

# AWS - Introduction

**VISHWANATH M S**  
**VISHWACLOUDLAB.ORG**

How can I use AWS services to develop,  
deploy and scale my applications?

## Enterprise Applications



Virtual Desktops



Sharing & Collaboration

## Platform Services

### Analytics



Hadoop



Real-time Streaming Data



Data warehouse



Data Pipelines

### App Services



Queuing & Notifications



Workflow



App streaming



Transcoding



Email



Search

### Deployment & Management



One-click web app deployment



Dev/ops resource management



Resource Templates



Code Deploy



Code Pipeline



Code Commit

### Mobile Services



Identity



Sync



Mobile Analytics



Push Notifications

## Administration & Security



Identity Management



Access Control



Usage & Resource Tracking



Service Catalog



Key Storage & Management



Monitoring and Logs

## Core Services



Compute  
(VMs, Auto-scaling and Load Balancing)



Storage  
(Object, Block and Archival)



CDN



Databases  
(Relational, NoSQL, Caching)



Networking  
(VPC, DX, DNS)

## Infrastructure



Regions



Availability Zones



Points of Presence

# The 5 Pillars of the AWS Well-Architected Framework

- **Cost Optimization**
- **Reliability**
- **Operational Excellence**
- **Performance Efficiency**
- **Security**

**Note: -- Abbreviation -- (CROPS)**

# Cost Optimization

## Design Principles

There are five design principles for cost optimization in the cloud:

- Adopt a consumption model
- Measure overall efficiency
- Stop spending money on data center operations
- Analyze and attribute expenditure
- Use managed services to reduce cost of ownership

# Reliability

## Design Principles

There are five design principles for reliability in the cloud:

- Test recovery procedures
- Automatically recover from failure
- Scale horizontally to increase aggregate system availability
- Stop guessing capacity
- Manage change in automation

# Operational Excellence

## Design Principles

There are six design principles for operational excellence in the cloud:

- Perform operations as code
- Annotate documentation
- Make frequent, small, reversible changes
- Refine operations procedures frequently
- Anticipate failure
- Learn from all operational failures

# Performance Efficiency

## Design Principles

There are five design principles for performance efficiency in the cloud:

- Democratize advanced technologies
- Go global in minutes
- Use serverless architectures
- Experiment more often
- Mechanical sympathy



# Security

## Design Principles

There are six design principles for security in the cloud:

- Implement a strong identity foundation
- Enable traceability
- Apply security at all layers
- Automate security best practices
- Protect data in transit and at rest
- Prepare for security events