

FINAL REPORT: CLOUD SECURITY IMPLEMENTATION

Title: Implementation of IAM Policies, Secure Storage, and Data Encryption on AWS

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Submission: Internship Deliverable

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1. Introduction

This report details the implementation of IAM policies, secure S3 storage, and data encryption on the AWS cloud platform as part of the Cloud Security Internship at CodTech.

2. IAM Policy Implementation

- Created 3 IAM Groups:
 - Admins — Attached AdministratorAccess
 - Auditors — Attached AmazonS3ReadOnlyAccess
 - Developers — (Custom policy optional)
- Created 3 IAM users:
 - admin_user → assigned to Admins
 - auditor_user → assigned to Auditors
 - developer_user → assigned to Developers
- All users successfully assigned to their groups with appropriate policies.

The screenshot shows the AWS IAM 'Create user' wizard at Step 2: Set permissions. The 'Add user to group' option is selected. The 'User groups' table lists three groups: Admins, Auditors, and Developers, each with 0 users and specific policies attached. A note at the bottom suggests using a permissions boundary to control maximum permissions.

Group name	Users	Attached policies	Created
Admins	0	AdministratorAccess	2025-06-22 (6 minutes ago)
Auditors	0	AmazonS3ReadOnlyAccess	2025-06-22 (5 minutes ago)
Developers	0	-	2025-06-22 (7 minutes ago)

User created successfully
You can view and download the user's password and email instructions for signing in to the AWS Management Console.

Users (3) info
An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

User name	Path	Group:	Last activity	MFA	Password age	Console last sign-in
admin_user	/	1	-	-	-	-
auditor_user	/	0	-	-	-	-
developer_user	/	1	-	-	-	-

3. Secure S3 Bucket Setup

Bucket Name	Purpose	Encryption
dev-bucket-kishore	Developer uploads	SSE-S3 (AES-256)
backup-bucket-kishore	Encrypted backups	SSE-KMS (backupKey)
logs-bucket-kishore	Log storage	SSE-S3

Successfully created bucket "backup-bucket-kishore"
To upload files and folders, or to configure additional bucket settings, choose [View details](#).

Account snapshot - updated every 24 hours All AWS Regions
Storage lens provides visibility into storage usage and activity trends. Metrics don't include directory buckets. [Learn more](#)

[View Storage Lens dashboard](#)

General purpose buckets		Directory buckets	
General purpose buckets (4) <small>All AWS Regions</small>	Buckets are containers for data stored in S3.	View details	
Find buckets by name		Create bucket	
Name	AWS Region	IAM Access Analyzer	Creation date
backup-bucket-kishore	Europe (Stockholm) eu-north-1	View analyzer for eu-north-1	June 22, 2025, 20:58:25 (UTC+05:30)
codtech-cloud-bucket	Europe (Stockholm) eu-north-1	View analyzer for eu-north-1	June 18, 2025, 20:30:50 (UTC+05:30)
dev-bucket-kishore	Europe (Stockholm) eu-north-1	View analyzer for eu-north-1	June 22, 2025, 20:24:04 (UTC+05:30)
logs-bucket-kishore	Europe (Stockholm) eu-north-1	View analyzer for eu-north-1	June 22, 2025, 20:48:50 (UTC+05:30)

Bucket 1 : dev-bucket-kishore :-

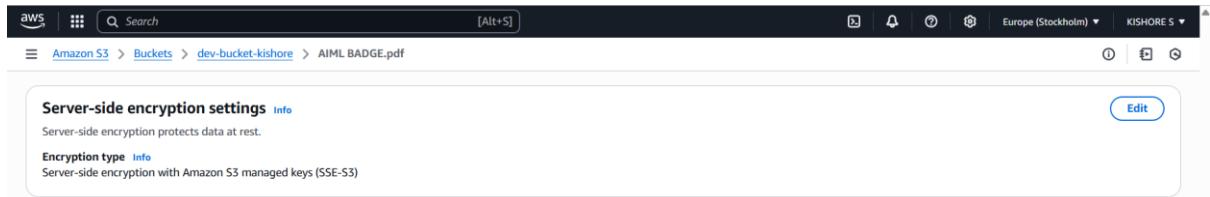


Bucket 2 : backup-bucket-kishore :-

Bucket 3 : logs-bucket-kishore :-

4. Test File Upload (Encryption Check)

- Uploaded a test file to dev-bucket
- Verified encryption: **AES256 (SSE-S3)** shown in object details



5. Conclusion

All security policies and encryption configurations have been successfully implemented and tested. This completes the Cloud Security implementation as part of the CodTech internship program.