K21Academy
Learn Cloud, AI & ML from Experts

10 Hands-On AWS Labs to Land a High-Paying Job

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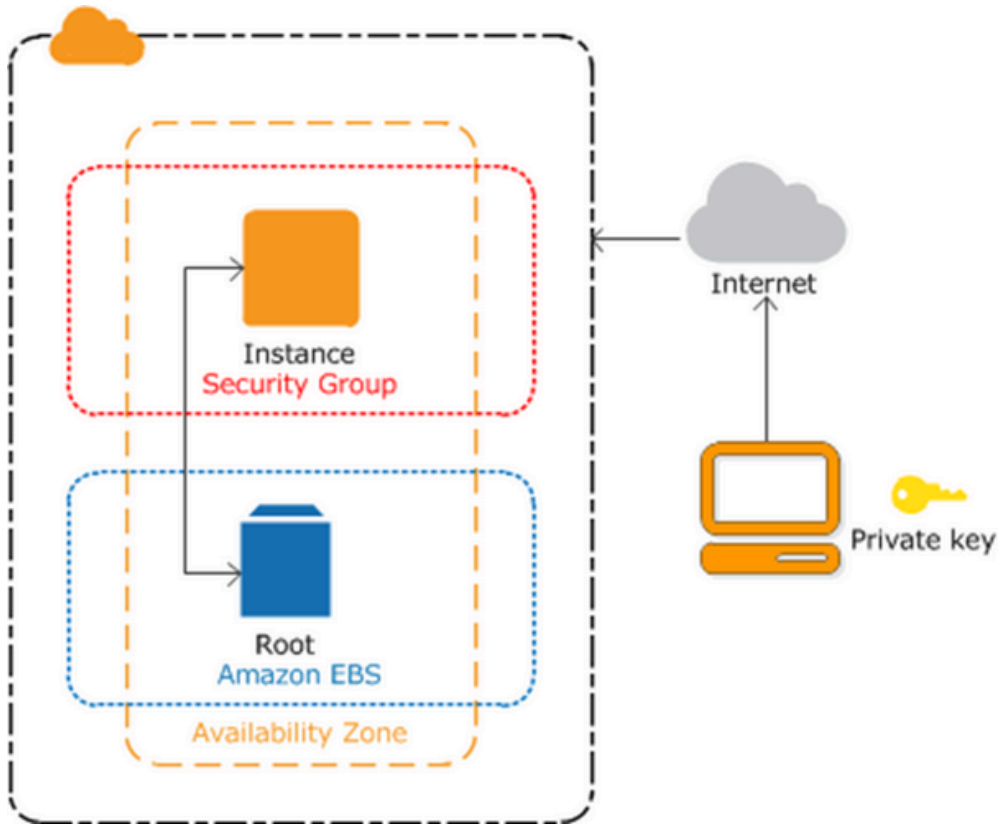
Why Master AWS?

Mastering AWS provides scalable and reliable cloud solutions, enabling efficient deployment and management of applications. It offers tools and services for various business needs, from storage to machine learning. Expertise in AWS enhances career prospects in a cloud-dominated tech industry.

Lab 1: Create And Connect To Windows EC2 Machine

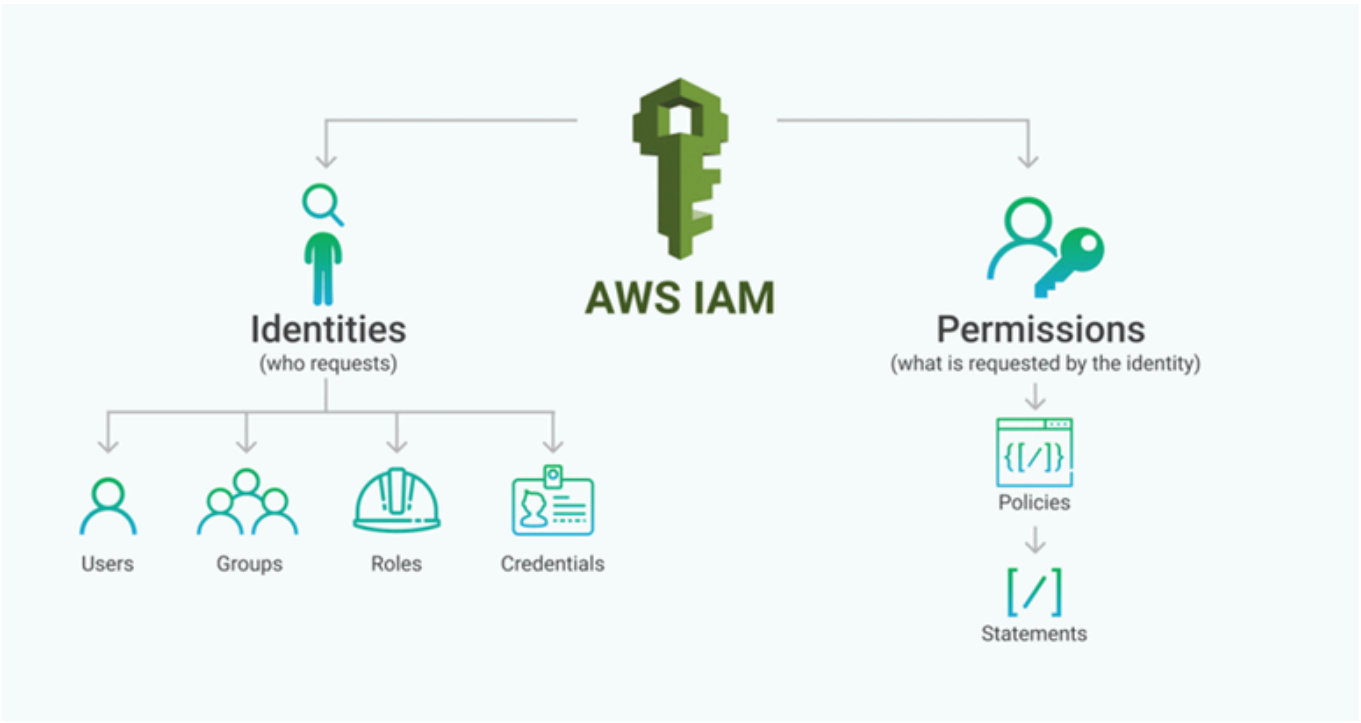


Objective: Setting up and securely connecting to a Windows EC2 instance on AWS

Steps:

- Launching the Windows Instance
- Connecting to the Windows Instance
- Resetting Password for Windows Instance

Lab 2: Working with AWS IAM

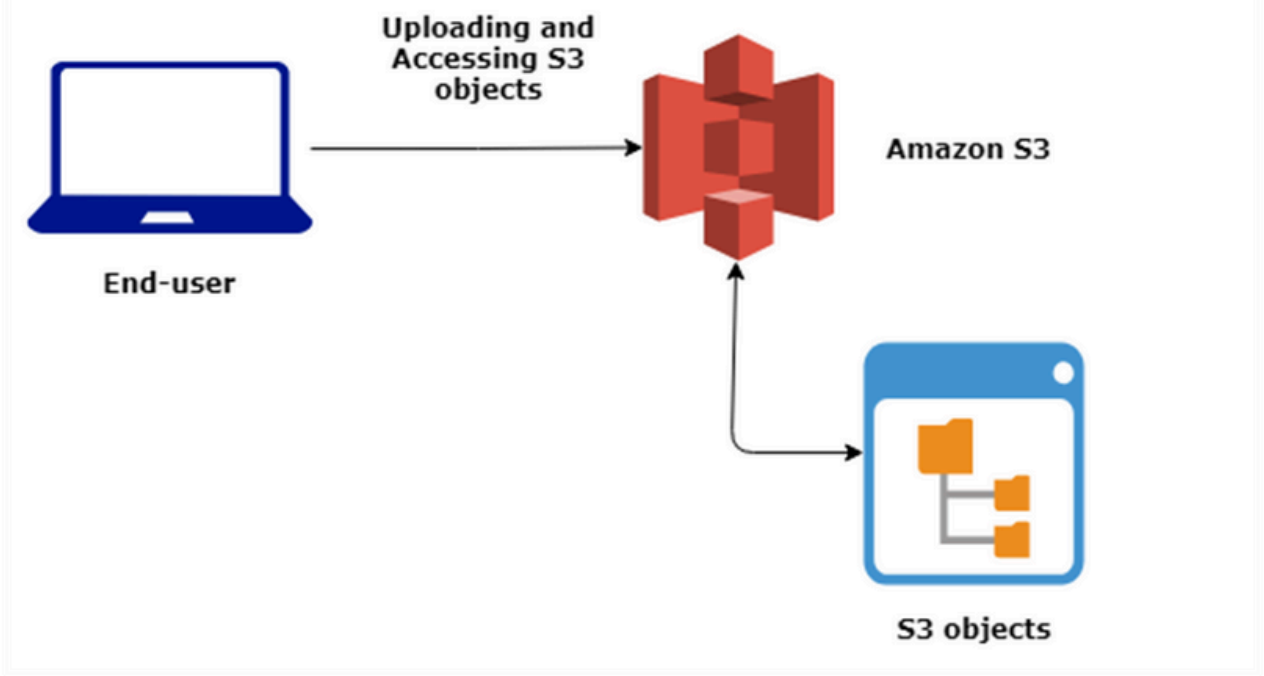


Objective: Managing and securing access to AWS resources using IAM

Steps:

- Create IAM User, Groups, Permissions
- How to Create Access Keys & Secret Keys
- Assign Policy to Group, and Add User to Group

Lab 3: Create S3 Bucket, Upload & Access Files & Host the Website

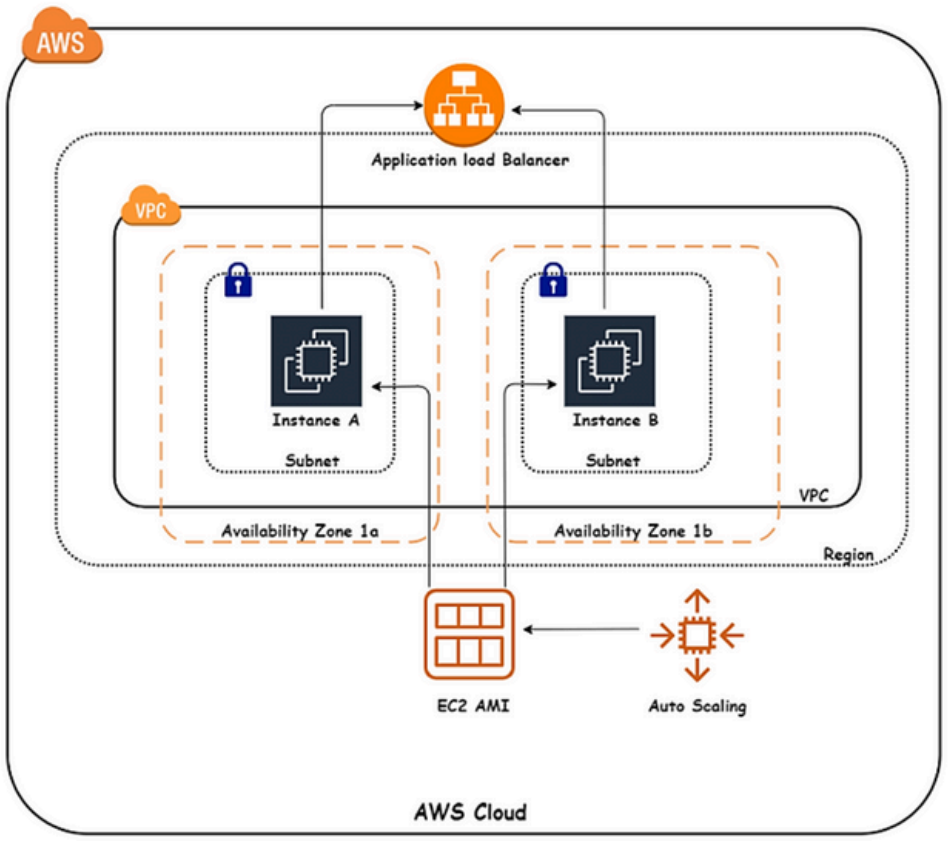


Objective: Learn to set up an S3 bucket, handle file operations, and host a static website on Amazon S3.

Steps:

- Create S3 Bucket, Grant Public Access via Bucket Policy
- Enable versioning on an S3 bucket to preserve, retrieve, and restore all objects.
- Host a static website on S3 by serving HTML files.

Lab 4: Configure Load Balancer and Auto Scaling on EC2

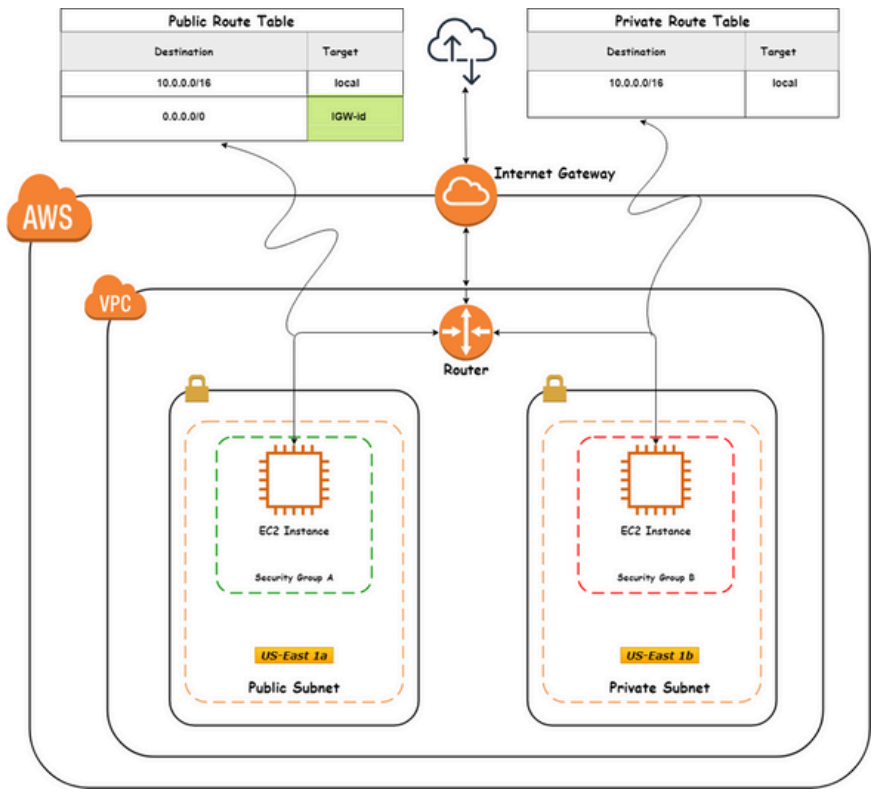


Objective: Learn to configure Load Balancers and Auto Scaling on EC2 to enhance application performance and resilience.

Steps:

- Launch two web servers in separate Availability Zones.
- Create an Application Load Balancer to distribute traffic.
- Set up and test Auto Scaling with simulated CPU load

Lab 5: Create a Custom Virtual Private Cloud

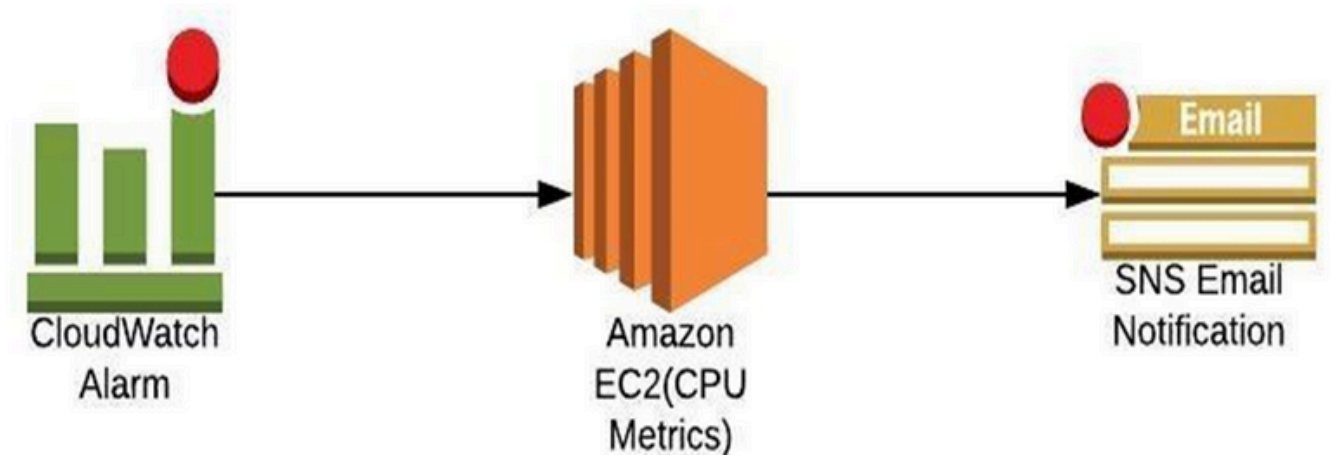


Objective: Learn to build a Custom VPC, set up subnets, and configure security in AWS.

Steps:

- Set up a Custom VPC with public and private subnets.
- Configure Internet Gateway and NAT Gateway for internet access.
- Launch instances in both subnets and connect via Bastion Host.

Lab 6: Set CloudWatch Alerts for EC2 CPU Utilization

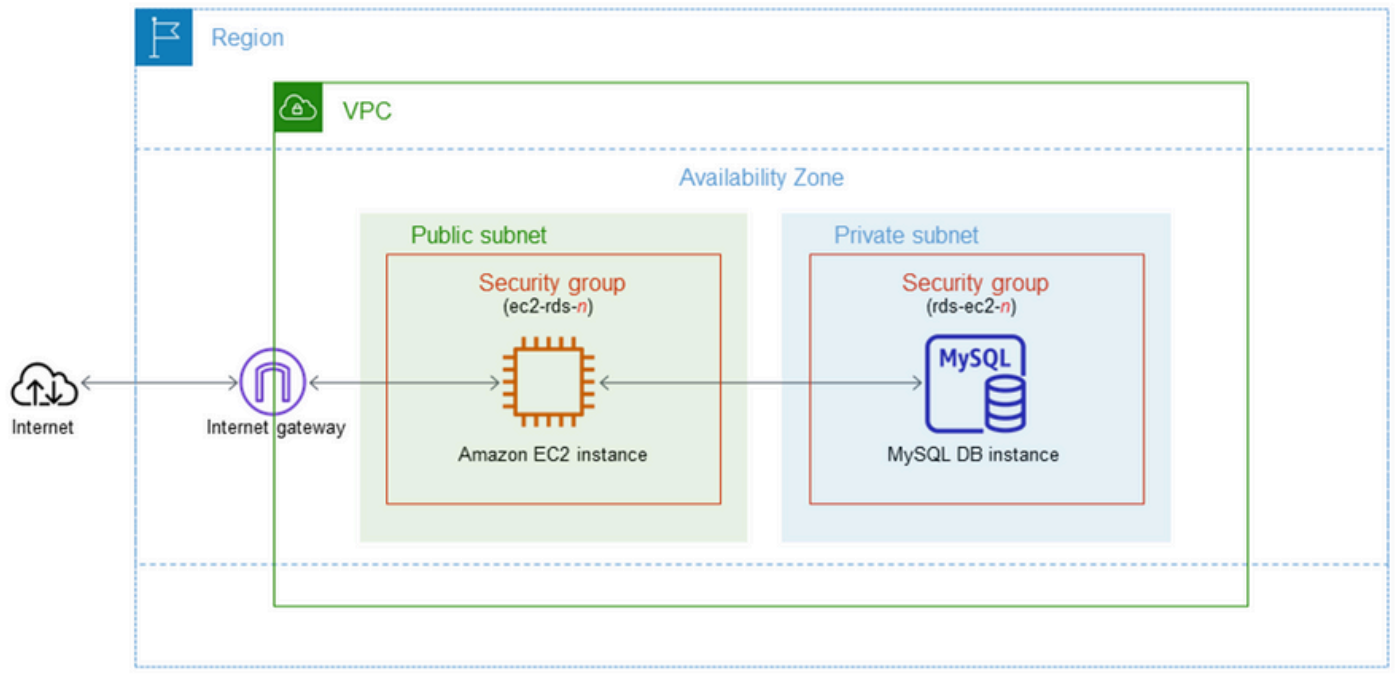


Objective: Learn to configure CloudWatch to monitor EC2 CPU utilization and set up automated notifications.

Steps:

- Launch a new EC2 instance.
- Set up monitoring for the EC2 instance using CloudWatch.
- Create alerts based on CPU utilization or other metrics..

Lab 7: Set Up MySQL DB Instance in AWS RDS

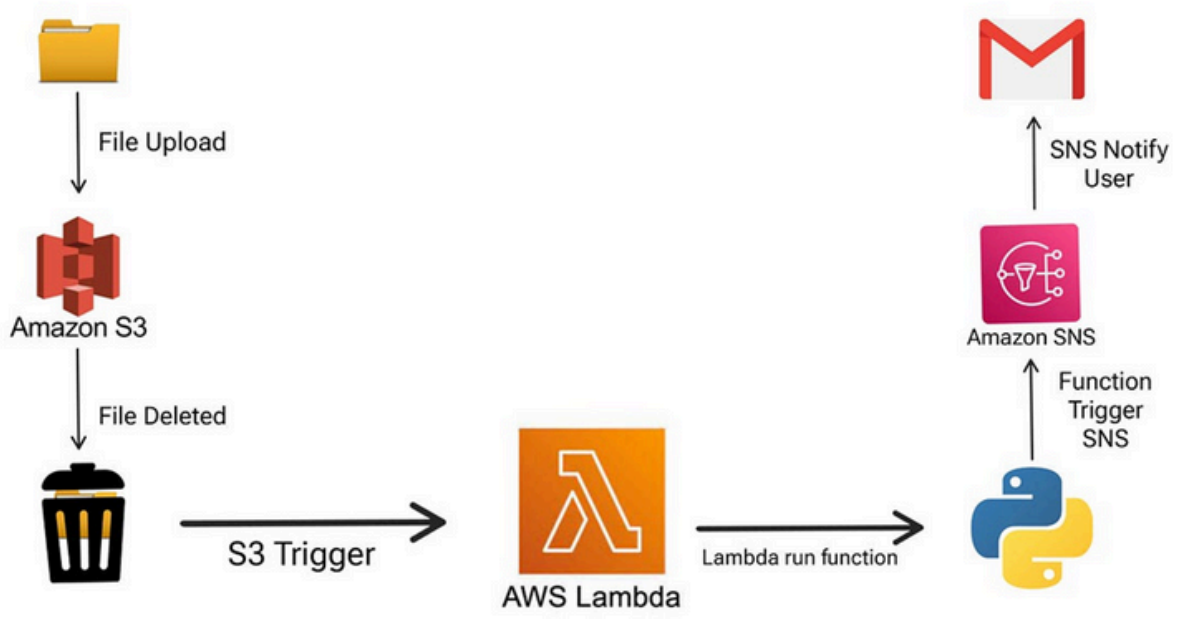


Objective: Learn to deploy and configure a MySQL database using Amazon RDS

Steps:

- Configure a MySQL database on Amazon RDS.
- Set up Workbench on Windows EC2.
- Use Workbench to connect to the RDS MySQL database

Lab 8: Working with Event-Driven Architectures

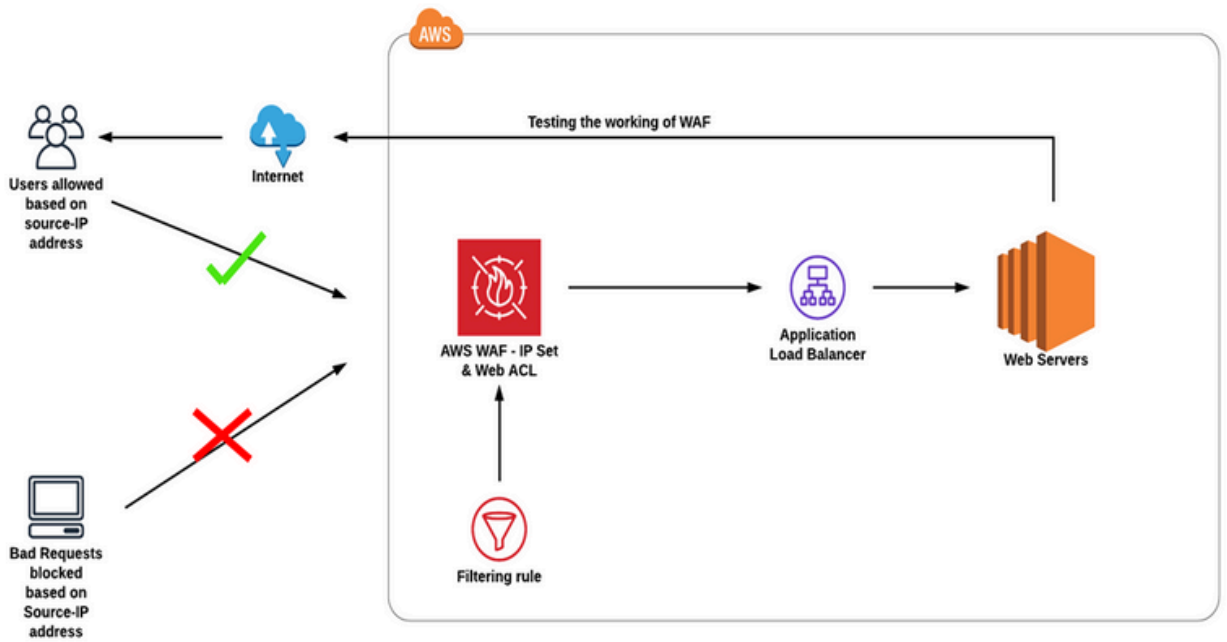


Objective: Learn to build event-driven architectures using AWS Lambda, SES, SNS, and SQS for automated, scalable workflows.

Steps:

- Set up S3 to trigger a Lambda function on object addition.
- Use Lambda and SES for email notifications.
- Configure Lambda to send emails based on SQS messages using SNS.

Lab 9: Block Web Traffic with WAF in AWS

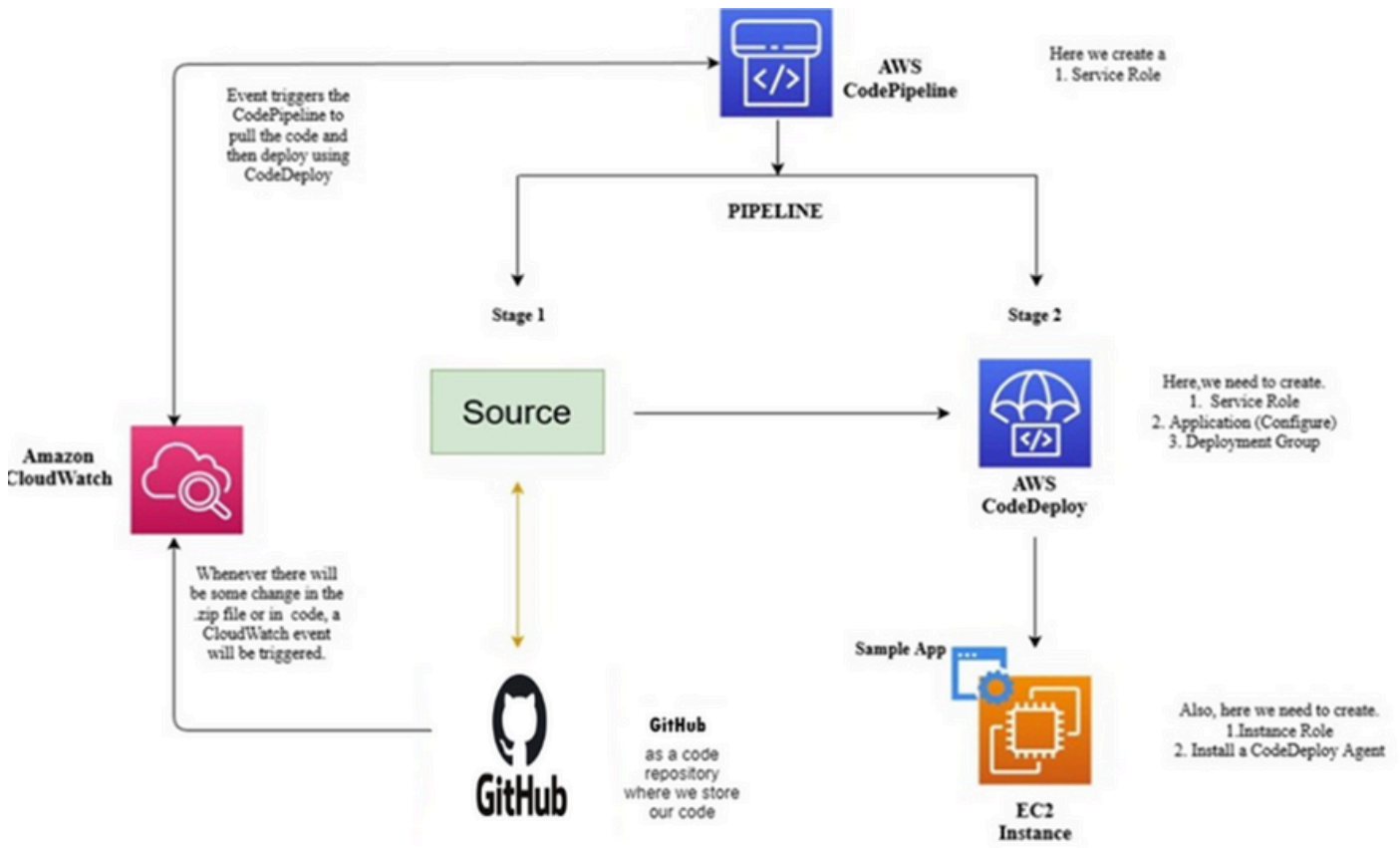


Objective: Learn to secure web applications by blocking traffic with AWS WAF

Steps:

- Deploy servers in separate Availability Zones.
- Set up an Application Load Balancer.
- Set up WAF with IP sets and a web ACL, then test its effectiveness.

Lab 10: Create a Simple Code Pipeline in AWS



Objective: Learn to create and automate a CI/CD pipeline using AWS CodePipeline

Steps:

- Create a repository and add sample code.
- Set up an EC2 instance and deployment group.
- Build and verify your CI/CD pipeline.