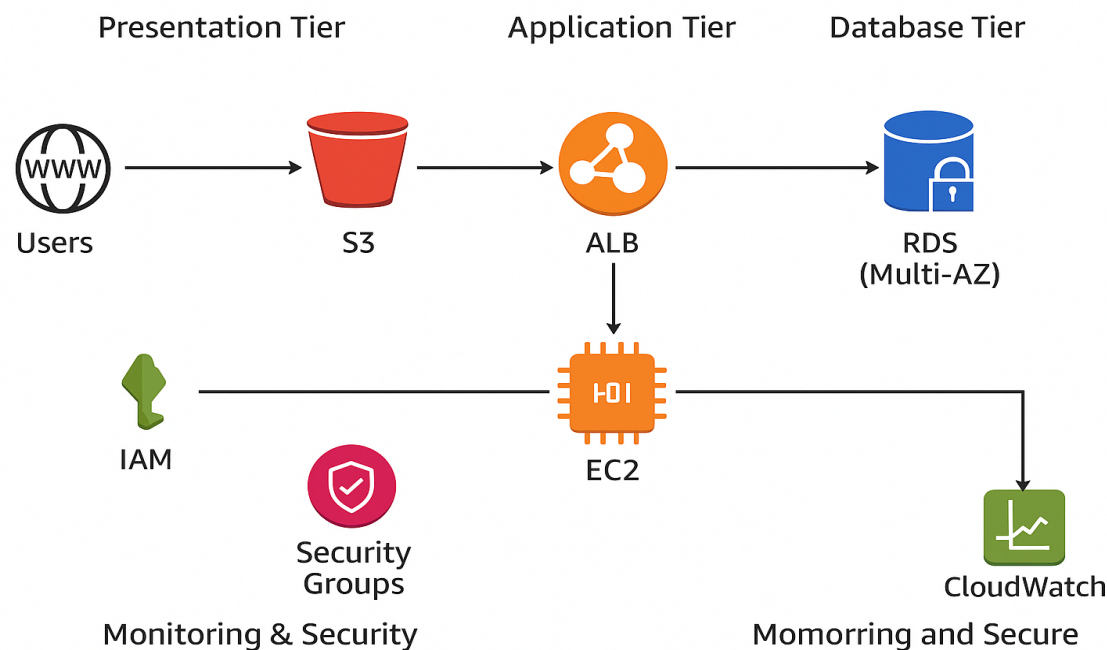


AWS Scalable Web Application Architecture

Overview:

This document presents the design of a **three-tier scalable web application architecture** built on Amazon Web Services (AWS). The architecture ensures high availability, security, and cost efficiency while handling dynamic workloads effectively using AWS best practices.

Architecture Diagram:



Tier	AWS Service	Description
Presentation Tier	Amazon S3	Hosts static web content such as HTML, CSS, and images.
Application Tier	EC2 + ALB	Processes application logic and distributes requests via Load Balancing.
Database Tier	Amazon RDS (Multi-AZ)	Stores and replicates data for fault tolerance.
Monitoring	Amazon CloudWatch	Tracks performance metrics and sends alerts.
Security	IAM, Security Groups, KMS	Manages identity, access control, and encryption.

Key Highlights:

- Ensures **high availability** with Multi-AZ database replication.
- Provides **scalability** using Auto Scaling and Load Balancing.
- Implements **data protection** with IAM roles and KMS encryption.
- Enables **cost optimization** through S3 lifecycle management and EC2 right-sizing.
- **Monitored** and **automated performance alerts** using CloudWatch for operational excellence.