5a7730d7b / User-1 |
| Edge associations | - |

Below the details, there are tabs for 'Routes', 'Subnet associations', 'Edge associations', 'Route propagation', and 'Tags'. The 'Routes' tab is selected, showing one route entry:

| Routes (1) | |
|-------------|----------------|
| Destination | 192.168.0.0/16 |
| Target | local |
| Status | Active |
| Propagated | No |



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VPC | ap-south-1 New Tab

ap-south-1.console.aws.amazon.com/vpcconsole/home?region=ap-south-1#RouteTableDetails:RouteTableId=rtb-02af62d1e6e22864f Mumbai balvant.vishwakarma

VPC > Route tables > rtb-02af62d1e6e22864f Actions

VPC dashboard

EC2 Global View Filter by VPC

Virtual private cloud

Your VPCs Subnets **Route tables**

Internet gateways Egress-only internet gateways DHCP option sets Elastic IPs Managed prefix lists NAT gateways Peering connections

Security

Network ACLs CloudShell Feedback

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rtb-02af62d1e6e22864f / User-3-Route

Details

| | | | |
|---------------------|------------------------------------|------------------------------|-----------------------------------|
| Route table ID | rtb-02af62d1e6e22864f | Main | No |
| VPC | vpc-05bd374b936795954 My-Project | Owner ID | 039612886733 |
| | | Explicit subnet associations | subnet-05feb82942d8540b0 / User-3 |
| Edge associations - | | | |

Routes Subnet associations Edge associations Route propagation Tags

Routes (1)

| Destination | Target | Status | Propagated |
|----------------|--------|--------|------------|
| 192.168.0.0/16 | local | Active | No |

Both Edit routes

VPC | ap-south-1 New Tab

ap-south-1.console.aws.amazon.com/vpcconsole/home?region=ap-south-1#RouteTableDetails:RouteTableId=rtb-0ed4785960ca74197 Mumbai balvant.vishwakarma

VPC > Route tables > rtb-0ed4785960ca74197 Actions

VPC dashboard

EC2 Global View Filter by VPC

Virtual private cloud

Your VPCs Subnets **Route tables**

Internet gateways Egress-only internet gateways DHCP option sets Elastic IPs Managed prefix lists NAT gateways Peering connections

Security

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rtb-0ed4785960ca74197 / User-2-Route

Details

| | | | |
|---------------------|------------------------------------|------------------------------|-----------------------------------|
| Route table ID | rtb-0ed4785960ca74197 | Main | No |
| VPC | vpc-05bd374b936795954 My-Project | Owner ID | 039612886733 |
| | | Explicit subnet associations | subnet-02e47d36143ab4609 / User-2 |
| Edge associations - | | | |

Routes Subnet associations Edge associations Route propagation Tags

Routes (1)

| Destination | Target | Status | Propagated |
|----------------|--------|--------|------------|
| 192.168.0.0/16 | local | Active | No |

Both Edit routes



➤ Create internet gateway And Attach With VPC (virtual Privet cloud)

The screenshot shows the AWS VPC console with the URL ap-south-1.console.aws.amazon.com/vpcconsole/home?region=ap-south-1#igws. The left sidebar is expanded to show the "Virtual private cloud" section, specifically the "Internet gateways" subsection. The main area displays a table titled "Internet gateways (1/2)" with one item listed:

| Name | Internet gateway ID | State |
|--------------------|---------------------|----------|
| my-internet-getway | igw-0dbc0ad5e91abcd | Attached |

An "Actions" dropdown menu is open over the first row, showing options: "View details", "Attach to VPC" (which is highlighted in orange), "Detach from VPC", "Manage tags", and "Delete internet gateway". Below the table, a detailed view for the gateway "igw-0dbc0ad5e91abcd / my-internet-getway" is shown, with tabs for "Details" and "Tags". The "Details" tab displays the gateway's ID, state (Detached), VPC ID (empty), and owner (039612886733). The "Tags" tab shows a single tag named "Name" with the value "my-internet-getway".

The screenshot shows the AWS VPC console with the URL ap-south-1.console.aws.amazon.com/vpcconsole/home?region=ap-south-1#InternetGateway:id=igw-0dbc0ad5e91abcd. The left sidebar is expanded to show the "Virtual private cloud" section, specifically the "Internet gateways" subsection. The main area displays a detailed view for the gateway "igw-0dbc0ad5e91abcd / my-internet-getway".

Details (Info)

| Internet gateway ID | State | VPC ID | Owner |
|---------------------|----------|--------|--------------|
| igw-0dbc0ad5e91abcd | Detached | - | 039612886733 |

Tags

| Key | Value |
|------|--------------------|
| Name | my-internet-getway |

An "Actions" dropdown menu is visible at the top right of the main content area. The bottom of the screen shows the Windows taskbar with various pinned icons.

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VPC | ap-south-1 New Tab

ap-south-1.console.aws.amazon.com/vpcconsole/home?region=ap-south-1#RouteTableDetails:RouteTableId=rtb-0f538f9c1c98e6c0f

VPC > Route tables > rtb-0f538f9c1c98e6c0f

rtb-0f538f9c1c98e6c0f / User-1-Route

Details

| | | | |
|---|--------------------------|---|------------------------|
| Route table ID rtb-0f538f9c1c98e6c0f | Main Yes | Explicit subnet associations subnet-07e249ba5a7730d7b / User-1 | Edge associations - |
| VPC vpc-05bd374b936795954 My Project | Owner ID 039612886733 | | |

Routes

| Destination | Target | Status | Propagated |
|----------------|---------------------|--------|------------|
| 0.0.0.0/0 | igw-0dbc0ad5e91abcd | Active | No |
| 192.168.0.0/16 | local | Active | No |

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Amazon S3

VPC | ap-south-1 New Tab

ap-south-1.console.aws.amazon.com/vpcconsole/home?region=ap-south-1#RouteTableDetails:RouteTableId=rtb-0ed4785960ca74197

VPC > Route tables > rtb-0ed4785960ca74197

rtb-0ed4785960ca74197 / User-2-Route

Details

| | | | |
|---|--------------------------|---|------------------------|
| Route table ID rtb-0ed4785960ca74197 | Main No | Explicit subnet associations subnet-02e47d36143ab4609 / User-2 | Edge associations - |
| VPC vpc-05bd374b936795954 My Project | Owner ID 039612886733 | | |

Routes

| Destination | Target | Status | Propagated |
|----------------|---------------------|--------|------------|
| 0.0.0.0/0 | igw-0dbc0ad5e91abcd | Active | No |
| 192.168.0.0/16 | local | Active | No |

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VPC dashboard < Actions ▾

E2 Global View Filter by VPC

Virtual private cloud ▼

Your VPCs

Subnets

Route tables ▼

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

Peering connections

Security ▼

Network ACLs

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➤ Creating One user EC2 Instance by using vpc (user-1) Who's control s3 bucket

Instance details | EC2 | ap-south-1 ChatGPT

aws Search [Alt+S]

EC2 > Instances > i-056d83cd5acf4f434 Actions ▾

Dashboard ▼

EC2 Global View

Events

Instances ▼

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images ▼

AMIs

AMI Catalog

Elastic Block Store ▼

Volumes

Instance summary for i-056d83cd5acf4f434 (User-1) Info Actions ▾

Updated less than a minute ago

| | | |
|--|---|--|
| Instance ID | Public IPv4 address | Private IPv4 addresses |
| i-056d83cd5acf4f434 | 3.110.214.99 open address | 192.168.1.24 |
| IPv6 address | Instance state | Public IPv4 DNS |
| - | Running | - |
| Hostname type | Private IP DNS name (IPv4 only) | Elastic IP addresses |
| IP name: ip-192-168-1-24.ap-south-1.compute.internal | ip-192-168-1-24.ap-south-1.compute.internal | - |
| Answer private resource DNS name | Instance type | AWS Compute Optimizer finding |
| - | t2.micro | Opt-in to AWS Compute Optimizer for recommendations. |
| Auto-assigned IP address | VPC ID | Learn more |
| 3.110.214.99 [Public IP] | vpc-05bd374b936795954 (My-Project) | |
| IAM Role | Subnet ID | Auto Scaling Group name |
| - | subnet-07e249ba5a7730d7b (User-1) | - |



```
ubuntu@ip-192-168-1-24:~  
login as: ubuntu  
Authenticating with public key "jay.bala-w"  
Welcome to Ubuntu 24.04.1 LTS (GNU/Linux 6.8.0-1018-aws x86_64)  
  
* Documentation: https://help.ubuntu.com  
* Management: https://landscape.canonical.com  
* Support: https://ubuntu.com/pro  
  
System information as of Sun Dec 29 04:20:57 UTC 2024  
  
System load: 0.96 Processes: 109  
Usage of /: 24.7% of 6.71GB Users logged in: 0  
Memory usage: 21% IPv4 address for enX0: 192.168.1.24  
Swap usage: 0%  
  
Expanded Security Maintenance for Applications is not enabled.  
0 updates can be applied immediately.  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*copyright*.  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
ubuntu@ip-192-168-1-24:~$
```

➤ Downloading AWS-CLI in our EC-2 Instance User-1

```
ubuntu@ip-192-168-1-24:~  
inflating: aws/dist/docutils/writers/html5_polyglot/math.css  
inflating: aws/dist/docutils/writers/html5_polyglot/template.txt  
inflating: aws/dist/docutils/writers/odf_odt/styles.odt  
inflating: aws/dist/docutils/writers/pep_html/pep.css  
inflating: aws/dist/docutils/writers/pep_html/template.txt  
creating: aws/dist/docutils/parsers/rst/  
creating: aws/dist/docutils/parsers/rst/include/isotech.txt  
inflating: aws/dist/docutils/parsers/rst/include/isogrk1.txt  
inflating: aws/dist/docutils/parsers/rst/include/isopub.txt  
inflating: aws/dist/docutils/parsers/rst/include/isomopt-wide.txt  
inflating: aws/dist/docutils/parsers/rst/include/isogr44.txt  
inflating: aws/dist/docutils/parsers/rst/include/isolat1.txt  
inflating: aws/dist/docutils/parsers/rst/include/isoamso.txt  
inflating: aws/dist/docutils/parsers/rst/include/isocyr2.txt  
inflating: aws/dist/docutils/parsers/rst/include/isomopf.txt  
inflating: aws/dist/docutils/parsers/rst/include/isobox.txt  
inflating: aws/dist/docutils/parsers/rst/include/isocyl1.txt  
inflating: aws/dist/docutils/parsers/rst/include/isomfrk-symbol.txt  
inflating: aws/dist/docutils/parsers/rst/include/isomfrk-wide.txt  
inflating: aws/dist/docutils/parsers/rst/include/ssdefts.txt  
inflating: aws/dist/docutils/parsers/rst/include/isoamsr.txt  
inflating: aws/dist/docutils/parsers/rst/include/isoamsc.txt  
inflating: aws/dist/docutils/parsers/rst/include/isolat2.txt  
inflating: aws/dist/docutils/parsers/rst/include/isomfrk-wide.txt  
inflating: aws/dist/docutils/parsers/rst/include/isodiat.txt  
inflating: aws/dist/docutils/parsers/rst/include/mmlextra-wide.txt  
inflating: aws/dist/docutils/parsers/rst/include/mmalias.txt  
inflating: aws/dist/docutils/parsers/rst/include/mmlextra.txt  
inflating: aws/dist/docutils/parsers/rst/include/isomscr.txt  
inflating: aws/dist/docutils/parsers/rst/include/README.txt  
inflating: aws/dist/docutils/parsers/rst/include/xhtml1-special.txt  
inflating: aws/dist/docutils/parsers/rst/include/isogrk2.txt  
inflating: aws/dist/docutils/parsers/rst/include/isoamsn.txt  
inflating: aws/dist/docutils/parsers/rst/include/isogr44-wide.txt  
inflating: aws/dist/docutils/parsers/rst/include/isomaa.txt  
inflating: aws/dist/docutils/parsers/rst/include/isoamsb.txt  
inflating: aws/dist/docutils/parsers/rst/include/isomscr-wide.txt  
inflating: aws/dist/docutils/parsers/rst/include/xhtml1-lat1.txt  
inflating: aws/dist/docutils/parsers/rst/include/isonum.txt  
inflating: aws/dist/docutils/parsers/rst/include/isogr33.txt  
ubuntu@ip-192-168-1-24:~$ sudo ./aws/install  
You can now run: /usr/local/bin/aws --version  
ubuntu@ip-192-168-1-24:~$ aws --version  
aws-cli/2.22.26 Python/3.12.6 Linux/6.8.0-1018-aws exe/x86_64.ubuntu.24  
ubuntu@ip-192-168-1-24:~$
```



- **Using Command:-** curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip"
unzip awscliv2.zip
sudo ./aws/install
- **By using command :-** aws s3api create-bucket --bucket my-final-projectes-1 --region ap-south-1 --create-bucket-configuration LocationConstraint=ap-south-1

```
ubuntu@ip-192-168-1-24:~$ aws s3api create-bucket --bucket my-final-projectes-1 --region ap-south-1 --create-bucket-configuration LocationConstraint=ap-south-1
{
    "Location": "http://my-final-projectes-1.s3.amazonaws.com/"
}
ubuntu@ip-192-168-1-24:~$
```

A screenshot of a Windows taskbar showing various pinned icons including File Explorer, Microsoft Edge, and several communication and productivity apps. The system tray shows the date and time as 10:37 AM on 12/29/2024, along with language and battery status indicators.



Screenshot of the AWS S3 console showing the 'Buckets' page. The 'General purpose buckets' tab is selected, displaying one bucket named 'my-final-projectes-1'. The bucket details show it was created on December 29, 2024, at 10:36:45 (UTC+05:30) in Asia Pacific (Mumbai) region ap-south-1. Action buttons include Copy ARN, Empty, Delete, and Create bucket.

Screenshot of the AWS CloudShell interface, showing the command line prompt and various AWS service icons in the toolbar.

BY Using command :- aws s3 cp don s3://my-final-projectes-1/ --region ap-south-1 --recursive

```
ubuntu@ip-192-168-1-24:~  
ubuntu@ip-192-168-1-24:~$ aws s3 cp don s3://my-final-projectes-1/ --region ap-south-1 --recursive  
ubuntu@ip-192-168-1-24:~$ cat don  
cat: don: Is a directory  
ubuntu@ip-192-168-1-24:~$ ls  
aws awscli2.rtf don  
ubuntu@ip-192-168-1-24:~$ cd don  
ubuntu@ip-192-168-1-24:~/don$ ls  
ubuntu@ip-192-168-1-24:~/don$ touch "welcome to my project" project  
ubuntu@ip-192-168-1-24:~/don$ ls  
project 'welcome to my project'  
ubuntu@ip-192-168-1-24:~/don$ cd ..  
ubuntu@ip-192-168-1-24:~$ aws s3 cp don s3://my-final-projectes-1/ --region ap-south-1 --recursive  
upload: don/welcome to my project to s3://my-final-projectes-1/welcome to my project  
upload: don/project to s3://my-final-projectes-1/project  
ubuntu@ip-192-168-1-24:~$
```

The screenshot shows the Amazon S3 console interface. The left sidebar includes sections for General purpose buckets, Storage Lens, and AWS Organizations settings. The main content area displays the 'Objects' tab for the bucket 'my-final-projectes-1'. The table lists the following objects:

| Name | Type | Last modified | Size | Storage class |
|-----------------------|------|---|------|---------------|
| project | - | December 29, 2024, 11:36:44 (UTC+05:30) | 0 B | Standard |
| welcome to my project | - | December 29, 2024, 11:36:44 (UTC+05:30) | 0 B | Standard |

BY Using command :- aws s3api put-bucket-versioning --bucket my-final-projectes-1 --versioning-configuration Status=Enabled --region ap-south-1

```
ubuntu@ip-192-168-1-24:~$ aws s3api put-bucket-versioning --bucket my-final-projectes-1 --versioning-configuration Status=Enabled --region ap-south-1
ubuntu@ip-192-168-1-24:~$
```

Amazon S3

General purpose buckets

Directory buckets

Table buckets [New](#)

Access Grants

Access Points

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

IAM Access Analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

Storage Lens groups

AWS Organizations settings

CloudShell Feedback

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ENG IN 11:54 AM 12/29/2024

○ LifeCycle Configuration

Lifecycle rule name
2 days delete policy

Status
Enabled

Scope
Entire bucket

Prefix

Object tags

Minimum object size

When no minimum object size is specified, the minimum object size for transitions is determined by the lifecycle configuration. [Learn more](#)

Maximum object size

Review transition and expiration actions

Current version actions

Day 0

- Objects uploaded

↓

Day 2

- Objects expire

Noncurrent versions actions

Day 0

No actions defined.

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ENG IN 12:03 PM 12/29/2024

➤ Lambda Configuration

Creating IAM Role For Lambda



Instances | EC2 | ap-south-1 | Lambda-Project | IAM | Global | ChatGPT

us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/roles/details/Lambda-Project?section=permissions

IAM > Roles > Lambda-Project

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

- User groups
- Users
- Roles**
- Policies
- Identity providers
- Account settings
- Root access management [New](#)

Access reports

- Access Analyzer
- External access

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Summary

Creation date: December 29, 2024, 12:15 (UTC+05:30)

Last activity: -

ARN: arn:aws:iam::039612886733:role/Lambda-Project

Maximum session duration: 1 hour

Permissions

Permissions policies (2) [Info](#)

You can attach up to 10 managed policies.

| Policy name | Type | Attached entities |
|---------------------|-------------|-------------------|
| AmazonEC2FullAccess | AWS managed | 1 |
| AmazonS3FullAccess | AWS managed | 1 |

Filter by Type: All types

Actions: Simulate, Remove, Add permissions

Instances | EC2 | ap-south-1 | Lambda-Project | IAM | Global | ChatGPT

us-east-1.console.aws.amazon.com/lambda/home?region=ap-south-1#/functions

Lambda > Functions

Functions (1)

Last fetched 30 seconds ago

Create function

Filter by tags and attributes or search by keyword

| Function name | Description | Package type | Runtime | Last modified |
|----------------|-------------|--------------|------------|----------------|
| Project-lambda | - | Zip | Python 3.9 | 29 minutes ago |

Actions

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➤ Configuration Simple Notification service

The screenshot shows the AWS SNS console for the 'MY-PROJECT' topic. The 'Details' section displays the topic name 'MY-PROJECT', ARN 'arn:aws:sns:ap-south-1:039612886733:MY-PROJECT', and type 'Standard'. A single subscription is listed under the 'Subscriptions' tab, which includes an endpoint '+918866162749' and a status of 'Confirmed'. The 'Protocol' is set to 'SMS'.

Creating Subscription of SNS

The screenshot shows the AWS SNS console for the 'MY-PROJECT' topic. A new subscription is being created with the ARN 'arn:aws:sns:ap-south-1:039612886733:MY-PROJECT:41c81851-269e-4563-a98c-38ba23557462'. The 'Details' section shows the ARN, endpoint '+918866162749', topic 'MY-PROJECT', and subscription principal 'arn:aws:iam::039612886733:root'. The status is 'Confirmed' and the protocol is 'SMS'.



➤ Creating Event Notification in S3 Bucket

The screenshot shows the AWS Lambda console interface. At the top, there's a navigation bar with tabs like ChatGPT, my-final-project-1, Project-lan..., and New Tab. Below the navigation bar, the URL is ap-south-1.console.aws.amazon.com/s3/buckets/my-final-projects-1?region=ap-south-1&bucketType=general&tab=properties. The main content area shows the properties of the 'my-final-projects-1' bucket. Under the 'Event notifications' section, there is one entry for an SNS topic named 'MY-PROJECT'. The 'Create event notification' button is visible at the top right of this section.





○ Configuring CloudFront

The screenshot shows the AWS CloudFront distribution configuration page for distribution ID E20MPP3T6A2UB5. The left sidebar includes sections for Distributions, Telemetry, Reports & analytics, and CloudShell/Feedback. The main content area has tabs for General, Security, Origins, Behaviors, Error pages, Invalidations, Tags, and Logging, with General selected. The General tab displays the distribution's details, including its distribution domain name (d2qs49jqxijq73.cloudfront.net), ARN (arn:aws:cloudfront:039612886733:distribution/E20MPP3T6A2UB5), and last modified date (December 29, 2024 at 12:35:10 PM UTC). The Settings section shows the price class set to 'Use all edge locations (best performance)', supported HTTP versions (HTTP/2, HTTP/1.1, HTTP/1.0), and standard logging (Off). The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray indicating the date and time.