AWS Solutions Architect Associate Training

1. ***Introduction to Cloud Computing***
   a.   What is Cloud Computing
   b.   Benefits of Cloud Computing
   c.   Cloud Service Offerings - IaaS SaaS & PaaS
   d.   Cloud deployment models
   e.   Who should learn AWS
   f.   Opportunities & Job Roles in the cloud

2. ***Networking - VPC***
   a.   VPC (Virtual Private Cloud)
   b.   Private & public subnets
   c.   Calculating CIDR Blocks Internet Gateways
   d.   Route Tables
   e.   Elastic IPs & public IPs
   f.   Securing VPC (Security groups & NACLs)
   g.   VPC Peering Connection
   h.   NAT Gateway
   i.   VPC Endpoints

3. ***EC2 (Elastic Compute Cloud)***
   a.   EC2 Instances
   b.   Amazon Machine Images (AMI)
   c.   Instance Resizing
   d.   Instance Types Generations & Sizes
   e.   On-Demand Instances

4. ***EBS (Elastic Block Store)***
   a.   Volume Types
   b.   Creating Snapshots (Backups)
   c.   Restoring from Snapshots
   d.   Resizing Volumes
   e.   Migrating Volumes to Another Region

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5. EFS
    a. Introduction to EFS
    b. Creating EFS file system
    c. Mounting to multiple EC2 instances

6. Elastic Load Balancer (ELB)
    a. Application Load Balancer
    b. Classic Load Balancer
    c. Network Load Balancer
    d. Gateway LoadBalancer

7. Auto Scaling
    a. Auto Scaling Group
    b. Launch Configuration
    c. Step Simple Scaling

8. AutoScaling with ELB
    a. Application ELB
    b. Auto scaling
    c. Dynamic Registration

9. IAM (Identity & Access Management)
    a. User & Service management
    b. Managing Passwords Policies
    c. Key Management Service
    d. Managing Roles
    e. Activating Multi-Factor Authentication
    f. Identity Federation
    g. Managing Programmatic Access

10. KMS (Key Management Service)
    a. What is KMS
    b. Creating KMS key
    c. Managing KMS admin and usage permissions

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11. Databases
    a.   RDS (Oracle MySQL MariaDB)
    b.   Redshift for Data Warehousing
    c.   NoSQL - DynamoDB
    d.   Taking Automated Backups
    e.   Migrating DB Across Regions

12. DMS
    a.   Loca Database Config
    b.   RDS Config
    c.   Endpoint URLS
    d.   Migration Task
    e.   Migrating DB Across Regions

13. Route 53 (DNS & Domain Registration)
    a.   DNS Flow
    b.   Fundamentals of Route53
    c.   Registering A Domain
    d.   Route53 resolvers
    e.   Creating Hosted Zones
    f.   Record Sets (A, AAAA, CNAME)

14. CloudFront
    a.   CDN
    b.   Gio restriction
    c.   Configuration
    d.   Routing policy (Simple weighted failover geolocation & latency based)

15. S3 - Simple Storage Services
    a.   Standard Storage
    b.   Standard - Infrequently Accessed
    c.   Reduced Redundancy
    d.   Encrypting Objects
    e.   Uploading deleting & downloading objects
    f.   Versioning

g. Life cycle management

h. S3 Logging

i. Static Website Hosting

j. Cross-region Replication

k. Configuring Events

l. Glacier, Snowball

16. *CloudFront - CDN (Content Delivery Network)*

a. Edge Location

b. Origins

c. Configuring CDN

17. *Monitoring CloudWatch*

a. Cloud Trail

b. Basic & Detailed Monitoring

c. Creating custom dashboards & widgets

d. Setting up alerts

e. Configuring events & rules

f. EC2 actions

18. *Simple Services*

a. Simple Queue Service (SQS)

b. Simple Email Service (SES)

c. Simple Notification Service (SNS)

19. Cloud Formation

a. Stacks Creation

20. Lambda Services

a. EC2 Launching

b. Start and Stop Instances

c. S3 triggering

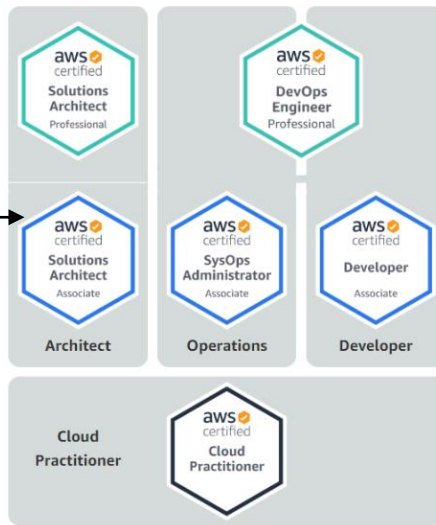# AWS Solutions Architect Associate Training

Professional

Two years of comprehensive experience designing, operating, and troubleshooting solutions using the AWS Cloud

Associate

One year of experience solving problems and implementing solutions using the AWS Cloud

Foundational

Six months of fundamental AWS Cloud and industry knowledge

aws certified
Solutions Architect
Professional

aws certified
DevOps Engineer
Professional

aws certified
Solutions Architect
Associate

Architect

aws certified
SysOps Administrator
Associate

Operations

aws certified
Developer
Associate

Developer

Cloud
Practitioner

aws certified
Cloud Practitioner

Specialty

Technical AWS Cloud experience in the Specialty domain as specified in the **exam guide**

aws certified
Advanced Networking
Specialty

aws certified
Big Data
Specialty

aws certified
Security
Specialty

aws certified
Machine Learning
Specialty

aws certified
Alexa Skill Builder
Specialty

PLAN

DEVELOPER

CODE git

BUILD gradle maven

TEST Se

INTEGRATE Jenkins

DEPLOY

OPERATIONS ANSIBLE puppet docker

OPERATE

MONITOR Nagios
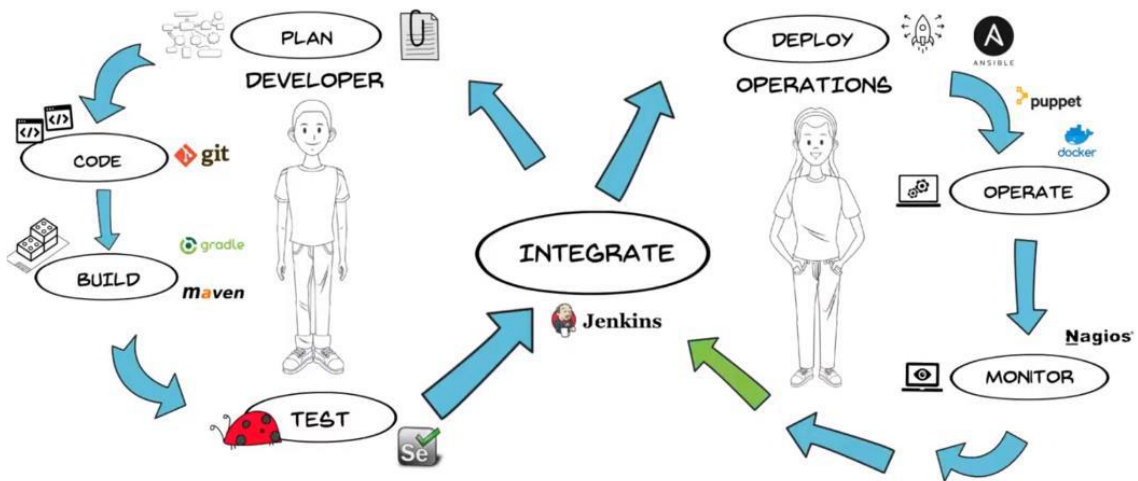
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SNO	Topic	Tool	Concepts	Duration
				In hours
1	**SDLC**		Waterfall Model	1
			Agile Model	
2	**Source Code Management**	**GIT**	About Version Controle System	5
			Central VCS vs Distributed VCS	
			About Git Hub	
			Repository Creation	
			Git Lifecycle	
			git commands	
			git undo operations-git revert,reset and checkout	
			git tags,clean,cherry-pick	
			git merge,rebase	
			git merge conflict	
			git PullReuest	
			git branching stratagies	
				7
3	**containerization Tool**	**Docker**	Docker Architecture	
			Docker Lifecycle	
			Docker Registry	
			docker commands	
			docker volumes vs bindmount	
			docker file	
			docker file instruction	
			docker compose	
			docker Network	
			docker swarms cluster	
4	**Orchestration Tool**	**Kubernetes**		6
			K8S Architecture	
			Kubadm 1.20 -- baremetal/Native installation	
			kubernetes cluster configuration	
			Master-slave config	
			kubernetes Deployment files	
			pods creation	
			service creation	

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			(clusterip/NodePort/LoadBalancer)	
			Ingress Rules Configuration	
			K8S - Dashboard Configuration	
			custom Image Deployment using kubernetes DashBoard	
		EKS	on AWS Environment	
5	Config management Tool	Ansible		6
			Ansible Architecture	
			Ansible Installation	
			Adhoc commands	
			configure Master & Remote	
			Playbooks	
			package installation & uninstall	
			COPY Module	
			FETCH Module	
			File Module	
			Template Module .j2	
			Ansible Tags	
			Ansible Roles	
				7
6	CI Tool	Jenkins		
			Jenkins config	
			Jenkins Jobs	
			Jenkins Plugins	
			Master-Slave config in Jenkins	
			Chain Jobs Creations	
			Jenkins Pipelines	
			Jenkins - GitHub Integration	
			Jenkins - GitHub - Maven Integration	
			Jenkins - GITHUB - Maven - EC2 Integration	
			Jenkins - GITHUB - Docker,Ansible Integration	
			scripted pipeline - Groovy declarative scripting	
7	Build Tool	Maven		1
			About Maven	
			About POM.xml	
			About Dependencies	
			About Artifacts	
			Maven Phases	

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8	**Monitoring Tool**	**Nagios**	2
		Nagios Installation	
		Configuration	
		Server Integration	