Lab: Building a Highly Available and DDoS-Protected Web Architecture

Objective

Deploy a web application behind an ALB with Auto Scaling and AWS Shield/WAF.

Part A: AWS Console Steps

1. Create a Launch Template for EC2

2. Set up an Auto Scaling Group across 2 AZs

3. Attach an Application Load Balancer

4. Associate AWS WAF with ALB

5. Enable AWS Shield (Standard is automatic)

Part B: Terraform Steps

1. Define launch template and ASG

2. Create ALB and target group

3. Enable WAF and associate it with ALB

Validation

- Check EC2 health and ALB status

- Review WAF logs and test access patterns