

# Hosting Web Applications on AWS Cloud

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# Introduction

- In today's fast-paced and interconnected world, businesses are constantly seeking innovative solutions to enhance user experiences, increase scalability, and improve overall efficiency. Our three-tier web application architecture is designed precisely to address these challenges and provide you with a cutting-edge solution that aligns with industry best practices.

# Why Cloud Computing

## ADVANTAGES OF CLOUD COMPUTING

- Trade capital expense for operational expense
- Benefit from massive economies of scale
- Scale based on actual measures usage
- Stop spending money running and maintaining data centers
- Go global in minutes by leverage global infrastructure

## PROBLEM SOLVED BY CLOUD

- High availability and fault-tolerance
- Cost-Effectiveness
- Scalability
- Agility

# Hosting Web App on AWS Cloud



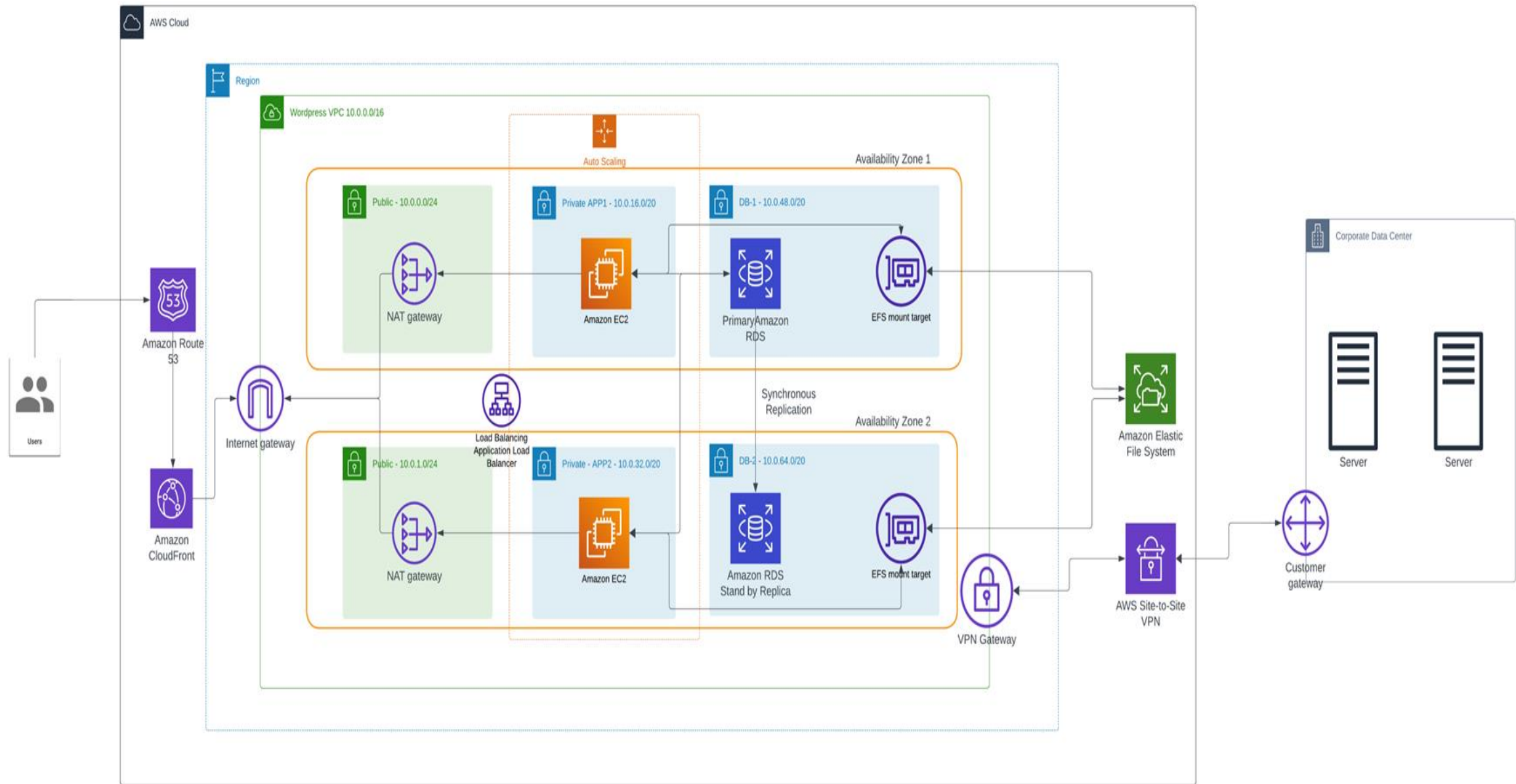
## ARCHITECTURE OVERVIEW



By Creating A 3-tier web application architecture leveraging AWS (Amazon Web Services) cloud services. This architecture will aim to deliver a scalable, highly available, and secure web application environment that separates presentation, application logic, and data layers. By following the proposed 3-tier architecture, organizations can benefit from improved scalability, increased fault tolerance, and enhanced security for their web applications.







# Presentation layer

Describes the components responsible for user interaction, such as web servers, load balancers, and content delivery networks (CDNs). This architecture will consist of CloudFront as our CDN which will ensure faster delivery, lower latency and improving performance and Elastic Load Balancer will ensure high availability and scalability by distributing incoming traffic


# Application layer

Responsible for implementing application logic, Processing data, and facilitating the communication between the presentation layer and the data layer It will consist of EC2 instances as our computing power in an Auto scaling group to scale based on the capacity needed

# Data layer




Focuses on managing and storing data required by the application and provides the necessary functionality for data access, storage, and retrieval. We will use RDS in a multi-AZ deployment for maximum availability and fault-tolerance and EFS as our shared file storage which is highly available, scalable and high performance





# Advantages of our architecture

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- Separation of presentation, application, and data tiers allows for modularity and easier maintenance. Change or updates on any tier don't affect the others
  - Each tier can be scaled independently based on demand for better cost optimization
  - High performance by leveraging AWS global infrastructure
  - Highly available and redundant as there is no single point of failure
  - Security with strict access control and data protection
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# Thank You