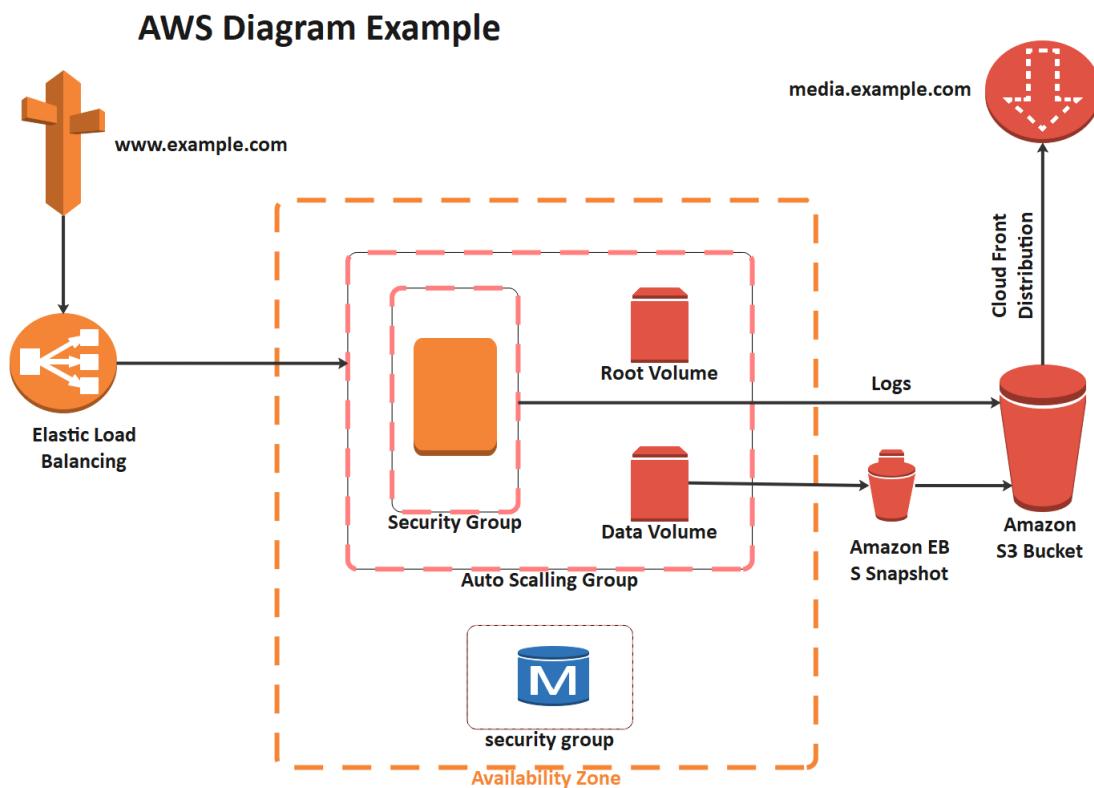


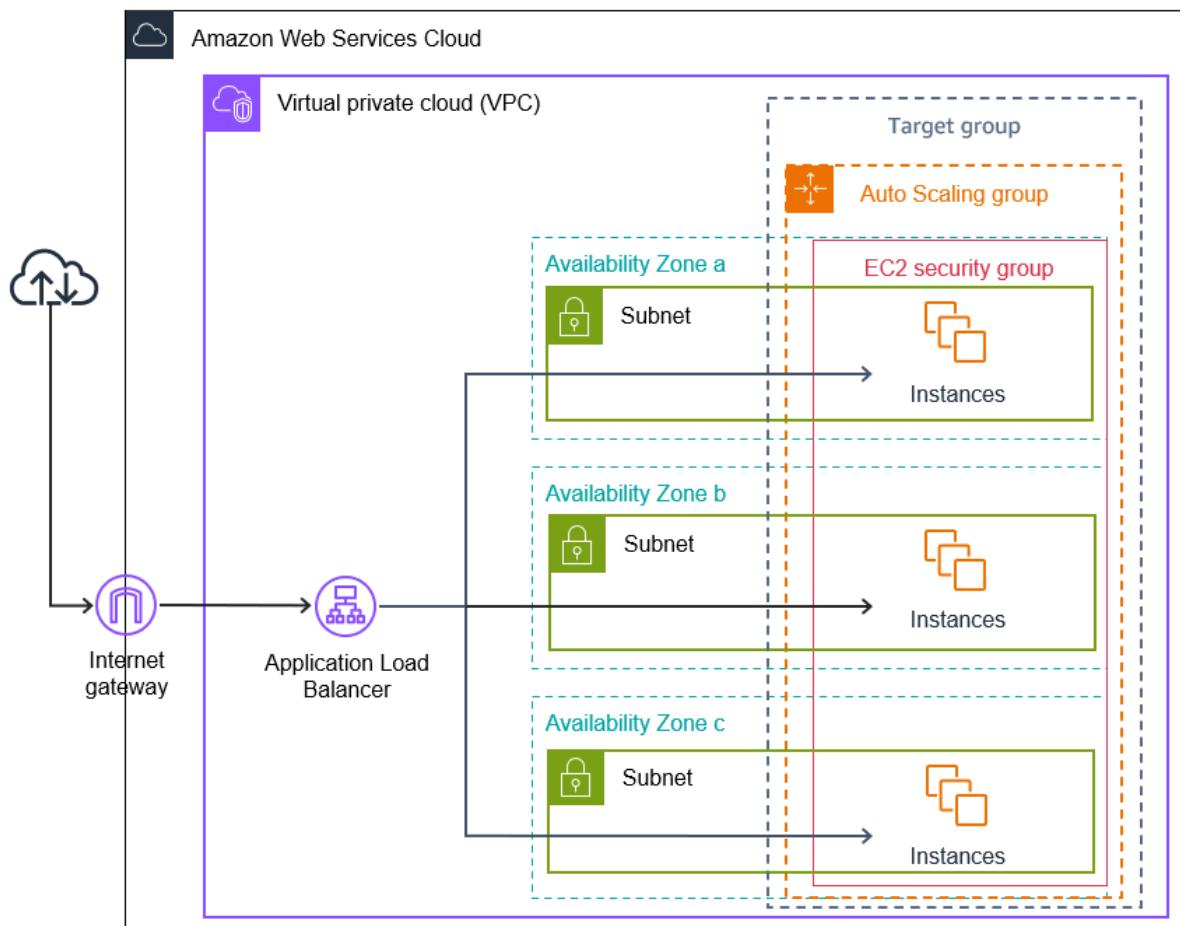
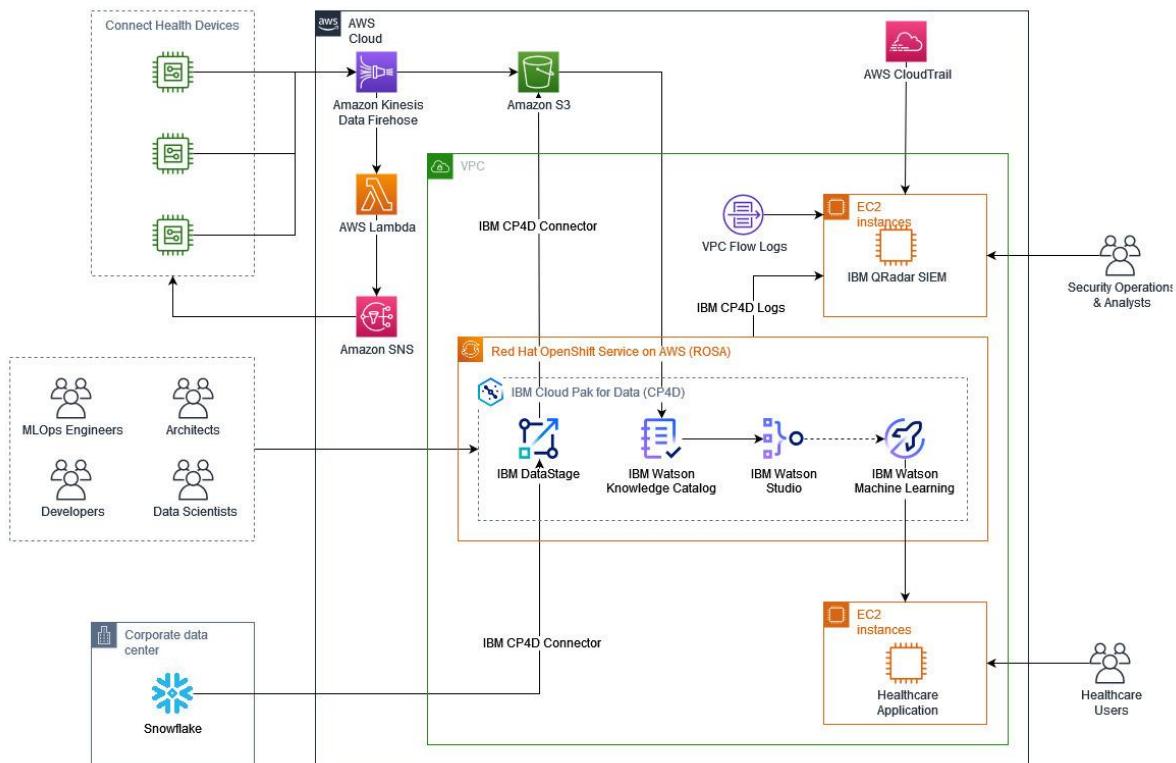
Below is the **MASTER INDEX — COMPLETE AWS ENGINEER CONCEPTS, CHAPTERS & TOPICS**
This is the **official-level + industry-level syllabus** you must finish to become **job-ready AWS Engineer (₹6–9 LPA)** in 2026.

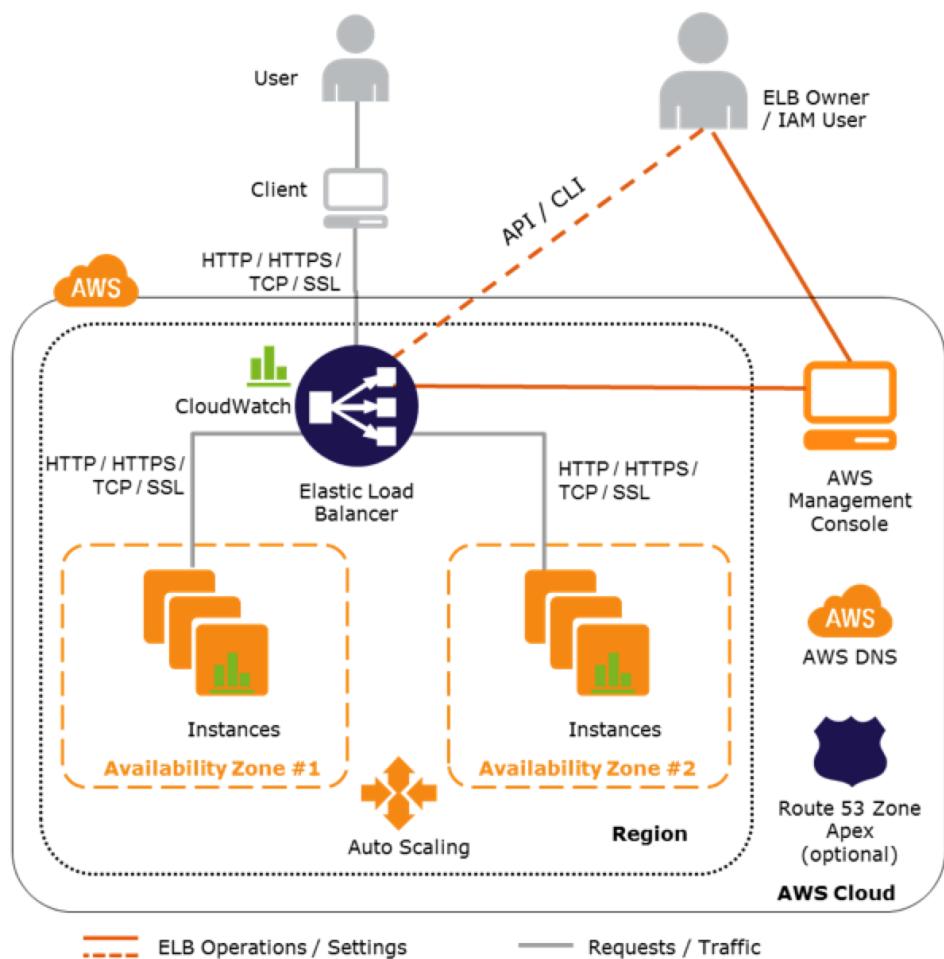
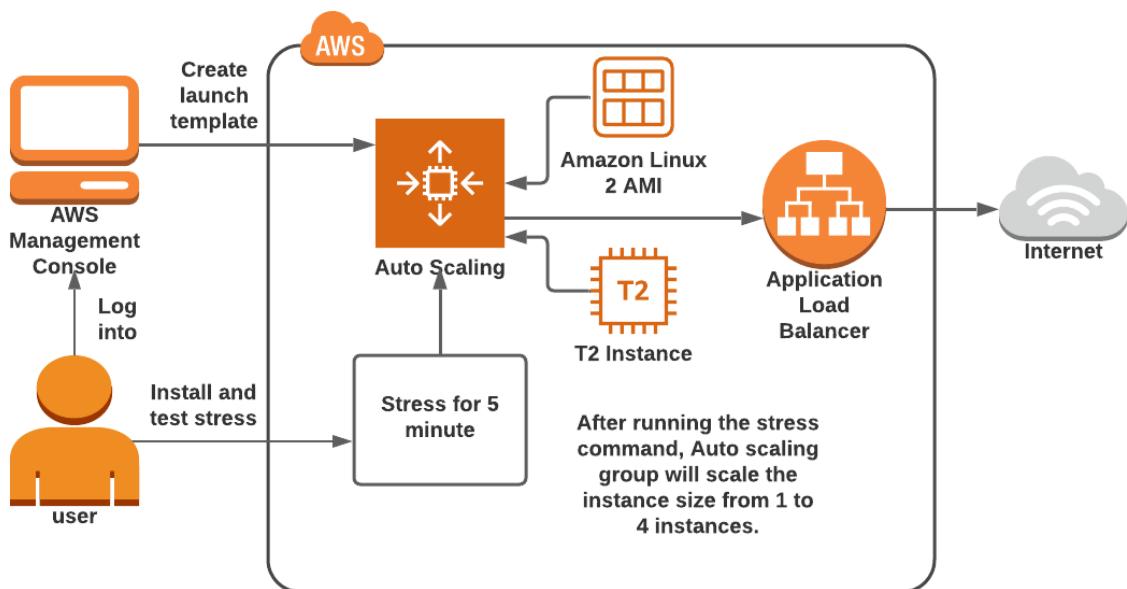
Think of this like a **BOOK TABLE OF CONTENTS** ■

👉 *If you finish every chapter below with hands-on, you are employable.*

🌐 AWS ENGINEER – COMPLETE CONCEPT & CHAPTER INDEX (END-TO-END)







CHAPTER 1: CLOUD COMPUTING FUNDAMENTALS

Concepts

- What is Cloud Computing
- Why Cloud (business + technical reasons)
- CAPEX vs OPEX
- Elasticity vs Scalability

Topics

- IaaS / PaaS / SaaS
 - Public / Private / Hybrid Cloud
 - Shared Responsibility Model
 - Cloud Service Models comparison
 - Cloud advantages & limitations
-

CHAPTER 2: AWS GLOBAL INFRASTRUCTURE

Concepts

- How AWS data centers are designed

Topics

- Regions
 - Availability Zones (AZ)
 - Edge Locations
 - Local Zones
 - AWS Global Accelerator
 - Fault tolerance & low latency design
-

CHAPTER 3: AWS ACCOUNT & PRICING

Concepts

- Pay-as-you-go model

Topics

- AWS Free Tier
 - Pricing models
 - On-Demand
 - Reserved
 - Spot
 - AWS Billing Dashboard
 - Cost Explorer
 - Budgets & alerts
 - Root user best practices
-

CHAPTER 4: LINUX FUNDAMENTALS FOR AWS

Concepts

- Linux as cloud OS

Topics

- Linux file system
/etc /var /home /opt
 - Users & groups
 - File permissions
chmod, chown
 - Package management
yum, apt
 - Services
systemctl
 - Logs
/var/log
 - SSH & key-based authentication
-

CHAPTER 5: NETWORKING FUNDAMENTALS (MANDATORY)

Concepts

- How data flows on internet

Topics

- OSI Model
 - TCP/IP Model
 - IP addressing
 - CIDR notation
 - Subnetting basics
 - DNS working
 - HTTP vs HTTPS
 - Common ports
22, 80, 443
 - Firewalls
 - Load balancing basics
-

CHAPTER 6: AWS IDENTITY & SECURITY (IAM)

Concepts

- Authentication vs Authorization

Topics

- IAM Users
 - IAM Groups
 - IAM Roles
 - IAM Policies (JSON)
 - Managed vs Inline policies
 - Least privilege principle
 - MFA
 - IAM Access Analyzer
 - AWS KMS (intro)
-

CHAPTER 7: COMPUTE – AMAZON EC2 (CORE)

Concepts

- Virtual machines in cloud

Topics

- EC2 instance types & families
- AMI
- Key pairs
- Security groups
- Elastic IP
- User Data scripts
- Auto Scaling Groups
- Launch Templates
- Load Balancers
 - ALB
 - NLB (intro)

CHAPTER 8: STORAGE SERVICES

Concepts

- Block vs Object vs File storage

Topics

- Amazon S3
 - Buckets & objects
 - Permissions
 - Bucket policies
 - Versioning
 - Lifecycle rules
- EBS
- EFS

- S3 Glacier
 - Storage selection strategy
-

CHAPTER 9: DATABASE SERVICES

Concepts

- Managed databases

Topics

- Amazon RDS
 - MySQL / PostgreSQL
 - Multi-AZ deployment
 - Automated backups
 - Read replicas (intro)
 - DynamoDB basics
 - SQL vs NoSQL
-

CHAPTER 10: VIRTUAL PRIVATE CLOUD (VPC)

Concepts

- Private networking in AWS

Topics

- VPC creation
- CIDR planning
- Subnets (Public / Private)
- Route tables
- Internet Gateway
- NAT Gateway
- Security Group vs NACL
- Bastion Host
- VPC traffic flow

CHAPTER 11: HIGH AVAILABILITY & SCALING

Concepts

- Fault tolerance
- Disaster recovery

Topics

- Multi-AZ architecture
 - Auto Scaling strategies
 - Load balancing strategies
 - Backup & restore
 - RTO & RPO (intro)
-

CHAPTER 12: MONITORING, LOGGING & AUDIT

Concepts

- Observability

Topics

- Amazon CloudWatch
 - Metrics
 - Logs
 - Alarms
 - CloudTrail
 - AWS Config (intro)
 - Monitoring EC2, ALB, RDS
-

CHAPTER 13: AUTOMATION & MANAGEMENT

Concepts

- Infrastructure as Code

Topics

- AWS CLI
 - EC2 User Data
 - CloudFormation
 - Templates
 - Stacks
 - Change Sets
-

CHAPTER 14: COST OPTIMIZATION (FINOPS BASICS)

Concepts

- Cost control in cloud

Topics

- Right sizing
 - Storage tiering
 - Spot instances
 - Cost Explorer analysis
 - Budget alerts
 - Cost optimization best practices
-

CHAPTER 15: SECURITY BEST PRACTICES

Topics

- IAM hardening
 - Root account security
 - Network security layers
 - Encryption at rest & in transit
 - Shared responsibility revisited
-

CHAPTER 16: REAL-TIME AWS PROJECT ARCHITECTURE

Topics

- Static website hosting on S3
 - Highly available web application (EC2 + ALB + ASG + RDS)
 - Secure VPC design
 - IAM security hardening
 - CloudWatch monitoring project
 - Cost optimized architecture
-

CHAPTER 17: TROUBLESHOOTING & INTERVIEW SCENARIOS

Topics

- EC2 not reachable
 - Website down troubleshooting
 - IAM permission denied errors
 - High billing issue
 - RDS connectivity problems
-

CHAPTER 18: JOB PREPARATION

Topics

- Resume project mapping
 - Common AWS interview questions
 - Architecture explanation practice
 - Role-based responsibilities
-

JOB ROLES THIS INDEX PREPARES YOU FOR

- AWS Cloud Engineer
- Associate Cloud Engineer
- Cloud Infrastructure Engineer
- Junior DevOps Engineer

- Platform Support Engineer
-

⭐ FINAL TRUTH (IMPORTANT)

- ✓ This index = **complete AWS Engineer syllabus**
 - ✓ Finish **hands-on for each chapter**
 - ✓ VPC + IAM + EC2 = **interview core**
 - ✓ Projects convert learning → job
-

➡️ soon NEXT (Tell me what you want)

- 1 Chapter-wise detailed notes (one chapter at a time)
- 2 Hands-on labs mapped to each chapter
- 3 Interview Q&A per chapter
- 4 90-day daily execution plan

Just reply with **chapter number or option (1–4)** 

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